Tr

Discrete Devices

Transistors

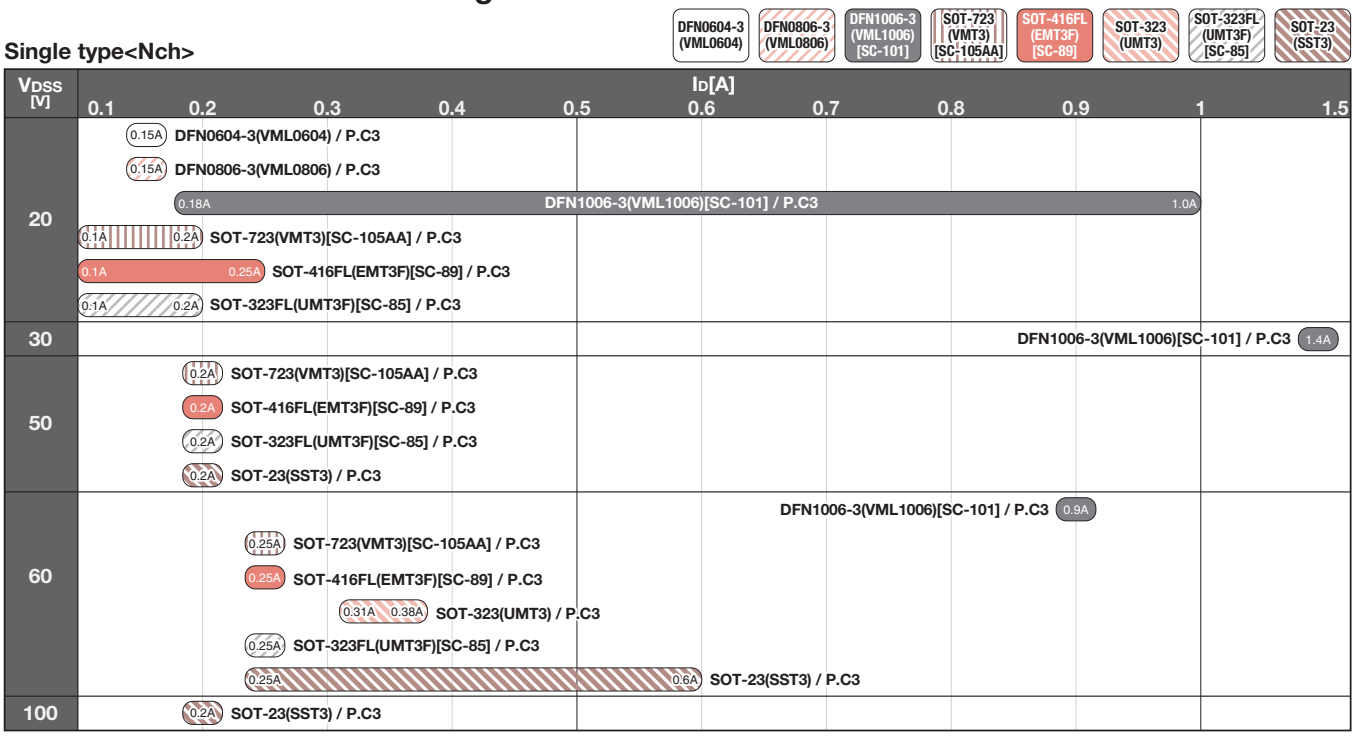
CONTENTS

ISO/TS 16949-approved

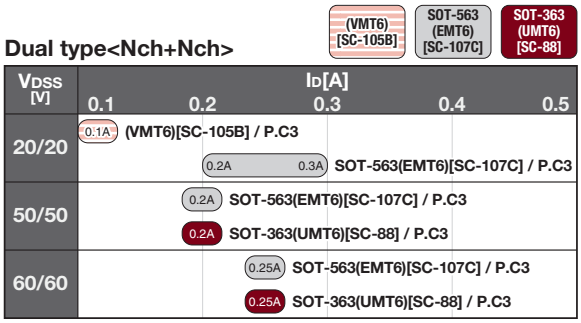
Small Signal MOSFETs

●Quick Reference for Small Signal MOSFETs

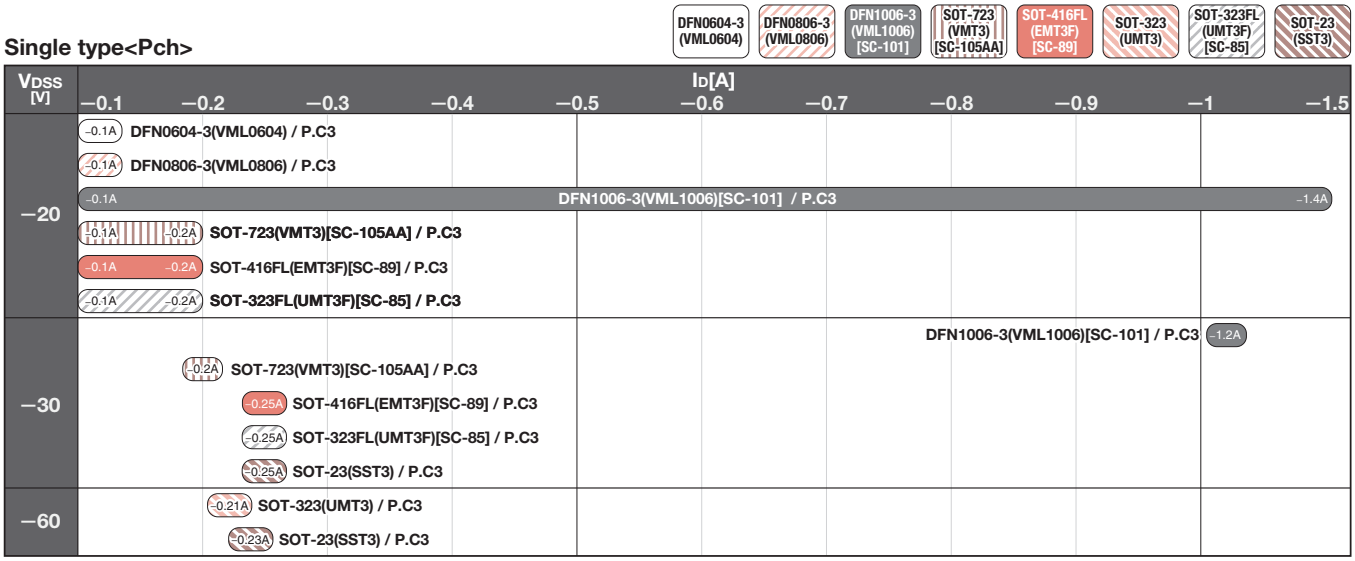
Single type<Nch>



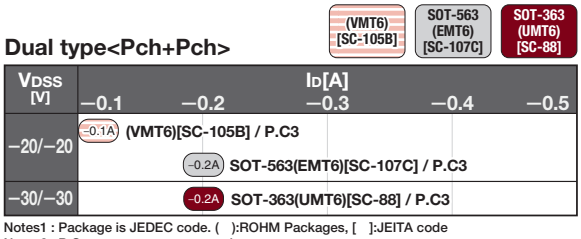
Dual type<Nch+Nch>



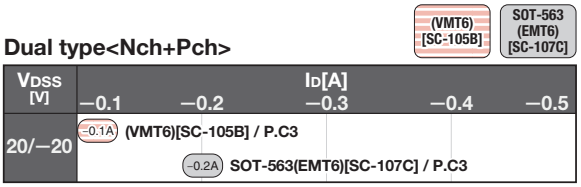
Single type<Pch>



Dual type<Pch+Pch>



Dual type<Nch+Pch>



Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : P.Cxx represents page number.

Small Signal MOSFETs series

Package	Product No.		Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(Ω)													
	Part No.	Taping Code					V_{GS}=10V		V_{GS}=4.5V		V_{GS}=4.0V		V_{GS}=2.5V		V_{GS}=1.8V		V_{GS}=1.5V		V_{GS}=1.2V		V_{GS}=0.9V	
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
DFN0604-3 (VML0604) 0604 size	RV3C002UN	T2CL	N	20	0.15	0.10	—	—	1.40	2.00	—	—	1.70	2.60	—	—	2.70	5.40	—	—	—	—
	☆RV3CA01ZP*1	T2CL	P	−20	−0.10	0.10	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	—	—	—	—
	☆RV3C001ZP	T2CL		−20	−0.10	0.10	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	—	—	—	—
DFN0806-3 (VML0806) 0806 size	RV1C002UN	T2CL	N	20	0.15	0.10	—	—	1.40	2.00	—	—	1.70	2.60	—	—	2.70	5.40	3.80	11.40	—	—
	RV1C001ZP	T2CL	P	−20	−0.10	0.10	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
DFN1006-3 (VML1006) [SC-101] 1006 size	RV2C010UN	T2L	N	20	1.00	0.40	—	—	0.34	0.47	—	—	0.40	0.56	—	—	0.54	0.81	0.70	1.05	—	—
	RV2C002UN	T2L		20	0.18	0.10	—	—	1.40	2.00	—	—	1.70	2.60	—	—	2.70	5.40	3.80	11.40	—	—
	RV2E014AJ	T2CL		30	1.40*2	0.60*2	—	—	0.17	0.29	—	—	0.225	0.38	—	—	—	—	—	—	—	—
	☆RV2L009GN	T2CL		60	0.90*2	0.60*2	0.48	0.72	0.66	1.06	—	—	—	—	—	—	—	—	—	—	—	—
	RV2C014BC	T2CL	P	−20	−1.40*2	0.60*2	—	—	0.22	0.30	—	—	0.28	0.39	0.37	0.70	—	—	—	—	—	—
	RV2C001ZP	T2L		−20	−0.10	0.10	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	RV2E012AT	T2CL		−30	−1.20*2	0.60*2	0.27	0.41	0.39	0.57	—	—	—	—	—	—	—	—	—	—	—	—
SOT-723 (VMT3) [SC-105AA] 1212 size	RUM002N02	T2L	N	20	0.20	0.15	—	—	—	—	—	—	0.80	1.20	—	—	1.20	2.40	1.60	4.80	—	—
	RUM001L02	T2CL		20	0.10	0.15	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
	RYM002N05	T2CL		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	RUM002N05	T2L		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	RSM002N06	T2L		60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RZM002P02	T2L	P	−20	−0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	RZM001P02	T2L		−20	−0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	RSM002P03	T2L		−30	−0.20	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
(VMT6) [SC-105B] 1212 size	VT6K1	T2CR	N+N	20	0.10	0.15	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
	VT6J1	T2CR	P+P	−20	−0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	VT6M1	T2CR	N+P	20	0.10	0.15	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
				−20	−0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	13.30	53.20	—	—
SOT-416FL (EMT3F) [SC-89] 1616 size	RE1C002UN	TCL	N	20	0.20	0.15	—	—	—	—	—	—	0.80	1.20	—	—	1.20	2.40	1.60	4.80	—	—
	RE1C001UN	TCL		20	0.10	0.15	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
	RE1J002YN	TCL		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	RE1L002SN	TL		60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RE1C002ZP	TL	P	−20	−0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	RE1C001ZP	TL		−20	−0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	RE1E002SP	TCL		−30	−0.25	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
SOT-563 (EMT6) [SC-107C] 1616 size	EM6K6	T2R	N+N	20	0.30	0.15	—	—	—	—	0.70	1.00	0.80	1.20	1.00	1.40	—	—	—	—	—	—
	EM6K7	T2CR		20	0.20	0.15	—	—	—	—	—	—	0.80	1.20	—	—	1.20	2.40	1.60	4.80	—	—
	EM6K33	T2R		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	EM6K34	T2CR		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	EM6K31	T2R		60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	EM6J1	T2R	P+P	−20	−0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	EM6M2	T2R	N+P	20	0.20	0.15	—	—	—	—	0.70	1.00	0.80	1.20	1.00	1.40	1.20	2.40	1.60	4.80	—	—
				−20	−0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	1.30	2.20	1.60	3.50	2.40	9.60	—	—
SOT-323 (UMT3) 2021 size	☆BSS138W	T106	N	60	0.31	0.30	1.70	2.40	2.10	3.00	—	—	3.00	12.00	—	—	—	—	—	—	—	—
	☆BSS138BKW	T106		60	0.38	0.30	0.50	0.70	0.60	0.84	—	—	1.00	4.00	—	—	—	—	—	—	—	—
	☆BSS84W	T106	P	−60	−0.21	0.30	3.60	5.30	4.30	6.40	—	—	—	—	—	—	—	—	—	—	—	—
SOT-323FL (UMT3F) [SC-85] 2021 size	RU1C002UN	TCL	N	20	0.20	0.15	—	—	—	—	—	—	0.80	1.20	—	—	1.20	2.40	1.60	4.80	—	—
	RU1C001UN	TCL		20	0.10	0.20	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
	RU1J002YN	TCL		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	RU1L002SN	TL		60	0.25	0.20	1.70	2.40	2.00	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RU1C002ZP	TCL	P	−20	−0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	RU1C001ZP	TL		−20	−0.10	0.20	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	RU1E002SP	TCL		−30	−0.25	0.20	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
SOT-363 (UMT6) [SC-88] 2021 size	UM6K34N	TCN	N+N	50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	UM6K33N	TN		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	UM6K31N	TN		60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	UM6J1N	TN	P+P	−30	−0.20	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
SOT-23 (SST3) 2924 size	RYC002N05	T316	N	50	0.20	0.20	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	RUC002N05	T116		50	0.20	0.20	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	New BSS670	T116		60	0.60	0.35	0.50	0.65	0.60	0.82	—	—	1.00	4.00	—	—	—	—	—	—	—	—
	New BSS138BK	T116		60	0.40	0.35	0.50	0.70	0.60	0.84	—	—	1.00	4.00	—	—	—	—	—	—	—	—
	RK7002BM	T116		60	0.25	0.20	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	☆BSS123	T116		100	0.20	0.35	5.50	7.70	5.90	8.20	—	—	—	—	—	—	—	—	—	—	—	—
	RSC002P03	T316	P	−30	−0.25	0.20	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
	New BSS84	T116		−60	−0.23	0.35	3.60	5.30	4.30	6.40	—	—	—	—	—	—	—	—	—	—	—	—

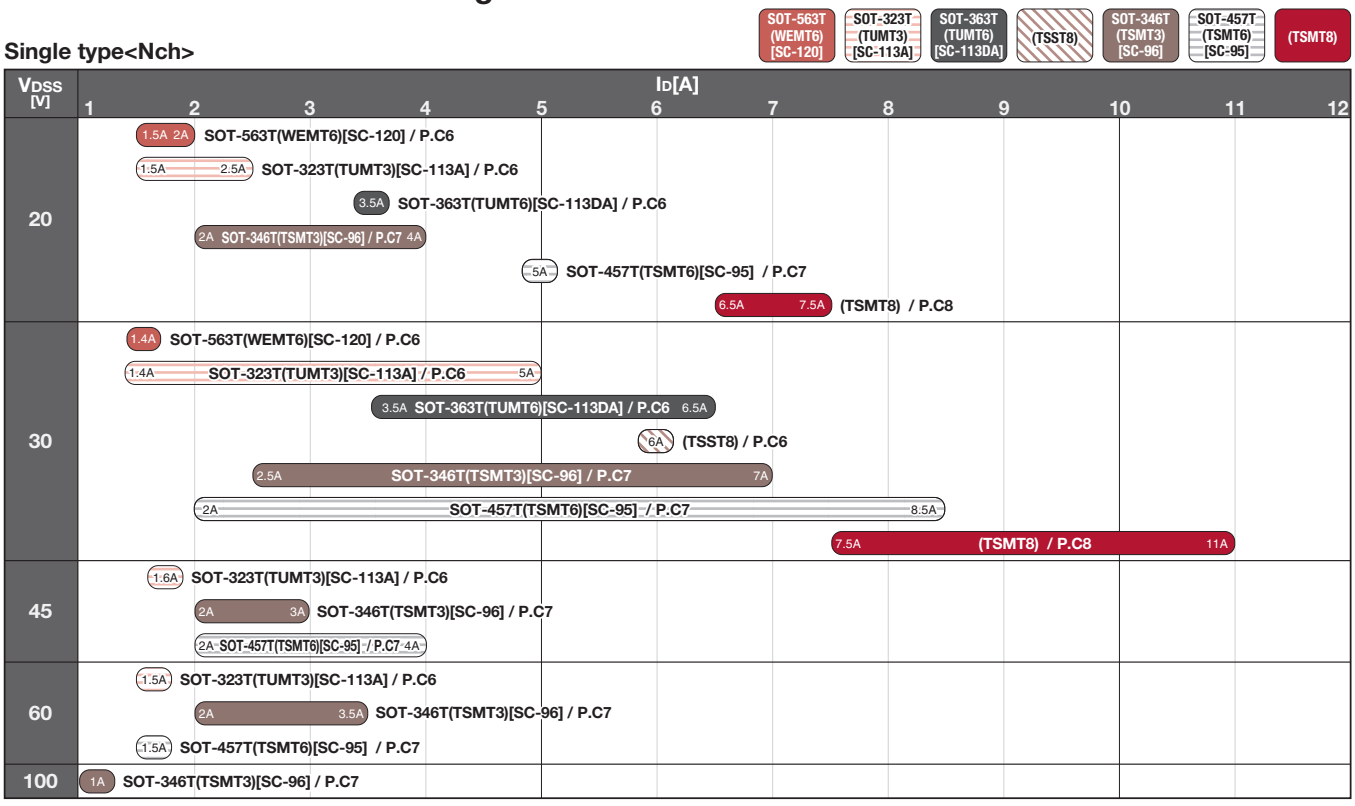
Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: For overvoltage protection *2: PW≦5s

☆: Under Development

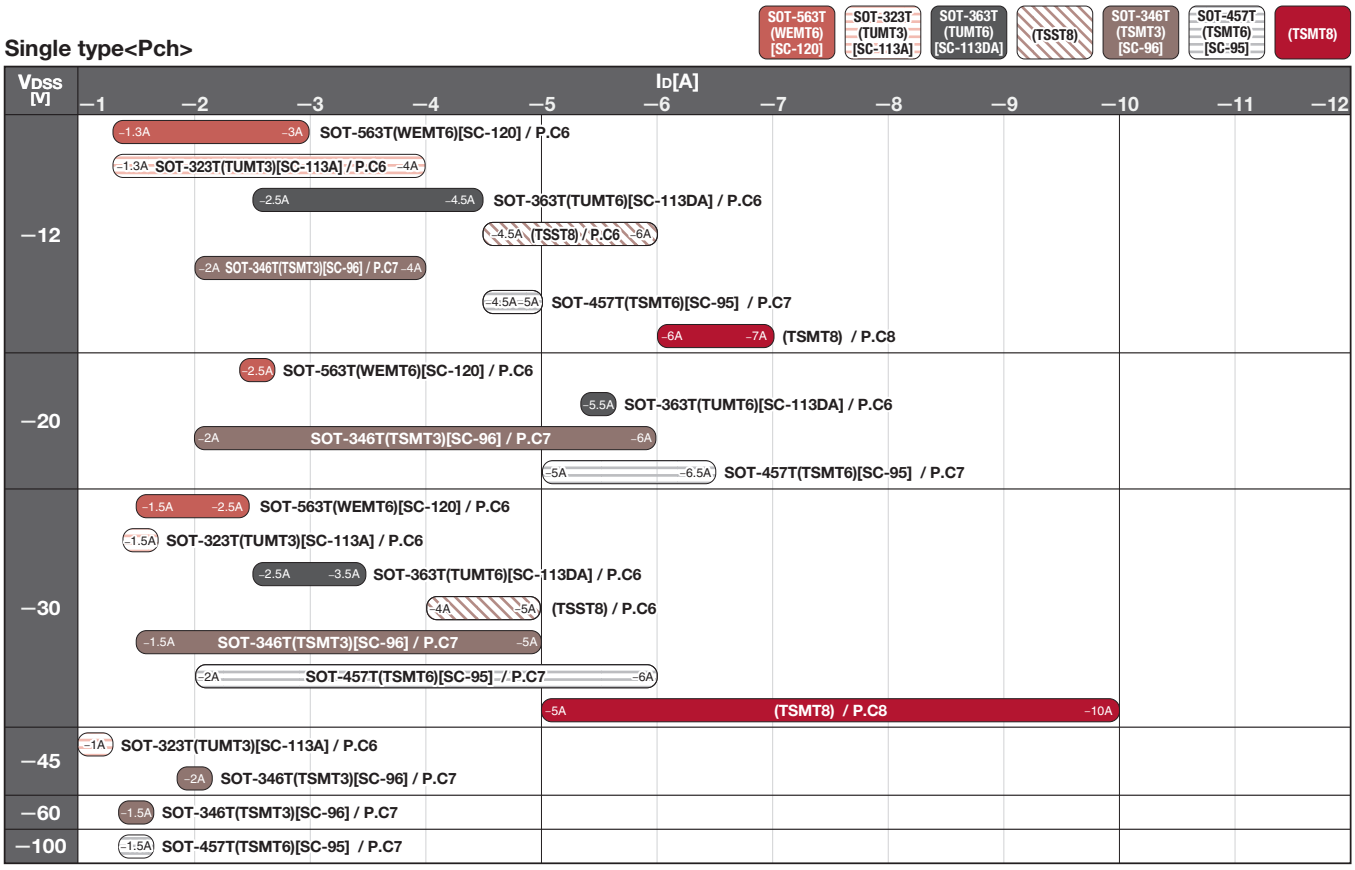
Small Signal MOSFETs

●Quick Reference for Small Signal MOSFETs

Single type<Nch>



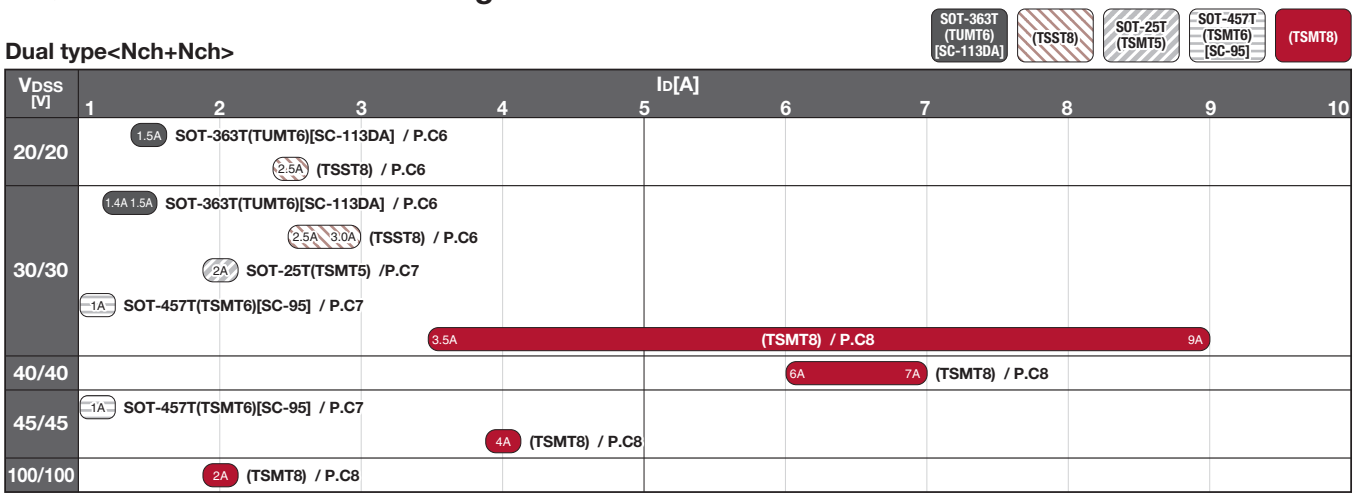
Single type<Pch>



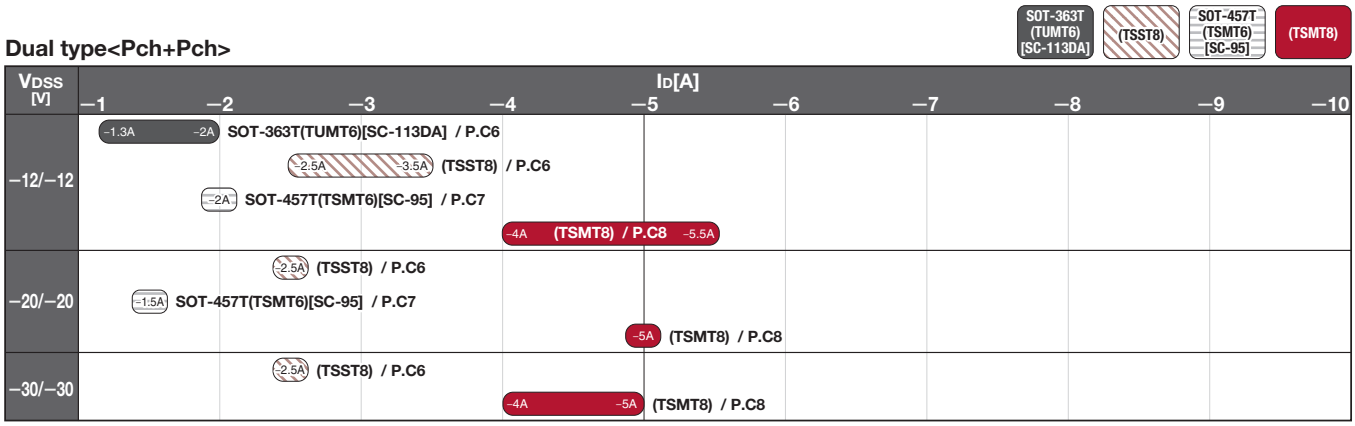
Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : P.Cxx represents page number.

●Quick Reference for Small Signal MOSFETs

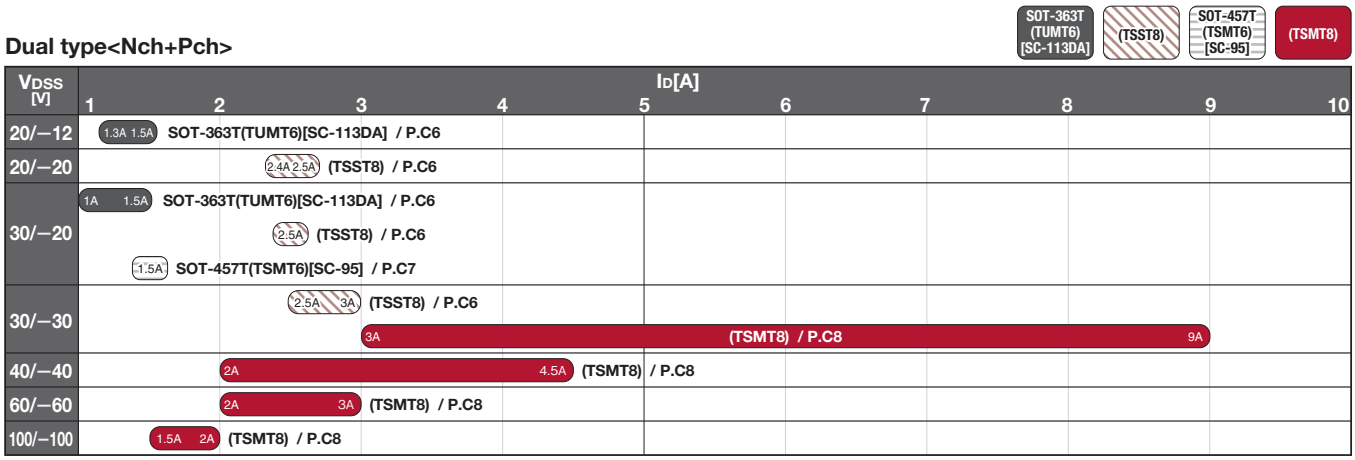
Dual type<Nch+Nch>



Dual type<Pch+Pch>



Dual type<Nch+Pch>



Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : P.Cxx represents page number.

C Transistors

Small Signal MOSFETs

Small Signal MOSFETs series

Package	Product No.		Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(mΩ)										Qg(nC) (V_{GS}=4.5)
	Part No.	Taping Code					V_{GS}=10V		V_{GS}=4.5V		V_{GS}=4.0V		V_{GS}=2.5V		V_{GS}=1.5V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
SOT-563T (WEMT6) [SC-120] 1616 size	RW1C020UN	T2R	N	20	2	0.7	—	—	75	105	—	—	95	135	170	240	2
	RW1C015UN	T2R		20	1.5	0.7	—	—	130	180	—	—	170	240	300	600	1.8
	RW1E014SN	T2R		30	1.4	0.7	170	240	250	350	270	380	—	—	—	—	1.4*2
	RW1A030AP	T2CR	P	−12	−3	0.7	—	—	30	42	—	—	40	56	75	150	22
	RW1A025AP	T2R		−12	−2.5	0.7	—	—	44	62	—	—	55	77	90	180	16
	RW1A020ZP	T2R		−12	−2	0.7	—	—	75	105	—	—	105	145	200	400	6.5
	RW1A013ZP	T2R		−12	−1.3	0.7	—	—	190	260	—	—	280	390	530	1060	2.4
	RW1C025ZP	T2CR		−20	−2.5	0.7	—	—	48	65	—	—	65	90	120	240	10.5
	RW1E025RP	T2R		−30	−2.5	0.7	55	75	85	115	95	125	—	—	—	—	5.2*2
	RW1E015RP	T2R		−30	−1.5	0.7	115	160	170	240	190	270	—	—	—	—	5.2*2
SOT-323T (TUMT3) [SC-113A] 2021 size	RUF025N02	TL	N	20	2.5	0.8	—	—	39	54	—	—	49	68	80	160	5
	RUF020N02	TL		20	2	0.8	—	—	75	105	—	—	95	135	170	240	2
	RUF015N02	TL		20	1.5	0.8	—	—	130	180	—	—	170	240	220*1	310*1	1.8
	☆RF5E050AJ	TCL		30	5	0.8	—	—	16.7	21.8	—	—	24	31.3	—	—	7.6
	RTF025N03	TL		30	2.5	0.8	—	—	48	67	50	70	70	98	—	—	3.7
	RSF014N03	TL		30	1.4	0.8	170	240	250	350	270	380	—	—	—	—	1.4*2
	RTF016N05	TL		45	1.6	0.8	—	—	140	190	150	210	200	280	—	—	2.3
	RSF015N06	TL		60	1.5	0.8	210	290	240	330	255	350	—	—	—	—	2*2
	RAF040P01	TCL	P	−12	−4	0.8	—	—	22	30	—	—	27	38	40	68	37
	RZF030P01	TL		−12	−3	0.8	—	—	28	39	—	—	39	54	72	144	18
	RZF020P01	TL		−12	−2	0.8	—	—	75	105	—	—	105	145	200	400	6.5
	RZF013P01	TL		−12	−1.3	0.8	—	—	190	260	—	—	280	390	530	1060	2.4
	RRF015P03	TL		−30	−1.5	0.8	115	160	170	240	190	270	—	—	—	—	3.2*2
	RSF010P05	TL		−45	−1	0.8	330	460	450	630	490	690	—	—	—	—	2.3*2
SOT-363T (TUMT6) [SC-113DA] 2021 size	RUL035N02	TR	N	20	3.5	1	—	—	31	43	—	—	38	53	66	93	5.7
	RF6E065BN	TCR		30	6.5	1	12.9	15.3	18.5	22.7	—	—	—	—	—	—	8.3
	RF6E045AJ	TR		30	4.5	1	—	—	16.9	23.7	—	—	23.9	33.5	—	—	8.1
	RTL035N03	TR		30	3.5	1	—	—	40	56	42	59	56	79	—	—	4.6
	RXL035N03	TCR		30	3.5	1	35	50	45	65	50	70	—	—	—	—	3.3*2
	US6K4	TR	N+N	20	1.5	1	—	—	130	180	—	—	170	240	220*1	310*1	1.8
	US6K1	TR		30	1.5	1	—	—	170	240	180	250	240	340	—	—	1.6
	US6K2	TR		30	1.4	1	170	240	250	350	270	380	—	—	—	—	1.4*2
	RAL045P01	TCR	P	−12	−4.5	1	—	—	22	30	—	—	28	39	50	100	40
	RAL035P01	TR		−12	−3.5	1	—	—	30	42	—	—	40	56	75	150	22
	RAL025P01	TR		−12	−2.5	1	—	—	44	62	—	—	55	77	90	180	16
	RF6C055BC	TCR		−20	−5.5	1	—	—	19.5	25.7	—	—	24.7	33.1	33.7	63.6	15.2
	RRL035P03	TR		−30	−3.5	1	36	50	52	72	58	81	—	—	—	—	8*2
	RRL025P03	TR		−30	−2.5	1	55	75	85	115	95	125	—	—	—	—	5.2*2
	US6J12	TCR	P+P	−12	−2	1	—	—	75	105	—	—	105	145	200	400	7.6
	US6J11	TR		−12	−1.3	1	—	—	190	260	—	—	280	390	530	1060	2.4
	US6M11	TR	N+P	20	1.5	1	—	—	130	180	—	—	170	240	300	600	1.8
				−12	−1.3	1	—	—	190	260	—	—	280	390	530	1060	2.4
	US6M2	TR		30	1.5	1	—	—	170	240	180	250	240	340	—	—	1.6
				−20	−1	1	—	—	280	390	310	430	570	800	—	—	2.1
	US6M1	TR		30	1.4	1	170	240	250	350	270	380	—	—	—	—	1.4*2
				−20	−1	1	—	—	280	390	310	430	570	800	—	—	2.1
(TSST8) 3019 size	RT1E060XN	TR	N	30	6	1.25	16	22	21	29	23	32	—	—	—	—	6.8*2
	TT8K1	TR	N+N	20	2.5	1.25	—	—	52	72	—	—	65	90	100	140	3.6
	TT8K11	TR		30	3	1.25	51	71	67	94	78	109	—	—	—	—	2.5*2
	TT8K2	TR		30	2.5	1.25	—	—	65	90	70	95	95	130	—	—	3.2
	RT1A060AP	TR	P	−12	−6	1.25	—	—	14	19	—	—	17	24	27	54	80
	RT1A050ZP	TR		−12	−5	1.25	—	—	19	26	—	—	26	36	48	96	34
	RT1A045AP	TR		−12	−4.5	1.25	—	—	22	30	—	—	28	39	50	100	40
	RT1E050RP	TR		−30	−5	1.25	26	36	36	50	40	56	—	—	—	—	13*2
	RT1E040RP	TR		−30	−4	1.25	32	45	45	63	52	72	—	—	—	—	10.5
	TT8J11	TR	P+P	−12	−3.5	1.25	—	—	31	43	—	—	43	60	80	160	22
	TT8J13	TR		−12	−2.5	1.25	—	—	44	62	—	—	55	77	90	180	16
	TT8J21	TR		−20	−2.5	1.25	—	—	49	68	—	—	68	95	140	280	12
	TT8J2	TR		−30	−2.5	1.25	60	84	95	130	115	160	—	—	—	—	4.8*2
	TT8J3	TR		−30	−2.5	1.25	65	84	100	130	120	160	—	—	—	—	4.8*2
	TT8M1	TR	N+P	20	2.5	1.25	—	—	52	72	—	—	65	90	100	140	3.6
				−20	−2.5	1.25	—	—	49	68	—	—	68	95	140	280	12
	TT8M3	TR		20	2.5	1.25	—	—	52	72	—	—	65	90	100	140	3.6
				−20	−2.4	1.25	—	—	80	105	—	—	105	140	180	360	6.7
	TT8M2	TR		30	2.5	1.25	—	—	65	90	70	95	95	130	—	—	3.2
				−20	−2.5	1.25	—	—	49	68	—	—	68	95	140	280	12
	TT8M11	TCR		30	3	1.25	51	71	67	94	78	109	—	—	—	—	2.5*2
				−30	−2.5	1.25	60	84	95	130	115	160	—	—	—	—	4.8*2

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: V_{GS}=1.8V *2: V_{GS}=5V

☆: Under Development

Small Signal MOSFETs series

Package	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	V_{GS}=10V Max.	V_{GS}=4.5V Typ.	V_{GS}=4.5V Max.	V_{GS}=4.0V Typ.	V_{GS}=4.0V Max.	V_{GS}=2.5V Typ.	V_{GS}=2.5V Max.	V_{GS}=1.8V Typ.	V_{GS}=1.8V Max.	V_{GS}=1.5V Typ.	V_{GS}=1.5V Max.	Qg(nC) (V_{GS}=4.5)
SOT-346T (TSMT3) [SC-96] 2928 size	RUR040N02	TL	N	20	4	1	—	—	25	35	—	—	33	46	42	59	55	110	8
	RUR020N02	TL		20	2	1	—	—	75	105	—	—	95	135	130	185	170	240	2
	RQ5E070BN	TCL		30	7	1	12.4	16.1	16.5	20.4	—	—	—	—	—	—	—	—	11.7
	New RQ5E065AJ	TCL		30	6.5	1	—	—	13.7	18.1	—	—	17.9	23.7	—	—	—	—	12.2
	New RQ5E040TN	TL		30	4	1	—	—	34	48	36	50	47	66	—	—	—	—	5.9
	RQ5E040AJ	TCL		30	4	1	—	—	27	37	—	—	39	54	—	—	—	—	4.3
	New RQ5E035XN	TCL		30	3.5	1	35	50	45	65	50	70	—	—	—	—	—	—	3.3*1
	RQ5E035BN	TCL		30	3.5	1	28	37	43	56	—	—	—	—	—	—	—	—	3.1
	RQ5E030AJ	TCL		30	3	1	—	—	57	75	—	—	81	109	—	—	—	—	2.1
	New RQ5E025SN	TL		30	2.5	1	50	70	74	105	83	118	—	—	—	—	—	—	2.9*1
	New RQ5E025TN	TL		30	2.5	1	—	—	66	92	70	98	95	133	—	—	—	—	3.3
	New RQ5H030TN	TL		45	3	1	—	—	48	67	53	74	68	95	—	—	—	—	6.2
	New RQ5H025TN	TL		45	2.5	1	—	—	95	130	100	140	125	175	—	—	—	—	3.2
	RSR025N05	TL		45	2.5	1	70	100	95	150	105	160	—	—	—	—	—	—	3.6*1
	New RQ5H020TN	TL		45	2	1	—	—	130	180	135	190	180	250	—	—	—	—	2.9
	New RQ5L035GN	TCL		60	3.5	1	38	51	53	72	—	—	—	—	—	—	—	—	3.8
	New RQ5L030SN	TL		60	3	1	60	85	70	100	75	105	—	—	—	—	—	—	5*1
	New RQ5L020SN	TL		60	2	1	120	170	140	195	150	210	—	—	—	—	—	—	2.7*1
	New RQ5P010SN	TL		100	1	1	370	520	400	560	410	580	—	—	—	—	—	—	3.5*1
	New RQ5A040ZP	TL	P	−12	−4	1	—	—	22	30	—	—	30	42	40	60	55	110	30
	RQ5A030AP	TL		−12	−3	1	—	—	44	62	—	—	55	77	75	110	90	180	16
	New RQ5A025ZP	TL		−12	−2.5	1	—	—	44	61	—	—	60	84	81	121	110	220	13
	New RQ5A020ZP	TL		−12	−2	1	—	—	75	105	—	—	105	145	150	225	200	400	6.5
	RQ5C060BC	TCL		−20	−6	1	—	—	16.1	21.1	—	—	20.3	26.9	27.4	51.0	—	—	19.2
	RQ5C035BC	TCL		−20	−3.5	1	—	—	42	59	—	—	54	76	84	135	—	—	6.5
	New RQ5C030TP	TL		−20	−3	1	—	—	55	75	60	85	90	125	—	—	—	—	9.3
	New RQ5C025TP	TL		−20	−2.5	1	—	—	70	95	75	105	115	160	—	—	—	—	7
	New RQ5C020TP	TL		−20	−2	1	—	—	100	135	110	150	180	250	—	—	—	—	4.9
	RQ5E050AT	TCL		−30	−5	1	21	26	30	37	—	—	—	—	—	—	—	—	9.7
	RQ5E040RP	TL		−30	−4	1	32	45	45	63	52	72	—	—	—	—	—	—	10.5*1
	RQ5E035AT	TCL		−30	−3.5	1	38	50	54	70	—	—	—	—	—	—	—	—	5.2
	New RQ5E030RP	TL		−30	−3	1	55	75	85	115	95	125	—	—	—	—	—	—	5.2*1
	New RQ5E025SP	TL		−30	−2.5	1	70	98	100	140	115	160	—	—	—	—	—	—	5.4*1
	RQ5E025AT	TCL		−30	−2.5	1	70	91	104	135	—	—	—	—	—	—	—	—	2.7
	New RQ5E020SP	TL		−30	−2	1	85	120	135	190	150	210	—	—	—	—	—	—	4.3*1
	New RQ5E015RP	TL		−30	−1.5	1	115	160	170	240	190	270	—	—	—	—	—	—	3.2*1
	RQ5H020SP	TL		−45	−2	1	130	190	180	260	200	280	—	—	—	—	—	—	9.5*2
	RQ5L015SP	TL		−60	−1.5	1	200	280	240	340	255	360	—	—	—	—	—	—	10*2
SOT-25T (TSMT5) 2928 size	QS5K2	TR	N+N	30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	2.8
SOT-457T (TSMT6) [SC-95] 2928 size	RQ6C050UN	TR	N	20	5	1.25	—	—	22	30	—	—	27	38	32	45	40	80	12
	RQ6E085BN	TCR		30	8.5	1.25	11.1	14.4	13.9	17.3	—	—	—	—	—	—	—	—	16.6
	New RQ6E080AJ	TCR		30	8	1.25	—	—	12.5	16.5	—	—	15.7	19.5	—	—	—	—	16.2
	RQ6E055BN	TR		30	5.5	1.25	19	25	30	39	—	—	—	—	—	—	—	—	4.4
	New RQ6E050AJ	TCR		30	5	1.25	—	—	26	35	—	—	38	50	—	—	—	—	4.7
	RQ6E045BN	TCR		30	4.5	1.25	21	30	35	49	—	—	—	—	—	—	—	—	4.7
	New RQ6E045TN	TR		30	4.5	1.25	—	—	30	43	32	45	42	60	—	—	—	—	7.6
	New RQ6E045SN	TR		30	4.5	1.25	27	38	36	51	40	56	—	—	—	—	—	—	6.8*1
	New RQ6E040XN	TCR		30	4	1.25	35	50	45	65	50	70	—	—	—	—	—	—	33*1
	New RQ6E035TN	TR		30	3.5	1.25	—	—	38	54	40	56	55	77	—	—	—	—	4.6
	RSQ020N03	TR		30	2	1.25	96	134	148	207	168	235	—	—	—	—	—	—	2.2*1
	RTQ020N03	TR		30	2	1.25	—	—	89	125	94	132	138	194	—	—	—	—	2.4
	RVQ040N05	TR		45	4	1.25	38	53	47	66	53	74	—	—	—	—	—	—	6.3*1
	RTQ020N05	TR		45	2	1.25	—	—	140	190	150	210	200	280	—	—	—	—	2.3
	RSQ015N06	TR		60	1.5	1.25	210	290	240	330	255	350	—	—	—	—	—	—	2*1
	QS6K1	TR	N+N	30	1	1.25	—	—	170	238	180	252	260	364	—	—	—	—	1.7
	New QH6K21	TR		45	1	1.25	—	—	300	420	310	435	415	585	—	—	—	—	1.5
	New RQ6A050ZP	TR	P	−12	−5	1.25	—	—	19	26	—	—	26	36	33	49	44	88	35
	New RQ6A045AP	TCR		−12	−4.5	1.25	—	—	22	30	—	—	28	39	38	57	50	100	40
	New RQ6A045ZP	TR		−12	−4.5	1.25	—	—	25	35	—	—	31	43	39	58	50	100	31
	New RQ6C065BC	TCR		−20	−6.5	1.25	—	—	14.9	21	—	—	18.6	26	25	50	—	—	22
	RQ6C050BC	TCR		−20	−5	1.25	—	—	27	36	—	—	35	47	48	77	—	—	10.4
	RQ6E060AT	TCR		−30	−6	1.25	20.3	26.4	26.8	34.6	—	—	—	—	—	—	—	—	12.9
	RQ6E050AT	TCR		−30	−5	1.25	21	27	29	38	—	—	—	—	—	—	—	—	10.4
	New RQ6E045RP	TR		−30	−4.5	1.25	25	35	34	48	38	53	—	—	—	—	—	—	14*1
	RQ6E035AT	TCR		−30	−3.5	1.25	38	50	54	70	—	—	—	—	—	—	—	—	5.2
	New RQ6E035SP	TR		−30	−3.5	1.25	45	65	65	90	70	95	—	—	—	—	—	—	9.2*1
	RQ6E030AT	TCR		−30	−3	1.25	70	91	104	135	—	—	—	—	—	—	—	—	2.7
	New RQ6E030SP	TR		−30	−3	1.25	60	80	90	125	100	140	—	—	—	—	—	—	6*1
	RRQ020P03	TR		−30	−2	1.25	115	160	170	240	190	270	—	—	—	—	—	—	3.2*1
	RQ6P015SP	TR		−100	−1.5	1.25	350	470	380	510	400	540	—	—	—	—	—	—	17*1
	QS6J11	TR	P+P	−12	−2	1.25	—	—	75	105	—	—	105	145	150	225	200	400	6.5
	New QH6J1	TR		−20	−1.5	1.25	—	—	155	215	170	235	310	430	—	—	—	—	3
	QS6M4	TR	N+P	30	1.5	1.25	—	—	170	230	180	245	260	360	—	—	—	—	1.6
				−20	−1.5	1.25	—	—	155	215	170	235	310	430	—	—	—	—	3

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code Notes2: *1: V_{GS}=5V *2: V_{GS}=10V

C Transistors

Small Signal MOSFETs

Small Signal MOSFETs series

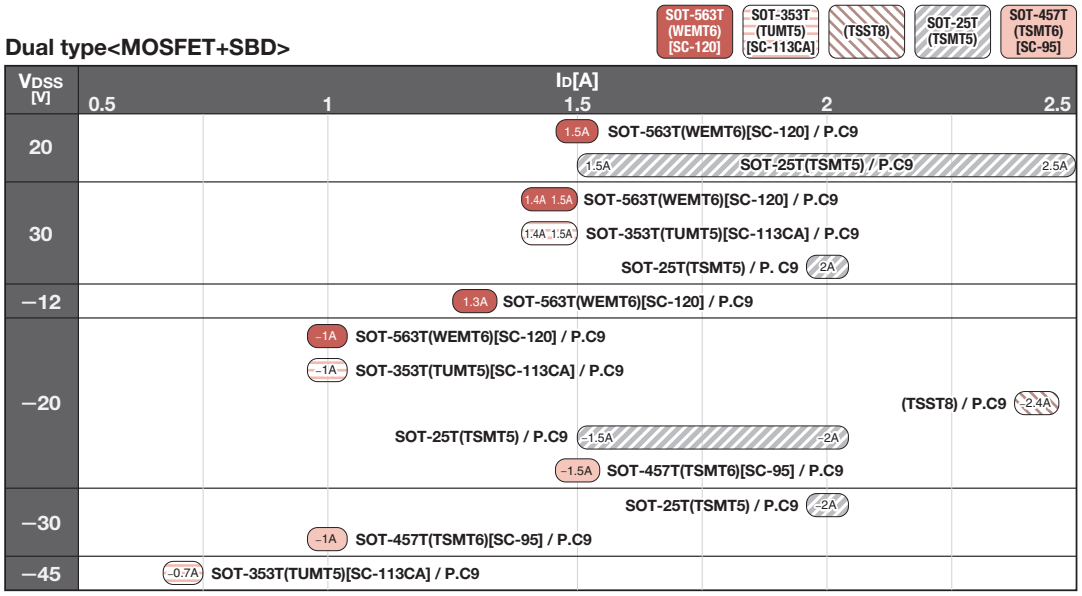
Package	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	V_{GS}=10V Max.	V_{GS}=4.5V Typ.	V_{GS}=4.5V Max.	V_{GS}=4.0V Typ.	V_{GS}=4.0V Max.	V_{GS}=2.5V Typ.	V_{GS}=2.5V Max.	V_{GS}=1.8V Typ.	V_{GS}=1.8V Max.	V_{GS}=1.5V Typ.	V_{GS}=1.5V Max.	Qg(nC) (V_{GS}=4.5V)
(TSMT8) 3028 size 	RQ1C075UN	TR	N	20	7.5	1.5	—	—	11	16	—	—	14	20	17	24	20	40	18
	RQ1C065UN	TR		20	6.5	1.5	—	—	16	22	—	—	19	27	24	32	29	58	11
	RQ7E110AJ	TCR		30	11	1.5	—	—	6.8	9	—	—	9.1	12.4	—	—	—	—	22
	RQ1E100XN	TR		30	10	1.5	7.5	10.5	9.5	13.3	10	14	—	—	—	—	—	—	12.7*1
	RQ1E075XN	TCR		30	7.5	1.5	12	17	17	24	19	27	—	—	—	—	—	—	6.8*1
	QH8KA4	TCR	N+N	30	9	1.5	—	—	12.5	17	13	18	17	24	—	—	—	—	12
	QS8K13	TCR		30	6	1.5	20	28	25	35	28	39	—	—	—	—	—	—	5.5*1
	QH8KA2	TR		30	4.5	1.5	25	35	40	56	—	—	—	—	—	—	—	—	4.7
	QH8KA1	TCR		30	4.5*2	2.4*2	56	73	86	112	—	—	—	—	—	—	—	—	1.5
	QS8K11	TR		30	3.5	1.5	35	50	45	65	50	70	—	—	—	—	—	—	3.3*1
	New QH8K26	TR		40	7*2	2.6*2	27	38	35	50	—	—	—	—	—	—	—	—	2.9*1
	New QH8K22	TCR		40	6*2	2.5*2	34.6	46	43.9	59	—	—	—	—	—	—	—	—	1.3
	QS8K21	TR		45	4	1.5	38	53	48	67	53	75	—	—	—	—	—	—	5.4*1
	New QH8K51	TR		100	2	1.5	240	325	250	340	260	355	—	—	—	—	—	—	4.7*1
	RQ1A070AP	TR	P	−12	−7	1.5	—	—	10	14	—	—	13	19	18	27	24	48	80
	RQ1A060ZP	TR		−12	−6	1.5	—	—	16	23	—	—	22	31	28	42	39	78	34
	☆RQ7E100AT	TCR		−30	−10	1.5	8.7	10.6	11.9	14.8	—	—	—	—	—	—	—	—	26
	RQ1E070RP	TR		−30	−7	1.5	12	17	17	24	19	27	—	—	—	—	—	—	26*1
	RQ7E055AT	TCR		−30	−5.5	1.5	19.3	24.5	28.2	36.1	—	—	—	—	—	—	—	—	9.4
	RQ1E050RP	TR		−30	−5	1.5	22	31	32	45	36	50	—	—	—	—	—	—	13*1
	QS8J13	TR	P+P	−12	−5.5	1.5	—	—	15	22	—	—	19	28	24	38	29	58	60
	QS8J12	TR		−12	−4.5	1.5	—	—	21	29	—	—	27	38	37	55	49	98	40
	QS8J2	TR		−12	−4	1.5	—	—	26	36	—	—	36	50	46	69	66	132	20
	New QH8JA1	TCR		−20	−5	1.5	—	—	28	38	—	—	35	48	49	77	—	—	10.2
	QS8J5	TR		−30	−5	1.5	28	39	40	56	45	63	—	—	—	—	—	—	10*1
	QS8J4	TR		−30	−4	1.5	40	56	55	77	60	84	—	—	—	—	—	—	8.4*1
	QH8MA4	TR	N+P	30	9*2	2.6*2	12.3	16	18.2	23.7	—	—	—	—	—	—	—	—	7.9
				−30	−8*2	2.6*2	22	28.6	31	40.3	—	—	—	—	—	—	—	—	9.8
	QH8MA3	TR		30	7*2	2.5*2	22	29	35	46	—	—	—	—	—	—	—	—	3.7
				−30	−5.5*2	2.5*2	37	48	55	72	—	—	—	—	—	—	—	—	5.2
	QS8M13	TCR		30	6	1.5	20	28	25	35	28	39	—	—	—	—	—	—	5.5*1
				−30	−5	1.5	28	39	40	56	45	63	—	—	—	—	—	—	10*1
	QH8MA2	TR		30	4.5	1.5	25	35	40	56	—	—	—	—	—	—	—	—	4.7
				−30	−3	1.5	55	80	80	115	—	—	—	—	—	—	—	—	4.3
	QH8M22	TCR		40	4.5*3	1.5*3	34.6	46	43.9	59	—	—	—	—	—	—	—	—	1.3
				−40	−2*3	1.5*3	130	190	180	260	—	—	—	—	—	—	—	—	4.4
	QS8M31	TR		60	3	1.5	80	112	93	130	98	137	—	—	—	—	—	—	4.0*1
				−60	−2	1.5	150	210	180	252	190	266	—	—	—	—	—	—	7.2*1
	QS8M51	TR		100	2	1.5	240	325	250	340	260	355	—	—	—	—	—	—	4.7*1
				−100	−1.5	1.5	350	470	380	510	400	540	—	—	—	—	—	—	17*1

Notes1 : ( ):ROHM Packages
Notes2 : *1: V_{GS}=5V *2: PW≦1s *3: PW≦5s

☆: Under Development

●Quick Reference for Multiple Schottky Barrier Diodes Small Signal MOSFETs series
(WEMT • TUMT • TSST • TSMT Package)

Dual type<MOSFET+SBD>



Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : P.Cxx represents page number.

Multiple Schottky Barrier Diodes Small Signal MOSFETs series

Package	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	V_{GS}=10V Max.	V_{GS}=4.5V Typ.	V_{GS}=4.5V Max.	V_{GS}=4.0V Typ.	V_{GS}=4.0V Max.	V_{GS}=2.5V Typ.	V_{GS}=2.5V Max.	V_{GS}=1.5V Typ.	V_{GS}=1.5V Max.	Qg(nC) (V_{GS}=4.5V)
SOT-563T (WEMT6) [SC-120] 1616 size	ES6U2	T2R	N+SBD(0.5A)	20	1.5	0.8	—	—	130	180	—	—	170	240	300	600	1.8
	ES6U41	T2R		30	1.5	0.8	—	—	170	240	180	250	240	340	—	—	1.6
	ES6U3	T2R		30	1.4	0.8	170	240	250	350	270	380	—	—	—	—	1.4*1
	ES6U1	T2R	P+SBD(0.5A)	−12	−1.3	0.8	—	—	190	260	—	—	280	390	530	1060	2.4
	ES6U42	T2R		−20	−1	0.8	—	—	280	390	310	430	570	800	—	—	2.1
SOT-353T (TUMT5) [SC-113CA] 2021 size	US5U1	TR	N+SBD(0.5A)	30	1.5	1	—	—	170	240	180	250	240	340	—	—	1.6
	US5U2	TR		30	1.4	1	170	240	250	350	270	380	—	—	—	—	1.4*1
	US5U30	TR	P+SBD(0.5A)	−20	−1	1	—	—	280	390	310	430	570	800	—	—	2.1
	US5U35	TR	P+SBD(0.1A)	−45	−0.7	1	600	800	900	1300	1000	1400	—	—	—	—	1.7*1
(TSST8) 3019 size	TT8U1	TR	P+SBD(1A)	−20	−2.4	1.25	—	—	80	105	—	—	105	140	180	360	6.7
	TT8U2	TR		−20	−2.4	1.25	—	—	80	105	—	—	105	140	180	360	6.7
SOT-25T (TSMT5) 2928 size	QS5U36	TR	N+SBD(0.7A)	20	2.5	1.25	—	—	58	81	—	—	74	104	120	240	3.5
	QS5U34	TR	N+SBD(0.5A)	20	1.5	1.25	—	—	130	180	—	—	170	240	220*6	310*6	1.8
	QS5U13*2	TR	N+SBD(0.5A)	30	2	1.25	—	—	71	100	76	107	110	154	—	—	2.8
	QS5U16*2	TR		30	2	1.25	—	—	71	100	76	107	110	154	—	—	2.8
	QS5U12*3	TR	N+SBD(1A)	30	2	1.25	—	—	71	100	76	107	110	154	—	—	2.8
	QS5U17*3	TR		30	2	1.25	—	—	71	100	76	107	110	154	—	—	2.8
	QS5U28	TR	P+SBD(1A)	−20	−2	1.25	—	—	90	125	97	135	175	245	—	—	4.8
	QS5U23*4	TR	P+SBD(0.5A)	−20	−1.5	1.25	—	—	160	200	180	240	260	340	—	—	4.2
	QS5U26*4	TR		−20	−1.5	1.25	—	—	160	200	180	240	260	340	—	—	4.2
	QS5U21*5	TR	P+SBD(1A)	−20	−1.5	1.25	—	—	160	200	180	240	260	340	—	—	4.2
	QS5U27*5	TR		−20	−1.5	1.25	—	—	160	200	180	240	260	340	—	—	4.2
	QS5U33	TR	P+SBD(1A)	−30	−2	1.25	95	135	145	205	160	225	—	—	—	—	3.4*1
SOT-457T (TSMT6) [SC-95] 2928 size	QS6U22	TR	P+SBD(0.7A)	−20	−1.5	1.25	—	—	155	215	170	235	310	430	—	—	3
	QS6U24	TR		−30	−1	1.25	300	400	500	700	600	800	—	—	—	—	1.7*1

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: V_{GS}=5V
Notes3 : *2, *3, *4, *5: Please note that, although the internal circuit configuration may differ between part numbers, the electrical specifications remain the same.
Notes4 : *6: V_{GS}=1.8V

Power MOSFETs

●Quick Reference for Power MOSFETs series

SOT-89 (MPT3) [SC-62] | DFN2020-8S (HUML2020L8 Single) | DFN2020-8D (HUML2020L8 Dual) | (HSMT8) | (HSML3030L10)

Single type<Nch>

VDSS [V]	ID[A]
30	3A SOT-89(MPT3)[SC-62] / P.C11 6A DFN2020-8S(HUML2020L8 Single) / P.C11 11A 15A (HSMT8) / P.C11 39A
40	(HSMT8) / P.C11 27A 39A
60	2A SOT-89(MPT3)[SC-62] / P.C11 5.5A DFN2020-8S(HUML2020L8 Single) / P.C11 13A (HSMT8) / P.C11 30A

Dual type<Nch+Nch>

VDSS [V]	ID[A]
30/30	5.5A DFN2020-8D(HUML2020L8 Dual) / P.C11 7A (HSML3030L10) / P.C11 11A
60/60	3A DFN2020-8D(HUML2020L8 Dual) / P.C11

Single type<Pch>

VDSS [V]	ID[A]
−20	−10A DFN2020-8S(HUML2020L8 Single) / P.C11 −30A (HSMT8) / P.C11
−30	−7.5A DFN2020-8S(HUML2020L8 Single) / P.C11 −18A (HSMT8) / P.C11 −39A

Dual type<Pch+Pch>

VDSS [V]	ID[A]
−20/−20	−5A DFN2020-8D(HUML2020L8 Dual)/ P.C11
−30/−30	−4A DFN2020-8D(HUML2020L8 Dual)/ P.C11

Dual type<Nch+Pch>

VDSS [V]	ID[A]
20/−20	5A 5.5A DFN2020-8D(HUML2020L8 Dual) / P.C11
30/−30	4A DFN2020-8D(HUML2020L8 Dual)/ P.C11

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : P.Cxx represents page number.

Power MOSFETs series<MPT3・HUML2020L8・HSMT8・HSML3030L10 Package>

Package	Application	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25℃)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	Max.	V_{GS}=4.5V Typ.	Max.	V_{GS}=4.0V Typ.	Max.	V_{GS}=2.5V Typ.	Max.	V_{GS}=1.8V Typ.	Max.	V_{GS}=1.5V Typ.	Max.	Qg(nC) (V_{GS}=4.5V)
 SOT-89 (MPT3) [SC-62] 4540 size	DC-DC Converter Motor Drive	RHP030N03	T100	N	30	3	2	90	120	—	—	160	210	—	—	—	—	—	—	6.5*2
		RHP020N06	T100		60	2	2	150	200	200	280	240	340	—	—	—	—	—	—	7*2
		RJP020N06	T100		60	2	2	—	—	165	240	170	250	210	300	—	—	—	—	5*3
 DFN2020-8S (HUML2020L8(Single)) 2020 size	DC-DC Converter	RF4E110GN	TR	N	30	11	2	8.7	11.3	11.7	16.5	—	—	—	—	—	—	—	—	3.5
		RF4E080GN	TR		30	8	2	13.5	17.6	17.6	31.2	—	—	—	—	—	—	—	—	2.8
		RF4E070GN	TR		30	7	2	16.4	21.4	23.0	33.0	—	—	—	—	—	—	—	—	2.2
		New RF4L055GN	TCR		60	5.5	2	31	43	45	66	—	—	—	—	—	—	—	—	4.1
	Load Switch Switching	RF4E110BN	TR		30	11	2	8.5	11.1	11.8	15.4	—	—	—	—	—	—	—	—	12
		RF4E100AJ	TCR		30	10	2	—	—	9.4	12.4	—	—	13.3	17.9	—	—	—	—	13
		RF4E080BN	TR		30	8	2	13.5	17.6	18.9	24.6	—	—	—	—	—	—	—	—	7.2
		RF4E070BN	TR		30	7	2	22.0	28.6	30.8	40.0	—	—	—	—	—	—	—	—	4.6
		RF4E060AJ	TCR		30	6	2	—	—	28	37	—	—	41	55	—	—	—	—	4.0
		RF4C050AP	TR	P	−20	−10	2	—	—	18	26	—	—	22	31	27	45	32	65	55
		RF4C100BC	TCR		−20	−10	2	—	—	12.0	15.6	—	—	15.4	20.0	23.5	37.6	—	—	23.5
		RF4E075AT	TCR		−30	−7.5	2	16.7	21.7	24.4	31.7	—	—	—	—	—	—	—	—	11
 DFN2020-8D (HUML2020L8 Dual) 2020 size	Load Switch Switching	UT6K3	TCR	N+N	30	5.5	2	—	—	30	42	—	—	45	63	—	—	—	—	4.0
		New UT6K30	TCR		60	3	2	111	153	162	223	—	—	—	—	—	—	—	—	1.1*2
		UT6JA3	TCR	P+P	−20	−5	2	—	—	42	59	—	—	54	76	76	118	—	—	6.5
		UT6JA2	TCR		−30	−4	2	55	70	80	103	—	—	—	—	—	—	—	—	3.4
	Motor	UT6MA3	TBR	N+P	20	5.5	2	—	—	30	42	—	—	45	63	—	—	—	—	4.0
					−20	−5	2	—	—	42	59	—	—	54	76	—	—	—	—	6.5
		New UT6MA2	TCR		30	4	2	37	46	59	80	—	—	—	—	—	—	—	—	2.2
					−30	−4	2	55	70	80	103	—	—	—	—	—	—	—	—	3.3
 (HSMT8) 3333 size	DC-DC Converter Switching	RQ3E180GN	TB	N	30	39*1	20*1	3.3	4.3	4.3	6.1	—	—	—	—	—	—	—	—	11.0
		RQ3E150GN	TB		30	39*1	17*1	4.7	6.1	6.2	8.8	—	—	—	—	—	—	—	—	7.4
		RQ3E120GN	TB		30	27*1	15*1	6.7	8.8	9.1	13.8	—	—	—	—	—	—	—	—	4.8
		RQ3E100GN	TB		30	21*1	15*1	8.9	11.7	12.0	20.0	—	—	—	—	—	—	—	—	3.9
		RQ3E080GN	TB		30	18*1	14*1	12.9	16.7	17.5	31.2	—	—	—	—	—	—	—	—	2.8
		RQ3G150GN	TB		40	39*1	20*1	5.1	7.2	6.4	8.9	—	—	—	—	—	—	—	—	11.6
		RQ3G100GN	TB		40	27*1	15*1	11.0	14.3	14.1	18.3	—	—	—	—	—	—	—	—	4.3
		New RQ3L090GN	TB		60	30*1	20*1	10.3	13.9	14.6	21.4	—	—	—	—	—	—	—	—	13
		RQ3L050GN	TB		60	13*1	15*1	43	61	61	86	—	—	—	—	—	—	—	—	2.8
	Load Switch Switching	RQ3E180AJ	TB		30	30*1	30*1	—	—	3.5	4.5	—	—	4.5	5.8	—	—	—	—	39
		RQ3E180BN	TB		30	39*1	20*1	2.8	3.9	3.7	5.2	—	—	—	—	—	—	—	—	37
		RQ3E160AD	TB		30	16	2	3.5	4.5	5.0	7.0	—	—	—	—	—	—	—	—	25
		RQ3E150BN	TB		30	39*1	17*1	3.8	5.3	5.3	7.4	—	—	—	—	—	—	—	—	23
		RQ3E130BN	TB		30	39*1	16*1	4.4	6.0	6.7	9.4	—	—	—	—	—	—	—	—	16
		RQ3E120BN	TB		30	21*1	16*1	6.6	9.3	8.6	11.9	—	—	—	—	—	—	—	—	14
		RQ3E110AJ	TB		30	24*1	15*1	—	—	8.8	11.7	—	—	12.6	16.5	—	—	—	—	13.5
		RQ3E100BN	TB		30	21*1	15*1	7.7	10.4	11.0	15.3	—	—	—	—	—	—	—	—	10.5
		RQ3E080BN	TB		30	15*1	14*1	11.0	15.2	16.0	22.0	—	—	—	—	—	—	—	—	7.2
		RQ3E070BN	TB		30	15*1	13*1	20	27	29	39	—	—	—	—	—	—	—	—	4.6
		RQ3C150BC	TB	P	−20	−30*1	20*1	—	—	4.8	6.7	—	—	6.1	8.5	8.8	14.0	—	—	60
		RQ3E120AT	TB		−30	−39*1	20*1	6.1	8.0	8.7	11.3	—	—	—	—	—	—	—	—	33
		☆RQ3E100AT	TB		−30	−31*1	17*1	9.0	11.4	13.1	16.7	—	—	—	—	—	—	—	—	21.0
		RQ3E075AT	TB		−30	−18*1	15*1	17.4	23.0	26.0	33.0	—	—	—	—	—	—	—	—	10.4
 (HSML3030L10) 3030 size	DC-DC Converter	HS8S2	TB	N+N	30	10	2	11.2	14.6	14.7	20.0	—	—	—	—	—	—	—	—	2.7
					30	11	2	10.5	12.6	12.1	16.5	—	—	—	—	—	—	—	—	12
		HS8K1	TB		30	10	2	11.2	14.6	14.7	20.0	—	—	—	—	—	—	—	—	2.7
					30	11	2	9.1	11.8	11.9	16.5	—	—	—	—	—	—	—	—	3.3
		HS8K11	TB		30	7	2	12.8	17.9	20.8	29.1	—	—	—	—	—	—	—	—	5.7
					30	11	2	10.2	13.3	11.8	15.4	—	—	—	—	—	—	—	—	9.0

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: Tc=25°C *2: V_{GS}=10V *3 V_{GS}=4V

☆: Under Development

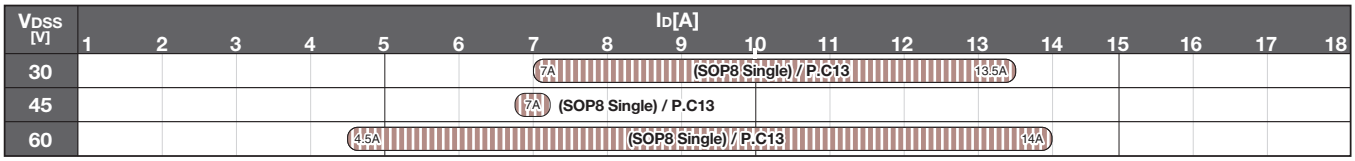
C Transistors

Power MOSFETs

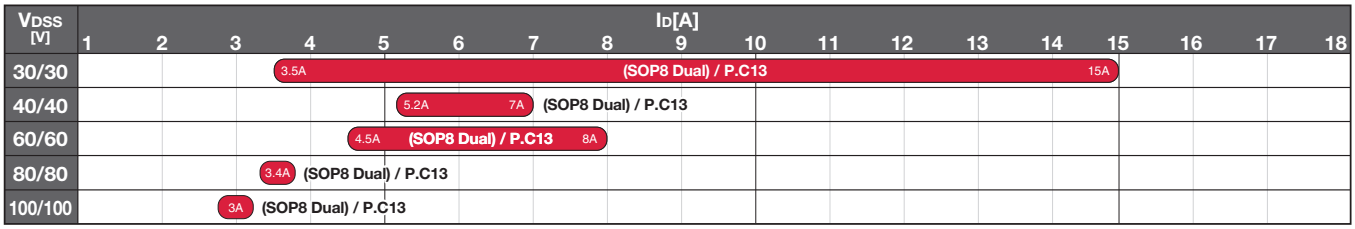
●Quick Reference for Power MOSFETs series(SOP8 Single/Dual Package)

SOP8 Single　SOP8 Dual

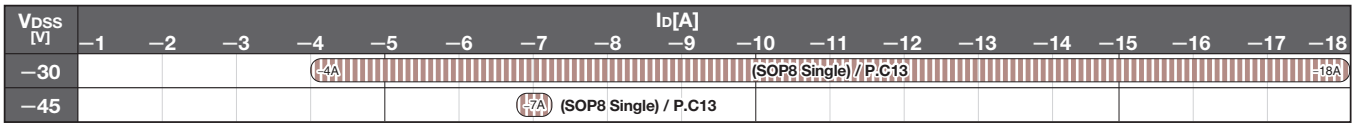
Single type<Nch>



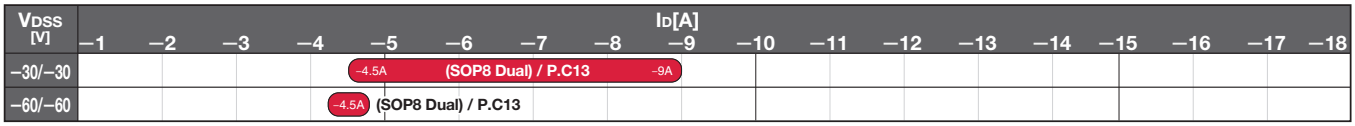
Dual type<Nch+Nch>



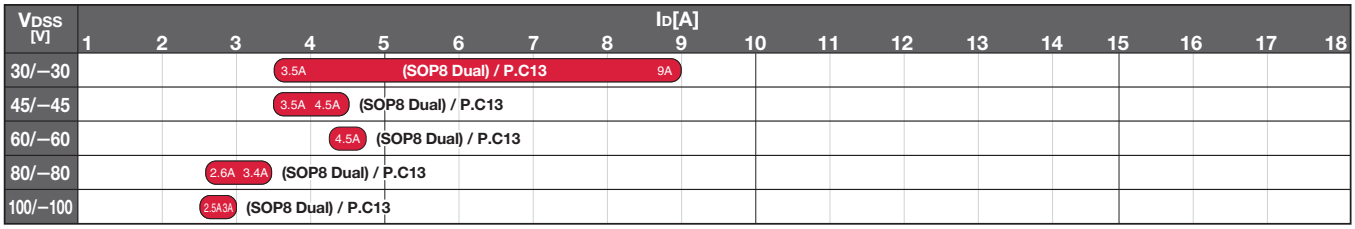
Single type<Pch>



Dual type<Pch+Pch>



Dual type<Nch+Pch>



Notes1 : ( ):ROHM Packages
Notes2 : P.Cxx represents page number.

C Transistors

Power MOSFETs series

<SOP8 Package> (Single type)

Package	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	V_{GS}=10V Max.	V_{GS}=4.5V Typ.	V_{GS}=4.5V Max.	V_{GS}=4.0V Typ.	V_{GS}=4.0V Max.	V_{GS}=2.5V Typ.	V_{GS}=2.5V Max.	V_{GS}=1.5V Typ.	V_{GS}=1.5V Max.	Qg(nC) (V_{GS}=5V)
(SOP8) 5060 size 	RS3E135BN	TB	N	30	13.5	2.0	5.7	7.4	8.5	10.9	—	—	—	—	—	—	16.6*1
	RXH125N03	TB		30	12.5	2.0	7.5	12	9.5	13.3	10	14	—	—	—	—	12.7
	RXH100N03	TB		30	10	2.0	9.5	13	12	17	13	18	—	—	—	—	11
	RS3E095BN	TB		30	9.5	2.0	11.9	14.6	17.5	21.9	—	—	—	—	—	—	8.3*1
	RXH090N03	TB		30	9	2.0	12	17	17	24	19	27	—	—	—	—	6.8
	RXH070N03	TB		30	7	2.0	20	28	25	35	28	39	—	—	—	—	5.8
	RSH070N05	TB		45	7	2.0	18	25	23	32	25	35	—	—	—	—	12
	New RS3L140GN	TB		60	14	2.0	4.9	6.5	6.8	9.6	—	—	—	—	—	—	31*1
	RSH065N06	TB		60	6.5	2.0	24	37	28	44	31	48	—	—	—	—	11
	New RS3L045GN	TB		60	4.5	2.0	43	59	62	92	—	—	—	—	—	—	3*1
	☆RS3E180AT	TB1	P	−30	−18	2.0	4.1	4.8	5.1	6.1	—	—	—	—	—	—	80
	RRH140P03	TB		−30	−14	2.0	5	7	6.7	9.4	7.3	10.2	—	—	—	—	80
	☆RS3E130AT	TB1		−30	−13	2.0	6.5	8.5	8.6	11.2	—	—	—	—	—	—	41.1
	RRH100P03	TB		−30	−10.0	2.0	9	12.6	12.5	17.5	14	19.6	—	—	—	—	39
	RRH090P03	TB1		−30	−9	2.0	11	15.4	15	21	17	24	—	—	—	—	30
	RS3E075AT	TB		−30	−7.5	2.0	18	23.5	24	31	—	—	—	—	—	—	12.8*1
	New RSH050P03	TB		−30	−5	2.0	30	42	47	65	55	77	—	—	—	—	13
	RRH050P03	TB1		−30	−5	2.0	36	50	52	72	58	80	—	—	—	—	9.2
	New RSH040P03	TB		−30	−4	2.0	42	58	68	92	78	106	—	—	—	—	8
	RRH040P03	TB		−30	−4	2.0	55	75	85	115	95	125	—	—	—	—	5.2
	RSH070P05	TB1		−45	−7	2.0	19	27	25	35	28	39	—	—	—	—	34

<SOP8 Package> (Dual type)

Package	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Ta=25°C)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	V_{GS}=10V Max.	V_{GS}=4.5V Typ.	V_{GS}=4.5V Max.	V_{GS}=4.0V Typ.	V_{GS}=4.0V Max.	Qg(nC) (V_{GS}=5V)
(SOP8) 5060 size 	New SH8K10S	TB	N	30	7	2.0	17	24	23	33	25	35	8.4
			N+SBD	30	8.5		14	19.6	17.8	24.9	19	26.6	8.9
	New SH8KA7	TB	N+N	30	15*3	4.6*3	7.1	9.1	8.3	10.7	—	—	41*1
	New SH8KA4	TB		30	9*3	3*3	16.5	21.4	22.2	28.9	—	—	7.9*1
	New SH8KA2	TB		30	8*3	2.8*3	23	28	34	43	—	—	4.1*1
	SH8K12	TB		30	6*3	2	30	42	40	56	45	63	4
	New SH8KA1	TB		30	4.5*3	2.7*3	54	69	84	109	—	—	1.6*1
	SH8K11	TB		30	3.5	2	70	98	90	126	100	140	1.9
	SH8K26	TB		40	7	2	27	38	35	50	—	—	2.9
	SH8K25	TB		40	5.2*3	3*3	60	85	80	112	—	—	1.7
	New SH8K39	TB		60	8*3	2*3	15	21	20	30	—	—	12.8*1
	New SH8K37	TB		60	5.5*3	2*3	33	46	44	66	—	—	5.2*1
	SH8K32	TB		60	4.5	2	46	65	52	73	55	77	7
	SH8K41	TB		80	3.4	2	90	130	110	150	120	160	6.6
	SH8K52	TB		100	3	2	120	170	135	190	—	—	8.5
	SH8J66	TB	P+P	−30	−9	2	13.5	18.5	17.5	23.6	19	24.7	35
	SH8J65	TB		−30	−7	2	21.5	29	29	39	31	040.8	18
	SH8J62	TB		−30	−4.5	2	40	56	55	77	60	84	8
	SH8J31	TB		−60	−4.5	2	50	70	55	80	60	85	40*2
	New SH8MA4	TB1	N+P	30	9*3	2*3	16.5	21.4	22.2	32.5	—	—	7.9*1
				−30	−8.5*3		23	29.6	32	41.3	—	—	9.8*1
	New SH8MA3	TB1		30	7*3	2*3	23	28	42	57	—	—	3.7*1
				−30	−6*3		40	50	60	73	—	—	5.2*1
	New SH8MA2	TB		30	4.5*3	2*3	57	80	88	125	—	—	3
				−30	−4.5*3		63	82	89	115	—	—	6.7
	SH8M14	TB		30	9	2	15	21	18	25	20	28	8.5
				−30	−7		21.5	29	29	39	31	40.8	18
	SH8M13	TB		30	6	2	22	31	30	42	35	49	5
				−30	−7		21.5	29	29	39	31	40.8	18
	SH8M12	TB		30	5	2	30	42	40	56	45	63	4
				−30	−4.5		40	56	55	77	60	84	8
	SH8M11	TB		30	3.5	2	70	98	90	126	100	140	1.9
				−30	−3.5		70	98	100	140	110	155	4.2
	SH8M24	TB		45	4.5	2	33	46	41	57	46	64	6.8
				−45	−3.5		45	63	60	84	66	92	13
	New SH8M31	TB		60	4.5	2	46	65	52	73	55	77	7*1
				−60	−4.5		50	70	55	80	60	85	20*1
	SH8M41	TB		80	3.4	2	90	130	110	150	120	160	6.6
				−80	−2.6		165	240	220	300	230	310	8.2
	SH8M51	TB		100	3	2	120	170	130	180	135	190	8.5
				−100	−2.5		210	290	230	320	240	340	12.5

Notes1 : ( ):ROHM Packages
Notes2 : *1: V_{GS}=4.5V *2: V_{GS}=10V *3: PW≦1s

☆: Under Development

Power MOSFETs

●Quick Reference for Power MOSFETs series(HSOP8 Single type)

(HSOP8) Single

Single type<Nch>

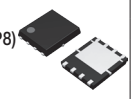
VDSS [V]	Feature	ID[A] 10 20 30 40 50 60 70 80
30	Switching	35A (HSOP8)Single / P.C14 80A
40		34A (HSOP8)Single / P.C14 80A
60		36A (HSOP8)Single / P.C14 68A
100		60A (HSOP8)Single / P.C14

Single type<Pch>

VDSS [V]	Feature	ID[A] −10 −20 −30 −40 −50 −60 −70 −80
−30	Switching	(HSOP8)Single / P.C14 −76A–80A

Notes1 : ( ):ROHM Packages Notes2 : P.Cxx represents page number.

(HSOP8 Single type)

Package	Application	Product No. Part No.	Taping Code	Polarity (ch)	VDSS (V)	ID(A) (TC=25°C)	PD(W) (TC=25°C)	RDS(on)(mΩ) VGS=10V Typ.	VGS=10V Max.	VGS=4.5V Typ.	VGS=4.5V Max.	Qg(nC) (VGS=4.5V)	Drive Voltage (V)
(HSOP8) Single 	Load Switch	RS1E350BN	TB	N	30	80	35	1.2	1.7	1.8	2.5	95	4.5
		RS1E280BN	TB		30	80	30	1.7	2.3	2.3	3.2	50	
		RS1E240BN	TB		30	40	30	2.3	3.2	3.3	4.6	35	
		RS1E200BN	TB		30	68	25	2.8	3.9	3.8	5.3	29	
		RS1E180BN	TB		30	60	25	3.5	4.9	4.9	6.9	23	
		☆RS1E260AT	TB	P	−30	−80	40	2.4	3.0	3.4	4.3	87	
		☆RS1E220AT	TB		−30	−76	34	3.3	4.1	4.6	5.8	65	
	DC-DC Converter Switching	RS1E350GN	TB	N	30	80	39	1.48	1.76	1.92	2.4	32.7	
		RS1E320GN	TB		30	80	34	1.4	1.9	1.8	2.9	19.6	
		RS1E300GN	TB		30	80	33	1.7	2.2	2.2	3.3	18.5	
		RS1E280GN	TB		30	80	31	2.0	2.6	2.6	3.8	17.1	
		RS1E240GN	TB		30	72	27	2.6	3.3	3.3	5.2	11.2	
		RS1E200GN	TB		30	57	25	3.6	4.6	4.7	7.5	7.8	
		RS1E170GN	TB		30	40	23	5.1	6.7	6.7	10.3	5.9	
		RS1E150GN	TB		30	40	22	6.7	8.8	8.8	13.3	4.8	
		RS1E130GN	TB		30	35	22	8.9	11.7	11.7	17.7	3.9	
		RS1G300GN	TB		40	80	35	1.9	2.5	2.4	3.0	28.6	
		RS1G260MN	TB		40	80	35	2.4	3.3	3.2	4.4	44*	
		RS1G180MN	TB		40	57	30	5.0	7.0	6.7	9.2	19.5*	
		RS1G150MN	TB		40	43	25	7.6	10.6	10.2	13.3	15*	
		RS1G120MN	TB		40	34	25	11.6	16.2	15.6	20.7	9.4*	
		New RS1L180GN	TB		60	68	39	4.2	5.6	5.9	8.5	34	
		New RS1L145GN	TB		60	46	31	6.7	9.7	9.6	14.1	19.5	
		New RS1L120GN	TB		60	36	27	9.3	12.7	13.4	19.8	14	
		☆RS1P600BE	TB		100	60	35	7.4	8.8	—	—	33*	10

Notes1 : ( ):ROHM Packages Notes2 : *VGS=10V

☆: Under Development

●Quick Reference for Power MOSFETs series(HSOP8 Dual type)

HSOP8 Dual

Dual type<Nch+Nch>

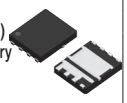
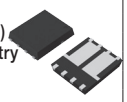
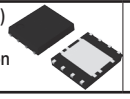
VDSS [V]	Feature	ID[A] 10 20 30 40 50 60 70 80
30/30	Switching	14A HSOP8 Dual(N+N) / P.C14 80A
		27A HSOP8 Dual(N+N+SBD) / P.C14 80A

Dual type<Nch+Pch>

VDSS [V]	Feature	ID[A] 1 5 10 15 20 25
30/−30	Motor	15A 18A HSOP8 Dual / P.C14
60/−60		8.5A HSOP8 Dual / P.C14
100/−100		4.5A HSOP8 Dual / P.C14

Notes1 : ( ):ROHM Packages Notes2 : P.Cxx represents page number.

(HSOP8 Dual type)

Package	Application	Product No. Part No.	Taping Code	Polarity (ch)	VDSS (V)	ID(A) (Ta=25°C)	PD(W) (Ta=25°C)	RDS(on)(mΩ) VGS=10V Typ.	VGS=10V Max.	VGS=4.5V Typ.	VGS=4.5V Max.	Qg(nC) (VGS=4.5V)	Drive Voltage (V)
(HSOP8) Asymmetry Dual 	Switching	HP8K24	TB	N+N	30	80*1	31*1	2.3	3	3.2	4.2	17.2	4.5
					30	27*1	22*1	6.7	8.8	9.1	13.3	4.8	
		HP8K22	TB		30	57*1	25*1	3.6	4.6	4.7	7.5	7.8	
					30	27*1	22*1	6.7	8.8	9.1	13.3	4.8	
		HP8S36	TB	N	30	80*1	29*1	2	2.4	2.3	2.8	47	
				N+SBD	30	27*1	22*1	6.7	8.8	9.1	13.3	4.8	
(HSOP8) Symmetry Dual 	Motor	HP8MA2	TB1	N+P	30	18*2	7*2	7.5	9.6	11.7	16.5	10.5	
					−30	−15*2	7*2	13.2	17.9	21	29	12.8	
		New HP8M31	TB1		60	8.5*2	7*2	46	65	52	73	6.2	
					−60	−8.5*2	7*2	50	70	55	80	15.7	
		New HP8M51	TB1		100	4.5*2	7*2	120	170	130	180	8.5*3	
					−100	−4.5*2	7*2	210	290	230	320	12.5*3	
(HSOP8) Drain Common Dual 	Load Switch	HP8KA1	TB	N+N	30	14*1	3*1	3.5	5	5	7	24	

Notes1 : ( ):ROHM Packages Notes2 : *1: Tc=25°C *2: Pw<1s *3: VGS=5V

●Quick Reference for Power MOSFETs series

(SOP8) TO-252 TO-263S (LPTS D2PAK) [SC-83] TO-263AB (LPTL) TO-220AB TO-220FM TO-3PF TO-247

Single type<Nch>

VDSS [V]	Feature	ID[A] 1 2 3 4 5 6 7 8 9 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
40	Switching	40A 60A TO-252 / P.C16 80A TO-263AB(LPTL) / P.C17 120A 80A TO-220AB / P.C16 180A
45	Switching	20A TO-252 / P.C16
60	Switching	5A TO-252 / P.C16 80A 80A TO-263AB(LPTL) / P.C17 120A 65A TO-220AB / P.C16 180A 60A TO-247 / P.C18 180A
100	Switching	5A TO-252 / P.C16 80A 30A TO-263AB(LPTL) / P.C17 120A 80A TO-220AB / P.C16
190	Ganeral Purpose	7.5A 10A TO-252 / P.C16
200	Ganeral Purpose	5A TO-252 / P.C16 10A 8A TO-263S(LPTS D2PAK)[SC-83] / P.C17 70A 8A TO-220FM / P.C16 70A
250	Ganeral Purpose	4A TO-252 / P.C16 8A 5A TO-263S(LPTS D2PAK)[SC-83] / P.C17 51A 5A TO-220FM / P.C16 51A
600	Low Noise	1.7A TO-252 / P.C18 11A 4A TO-263S(LPTS D2PAK)[SC-83] / P.C18 24A 4A TO-220FM / P.C18 30A 15A 35A TO-3PF / P.C18 20A TO-247 / P.C18 76A
600	Fast Switching	3A TO-252 / P.C19 11A 4A TO-263S(LPTS D2PAK)[SC-83] / P.C19 24A 4A TO-220FM / P.C19 30A 15A 35A TO-3PF / P.C19 20A TO-247 / P.C19 76A
600	Fast Recovery Body Diode	4A TO-252 / P.C20 10A 4A TO-263S(LPTS D2PAK)[SC-83] / P.C20 20A 4A TO-220FM / P.C20 30A 20A 47A TO-3PF / P.C20 20A TO-247 / P.C20 76A
650	Low Noise	1.7A TO-252 / P.C18 11A 4A TO-263S(LPTS D2PAK)[SC-83] / P.C18 24A 4A TO-220FM / P.C18 30A 15A 35A TO-3PF / P.C18 20A TO-247 / P.C18 76A
650	Fast Switching	4A TO-252 / P.C19 11A 4A TO-263S(LPTS D2PAK)[SC-83] / P.C19 24A 4A TO-220FM / P.C19 30A 15A 35A TO-220AB / P.C19 15A 35A TO-3PF / P.C19 20A TO-247 / P.C19 76A
800	Fast Switching	2A TO-220FM / P.C19 10A

Dual type<Nch+Nch>

VDSS [V]	Feature	ID[A] 0.5 1
500/500	Ganeral Purpose	0.5A (SOP8)/ P.C19

Single type<Pch>

VDSS [V]	Feature	ID[A] −1 −2 −3 −4 −5 −6 −7 −8 −9 −10 −20 −30
−45	Switching	-4.5A TO-252 / P.C18 -16A
−60	Switching	TO-252 / P.C18 -14A
−100	Switching	TO-252 / P.C18 -13A TO-263S(LPTS D2PAK) [SC-83] / P.C17 -15A -25A

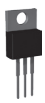
Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : P.Cxx represents page number.

C Transistors

Power MOSFETs

Power MOSFETs

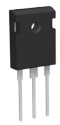
Power MOSFETs series

Package	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D(A) (T_C=25°C)	P_D(W) (T_C=25°C)	$R_{DS(on)}$(mΩ) V_{GS}=10V Typ.	V_{GS}=10V Max.	V_{GS}=6.0V Typ.	V_{GS}=6.0V Max.	V_{GS}=4.5V Typ.	V_{GS}=4.5V Max.	V_{GS}=4.0V Typ.	V_{GS}=4.0V Max.	Qg(nC) (V_{GS}=10V)
TO-252 	RD3G600GN	TL	N	40	60	40	2.8	3.6	—	—	3.3	4.3	—	—	46.5
	RD3G500GN	TL		40	50	35	3.9	4.9	—	—	4.7	6.3	—	—	31
	RD3G400GN	TL		40	40	26	5.6	7.5	—	—	7	9.5	—	—	19
	New RD3H200SN	TL1		45	20	20	20	28	—	—	25	35	28	40	12*2
	New RD3L08BGN	TL		60	80*1	119	4.2	5.1	—	—	5.7	8	—	—	71
	New RD3L08CGN	TL1		60	80*1	96	5.3	7	—	—	7.4	10.7	—	—	55
	New RD3L06BGN	TL1		60	60*1	65.7	9.9	13.5	—	—	14.3	21	—	—	25
	New RD3L220SN	TL1		60	22	20	18	26	—	—	21	30	23	33	30
	New RD3L150SN	TL1		60	15	20	28	40	—	—	33	47	36	51	18
	New RD3L080SN	TL1		60	8	15	57	80	—	—	70	98	78	109	9.4
	New RD3L050SN	TL1		60	5.0	15	78	109	—	—	94	131	100	140	8
	☆RD3P08BBD	TL		100	80*1	114	8.1	11.7	11	16	—	—	—	—	37
	New RD3P200SN	TL1		100	20	20	33	46	—	—	—	—	36	50	55
	New RD3P175SN	TL1		100	17.5	20	75	105	—	—	80	112	85	119	24
	New RD3P100SN	TL1		100	10	20	95	133	—	—	100	140	105	147	18
	New RD3P050SN	TL1		100	5.0	15	135	190	—	—	142	200	145	205	14
	New RD3S100CN	TL1		190	10	85	130	182	—	—	—	—	136	190	52
	New RD3S075CN	TL1		190	7.5	52	240	336	—	—	—	—	248	347	30
	New RD3T100CN	TL1		200	10	85	140	182	—	—	—	—	—	—	25
	New RD3T075CN	TL1		200	7.5	52	250	325	—	—	—	—	—	—	15
	New RD3T050CN	TL1		200	5	29	540	760	—	—	—	—	—	—	8.3
	New RD3U080CN	TL1		250	8	85	225	300	—	—	—	—	—	—	25
	New RD3U060CN	TL1		250	6	52	410	530	—	—	—	—	—	—	15
	New RD3U040CN	TL1		250	4	29	930	1300	—	—	—	—	—	—	8.5
	New RD3H160SP	TL1	P	−45	−16	20	35	50	—	—	45	63	50	70	16*2
	New RD3H080SP	TL1		−45	−8	15	65	91	—	—	95	133	105	147	9*2
	New RD3H045SP	TL1		−45	−4.5	15	112	157	—	—	160	224	185	259	5.6*2
	New RD3L140SP	TL1		−60	−14	20	60	84	—	—	73	103	77	108	27
	New RD3P130SP	TL1		−100	−13	20	135	200	—	—	150	220	155	230	40
TO-220FM 	RCX700N20	—	N	200	70	83	30.5	42.7	—	—	—	—	—	—	125
	RCX450N20	—		200	45	69	42	55	—	—	—	—	—	—	80
	RCX300N20	—		200	30	61	60	80	—	—	—	—	—	—	60
	RCX200N20	—		200	20	48	100	130	—	—	—	—	—	—	40
	RCX160N20	—		200	16	43	135	180	—	—	—	—	—	—	26
	RCX120N20	—		200	12	40	250	325	—	—	—	—	—	—	15
	RCX081N20	—		200	8	40	470	770	—	—	—	—	—	—	9
	RCX511N25	—		250	51	84	48	65	—	—	—	—	—	—	120
	RCX330N25	—		250	33	69	77	105	—	—	—	—	—	—	80
	RCX220N25	—		250	22	61	105	140	—	—	—	—	—	—	60
	RCX120N25	—		250	12	48	180	235	—	—	—	—	—	—	35
	RCX100N25	—		250	10	43	245	320	—	—	—	—	—	—	26.5
	RCX080N25	—		250	8	35	460	600	—	—	—	—	—	—	15
	RCX051N25	—		250	5	30	970	1360	—	—	—	—	—	—	9
TO-220AB 	RX1G18BGN	C10	N	40	180	208	1.17	1.64	—	—	1.33	1.87	—	—	168
	New RX1G08CGN	C10		40	80	78	3.5	4.7	—	—	4.4	5.9	—	—	32
	New RX1L18CGN	C10		60	180	208	1.59	2.15	—	—	2.17	3.26	—	—	190
	New RX1L18BGN	C10		60	180	166	2	2.7	—	—	2.77	4.16	—	—	139
	New RX1L16BGN	C10		60	160	125	2.9	4	—	—	4.1	6.2	—	—	88
	New RX1L08BGN	C10		60	80	96	5.2	7.2	—	—	7.3	12.3	—	—	55
	New RX1L06BGN	C10		60	65	65	10.2	13.8	—	—	14.5	23.8	—	—	25
	☆RX1P08BBE	—		100	80*1	114	6.8	8.2	—	—	—	—	—	—	55

Notes1 : Package is JEDEC code.
Notes2 : *1: V_{GS}=10V *2: V_{GS}=4.5V

☆: Under Development

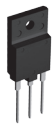
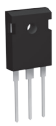
Power MOSFETs series

Package	Product No.		Polarity (ch)	V_{DSS} (V)	I_D(A) (T_C=25°C)	P_D(W) (T_C=25°C)	$R_{DS(on)}$(mΩ)								Qg(nC) (V_{GS}=10V)
	Part No.	Taping Code					V_{GS}=10V		V_{GS}=6.0V		V_{GS}=4.5V		V_{GS}=4.0V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
TO-263AB (LPTL) 	RJ1G12BGN	TLL	N	40	120*1	178	1.38	1.86	—	—	1.54	2.08	—	—	165
	RJ1G08CGN	TLL		40	80*1	78	4.2	5.6	—	—	5	6.7	—	—	31.1
	New RJ1L12BGN	TLL		60	120*1	192	2.1	2.9	—	—	2.7	4.1	—	—	175
	New RJ1L12CGN	TLL		60	120*1	166	2.5	3.4	—	—	3.2	4.8	—	—	139
	New RJ1L12DGN	TLL		60	120*1	125	3.9	5.3	—	—	5.1	7.7	—	—	88
	New RJ1L08CGN	TLL		60	80*1	96	5.3	7	—	—	7.4	10.7	—	—	55
	New RJ1P12BBD	TLL		100	120*1	178	3.8	5.3	4.9	7	—	—	—	—	91.5
TO-263S (LPTS D2PAK) [SC-83] 	RSJ650N10	TL	N	100	65	100	6.5	9.1	—	—	—	—	7	9.8	260
	RSJ550N10	TL		100	55	100	12	16.8	—	—	—	—	13.5	18.9	143
	RSJ400N10	TL		100	40	50	19	27	—	—	—	—	21	30	90
	RSJ301N10	TL		100	30	50	33	46	—	—	—	—	36	50	60
	RCJ700N20	TL		200	70	297	30.5	42.7	—	—	—	—	—	—	125
	RCJ450N20	TL		200	45	211	42	55	—	—	—	—	—	—	80
	RCJ300N20	TL		200	30	166	60	80	—	—	—	—	—	—	60
	RCJ200N20	TL		200	20	106	100	130	—	—	—	—	—	—	40
	RCJ160N20	TL		200	16	85	135	180	—	—	—	—	—	—	26
	RCJ120N20	TL		200	12	52	250	325	—	—	—	—	—	—	15
	RCJ081N20	TL		200	8	40	550	770	—	—	—	—	—	—	9
	RCJ510N25	TL		250	51	304	48	65	—	—	—	—	—	—	120
	RCJ330N25	TL		250	33	211	77	105	—	—	—	—	—	—	80
	RCJ220N25	TL		250	22	166	105	140	—	—	—	—	—	—	60
	RCJ120N25	TL		250	12	107	180	235	—	—	—	—	—	—	35
	RCJ100N25	TL		250	10	85	245	320	—	—	—	—	—	—	26.5
	RCJ050N25	TL		250	5	30	970	1360	—	—	—	—	—	—	9
	RSJ250P10	TL	P	−100	−25	50	45	63	—	—	48	67	50	70	60*2
	RSJ151P10	TL		−100	−15	50	85	120	—	—	95	135	100	140	64
TO-247 	New RZ2L18BGN	C11	N	60	180*1	208	2.1	2.9	—	—	—	—	—	—	190
	New RZ2L18CGN	C11		60	180*1	166	2.5	3.4	—	—	—	—	—	—	139

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: V_{GS}=10V *2: V_{GS}=5V

Power MOSFETs

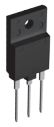
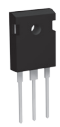
Low Noise type

Package	Application	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Tc=25°C)	$R_{DS(on)}$(Ω) V_{GS}=10V Typ.	$R_{DS(on)}$(Ω) V_{GS}=10V Max.	Qg Typ.(nC) V_{GS}=10V	Drive Voltage (V)
TO-252 	Switching	New R6011END3	TL1	N	600	11	124	0.340	0.390	32	10
		New R6009END3	TL1		600	9	94	0.500	0.535	23	10
		New R6007END3	TL1		600	7	78	0.570	0.620	20	10
		New R6004END3	TL1		600	4	59	0.900	0.980	15	10
		New R6002END3	TL1		600	1.7	26	2.800	3.400	6.5	10
		☆R6511END3	TL1		650	11	124	0.360	0.400	32	10
		☆R6509END3	TL1		650	9	94	0.530	0.585	24	10
		☆R6507END3	TL1		650	7	78	0.605	0.665	20	10
		☆R6504END3	TL1		650	4	59	0.955	1.050	15	10
		☆R6502END3	TL1		650	1.7	24	3.000	3.300	6.5	10
TO-263S (LPTS D2PAK) [SC-83] 		R6024ENJ	TL	N	600	24	245	0.150	0.165	70	10
		R6020ENJ	TL		600	20	231	0.170	0.196	60	10
		R6015ENJ	TL		600	15	184	0.260	0.290	40	10
		R6011ENJ	TL		600	11	124	0.340	0.390	32	10
		R6009ENJ	TL		600	9	94	0.500	0.535	23	10
		R6007ENJ	TL		600	7	78	0.570	0.620	20	10
		R6004ENJ	TL		600	4	58	0.900	0.980	15	10
		New R6524ENJ	TL		650	24	245	0.160	0.185	70	10
		New R6520ENJ	TL		650	20	231	0.185	0.205	61	10
		New R6515ENJ	TL		650	15	184	0.280	0.315	40	10
		New R6511ENJ	TL		650	11	124	0.360	0.400	32	10
		New R6509ENJ	TL		650	9	94	0.530	0.585	24	10
		New R6507ENJ	TL		650	7	78	0.605	0.665	20	10
		New R6504ENJ	TL		650	4	58	0.955	1.050	15	10
TO-220FM 		R6030ENX	—*	N	600	30	86	0.115	0.130	85	10
		R6024ENX	—*		600	24	74	0.150	0.165	70	10
		R6020ENX	—*		600	20	68	0.170	0.196	60	10
		R6015ENX	—*		600	15	60	0.260	0.290	40	10
		R6011ENX	—*		600	11	53	0.340	0.390	32	10
		R6009ENX	—*		600	9	48	0.500	0.535	23	10
		R6007ENX	—*		600	7	46	0.570	0.620	20	10
		R6004ENX	—*		600	4	35	0.900	0.980	15	10
		New R6530ENX	—*		650	30	86	0.125	0.140	90	10
		New R6524ENX	—*		650	24	74	0.160	0.185	70	10
		New R6520ENX	—*		650	20	68	0.185	0.205	61	10
		New R6515ENX	—*		650	15	60	0.280	0.315	40	10
		New R6511ENX	—*		650	11	53	0.360	0.400	32	10
		New R6509ENX	—*		650	9	48	0.530	0.585	24	10
		New R6507ENX	—*		650	7	46	0.605	0.665	20	10
		New R6504ENX	—*		650	4	35	0.955	1.050	15	10
TO-3PF 		R6035ENZ	C8	N	600	35	102	0.095	0.102	110	10
		R6030ENZ	C8		600	30	86	0.115	0.130	85	10
		R6024ENZ	C8		600	24	74	0.150	0.165	70	10
		R6020ENZ	C8		600	20	68	0.170	0.196	60	10
		R6015ENZ	C8		600	15	60	0.260	0.290	40	10
		New R6535ENZ	C8		650	35	102	0.098	0.115	113	10
		New R6530ENZ	C8		650	30	86	0.125	0.140	90	10
		New R6524ENZ	C8		650	24	74	0.160	0.185	70	10
		New R6520ENZ	C8		650	20	68	0.185	0.205	61	10
		New R6515ENZ	C8		650	15	60	0.280	0.315	40	10
TO-247 		R6076ENZ1	C9	N	600	76	735	0.038	0.042	260	10
		R6047ENZ1	C9		600	47	481	0.066	0.072	145	10
		R6035ENZ1	C9		600	35	379	0.095	0.102	110	10
		R6030ENZ1	C9		600	30	305	0.115	0.130	85	10
		R6024ENZ1	C9		600	24	245	0.150	0.165	70	10
		R6020ENZ1	C9		600	20	231	0.170	0.196	60	10
		New R6576ENZ1	C9		650	76	735	0.040	0.046	260	10
		New R6547ENZ1	C9		650	47	481	0.070	0.080	145	10
		New R6535ENZ1	C9		650	35	379	0.098	0.115	110	10
		New R6530ENZ1	C9		650	30	305	0.125	0.140	85	10
		New R6524ENZ1	C9		650	24	245	0.160	0.185	70	10
		New R6520ENZ1	C9		650	20	231	0.185	0.205	60	10

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *: Packaging type C7 allows the tube.

☆: Under Development

Fast Switching type

Package	Application	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Tc=25°C)	$R_{DS(on)}$(Ω) V_{GS}=10V Typ.	$R_{DS(on)}$(Ω) V_{GS}=10V Max.	Qg Typ.(nC) V_{GS}=10V	Drive Voltage (V)
TO-252 	Switching	New R6011KND3	TL1	N	600	11	124	0.340	0.390	22	10
		New R6009KND3	TL1		600	9	94	0.500	0.535	16.5	10
		New R6007KND3	TL1		600	7	78	0.570	0.620	15	10
		New R6006KND3	TL1		600	6	70	0.720	0.830	12	10
		New R6003KND3	TL1		600	3	44	1.300	1.500	8	10
		☆R6511KND3	TL1		650	11	124	0.360	0.400	22	10
		☆R6509KND3	TL1		650	9	94	0.530	0.585	16.5	10
		☆R6507KND3	TL1		650	7	78	0.605	0.665	15	10
		☆R6504KND3	TL1		650	4	58	0.955	1.050	10	10
TO-263S (LPTS D2PAK) [SC-83] 		R6024KNJ	TL	N	600	24	245	0.150	0.165	46	10
		R6020KNJ	TL		600	20	231	0.170	0.196	40	10
		R6015KNJ	TL		600	15	184	0.260	0.290	30	10
		R6011KNJ	TL		600	11	124	0.340	0.390	22	10
		R6009KNJ	TL		600	9	94	0.500	0.535	16.5	10
		R6007KNJ	TL		600	7	78	0.570	0.620	15	10
		R6004KNJ	TL		600	4	58	0.900	0.980	10	10
		New R6524KNJ	TL		650	24	245	0.160	0.185	46	10
		New R6520KNJ	TL		650	20	231	0.185	0.205	40	10
		New R6515KNJ	TL		650	15	184	0.280	0.315	30	10
		New R6511KNJ	TL		650	11	124	0.360	0.400	22	10
		New R6509KNJ	TL		650	9	94	0.530	0.585	16.5	10
		New R6507KNJ	TL		650	7	78	0.605	0.665	15	10
		New R6504KNJ	TL		650	4	58	0.955	1.050	10	10
TO-220FM 		R6030KNX	—*	N	600	30	86	0.115	0.130	56	10
		R6024KNX	—*		600	24	74	0.150	0.165	46	10
		R6020KNX	—*		600	20	68	0.170	0.196	40	10
		R6015KNX	—*		600	15	60	0.260	0.290	30	10
		R6011KNX	—*		600	11	53	0.340	0.390	22	10
		R6009KNX	—*		600	9	48	0.500	0.535	16.5	10
		R6007KNX	—*		600	7	46	0.570	0.620	15	10
		New R6006KNX	—*		600	6	40	0.720	0.830	12	10
		R6004KNX	—*		600	4	35	0.900	0.980	10	10
		New R6530KNX	—*		650	30	86	0.125	0.140	56	10
		New R6524KNX	—*		650	24	74	0.160	0.185	46	10
		New R6520KNX	—*		650	20	68	0.185	0.205	40	10
		New R6515KNX	—*		650	15	60	0.280	0.315	30	10
		New R6511KNX	—*		650	11	53	0.360	0.400	22	10
		New R6509KNX	—*		650	9	48	0.530	0.585	16.5	10
		New R6507KNX	—*		650	7	46	0.605	0.665	15	10
		New R6504KNX	—*		650	4	35	0.955	1.050	10	10
		R8010ANX	—		800	10	40	0.430	0.560	62	10
		R8008ANX	—		800	8	50	0.790	1.030	39	10
		R8005ANX	—		800	5	40	1.600	2.080	21	10
		R8002ANX	—		800	2	35	3.300	4.300	12.7	10
TO-220AB 		New R6535KNX1	C10	N	650	35	102	0.098	0.115	72	10
		New R6530KNX1	C10		650	30	86	0.125	0.140	56	10
		New R6524KNX1	C10		650	24	74	0.160	0.185	45	10
		New R6520KNX1	C10		650	20	68	0.185	0.205	40	10
		New R6515KNX1	C10		650	15	60	0.280	0.315	27.5	10
TO-3PF 		R6035KNZ	C8	N	600	35	102	0.095	0.102	72	10
		R6030KNZ	C8		600	30	86	0.115	0.130	56	10
		R6024KNZ	C8		600	24	74	0.150	0.165	46	10
		R6020KNZ	C8		600	20	68	0.170	0.196	40	10
		R6015KNZ	C8		600	15	60	0.260	0.290	30	10
		New R6535KNZ	C8		650	35	102	0.098	0.115	72	10
		New R6530KNZ	C8		650	30	86	0.125	0.140	56	10
		New R6524KNZ	C8		650	24	74	0.160	0.185	46	10
		New R6520KNZ	C8		650	20	68	0.185	0.205	40	10
		New R6515KNZ	C8		650	15	60	0.280	0.315	30	10
TO-247 		New R6076KNZ1	C9	N	600	76	735	0.040	0.042	165	10
		New R6047KNZ1	C9		600	47	481	0.070	0.072	100	10
		R6035KNZ1	C9		600	35	379	0.095	0.102	72	10
		R6030KNZ1	C9		600	30	305	0.115	0.130	56	10
		R6024KNZ1	C9		600	24	245	0.150	0.165	46	10
		R6020KNZ1	C9		600	20	231	0.170	0.196	40	10
		New R6576KNZ1	C9		650	76	735	0.040	0.046	165	10
		New R6547KNZ1	C9		650	47	481	0.070	0.080	100	10
		New R6535KNZ1	C9		650	35	379	0.098	0.115	72	10
		New R6530KNZ1	C9		650	30	305	0.125	0.140	56	10
		New R6524KNZ1	C9		650	24	245	0.160	0.185	45	10
		New R6520KNZ1	C9		650	20	231	0.185	0.205	40	10
SOP8(Dual) 		SP8K80	TB1	N+N	500	0.5	2	9.000	11.700	3.8	10

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *: Packaging type C7 allows the tube.

☆: Under Development

Power MOSFETs

Fast Recovery Body Diode Type ⟨PrestoMOS™⟩

Package	Application	Product No. Part No.	Taping Code	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D(W) (Tc=25°C)	$R_{DS(on)}$(Ω) V_{GS}=10V Typ.	$R_{DS(on)}$(Ω) V_{GS}=10V Max.	$R_{DS(on)}$(Ω) V_{GS}=15V Typ.	$R_{DS(on)}$(Ω) V_{GS}=15V Max.	Qg Typ.(nC) V_{GS}=10V	Qg Typ.(nC) V_{GS}=15V	trr(Typ.) (ns)	Drive Voltage (V)
TO-252	Switching	New R6010MND3	TL	N	600	10	143	0.280	0.380	—	—	20	—	80	10
		☆R6008MND3	TL		600	8	115	0.450	0.610	—	—	13.5	—	65	10
		New R6007MND3	TL		600	7	95	0.540	0.730	—	—	10	—	60	10
		☆R6009JND3	TL1		600	9	125	—	—	0.450	0.585	—	22	65	15
		☆R6007JND3	TL1		600	7	96	—	—	0.600	0.780	—	17.5	60	15
		☆R6006JND3	TL1		600	6	86	—	—	0.720	0.936	—	15.5	58	15
		☆R6005JND3	TL1		600	5	70	—	—	0.930	1.209	—	12.5	55	15
		☆R6004JND3	TL1		600	4	60	—	—	1.100	1.430	—	10.5	45	15
TO-263S (LPTS D2PAK) [SC-83]		☆R6010MNJ	TL	N	600	10	143	0.280	0.380	—	—	20	—	80	10
		☆R6008MNJ	TL		600	8	113	0.450	0.610	—	—	13.5	—	65	10
		☆R6007MNJ	TL		600	7	94	0.540	0.730	—	—	10	—	60	10
		☆R6020JNJ	TL		600	20	252	—	—	0.200	0.260	—	50	85	15
		☆R6018JNJ	TL		600	18	220	—	—	0.220	0.286	—	42	80	15
		☆R6012JNJ	TL		600	12	160	—	—	0.350	0.455	—	30	70	15
		☆R6009JNJ	TL		600	9	125	—	—	0.450	0.585	—	22	65	15
		☆R6007JNJ	TL		600	7	96	—	—	0.600	0.780	—	17.5	60	15
		☆R6006JNJ	TL		600	6	86	—	—	0.720	0.936	—	15.5	58	15
		☆R6005JNJ	TL		600	5	70	—	—	0.930	1.209	—	12.5	55	15
		☆R6004JNJ	TL		600	4	60	—	—	1.100	1.430	—	10.5	45	15
TO-220FM		New R6030MNX	—*	N	600	30	90	0.110	0.150	—	—	43	—	90	10
		☆R6010MNX	—*		600	10	56	0.280	0.380	—	—	20	—	80	10
		☆R6008MNX	—*		600	8	50	0.450	0.610	—	—	13.5	—	65	10
		☆R6007MNX	—*		600	7	45	0.540	0.730	—	—	10	—	60	10
		☆R6025JNX	—*		600	25	85	—	—	0.150	0.195	—	65	90	15
		☆R6020JNX	—*		600	20	76	—	—	0.200	0.260	—	50	85	15
		☆R6018JNX	—*		600	18	72	—	—	0.220	0.286	—	42	80	15
		☆R6012JNX	—*		600	12	60	—	—	0.350	0.455	—	30	70	15
		☆R6009JNX	—*		600	9	53	—	—	0.450	0.585	—	22	65	15
		☆R6007JNX	—*		600	7	46	—	—	0.600	0.780	—	17.5	60	15
		☆R6006JNX	—*		600	6	43	—	—	0.720	0.936	—	15.5	58	15
		☆R6005JNX	—*		600	5	40	—	—	0.930	1.209	—	12.5	55	15
		☆R6004JNX	—*		600	4	35	—	—	1.100	1.430	—	10.5	45	15
TO-3PF		New R6047MNZ	C8	N	600	47	102	0.060	0.081	—	—	70	—	105	10
		New R6030MNZ	C8		600	30	90	0.110	0.150	—	—	43	—	90	10
		☆R6030JNZ	C8		600	30	93	—	—	0.120	0.156	—	75	95	15
		☆R6025JNZ	C8		600	25	85	—	—	0.150	0.195	—	65	90	15
		☆R6020JNZ	C8		600	20	76	—	—	0.200	0.260	—	50	85	15
TO-247		New R6076MNZ1	C9	N	600	76	740	0.040	0.055	—	—	115	—	135	10
		New R6047MNZ1	C9		600	47	440	0.060	0.081	—	—	70	—	105	10
		New R6030MNZ1	C9		600	30	357	0.110	0.150	—	—	43	—	90	10
		☆R6070JNZ1	C9		600	70	770	—	—	0.050	0.065	—	160	135	15
		☆R6042JNZ1	C9		600	42	495	—	—	0.090	0.117	—	100	110	15
		☆R6030JNZ1	C9		600	30	370	—	—	0.120	0.156	—	75	95	15
		☆R6025JNZ1	C9		600	25	306	—	—	0.150	0.195	—	65	90	15
		☆R6020JNZ1	C9		600	20	252	—	—	0.200	0.260	—	50	85	15

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *: Packaging type C7 allows the tube.

☆: Under Development

Selector Guide for Automotive MOSFETs

Automotive MOSFETs

Package	Product No.			Polarity (ch)	V_{DSS} (V)	I_D (A)	V_{GS} (V)	$R_{DS(on)}$(mΩ)												Qg Typ. (nC)	Ciss Typ. (pF)	Automotive Grade AEC-Q101
	Part No.	Grade Code	Taping Code					V_{GS}=10V		V_{GS}=4.5V		V_{GS}=2.5V		V_{GS}=1.8V		V_{GS}=1.5V		V_{GS}=1.2V		V_{GS}=5V	V_{DS}=10V	
								Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.			
SOT-723 (VMT3)[SC-105AA] 1212 size	RUM002N02	FHA	T2L	N	20	0.2	±8	—	—	—	—	800	1200	—	—	1200	2400	1600	4800	—	—	YES
SOT-563 (EMT6)[SC-107C] 1616 size	EM6K33	FHA	T2R	N+N	50	0.2	±8	—	—	—	—	1700	2400	—	—	2000	4000	2400	7200	—	—	YES
SOT-323 (UMT3)[SC-70] 2021 size	☆BSS138BKW	HZG	T106	N	60	0.38	±20	500	700	600	840	1000	4000	—	—	—	—	—	—	—	—	YES
	☆BSS138W	HZG	T106		60	0.31	±20	1700	2400	2100	3000	3000	12000	—	—	—	—	—	—	—	—	YES
	☆BSS84W	HZG	T106	P	−60	−0.21	±20	3600	5300	4300	6400	—	—	—	—	—	—	—	—	—	—	YES
SOT-363 (UMT6)[SC-88] 2021 size	UM6K31N	FHA	TCN	N+N	60	0.25	±20	1700	2400	2100	3000	3000	12000	—	—	—	—	—	—	—	15*3	YES
SOT-323T (TUMT3) [SC-113A] 2021 size	RUF025N02	FRA	TL	N	20	2.5	±10	—	—	39	54	49	68	65	91	80	160	—	—	5*2	370	YES
	RTF025N03	FRA	TL		30	2.5	±12	—	—	48	67	70	98	—	—	—	—	—	—	3.7*2	270	YES
	RTF016N05	FRA	TL		45	1.6	±12	—	—	140	190	200	280	—	—	—	—	—	—	2.3*2	150	YES
	RSF015N06	FRA	TL		60	1.5	±20	210	290	240	330	—	—	—	—	—	—	—	—	2	110	YES
SOT-363T (TUMT6) [SC-113DA] 2021 size	RUL035N02	FRA	TR	N	20	3.5	±10	—	—	31	43	38	53	—	—	66	93	—	—	5.7*2	460	YES
	RTL035N03	FRA	TR		30	3.5	±12	—	—	40	56	56	79	—	—	—	—	—	—	4.6*2	350	YES
	US6K41	FRA	TR	N+N	20	1	±8	—	—	130	190	170	240	220	310	290	410	—	—	2*2	75	YES
	RTL020P02	FRA	TR	P	−20	−2	±12	—	—	100	135	180	250	—	—	—	—	—	—	4.9*2	430	YES
	RRL035P03	FRA	TR		−30	−3.5	±20	36	50	52	72	—	—	—	—	—	—	—	—	8	800	YES
	RRL025P03	FRA	TR		−30	−2.5	±20	55	75	85	115	—	—	—	—	—	—	—	—	5.2	480	YES
	RSL020P03	FRA	TR		−30	−2	±20	80	120	125	190	—	—	—	—	—	—	—	—	3.9	350	YES
	US6J41	FRA	TR	P+P	−20	−1	±8	—	—	180	260	240	340	320	450	400	560	—	—	2*2	80	YES
SOT-23 (SST3) 2924 size	RUC002N05	HZG	T116	N	50	0.2	±8	—	—	1600	2200	1700	2400	—	—	2000	4000	—	—	—	25	YES
	New BSS670	HZG	T116		60	0.6	0.35*5	500	650	600	820	1000	4000	—	—	—	—	—	—	—	—	YES
	New BSS138BK	HZG	T116		60	0.4	0.35*5	500	700	600	840	1000	4000	—	—	—	—	—	—	—	—	YES
	RK7002BM	HZG	T116		60	0.25	±20	1700	2400	2100	3000	3000	12000	—	—	—	—	—	—	—	15	YES
	☆BSS123	HZG	T116		100	0.2	0.35*5	5500	7700	5900	8200	—	—	—	—	—	—	—	—	—	—	YES
	New BSS84	HZG	T116	P	−60	−0.2	0.35*5	3600	5300	4300	6400	—	—	—	—	—	—	—	—	—	—	YES
SOT-346T (TSMT3) [SC-96] 2928 size	RUR040N02	FRA	TL	N	20	4	±10	—	—	25	35	33	46	—	—	55	110	—	—	8*2	680	YES
	RTR040N03	FRA	TL		30	4	±12	—	—	34	48	47	66	—	—	—	—	—	—	5.9*2	475	YES
	RTR025N03	FRA	TL		30	2.5	±12	—	—	66	92	95	133	—	—	—	—	—	—	3.3*2	220	YES
	RSR025N03	FRA	TL		30	2.5	±20	50	70	74	105	—	—	—	—	—	—	—	—	2.9	165	YES
	RTR030N05	FRA	TL		45	3	±12	—	—	48	67	68	95	—	—	—	—	—	—	6.2*2	510	YES
	RSR025N05	FRA	TL		45	2.5	±20	70	100	95	150	—	—	—	—	—	—	—	—	3.6	260	YES
	RTR025N05	FRA	TL		45	2.5	±12	—	—	95	130	125	175	—	—	—	—	—	—	3.2*2	250	YES
	RTR020N05	FRA	TL		45	2	±12	—	—	130	180	180	250	—	—	—	—	—	—	2.9*2	200	YES
	RSR030N06	FRA	TL		60	3	±20	60	85	70	100	—	—	—	—	—	—	—	—	5	380	YES
	RSR020N06	FRA	TL		60	2	±20	120	170	140	195	—	—	—	—	—	—	—	—	2.7	180	YES
	RSR010N10	FHA	TL		100	1	±20	370	520	400	560	—	—	—	—	—	—	—	—	3.5	140*3	YES
	RTR030P02	FHA	TL	P	−20	−3	±12	—	—	55	75	90	125	—	—	—	—	—	—	9.3*2	840	YES
	RTR025P02	FRA	TL		−20	−2.5	±12	—	—	70	95	115	160	—	—	—	—	—	—	7*2	630	YES
	RTR020P02	FRA	TL		−20	−2	±12	—	—	100	135	180	250	—	—	—	—	—	—	4.9*2	430	YES
	RRR040P03	FRA	TL		−30	−4	±20	32	45	45	63	—	—	—	—	—	—	—	—	10.5	1000	YES
	RRR030P03	FRA	TL		−30	−3	±20	55	75	85	115	—	—	—	—	—	—	—	—	5.2	480	YES
	RSR025P03	FRA	TL		−30	−2.5	±20	70	98	100	140	—	—	—	—	—	—	—	—	5.4	460	YES
	RSR020P05	FRA	TL		−45	−2	±20	130	190	180	260	—	—	—	—	—	—	—	—	4.5*2	500	YES
	RSR015P06	FRA	TL		−60	−1.5	±20	200	280	240	340	—	—	—	—	—	—	—	—	10*1	500	YES
SOT-457T (TSMT6) [SC-95] 2928 size	RUQ050N02	FRA	TR	N	20	5	±10	—	—	22	30	27	38	—	—	40	80	—	—	12*2	900	YES
	RTQ045N03	FRA	TR		30	4.5	±12	—	—	30	43	42	60	—	—	—	—	—	—	7.6*2	540	YES
	RSQ045N03	FRA	TR		30	4.5	±20	27	38	36	51	—	—	—	—	—	—	—	—	6.8	520	YES
	RSQ035N03	FRA	TR		30	3.5	±20	44	62	60	84	—	—	—	—	—	—	—	—	5.3	290	YES
	RTQ035N03	FRA	TR		30	3.5	±12	—	—	38	54	55	77	—	—	—	—	—	—	4.6*2	285	YES
	RSQ020N03	FRA	TR		30	2	±20	96	134	148	207	—	—	—	—	—	—	—	—	2.2	110	YES
	RVQ040N05	FRA	TR		45	4	±21	38	53	47	66	—	—	—	—	—	—	—	—	6.3	530	YES
	RTQ020N05	FRA	TR		45	2	±12	—	—	140	190	200	280	—	—	—	—	—	—	2.3*2	150	YES
	RSQ035N06	FRA	TR		60	3.5	±20	50	70	58	82	—	—	—	—	—	—	—	—	6.5	430	YES
	RSQ015N06	FRA	TR		60	1.5	±20	210	290	240	330	—	—	—	—	—	—	—	—	2	110	YES
	QS6K1	FRA	TR	N+N	30	1	±12	—	—	170	238	260	364	—	—	—	—	—	—	1.7*2	77	YES
	QS6K21	FRA	TR		45	1	±12	—	—	300	420	415	585	—	—	—	—	—	—	1.5*2	95	YES
	RTQ035P02	FHA	TR	P	−20	−3.5	±12	—	—	50	65	80	100	—	—	—	—	—	—	10.5*2	1200	YES
	RTQ025P02	FRA	TR		−20	−2.5	±12	—	—	72	100	140	190	—	—	—	—	—	—	6.4*2	580	YES
	RRQ045P03	FRA	TR		−30	−4.5	±20	25	35	34	48	—	—	—	—	—	—	—	—	14	1350	YES
	RSQ035P03	FRA	TR		−30	−3.5	±20	45	65	65	90	—	—	—	—	—	—	—	—	9.2	780	YES
	RRQ030P03	FRA	TR		−30	−3	±20	55	75	85	115	—	—	—	—	—	—	—	—	5.2	480	YES
	RSQ025P03	FRA	TR		−30	−2.5	±20	80	110	120	165	—	—	—	—	—	—	—	—	4.4	320	YES
	RSQ015P10	FRA	TR		−100	−1.5	±20	350	470	380	510	—	—	—	—	—	—	—	—	17	950*3	YES
(TSMT8) 3028 size	RQ1C075UN	FRA	TR	N	20	7.5	±10	—	—	11	16	14	20	—	—	20	40	—	—	18*2	1400	YES
	QS8K2	FRA	TR	N+N	30	3.5	±12	—	—	38	54	55	77	—	—	—	—	—	—	4.6*2	285	YES
	RQ1A070ZP	FRA	TR	P	−12	−7	±10	—	—	8	12	11	16	—	—	19	38	—	—	58*2	7400*4	YES
	RQ1E070RP	FRA	TR		−30	−7	±20	12	17	17	24	—	—	—	—	—	—	—	—	26	2700	YES
	RQ1E050RP	FRA	TR		−30	−5	±20	22	31	32	45	—	—	—	—	—	—	—	—	13	1300	YES
	QS8J4	FRA	TR	P+P	−30	−4	±20	40	56	55	77	—	—	—	—	—	—	—	—	8.4	800	YES
	QS8M51	FRA	TR	N+P	100	2	±20	240	325	250	340	—	—	—	—	—	—	—	—	4.7	290*3	YES
					−100	−1.5	±20	350	470	380	510	—	—	—	—	—	—	—	—	17	950*3	YES

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code Notes2 : *1: V_{GS}=10V *2: V_{GS}=4.5V *3: V_{DS}=25V *4: V_{DS}=6V *5: Ta=25°C

☆: Under Development

Selector Guide for Automotive Power MOSFETs

Automotive Power MOSFETs

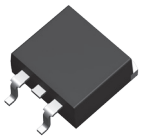
Package	Product No.			Polarity (ch)	V_{DSS} (V)	I_D (A)	V_{GS} (V)	$R_{DS(on)}$(mΩ)						Qg Typ.(nC)	Ciss Typ.(pF)	Automotive Grade AEC-Q101
	Part No.	Grade Code	Taping Code					V_{GS}=10V		V_{GS}=4.5V		V_{GS}=2.5V		V_{GS}=5V	V_{DS}=10V	
								Typ.	Max.	Typ.	Max.	Typ.	Max.			
SOT-89 (MPT3) [SC-62] 4540 size	RHP030N03	FRA	T100	N	30	3	±20	90	120	160	210	—	—	6.5*1	160	YES
	RJP020N06	FRA	T100		60	2	±12	—	—	165	240	210	300	5*2	160	YES
	RHP020N06	FRA	T100		60	2	±20	150	200	200	280	—	—	7*1	140	YES
(HSMT8AG) 3333 size	☆AG009DGQ3	—	TB	N	40	30	±20	6	8	7.3	10	—	—	32*1	1790	YES
(SOP8) 5060 size	RSS130N03	FRA	TB	N	30	13	±20	5.9	8.3	7.4	10.4	—	—	25	2000	YES
	RSS100N03	FRA	TB		30	10	±20	9.5	13.3	12.5	17.5	—	—	14	1070	YES
	RSS090N03	FRA	TB		30	9	±20	11	16	15	22	—	—	11	810	YES
	RSS095N05	FRA	TB		45	9.5	±20	11	16	14	20	—	—	18.9	1830	YES
	RSS070N05	FRA	TB		45	7	±20	18	25	23	32	—	—	12	1000	YES
	RSS065N06	FRA	TB		60	6.5	±20	24	37	28	44	—	—	11	900	YES
	SP8K3	FRA	TB	N+N	30	7	±20	17	24	23	33	—	—	8.4	600	YES
	SP8K2	FRA	TB		30	6	±20	21	30	30	42	—	—	7.2	520	YES
	SP8K1	FRA	TB		30	5	±20	36	51	52	73	—	—	3.9	230	YES
	SP8K5	FRA	TB		30	3.5	±20	59	83	93	130	—	—	2.5	140	YES
	SP8K24	FRA	TB		45	6	±20	18	25	24	34	—	—	15.4	1400	YES
	SP8K23	FRA	TB		45	5	±20	26	36	33	46	—	—	8.6	700	YES
	SP8K22	FRA	TB		45	4.5	±20	33	46	41	57	—	—	6.8	550	YES
	SP8K33	FRA	TB		60	5	±20	34	48	38	54	—	—	8	620	YES
	SP8K32	FRA	TB		60	4.5	±20	46	65	52	73	—	—	7	500	YES
	SP8K31	FRA	TB		60	3.5	±20	85	120	100	140	—	—	3.7	250	YES
	SP8K41	FRA	TB		80	3.4	±20	90	130	110	150	120	160	6.6	600	YES
	SP8K52	FRA	TB		100	3	±20	120	170	130	180	—	—	8.5	610*3	YES
	RRS140P03	FRA	TB	P	−30	−14	±20	5	7	6.7	9.4	—	—	80	8000	YES
	RRS100P03	FRA	TB		−30	−10	±20	9	12.6	12.5	17.5	—	—	39	3600	YES
	RRS090P03	FRA	TB		−30	−9	±20	11	15.4	15	21	—	—	30	3000	YES
	RRS075P03	FRA	TB		−30	−7.5	±20	15	21	22	31	—	—	21	1900	YES
	RRS050P03	FRA	TB		−30	−5	±20	36	50	52	72	—	—	9.2	850	YES
	RRS040P03	FRA	TB		−30	−4	±20	55	75	85	115	—	—	5.2	480	YES
	RSS070P05	FRA	TB		−45	−7	±20	19	27	25	35	—	—	34	4100	YES
	RSS060P05	FRA	TB		−45	−6	±20	26	36	35	49	—	—	23	2700	YES
	SP8J66	FRA	TB	P+P	−30	−9	±20	13.5	18.5	17.5	23.6	—	—	35	3000	YES
	SP8J5	FRA	TB		−30	−7	±20	20	28	25	35	—	—	25	2600	YES
	SP8M4	FRA	TB	N+P	30	9	±20	12	18	16	24	—	—	15	1190	YES
					−30	−7	±20	20	28	25	35	—	—	25	2600	YES
	SP8M10	FRA	TB		30	7	±20	17	25	23	35	—	—	8.4	600	YES
					−30	−4.5	±20	40	56	57	80	—	—	8.5	850	YES
	SP8M5	FRA	TB		30	6	±20	21	30	30	42	—	—	7.2	520	YES
					−30	−7	±20	20	28	25	35	—	—	25	2600	YES
	SP8M8	FRA	TB		30	6	±20	21	30	30	42	—	—	7.2	520	YES
					−30	−4.5	±20	40	56	57	80	—	—	8.5	850	YES
	SP8M3	FRA	TB		30	5	±20	36	51	52	73	—	—	3.9	230	YES
					−30	−4.5	±20	40	56	57	80	—	—	8.5	850	YES
	SP8M6	FRA	TB		30	5	±20	36	51	52	73	—	—	3.9	230	YES
					−30	−3.5	±20	65	90	100	140	—	—	5.5	490	YES
	SP8M21	FRA	TB		45	6	±20	18	25	24	34	—	—	15.4	1400	YES
					−45	−4	±20	33	46	43	60	—	—	20	2400	YES
	SP8M24	FRA	TB		45	4.5	±20	33	46	41	57	—	—	6.8	550	YES
					−45	−3.5	±20	45	63	60	84	—	—	13	1700	YES
	SP8M41	FRA	TB		80	3.4	±20	90	130	110	150	—	—	6.6	600	YES
					−80	−2.6	±20	165	240	220	300	—	—	8.2	1000	YES
	SP8M51	FRA	TB		100	3	±20	120	170	130	180	—	—	8.5	610*3	YES
					−100	−2.5	±20	210	290	230	320	—	—	12.5	1550*3	YES

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: V_{GS}=10V *2: V_{GS}=4.0V *3: V_{DS}=25V

☆: Under Development

Selector Guide for Automotive Power MOSFETs

Automotive Power MOSFETs

Package	Product No.			Polarity (ch)	V_{DSS} (V)	I_D (A)	V_{GS} (V)	$R_{DS(on)}$(mΩ)				Qg Typ.(nC)	Ciss Typ.(pF)	Automotive Grade AEC-Q101
	Part No.	Grade Code	Taping Code					V_{GS}=10V		V_{GS}=4.5V		V_{GS}=10V	V_{DS}=10V	
								Typ.	Max.	Typ.	Max.			
 TO-252	☆RD3H200SN	FRA	TL	N	45	20	±20	20	28	25	35	12*1	950	YES
	☆RD3L220SN	FRA	TL		60	22	±20	18	26	21	30	30	1500	YES
	☆RD3L150SN	FRA	TL		60	15	±20	28	40	33	47	18	930	YES
	☆RD3L080SN	FRA	TL		60	8	±20	57	80	70	98	9.4	380	YES
	☆RD3L050SN	FRA	TL		60	5	±20	78	109	94	131	8	290	YES
	☆RD3P200SN	FRA	TL		100	20	±20	33	46	36*3	50*3	55	2100*2	YES
	☆RD3P175SN	FRA	TL		100	17.5	±20	75	105	80	112	24	950*2	YES
	☆RD3P100SN	FRA	TL		100	10	±20	95	133	100	140	18	700*2	YES
	☆RD3P050SN	FRA	TL		100	5	±20	135	190	142	200	14	530*2	YES
	☆RD3U080AA	FRA	TL		250	8	±30	225	300	—	—	—	1440*2	YES
	☆RD3U041AA	FRA	TL		250	4	±30	930	1300	—	—	—	350*2	YES
	☆R5205PND3	FRA	TL		525	5	±25	1300	1600	—	—	—	320*2	YES
	☆R6006PND3	FRA	TL		600	6	±30	900	1200	—	—	—	460*2	YES
	☆R6004PND3	FRA	TL		600	4	±25	1400	1800	—	—	—	280*2	YES
	☆R8002CND3	FRA	TL		800	2	±30	3300	4300	—	—	—	240*2	YES
	☆R8001CND3	FRA	TL		800	1	±30	6700	8700	—	—	—	60*2	YES
	☆RD3H160SP	FRA	TL	P	−45	−16	±20	35	50	45	63	16*1	2000	YES
	☆RD3H080SP	FRA	TL		−45	−8	±20	65	91	95	133	9*1	1000	YES
	☆RD3H045SP	FRA	TL		−45	−4.5	±20	110	155	160	225	12*1	550	YES
	☆RD3L140SP	FRA	TL		−60	−14	±20	60	84	73	103	27	1900	YES
	☆RD3P130SP	FRA	TL		−100	−13	±20	135	200	150	220	40	2400*3	YES
 TO-263S (LPTS D2PAK) [SC-83]	RSJ451N04	FRA	TL	N	40	45	±20	9.5	13.5	—	—	43	2400*2	YES
	RSJ400N06	FRA	TL		60	40	±20	11	16	—	—	52	2400	YES
	RSJ400N10	FRA	TL		100	40	±20	19	27	21*3	30*3	90	3600*2	YES
	RSJ301N10	FRA	TL		100	30	±20	33	46	36*3	50*3	60	2100*2	YES
	RJ1U330AA	FRG	TL		250	33	±30	77	105	—	—	80	4500*2	YES
	R6020PNJ	FRG	TL		600	20	±30	190	250	—	—	65	2040*2	YES
	New R8008ANJ	FRG	TL		800	8	±30	790	1030	—	—	38	1100*2	YES
	New R8005ANJ	FRG	TL		800	5	±30	1600	2100	—	—	20	500*2	YES
	New R8002ANJ	FRG	TL		800	2	±30	3300	4300	—	—	13	250*2	YES
	RSJ250P10	FRA	TL	P	−100	−25	±20	45	63	48	67	60*1	8000*2	YES

Notes1 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code
Notes2 : *1: V_{GS}=5V *2: V_{DS}=25V *3: V_{GS}=4.0V

☆: Under Development

C Transistors

Bipolar Transistors

Quick Reference for General Purpose Amplification Bipolar Transistors(Flat type)

Application \ Package	SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416FL (EMT3F) [SC-89] 1616 size		SOT-323FL (UMT3F) [SC-85] 2021 size		V_{CEO} (V)	I_C (A)	h_{FE}*2
	*1 P_D=0.15W		*1 P_D=0.15W		*1 P_D=0.2W				
Polarity	PNP	NPN	PNP	NPN	PNP	NPN			
General Purpose Amplification	2SAR522M	2SCR522M	2SAR522EB	2SCR522EB	2SAR522UB	2SCR522UB	20	0.2	120 to 560
	2SAR523M	2SCR523M	2SAR523EB	2SCR523EB	2SAR523UB	2SCR523UB	50	0.1	120 to 560
	2SA2029	2SC5658	2SA1774EB	2SC4617EB	2SA1576UB	2SC4081UB	50	0.15	120 to 560
Low $V_{CE(sat)}$	2SA2030	2SC5663					12	0.5	270 to 680
		2SD2696					30	0.4	270 to 680
Driver			2SAR502EB	2SCR502EB	2SAR502UB	2SCR502UB	30	0.5	200 to 500

Notes1 : *1 With reference land installed
Notes2 : *2 For h_{FE}, please see the technical specifications.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

General Purpose Amplification Bipolar Transistors(Flat type)

Package	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	h_{FE}*2 Code			Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*2		Automotive Grade AEC-Q101
SOT-723 (VMT3) [SC-105AA] 1212 size	General Purpose Amplification	2SAR522M	*	—	T2L				PNP	0.15	20	0.2	120 to 560		—
		2SAR523M		—	T2L					0.15	50	0.1	120 to 560		—
		2SA2029		FHA	T2L	Q	R	S		0.15	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SA2030		—	T2L					0.15	12	0.5	270 to 680		—
	General Purpose Amplification	2SCR522M		—	T2L				NPN	0.15	20	0.2	120 to 560		—
		2SCR523M		—	T2L					0.15	50	0.1	120 to 560		—
		2SC5658		FHA	T2L	Q	R	S		0.15	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SC5663		—	T2L					0.15	12	0.5	270 to 680		—
		2SD2696		—	T2L					0.15	30	0.4	270 to 680		—
SOT-416FL (EMT3F) [SC-89] 1616 size	General Purpose Amplification	2SAR522EB	*	—	TL				PNP	0.15	20	0.2	120 to 560		—
		2SAR523EB		—	TL					0.15	50	0.1	120 to 560		—
		2SA1774EB		HZG	TL	Q	R	S		0.15	50	0.15	120 to 560	S:Not Recommended	YES
	Driver	2SAR502EB		HZG	TL					0.15	30	0.5	200 to 500		YES
	General Purpose Amplification	2SCR522EB		—	TL				NPN	0.15	20	0.2	120 to 560		—
		2SCR523EB		—	TL					0.15	50	0.1	120 to 560		—
		2SC4617EB		HZG	TL	Q	R	S		0.15	50	0.15	120 to 560	S:Not Recommended	YES
	Driver	2SCR502EB		HZG	TL					0.15	30	0.5	200 to 500		YES
SOT-323FL (UMT3F) [SC-85] 2021 size	General Purpose Amplification	2SAR522UB	*	—	TL				PNP	0.2	20	0.2	120 to 560		—
		2SAR523UB		—	TL					0.2	50	0.1	120 to 560		—
		2SA1576UB		HZG	TL	Q	R	S		0.2	50	0.15	120 to 560	S:Not Recommended	YES
	Driver	2SAR502UB		HZG	TL					0.2	30	0.5	200 to 500		YES
	General Purpose Amplification	2SCR522UB		—	TL				NPN	0.2	20	0.2	120 to 560		—
		2SCR523UB		—	TL					0.2	50	0.1	120 to 560		—
		2SC4081UB		HZG	TL	Q	R	S		0.2	50	0.15	120 to 560	S:Not Recommended	YES
	Driver	2SCR502UB		HZG	TL					0.2	30	0.5	200 to 500		YES

Notes1 : *: General Part No. have no grade code.
Notes2 : *1 With reference land installed
Notes3 : *2 For h_{FE}, Q: 120 to 270, R: 180 to 390, S: 270 to 560. Please see the technical specifications.
Notes4 : PNP (—) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Quick Reference for General Purpose Amplification Bipolar Transistors(Gull type)

Application \ Package	SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323 (UMT3) [SC-70] 2021 size		SOT-346 (SMT3) [SC-59] 2928 size		SOT23 (SST3) 2924 size		V_{CEO} (V)	I_C (A)	h_{FE}*2
	*1 P_D=0.15W		*1 P_D=0.2W		*1 P_D=0.2W		*1 P_D=0.2W				
Polarity	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
General Purpose Amplification			☆2SAR502U3	☆2SCR502U3					30	0.5	200 to 500
			☆2SA1576U3	☆2SC4081U3					50	0.15	120 to 560
	2SA1774	2SC4617	2SA1576A	2SC4081	2SA1037AK	2SC2412K			50	0.15	120 to 560
	2SA2018	2SC5585			2SA2119K				12	0.5	270 to 680
Low $V_{CE(sat)}$						2SD1757K			15	0.5	120 to 560
					2SB1590K	2SD2444K			15	1	120 to 270 180 to 390
			2SB1689	2SD2652					12	1.5	270 to 680
					2SB1690K	2SD2653K			12	2	270 to 680
			2SB1694	2SD2656					30	1	270 to 680
					2SB1695K	2SD2657K			30	1.5	270 to 680
Drive			2SA1577	2SC4097	2SA1036K	2SC2411K			32	0.5	120 to 390
					2SB1197K	2SD1781K			32	0.8	120 to 390
				2SD1949		2SD1484K			50	0.5	120 to 390
					2SB1198K	2SD1782K			80	0.5	120 to 390
High Speed Switching			☆2SA2088U3						60	0.5	120 to 270
				☆2SC5876U3					60	0.5	120 to 390
			2SA2088	2SC5876					60	0.5	120 to 270 120 to 390
High Voltage			☆2SA1579U3	☆2SC4102U3			☆2SARA41C	☆2SCRC41C	120	0.05	180 to 560
			2SA1579	2SC4102	2SA1514K	2SC3906K			120	0.05	180 to 560
						2SC4061K			300	0.1	56 to 120

Notes1 : *1 With reference land installed
Notes2 : *2 For h_{FE}, please see the technical specifications.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

☆: Under Development

General Purpose Amplification Bipolar Transistors(Gull type)

Package	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	h_{FE}*2 Code			Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*2		Automotive Grade AEC-Q101
 SOT-416 (EMT3) [SC-75A] 1616 size	General Purpose Amplification	2SA1774	*	FRA	TL	Q	R	S	PNP	0.15	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SA2018		—	TL					0.15	12	0.5	270 to 680		—
	General Purpose Amplification	2SC4617		FRA	TL	Q	R	S	NPN	0.15	50	0.15	120 to 560		YES
	Low $V_{CE(sat)}$	2SC5585		—	TL					0.15	12	0.5	270 to 680		—
 SOT-323 (UMT3) [SC-70] 2021 size	General Purpose Amplification	☆2SAR502U3	*	HZG	T106				PNP	0.2	30	0.5	200 to 500		YES
		☆2SA1576U3		HZG	T106					0.2	50	0.15	120 to 560		YES
		2SA1576A		FRA	T106	Q	R	S		0.2	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SB1689		—	T106					0.2	12	1.5	270 to 680		—
		2SB1694		FRA	T106					0.2	30	1	270 to 680		YES
	Driver	2SA1577		—	T106	Q	R			0.2	32	0.5	120 to 390		—
	High Speed Switching	☆2SA2088U3		HZG	T106					0.2	60	0.5	120 to 270		YES
		2SA2088		FRA	T106	Q				0.2	60	0.5	120 to 390		YES
	High Voltage	☆2SA1579U3		HZG	T106					0.2	120	0.05	180 to 560		YES
		2SA1579		FRA	T106	R	S			0.2	120	0.05	180 to 560		YES
	General Purpose Amplification	☆2SCR502U3		HZG	T106				NPN	0.2	30	0.5	200 to 500		YES
		☆2SC4081U3		HZG	T106					0.2	50	0.15	120 to 560		YES
		2SC4081		FRA	T106	Q	R	S		0.2	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SD2652		—	T106					0.2	12	1.5	270 to 680		—
		2SD2656		FRA	T106					0.2	30	1	270 to 680		YES
	Driver	2SC4097		—	T106	Q	R			0.2	32	0.5	120 to 390		—
		2SD1949		—	T106	Q	R			0.2	50	0.5	120 to 390		—
	High Speed Switching	☆2SC5876U3		HZG	T106					0.2	60	0.5	120 to 390		YES
		2SC5876		FRA	T106	Q	R			0.2	60	0.5	120 to 390		YES
	High Voltage	☆2SC4102U3		HZG	T106					0.2	120	0.05	180 to 560		YES
		2SC4102		FRA	T106	R	S			0.2	120	0.05	180 to 560		YES
 SOT-346 (SMT3) [SC-59] 2928 size	General Purpose Amplification	2SA1037AK	*	FRA	T146	Q	R	S	PNP	0.2	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SA2119K		—	T146					0.2	12	0.5	270 to 680		—
		2SB1590K		—	T146	Q				0.2	15	1	120 to 390		—
		2SB1690K		—	T146					0.2	12	2	270 to 680		—
		2SB1695K		—	T146					0.2	30	1.5	270 to 680		—
	Driver	2SA1036K		FRA	T146	Q	R			0.2	32	0.5	120 to 390		YES
		2SB1197K		FRA	T146	Q	R			0.2	32	0.8	120 to 390		YES
		2SB1198K		FRA	T146	Q	R			0.2	80	0.5	120 to 390		YES
	High Voltage	2SA1514K		FRA	T146	R	S			0.2	120	0.05	180 to 560		YES
	General Purpose Amplification	2SC2412K		FRA	T146	Q	R	S	NPN	0.2	50	0.15	120 to 560	S:Not Recommended	YES
	Low $V_{CE(sat)}$	2SD1757K		—	T146	Q	R	S		0.2	15	0.5	120 to 560		—
		2SD2444K		—	T146	R				0.2	15	1	180 to 390		—
		2SD2653K		—	T146					0.2	12	2	270 to 680		—
		2SD2657K		—	T146					0.2	30	1.5	270 to 680		—
	Driver	2SC2411K		FRA	T146	Q	R			0.2	32	0.5	120 to 390		YES
		2SD1781K		FRA	T146	Q	R			0.2	32	0.8	120 to 390		YES
		2SD1484K		FRA	T146	Q	R			0.2	50	0.5	120 to 390		YES
		2SD1782K		FRA	T146	Q	R			0.2	80	0.5	120 to 390		YES
	High Voltage	2SC3906K		FRA	T146	R	S			0.2	120	0.05	180 to 560		YES
		2SC4061K		—	T146	N				0.2	300	0.1	56 to 120		—
 SOT23 (SST3) 2924 size	High Voltage	☆2SARA41C	*	HZG	T116	R	S		PNP	0.2	120	0.05	180 to 560		YES
		☆2SCRC41C		HZG	T116	R	S		NPN	0.2	120	0.05	180 to 560		YES

Notes1 : *: General Part No. have no grade code.
Notes2 : *1 With reference land installed
Notes3 : *2 For h_{FE}, N: 56 to 120, P: 82 to 180, Q: 120 to 270, R: 180 to 390, S: 270 to 560. Please see the technical specifications.
Notes4 : PNP (−) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

☆: Under Development

C Transistors

Bipolar Transistors

Quick Reference for Bipolar Transistors(For Oversea Customer)

Application \ Package	SOT-323 (UMT3) [SC-70] 2021 size		SOT-363 (UMT6) [SC-88] 2021 size	SOT-23 (SST3) 2924 size		V_{CEO} (V)	I_C (A)	h_{FE}*2
	 *1 P_D=0.15W		 *1 P_D=0.2W	 *1 P_D=0.2W				
	PNP	NPN	PNP/NPN	PNP	NPN			
General Purpose Amplification	BC858BW	BC848BW		BC858B	BC848B	30	0.1	200 to 450
		☆BC847BU3		BC857B	BC847B	45	0.1	200 to 450
	☆BC857BU3					45	0.1	210 to 480
				☆BC857C	☆BC847C	45	0.15	420 to 800
			☆BC846PN		☆BC846B	65	0.12	200 to 450
				BC856B		65	0.1	220 to 475
				☆BSS63	☆BSS64	100	0.1	30 or more
Driver				☆BSS4130	☆BSS5130	30	1.0	270 or more
				BCX17	BCX19	45	0.5	100 to 600
				BC807-16	BC817-16	45	0.8	100 to 250
				BC807-25	BC817-25	45	0.8	160 to 400
				BC807-40	BC817-40	45	0.8	250 to 600
				SSTA56	SSTA06	80	0.5	100 or more
Switching	UMT3906	UMT3904		SST3906	SST3904	40	0.2	100 to 300
	☆UMT4403U3	☆UMT4401U3		SST4403	SST4401	40	0.6	100 to 300
		UMT2222A			SST2222A	40	0.6	100 to 300
		☆UM2222AU3				40	0.6	100 to 300
	UMT2907A			SST2907A		60	0.6	100 to 300
Darlington*3					SSTA28	80 (V_{CES})	0.3	10k or more

Notes1 : *1 With reference land installed Notes2 : *2 For h_{FE}, please see the technical specifications.
Notes3 : *3 For internal circuit, please see the technical specifications.
Notes4 : PNP (—) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

☆: Under Development

Bipolar Transistors(For Oversea Customer)

Package	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*2	Automotive Grade AEC-Q101
SOT-323 (UMT3) [SC-70] 2021 size	General Purpose Amplification	BC858BW	*	—	T106	PNP	0.15	30	0.1	200 to 450	—
		☆BC857BU3		HZG	T106		0.15	45	0.1	210 to 480	YES
	Switching	UMT3906		—	T106		0.15	40	0.2	100 to 300	—
		☆UMT4403U3		HZG	T106		0.15	40	0.6	100 to 300	YES
		UMT2907A		—	T106		0.15	60	0.6	100 to 300	—
	General Purpose Amplification	BC848BW		—	T106	NPN	0.15	30	0.1	200 to 450	—
		☆BC847BU3		HZG	T106		0.15	45	0.1	200 to 450	YES
	Switching	UMT3904		—	T106		0.15	40	0.2	100 to 300	—
		☆UMT4401U3		HZG	T106		0.15	40	0.6	100 to 300	YES
		UMT2222A		—	T106		0.15	40	0.6	100 to 300	—
		☆UM2222AU3		HZG	T106		0.15	40	0.6	100 to 300	YES
SOT-363 (UMT6) [SC-88] 2021 size	General Purpose Amplification	☆BC846PN	*	FHA	TR	NPN/PNP	0.2	65	0.12	200 to 450	YES
SOT-23 (SST3) 2924 size	General Purpose Amplification	BC858B	*	HZG	T116	PNP	0.2	30	0.1	200 to 450	YES
		BC857B		HZG	T116		0.2	45	0.1	200 to 450	YES
		☆BC857C		HZG	T116		0.2	45	0.15	420 to 800	YES
		BC856B		HZG	T116		0.2	65	0.1	220 to 475	YES
		☆BSS63		HZG	T116		0.2	100	0.1	30 or more	YES
	Driver	☆BSS4130		HZG	T116		0.2	30	1.0	270 or more	YES
		BCX17		HZG	T116		0.2	45	0.5	100 to 600	YES
		BC807-16		HZG	T116		0.2	45	0.8	100 to 250	YES
		BC807-25		HZG	T116		0.2	45	0.8	160 to 400	YES
		BC807-40		HZG	T116		0.2	45	0.8	250 to 600	YES
		SSTA56		HZG	T116		0.2	80	0.5	100 or more	YES
	Switching	SST3906		HZG	T116		0.2	40	0.2	100 to 300	YES
		SST4403		HZG	T116		0.2	40	0.6	100 to 300	YES
		SST2907A		HZG	T116		0.2	60	0.6	100 to 300	YES
	General Purpose Amplification	BC848B		HZG	T116	NPN	0.2	30	0.1	200 to 450	YES
		BC847B		HZG	T116		0.2	45	0.1	200 to 450	YES
		☆BC847C		HZG	T116		0.2	45	0.15	420 to 800	YES
		☆BC846B		HZG	T116		0.2	65	0.12	200 to 450	YES
		☆BSS64		HZG	T116		0.2	100	0.1	30 or more	YES
	Driver	☆BSS5130		HZG	T116		0.2	30	1.0	270 or more	YES
		BCX19		HZG	T116		0.2	45	0.5	100 to 600	YES
		BC817-16		HZG	T116		0.2	45	0.8	100 to 250	YES
		BC817-25		HZG	T116		0.2	45	0.8	160 to 400	YES
		BC817-40		HZG	T116		0.2	45	0.8	250 to 600	YES
		SSTA06		HZG	T116		0.2	80	0.5	100 or more	YES
	Switching	SST3904		HZG	T116		0.2	40	0.2	100 to 300	YES
		SST4401		HZG	T116		0.2	40	0.6	100 to 300	YES
		SST2222A		HZG	T116		0.2	40	0.6	100 to 300	YES
	Darlington*3	SSTA28		—	T116		0.2	80 (V_{CES})	0.3	10k or more	—

Notes1 : *: General Part No. have no grade code. Notes2 : *1 With reference land installed
Notes3 : *2 For h_{FE}, please see the technical specifications.
Notes4 : *3 For internal circuit, please see the technical specifications.
Notes5 : PNP (—) symbol omitted.
Notes6 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

☆: Under Development

Quick Reference for High h_{FE}/Muting·Darlington Bipolar Transistors

Application \ Package	SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323 (UMT3) [SC-70] 2021 size		SOT-346 (SMT3) [SC-59] 2928 size		V_{CEO} (V)	I_C (A)	h_{FE}*2
	*1 P_D=0.15W		*1 P_D=0.15W		*1 P_D=0.2W		*1 P_D=0.2W				
	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
High h_{FE} · Muting								2SD2704K	25 (V_{EBO})	0.3	820 to 2700
								2SD2114K	20	0.5	820 to 2700
		2SD2707		2SD2654		2SD2351		2SD2226K	50	0.15	820 to 2700
Darlington*3								2SD2142K	30	0.3	5k or more
							2SB852K	2SD1383K	32 (V_{CES})	0.3	5k or more

Notes1 : *1 With reference land installed
Notes2 : *2 For h_{FE}, please see the technical specifications.
Notes3 : *3 For internal circuit, please see the technical specifications.
Notes4 : PNP (−) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

High h_{FE}/Muting·Darlington Bipolar Transistors

Package	Application	Product No.						Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*2		Automotive Grade AEC-Q101
		Part No.	Grade Code		Taping Code	h_{FE}*2 code								
			General	Automotive										
 SOT-723 (VMT3) [SC-105AA] 1212 size	High h_{FE} · Muting	2SD2707	*	—	T2L	V	W	NPN	0.15	50	0.15	820 to 2700	W:Not Recommended	—
 SOT-416 (EMT3) [SC-75A] 1616 size	High h_{FE} · Muting	2SD2654	*	—	TL	V	W	NPN	0.15	50	0.15	820 to 2700		—
 SOT-323 (UMT3) [SC-70] 2021 size	High h_{FE} · Muting	2SD2351	*	—	T106	V	W	NPN	0.2	50	0.15	820 to 2700		—
 SOT-346 (SMT3HP) [SC-59] 2928 size	Darlington*3	2SB852K	*	—	T146	B		PNP	0.2	32 (V_{CES})	0.3	5k or more		—
	High h_{FE} · Muting	2SD2704K		—	T146			NPN	0.2	25 (V_{EBO})	0.3	820 to 2700		—
		2SD2114K		—	T146	V	W		0.2	20	0.5	820 to 2700		—
		2SD2226K		—	T146	V	W		0.2	50	0.15	820 to 2700		—
	Darlington*3	2SD2142K		—	T146				0.2	30	0.3	5k or more		—
		2SD1383K		—	T146	B			0.2	32 (V_{CES})	0.3	5k or more		—

Notes1 : *: General Part No. have no grade code.
Notes2 : *1 With reference land installed
Notes3 : *2 For h_{FE}, B: 5k or more, V: 820 to 1800, W: 1200 to 2700. Please see the technical specifications.
Notes4 : *3 For internal circuit, please see the technical specifications.
Notes5 : PNP (−) symbol omitted.
Notes6 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Bipolar Transistors

Quick Reference for High Frequency Bipolar Transistors

Package / Polarity / Application	SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323 (UMT3) [SC-70] 2021 size		SOT-346 (SMT3) [SC-59] 2928 size		V_{CEO} (V)	I_C (A)	h_{FE}*2
	 *1 P_D=0.15W		 *1 P_D=0.15W		 *1 P_D=0.2W		 *1 P_D=0.2W				
	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
High Frequency				2SC4618		2SC4098			25	0.05	82 to 180 (f_T=300MHz)
						2SC4774		2SC4713K	6	0.05	180 to 560 (f_T=800MHz)
		2SC5661		2SC4725		2SC4082		2SC3837K	20	0.05	82 to 180 (f_T=1500MHz)
		2SC5662		2SC4726		2SC4083		2SC3838K	11	0.05	56 to 180 (f_T=3200MHz)

Notes1 : *1 With reference land installed Notes2 : *2 For h_{FE}, please see the technical specifications.
Notes3 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

High Frequency Bipolar Transistors

Package	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	h_{FE}*2 code		Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*2	f_T (MHz)	Automotive Grade AEC-Q101
 SOT-723 (VMT3) [SC-105AA] 1212 size	High Frequency	2SC5661	*	—	T2L	P		NPN	0.15	20	0.05	82 to 180	1500	—
		2SC5662		—	T2L	P			0.15	11	0.05	56 to 180	3200	—
 SOT-416 (EMT3) [SC-75A] 1616 size	High Frequency	2SC4618		—	TL	N	P	NPN	0.15	25	0.05	82 to 180	300	—
		2SC4725		—	TL	P			0.15	20	0.05	82 to 180	1500	—
		2SC4726		—	TL	N	P		0.15	11	0.05	56 to 180	3200	—
 SOT-323 (UMT3) [SC-70] 2021 size	High Frequency	2SC4098		—	T106	P		NPN	0.2	25	0.05	82 to 180	300	—
		2SC4774		—	T106	R	S		0.2	6	0.05	180 to 560	800	—
		2SC4082		—	T106	P			0.2	20	0.05	82 to 180	1500	—
		2SC4083		—	T106	N	P		0.2	11	0.05	56 to 180	3200	—
 SOT-346 (SMT3HP) [SC-59] 2928 size	High Frequency	2SC4713K		—	T146	R	S	NPN	0.2	6	0.05	180 to 560	800	—
		2SC3837K		—	T146	P			0.2	20	0.05	82 to 180	1500	—
		2SC3838K		—	T146	N	P		0.2	11	0.05	56 to 180	3200	—

Notes1 : *: General Part No. have no grade code. Notes2 : *1 With reference land installed
Notes3 : *2 For h_{FE}, N: 56 to 120, P: 82 to 180, R: 180 to 390, S: 270 to 560. Please see the technical specifications.
Notes4 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Quick Reference for Low Saturation/Driver Bipolar Transistors

Package / Polarity / Application	SOT-323T/SOT-363T (TUMT3/TUMT6) [SC-113A/SC-113DA] 2021 size		SOT-346T/SOT-457T (TSMT3/TSMT6) [SC-96/SC-95] 2928 size		V_{CEO} (V)	I_C (A)	h_{FE}*2
	 *1 P_D=0.4W		 *1 P_D=0.5W				
	PNP	NPN	PNP	NPN			
Low $V_{CE(sat)}$	2SB1732	2SD2702	2SB1709	2SD2674	12	1.5	270 to 680
	2SB1730	2SD2700	2SB1690	2SD2653	12	2	270 to 680
	US6T4*3	US6X3*3	2SB1705	2SD2670	12	3	270 to 680
			2SB1707	2SD2672	12	4	270 to 680
			QST2*3	QSX1*3	12	6	270 to 680
	2SB1733	2SD2703	2SB1710	2SD2675	30	1	270 to 680
	2SB1731	2SD2701	2SB1695	2SD2657	30	1.5	270 to 680
	US6T5*3	US6X4*3	2SB1706	2SD2671	30	2	270 to 680
			2SB1708	2SD2673	30	3	270 to 680
			QST3*3	QSX2*3	30	5	270 to 680
Driver			2SAR512R	2SCR512R	30	2	200 to 500
			2SAR513R	2SCR513R	50	1	180 to 450
			2SAR553R	2SCR553R	50	2	180 to 450
			2SAR543R	2SCR543R	50	3	180 to 450
			2SAR514R	2SCR514R	80	0.7	120 to 390
			2SAR554R	2SCR554R	80	1.5	120 to 390
			2SAR544R	2SCR544R	80	2.5	120 to 390
High Speed Switching			2SA2094	2SC5866	60	2	120 to 270 120 to 390
High Voltage			2SAR340Q*3	2SCR341Q*3	400	0.1	82 to 270

Notes1 : *1 With reference land installed Notes2: *2 For h_{FE}, please see the technical specifications. Notes3 : *3 6pin package(TSMT6/TUMT6) For internal circuit, please see the technical specifications.
Notes4 : PNP (−) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Low Saturation/Driver Bipolar Transistors

Package	Application	Product No.	Grade Code		Taping Code	h_{FE}*2 code		Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*2	Automotive Grade AEC-Q101
		Part No.	General	Automotive									
SOT-323T (TUMT3) [SC-113A] 2021 size	Low $V_{CE(sat)}$	2SB1732	*	—	TL			PNP	0.4	−12	−1.5	270 to 680	—
		2SB1730		—	TL				0.4	−12	−2	270 to 680	—
		2SB1733		—	TL				0.4	−30	−1	270 to 680	—
		2SB1731		—	TL				0.4	−30	−1.5	270 to 680	—
		2SD2702		—	TL			NPN	0.4	12	1.5	270 to 680	—
		2SD2700		—	TL				0.4	12	2	270 to 680	—
		2SD2703		—	TL				0.4	30	1	270 to 680	—
		2SD2701		—	TL				0.4	30	1.5	270 to 680	—
SOT-363T (TUMT6) [SC-113DA] 2021 size	Low $V_{CE(sat)}$	US6T4	*	—	TR			PNP	0.4	−12	−3	270 to 680	—
		US6T5		—	TR				0.4	−30	−2	270 to 680	—
		US6X3		—	TR			NPN	0.4	12	3	270 to 680	—
		US6X4		—	TR				0.4	30	2	270 to 680	—
SOT-346T (TSMT3) [SC-96] 2928 size	Low $V_{CE(sat)}$	2SB1709	*	—	TL			PNP	0.5	−12	−1.5	270 to 680	—
		2SB1690		—	TL				0.5	−12	−2	270 to 680	—
		2SB1705		—	TL				0.5	−12	−3	270 to 680	—
		2SB1707		—	TL				0.5	−12	−4	270 to 680	—
		2SB1710		—	TL				0.5	−30	−1	270 to 680	—
		2SB1695		—	TL				0.5	−30	−1.5	270 to 680	—
		2SB1706		—	TL				0.5	−30	−2	270 to 680	—
		2SB1708		—	TL				0.5	−30	−3	270 to 680	—
	Driver	2SAR512R		—	TL				0.5	−30	−2	200 to 500	—
		2SAR513R		—	TL				0.5	−50	−1	180 to 450	—
		2SAR553R		—	TL				0.5	−50	−2	180 to 450	—
		2SAR543R		—	TL				0.5	−50	−3	180 to 450	—
		2SAR514R		—	TL				0.5	−80	−0.7	120 to 390	—
		2SAR554R		—	TL				0.5	−80	−1.5	120 to 390	—
		2SAR544R		—	TL				0.5	−80	−2.5	120 to 390	—
	High Speed Switching	2SA2094		—	TL	Q			0.5	−60	−2	120 to 270	—
	Low $V_{CE(sat)}$	2SD2674		—	TL			NPN	0.5	12	1.5	270 to 680	—
		2SD2653		—	TL				0.5	12	2	270 to 680	—
		2SD2670		—	TL				0.5	12	3	270 to 680	—
		2SD2672		—	TL				0.5	12	4	270 to 680	—
		2SD2675		—	TL				0.5	30	1	270 to 680	—
		2SD2657		—	TL				0.5	30	1.5	270 to 680	—
		2SD2671		—	TL				0.5	30	2	270 to 680	—
		2SD2673		—	TL				0.5	30	3	270 to 680	—
	Driver	2SCR512R		—	TL				0.5	30	2	200 to 500	—
		2SCR513R		—	TL				0.5	50	1	180 to 450	—
		2SCR553R		—	TL				0.5	50	2	180 to 450	—
		2SCR543R		—	TL				0.5	50	3	180 to 450	—
		2SCR514R		—	TL				0.5	80	0.7	120 to 390	—
		2SCR554R		—	TL				0.5	80	1.5	120 to 390	—
		2SCR544R		—	TL				0.5	80	2.5	120 to 390	—
	High Speed Switching	2SC5866		—	TL	Q	R		0.5	60	2	120 to 390	—
SOT-457T (TSMT6) [SC-95] 2928 size	Low $V_{CE(sat)}$	QST2	*	—	TR			PNP	0.5	−12	−6	270 to 680	—
		QST3		—	TR				0.5	−30	−5	270 to 680	—
	High Voltage	2SAR340Q		—	TR	P	Q		0.5	−400	−0.1	82 to 270	—
	Low $V_{CE(sat)}$	QSX1		—	TR			NPN	0.5	12	6	270 to 680	—
		QSX2		—	TR				0.5	30	5	270 to 680	—
	High Voltage	2SCR341Q		—	TR	P	Q		0.5	400	0.1	82 to 270	—

Notes1 : *: General Part No. have no grade code.
Notes2 : *1 With reference land installed
Notes3 : *2 For h_{FE}, P: 82 to 180, Q: 120 to 270, R: 180 to 390. Please see the technical specifications.
Notes4 : *3 6pin package(TSMT6/TUMT6) For internal circuit, please see the technical specifications.
Notes5 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Bipolar Transistors

Quick Reference for Power Bipolar Transistors

Application \ Package	DFN2020-3S (HUML2020L3) 2020 size		SOT-89 (MPT3) [SC-62] 4540 size		SOT-428 (CPT3 DPAK) [SC-63]		TO-252		V_{CEO} (V)	I_C (A)	h_{FE}*3
	 *1 P_D=0.5W		 *1 P_D=0.5W		 *2 P_D=10W		 *2 P_D=10W				
Polarity	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
Driver			2SB1697	2SD2661					12	2	270 to 680
			2SAR293P 2SAR293P5	2SCR293P 2SCR293P5					30	1	270 to 680
			2SAR512P 2SAR512P5	2SCR512P 2SCR512P5					30	2	200 to 500
			2SAR552P 2SAR552P5	2SCR552P 2SCR552P5					30	3	200 to 500
	2SAR542F3	New 2SCR542F3							30	3	200 to 500
			2SAR542P	2SCR542P			New 2SAR572D3	New 2SCR572D3	30	5	200 to 500
	New 2SAR562F3	New 2SCR562F3							30	6	200 to 500
			2SAR513P 2SAR513P5	2SCR513P 2SCR513P5					50	1	180 to 450
			2SAR553P 2SAR553P5	2SCR553P 2SCR553P5					50	2	180 to 450
			2SAR533P 2SAR533P5	2SCR533P 2SCR533P5					50	3	180 to 450
							New 2SAR573D3	New 2SCR573D3	50	3	180 to 450
			2SB1561	2SD2391					60	2	120 to 270
			2SAR514P 2SAR514P5	2SCR514P 2SCR514P5					80	0.7	120 to 390
			2SAR554P 2SAR554P5	2SCR554P 2SCR554P5					80	1.5	120 to 390
							New 2SAR574D3	New 2SCR574D3	80	2	120 to 390
			2SAR544P 2SAR544P5	2SCR544P 2SCR544P5					80	2.5	120 to 390
							New 2SAR586D3	New 2SCR586D3	80	5	120 to 390
				2SCR372P 2SCR372P5					120	0.7	120 to 390
				2SCR375P 2SCR375P5					120	1.5	120 to 390
					2SB1275	2SD1918			160	1.5	82 to 180 120 to 270
High Voltage			2SAR340P	2SCR346P					400	0.1	82 to 270
High Speed Switching			2SA2071P5	2SC5824					60	3	120 to 270 120 to 390
High h_{FE}				2SD2537					25	1.2	820 to 1800
			2SB1427						20	2	390 to 820
				2SD2153					25	2	560 to 2700
Darlington*4				2SD1834					60 (V_{CES})	1	2k or more
						2SD2143			60±10	2	1k to 10k
					2SB1316	2SD1980			100	2	1k to 10k

Notes1 : *1 With reference land installed
Notes2 : *2 Tc=25°C
Notes3 : *3 For h_{FE}, please see the technical specifications.
Notes4 : *4 For internal circuit, please see the technical specifications.
Notes5 : PNP (−) symbol omitted.
Notes6 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

C Transistors

Power Bipolar Transistors

Package	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	h_{FE}*3 code			Polarity (ch)	P_D*1 (W)	V_{CEO} (V)	I_C (A)	h_{FE}*3	Automotive Grade AEC-Q101
DFN2020-3S (HUML2020L3) 2020 size	Driver	2SAR542F3	*	—	TR				PNP	0.5	−30	−3	200 to 500	—
		New 2SAR562F3		—	TR					0.5	−30	−6	200 to 500	—
		New 2SCR542F3		—	TR				NPN	0.5	30	3	200 to 500	—
		New 2SCR562F3		—	TR					0.5	30	6	200 to 500	—
SOT-89 (MPT3) [SC-62] 4540 size	Driver	2SB1697	*	—	T100				PNP	0.5	−12	−2	270 to 680	—
		2SAR293P	—	FRA	T100					0.5	−30	−1	270 to 680	YES
		2SAR293P5	*	—	T100					0.5	−30	−1	270 to 680	—
		2SAR512P	—	FRA	T100					0.5	−30	−2	200 to 500	YES
		2SAR512P5	*	—	T100					0.5	−30	−2	200 to 500	—
		2SAR552P	—	FRA	T100					0.5	−30	−3	200 to 500	YES
		2SAR552P5	*	—	T100					0.5	−30	−3	200 to 500	—
		2SAR542P		FRA	T100					0.5	−30	−5	200 to 500	YES
		2SAR513P	—	FRA	T100					0.5	−50	−1	180 to 450	YES
		2SAR513P5	*	—	T100					0.5	−50	−1	180 to 450	—
		2SAR553P	—	FRA	T100					0.5	−50	−2	180 to 450	YES
		2SAR553P5	*	—	T100					0.5	−50	−2	180 to 450	—
		2SAR533P	—	FRA	T100					0.5	−50	−3	180 to 450	YES
		2SAR533P5	*	—	T100					0.5	−50	−3	180 to 450	—
		2SB1561		—	T100	Q				0.5	−60	−2	120 to 270	—
		2SAR514P	—	FRA	T100					0.5	−80	−0.7	120 to 390	YES
		2SAR514P5	*	—	T100					0.5	−80	−0.7	120 to 390	—
		2SAR554P	—	FRA	T100					0.5	−80	−1.5	120 to 390	YES
		2SAR554P5	*	—	T100					0.5	−80	−1.5	120 to 390	—
		2SAR544P	—	FRA	T100					0.5	−80	−2.5	120 to 390	YES
		2SAR544P5		—	T100					0.5	−80	−2.5	120 to 390	—
	High Voltage	2SAR340P		—	T100	P	Q			0.5	−400	−0.1	82 to 270	—
	High Speed Switching	2SA2071P5	*	—	T100	Q				0.5	−60	−3	120 to 270	—
	High h_{FE}	2SB1427		—	T100	E				0.5	−20	−2	390 to 820	—
	Driver	2SD2661		—	T100				NPN	0.5	12	2	270 to 680	—
		2SCR293P	—	FRA	T100					0.5	30	1	270 to 680	YES
		2SCR293P5	*	—	T100					0.5	30	1	270 to 680	—
		2SCR512P	—	FRA	T100					0.5	30	2	200 to 500	YES
		2SCR512P5	*	—	T100					0.5	30	2	200 to 500	—
		2SCR552P	—	FRA	T100					0.5	30	3	200 to 500	YES
		2SCR552P5	*	—	T100					0.5	30	3	200 to 500	—
		2SCR542P		FRA	T100					0.5	30	5	200 to 500	YES
		2SCR513P	—	FRA	T100					0.5	50	1	180 to 450	YES
		2SCR513P5	*	—	T100					0.5	50	1	180 to 450	—
		2SCR553P	—	FRA	T100					0.5	50	2	180 to 450	YES
		2SCR553P5	*	—	T100					0.5	50	2	180 to 450	—
		2SCR533P	—	FRA	T100					0.5	50	3	180 to 450	YES
		2SCR533P5	*	—	T100					0.5	50	3	180 to 450	—
		2SD2391		FRA	T100	Q				0.5	60	2	120 to 270	—
		2SCR514P	—	FRA	T100					0.5	80	0.7	120 to 390	YES
		2SCR514P5	*	—	T100					0.5	80	0.7	120 to 390	—
		2SCR554P	—	FRA	T100					0.5	80	1.5	120 to 390	YES
		2SCR554P5	*	—	T100					0.5	80	1.5	120 to 390	—
		2SCR544P	—	FRA	T100					0.5	80	2.5	120 to 390	YES
		2SCR544P5	*	—	T100					0.5	80	2.5	120 to 390	—
		2SCR372P	—	FRA	T100	Q	R			0.5	120	0.7	120 to 390	YES
		2SCR372P5	*	—	T100	Q	R			0.5	120	0.7	120 to 390	—
		2SCR375P	—	FRA	T100	Q	R			0.5	120	1.5	120 to 390	YES
		2SCR375P5		—	T100	Q	R			0.5	120	1.5	120 to 390	—
	High Voltage	2SCR346P		—	T100	P	Q			0.5	400	0.1	82 to 270	—
	High Speed Switching	2SC5824	*	—	T100	Q	R			0.5	60	3	120 to 390	—
	High h_{FE}	2SD2537		—	T100	V				0.5	25	1.2	820 to 1800	—
		2SD2153		—	T100	U	V	W		0.5	25	2	560 to 2700	—
	Darlington*4	2SD1834		—	T100					0.5	60 (V_{CES})	1	2k or more	—
SOT-428 (CPT3) [SC-63]	Driver	2SB1275	*	—	TL	P			PNP	10*2	−160	−1.5	82 to 180	—
	Darlington*4	2SB1316		—	TL					10*2	−100	−2	1k to 10k	—
	Driver	2SD1918		—	TL	Q			NPN	10*2	160	1.5	120 to 270	—
	Darlington*4	2SD2143		—	TL					10*2	60±10	2	1k to 10k	—
		2SD1980		—	TL					10*2	100	2	1k to 10k	—
TO-252	Driver	New 2SAR572D3	*	—	TL1				PNP	10*2	−30	−5	200 to 500	—
		New 2SAR573D3		—	TL1					10*2	−50	−3	180 to 450	—
		New 2SAR574D3		—	TL1					10*2	−80	−2	120 to 390	—
		New 2SAR586D3		—	TL1					10*2	−80	−5	120 to 390	—
		New 2SCR572D3		—	TL1				NPN	10*2	30	5	200 to 500	—
		New 2SCR573D3		—	TL1					10*2	50	3	180 to 450	—
		New 2SCR574D3		—	TL1					10*2	80	2	120 to 390	—
		New 2SCR586D3		—	TL1					10*2	80	5	120 to 390	—

Notes1 : *: General Part No. have no grade code.
Notes2 : *1 With reference land installed
Notes3 : *2 T_C=25°C
Notes4 : *3 h_{FE} P:82 to 180, Q:120 to 270, R:180 to 390, U:560 to 1200, V:820 to 1800, W:1200 to 2700. Please see the technical specifications.
Notes5 : *4 For internal circuit, please see the technical specifications.
Notes6 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Complex Bipolar Transistors

Quick Reference for General Purpose Amplification Complex Bipolar Transistors

Configuration	Package / Item / Application	Equivalent Circuit Diagram (TOP View)	(VMT6) [SC-105B] 1212 size	SOT-553/SOT-563 (EMT5/EMT6) [SC-107BB/SC-107C] 1616 size	SOT-353/SOT-363 (UMT5/UMT6) [SC-88A/SC-88] 2021 size	SOT-25/SOT-457 (SMT5/SMT6) [SC-74A/SC-74] 2928 size	Equivalent Element Transistors	V_{CEO} (V)	I_C (A)	h_{FE}
										
			Part No.							
PNP×2	Pre Amp.		VT6T1	EMT51			2SAR522EB×2	−20	−0.2	120 to 560
			VT6T2	EMT52			2SAR523EB×2	−50	−0.1	120 to 560
				EMT1	UMT1N	IMT1A	2SA1037AK×2	−50	−0.15	120 to 560
				EMT18	UMT18N	IMT18	2SA2018×2	−12	−0.5	270 to 680
NPN×2	Pre Amp.		VT6X1	EMX51			2SCR522EB×2	20	0.2	120 to 560
			VT6X2	EMX52			2SCR523EB×2	50	0.1	120 to 560
				EMX1	UMX1N	IMX1	2SC2412K×2	50	0.15	120 to 560
				EMX26			2SD2654×2	50	0.15	820 to 2700
				EMX18	UMX18N		2SC5585×2	12	0.5	270 to 680
						IMX25	2SD2704K×2	20	0.3	820 to 2700
PNP + NPN	Pre Amp.			EMY1	UMY1N	FMY1A	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560
			VT6Z1	EMZ51			2SAR522EB 2SCR522EB	−20 20	−0.2 0.2	120 to 560 120 to 560
			VT6Z2	EMZ52			2SAR523EB 2SCR523EB	−50 50	−0.1 0.1	120 to 560 120 to 560
				EMZ1	UMZ1N	IMZ1A	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560
				EMZ7			2SA2018 2SC5585	−12 12	−0.5 0.5	270 to 680 270 to 680
				EMZ8			2SA2018 2SC2412K	−12 50	−0.5 0.15	270 to 680 120 to 560

Notes1 : For Pin location, please see the technical specifications.
Notes2 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

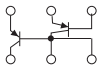
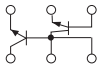
General Purpose Amplification Complex Bipolar Transistors

Package	Configuration	Application	Product No.				Equivalent Element Transistors	V_{CEO} (V)	I_C (A)	h_{FE}	Automotive Grade AEC-Q101
			Part No.	Grade Code		Taping Code					
				General	Automotive						
(VMT6) [SC-105B] 1212 size	PNP×2	Pre Amp.	VT6T1	*	—	T2R	2SAR522EB×2	−20	−0.2	120 to 560	—
			VT6T2		—	T2R	2SAR523EB×2	−50	−0.1	120 to 560	—
	NPN×2		VT6X1		—	T2R	2SCR522EB×2	20	0.2	120 to 560	—
			VT6X2		—	T2R	2SCR523EB×2	50	0.1	120 to 560	—
	PNP+NPN		VT6Z1		—	T2R	2SAR522EB 2SCR522EB	−20 20	−0.2 0.2	120 to 560 120 to 560	—
			VT6Z2		—	T2R	2SAR523EB 2SCR523EB	−50 50	−0.1 0.1	120 to 560 120 to 560	—
SOT-553 (EMT5) [SC-107BB] 1616 size	PNP+NPN	Pre Amp.	EMY1	*	—	T2R	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560	—
SOT-563 (EMT6) [SC-107C] 1616 size	PNP×2	Pre Amp.	EMT51	*	—	T2R	2SAR522EB×2	−20	−0.2	120 to 560	—
			EMT52		—	T2R	2SAR523EB×2	−50	−0.1	120 to 560	—
			EMT1		FHA	T2R	2SA1037AK×2	−50	−0.15	120 to 560	YES
			EMT18		—	T2R	2SA2018×2	−12	−0.5	270 to 680	—
	NPN×2		EMX51		—	T2R	2SCR522EB×2	20	0.2	120 to 560	—
			EMX52		—	T2R	2SCR523EB×2	50	0.1	120 to 560	—
			EMX1		FHA	T2R	2SC2412K×2	50	0.15	120 to 560	YES
			EMX26		—	T2R	2SD2654×2	50	0.15	820 to 2700	—
			EMX18		—	T2R	2SC5585×2	12	0.5	270 to 680	—
	PNP+NPN		EMZ51		—	T2R	2SAR522EB 2SCR522EB	−20 20	−0.2 0.2	120 to 560 120 to 560	—
			EMZ52		—	T2R	2SAR523EB 2SCR523EB	−50 50	−0.1 0.1	120 to 560 120 to 560	—
			EMZ1		FHA	T2R	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560	YES
			EMZ7		—	T2R	2SA2018 2SC5585	−12 12	−0.5 0.5	270 to 680 270 to 680	—
			EMZ8		—	T2R	2SA2018 2SC2412K	−12 50	−0.5 0.15	270 to 680 270 to 680	—
SOT-353 (UMT5) [SC-88A] 2021 size	PNP+NPN	Pre Amp.	UMY1N	*	—	TR	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560	—
SOT-363 (UMT6) [SC-88] 2021 size	PNP×2	Pre Amp.	UMT1N	*	FHA	TN	2SA1037AK×2	−50	−0.5	120 to 560	YES
			UMT18N		—	TR	2SA2018×2	−12	−0.5	270 to 680	—
	NPN×2		UMX1N		FHA	TN	2SC2412K×2	50	0.15	120 to 560	YES
			UMX18N		—	TN	2SC5585×2	12	0.5	270 to 680	—
	PNP+NPN		UMZ1N		FHA	TR	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560	YES
SOT-25 (SMT5) [SC-74A] 2928 size	PNP+NPN	Pre Amp.	FMY1A	*	—	T148	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560	—
SOT-457 (SMT6) [SC-74] 2928 size	PNP×2	Pre Amp.	IMT1A	*	—	T110	2SA1037AK×2	−50	−0.5	120 to 560	YES*1
			IMT18		—	T110	2SA2018×2	−12	−0.5	270 to 680	—
	NPN×2		IMX1		—	T110	2SC2412K×2	50	0.15	120 to 560	YES*1
			IMX25		—	T110	2SD2704K×2	20	0.3	820 to 2700	—
	PNP+NPN		IMZ1A		—	T108	2SA1037AK 2SC2412K	−50 50	−0.15 0.15	120 to 560 120 to 560	YES*1

Notes1 : *: General Part No. have no grade code.
Notes2 : *1 Not recommended for a new design.
Notes3 : For Pin location, please see the technical specifications.
Notes4 : Package is JEDEC code. ( ):ROHM Packages, [ ]:JEITA code

Complex Bipolar Transistors

Quick Reference for Complex Bipolar Transistors(For Current Mirror Circuit)

Configuration	Package / Item / Application	Equivalent Circuit Diagram (TOP View)	(VMT6) [SC-105B] 1212 size ◆ Part No.	Equivalent Element Transistors	V_{CEO} (V)	I_C (A)	h_{FE}	h_{FE} Ratio
PNP×2	Suitable for Current Mirror Circuit		VT6T11	2SAR522M×2	−20	−0.2	120 to 560	±10%
			VT6T12	2SAR523M×2	−50	−0.1	120 to 560	
NPN×2	Suitable for Current Mirror Circuit		VT6X11	2SCR522M×2	20	0.2	120 to 560	
			VT6X12	2SCR523M×2	50	0.1	120 to 560	

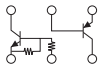
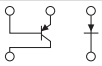
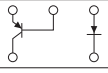
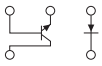
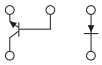
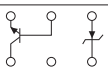
Notes1 : For Pin location, please see the technical specifications.
Notes2 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Bipolar Transistors(For Current Mirror Circuit)

Package	Configuration	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	V_{CEO} (V)	I_C (A)	h_{FE}	h_{FE} Ratio	Automotive Grade AEC-Q101
◆ (VMT6) [SC-105B] 1212 size	PNP×2	Suitable for Current Mirror Circuit	VT6T11	*	—	T2R	2SAR522M×2	−20	−0.2	120 to 560	±10%	—
			VT6T12		—	T2R	2SAR523M×2	−50	−0.1	120 to 560	±10%	—
	NPN×2		VT6X11		—	T2R	2SCR522M×2	20	0.2	120 to 560	±10%	—
			VT6X12		—	T2R	2SCR523M×2	50	0.1	120 to 560	±10%	—

Notes1 : *: General Part No. have no grade code.
Notes2 : For Pin location, please see the technical specifications.
Notes3 : ( ):ROHM Packages, [ ]:JEITA code

Quick Reference for Complex Bipolar Transistors(For Power Supply Circuit)

Configuration	Package / Item / Application	Equivalent Circuit Diagram (TOP View)	SOT-563 (EMT6) [SC-107C] 1616 size	SOT-353/SOT-363 (UMT5/UMT6) [SC-88A/SC-88] 2021 size	Equivalent Element Transistors	V_{CEO} (V)	I_C (mA)	h_{FE}
								
			Part No.					
PNP+DTR	Power Manegement		EMF5	UMF5N	2SA2018 DTC144E	−12 50	−500 100	270 to 680 68 or more
				UMF28N	2SA1774 DTC124X	−50 50	−150 100	180 to 390 68 or more
PNP+Di	DC-DC Converter			UML1N	2SA1774 DAN202K	−50 80	−150 100	120 to 560 —
				UML4N	2SA2018 RB521S-30	−12 30	−500 200	270 to 680 —
NPN+Di				UML2N	2SC4617 DAN202K	50 80	150 100	120 to 560 —
				UML6N	2SC5585 RB521S-30	12 30	500 200	270 to 680 —
NPN+Di	Shunt Regulator		EML22	UML23N	2SC2412K VDZ6.8B	50 Vz=6.8	150 Iz=5	120 to 390 —

Notes1 : For Pin location, please see the technical specifications.
Notes2 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Bipolar Transistors(For Power Supply Circuit)

Package	Configuration	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	V_{CEO} (V)	I_C (mA)	h_{FE}	Automotive Grade AEC-Q101
 SOT-563 (EMT6) [SC-107C] 1616 size	PNP+DTR	Power Manegement	EMF5	*	—	T2R	2SA2018 DTC144E	−12 50	−500 100	270 to 680 68 or more	—
	NPN+Di	Shunt Regulator	EML22		—	T2R	2SC2412K VDZ6.8B	50 Vz=6.8	150 Iz=5	120 to 390 —	—
 SOT-353 (UMT5) [SC-88A] 2021 size	PNP+Di	DC-DC Converter	UML1N	*	—	TR	2SA1774 DAN202K	−50 80	−150 100	120 to 560 —	—
			UML4N		—	TR	2SA2018 RB521S-30	−12 30	−500 200	270 to 680 —	—
	NPN+Di		UML2N		—	TR	2SC4617 DAN202K	50 80	150 100	120 to 560 —	—
			UML6N		—	TR	2SC5585 RB521S-30	12 30	500 200	270 to 680 —	—
 SOT-363 (UMT6) [SC-88] 2021 size	PNP+DTR	Power Manegement	UMF5N	*	—	TR	2SA2018 DTC144E	−12 50	−500 100	270 to 680 68 or more	—
			UMF28N		—	TR	2SA1774 DTC124X	−50 50	−150 100	180 to 390 68 or more	—
	NPN+Di	Shunt Regulator	UML23N		—	TR	2SC2412K VDZ6.8B	50 Vz=6.8	150 Iz=5	120 to 390 —	—

Notes1 : *: General Part No. have no grade code.
Notes2 : For Pin location, please see the technical specifications.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Bipolar Transistors

Quick Reference for Complex Bipolar Transistors(For Drivers)

Configuration	Package / Item / Application	Equivalent Circuit Diagram (TOP View)	SOT-363T (TUMT6) [SC-113DA] 2021 size	SOT-25T/SOT-457T (TSMT5/TSMT6) [— /SC-95] 2928 size	Equivalent Element Transistors	V_{CEO} (V)	I_C (A)	h_{FE}
								
			Part No.					
PNP×2	Driver		US6T8	QST8	2SB1709×2	−12	−1.5	270 to 680
			US6T9	QST9	2SB1710×2	−30	−1	270 to 680
NPN×2	Driver		US6X7	QSX7	2SD2674×2	12	1.5	270 to 680
			US6X8	QSX8	2SD2675×2	30	1	270 to 680
	DC-DC Converter			QS5W1	Exclusive Chip	30	3	200 to 500
				QS5W2	2SCR533P×2	50	3	180 to 450
PNP + NPN	Pre Amp.			QS6Z5	2SAR513P 2SCR513P	−50 50	−1 1	180 to 450 180 to 450
	DC-DC Converter			QS5Y1	Exclusive Chip	−30 30	−3 3	200 to 500 200 to 500
				QSZ4	2SB1706 2SD2671	−30 30	−2 2	270 to 680 270 to 680
				QSZ2	2SB1695 2SD2657	−30 30	−1.5 1.5	270 to 680 270 to 680
				QS5Y2	2SAR533P 2SCR533P	−50 50	−3 3	180 to 450 180 to 450

Notes1 : For Pin location, please see the technical specifications.
Notes2 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Bipolar Transistors(For Drivers)

Package	Configuration	Application	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	V_{CEO} (V)	I_C (A)	h_{FE}	Automotive Grade AEC-Q101
 SOT-363T (TUMT6) [SC-113DA] 2021 size	PNP×2	Driver	US6T8	*	—	TR	2SB1709×2	−12	−1.5	270 to 680	—
			US6T9		—	TR	2SB1710×2	−30	−1	270 to 680	—
	NPN×2		US6X7		—	TR	2SD2674×2	12	1.5	270 to 680	—
			US6X8		—	TR	2SD2675×2	30	1	270 to 680	—
 SOT-25T (TSMT5) 2928 size	NPN×2	DC-DC Converter	QS5W1	*	—	TR	Exclusive Chip	30	3	200 to 500	—
			QS5W2		—	TR	2SCR533P×2	50	3	180 to 450	—
	PNP+NPN		QS5Y1		—	TR	Exclusive Chip	−30 30	−3 3	200 to 500 200 to 500	—
			QSZ4		—	TR	2SB1706 2SD2671	−30 30	−2 2	270 to 680 270 to 680	—
			QSZ2		—	TR	2SB1695 2SD2657	−30 30	−1.5 1.5	270 to 680 270 to 680	—
			QS5Y2		—	TR	2SAR533P 2SCR533P	−50 50	−3 3	180 to 450 180 to 450	—
 SOT-457T (TSMT6) [SC-95] 2928 size	PNP+NPN	Pre Amp.	QS6Z5	*	—	TR	2SAR513P 2SCR513P	−50 50	−1 1	180 to 450 180 to 450	—
	PNP×2	Driver	QST8		—	TR	2SB1709×2	−12	−1.5	270 to 680	—
			QST9		—	TR	2SB1710×2	−30	−1	270 to 680	—
	NPN×2		QSX7		—	TR	2SD2674×2	12	1.5	270 to 680	—
			QSX8		—	TR	2SD2675×2	30	1	270 to 680	—

Notes1 : *: General Part No. have no grade code.
Notes2 : For Pin location, please see the technical specifications.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Digital Transistors

Quick Reference for 100mA Digital Transistors(For Automotive use)

Item / Specifications	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package																V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)	GI (h_{FE})
					SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416FL (EMT3F) [SC-89] 1616 size		SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323FL (UMT3F) [SC-85] 2021 size		SOT-323 (UMT3) [SC-70] 2021 size				SOT-23 (SST3) 2924 size		SOT-346 (SMT3) [SC-59] 2928 size				
					P_D=150mW*1						P_D=200mW*1												
					PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
					Quick Reference No.																		
R1=R2 Potential Divider type	DTA123Ex	DTC123Ex	2.2	2.2	1	20	39	54	69	84	99	114	129	153	☆178	☆193	210	231	252	267		0.1	20 or more
	DTA143Ex	DTC143Ex	4.7	4.7	2	21	40	55	70	85	100	115	130	154	☆179	☆194	211	232	253	268		0.1	30 or more
	DTA114Ex	DTC114Ex	10	10	3	22	41	56	71	86	101	116	131	155	☆180	☆195	212	233	254	269		0.05	30 or more
	DTA124Ex	DTC124Ex	22	22	4	23	42	57	72	87	102	117	132	156	☆181	☆196	213	234	255	270		0.03	56 or more
	DTA144Ex	DTC144Ex	47	47	5	24	43	58	73	88	103	118	133	157	☆182	☆197	214	235	256	271		0.03	68 or more
	DTA115Ex	DTC115Ex	100	100	6	25	44	59	74	89	104	119	134	158	☆183	☆198	215	236	257	272		0.02	82 or more
R1≠R2 Leak Absorption type	DTA113Zx	DTC113Zx	1	10	7	26	45	60	New 75	90	105	120	135	159	☆184	☆199	216	237	258	273		0.1	33 or more
	DTA123Yx	DTC123Yx	2.2	10	8	27	New 46	New 61	76	91	106	121	136	160	☆185	☆200	217	238	259	274		0.1	33 or more
	DTA123Jx	DTC123Jx	2.2	47	9	28	47	62	77	92	107	122	137	161	☆186	☆201	218	239	260	275		0.1	80 or more
	DTA143Xx	DTC143Xx	4.7	10	10	29	48	63	78	93	108	123	138	162	☆187	☆201	219	240	261	276		0.1	30 or more
	DTA143Zx	DTC143Zx	4.7	47	11	30	49	64	79	94	109	124	139	163	☆188	☆203	220	241	262	277		0.1	80 or more
	DTA114Wx	DTC114Wx	10	4.7	New 12	New 31							New 140	New 164							50	0.1	24 or more
	DTA114Yx	DTC114Yx	10	47	13	32	50	65	80	95	110	125	141	165	☆189	☆204	221	242	263	278		0.07	68 or more
	DTA124Xx	DTC124Xx	22	47	14	33	51	66	81	96	111	126	142	166	☆190	☆205	222	243	264	279		0.05	68 or more
	DTA144Vx	DTC144Vx	47	10	New 15	New 34											New 223	New 244				0.03	33 or more
	DTA144Wx	DTC144Wx	47	22	New 16	New 35							143	167			New 224	New 245				0.03	56 or more
Type Using R1 Alone as Input Resistor	DTA123Tx	DTC123Tx	2.2	—	New 17	New 36							New 144	New 168			New 225	New 246				0.1	100 to 600
	DTA143Tx	DTC143Tx	4.7	—	18	37	52	67	82	97	112	127	145	169	☆191	☆206	226	247	265	280		0.1	100 to 600
	DTA114Tx	DTC114Tx	10	—	19	38	53	68	83	98	113	128	146	170	☆192	☆207	227	248	266	281		0.1	100 to 600
	DTA124Tx	DTC124Tx	22	—									147	171			New 228	New 249				0.1	100 to 600
	DTA144Tx	DTC144Tx	47	—									148	172			New 229	New 250				0.1	100 to 600
	DTA115Tx	DTC115Tx	100	—									149	173			New 230	New 251				0.1	100 to 600
Type Using R2 Alone as Input Resistor	DTA114Gx	DTC114Gx	—	10									150	174		☆208						0.1	30 or more
	DTA124Gx	DTC124Gx	—	22										175								0.1	56 or more
	DTA144Gx	DTC144Gx	—	47									151	176								0.1	68 or more
	DTA115Gx	DTC115Gx	—	100									152	177		☆209						0.1	82 or more
x : Packaging designation symbol					M		EB		E		UB		UA		U3		CA		KA				

Notes1 : VMT3, EMT3F,EMT3 and UMT3F without suffix A.
Notes2 : *1 With reference land installed.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

☆ : Under Development

C Transistors

Digital Transistors

100mA Digital Transistors(For Automotive use)

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-723 (VMT3) [SC-105AA] 1212 size	1	DTA123EM	*	FHA	T2L	PNP	150	2.2	2.2	50	0.1	20 or more	YES
	2	DTA143EM		FHA	T2L		150	4.7	4.7	50	0.1	30 or more	YES
	3	DTA114EM		FHA	T2L		150	10	10	50	0.05	30 or more	YES
	4	DTA124EM		FHA	T2L		150	22	22	50	0.03	56 or more	YES
	5	DTA144EM		FHA	T2L		150	47	47	50	0.03	68 or more	YES
	6	DTA115EM		FHA	T2L		150	100	100	50	0.02	82 or more	YES
	7	DTA113ZM		FHA	T2L		150	1	10	50	0.1	33 or more	YES
	8	DTA123YM		FHA	T2L		150	2.2	10	50	0.1	33 or more	YES
	9	DTA123JM		FHA	T2L		150	2.2	47	50	0.1	80 or more	YES
	10	DTA143XM		FHA	T2L		150	4.7	10	50	0.1	30 or more	YES
	11	DTA143ZM		FHA	T2L		150	4.7	47	50	0.1	80 or more	YES
	12	New DTA114WM		FHA	T2L		150	10	4.7	50	0.1	24 or more	YES
	13	DTA114YM		FHA	T2L		150	10	47	50	0.07	68 or more	YES
	14	DTA124XM		FHA	T2L		150	22	47	50	0.05	68 or more	YES
	15	New DTA144VM		FHA	T2L		150	47	10	50	0.03	33 or more	YES
	16	New DTA144WM		FHA	T2L		150	47	22	50	0.03	56 or more	YES
	17	New DTA123TM		FHA	T2L		150	2.2	—	50	0.1	100 to 600	YES
	18	DTA143TM		FHA	T2L		150	4.7	—	50	0.1	100 to 600	YES
	19	DTA114TM		FHA	T2L		150	10	—	50	0.1	100 to 600	YES
	20	DTC123EM		FHA	T2L	NPN	150	2.2	2.2	50	0.1	20 or more	YES
	21	DTC143EM		FHA	T2L		150	4.7	4.7	50	0.1	30 or more	YES
	22	DTC114EM		FHA	T2L		150	10	10	50	0.05	30 or more	YES
	23	DTC124EM		FHA	T2L		150	22	22	50	0.03	56 or more	YES
	24	DTC144EM		FHA	T2L		150	47	47	50	0.03	68 or more	YES
	25	DTC115EM		FHA	T2L		150	100	100	50	0.02	82 or more	YES
	26	DTC113ZM		FHA	T2L		150	1	10	50	0.1	33 or more	YES
	27	DTC123YM		FHA	T2L		150	2.2	10	50	0.1	33 or more	YES
	28	DTC123JM		FHA	T2L		150	2.2	47	50	0.1	80 or more	YES
	29	DTC143XM		FHA	T2L		150	4.7	10	50	0.1	30 or more	YES
	30	DTC143ZM		FHA	T2L		150	4.7	47	50	0.1	80 or more	YES
	31	New DTC114WM		FHA	T2L		200	10	4.7	50	0.1	24 or more	YES
	32	DTC114YM		FHA	T2L		150	10	47	50	0.07	68 or more	YES
	33	DTC124XM		FHA	T2L		150	22	47	50	0.05	68 or more	YES
	34	New DTC144VM		FHA	T2L		150	47	10	50	0.03	33 or more	YES
	35	New DTC144WM		FHA	T2L		150	47	22	50	0.03	56 or more	YES
	36	New DTC123TM		FHA	T2L		150	2.2	—	50	0.1	100 to 600	YES
	37	DTC143TM		FHA	T2L		150	4.7	—	50	0.1	100 to 600	YES
	38	DTC114TM		FHA	T2L		150	10	—	50	0.1	100 to 600	YES
SOT-416FL (EMT3F) [SC-89] 1616 size	39	DTA123EEB	*	HZG	TL	PNP	150	2.2	2.2	50	0.1	20 or more	YES
	40	DTA143EEB		HZG	TL		150	4.7	4.7	50	0.1	30 or more	YES
	41	DTA114EEB		HZG	TL		150	10	10	50	0.05	30 or more	YES
	42	DTA124EEB		HZG	TL		150	22	22	50	0.03	56 or more	YES
	43	DTA144EEB		HZG	TL		150	47	47	50	0.03	68 or more	YES
	44	DTA115EEB		HZG	TL		150	100	100	50	0.02	82 or more	YES
	45	DTA113ZEB		HZG	TL		150	1	10	50	0.1	33 or more	YES
	46	New DTA123YEB		HZG	TL		150	2.2	10	50	0.1	33 or more	YES
	47	DTA123JEB		HZG	TL		150	2.2	47	50	0.1	80 or more	YES
	48	DTA143XEB		HZG	TL		150	4.7	10	50	0.1	30 or more	YES
	49	DTA143ZEB		HZG	TL		150	4.7	47	50	0.1	80 or more	YES
	50	DTA114YEB		HZG	TL		150	10	47	50	0.07	68 or more	YES
	51	DTA124XEB		HZG	TL		150	22	47	50	0.05	68 or more	YES
	52	DTA143TEB		HZG	TL		150	4.7	—	50	0.1	100 to 600	YES
	53	DTA114TEB		HZG	TL		150	10	—	50	0.1	100 to 600	YES
	54	DTC123EEB		HZG	TL	NPN	150	2.2	2.2	50	0.1	20 or more	YES
	55	DTC143EEB		HZG	TL		150	4.7	4.7	50	0.1	30 or more	YES
	56	DTC114EEB		HZG	TL		150	10	10	50	0.05	30 or more	YES
	57	DTC124EEB		HZG	TL		150	22	22	50	0.03	56 or more	YES
	58	DTC144EEB		HZG	TL		150	47	47	50	0.03	68 or more	YES
	59	DTC115EEB		HZG	TL		150	100	100	50	0.02	82 or more	YES
	60	DTC113ZEB		HZG	TL		150	1	10	50	0.1	33 or more	YES
	61	New DTC123YEB		HZG	TL		150	2.2	10	50	0.1	33 or more	YES
	62	DTC123JEB		HZG	TL		150	2.2	47	50	0.1	80 or more	YES
	63	DTC143XEB		HZG	TL		150	4.7	10	50	0.1	30 or more	YES
	64	DTC143ZEB		HZG	TL		150	4.7	47	50	0.1	80 or more	YES
	65	DTC114YEB		HZG	TL		150	10	47	50	0.07	68 or more	YES
	66	DTC124XEB		HZG	TL		150	22	47	50	0.05	68 or more	YES
	67	DTC143TEB		HZG	TL		150	4.7	—	50	0.1	100 to 600	YES
	68	DTC114TEB		HZG	TL		150	10	—	50	0.1	100 to 600	YES

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

100mA Digital Transistors(For Automotive use)

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-416 (EMT3) [SC-75A] 1616 size	69	DTA123EE	*	FRA	TL	PNP	150	2.2	2.2	50	0.1	20 or more	YES
	70	DTA143EE		FRA	TL		150	4.7	4.7	50	0.1	30 or more	YES
	71	DTA114EE		FRA	TL		150	10	10	50	0.05	30 or more	YES
	72	DTA124EE		FRA	TL		150	22	22	50	0.03	56 or more	YES
	73	DTA144EE		FRA	TL		150	47	47	50	0.03	68 or more	YES
	74	DTA115EE		FRA	TL		150	100	100	50	0.02	82 or more	YES
	75	New DTA113ZE		FRA	TL		150	1	10	50	0.1	33 or more	YES
	76	DTA123YE		FRA	TL		150	2.2	10	50	0.1	33 or more	YES
	77	DTA123JE		FRA	TL		150	2.2	47	50	0.1	80 or more	YES
	78	DTA143XE		FRA	TL		150	4.7	10	50	0.1	30 or more	YES
	79	DTA143ZE		FRA	TL		150	4.7	47	50	0.1	80 or more	YES
	80	DTA114YE		FRA	TL		150	10	47	50	0.07	68 or more	YES
	81	DTA124XE		FRA	TL		150	22	47	50	0.05	68 or more	YES
	82	DTA143TE		FRA	TL		150	4.7	—	50	0.1	100 to 600	YES
	83	DTA114TE		FRA	TL		150	10	—	50	0.1	100 to 600	YES
	84	DTC123EE		FRA	TL	NPN	150	2.2	2.2	50	0.1	20 or more	YES
	85	DTC143EE		FRA	TL		150	4.7	4.7	50	0.1	30 or more	YES
	86	DTC114EE		FRA	TL		150	10	10	50	0.05	30 or more	YES
	87	DTC124EE		FRA	TL		150	22	22	50	0.03	56 or more	YES
	88	DTC144EE		FRA	TL		150	47	47	50	0.03	68 or more	YES
	89	DTC115EE		FRA	TL		150	100	100	50	0.02	82 or more	YES
	90	DTC113ZE		FRA	TL		150	1	10	50	0.1	33 or more	YES
	91	DTC123YE		FRA	TL		150	2.2	10	50	0.1	33 or more	YES
	92	DTC123JE		FRA	TL		150	2.2	47	50	0.1	80 or more	YES
	93	DTC143XE		FRA	TL		150	4.7	10	50	0.1	30 or more	YES
	94	DTC143ZE		FRA	TL		150	4.7	47	50	0.1	80 or more	YES
	95	DTC114YE		FRA	TL		150	10	47	50	0.07	68 or more	YES
	96	DTC124XE		FRA	TL		150	22	47	50	0.05	68 or more	YES
	97	DTC143TE		FRA	TL		150	4.7	—	50	0.1	100 to 600	YES
	98	DTC114TE		FRA	TL		150	10	—	50	0.1	100 to 600	YES
SOT-323FL (UMT3F) [SC-85] 2021 size	99	DTA123EUB	*	HZG	TL	PNP	200	2.2	2.2	50	0.1	20 or more	YES
	100	DTA143EUB		HZG	TL		200	4.7	4.7	50	0.1	30 or more	YES
	101	DTA114EUB		HZG	TL		200	10	10	50	0.05	30 or more	YES
	102	DTA124EUB		HZG	TL		200	22	22	50	0.03	56 or more	YES
	103	DTA144EUB		HZG	TL		200	47	47	50	0.03	68 or more	YES
	104	DTA115EUB		HZG	TL		200	100	100	50	0.02	82 or more	YES
	105	DTA113ZUB		HZG	TL		200	1	10	50	0.1	33 or more	YES
	106	DTA123YUB		HZG	TL		200	2.2	10	50	0.1	33 or more	YES
	107	DTA123JUB		HZG	TL		200	2.2	47	50	0.1	80 or more	YES
	108	DTA143XUB		HZG	TL		200	4.7	10	50	0.1	30 or more	YES
	109	DTA143ZUB		HZG	TL		200	4.7	47	50	0.1	80 or more	YES
	110	DTA114YUB		HZG	TL		200	10	47	50	0.07	68 or more	YES
	111	DTA124XUB		HZG	TL		200	22	47	50	0.05	68 or more	YES
	112	DTA143TUB		HZG	TL		200	4.7	—	50	0.1	100 to 600	YES
	113	DTA114TUB		HZG	TL		200	10	—	50	0.1	100 to 600	YES
	114	DTC123EUB		HZG	TL	NPN	200	2.2	2.2	50	0.1	20 or more	YES
	115	DTC143EUB		HZG	TL		200	4.7	4.7	50	0.1	30 or more	YES
	116	DTC114EUB		HZG	TL		200	10	10	50	0.05	30 or more	YES
	117	DTC124EUB		HZG	TL		200	22	22	50	0.03	56 or more	YES
	118	DTC144EUB		HZG	TL		200	47	47	50	0.03	68 or more	YES
	119	DTC115EUB		HZG	TL		200	100	100	50	0.02	82 or more	YES
	120	DTC113ZUB		HZG	TL		200	1	10	50	0.1	33 or more	YES
	121	DTC123YUB		HZG	TL		200	2.2	10	50	0.1	33 or more	YES
	122	DTC123JUB		HZG	TL		200	2.2	47	50	0.1	80 or more	YES
	123	DTC143XUB		HZG	TL		200	4.7	10	50	0.1	30 or more	YES
	124	DTC143ZUB		HZG	TL		200	4.7	47	50	0.1	80 or more	YES
	125	DTC114YUB		HZG	TL		200	10	47	50	0.07	68 or more	YES
	126	DTC124XUB		HZG	TL		200	22	47	50	0.05	68 or more	YES
	127	DTC143TUB		HZG	TL		200	4.7	—	50	0.1	100 to 600	YES
	128	DTC114TUB		HZG	TL		200	10	—	50	0.1	100 to 600	YES

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Digital Transistors

100mA Digital Transistors(For Automotive use)

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-323 (UMT3) [SC-70] 2021 size	129	DTA123EUA	*	FRA	T106	PNP	200	2.2	2.2	50	0.1	20 or more	YES
	130	DTA143EUA		FRA	T106		200	4.7	4.7	50	0.1	30 or more	YES
	131	DTA114EUA		FRA	T106		200	10	10	50	0.05	30 or more	YES
	132	DTA124EUA		FRA	T106		200	22	22	50	0.03	56 or more	YES
	133	DTA144EUA		FRA	T106		200	47	47	50	0.03	68 or more	YES
	134	DTA115EUA		FRA	T106		200	100	100	50	0.02	82 or more	YES
	135	DTA113ZUA		FRA	T106		200	1	10	50	0.1	33 or more	YES
	136	DTA123YUA		FRA	T106		200	2.2	10	50	0.1	33 or more	YES
	137	DTA123JUA		FRA	T106		200	2.2	47	50	0.1	80 or more	YES
	138	DTA143XUA		FRA	T106		200	4.7	10	50	0.1	30 or more	YES
	139	DTA143ZUA		FRA	T106		200	4.7	47	50	0.1	80 or more	YES
	140	New DTA114WUA		FRA	T106		200	10	4.7	50	0.1	24 or more	YES
	141	DTA114YUA		FRA	T106		200	10	47	50	0.07	68 or more	YES
	142	DTA124XUA		FRA	T106		200	22	47	50	0.05	68 or more	YES
	143	DTA144WUA		FRA	T106		200	47	22	50	0.03	56 or more	YES
	144	New DTA123TUA		FRA	T106		200	2.2	—	50	0.1	100 to 600	YES
	145	DTA143TUA		FRA	T106		200	4.7	—	50	0.1	100 to 600	YES
	146	DTA114TUA		FRA	T106		200	10	—	50	0.1	100 to 600	YES
	147	DTA124TUA		FRA	T106		200	22	—	50	0.1	100 to 600	YES
	148	DTA144TUA		FRA	T106		200	47	—	50	0.1	100 to 600	YES
	149	DTA115TUA		FRA	T106		200	100	—	50	0.1	100 to 600	YES
	150	DTA114GUA		FRA	T106		200	—	10	50	0.1	30 or more	YES
	151	DTA144GUA		FRA	T106		200	—	47	50	0.1	68 or more	YES
	152	DTA115GUA		FRA	T106		200	—	100	50	0.1	82 or more	YES
	153	DTC123EUA		FRA	T106	NPN	200	2.2	2.2	50	0.1	20 or more	YES
	154	DTC143EUA		FRA	T106		200	4.7	4.7	50	0.1	30 or more	YES
	155	DTC114EUA		FRA	T106		200	10	10	50	0.05	30 or more	YES
	156	DTC124EUA		FRA	T106		200	22	22	50	0.03	56 or more	YES
	157	DTC144EUA		FRA	T106		200	47	47	50	0.03	68 or more	YES
	158	DTC115EUA		FRA	T106		200	100	100	50	0.02	82 or more	YES
	159	DTC113ZUA		FRA	T106		200	1	10	50	0.1	33 or more	YES
	160	DTC123YUA		FRA	T106		200	2.2	10	50	0.1	33 or more	YES
	161	DTC123JUA		FRA	T106		200	2.2	47	50	0.1	80 or more	YES
	162	DTC143XUA		FRA	T106		200	4.7	10	50	0.1	30 or more	YES
	163	DTC143ZUA		FRA	T106		200	4.7	47	50	0.1	80 or more	YES
	164	New DTC114WUA		FRA	T106		200	10	4.7	50	0.1	24 or more	YES
	165	DTC114YUA		FRA	T106		200	10	47	50	0.07	68 or more	YES
	166	DTC124XUA		FRA	T106		200	22	47	50	0.05	68 or more	YES
	167	DTC144WUA		FRA	T106		200	47	22	50	0.03	56 or more	YES
	168	New DTC123TUA		FRA	T106		200	2.2	—	50	0.1	100 to 600	YES
	169	DTC143TUA		FRA	T106		200	4.7	—	50	0.1	100 to 600	YES
	170	DTC114TUA		FRA	T106		200	10	—	50	0.1	100 to 600	YES
	171	DTC124TUA		FRA	T106		150	22	—	50	0.1	100 to 600	YES
	172	DTC144TUA		FRA	T106		200	47	—	50	0.1	100 to 600	YES
	173	DTC115TUA		FRA	T106		200	100	—	50	0.1	100 to 600	YES
	174	DTC114GUA		FRA	T106		200	—	10	50	0.1	30 or more	YES
	175	DTC124GUA		FRA	T106		200	—	22	50	0.1	56 or more	YES
	176	DTC144GUA		FRA	T106		200	—	47	50	0.1	68 or more	YES
	177	DTC115GUA		FRA	T106		200	—	100	50	0.1	82 or more	YES

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (−) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

100mA Digital Transistors(For Automotive use)

Package	Product No.					Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Taping Code								
			General	Automotive									
SOT-323 (UMT3) [SC-70] 2021 size	178	☆DTA123EU3	*	HZG	T106	PNP	200	2.2	2.2	50	0.1	20 or more	YES
	179	☆DTA143EU3		HZG	T106		200	4.7	4.7	50	0.1	30 or more	YES
	180	☆DTA114EU3		HZG	T106		200	10	10	50	0.05	30 or more	YES
	181	☆DTA124EU3		HZG	T106		200	22	22	50	0.03	56 or more	YES
	182	☆DTA144EU3		HZG	T106		200	47	47	50	0.03	68 or more	YES
	183	☆DTA115EU3		HZG	T106		200	100	100	50	0.02	82 or more	YES
	184	☆DTA113ZU3		HZG	T106		200	1	10	50	0.1	33 or more	YES
	185	☆DTA123YU3		HZG	T106		200	2.2	10	50	0.1	33 or more	YES
	186	☆DTA123JU3		HZG	T106		200	2.2	47	50	0.1	80 or more	YES
	187	☆DTA143XU3		HZG	T106		200	4.7	10	50	0.1	30 or more	YES
	188	☆DTA143ZU3		HZG	T106		200	4.7	47	50	0.1	80 or more	YES
	189	☆DTA114YU3		HZG	T106		200	10	47	50	0.07	68 or more	YES
	190	☆DTA124XU3		HZG	T106		200	22	47	50	0.05	68 or more	YES
	191	☆DTA143TU3		HZG	T106		200	4.7	—	50	0.1	100 to 600	YES
	192	☆DTA114TU3		HZG	T106		200	10	—	50	0.1	100 to 600	YES
	193	☆DTC123EU3		HZG	T106	NPN	200	2.2	2.2	50	0.1	20 or more	YES
	194	☆DTC143EU3		HZG	T106		200	4.7	4.7	50	0.1	30 or more	YES
	195	☆DTC114EU3		HZG	T106		200	10	10	50	0.05	30 or more	YES
	196	☆DTC124EU3		HZG	T106		200	22	22	50	0.03	56 or more	YES
	197	☆DTC144EU3		HZG	T106		200	47	47	50	0.03	68 or more	YES
	198	☆DTC115EU3		HZG	T106		200	100	100	50	0.02	82 or more	YES
	199	☆DTC113ZU3		HZG	T106		200	1	10	50	0.1	33 or more	YES
	200	☆DTC123YU3		HZG	T106		200	2.2	10	50	0.1	33 or more	YES
	201	☆DTC123JU3		HZG	T106		200	2.2	47	50	0.1	80 or more	YES
	202	☆DTC143XU3		HZG	T106		200	4.7	10	50	0.1	30 or more	YES
	203	☆DTC143ZU3		HZG	T106		200	4.7	47	50	0.1	80 or more	YES
	204	☆DTC114YU3		HZG	T106		200	10	47	50	0.07	68 or more	YES
	205	☆DTC124XU3		HZG	T106		200	22	47	50	0.05	68 or more	YES
	206	☆DTC143TU3		HZG	T106		200	4.7	—	50	0.1	100 to 600	YES
	207	☆DTC114TU3		HZG	T106		200	10	—	50	0.1	100 to 600	YES
	208	☆DTC114GU3		HZG	T106		200	—	10	50	0.1	30 or more	YES
	209	☆DTC115GU3		HZG	T106		200	—	100	50	0.1	82 or more	YES
SOT-23 (SST3) 2924 size	210	DTA123ECA	*	HZG	T116	PNP	200	2.2	2.2	50	0.1	20 or more	YES
	211	DTA143ECA		HZG	T116		200	4.7	4.7	50	0.1	30 or more	YES
	212	DTA114ECA		HZG	T116		200	10	10	50	0.05	30 or more	YES
	213	DTA124ECA		HZG	T116		200	22	22	50	0.03	56 or more	YES
	214	DTA144ECA		HZG	T116		200	47	47	50	0.03	68 or more	YES
	215	DTA115ECA		HZG	T116		200	100	100	50	0.02	82 or more	YES
	216	DTA113ZCA		HZG	T116		200	1	10	50	0.1	33 or more	YES
	217	DTA123YCA		HZG	T116		200	2.2	10	50	0.1	33 or more	YES
	218	DTA123JCA		HZG	T116		200	2.2	47	50	0.1	80 or more	YES
	219	DTA143XCA		HZG	T116		200	4.7	10	50	0.1	30 or more	YES
	220	DTA143ZCA		HZG	T116		200	4.7	47	50	0.1	80 or more	YES
	221	DTA114YCA		HZG	T116		200	10	47	50	0.07	68 or more	YES
	222	DTA124XCA		HZG	T116		200	22	47	50	0.05	68 or more	YES
	223	New DTA144VCA		HZG	T116		200	47	10	50	0.03	33 or more	YES
	224	New DTA144WCA		HZG	T116		200	47	22	50	0.03	56 or more	YES
	225	New DTA123TCA		HZG	T116		200	2.2	—	50	0.1	100 to 600	YES
	226	DTA143TCA		HZG	T116		200	4.7	—	50	0.1	100 to 600	YES
	227	DTA114TCA		HZG	T116		200	10	—	50	0.1	100 to 600	YES
	228	New DTA124TCA		HZG	T116		200	22	—	50	0.1	100 to 600	YES
	229	New DTA144TCA		HZG	T116		200	47	—	50	0.1	100 to 600	YES
	230	New DTA115TCA		HZG	T116		200	100	—	50	0.1	100 to 600	YES
	231	DTC123ECA		HZG	T116	NPN	200	2.2	2.2	50	0.1	20 or more	YES
	232	DTC143ECA		HZG	T116		200	4.7	4.7	50	0.1	30 or more	YES
	233	DTC114ECA		HZG	T116		200	10	10	50	0.05	30 or more	YES
	234	DTC124ECA		HZG	T116		200	22	22	50	0.03	56 or more	YES
	235	DTC144ECA		HZG	T116		200	47	47	50	0.03	68 or more	YES
	236	DTC115ECA		HZG	T116		200	100	100	50	0.02	82 or more	YES
	237	DTC113ZCA		HZG	T116		200	1	10	50	0.1	33 or more	YES
	238	DTC123YCA		HZG	T116		200	2.2	10	50	0.1	33 or more	YES
	239	DTC123JCA		HZG	T116		200	2.2	47	50	0.1	80 or more	YES
	240	DTC143XCA		HZG	T116		200	4.7	10	50	0.1	30 or more	YES
	241	DTC143ZCA		HZG	T116		200	4.7	47	50	0.1	80 or more	YES
	242	DTC114YCA		HZG	T116		200	10	47	50	0.07	68 or more	YES
	243	DTC124XCA		HZG	T116		200	22	47	50	0.05	68 or more	YES
	244	New DTC144VCA		HZG	T116		200	47	10	50	0.03	33 or more	YES
	245	New DTC144WCA		HZG	T116		200	47	22	50	0.03	56 or more	YES
	246	New DTC123TCA		HZG	T116		200	2.2	—	50	0.1	100 to 600	YES
	247	DTC143TCA		HZG	T116		200	4.7	—	50	0.1	100 to 600	YES
	248	DTC114TCA		HZG	T116		200	10	—	50	0.1	100 to 600	YES
	249	New DTC124TCA		HZG	T116		200	22	—	50	0.1	100 to 600	YES
	250	New DTC144TCA		HZG	T116		200	47	—	50	0.1	100 to 600	YES
	251	New DTC115TCA		HZG	T116		200	100	—	50	0.1	100 to 600	YES

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

☆ : Under Development

C Transistors

Digital Transistors

100mA Digital Transistors(For Automotive use)

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-346 (SMT3) [SC-59] 2928 size	252	DTA123EKA	*	FRA	T146	PNP	200	2.2	2.2	50	0.1	20 or more	YES*2
	253	DTA143EKA		FRA	T146		200	4.7	4.7	50	0.1	30 or more	YES*2
	254	DTA114EKA		FRA	T146		200	10	10	50	0.05	30 or more	YES*2
	255	DTA124EKA		FRA	T146		200	22	22	50	0.03	56 or more	YES*2
	256	DTA144EKA		FRA	T146		200	47	47	50	0.03	68 or more	YES*2
	257	DTA115EKA		FRA	T146		200	100	100	50	0.02	82 or more	YES*2
	258	DTA113ZKA		FRA	T146		200	1	10	50	0.1	33 or more	YES*2
	259	DTA123YKA		FRA	T146		200	2.2	10	50	0.1	33 or more	YES*2
	260	DTA123JKA		FRA	T146		200	2.2	47	50	0.1	80 or more	YES*2
	261	DTA143XKA		FRA	T146		200	4.7	10	50	0.1	30 or more	YES*2
	262	DTA143ZKA		FRA	T146		200	4.7	47	50	0.1	80 or more	YES*2
	263	DTA114YKA		FRA	T146		200	10	47	50	0.07	68 or more	YES*2
	264	DTA124XKA		—	T146		200	22	47	50	0.05	68 or more	—
	265	DTA143TKA		FRA	T146		200	4.7	—	50	0.1	100 to 600	YES*2
	266	DTA114TKA		FRA	T146		200	10	—	50	0.1	100 to 600	YES*2
	267	DTC123EKA		FRA	T146	NPN	200	2.2	2.2	50	0.1	20 or more	YES*2
	268	DTC143EKA		FRA	T146		200	4.7	4.7	50	0.1	30 or more	YES*2
	269	DTC114EKA		FRA	T146		200	10	10	50	0.05	30 or more	YES*2
	270	DTC124EKA		FRA	T146		200	22	22	50	0.03	56 or more	YES*2
	271	DTC144EKA		FRA	T146		200	47	47	50	0.03	68 or more	YES*2
	272	DTC115EKA		FRA	T146		200	100	100	50	0.02	82 or more	YES*2
	273	DTC113ZKA		FRA	T146		200	1	10	50	0.1	33 or more	YES*2
	274	DTC123YKA		—	T146		200	2.2	10	50	0.1	33 or more	—
	275	DTC123JKA		FRA	T146		200	2.2	47	50	0.1	80 or more	YES*2
	276	DTC143XKA		FRA	T146		200	4.7	10	50	0.1	30 or more	YES*2
	277	DTC143ZKA		FRA	T146		200	4.7	47	50	0.1	80 or more	YES*2
	278	DTC114YKA		FRA	T146		200	10	47	50	0.07	68 or more	YES*2
	279	DTC124XKA		FRA	T146		200	22	47	50	0.05	68 or more	YES*2
	280	DTC143TKA		FRA	T146		200	4.7	—	50	0.1	100 to 600	YES*2
	281	DTC114TKA		—	T146		200	10	—	50	0.1	100 to 600	—

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : *2 Not recommended for a new design.
Notes4 : PNP (−) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Quick Reference for 100mA Digital Transistors(For Consumer only)

Item / Specifications	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package: SOT-723 (VMT3) [SC-105AA] 1212 size		Package: SOT-416FL (EMT3F) [SC-89] 1616 size		Package: SOT-323FL (UMT3F) [SC-85] 2021 size		VCC (VCEO) (V)	IO (IC) (A)	GI (hFE)
					PD=150mW*		PD=150mW*		PD=200mW*				
					PNP	NPN	PNP	NPN	PNP	NPN			
					Quick Reference No.								
R1=R2 Potential Divider type	DTA023Ex	DTC023Ex	2.2	2.2	1	18	35	52	69	86		0.1	20 or more
	DTA043Ex	DTC043Ex	4.7	4.7	2	19	36	53	70	87		0.1	20 or more
	DTA014Ex	DTC014Ex	10	10	3	20	37	54	71	88		0.05	35 or more
	DTA024Ex	DTC024Ex	22	22	4	21	38	55	72	89		0.03	60 or more
	DTA044Ex	DTC044Ex	47	47	5	22	39	56	73	90		0.03	80 or more
	DTA015Ex	DTC015Ex	100	100	6	23	40	57	74	91		0.02	80 or more
R1≠R2 Leak Absorption type	DTA013Zx	DTC013Zx	1	10	7	24	41	58	75	92		0.1	30 or more
	DTA023Yx	DTC023Yx	2.2	10	8	25	42	59	76	93		0.1	35 or more
	DTA023Jx	DTC023Jx	2.2	47	9	26	43	60	77	94	50	0.1	80 or more
	DTA043Xx	DTC043Xx	4.7	10	10	27	44	61	78	95		0.1	35 or more
	DTA043Zx	DTC043Zx	4.7	47	11	28	45	62	79	96		0.1	80 or more
	DTA014Yx	DTC014Yx	10	47	12	29	46	63	80	97		0.07	80 or more
	DTA024Xx	DTC024Xx	22	47	13	30	47	64	81	98		0.05	80 or more
Type Using R1 Alone as Input Resistor	DTA043Tx	DTC043Tx	4.7	—	14	31	48	65	82	99		0.1	100 to 600
	DTA014Tx	DTC014Tx	10	—	15	32	49	66	83	100		0.1	100 to 600
	DTA044Tx	DTC044Tx	47	—	16	33	50	67	84	101		0.06	100 to 600
	DTA015Tx	DTC015Tx	100	—	17	34	51	68	85	102		0.1	100 to 600
x : Packaging designation symbol					M		EB		UB				

Notes1 : PNP (—) symbol omitted.
Notes2 : * With reference land installed.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

C Transistors

Digital Transistors

100mA Digital Transistors(For Consumer only)

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-723 (VMT3) [SC-105AA] 1212 size	1	DTA023EM	*	—	T2L	PNP	150	2.2	2.2	50	0.1	20 or more	—
	2	DTA043EM		—	T2L		150	4.7	4.7	50	0.1	20 or more	—
	3	DTA014EM		—	T2L		150	10	10	50	0.05	35 or more	—
	4	DTA024EM		—	T2L		150	22	22	50	0.03	60 or more	—
	5	DTA044EM		—	T2L		150	47	47	50	0.03	80 or more	—
	6	DTA015EM		—	T2L		150	100	100	50	0.02	80 or more	—
	7	DTA013ZM		—	T2L		150	1	10	50	0.1	30 or more	—
	8	DTA023YM		—	T2L		150	2.2	10	50	0.1	35 or more	—
	9	DTA023JM		—	T2L		150	2.2	47	50	0.1	80 or more	—
	10	DTA043XM		—	T2L		150	4.7	10	50	0.1	35 or more	—
	11	DTA043ZM		—	T2L		150	4.7	47	50	0.1	80 or more	—
	12	DTA014YM		—	T2L		150	10	47	50	0.07	80 or more	—
	13	DTA024XM		—	T2L		150	22	47	50	0.05	80 or more	—
	14	DTA043TM		—	T2L		150	4.7	—	50	0.1	100 to 600	—
	15	DTA014TM		—	T2L		150	10	—	50	0.1	100 to 600	—
	16	DTA044TM		—	T2L		150	47	—	50	0.06	100 to 600	—
	17	DTA015TM		—	T2L		150	100	—	50	0.1	100 to 600	—
	18	DTC023EM		—	T2L	NPN	150	2.2	2.2	50	0.1	20 or more	—
	19	DTC043EM		—	T2L		150	4.7	4.7	50	0.1	20 or more	—
	20	DTC014EM		—	T2L		150	10	10	50	0.05	35 or more	—
	21	DTC024EM		—	T2L		150	22	22	50	0.03	60 or more	—
	22	DTC044EM		—	T2L		150	47	47	50	0.03	80 or more	—
	23	DTC015EM		—	T2L		150	100	100	50	0.02	80 or more	—
	24	DTC013ZM		—	T2L		150	1	10	50	0.1	30 or more	—
	25	DTC023YM		—	T2L		150	2.2	10	50	0.1	35 or more	—
	26	DTC023JM		—	T2L		150	2.2	47	50	0.1	80 or more	—
	27	DTC043XM		—	T2L		150	4.7	10	50	0.1	35 or more	—
	28	DTC043ZM		—	T2L		150	4.7	47	50	0.1	80 or more	—
	29	DTC014YM		—	T2L		150	10	47	50	0.07	80 or more	—
	30	DTC024XM		—	T2L		150	22	47	50	0.05	80 or more	—
	31	DTC043TM		—	T2L		150	4.7	—	50	0.1	100 to 600	—
	32	DTC014TM		—	T2L		150	10	—	50	0.1	100 to 600	—
	33	DTC044TM		—	T2L		150	47	—	50	0.06	100 to 600	—
	34	DTC015TM		—	T2L		150	100	—	50	0.1	100 to 600	—
SOT-416FL (EMT3F) [SC-89] 1616 size	35	DTA023EEB	*	—	TL	PNP	150	2.2	2.2	50	0.1	20 or more	—
	36	DTA043EEB		—	TL		150	4.7	4.7	50	0.1	20 or more	—
	37	DTA014EEB		—	TL		150	10	10	50	0.05	35 or more	—
	38	DTA024EEB		—	TL		150	22	22	50	0.03	60 or more	—
	39	DTA044EEB		—	TL		150	47	47	50	0.03	80 or more	—
	40	DTA015EEB		—	TL		150	100	100	50	0.02	80 or more	—
	41	DTA013ZEB		—	TL		150	1	10	50	0.1	30 or more	—
	42	DTA023YEB		—	TL		150	2.2	10	50	0.1	35 or more	—
	43	DTA023JEB		—	TL		150	2.2	47	50	0.1	80 or more	—
	44	DTA043XEB		—	TL		150	4.7	10	50	0.1	35 or more	—
	45	DTA043ZEB		—	TL		150	4.7	47	50	0.1	80 or more	—
	46	DTA014YEB		—	TL		150	10	47	50	0.07	80 or more	—
	47	DTA024XEB		—	TL		150	22	47	50	0.05	80 or more	—
	48	DTA043TEB		—	TL		150	4.7	—	50	0.1	100 to 600	—
	49	DTA014TEB		—	TL		150	10	—	50	0.1	100 to 600	—
	50	DTA044TEB		—	TL		150	47	—	50	0.06	100 to 600	—
	51	DTA015TEB		—	TL		150	100	—	50	0.1	100 to 600	—
	52	DTC023EEB		—	TL	NPN	150	2.2	2.2	50	0.1	20 or more	—
	53	DTC043EEB		—	TL		150	4.7	4.7	50	0.1	20 or more	—
	54	DTC014EEB		—	TL		150	10	10	50	0.05	35 or more	—
	55	DTC024EEB		—	TL		150	22	22	50	0.03	60 or more	—
	56	DTC044EEB		—	TL		150	47	47	50	0.03	80 or more	—
	57	DTC015EEB		—	TL		150	100	100	50	0.02	80 or more	—
	58	DTC013ZEB		—	TL		150	1	10	50	0.1	30 or more	—
	59	DTC023YEB		—	TL		150	2.2	10	50	0.1	35 or more	—
	60	DTC023JEB		—	TL		150	2.2	47	50	0.1	80 or more	—
	61	DTC043XEB		—	TL		150	4.7	10	50	0.1	35 or more	—
	62	DTC043ZEB		—	TL		150	4.7	47	50	0.1	80 or more	—
	63	DTC014YEB		—	TL		150	10	47	50	0.07	80 or more	—
	64	DTC024XEB		—	TL		150	22	47	50	0.05	80 or more	—
	65	DTC043TEB		—	TL		150	4.7	—	50	0.1	100 to 600	—
	66	DTC014TEB		—	TL		150	10	—	50	0.1	100 to 600	—
	67	DTC044TEB		—	TL		150	47	—	50	0.06	100 to 600	—
	68	DTC015TEB		—	TL		150	100	—	50	0.1	100 to 600	—

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

100mA Digital Transistors(For Consumer only)

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
 SOT-323FL (UMT3F) [SC-85] 2021 size	69	DTA023EUB	*	—	TL	PNP	200	2.2	2.2	50	0.1	20 or more	—
	70	DTA043EUB		—	TL		200	4.7	4.7	50	0.1	20 or more	—
	71	DTA014EUB		—	TL		200	10	10	50	0.05	35 or more	—
	72	DTA024EUB		—	TL		200	22	22	50	0.03	60 or more	—
	73	DTA044EUB		—	TL		200	47	47	50	0.03	80 or more	—
	74	DTA015EUB		—	TL		200	100	100	50	0.02	80 or more	—
	75	DTA013ZUB		—	TL		200	1	10	50	0.1	30 or more	—
	76	DTA023YUB		—	TL		200	2.2	10	50	0.1	35 or more	—
	77	DTA023JUB		—	TL		200	2.2	47	50	0.1	80 or more	—
	78	DTA043XUB		—	TL		200	4.7	10	50	0.1	35 or more	—
	79	DTA043ZUB		—	TL		200	4.7	47	50	0.1	80 or more	—
	80	DTA014YUB		—	TL		200	10	47	50	0.07	80 or more	—
	81	DTA024XUB		—	TL		200	22	47	50	0.05	80 or more	—
	82	DTA043TUB		—	TL		200	4.7	—	50	0.1	100 to 600	—
	83	DTA014TUB		—	TL		200	10	—	50	0.1	100 to 600	—
	84	DTA044TUB		—	TL		200	47	—	50	0.06	100 to 600	—
	85	DTA015TUB		—	TL		200	100	—	50	0.1	100 to 600	—
	86	DTC023EUB		—	TL	NPN	200	2.2	2.2	50	0.1	20 or more	—
	87	DTC043EUB		—	TL		200	4.7	4.7	50	0.1	20 or more	—
	88	DTC014EUB		—	TL		200	10	10	50	0.05	35 or more	—
	89	DTC024EUB		—	TL		200	22	22	50	0.03	60 or more	—
	90	DTC044EUB		—	TL		200	47	47	50	0.03	80 or more	—
	91	DTC015EUB		—	TL		200	100	100	50	0.02	80 or more	—
	92	DTC013ZUB		—	TL		200	1	10	50	0.1	30 or more	—
	93	DTC023YUB		—	TL		200	2.2	10	50	0.1	35 or more	—
	94	DTC023JUB		—	TL		200	2.2	47	50	0.1	80 or more	—
	95	DTC043XUB		—	TL		200	4.7	10	50	0.1	35 or more	—
	96	DTC043ZUB		—	TL		200	4.7	47	50	0.1	80 or more	—
	97	DTC014YUB		—	TL		200	10	47	50	0.07	80 or more	—
	98	DTC024XUB		—	TL		200	22	47	50	0.05	80 or more	—
	99	DTC043TUB		—	TL		200	4.7	—	50	0.1	100 to 600	—
	100	DTC014TUB		—	TL		200	10	—	50	0.1	100 to 600	—
	101	DTC044TUB		—	TL		200	47	—	50	0.06	100 to 600	—
	102	DTC015TUB		—	TL		200	100	—	50	0.1	100 to 600	—

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (−) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Digital Transistors

Quick Reference for 500mA Digital Transistors

Item / Specifications	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package: SOT-323 (UMT3) [SC-70] 2021 size	Package: SOT-23 (SST3) 2924 size	Package: SOT-346 (SMT3) [SC-59] 2928 size	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)	GI (h_{FE})
										
					P_D=200mW*					
					PNP / NPN	PNP / NPN	PNP / NPN			
					Quick Reference No.					
R1=R2 Potential Divider type	DTB113Ex	DTD113Ex	1	1	☆1	☆9	17 / 25	33 / 41	50	0.5	33 or more
	DTB123Ex	DTD123Ex	2.2	2.2	☆2	☆10	18 / 26	34 / 42			39 or more
	DTB143Ex	DTD143Ex	4.7	4.7	☆3	☆11	19 / 27	35 / 43			47 or more
	DTB114Ex	DTD114Ex	10	10	☆4	☆12	20 / 28	36 / 44			56 or more
R1≠R2 Leak Absorption type	DTB113Zx	DTD113Zx	1	10	☆5	☆13	21 / 29	37 / 45			56 or more
	DTB123Yx	DTD123Yx	2.2	10	☆6	☆14	22 / 30	38 / 46			56 or more
Type Using R2 Alone as Bleeder Resistor	DTB114Gx	DTD114Gx	—	10	☆7	☆15	23 / 31	39 / 47			56 or more
Type Using R1 Alone as Input Resistor	DTB123Tx	DTD123Tx	2.2	—	☆8	☆16	24 / 32	40 / 48	40		100 to 600
x : Packaging designation symbol					U		C		K		

Notes1 : PNP (—) symbol omitted. Notes2 : * With reference land installed.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

☆ : Under Development

500mA Digital Transistors

Package	Quick Reference No.	Part No.	Grade Code: General	Grade Code: Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-323 (UMT3) [SC-70] 2021 size	1	☆DTB113EU	*	—	T106	PNP	200	1	1	50	0.5	33 or more	—
	2	☆DTB123EU		—	T106		200	2.2	2.2	50	0.5	39 or more	—
	3	☆DTB143EU		—	T106		200	4.7	4.7	50	0.5	47 or more	—
	4	☆DTB114EU		—	T106		200	10	10	50	0.5	56 or more	—
	5	☆DTB113ZU		—	T106		200	1	10	50	0.5	56 or more	—
	6	☆DTB123YU		—	T106		200	2.2	10	50	0.5	56 or more	—
	7	☆DTB114GU		—	T106		200	—	10	50	0.5	56 or more	—
	8	☆DTB123TU		—	T106		200	2.2	—	40	0.5	100 to 600	—
	9	☆DTD113EU		—	T106	NPN	200	1	1	50	0.5	33 or more	—
	10	☆DTD123EU		—	T106		200	2.2	2.2	50	0.5	39 or more	—
	11	☆DTD143EU		—	T106		200	4.7	4.7	50	0.5	47 or more	—
	12	☆DTD114EU		—	T106		200	10	10	50	0.5	56 or more	—
	13	☆DTD113ZU		—	T106		200	1	10	50	0.5	56 or more	—
	14	☆DTD123YU		—	T106		200	2.2	10	50	0.5	56 or more	—
	15	☆DTD114GU		—	T106		200	—	10	50	0.5	56 or more	—
	16	☆DTD123TU		—	T106		200	2.2	—	40	0.5	100 to 600	—
SOT-23 (SOT-23) 2924 size	17	DTB113EC	*	HZG	T116	PNP	200	1	1	50	0.5	33 or more	YES
	18	DTB123EC		HZG	T116		200	2.2	2.2	50	0.5	39 or more	YES
	19	DTB143EC		HZG	T116		200	4.7	4.7	50	0.5	47 or more	YES
	20	DTB114EC		HZG	T116		200	10	10	50	0.5	56 or more	YES
	21	DTB113ZC		HZG	T116		200	1	10	50	0.5	56 or more	YES
	22	DTB123YC		HZG	T116		200	2.2	10	50	0.5	56 or more	YES
	23	DTB114GC		HZG	T116		200	—	10	50	0.5	56 or more	YES
	24	DTB123TC		HZG	T116		200	2.2	—	40	0.5	100 to 600	YES
	25	DTD113EC		HZG	T116	NPN	200	1	1	50	0.5	33 or more	YES
	26	DTD123EC		HZG	T116		200	2.2	2.2	50	0.5	39 or more	YES
	27	DTD143EC		HZG	T116		200	4.7	4.7	50	0.5	47 or more	YES
	28	DTD114EC		HZG	T116		200	10	10	50	0.5	56 or more	YES
	29	DTD113ZC		HZG	T116		200	1	10	50	0.5	56 or more	YES
	30	DTD123YC		HZG	T116		200	2.2	10	50	0.5	56 or more	YES
	31	DTD114GC		HZG	T116		200	—	10	50	0.5	56 or more	YES
	32	DTD123TC		HZG	T116		200	2.2	—	40	0.5	100 to 600	YES
SOT-346 (SMT3) [SC-59] 2928 size	33	DTB113EK	*	FRA	T146	PNP	200	1	1	50	0.5	33 or more	YES*2
	34	DTB123EK		FRA	T146		200	2.2	2.2	50	0.5	39 or more	YES*2
	35	DTB143EK		FRA	T146		200	4.7	4.7	50	0.5	47 or more	YES*2
	36	DTB114EK		FRA	T146		200	10	10	50	0.5	56 or more	YES*2
	37	DTB113ZK		FRA	T146		200	1	10	50	0.5	56 or more	YES*2
	38	DTB123YK		FRA	T146		200	2.2	10	50	0.5	56 or more	YES*2
	39	DTB114GK		—	T146		200	—	10	50	0.5	56 or more	—
	40	DTB123TK		—	T146		200	2.2	—	40	0.5	100 to 600	—
	41	DTD113EK		FRA	T146	NPN	200	1	1	50	0.5	33 or more	YES*2
	42	DTD123EK		FRA	T146		200	2.2	2.2	50	0.5	39 or more	YES*2
	43	DTD143EK		FRA	T146		200	4.7	4.7	50	0.5	47 or more	YES*2
	44	DTD114EK		FRA	T146		200	10	10	50	0.5	56 or more	YES*2
	45	DTD113ZK		FRA	T146		200	1	10	50	0.5	56 or more	YES*2
	46	DTD123YK		FRA	T146		200	2.2	10	50	0.5	56 or more	YES*2
	47	DTD114GK		—	T146		200	—	10	50	0.5	56 or more	—
	48	DTD123TK		—	T146		200	2.2	—	40	0.5	100 to 600	—

Notes1 : * : General part No. have no grade code. Notes2 : *1 With reference land installed. Notes3 : *2 Not recommended for a new design.
Notes4 : PNP (—) symbol omitted. Notes5 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

☆ : Under Development

Quick Reference for 12V/500mA Digital Transistors

Item / Specifications	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package: SOT-723 (VMT3) [SC-105AA] 1212 size	Package: SOT-416 (EMT3) [SC-75A] 1616 size	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)	GI (h_{FE})
					P_D=150mW*				
					PNP	NPN	PNP	NPN	
					Quick Reference No.				
R1=R2 Potential Divider type	DTB543Ex	DTD543Ex	4.7	4.7	1	6	11	16	115 or more
R1≠R2 Leak Absorption type	DTB513Zx	DTD513Zx	1	10	2	7	12	17	140 or more
	DTB523Yx	DTD523Yx	2.2	10	3	8	13	18	140 or more
	DTB543Xx	DTD543Xx	4.7	10	4	9	14	19	140 or more
	DTB543Zx	DTD543Zx	4.7	47	5	10	15	20	140 or more
							12	0.5	
x : Packaging designation symbol					M	E			

Notes1 : PNP (−) symbol omitted.
Notes2 : * With reference land installed.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

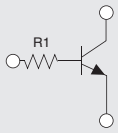
12V/500mA Digital Transistors

Package	Product No. Quick Reference No.	Part No.	Grade Code General	Grade Code Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
SOT-723 (VMT3) [SC-105AA] 1212 size	1	DTB543EM	*	—	T2L	PNP	150	4.7	4.7	12	0.5	115 or more	—
	2	DTB513ZM		—	T2L		150	1	10	12	0.5	140 or more	—
	3	DTB523YM		—	T2L		150	2.2	10	12	0.5	140 or more	—
	4	DTB543XM		—	T2L		150	4.7	10	12	0.5	140 or more	—
	5	DTB543ZM		—	T2L		150	4.7	47	12	0.5	140 or more	—
	6	DTD543EM		—	T2L	NPN	150	4.7	4.7	12	0.5	115 or more	—
	7	DTD513ZM		—	T2L		150	1	10	12	0.5	140 or more	—
	8	DTD523YM		—	T2L		150	2.2	10	12	0.5	140 or more	—
	9	DTD543XM		—	T2L		150	4.7	10	12	0.5	140 or more	—
	10	DTD543ZM		—	T2L		150	4.7	47	12	0.5	140 or more	—
SOT-416 (EMT3) [SC-75A] 1616 size	11	DTB543EE	*	—	TL	PNP	150	4.7	4.7	12	0.5	115 or more	—
	12	DTB513ZE		—	TL		150	1	10	12	0.5	140 or more	—
	13	DTB523YE		—	TL		150	2.2	10	12	0.5	140 or more	—
	14	DTB543XE		—	TL		150	4.7	10	12	0.5	140 or more	—
	15	DTB543ZE		—	TL		150	4.7	47	12	0.5	140 or more	—
	16	DTD543EE		—	TL	NPN	150	4.7	4.7	12	0.5	115 or more	—
	17	DTD513ZE		—	TL		150	1	10	12	0.5	140 or more	—
	18	DTD523YE		—	TL		150	2.2	10	12	0.5	140 or more	—
	19	DTD543XE		—	TL		150	4.7	10	12	0.5	140 or more	—
	20	DTD543ZE		—	TL		150	4.7	47	12	0.5	140 or more	—

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : PNP (−) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Digital Transistors

Quick Reference for Muting Digital Transistors

Item / Specifications	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package: SOT-323FL (UMT3F) [SC-85] 2021 size	Package: SOT-323 (UMT3) [SC-70] 2021 size	Package: SOT-346 (SMT3) [SC-59] 2928 size	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)	GI (h_{FE})
	—									
					P_D=200mW*					
Type Using R1 Alone as Input Resistor	—	DTC623Tx	2.2	—		DTC623TU	DTC623TK	20	0.6	820 to 2700
	—	DTC643Tx	4.7	—		DTC643TU	DTC643TK			820 to 2700
	—	DTC614Tx	10	—		DTC614TU	DTC614TK			820 to 2700
	—	DTC923TUB	2.2	—	DTC923TUB			40 (V_{EBO})	0.4	820 to 2700
	—	DTC943TUB	4.7	—	DTC943TUB					820 to 2700
	—	DTC914TUB	10	—	DTC914TUB					820 to 2700
x : Packaging designation symbol					UB	U	K			

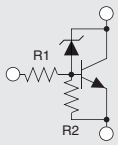
Notes1 : * With reference land installed.
Notes2 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Muting Digital Transistors

Package	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Polarity (ch)	P_D*1 (mW)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
 SOT-323FL (UMT3F) [SC-85] 2021 size	DTC923TUB	*	—	TL	NPN	200	2.2	—	40 (V_{EBO})	0.4	820 to 2700	—
	DTC943TUB		—	TL		200	4.7	—	40 (V_{EBO})	0.4	820 to 2700	—
	DTC914TUB		—	TL		200	10	—	40 (V_{EBO})	0.4	820 to 2700	—
 SOT-323 (UMT3) [SC-70] 2021 size	DTC623TU	*	—	T106	NPN	200	2.2	—	20	0.6	820 to 2700	—
	DTC643TU		—	T106		200	4.7	—	20	0.6	820 to 2700	—
	DTC614TU		—	T106		200	10	—	20	0.6	820 to 2700	—
 SOT-346 (SMT3) [SC-59] 2928 size	DTC623TK	*	—	T146	NPN	200	2.2	—	20	0.6	820 to 2700	—
	DTC643TK		—	T146		200	4.7	—	20	0.6	820 to 2700	—
	DTC614TK		—	T146		200	10	—	20	0.6	820 to 2700	—

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Quick Reference for Power Digital Transistors

Item / Specifications	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package: SOT-89 (MPT3) [SC-62] 4540 size	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)	GI (h_{FE})
	—							
					P_D=0.5W*			
Driver	—	DTDG23YP	2.2	10	DTDG23YP	60±10	1	300 or more
	—	DTDG14GP	—	10	DTDG14GP			300 or more

Notes1 : * With reference land installed.
Notes2 : For internal circuit, please see the technical specifications.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

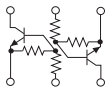
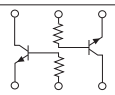
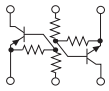
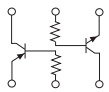
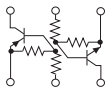
Power Digital Transistors

Package	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Polarity (ch)	P_D*1 (W)	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	GI (h_{FE})	Automotive Grade AEC-Q101
 SOT-89 (MPT3) [SC-62] 4540 size	DTDG23YP	*	FRA	T100	NPN	0.5	2.2	10	60±10	1	300 or more	YES
	DTDG14GP		FRA	T100		0.5	—	10	60±10	1	300 or more	YES

Notes1 : * : General part No. have no grade code.
Notes2 : *1 With reference land installed.
Notes3 : For internal circuit, please see the technical specifications.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Digital Transistors

Quick Reference for 100mA Complex Digital Transistors(Including Automotive use)

Configuration	Equivalent Circuit Diagram (TOP View)	SOT-563 (EMT6) [SC-107C] 1616 size	SOT-363 (UMT6) [SC-88] 2021 size	SOT-457 (SMT6) [SC-74] 2928 size	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)
		Part No.							
PNP×2		EMB10	UMB10N	IMB10A	DTA123J×2	2.2	47		0.1
		EMB11	UMB11N	IMB11A	DTA114E×2	10	10		0.05
		EMB2	UMB2N	IMB2A	DTA144E×2	47	47		0.03
		EMB3	UMB3N	IMB3A	DTA143T×2	4.7	—		0.1
		EMB4	UMB4N		DTA114T×2	10	—		0.1
NPN×2		EMH10	UMH10N		DTC123J×2	2.2	47		0.1
		EMH25	☆UMH25N		DTC143Z×2	4.7	47		0.1
		EMH11	UMH11N	IMH11A	DTC114E×2	10	10		0.05
		EMH9	UMH9N	IMH9A	DTC114Y×2	10	47		0.07
		EMH1	UMH1N	IMH1A	DTC124E×2	22	22		0.03
		EMH2	UMH2N	IMH2A	DTC144E×2	47	47		0.03
		EMH3	UMH3N	IMH3A	DTC143T×2	4.7	—		0.1
		EMH4	UMH4N	IMH4A	DTC114T×2	10	—	50	0.1
PNP+NPN Complimentary			New UMD25N		DTA123J DTC123J	2.2 2.2	47 47		0.1
		EMD22	UMD22N		DTA143Z DTC143Z	4.7 4.7	47 47		0.1
		EMD3	UMD3N	IMD3A	DTA114E DTC114E	10 10	10 10		0.05
		EMD9	UMD9N	IMD9A	DTA114Y DTC114Y	10 10	47 47		0.07
		EMD2	UMD2N	IMD2A	DTA124E DTC124E	22 22	22 22		0.03
		EMD12	UMD12N		DTA144E DTC144E	47 47	47 47		0.03
		EMD6	UMD6N	IMD6A	DTA143T DTC143T	4.7 4.7	— —		0.1
PNP+NPN Different type		EMD38			DTA113Z DTC114Y	1 10	10 47		0.1 0.07
		EMD5	UMD5N		DTA143X DTC144E	4.7 47	10 47		0.1 0.03
		EMD4	UMD4N		DTA114Y DTC144E	10 47	47 47		0.1 0.03

Notes1 : For Pin location, please see the technical specifications.
Notes2 : PNP (—) symbol omitted.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

☆ : Under Development

C Transistors

Complex Digital Transistors

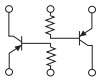
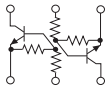
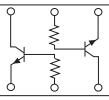
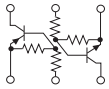
100mA Complex Digital Transistors(Including Automotive use)

Package	Configuration	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	Automotive Grade AEC-Q101
SOT-563 (EMT6) [SC-107C] 1616 size	PNP×2	EMB10	*	FHA	T2R	DTA123J×2	2.2	47	50	0.1	YES
		EMB11		FHA	T2R	DTA114E×2	10	10	50	0.05	YES
		EMB2		FHA	T2R	DTA144E×2	47	47	50	0.03	YES
		EMB3		FHA	T2R	DTA143T×2	4.7	—	50	0.1	YES
		EMB4		FHA	T2R	DTA114T×2	10	—	50	0.1	YES
	NPN×2	EMH10		FHA	T2R	DTC123J×2	2.2	47	50	0.1	YES
		EMH25		FHA	T2R	DTC143Z×2	4.7	47	50	0.1	YES
		EMH11		FHA	T2R	DTC114E×2	10	10	50	0.05	YES
		EMH9		FHA	T2R	DTC114Y×2	10	47	50	0.07	YES
		EMH1		FHA	T2R	DTC124E×2	22	22	50	0.03	YES
		EMH2		FHA	T2R	DTC144E×2	47	47	50	0.03	YES
		EMH3		FHA	T2R	DTC143T×2	4.7	—	50	0.1	YES
		EMH4		FHA	T2R	DTC114T×2	10	—	50	0.1	YES
	PNP+NPN Complimentary	EMD22		FHA	T2R	DTA143Z DTC143Z	4.7 4.7	47 47	50	0.1	YES
		EMD3		FHA	T2R	DTA114E DTC114E	10 10	10 10	50	0.05	YES
		EMD9		FHA	T2R	DTA114Y DTC114Y	10 10	47 47	50	0.07	YES
		EMD2		FHA	T2R	DTA124E DTC124E	22 22	22 22	50	0.03	YES
		EMD12		FHA	T2R	DTA144E DTC144E	47 47	47 47	50	0.03	YES
		EMD6		FHA	T2R	DTA143T DTC143T	4.7 4.7	— —	50	0.1	YES
	PNP+NPN Different type	EMD38		—	T2R	DTA113Z DTC114Y	1 10	10 47	50	0.1 0.07	—
		EMD5		—	T2R	DTA143X DTC144E	4.7 47	10 47	50	0.1 0.03	—
		EMD4		—	T2R	DTA114Y DTC144E	10 47	47 47	50	0.1 0.03	—
SOT-363 (UMT6) [SC-88] 2021 size	PNP×2	UMB10N	*	FHA	TN	DTA123J×2	2.2	47	50	0.1	YES
		UMB11N		FHA	TN	DTA114E×2	10	10	50	0.05	YES
		UMB2N		FHA	TN	DTA144E×2	47	47	50	0.03	YES
		UMB3N		FHA	TN	DTA143T×2	4.7	—	50	0.1	YES
		UMB4N		FHA	TN	DTA114T×2	10	—	50	0.1	YES
	NPN×2	UMH10N		FHA	TN	DTC123J×2	2.2	47	50	0.1	YES
		☆UMH25N		FHA	TN	DTC143Z×2	4.7	47	50	0.1	YES
		UMH11N		FHA	TN	DTC114E×2	10	10	50	0.05	YES
		UMH9N		FHA	TN	DTC114Y×2	10	47	50	0.07	YES
		UMH1N		FHA	TN	DTC124E×2	22	22	50	0.03	YES
		UMH2N		FHA	TN	DTC144E×2	47	47	50	0.03	YES
		UMH3N		FHA	TN	DTC143T×2	4.7	—	50	0.1	YES
		UMH4N		FHA	TN	DTC114T×2	10	—	50	0.1	YES
	PNP+NPN Complimentary	New UMD25N		—	TR	DTA123J DTC123J	2.2 2.2	47 47	50	0.1	—
		UMD22N		FHA	TR	DTA143Z DTC143Z	4.7 4.7	47 47	50	0.1	YES
		UMD3N		FHA	TR	DTA114E DTC114E	10 10	10 10	50	0.05	YES
		UMD9N		FHA	TR	DTA114Y DTC114Y	10 10	47 47	50	0.07	YES
		UMD2N		FHA	TR	DTA124E DTC124E	22 22	22 22	50	0.03	YES
		UMD12N		FHA	TR	DTA144E DTC144E	47 47	47 47	50	0.03	YES
		UMD6N		FHA	TR	DTA143T DTC143T	4.7 4.7	— —	50	0.1	YES
	PNP+NPN Different type	UMD5N		—	TR	DTA143X DTC144E	4.7 47	10 47	50	0.1 0.03	—
		UMD4N		—	TR	DTA114Y DTC144E	10 47	47 47	50	0.1 0.03	—
SOT-457 (SMT6) [SC-74] 2928 size	PNP×2	IMB10A	*	—	T110	DTA123J×2	2.2	47	50	0.1	—
		IMB11A		—	T110	DTA114E×2	10	10	50	0.05	—
		IMB2A		—	T110	DTA144E×2	47	47	50	0.03	—
		IMB3A		—	T110	DTA143T×2	4.7	—	50	0.1	—
	NPN×2	IMH11A		FRA	T110	DTC114E×2	10	10	50	0.05	YES*1
		IMH9A		FRA	T110	DTC114Y×2	10	47	50	0.07	YES*1
		IMH1A		—	T110	DTC124E×2	22	22	50	0.03	—
		IMH2A		—	T110	DTC144E×2	47	47	50	0.03	—
		IMH3A		—	T110	DTC143T×2	4.7	—	50	0.1	—
		IMH4A		—	T110	DTC114T×2	10	—	50	0.1	—
	PNP+NPN Complimentary	IMD3A		FRA	T108	DTA114E DTC114E	10 10	10 10	50	0.05	YES*1
		IMD9A		FRA	T108	DTA114Y DTC114Y	10 10	47 47	50	0.07	YES*1
		IMD2A		—	T108	DTA124E DTC124E	22 22	22 22	50	0.03	—
		IMD6A		—	T108	DTA143T DTC143T	4.7 4.7	— —	50	0.1	—

Notes1 : * : General part No. have no grade code.
Notes2 : For Pin location, please see the technical specifications.
Notes3 : *1 Not recommended for a new design.
Notes4 : PNP (—) symbol omitted.
Notes5 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

☆ : Under Development

Quick Reference for 100mA Complex Digital Transistors(For Consumer only) 1

Configuration	Equivalent Circuit Diagram (TOP View)	SOT-563 (EMT6) [SC-107C] 1616 size  Part No.	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)
PNP×2		EMB60	DTA023J×2	2.2	47	50	0.1
		EMB75	DTA043Z×2	4.7	47		0.1
		EMB61	DTA014E×2	10	10		0.05
		EMB59	DTA014Y×2	10	47		0.07
		EMB51	DTA024E×2	22	22		0.03
		EMB52	DTA044E×2	47	47		0.03
		EMB53	DTA043T×2	4.7	—		0.1
NPN×2		EMH60	DTC023J×2	2.2	47		0.1
		EMH75	DTC043Z×2	4.7	47		0.1
		EMH61	DTC014E×2	10	10		0.05
		EMH59	DTC014Y×2	10	47		0.07
		EMH51	DTC024E×2	22	22		0.03
		EMH52	DTC044E×2	47	47		0.03
		EMH53	DTC043T×2	4.7	—		0.1
PNP+NPN Complimentary		EMD72	DTA043Z DTC043Z	4.7 4.7	47 47		0.1
		EMD53	DTA014E DTC014E	10 10	10 10		0.05
		EMD59	DTA014Y DTC014Y	10 10	47 47		0.07
		EMD52	DTA024E DTC024E	22 22	22 22		0.03
		EMD62	DTA044E DTC044E	47 47	47 47		0.03

Notes1 : For Pin location, please see the technical specifications.
Notes2 : PNP (−) symbol omitted.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

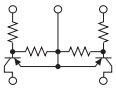
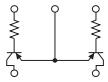
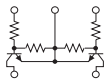
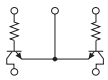
100mA Complex Digital Transistors(For Consumer only) 1

Package	Configuration	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	Automotive Grade AEC-Q101
SOT-563 (EMT6) [SC-107C] 1616 size	PNP×2	EMB60	*	—	T2R	DTA023J×2	2.2	47	50	0.1	—
		EMB75		—	T2R	DTA043Z×2	4.7	47	50	0.1	—
		EMB61		—	T2R	DTA014E×2	10	10	50	0.05	—
		EMB59		—	T2R	DTA014Y×2	10	47	50	0.07	—
		EMB51		—	T2R	DTA024E×2	22	22	50	0.03	—
		EMB52		—	T2R	DTA044E×2	47	47	50	0.03	—
		EMB53		—	T2R	DTA043T×2	4.7	—	50	0.1	—
	NPN×2	EMH60		—	T2R	DTC023J×2	2.2	47	50	0.1	—
		EMH75		—	T2R	DTC043Z×2	4.7	47	50	0.1	—
		EMH61		—	T2R	DTC014E×2	10	10	50	0.05	—
		EMH59		—	T2R	DTC014Y×2	10	47	50	0.07	—
		EMH51		—	T2R	DTC024E×2	22	22	50	0.03	—
		EMH52		—	T2R	DTC044E×2	47	47	50	0.03	—
		EMH53		—	T2R	DTC043T×2	4.7	—	50	0.1	—
	PNP+NPN Complimentary	EMD72		—	T2R	DTA043Z DTC043Z	4.7 4.7	47 47	50	0.1	—
		EMD53		—	T2R	DTA014E DTC014E	10 10	10 10	50	0.05	—
		EMD59		—	T2R	DTA014Y DTC014Y	10 10	47 47	50	0.07	—
		EMD52		—	T2R	DTA024E DTC024E	22 22	22 22	50	0.03	—
		EMD62		—	T2R	DTA044E DTC044E	47 47	47 47	50	0.03	—

Notes1 : * : General part No. have no grade code.
Notes2 : For Pin location, please see the technical specifications.
Notes3 : PNP (−) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Digital Transistors

Quick Reference for 100mA Complex Digital Transistors(For Consumer only) 2

Configuration	Equivalent Circuit Diagram (TOP View)	SOT-553 (EMT5) [SC-107BB] 1616 size	SOT-353 (UMT5) [SC-88A] 2021 size	SOT-25 (SMT5) [SC-74A] 2928 size	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC} (V_{CEO}) (V)	I_O (I_C) (A)
									
		Part No.							
PNP×2		EMA5	UMA5N	FMA5A	DTA123J×2	2.2	47	50	0.1
			UMA9N	FMA9A	DTA114E×2	10	10		0.05
			UMA1N	FMA1A	DTA124E×2	22	22		0.03
		EMA2	UMA2N	FMA2A	DTA144E×2	47	47		0.03
		EMA3	UMA3N	FMA3A	DTA143T×2	4.7	—		0.1
		EMA4	UMA4N	FMA4A	DTA114T×2	10	—		0.1
NPN×2		EMG11	UMG11N		DTC123J×2	2.2	47		0.1
		EMG8	UMG8N		DTC143Z×2	4.7	47		0.1
		EMG9	UMG9N	FMG9A	DTC114E×2	10	10		0.05
		EMG5	UMG5N		DTC114Y×2	10	47		0.07
		EMG1	UMG1N	FMG1A	DTC124E×2	22	22		0.03
		EMG2	UMG2N	FMG2A	DTC144E×2	47	47		0.03
		EMG3	UMG3N	FMG3A	DTC143T×2	4.7	—		0.1
		EMG4	UMG4N	FMG4A	DTC114T×2	10	—		0.1
		EMG6	UMG6N	FMG6A	DTC144T×2	47	—		0.1

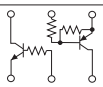
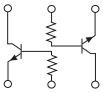
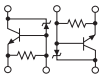
Notes1 : For Pin location, please see the technical specifications.
Notes2 : PNP (—) symbol omitted.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

100mA Complex Digital Transistors(For Consumer only) 2

Package	Configuration	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	Automotive Grade AEC-Q101
SOT-553 (EMT5) [SC-107BB] 1616 size	PNP×2	EMA5	*	—	T2R	DTA123J×2	2.2	47	50	0.1	—
		EMA2		—	T2R	DTA144E×2	47	47	50	0.03	—
		EMA3		—	T2R	DTA143T×2	4.7	—	50	0.1	—
		EMA4		—	T2R	DTA114T×2	10	—	50	0.1	—
	NPN×2	EMG11		—	T2R	DTC123J×2	2.2	47	50	0.1	—
		EMG8		—	T2R	DTC143Z×2	4.7	47	50	0.1	—
		EMG9		—	T2R	DTC114E×2	10	10	50	0.05	—
		EMG5		—	T2R	DTC114Y×2	10	47	50	0.07	—
		EMG1		—	T2R	DTC124E×2	22	22	50	0.03	—
		EMG2		—	T2R	DTC144E×2	47	47	50	0.03	—
		EMG3		—	T2R	DTC143T×2	4.7	—	50	0.1	—
		EMG4		—	T2R	DTC114T×2	10	—	50	0.1	—
		EMG6		—	T2R	DTC144T×2	47	—	50	0.1	—
SOT-353 (UMT5) [SC-88A] 2021 size	PNP×2	UMA5N	*	—	TR	DTA123J×2	2.2	47	50	0.1	—
		UMA9N		—	TR	DTA114E×2	10	10	50	0.05	—
		UMA1N		—	TR	DTA124E×2	22	22	50	0.03	—
		UMA2N		—	TR	DTA144E×2	47	47	50	0.03	—
		UMA3N		—	TR	DTA143T×2	4.7	—	50	0.1	—
		UMA4N		—	TR	DTA114T×2	10	—	50	0.1	—
	NPN×2	UMG11N		—	TR	DTC123J×2	2.2	47	50	0.1	—
		UMG8N		—	TR	DTC143Z×2	4.7	47	50	0.1	—
		UMG9N		—	TR	DTC114E×2	10	10	50	0.05	—
		UMG5N		—	TR	DTC114Y×2	10	47	50	0.07	—
		UMG1N		—	TR	DTC124E×2	22	22	50	0.03	—
		UMG2N		—	TR	DTC144E×2	47	47	50	0.03	—
		UMG3N		—	TR	DTC143T×2	4.7	—	50	0.1	—
		UMG4N		—	TR	DTC114T×2	10	—	50	0.1	—
		UMG6N		—	TR	DTC144T×2	47	—	50	0.1	—
SOT-25 (SMT5) [SC-74A] 2928 size	PNP×2	FMA5A	*	—	T148	DTA123J×2	2.2	47	50	0.1	—
		FMA9A		—	T148	DTA114E×2	10	10	50	0.05	—
		FMA1A		—	T148	DTA124E×2	22	22	50	0.03	—
		FMA2A		—	T148	DTA144E×2	47	47	50	0.03	—
		FMA3A		—	T148	DTA143T×2	4.7	—	50	0.1	—
		FMA4A		—	T148	DTA114T×2	10	—	50	0.1	—
	NPN×2	FMG9A		—	T148	DTC114E×2	10	10	50	0.05	—
		FMG1A		—	T148	DTC124E×2	22	22	50	0.03	—
		FMG2A		—	T148	DTC144E×2	47	47	50	0.03	—
		FMG3A		—	T148	DTC143T×2	4.7	—	50	0.1	—
		FMG4A		—	T148	DTC114T×2	10	—	50	0.1	—
		FMG6A		—	T148	DTC144T×2	47	—	50	0.1	—

Notes1 : * : General part No. have no grade code.
Notes2 : For Pin location, please see the technical specifications.
Notes3 : PNP (—) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Quick Reference for Complex Digital Transistors(For Power Management, Muting and Drivers)

Configuration	Equivalent Circuit Diagram (TOP View)	SOT-563 (EMT6) [SC-107C] 1616 size	SOT-363 (UMT6) [SC-88] 2021 size	SOT-457 (SMT6) [SC-74] 2928 size	SOT-363T (TUMT6) [SC-113DA] 2021 size	SOT-457T (TSMT6) [SC-95] 2928 size	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)
		Part No.							
PNP+NPN Power Management		EMD29					DTB513Z DTC114E	1 10	10 10
				IMD10A			−50V/−0.5A DTC114T	0.1 10	10 —
				IMD16A			−50V/−0.5A DTC115T	2.2 100	22 —
NPN×2 Muting				IMH23	US6H23		DTC643T×2	4.7	—
				IMH21			DTC614T×2	10	—
			UMH33N				DTC923TUB×2	2.2	—
			UMH32N				DTC943TUB×2	4.7	—
			UMH37N				DTC914TUB×2	10	—
NPN×2 Driver						QSH29	60±10V/500mA×2	—	10

Notes1 : No.1 pin is located on the upper right of equivalent circuit diagram for SOT-563(EMT6) and SOT-363(UMT6) packages. No.1 pin is located on the lower right of equivalent circuit diagram for SOT-457(SMT6) packages.
Notes2 : PNP (−) symbol omitted.
Notes3 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

Complex Digital Transistors(For Power Management, Muting and Drivers)

Package	Configuration	Product No. Part No.	Grade Code General	Grade Code Automotive	Taping Code	Equivalent Element Transistors	R1 (kΩ)	R2 (kΩ)	V_{CC}(V_{CEO}) (V)	I_O(I_C) (A)	Automotive Grade AEC-Q101
 SOT-563 (EMT6) [SC-107C] 1616 size	PNP+NPN Power Management	EMD29	*	—	T2R	DTB513Z DTC114E	1 10	10 10	12	0.5	—
 SOT-363 (UMT6) [SC-88] 2021 size	NPN×2 Muting	UMH33N	*	—	TN	DTC923TUB×2	2.2	—	40 (V_{EBO})	0.4	—
		UMH32N		—	TN	DTC943TUB×2	4.7	—	40 (V_{EBO})	0.4	—
		UMH37N		—	TN	DTC914TUB×2	10	—	40 (V_{EBO})	0.4	—
 SOT-457 (SMT6) [SC-74] 2928 size	PNP+NPN Power Management	IMD10A	*	—	T108	Exclusive chip DTC114T	0.1 10	10 —	50	0.5	—
		IMD16A		—	T108	Exclusivechip DTC115T	2.2 100	22 —	50	0.5	—
	NPN×2 Muting	IMH23		—	T110	DTC643T×2	4.7	—	20	0.6	—
		IMH21		—	T110	DTC614T×2	10	—	20	0.6	—
 SOT-363T (TUMT6) [SC-113DA] 2021 size	NPN×2 Muting	US6H23	*	—	TR	DTC643T×2	4.7	—	20	0.6	—
 SOT-457T (TSMT6) [SC-95] 2928 size	NPN×2 Driver	QSH29	*	—	TR	Exclusive chip×2	—	10	60±10	0.5	—

Notes1 : * : General part No. have no grade code.
Notes2 : No.1 pin is located on the upper right of equivalent circuit diagram for SOT-563(EMT6) and SOT-363(UMT6) packages. No.1 pin is located on the lower right of equivalent circuit diagram for SOT-457(SMT6) packages.
Notes3 : PNP (−) symbol omitted.
Notes4 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code

IC Transistor Array

*The following products are belonging to ICs. (Refer P.A20) Please ask IC product group for inquiry.

Transistor Array

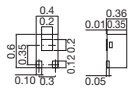
Part No.	Number of Bit	Output Withstand Voltage(V)	Output Saturation Voltage(V)	Output Current (mA)	Input Resistance (kΩ)	Input/Output Relation	Input Active Level	Output Current Relation	Circuit Construction	Features	Package
BA12003BF	7	60	1.46*	500	2.7	Inverting type	H	Sink	Darlington	Built-in surge absorbing diode	SOP16
BA12004BF	7	60	1.46*	500	10.5	Inverting type	H	Sink	Darlington	Built-in surge absorbing diode	SOP16

Note: * Output Current=350mA

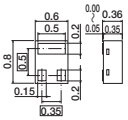
Packages

●Dimensions (Unit : mm)

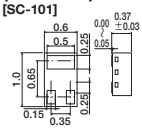
DFN0604-3 (VML0604)



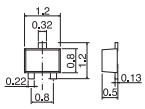
DFN0806-3 (VML0806)



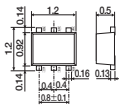
DFN1006-3 (VML1006) [SC-101]



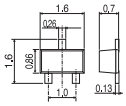
SOT-723 (VMT3) [SC-105AA]



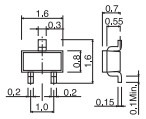
(VMT6) [SC-105B]



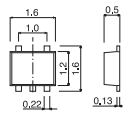
SOT-416FL (EMT3F) [SC-89]



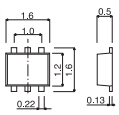
SOT-416 (EMT3) [SC-75A]



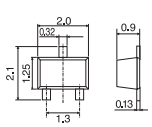
SOT-553 (EMT5) [SC-107BB]



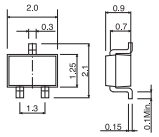
SOT-563 (EMT6) [SC-107C]



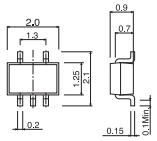
SOT-323FL (UMT3F) [SC-85]



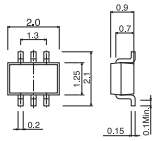
SOT-323 (UMT3) [SC-70]



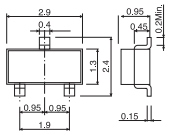
SOT-353 (UMT5) [SC-88A]



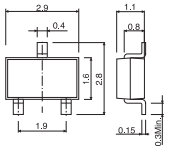
SOT-363 (UMT6) [SC-88]



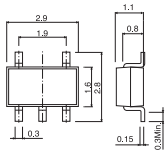
SOT-23 (SST3)



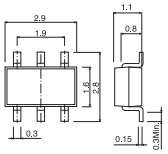
SOT-346 (SMT3) [SC-59]



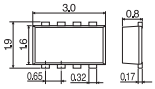
SOT-25 (SMT5) [SC-74A]



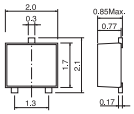
SOT-457 (SMT6) [SC-74]



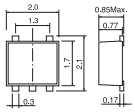
(TSST8)



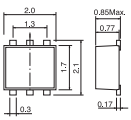
SOT-323T (TUMT3) [SC-113A]



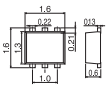
SOT-353T (TUMT5) [SC-113CA]



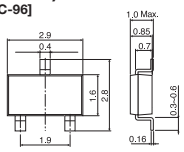
SOT-363T (TUMT6) [SC-113DA]



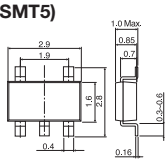
SOT-563T (WEMT6) [SC-120]



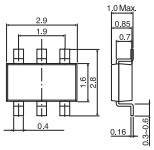
SOT-346T (TSMT3) [SC-96]



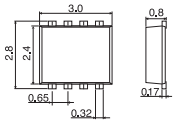
SOT-25T (TSMT5)



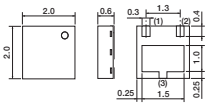
SOT-457T (TSMT6) [SC-95]



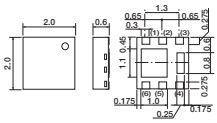
(TSMT8)



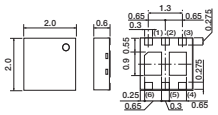
DFN2020-3S (HUML2020L3)



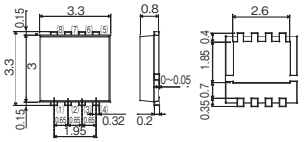
DFN2020-8S (HUML2020L8 Single)



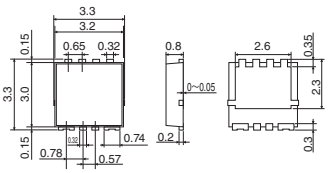
DFN2020-8D (HUML2020L8 Dual)



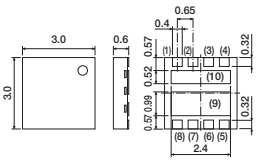
(HSMT8)



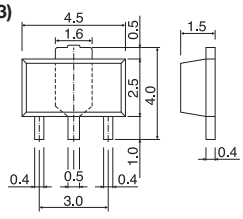
(HSMT8AG)



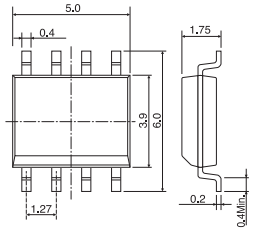
(HSML3030L10)



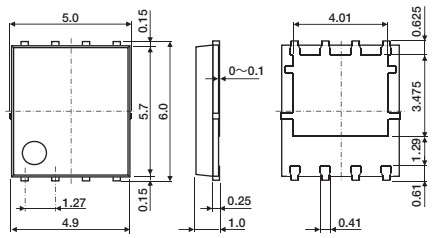
SOT-89 (MPT3) [SC-62]



(SOP8)



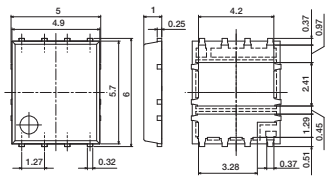
(HSOP8 Single)



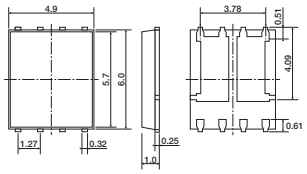
Notes1 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code
Notes2 : For details of dimensions, please refer to the technical specifications.

C Transistors

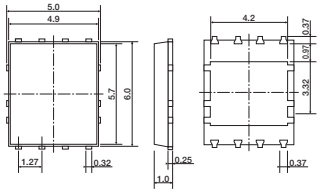
(HSOP8 Asymmetry Dual)



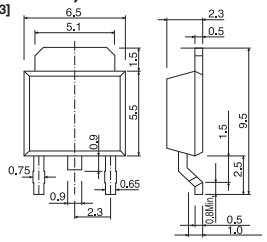
(HSOP8 Symmetry Dual)



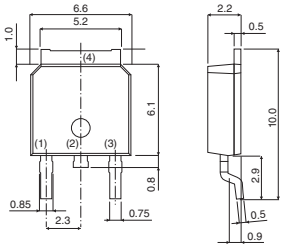
(HSOP8 Drain Common Dual)



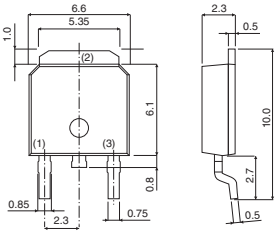
SOT-428
(CPT3 DPAK)
[SC-63]



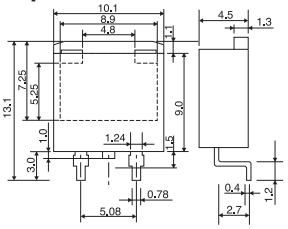
TO-252 *1
(DPAK)



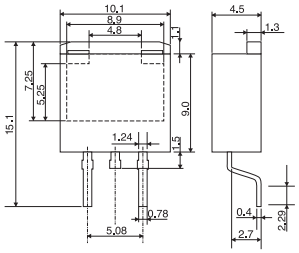
TO-252 *2
(DPAK)



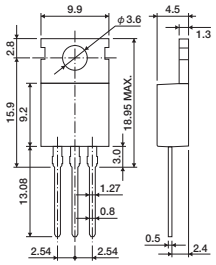
TO-263S
(LPTS D2-PAK)
[SC-83]



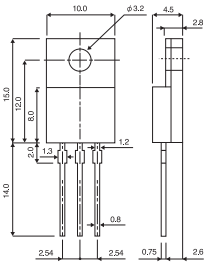
TO-263AB
(LPTL)



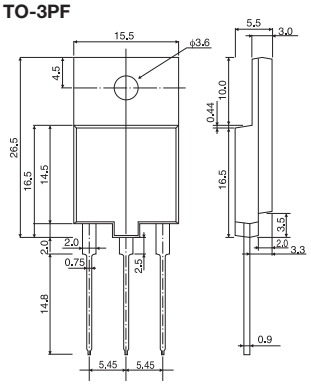
TO-220AB



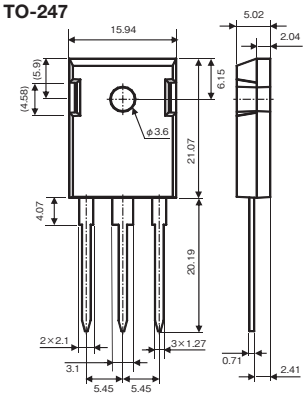
TO-220FM



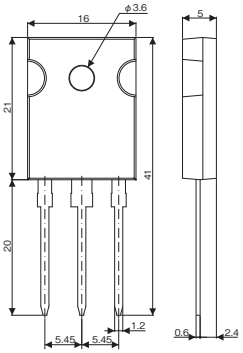
TO-3PF



TO-247



TO-247N



Notes1 : *1 Taping code : TL, *2 Taping code : TL1
Notes2 : Package is JEDEC code. ( ):ROHM Packages , [ ]:JEITA code
Notes3 : For details of dimensions, please refer to the technical specifications.

Part No. Explanation

•MOSFET Part No. Explanation

<Single-Chip type>

Example: R T Q 0 3 5 P 0 2 T R □ (Tape Code)

- R: ROHM
- T: Drive Voltage
- Q: Type of MOSFET
- 035: I_D(Unit: 100mA) ex.) 035=3,500mA(3.5A)
- P: Polarity

Polarity	
N	Nch
P	Pch

Drive Voltage

Type of MOSFET	Drive Voltage(V)				
	0.9/1.2/1.5/1.8	2.5	4	4.5	10
Low I_{GSS} type	—	—	C	—	C
General use type	Z,U,Y	T	D,R,S,X	—	—
High ESD Resistance type	—	J	H	—	—
Stripe	A	—	—	—	—

Package

Symbol	Package
M	SOT-723
U	SOT-323
F	SOT-323T
L	SOT-363T
C	SOT-23
K	SOT-346
R	SOT-346T
Q	SOT-457T
P	SOT-89
H	(SOP8)
S	(SOP8)
D	SOT-428
J	TO-263AB
X	TO-220FM

V_{DSS}

Symbol	V_{DSS}(V)
01	12
02	20
03	30
04	40
05	45
06	60
10	100
19	190
20	200
25	250

<Single-Chip type>

Example: R T 1 A 0 4 0 Z P T L □ (Tape Code)

- R: ROHM
- T: Package

Symbol	Package
V3	DFN0604-3
V1	DFN0806-3
V2	DFN1006-3
E1	SOT-416FL
U1	SOT-323FL
W1	SOT-563T
T1	(TSST8)
F5	SOT-323T
F6	SOT-363T
Q5	SOT-346T
Q6	SOT-457T
Q1	(TSMT8)
Q7	(TSMT8)
F4	DFN2020-8S
F6	SOT-363T
Q3	(HSMT8)
S3	(SOP8)
S1	(HSOP8)
D1	SOT-428
D3	TO-252
X1	TO-220AB
J1	TO-263S
Z2	TO-247N

- A: V_{DSS}

Symbol	V_{DSS}(V)
A	12
C	20
E	30
G	40
H	45
J	50
L	60
P	100
S	190
T	200
U	250

- 040: I_D(A) ex.) 040=4A, 013=1.3A
- Z P: Drive Voltage

Symbol	Process	Pol.	Drive Voltage	Comment
SN	Gen.1	Nch	2.5V/4.0V	—
UN	Gen.1	Nch	1.2V/1.5V	—
YN	Gen.1	Nch	0.9V	—
MN	Gen.3	Nch	4.5V	High Performance
BN	Gen.4	Nch	4.5V	—
AD	Gen.4	Nch	4.5V	Built-in ESD Protection
GN	Gen.4	Nch	4.5V	High Performance
AJ	Gen.5	Nch	2.5V	—
SP	Gen.1	Pch	2.5V/4.0V	—
RP	Gen.2	Pch	4.0V	—
ZP	Gen.2	Pch	1.2V/1.5V	—
AP	Gen.4	Pch	1.5V	—
BC	Gen.5	Pch	2.5V	—
AT	Gen.4	Pch	4.5V	—
AA	Gen.1	Nch	10V	For Automotive
AM	Gen.1	Nch	10V	Built-in ESD Protection
BD	Gen.3	Nch	6.0V	—
BE	Gen.3	Nch	10V	—
CN	Gen.1	Nch	10V	—

<Dual-Chip type>

Example: S H 8 M 3 □ T B □ (Tape Code)

- S H 8: Package

Symbol	Package
VT6	(VMT6)
EM6	SOT-563
UM6	SOT-363
ES6	SOT-563T
US5	SOT-353T
US6	SOT-363T
TT8	(TSST8)
QS5	SOT-25T
QS6	SOT-457T
QH6	SOT-457T
QS8	(TSMT8)
QH8	(TSMT8)
UT6	DFN2020-8D
HS8	(HSML3030L10)
SH8	(SOP8)
SP8	(SOP8)
HP8	(HSOP8)

- M: Polarity

Polarity	
K	Nch+Nch
J	Pch+Pch
M	Nch+Pch
U	MOS+SBD
S	Nch+Nch+SBD

- 3 □: Serial No.(include alphabets) Note) "N" is put to UMT5 & UMT6 packages
- T B: Tape Code

<Single-Chip type>

Example: R 6 0 2 0 E N X □ C 7 □ (Tape Code)

- R: ROHM
- 6 0: V_{DSS}(V) 60=600V
- 2 0: I_D(A) 20=20A
- E: A=No G-S Protection Diode, C=With G-S Protection Diode, E=Low Noise, J, M=Fast Recovery Body Diode, K=Fast Switching
- N: Polarity N=Nch
- X □: Package

Symbol	Package
D3	TO-252
J	TO-263
X	TO-220FM
X1	TO-220AB
Z	TO-3PF
Z1	TO-247
Z2	TO-247N

- C 7: Tape Code

<Automotive type>

Example: A G 0 0 9 D G Q 3 T B □ (Tape Code)

- A G: ROHM AEC-Q101 qualified
- 0 0 9: Serial No.
- D G Q: Drive Voltage

Symbol	Process	Pol.	Drive Voltage
D	Gen.4	N	4.5V

- 3: V_{DSS}

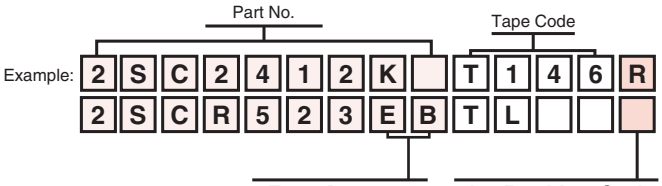
Symbol	V_{DSS}(V)
G	40

- T B: Tape Code
- □: Package

Symbol	Package
Q3	HSMT8AG

Notes : Package is JEDEC code. ( ):ROHM Packages

•Bipolar Transistor Part No. Explanation



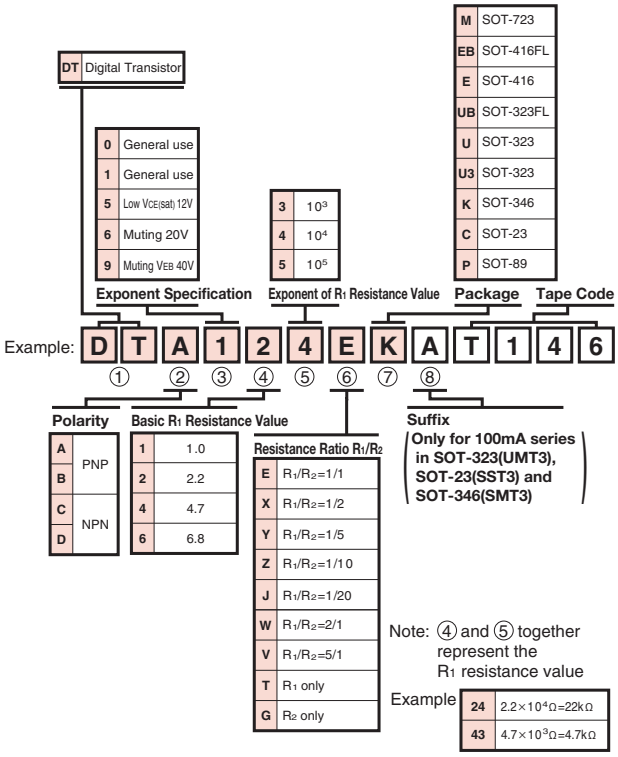
•Package

Code	Package
M	SOT-723
EB	SOT-416FL
E	SOT-416
UB	SOT-323FL
U	SOT-323
U3	SOT-323
K	SOT-346
C	SOT-23
R	SOT-346T
F3	DFN2020-3S
P	SOT-89
P5	SOT-89
D	SOT-428
D3	TO-252

•hFE Ranking Code

Code	hFE Range
N	56 to 120
P	82 to 180
Q	120 to 270
R	180 to 390
S	270 to 560
U	560 to 1200
V	820 to 1800
W	1200 to 2700

• Digital Transistor Part No. Explanation



•Packaging type

Package	Code	Packaging Style	Direction	Basic Ordering Unit (pcs)
DFN0604-3(VML0604)	T2L,T2CL	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
DFN0806-3(VML0806)	T2L,T2CL	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
DFN1006-3(VML1006)	T2L,T2CL	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
SOT-723(VMT3)	T2L,T2CL	Embossed tape	One terminal on sprocket hole side	8,000
(VMT6)	T2R,T2CR	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-416FL(EMT3F)	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-416(EMT3)	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-553(EMT5)	T2R,T2CR	Embossed tape	Three terminals on sprocket hole side	8,000
SOT-563(EMT6)	T2R,T2CR	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-323FL(UMT3F)	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-323(UMT3)	T106,T306	Embossed tape	One terminal on sprocket hole side	3,000
SOT-353(UMT5)	TR,TCR	Embossed tape	Three terminals on sprocket hole side	3,000
SOT-363(UMT6)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	TN,TCN	Embossed tape	Non-direction	3,000
SOT-563T(WEMT6)	T2R,T2CR	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-323T(TUMT3)	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-353T(TUMT5)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-363T(TUMT6)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-23(SST3)	T116,T316	Embossed tape	One terminal on sprocket hole side	3,000
SOT-346(SMT3)	T146	Embossed tape	One terminal on sprocket hole side	3,000
SOT-25(SMT5)	T148	Embossed tape	Three terminals on sprocket hole side	3,000
SOT-457(SMT6)	T108	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
	T110	Embossed tape	Non-direction	3,000
(TSST8)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-346T(TSMT3)	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-25T(TSMT5)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-457T(TSMT6)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
(TSMT8)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
DFN2020-3S(HUML2020L3)	TR,TCR	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
DFN2020-8(HUML2020L8)	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
(HSMT8)	TB	Embossed tape	Terminal No.1 on sprocket hole side	3,000
(HSMT8AG)	TB	Embossed tape	Terminal No.1 on sprocket hole side	3,000
(HSML3030L10)	TB	Embossed tape	Terminal No.1 on sprocket hole side	3,000
(SOP8)	TB	Embossed tape	Terminal No.1 on sprocket hole side	2,500
SOT-89(MPT3)	T100	Embossed tape	Three terminals on sprocket hole side	1,000
(HSOP8)	TB	Embossed tape	Three terminals on sprocket hole side	2,500
SOT-428(CPT3)	TL	Embossed tape	Fin on sprocket hole side	2,500
TO-252	TL,TL1	Embossed tape	Fin on sprocket hole side	2,500
TO-263(LPT)	TL	Embossed tape	Fin on sprocket hole side	1,000
	TLL	Embossed tape	Fin on sprocket hole side	1,000
TO-220FM	—	Bulk	—	500
	C7	Tube	—	1,000
TO-220AB	C10	Tube	—	1,000
TO-3PF	C8	Tube	—	360
TO-247	C9	Tube	—	450
TO-247N	C11	Tube	—	450

Notes : Package is JEDEC code. ( ):ROHM Packages