

By Category PDF

Category Transistors

Discrete Devices

Transistors

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Transistors

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Small Signal MOSFET

Small Signal MOSFET series

Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (Ω)															
	Part No.	Packing 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	—	—	—	—
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	0.6*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	—	—	—	—	—	—	—	—	—	—	—	—
DSN1006-3 (SMM1006) 1006 size	New RA1C030LD	T5CL	N	20	3.0	1.0	—	—	0.08	0.14	—	—	0.13	0.19	0.20	—	—	—	—	—	—	—
DFN1010-3 1010 size	☆RV9C010UN	G2CR	N	20	1.0	1.0	—	—	0.34	0.47	—	—	0.4	0.56	—	—	0.54	0.81	0.70	1.05	—	—
	☆RV9E020AJ	G2CR		30	2.0	1.0	—	—	0.17	0.29	—	—	0.225	0.38	—	—	—	—	—	—	—	—
	☆RV9C020BC	G2CR	P	−20	−2.0	1.0	—	—	0.21	0.28	—	—	0.27	0.37	0.39	0.60	—	—	—	—	—	—
	☆RV9E017AT	G2CR		−30	−1.7	1.0	0.26	0.34	0.40	0.52	—	—	—	—	—	—	—	—	—	—	—	—
DFN1212-3 1212 size	☆RV7E040AJ	TCR1	N	30	4.0	1.1	—	—	41	55	—	—	54	73	—	—	—	—	—	—	—	—
	☆RV7L020GN	TCR1		60	2.0	1.1	123	164	172	281	—	—	—	—	—	—	—	—	—	—	—	—
	☆RV7C040BC	TCR1	P	−20	−4.0	1.1	—	—	53	63	—	—	65	79	89	106	—	—	—	—	—	—
	☆RV7E035AT	TCR1		−30	−3.5	1.1	65	80	91	113	—	—	—	—	—	—	—	—	—	—	—	—
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	P	60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RZM002P02	T2L		−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	—	—	—	—	—	—	—	—	—	—	—	
DFN1616-6 1616 size	☆RV5L030GN	TCR1	N	60	3.0	1.5	0.104	0.148	0.131	0.223	—	—	—	—	—	—	—	—	—	—	—	—
	RV5A040AP	TCR1	P	−12	−4.00	1.50	—	—	0.044	0.062	—	—	0.055	0.077	0.075	0.110	0.090	0.180	—	—	—	—
	RV5C040AP	TCR1		−20	−4.00	1.50	—	—	0.060	0.085	—	—	0.065	0.095	0.095	0.155	0.130	0.260	—	—	—	—
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-323 (UMT3) ◆ 2021 size	New BSS138BKW	T106	N	60	0.38	0.30	0.50	0.70	0.60	0.84	—	—	1.00	4.00	—	—	—	—	—	—	—	—
	New BSS138W	T106		60	0.31	0.30	1.70	2.40	2.10	3.00	—	—	3.00	12.00	—	—	—	—	—	—	—	—
	New BSS84W	T106	P	−60	−0.21	0.30	2.80	5.30	3.50	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	0.15	—	—	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	0.15	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	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	RU1E002SP	TCL		−30	−0.25	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—

Note1: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Note2: *1 For overvoltage protection *2 Pw≤5s

☆: Under Development

Small Signal MOSFET series																						
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (Ω)															
	Part No.	Packing 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
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	—	—
	BSS670	T116		60	0.60	0.35	0.50	0.65	0.60	0.82	—	—	1.00	4.00	—	—	—	—	—	—	—	—
	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	—	—	—	—	—	—	—	—
	RSC002P03	T316	P	-30	-0.25	0.20	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
	BSS84	T116		-60	-0.23	0.35	3.60	5.30	4.30	6.40	—	—	—	—	—	—	—	—	—	—	—	—
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-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	—	—	—	—	—	—	—	—	—	—

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

Power MOSFETs

Power MOSFET series																	
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)										Q _g (nC) (V _{GS} =4.5)
	Part No.	Packing 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-232T (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
	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	1,060	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	TCR		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}
	New RF6G035BG	TCR		40	3.5	1	37	46	59	80	—	—	—	—	—	—	1.8
	New RF6L025BG	TCR		60	2.5	1	70	91	100	140	—	—	—	—	—	—	1.7
	RAL035P01	TR	P	−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}	
	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}
	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	1,060	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	1,060	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

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

Note2: *1 V_{GS}=1.8V *2 V_{GS}=5V

Power MOSFETs

Power MOSFET series																						
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)										Q _g (nC) (V _{GS} =4.5V)					
	Part No.	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V					
							Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max				
SOT-346T (TSM3) [SC-96] 2928 size	RUR040N02	TL	N	20	4	1	—	—	25	35	—	—	33	46	42	59	55	110				
	RUR020N02	TL		20	2	1	—	—	75	105	—	—	95	135	130	185	170	240				
	RQ5E070BN	TCL		30	7	1	12.4	16.1	16.5	20.4	—	—	—	—	—	—	—	11.7				
	RQ5E065AJ	TCL		30	6.5	1	—	—	13.7	18.1	—	—	17.9	23.7	—	—	—	12.2				
	RQ5E040TN	TL		30	4	1	—	—	34	48	36	50	47	66	—	—	—	5.9				
	RQ5E040AJ	TCL		30	4	1	—	—	27	37	—	—	39	54	—	—	—	4.3				
	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				
	RQ5E025SN	TL		30	2.5	1	50	70	74	105	83	118	—	—	—	—	—	2.9 ^{*1}				
	RQ5E025TN	TL		30	2.5	1	—	—	66	92	70	98	95	133	—	—	—	3.3				
	RQ5H030TN	TL		45	3	1	—	—	48	67	53	74	68	95	—	—	—	6.2				
	RQ5H025TN	TL		45	2.5	1	—	—	95	130	100	140	125	175	—	—	—	3.2				
	RQ5H020TN	TL		45	2	1	—	—	130	180	135	190	180	250	—	—	—	2.9				
	RQ5L030SN	TL		60	3	1	60	85	70	100	75	105	—	—	—	—	—	5 ^{*1}				
	RQ5L020SN	TL		60	2	1	120	170	140	195	150	210	—	—	—	—	—	2.7 ^{*1}				
	RQ5P010SN	TL		100	1	1	370	520	400	560	410	580	—	—	—	—	—	3.5 ^{*1}				
	RQ5A040ZP	TL	P	-12	-4	1	—	—	22	30	—	—	30	42	40	60	55	110				
	RQ5A030AP	TL		-12	-3	1	—	—	44	62	—	—	55	77	75	110	90	180				
	RQ5A025ZP	TL		-12	-2.5	1	—	—	44	61	—	—	60	84	81	121	110	220				
	RQ5A020ZP	TL		-12	-2	1	—	—	75	105	—	—	105	145	150	225	200	400				
	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				
	RQ5C030TP	TL		-20	-3	1	—	—	55	75	60	85	90	125	—	—	—	9.3				
	RQ5C025TP	TL		-20	-2.5	1	—	—	70	95	75	105	115	160	—	—	—	7				
	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				
	RQ5E030RP	TL		-30	-3	1	55	75	85	115	95	125	—	—	—	—	—	5.2 ^{*1}				
	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				
	RQ5E020SP	TL		-30	-2	1	85	120	135	190	150	210	—	—	—	—	—	4.3 ^{*1}				
	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 (TSM5) 2928 size	QS5K2	TR	N+N	30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	2.8				
SOT-457T (TSM6) [SC-95] 2928 size	RQ6C050UN	TR	N	20	5	1.25	—	—	22	30	—	—	27	38	32	45	40	80				
	RQ6E085BN	TCR		30	8.5	1.25	11.1	14.4	13.9	17.3	—	—	—	—	—	—	—	16.6				
	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				
	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				
	RQ6E045TN	TR		30	4.5	1.25	—	—	30	43	32	45	42	60	—	—	—	7.6				
	RQ6E045SN	TR		30	4.5	1.25	27	38	36	51	40	56	—	—	—	—	—	6.8 ^{*1}				
	RQ6E040XN	TCR		30	4	1.25	35	50	45	65	50	70	—	—	—	—	—	33 ^{*1}				
	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				
	QS6K21	TR		45	1	1.25	—	—	300	420	310	435	415	585	—	—	—	1.5				
	RQ6A050ZP	TR		-12	-5	1.25	—	—	19	26	—	—	26	36	33	49	44	88				
	RQ6A045AP	TCR		-12	-4.5	1.25	—	—	22	30	—	—	28	39	38	57	50	100				
	RAQ045P01	TCR	P	-12	-4.5	1.25	—	—	22	30	—	—	28	39	38	57	50	100				
	RQ6A045ZP	TR		-12	-4.5	1.25	—	—	25	35	—	—	31	43	39	58	50	100				
	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				
	RQ6E045RP	TR		-30	-4.5	1.25	25	35	34	48	38	53	—	—	—	—	—	14 ^{*1}				
	RRQ045P03	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				
	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				
	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}				
	RQ6G050AT	TCR	N+P	-40	-5	1.25	31	40	38	49	—	—	—	—	—	—	—	11				
	RQ6L035AT	TCR		-60	-3.5	1.25	62	78	69	87	—	—	—	—	—	—	—	11				
	RQ6L020SP	TCR		-60	-2	1.25	150	210	180	252	190	266	—	—	—	—	—	7.2 ^{*1}				
	New RQ6P020AT	TCR		-100	-2	1.25	166	220	177	230	—	—	—	—	—	—	—	12				
	RQ6P015SP	TR	P+P	-100	-1.5	1.25	350	470	380	510	400	540	—	—	—	—	—	17 ^{*1}				
	QS6J11	TR		-12	-2	1.25	—	—	75	105	—	—	105	145	150	225	200	400				
	QS6J1	TR		-20	-1.5	1.25	—	—	155	215	170	235	310	430	—	—	—	3				
	QS6M4	TR		-30	-1.5	1.25	—	—	170	230	180	245	260	360	—</							

Power MOSFET series <TSMT Package>																			
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)												Q _g (nC) (V _{GS} =4.5V)
	Part No.	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V		
							Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	
(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*
	RQ1E075XN	TCR		30	7.5	1.5	12	17	17	24	19	27	—	—	—	—	—	—	6.8*
	RQ7G080BG	TCR		40	8	1.5	12.7	16.5	15.5	24	—	—	—	—	—	—	—	—	5.0
	RQ7L055BG	TCR	60	5.5	1.5	22	29	30	42	—	—	—	—	—	—	—	—	3.9	
	QH8KA4	TCR	30	9	1.5	—	—	12.5	17	13	18	17	24	—	—	—	—	—	12
	QH8KA3	TCR	30	9.0*2	2.6*2	12.3	16.0	18.2	23.7	—	—	—	—	—	—	—	—	—	7.9
	QS8K13	TCR	30	6	1.5	20	28	25	35	28	39	—	—	—	—	—	—	—	5.5*1
	QH8KA2	TCR	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	TCR	30	3.5	1.5	35	50	45	65	50	70	—	—	—	—	—	—	—	3.3*1
	QH8KB6	TCR	40	8	1.5	13.7	17.7	16.4	27	—	—	—	—	—	—	—	—	—	5.0
	QH8KB5	TCR	40	7.5*2	1.5	34	44	44	74	—	—	—	—	—	—	—	—	—	1.8
	QS8K21	TR	45	4	1.5	38	53	48	67	53	75	—	—	—	—	—	—	—	5.4*1
	QH8KC6	TCR	60	5.5	1.5	23	30	31	44	—	—	—	—	—	—	—	—	—	3.9
	QH8KC5	TCR	60	3	1.5	70	90	100	140	—	—	—	—	—	—	—	—	—	1.7
	New QH8KE6	TCR	100	4	1.5	43	56	55	82	—	—	—	—	—	—	—	—	—	3.7
	New QH8KE5	TCR	100	2	1.5	155	202	199	299	—	—	—	—	—	—	—	—	—	1.6
	QH8K51	TR	100	2	1.5	240	325	250	340	260	355	—	—	—	—	—	—	—	4.7*1
	RQ1A070AP	TR	-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	11.2	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
	RQ7G080AT	TCR	-40	-8	1.5	14.7	18.2	18.1	22.6	—	—	—	—	—	—	—	—	—	18
	RQ7L050AT	TCR	-60	-5	1.5	31	39	35	44	—	—	—	—	—	—	—	—	—	18
	QS8J13	TR	-12	-5.5	1.5	—	—	15	22	—	—	19	28	24	38	29	58	60	
	QS8J2	TR	-12	-4	1.5	—	—	26	36	—	—	36	50	46	69	66	132	20	
	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
	QH8JB5	TCR	-40	-5	1.5	33	41	41	51	—	—	—	—	—	—	—	—	—	9.0
	QH8JC5	TCR	-60	-3.5	1.5	71	91	79	101	—	—	—	—	—	—	—	—	—	8.5
	New QH8JE5	TCR	-100	-2	1.5	210	270	220	290	—	—	—	—	—	—	—	—	—	10.2
	QH8MA4	TCR	30	9*2	2.6*2	12.3	16	18.2	23.7	—	—	—	—	—	—	—	—	—	7.9
	QH8MA3	TCR	30	8*2	2.6*2	22	28.6	31	40.3	—	—	—	—	—	—	—	—	—	9.8
	QH8MA2	TCR	30	7*2	2.5*2	22	29	35	46	—	—	—	—	—	—	—	—	—	3.7
	QH8MA2	TCR	30	4.5	1.5	25	35	40	56	—	—	—	—	—	—	—	—	—	5.2
	QH8MA2	TCR	-30	-5.5*2	2.5*2	37	48	55	72	—	—	—	—	—	—	—	—	—	4.7
	QH8MA2	TCR	-30	-3	1.5	55	80	80	115	—	—	—	—	—	—	—	—	—	4.3
	QH8MA2	TCR	40	4.5	1.5	34	44	44	74	—	—	—	—	—	—	—	—	—	1.8
	QH8MB5	TCR	-40	-5	1.5	33	41	41	51	—	—	—	—	—	—	—	—	—	9.0
	QH8MC5	TCR	60	3	1.5	70	90	100	140	—	—	—	—	—	—	—	—	—	1.7
	QH8MC5	TCR	-60	-3.5	1.5	71	91	79	101	—	—	—	—	—	—	—	—	—	8.5
	QS8M31	TR	60	3	1.5	80	112	93	130	98	137	—	—	—	—	—	—	—	4*1
	QS8M31	TR	-60	-2	1.5	150	210	180	252	190	266	—	—	—	—	—	—	—	7.2*1
	QS8M31	TR	100	2	1.5	147	190	190	290	—	—	—	—	—	—	—	—	—	1.6
	New QH8ME5	TCR	-100	-2	1.5	210	270	220	290	—	—	—	—	—	—	—	—	—	10.2
	QS8M51	TR	100	2	1.5	240	325	250	340	260	355	—	—	—	—	—	—	—	4.7*1
	QS8M51	TR	-100	-1.5	1.5	350	470	380	510	400	540	—	—	—	—	—	—	—	17*1

Note1: () : ROHM Packages.
Note2: *1 V_{GS}=5V *2 P_W≤1s

●Multiple Schottky Barrier Diodes Power MOSFET series (TUMT • TSMT Package)

Multiple Schottky Barrier Diodes Power MOSFET series																	
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)										Q _g (nC) (V _{GS} =4.5V)
	Part No.	Packing 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-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	1,300	1,000	1,400	—	—	—	—	1.7*1
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	P+SBD (1A)	-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	4.2
	QS5U21*5	TR		-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	—	—	—	—
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*6

Power MOSFETs

● Multiple Schottky Barrier Diodes Power MOSFET series
(TUMT • TSMT Package)

Power MOSFETs <MPT3·HEML1616L7·HUML2020L8·HSMT8·HSML3030L10 Package>																						
Package	Application	Product No.		Polarity (ch)	V _{DS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS (on)} (mΩ)														Q _g (nC) (V _{GS} =4.5V)
		Part No.	Packing code					V _{GS} =10V		V _{GS} =6V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V		
								Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	
 SOT-89 (MPT3) [SC-62] 4540 size	DC-DC Converter Motor Drive	RHP030N03	T100	N	30	3	2	90	120	—	—	—	—	160	210	—	—	—	—	—	—	6.5*1
		RHP020N06	T100		60	2	2	150	200	—	—	200	280	240	340	—	—	—	—	—	—	7*1
		RJP020N06	T100		60	2	2	—	—	—	—	165	240	170	250	210	300	—	—	—	—	—
 (HEML1616L7) Single 1616 size <DFN1616-7T>	Load Switch Switching	RW4E075AJ	TCL1	N	30	7.5	1.5	—	—	—	—	18.5	26	—	—	26.6	38	—	—	—	—	6.3
		RW4E065GN	TCL1		40	6.5	1.5	18.2	22.5	—	—	25.1	31.6	—	—	—	—	—	—	—	—	2.1
		RW4E045AJ	TCL1		30	4.5	1.5	—	—	—	—	28	40	—	—	41	58	—	—	—	—	4
		RW4E045AT	TCL1	P	-30	-4.5	1.5	34	48	—	—	50	70	—	—	—	—	—	—	—	—	5.3
		RW4C045BC	TCL1		-20	-4.5	1.5	—	—	—	—	39	56	—	—	52	74	73	117	—	—	6.5
 (HUML2020L8) Single 2020 size <DFN2020-8S>	DC-DC Converter Motor Drive	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	33	—	—	—	—	—	—	—	—	2.2
		RF4G100BG	TCR		40	10	2	10.9	14.2	—	—	13.7	23.0	—	—	—	—	—	—	—	—	5.0
		RF4L070BG	TCR		60	7	2	21	27	—	—	29	40	—	—	—	—	—	—	—	—	3.9
	RF4E110BN	TR	30		11	2	8.5	11.1	—	—	11.8	15.4	—	—	—	—	—	—	—	—	12	
	Load Switch Switching	RF4E100AJ	TCR	N	30	10	2	—	—	—	—	9.4	12.4	—	—	13.3	17.9	—	—	—	—	13
		RF4E080BN	TR1		30	8	2	13.5	17.6	—	—	18.9	24.6	—	—	—	—	—	—	—	—	7.2
		RF4E070BN	TR		30	7	2	22	28.6	—	—	30.8	40	—	—	—	—	—	—	—	—	4.6
		RF4E060AJ	TCR		30	6	2	—	—	—	—	28	37	—	—	41	55	—	—	—	—	4
		New RF4P060BG	TCR	P	100	6	2	41	53	—	—	52	78	—	—	—	—	—	—	—	—	3.7
		RF4C050AP	TR		-20	-10	2	—	—	—	—	18	26	—	—	22	31	27	45	32	65	55
		RF4C100BC	TCR		-20	-10	2	—	—	—	—	12	15.6	—	—	15.4	20	23.5	37.6	—	—	23.5
		RF4E075AT	TCR		-30	-7.5	2	16.7	21.7	—	—	24.4	31.7	—	—	—	—	—	—	—	—	11
		RF4G060AT	TCR		-40	-6	2	32	40	—	—	40	51	—	—	—	—	—	—	—	—	8.5
		RF4L040AT	TCR		-60	-4	2	70	89	—	—	78	100	—	—	—	—	—	—	—	—	8.5
		New RF4P025AT	TCR		-100	-2.5	2	200	260	—	—	220	280	—	—	—	—	—	—	—	—	10.2
(HUML2020L8) Dual 2020 size (DFN2020-8D)		Load Switch Switching	UT6K3		TCR	N+N	30	5.5	2	—	—	—	—	30	42	—	—	45	63	—	—	—
UT6KB5	TCR		40	5	2		37	48	—	—	48	80	—	—	—	—	—	—	—	—	1.8	
UT6KC5	TCR		60	3.5	2		73	95	—	—	104	145	—	—	—	—	—	—	—	—	1.7	
New UT6KE5	TCR		100	2	2		152	197	—	—	195	292	—	—	—	—	—	—	—	—	1.6	
UT6JA3	TCR		P+P	-20	-5	2	—	—	—	—	42	59	—	—	54	76	76	118	—	—	6.5	
UT6J3	TCR			-20	-3	2	—	—	—	—	60	85	—	—	65	95	95	155	130	260	85	
UT6JA2	TCR			-30	-4	2	55	70	—	—	80	103	—	—	—	—	—	—	—	—	3.4	
UT6JB5	TCR			-40	-3.5	2	95	122	—	—	121	155	—	—	—	—	—	—	—	—	3.3	
UT6JC5	TCR			-60	-2.5	2	220	280	—	—	250	320	—	—	—	—	—	—	—	—	3.2	
New UT6JE5	TCR			-100	-1	2	650	840	—	—	690	900	—	—	—	—	—	—	—	—	3.7	
Motor	UT6MA3	TBR	N+P	20	5.5	2	—	—	—	—	30	42	—	—	45	63	—	—	—	—	4	
	UT6MA2	TCR		-20	-5	2	—	—	—	—	42	59	—	—	54	76	—	—	—	—	6.5	
	UT6ME5	TCR		30	4	2	37	46	—	—	59	80	—	—	—	—	—	—	—	—	2.2	
	UT6ME5	TCR		-30	-4	2	55	70	—	—	80	103	—	—	—	—	—	—	—	—	3.3	
	UT6ME5	TCR		100	2	2	159	207	—	—	230	345	—	—	—	—	—	—	—	—	1.6	
	UT6ME5	TCR		-100	-1	2	650	840	—	—	690	900	—	—	—	—	—	—	—	—	3.7	

Note1: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, () : GENERAL code.
Note2: *1 V_{DS}=10V *2 V_{DS}=4V

Power MOSFETs <MPT3·HEML1616L7·HUML2020L8·HSMT8·HSML3030L10 Package>																						
Package	Application	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)												Q _g (nC) (V _{GS} =4.5V)		
		Part No.	Packing code					V _{GS} =10V		V _{GS} =6V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V			V _{GS} =1.5V	
								Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max		Typ	Max
 (HSMT8) 3333 size Single	DC-DC Converter Switching	RQ3E180GN	TB	N	30	39*1	20*1	3.3	4.3	—	—	4.3	6.1	—	—	—	—	—	—	—	11	
		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	20	—	—	—	—	—	—	—	3.9	
		RQ3E080GN	TB		30	18*1	14*1	12.9	16.7	—	—	17.5	31.2	—	—	—	—	—	—	—	2.8	
		New RH6G040BG	TB1		40	40*1	59*1	2.8	3.6	—	—	4.7	6.5	—	—	—	—	—	—	—	12.4	
		New RH6L040BG	TB1		60	40*1	59*1	5.5	7.1	—	—	8	11.2	—	—	—	—	—	—	—	9.2	
		New RH6P040BH	TB1		100	40	59	12	15.6	15.6	23.3	—	—	—	—	—	—	—	—	—	8.8*2	
		RQ3P300BH	TB1		100	39*1	32*1	11.9	15.5	15.6	24.0	—	—	—	—	—	—	—	—	—	18*2	
		New RH6R025BH	TB1		150	25*1	59*1	46	60	49	73	—	—	—	—	—	—	—	—	—	8.7*2	
	Load Switch Switching	RQ3E180BN	TB		30	39*1	20*1	2.8	3.9	—	—	3.7	5.2	—	—	—	—	—	—	—	—	37
		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	—	—	6.7	9.4	—	—	—	—	—	—	—	—	16
		RQ3E180AJ	TB1		30	30*1	30*1	—	—	—	—	3.5	4.5	—	—	4.5	5.8	—	—	—	—	39
		RQ3E110AJ	TB		30	24*1	15*1	—	—	—	—	8.8	11.7	—	—	12.6	16.5	—	—	—	—	13.5
		RQ3E120BN	TB		30	21*1	16*1	6.6	9.3	—	—	8.6	11.9	—	—	—	—	—	—	—	—	14
		RQ3E100BN	TB		30	21*1	15*1	7.7	10.4	—	—	11	15.3	—	—	—	—	—	—	—	—	10.5
		RQ3E160AD	TB		30	16	2	3.5	4.5	—	—	5	7	—	—	—	—	—	—	—	—	25
		RQ3E080BN	TB		30	15*1	14*1	11	15.2	—	—	16	22	—	—	—	—	—	—	—	—	7.2
		RQ3E070BN	TB1		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	—	—	60
		RQ3E120AT	TB		-30	-39*1	20*1	6.1	8	—	—	8.7	11.3	—	—	—	—	—	—	—	—	33
		RQ3E100AT	TB		-30	-31*1	17*1	9	11.4	—	—	13.1	16.7	—	—	—	—	—	—	—	—	21
		RQ3E075AT	TB		-30	-18*1	15*1	17.4	23	—	—	26	33	—	—	—	—	—	—	—	—	10.4
		RQ3G110AT	TB		-40	-35*1	20	9.8	12.4	—	—	12.3	15.7	—	—	—	—	—	—	—	—	20
		RQ3L070AT	TB		-60	-25*1	20	22	28	—	—	25	32	—	—	—	—	—	—	—	—	21
		New RQ3P045AT	TB1		-100	-14.5*1	20*1	67	86	—	—	71	92	—	—	—	—	—	—	—	—	25
 (HSMT8) 3333 size Dual	Motor	New HT8KB6	TB1	N+N	40	15*1	14*1	13.3	17.2	—	—	19.3	27	—	—	—	—	—	—	—	5	
		New HT8KB5	TB1		40	12*1	13*1	36	47	—	—	58	81	—	—	—	—	—	—	—	1.8	
		New HT8KC6	TB1		60	15*1	14*1	23	29	—	—	31	43	—	—	—	—	—	—	—	3.9	
		New HT8KC5	TB1		60	10*1	13*1	69	90	—	—	99	139	—	—	—	—	—	—	—	1.7	
		New HT8KE6	TB1		100	13*1	14*1	44	57	—	—	56	83	—	—	—	—	—	—	—	3.7	
		New HT8KE5	TB1		100	7*1	13*1	148	193	—	—	200	300	—	—	—	—	—	—	—	—	1.7
 (HSML3030L10) 3030 size	DC-DC Converter	HS8K1	TB	N+N	30	10	2	11.2	14.6	—	—	14.7	20	—	—	—	—	—	—	—	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
 (HSML3333L9) 3333 size (DFN3333-9DC)	Motor	HS8MA2	TCR1	N+P	30	7.0	2	25	35	—	—	40	56	—	—	—	—	—	—	—	4.7	
					-30	-5.5	2	55	80	—	—	80	115	—	—	—	—	—	—	—	—	—

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code, < >: GENERAL code.
Note2: *1 T_c=25°C *2 V_{GS}=10V

Power MOSFETs

<SOP8 Package> (Single type)

Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)						Q _g (nC) (V _{GS} =5V)
	Part No.	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		
							Typ	Max	Typ	Max	Typ	Max	
(SOP8) 5060 size 	RS3E135BN	TB	N	30	13.5	2	5.7	7.4	8.5	10.9	—	—	16.6*1
	RXH125N03	TB		30	12.5	2	7.5	12	9.5	13.3	10	14	12.7
	RXH100N03	TB1		30	10	2	9.5	13	12	17	13	18	11
	RS3E095BN	TB		30	9.5	2	11.9	14.6	17.5	21.9	—	—	8.3*1
	RXH090N03	TB1		30	9	2	12	17	17	24	19	27	6.8
	RXH070N03	TB1		30	7	2	20	28	25	35	28	39	5.8
	RSH070N05	TB1		45	7	2	18	25	23	32	25	35	12
	RSH065N06	TB1		60	6.5	2	24	37	28	44	31	48	11
	RS3E180AT	TB1	P	−30	−18	2	4.1	5.4	5	6.1	—	—	80*1
	RRH140P03	TB		−30	−14	2	5	7	6.7	9.4	7.3	10.2	80
	RS3E130AT	TB1		−30	−13	2	6.5	8.5	8.6	11.2	—	—	83*2
	RRH100P03	TB1		−30	−10	2	9	12.6	12.5	17.5	14	19.6	39
	RRH090P03	TB1		−30	−9	2	11	15.4	15	21	17	24	30
	RS3E075AT	TB1		−30	−7.5	2	18	23.5	24	31	—	—	12.8*1
	RRH050P03	TB1		−30	−5	2	36	50	52	72	58	80	9.2
	RRH040P03	TB1		−30	−4	2	55	75	85	115	95	125	5.2
	RS3G160AT	TB1		−40	−16	2	5	6.2	6.1	7.6	—	—	55*1
	RSH070P05	TB1		−45	−7	2	19	27	25	35	28	39	34
	RS3L110AT	TB1		−60	−11	2	10.1	12.8	11.2	14.3	—	—	55*1
	New RS3P070AT	TB1		−100	−7	2	28	36	30	38	—	—	57*1

<SOP8 Package> (Dual type)

Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _a =25°C)	R _{DS(on)} (mΩ)						Q _g (nC) (V _{GS} =5V)
	Part No.	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		
							Typ	Max	Typ	Max	Typ	Max	
(SOP8) 5060 size 	SH8KA7	TB	N+N	30	15*3	4.6*3	7.1	9.1	8.3	10.7	—	—	41*1
	SH8KA4	TB		30	9*3	3*3	16.5	21.4	22.2	28.9	—	—	7.9*1
	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
	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
	SH8KB6	TB1		40	8.5	2	14.9	19.4	18.2	26	—	—	5.0*1
	SH8KB7	TB1		40	13.5	2	6.5	8.4	7.5	10.5	—	—	13*1
	SH8KC6	TB1		60	6.5	2	25	32	33	46	—	—	3.9*1
	SH8KC7	TB1		60	10.5	2	9.5	12.4	12.3	17.2	—	—	10.8*1
	SH8KE7	TB1		100	8	2	16.1	20.9	19.7	29.6	—	—	9.1*1
	SH8KE6	TB1		100	4.5	2	45	58	56	84	—	—	3.3*1
	SH8J66	TB1	P+P	−30	−9	2	13.5	18.5	17.5	23.6	19	24.7	35
	SH8J65	TB1		−30	−7	2	21.5	29	29	39	31	40.8	18
	SH8J62	TB1		−30	−4.5	2	40	56	55	77	60	84	8
	SH8JB5	TB1		−40	−8.5	2	12.4	15.3	15	18.7	—	—	25*1
	SH8JC5	TB1		−60	−7.5	2	25	32	28	35	—	—	23*1
	SH8J31	TB		−60	−4.5	2	50	70	55	80	60	85	40*2
	New SH8JE5	TB1		−100	−4.5	2	70	91	74	96	—	—	25*1
	SH8MA4	TB1	N+P	30	9*3	3.0*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
	SH8MA3	TB1		30	7*3	2.8*3	23	28	42	57	—	—	3.7*1
				−30	−6*3		40	50	60	73	—	—	5.2*1
	SH8MA2	TB		30	4.5*3	2.7*3	57	80	88	125	—	—	1.5*1
				−30	−4.5*3		63	82	89	115	—	—	3.4*1
	SH8MB5	TB1		40	8.5	2	14.9	19.4	18.2	26	—	—	5*1
				−40	−8.5		13.9	16.8	16.5	21	—	—	25*1
	New SH8MB4	TB1		40	5	2	42	55	65	91	—	—	1.8*1
				−40	−6		36	46	44	56	—	—	9.0*1
	New SH8MC4	TB1		60	4	2	73	95	106	148	—	—	1.7*1
				−60	−4.5		75	96	84	107	—	—	8.5*1
	SH8M24	TB		45	4.5	2	33	46	41	57	46	64	6.8
				−45	−3.5		45	63	60	84	66	92	13
	SH8MC5	TB1		60	6.5	2	25	32	33	46	—	—	3.9*1
				−60	−7		27	33	29	37	—	—	23*1
	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
	New SH8ME5	TB1		100	4.5	2	45	58	56	84	—	—	3.3*1
				−100	−4.5		70	91	74	96	—	—	25*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

Note1: (): ROHM Packages at package site.

Note2: *1 V_{GS}=4.5V *2 V_{GS}=10V *3 P_{WS}1s

<HSOP8 Package> (Single type)															
Package	Application	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)						Q _g (nC) (V _{GS} =4.5V)	Drive Voltage (V)
		Part No.	Packing code					V _{GS} =10V		V _{GS} =6V		V _{GS} =4.5V			
								Typ	Max	Typ	Max	Typ	Max		
(HSOP8) 6050 size Single 	Load Switch	RS1E350BN	TB	N	30	80	35	1.2	1.7	—	—	1.8	2.5	95	4.5
		RS1E281BN	TB1		30	80	30	1.7	2.3	—	—	2.3	3.2	50	
		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	
		RS1E240BN	TB		30	40	30	2.3	3.2	—	—	3.3	4.6	35	
		RS1E260AT	TB1	P	−30	−80	40	2.5	3.1	—	—	3.5	4.3	87	
		RS1E220AT	TB1		−30	−76	34	3.3	4.1	—	—	4.6	5.8	65	
		RS1G201AT	TB1		−40	−78	40	4.2	5.2	—	—	5.2	6.5	62	
		RS1L151AT	TB1		−60	−56	40	8.9	11.3	—	—	9.9	12.6	59	
		New RS1P090AT	TB1		−100	−33	40	26	34	—	—	28	36	62	
	DC-DC Converter Switching	RS1E350GN	TB	N	30	80	39	1.48	1.76	—	—	1.92	2.40	32.7	4.5
		RS1E321GN	TB1		30	80	34	1.4	1.9	—	—	1.8	2.9	19.6	
		RS1E301GN	TB1		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	
		New RS6G120BG	TB1		40	120	104	1.03	1.34	—	—	1.74	2.43	34	
		New RS6G100BG	TB1		40	100	59	2.6	3.4	—	—	4.6	6.5	11.8	
		New RS6L120BG	TB1		60	120	104	2.1	2.7	—	—	3	4.2	25	6.0
		New RS6L090BG	TB1		60	90	73	3.6	4.7	—	—	5.3	7.4	13.6	
		New RS6N120BH	TB1		80	120	104	2.8	3.3	3.5	4.9	—	—	53*	
		New RS6P100BH	TB1		100	100	104	4.5	5.9	5.8	8.7	—	—	45*	
		New RS6P060BH	TB1		100	60	73	8.2	10.6	10.7	16	—	—	25*	
		New RS1P600BH	TB1		100	60	35	6.7	8.8	8.6	12.9	—	—	32*	
		New RS6R060BH	TB1		150	60	104	16.7	21.8	17.9	26.8	—	—	46*	
		New RS6R035BH	TB1		150	35	73	32	41	34	59	—	—	25*	

Note1: (): ROHM Packages.
Note2: *V_{GS}=10V

<HSOP8 Package> (Dual type)													
Package	Application	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A) (T _a =25°C)	P _D (W) (T _a =25°C)	R _{DS (on)} (mΩ)				Q _g (nC) (V _{GS} =4.5V)	Drive Voltage (V)
		Part No.	Packing code					V _{GS} =10V		V _{GS} =4.5V			
								Typ	Max	Typ	Max		
(HSOP8) 5060 size 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	
(HSOP8) 5060 size Symmetry Dual	Motor	New HP8KB7	TB1	N+N	40	24*1	26*1	6.2	8	8	11.1	13	
		New HP8KB6	TB1		40	24*1	21*1	12.1	15.7	17.8	25	5	
		New HP8KC7	TB1		60	24*1	26*1	8.8	11.5	11.2	15.7	10.8	
		New HP8KC6	TB1		60	23*1	21*1	21	27	29	43	3.9	
		New HP8KE7	TB1		100	24*1	26*1	15.1	19.6	18.6	27.8	10.5	
		New HP8KE6	TB1		100	17*1	21*1	41	54	53	73	3.7	
		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	
					40	16.5*1	20*1	35	46	57	80	1.8	
					-40	-18.0*1	20*1	34	44	42	55	9	
					60	12*1	20*1	69	99	99	139	1.7	
					-60	-12*1	20*1	74	96	83	107	8.5	
					60	8.5*2	7*2	46	65	52	73	6.2	
					-60	-8.5*2	7*2	50	70	55	80	15.7	
					100	8.5*1	20*1	148	193	200	300	1.7	
					-100	-8.0*1	20*1	210	273	233	303	10.2	
					100	4.5*2	7*2	120	170	130	180	8.5	
					-100	-4.5*2	7*2	210	290	230	320	12.5	
(HSOP8) 5060 size Drain Common Dual	Load Switch	HP8KA1	TB	N+N	30	14*1	3*1	3.5	5	5	7	24	

Note1: (): ROHM Packages.
Note2: *1 T_C=25°C *2 P_W≤1s

Power MOSFETs

Power MOSFET 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)								Q _g (nC) (V _{GS} =10V)		
	Part No.	Packing 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-252 (DPAK) 	New	RD3G07BBG	TL1	N	40	70	89	1.75	2.27	—	—	2.6	3.7	—	—	28* ²	
	New	RD3G03BBG	TL1		40	35	50	5	6.5	—	—	7.6	10.6	—	—	9.2* ²	
		RD3H200SN	TL1		45	20	20	20	28	—	—	25	35	28	40	12* ¹	
	New	RD3L07BBG	TL1		60	70	89	3	3.9	—	—	4.1	5.7	—	—	23* ²	
	New	RD3L03BBG	TL1		60	35	50	8.7	11.3	—	—	12.1	16.9	—	—	6.8* ²	
		RD3L220SN	TL1		60	22	20	18	26	—	—	21	30	23	33	30	
		RD3L150SN	TL1		60	15	20	28	40	—	—	33	47	36	51	18	
		RD3L080SN	TL1		60	8	15	57	80	—	—	70	98	78	109	9.4	
		RD3L050SN	TL1		60	5	15	78	109	—	—	94	131	100	140	8	
	New	RD3P07BBH	TL1		100	70	89	5.9	7.7	7.5	11.2	—	—	—	—	38	
	New	RD3P03BBH	TL1		100	35	50	18	23	23	34	—	—	—	—	12.4	
		RD3P200SN	TL1		100	20	20	33	46	—	—	—	—	36	50	55	
		RD3P175SN	TL1		100	17.5	20	75	105	—	—	80	112	85	119	24	
		RD3P100SN	TL1		100	10	20	95	133	—	—	100	140	105	147	18	
		RD3P050SN	TL1		100	5	15	135	190	—	—	142	200	145	205	14	
		RD3S100CN	TL1		190	10	85	130	182	—	—	—	—	136	190	52	
		RD3S075CN	TL1		190	7.5	52	240	336	—	—	—	—	248	347	30	
		RD3T100CN	TL1		200	10	85	140	182	—	—	—	—	—	—	25	
		RD3T075CN	TL1		200	7.5	52	250	325	—	—	—	—	—	—	15	
		RD3T050CN	TL1		200	5	29	540	760	—	—	—	—	—	—	8.3	
		RD3U080CN	TL1		250	8	85	225	300	—	—	—	—	—	—	25	
		RD3U060CN	TL1		250	6	52	410	530	—	—	—	—	—	—	15	
		RD3U040CN	TL1		250	4	29	930	1,300	—	—	—	—	—	—	8.5	
		RD3G07BAT	TL1	P	−40	−70	101	5.7	7.1	—	—	6.9	8.7	—	—	105	
		RD3G03BAT	TL1		−40	−35	56	15	19.1	—	—	18.5	24	—	—	38	
		RD3G01BAT	TL1		−40	−15	25	31	39	—	—	38	49	—	—	19.3	
		RD3H160SP	TL1		−45	16	20	35	50	—	—	45	63	50	70	16* ¹	
		RD3H080SP	TL1		−45	−8	15	65	91	—	—	95	133	105	147	9* ¹	
		RD3H045SP	TL1		−45	−4.5	15	112	157	—	—	160	224	185	259	5.6* ¹	
		RD3L07BAT	TL1		−60	−70	101	10.1	12.7	—	—	11.1	14.1	—	—	105	
		RD3L03BAT	TL1		−60	−35	56	32	41	—	—	36	46	—	—	37	
		RD3L140SP	TL1		−60	−14	20	60	84	—	—	73	103	77	108	27	
		RD3L01BAT	TL1		−60	−10	26	65	84	—	—	73	93	—	—	15.2	
		New	RD3P05BAT		TL1	−100	−50	101	32	41	35	46	—	—	—	—	110
		New	RD3P02BAT		TL1	−100	−20	56	89	116	100	130	—	—	—	—	39
		New	RD3P01BAT		TL1	−100	−10	25	181	240	210	270	—	—	—	—	19.4
			RD3P130SP		TL1	−100	−13	20	135	200	—	—	150	220	155	230	40
(TO-220FM) (TO-220FP) 		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	1,360	—	—	—	—	—	—	—	9
TO-220AB 	New	RX3G18BBG	C16	N	40	180	178	1.13	1.47	—	—	1.43	2	—	—	105* ²	
	New	RX3G07BBG	C16		40	70	89	2.3	3	—	—	3.2	4.4	—	—	28* ²	
	New	RX3L18BBG	C16		60	180	178	1.54	2	—	—	1.9	2.66	—	—	77* ²	
	New	RX3L07BBG	C16		60	70	89	3.5	4.6	—	—	4.7	6.5	—	—	23* ²	
	New	RX3P10BBH	C16		100	105	178	2.8	3.7	3.2	4.8	—	—	—	—	135	
	New	RX3P07CBH	C16		100	70	125	4	5.2	4.8	7.2	—	—	—	—	73	
	New	RX3P07BBH	C16		100	70	89	6.5	8.4	8	12	—	—	—	—	38	
TO-263AB (TO-263AB-3LSHYAD) 	New	RJ1P10BBH	TL1	N	100	105	189	2.3	3.0	2.8	4.2	—	—	—	—	135	
	New	RJ1P07CBH	TL1		100	70	135	3.9	5.1	4.7	7.1	—	—	—	—	73	
	New	RJ1P04BBH	TL1		100	40	89	6.3	8.2	7.8	11.7	—	—	—	—	38	
	New	RJ1R10BBH	TL1		150	105	189	6.3	8.2	6.7	10	—	—	—	—	130	
	New	RJ1R04BBH	TL1		150	40	89	20	26	22	32	—	—	—	—	37	

Note1: Package is JEDEC code. (): ROHM Packages, (): GENERAL code.

Note2: *1 V_{GS}=5V *2 V_{GS}=4.5V

Power MOSFET 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)								Q _g (nC) (V _{GS} =10V)
	Part No.	Packing 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-263S (LPTS) [SC-83] (D2PAK) 	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
	RCJ451N20	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
	RCJ331N25	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	1,360	—	—	—	—	—	—	9
	RSJ250P10	TL	P	−100	−25	50	45	63	—	—	48	67	50	70	60*1
	RSJ151P10	TL		−100	−15	50	85	120	—	—	95	135	100	140	64

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code, (): GENERAL code.
 Note2: *1 V_{GS}=5V

Power MOSFETs

Low Noise type											
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS(on)} (Ω)		Q _g (nC) V _{GS} =10V		
	Part No.	Packing code					V _{GS} =10V				
							Typ	Max			
(SOP8) 	R6000ENH	TB1	N	600	0.5	2.0	7.300	8.800	4.3		
	R6002ENH	TB1		600	1.7	2.0	2.800	3.400	6.5		
(SOT-223) 	☆R6004END4	TL1	N	600	4	9.1	0.9	0.98	15		
TO-252 (DPAK) 	R6011END3	TL1	N	600	11	124	0.340	0.390	32		
	R6009END3	TL1		600	9	94	0.500	0.535	23		
	R6007END3	TL1		600	7	78	0.570	0.620	20		
	R6004END3	TL1		600	4	59	0.900	0.980	15		
	R6002END3	TL1		600	1.7	26	2.800	3.400	6.5		
	R6511END3	TL1		650	11	124	0.360	0.400	32		
	R6509END3	TL1		650	9	94	0.530	0.585	24		
	R6507END3	TL1		650	7	78	0.605	0.665	20		
	R6504END3	TL1		650	4	58	0.955	1.050	15		
	R6502END3	TL1		650	1.7	26	3.050	4.000	6.5		
TO-263S (LPTS) [SC-83] (D2PAK) 	R6024ENJ	TL	N	600	24	245	0.150	0.165	70		
	R6020ENJ	TL		600	20	231	0.170	0.196	60		
	R6015ENJ	TL		600	15	184	0.260	0.290	40		
	R6011ENJ	TL		600	11	124	0.340	0.390	32		
	R6009ENJ	TL		600	9	94	0.500	0.535	23		
	R6007ENJ	TL		600	7	78	0.570	0.620	20		
	R6004ENJ	TL		600	4	58	0.900	0.980	15		
	R6524ENJ	TL		650	24	245	0.160	0.185	70		
	R6520ENJ	TL		650	20	231	0.185	0.205	61		
	R6515ENJ	TL		650	15	184	0.280	0.315	40		
	R6511ENJ	TL		650	11	124	0.360	0.400	32		
	R6509ENJ	TL		650	9	94	0.530	0.585	24		
	R6507ENJ	TL		650	7	78	0.605	0.665	20		
	R6504ENJ	TL		650	4	58	0.955	1.050	15		
	(TO-220FM) (TO-220FP) 	R6030ENX		C7 G	N	600	30	86	0.115	0.130	85
		R6024ENX		C7 G		600	24	74	0.150	0.165	70
R6020ENX		C7 G	600	20		68	0.170	0.196	60		
R6015ENX		C7 G	600	15		60	0.260	0.290	40		
R6011ENX		C7 G	600	11		53	0.340	0.390	32		
R6009ENX		C7 G	600	9		48	0.500	0.535	23		
R6007ENX		C7 G	600	7		46	0.570	0.620	20		
R6004ENX		C7 G	600	4		35	0.900	0.980	15		
R6530ENX		C7 G	650	30		86	0.125	0.140	90		
R6524ENX		C7 G	650	24		74	0.160	0.185	70		
R6520ENX		C7 G	650	20		68	0.185	0.205	61		
R6515ENX		C7 G	650	15		60	0.280	0.315	40		
R6511ENX		C7 G	650	11		53	0.360	0.400	32		
R6509ENX		C7 G	650	9		48	0.530	0.585	24		
R6507ENX		C7 G	650	7		46	0.605	0.665	20		
R6504ENX		C7 G	650	4		35	0.955	1.050	15		
TO-247AD (TO-247) 	R6076ENZ4	C13	N	600	76	735	0.038	0.042	260		
	R6047ENZ4	C13		600	47	481	0.066	0.072	145		
	R6035ENZ4	C13		600	35	379	0.092	0.102	110		
	R6030ENZ4	C13		600	30	305	0.115	0.130	85		
	R6024ENZ4	C13		600	24	245	0.150	0.165	70		
	R6020ENZ4	C13		600	20	231	0.170	0.196	60		
	R6576ENZ4	C13		650	76	735	0.040	0.046	260		
	R6547ENZ4	C13		650	47	480	0.070	0.080	150		
	R6535ENZ4	C13		650	35	379	0.098	0.115	110		
	R6530ENZ4	C13		650	30	305	0.125	0.140	90		
	R6524ENZ4	C13		650	24	245	0.160	0.185	70		
	R6520ENZ4	C13		650	20	231	0.185	0.205	61		
(TO-3PF) 	R6035ENZ	C17	N	600	35	120	0.092	0.102	110		
	R6030ENZ	C17		600	30	120	0.115	0.130	85		
	R6024ENZ	C17		600	24	120	0.150	0.165	70		
	R6020ENZ	C17		600	20	120	0.170	0.196	60		
	R6015ENZ	C17		600	15	120	0.260	0.290	40		
	R6535ENZ	C17		650	35	102	0.098	0.115	110		
	R6530ENZ	C17		650	30	86	0.125	0.140	90		
	R6524ENZ	C17		650	24	74	0.165	0.185	70		
	R6520ENZ	C17		650	20	68	0.185	0.205	61		

Note: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, < > : GENERAL code.

☆: Under Development

Fast Switching type									
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS(on)} (Ω)		Q _g (nC) V _{GS} =10V
	Part No.	Packing code					V _{GS} =10V		
							Typ	Max	
TO-252 (DPAK) 	R6011KND3	TL1	N	600	11	124	0.340	0.390	22
	R6009KND3	TL1		600	9	94	0.500	0.535	16.5
	R6007KND3	TL1		600	7	78	0.570	0.620	15
	R6006KND3	TL1		600	6	70	0.720	0.830	12
	R6003KND3	TL1		600	3	44	1.300	1.500	8
	New R6014YND3	TL1		600	14	132	0.215*	0.260*	20
	New R6010YND3	TL1		600	10	92	0.324*	0.390*	15
	R6511KND3	TL1		650	11	124	0.360	0.400	22
	R6509KND3	TL1		650	9	94	0.530	0.585	16.5
	R6507KND3	TL1		650	7	78	0.605	0.665	15
	R6504KND3	TL1		650	4	58	0.955	1.050	10
	R8006KND3	TL1		800	6	83	0.750	0.900	22
	R8003KND3	TL1		800	3	48	1.500	1.800	11.5
	R8002KND3	TL1		800	1.6	30	3.500	4.200	7.5
TO-263S (LPTS) [SC-83] (D2PAK) 	R6024KNJ	TL	N	600	24	245	0.150	0.165	46
	R6020KNJ	TL		600	20	231	0.170	0.196	40
	R6015KNJ	TL		600	15	184	0.260	0.290	30
	R6011KNJ	TL		600	11	124	0.340	0.390	22
	R6009KNJ	TL		600	9	94	0.500	0.535	16.5
	R6007KNJ	TL		600	7	78	0.570	0.620	15
	R6004KNJ	TL		600	4	58	0.900	0.980	10
	R6524KNJ	TL		650	24	245	0.160	0.185	46
	R6520KNJ	TL		650	20	231	0.185	0.205	40
	R6515KNJ	TL		650	15	184	0.280	0.315	30
	R6511KNJ	TL		650	11	124	0.360	0.400	22
	R6509KNJ	TL		650	9	94	0.530	0.585	16.5
	R6507KNJ	TL		650	7	78	0.605	0.665	15
	R6504KNJ	TL		650	4	58	0.955	1.050	10
TO-220AB 	☆R6061YNX3	C16	N	600	61	568	0.050*	0.060*	76
	New R6049YNX3	C16		600	49	448	0.068*	0.082*	65
	New R6038YNX3	C16		600	38	348	0.080*	0.096*	50
	New R6027YNX3	C16		600	27	245	0.112*	0.135*	40
	New R6022YNX3	C16		600	22	205	0.137*	0.165*	33
	New R6020YNX3	C16		600	20	182	0.154*	0.185*	28
	New R6014YNX3	C16		600	14	132	0.215*	0.260*	20
	New R6010YNX3	C16		600	10	92	0.324*	0.390*	15
	R6535KNX3	C16		650	35	370	0.098	0.115	72
	R6530KNX3	C16		650	30	307	0.125	0.140	56
	R6524KNX3	C16		650	24	253	0.160	0.185	45
	R6520KNX3	C16		650	20	220	0.185	0.205	40
	R6515KNX3	C16		650	15	161	0.280	0.315	27.5
	(TO-220FM) (TO-220FP) 	R6030KNX		C7 G	N	600	30	86	0.115
R6024KNX		C7 G	600	24		74	0.150	0.165	46
R6020KNX		C7 G	600	20		68	0.170	0.196	40
R6015KNX		C7 G	600	15		60	0.260	0.290	30
R6011KNX		C7 G	600	11		53	0.340	0.390	22
R6009KNX		C7 G	600	9		48	0.500	0.535	16.5
R6007KNX		C7 G	600	7		46	0.570	0.620	15
R6006KNX		C7 G	600	6		40	0.720	0.830	12
R6004KNX		C7 G	600	4		35	0.900	0.980	10
New R6061YNX		C7 G	600	26		100	0.050*	0.060*	80
New R6049YNX		C7 G	600	22		90	0.068*	0.082*	20
New R6038YNX		C7 G	600	18		81	0.080*	0.096*	50
New R6027YNX		C7 G	600	14		70	0.112*	0.135*	40
New R6022YNX		C7 G	600	13		65	0.137*	0.165*	35
New R6020YNX		C7 G	600	12		62	0.154*	0.185*	30
New R6014YNX		C7 G	600	9		54	0.215*	0.260*	20
New R6010YNX		C7 G	600	7		47	0.324*	0.390*	15
R6530KNX		C7 G	650	30		86	0.125	0.140	56
R6524KNX		C7 G	650	24		74	0.160	0.185	46
R6520KNX		C7 G	650	20		68	0.185	0.205	40
R6515KNX		C7 G	650	15		60	0.280	0.315	30
R6511KNX		C7 G	650	11		53	0.360	0.400	22
R6509KNX		C7 G	650	9		48	0.530	0.585	16.5
R6507KNX		C7 G	650	7		46	0.605	0.665	14.5
R6504KNX		C7 G	650	4		35	0.955	1.050	10
R8019KNX		C7 G	800	19		83	0.200	0.240	65
R8011KNX		C7 G	800	11		65	0.370	0.450	37
R8009KNX		C7 G	800	9		59	0.500	0.600	27
R8006KNX		C7 G	800	6		52	0.750	0.900	22
R8003KNX		C7 G	800	3		48	1.500	1.800	11.5
R8002KNX		C7 G	800	1.6		28	3.500	4.200	7.5

Note: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, < > : GENERAL code.
*V_{GS}=12V

☆: Under Development

Power MOSFETs

Fast Switching type									
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS (on)} (Ω)		Q _g (nC) V _{GS} =10V
	Part No.	Packing code					V _{GS} =10V		
							Typ	Max	
TO-247AD (TO-247) 	☆R60A4YNZ4	C13	N	600	140	1,250	0.021*	0.025*	180
	<i>New</i> R6086YNZ4	C13		600	86	781	0.036*	0.044*	110
	<i>New</i> R6061YNZ4	C13		600	61	568	0.050*	0.060*	76
	<i>New</i> R6049YNZ4	C13		600	49	448	0.068*	0.082*	65
	<i>New</i> R6038YNZ4	C13		600	38	348	0.080*	0.096*	50
	<i>New</i> R6027YNZ4	C13		600	27	245	0.112*	0.135*	40
	<i>New</i> R6022YNZ4	C13		600	22	205	0.137*	0.165*	33
	<i>New</i> R6020YNZ4	C13		600	20	182	0.154*	0.185*	28
	R6076KNZ4	C13		600	76	735	0.038	0.042	165
	R6047KNZ4	C13		600	47	481	0.066	0.072	100
	R6035KNZ4	C13		600	35	379	0.095	0.102	72
	R6030KNZ4	C13		600	30	305	0.115	0.130	56
	R6024KNZ4	C13		600	24	245	0.150	0.165	46
	R6020KNZ4	C13		600	20	231	0.170	0.196	40
	R6576KNZ4	C13		650	76	735	0.040	0.046	165
	R6547KNZ4	C13		650	47	481	0.070	0.080	100
	R6535KNZ4	C13		650	35	379	0.098	0.115	72
	R6530KNZ4	C13		650	30	305	0.125	0.140	56
	R6524KNZ4	C13		650	24	245	0.160	0.185	45
	R6520KNZ4	C13		650	20	231	0.185	0.205	40
(TO-3PF) 	<i>New</i> R6086YNZ	C17	N	600	33	781	0.036*	0.044*	110
	R6035KNZ	C17		600	35	102	0.092	0.102	72
	R6030KNZ	C17		600	30	86	0.115	0.130	56
	R6024KNZ	C17		600	24	74	0.150	0.165	45
	R6020KNZ	C17		600	20	68	0.170	0.196	40
	R6015KNZ	C17		600	15	60	0.260	0.290	27.5
	R6535KNZ	C17		650	35	102	0.098	0.115	72
	R6530KNZ	C17		650	30	86	0.125	0.140	56
	R6524KNZ	C17		650	24	74	0.160	0.185	45
	R6520KNZ	C17		650	20	68	0.185	0.205	40
	R6515KNZ	C17		650	15	60	0.280	0.315	27.5

Note: Package is JEDEC code. (): ROHM Packages.
*V_{GS}=12V

☆: Under Development

Fast Recovery Body Diode type <PrestoMOS™>										
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS (on)} (Ω)		Q _g Typ (nC) V _{GS} =15V	trr Typ (ns)
	Part No.	Packing code					V _{GS} =15V			
							Typ	Max		
(SOT-223) 	New R6002JND4	TL1	N	600	2	6.6	2.5	3.25	7	40
	New R6003JND4	TL1		600	3	7.8	1.65	2.15	8	42
TO-252 (DPAK) 	R6009JND3	TL1	N	600	9	125	0.450	0.585	22	65
	R6007JND3	TL1		600	7	96	0.600	0.780	17.5	60
	R6006JND3	TL1		600	6	86	0.720	0.936	15.5	58
	R6004JND3	TL1		600	4	60	1.100	1.430	10.5	45
	New R6013VND3	TL1		600	13	131	0.250	0.300	21*	65
TO-263S (LPTS) [SC-83] (D2PAK) 	R6020JNJ	TL	N	600	20	252	0.180	0.234	45	85
	R6018JNJ	TL		600	18	220	0.220	0.286	42	80
	R6012JNJ	TL		600	12	160	0.300	0.390	28	70
	R6009JNJ	TL		600	9	125	0.450	0.585	22	65
	R6007JNJ	TL		600	7	96	0.600	0.780	17.5	60
	R6006JNJ	TL		600	6	86	0.720	0.936	15.5	58
	R6004JNJ	TL		600	4	60	1.100	1.430	10.5	45
TO-220AB 	☆ R6055VNX3	C16	N	600	55	543	0.059	0.071	80*	112
	New R6035VNX3	C16		600	35	348	0.095	0.114	50*	92
	New R6024VNX3	C16		600	24	245	0.127	0.153	38*	80
(TO-220FM) (TO-220FP) 	R6030JNX	C7 G	N	600	30	95	0.110	0.143	74	100
	R6025JNX	C7 G		600	25	85	0.140	0.182	57	90
	R6020JNX	C7 G		600	20	76	0.180	0.234	45	85
	R6018JNX	C7 G		600	18	72	0.220	0.286	42	80
	R6012JNX	C7 G		600	12	60	0.300	0.390	28	70
	R6009JNX	C7 G		600	9	53	0.450	0.585	22	65
	R6007JNX	C7 G		600	7	46	0.600	0.780	17.5	60
	R6006JNX	C7 G		600	6	43	0.720	0.936	15.5	58
	R6004JNX	C7 G		600	4	35	1.100	1.430	10.5	45
	☆ R6055VNX	C7 G		600	23	99	0.059	0.071	80*	112
	New R6035VNX	C7 G		600	17	81	0.095	0.114	50*	92
	New R6024VNX	C7 G		600	13	70	0.127	0.153	38*	80
	New R6018VNX	C7 G		600	10	61	0.170	0.204	27*	68
	New R6013VNX	C7 G		600	8	54	0.250	0.300	21*	65
	TO-247AD (TO-247) 	R6070JNZ4		C13	N	600	70	770	0.045	0.058
R6050JNZ4		C13	600	50		615	0.064	0.083	120	120
R6042JNZ4		C13	600	42		495	0.080	0.104	100	110
R6030JNZ4		C13	600	30		370	0.110	0.143	74	100
R6025JNZ4		C13	600	25		306	0.140	0.182	57	90
R6020JNZ4		C13	600	20		252	0.180	0.234	45	85
☆ R60A4VNZ4		C13	600	140		1,388	0.022	0.027	195*	167
New R6077VNZ4		C13	600	77		781	0.042	0.051	108*	125
New R6055VNZ4		C13	600	55		543	0.059	0.071	80*	112
(TO-3PF) 	R6050JNZ	C17	N	600	50	120	0.064	0.083	120	120
	R6030JNZ	C17		600	30	93	0.110	0.143	74	100
	R6025JNZ	C17		600	25	85	0.140	0.182	57	90
	R6020JNZ	C17		600	20	76	0.180	0.234	45	85
	New R6077VNZ	C17		600	29	113	0.042	0.051	108*	125
	New R6055VNZ	C17		600	23	99	0.059	0.071	80*	112

Note: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, < > : GENERAL code.
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 *V_{GS}=10V

☆: 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)								Q _g Typ (nC)		C _{iss} Typ (pF)		Automotive Grade AEC-Q101		
	Part No.	Grade Code	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V		V _{GS} =5V	V _{DS} =10V			
								Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max					
 DFN1010-3W 1010 size	RV8C010UN	HZG	G2CR	N	20	1	±8	—	—	340	470	400	560	470	650	540	810	—	40	YES		
	RV8L002SN	HZG	G2CR		60	0.25	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	—	15	YES		
	BSS84X	HZG	G2CR	P	-60	-0.23	±20	2,800	5,300	3,500	6,400	—	—	—	—	—	—	—	35	YES		
 DFN1616-6W 1616 size	☆RV4E034UN	HZG	TCR1	N	30	3.4	±12	—	—	72	97	100	140	—	—	—	—	3.2* ²	170	YES		
	☆RV4L016SN	HZG	TCR1		60	1.6	±20	237	305	290	374	—	—	—	—	—	—	2.0* ¹	110	YES		
	RV4C020ZP	HZG	TCR1	P	-20	-2	±8	—	—	180	260	240	340	320	450	400	560	2	80	YES		
	RV4E031RP	HZG	TCR1		-30	-3.1	±20	75	105	108	152	—	—	—	—	—	—	4.8	460	YES		
 SOT-323 (UMT3) [SC-70] 2021 size	BSS138BWA	HZG	T106	N	60	0.38	±20	500	700	600	840	1,000	4,000	—	—	—	—	—	—	YES		
	☆BSS138WA	HZG	T106		60	0.31	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	—	—	YES		
	BSS84WA	HZG	T106	P	-60	-0.21	±20	3,600	5,300	4,300	6,400	—	—	—	—	—	—	—	—	YES		
 SOT-363 (UMT6) [SC-88] 2021 size	UM6K31N	FHA	TCN	N+N	60	0.25	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	—	15* ⁴	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	50	70	66	93	5.7* ²	460	YES		
	RTL035N03	FRA	TR		30	3.5	±12	—	—	40	56	56	79	—	—	—	—	—	4.6* ²	350	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	
 SOT-23 (SST3) 2924 size	RUC002N05	HZG	T116	N	50	0.2	±8	—	—	1,600	2,200	1,700	2,400	—	—	2,000	4,000	—	25	YES		
	☆BSS670A	HZG	T116		60	0.6	±20	500	650	600	820	—	—	—	—	—	—	—	—	YES		
	BSS138BKA	HZG	T116		60	0.4	±20	500	700	600	840	1,000	4,000	—	—	—	—	—	—	YES		
	RK7002BM	HZG	T116		60	0.25	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	—	15	YES		
	BSS84A	HZG	T116	P	-60	-0.23	±20	2,800	5,300	3,500	6,400	—	—	—	—	—	—	—	—	YES		
 SOT-346T (TSMT3) [SC-96] 2928 size	RUR040N02	HZG	TL	N	20	4	±10	—	—	25	35	33	46	—	—	55	110	8* ²	680	YES		
	RTR040N03	HZG	TL		30	4	±12	—	—	34	48	47	66	—	—	—	—	—	5.9* ²	475	YES	
	RTR025N03	HZG	TL		30	2.5	±12	—	—	66	92	95	133	—	—	—	—	—	3.3* ²	220	YES	
	RSR025N03	HZG	TL		30	2.5	±20	50	70	74	105	—	—	—	—	—	—	—	2.9	165	YES	
	RTR030N05	HZG	TL		45	3	±12	—	—	48	67	68	95	—	—	—	—	—	6.2* ²	510	YES	
	RSR025N05	HZG	TL		45	2.5	±20	70	100	95	150	—	—	—	—	—	—	—	3.6	260	YES	
	RTR025N05	HZG	TL		45	2.5	±12	—	—	95	130	125	175	—	—	—	—	—	3.2* ²	250	YES	
	RTR020N05	HZG	TL		45	2	±12	—	—	130	180	180	250	—	—	—	—	—	2.9* ²	200	YES	
	RSR030N06	HZG	TL		60	3	±20	60	85	70	100	—	—	—	—	—	—	—	5	380	YES	
	RSR020N06	HZG	TL		60	2	±20	120	170	140	195	—	—	—	—	—	—	—	2.7	180	YES	
	RSR010N10	HZG	TL	100	1	±20	370	520	400	560	—	—	—	—	—	—	—	3.5	140* ⁴	YES		
	RTR030P02	HZG	TL	P	-20	-3	±12	—	—	55	75	90	125	—	—	—	—	—	9.3* ²	840	YES	
	RTR025P02	HZG	TL		-20	-2.5	±12	—	—	70	95	115	160	—	—	—	—	—	7* ²	630	YES	
	RTR020P02	HZG	TL		-20	-2	±12	—	—	100	135	180	250	—	—	—	—	—	4.9* ²	430	YES	
	RRR040P03	HZG	TL		-30	-4	±20	32	45	45	63	—	—	—	—	—	—	—	10.5	1,000	YES	
	RRR030P03	HZG	TL		-30	-3	±20	55	75	85	115	—	—	—	—	—	—	—	5.2	480	YES	
	RSR025P03	HZG	TL		-30	-2.5	±20	70	98	100	140	—	—	—	—	—	—	—	5.4	460	YES	
	RSR020P05	HZG	TL		-45	-2	±20	130	190	180	260	—	—	—	—	—	—	—	4.5* ²	500	YES	
	RSR015P06	HZG	TL		-60	-1.5	±20	200	280	240	340	—	—	—	—	—	—	—	10* ¹	500	YES	
	RUQ050N02	HZG	TR		N	20	5	±10	—	—	22	30	27	38	—	—	40	80	12* ²	900	YES	
	RTQ045N03	HZG	TR			30	4.5	±12	—	—	30	43	42	60	—	—	—	—	—	7.6* ²	540	YES
	RSQ045N03	HZG	TR			30	4.5	±20	27	38	36	51	—	—	—	—	—	—	—	6.8	520	YES
	RSQ035N03	HZG	TR			30	3.5	±20	44	62	60	84	—	—	—	—	—	—	—	5.3	290	YES
RTQ035N03	HZG	TR	30			3.5	±12	—	—	38	54	55	77	—	—	—	—	—	4.6* ²	285	YES	
RSQ020N03	HZG	TR	30	2		±20	96	134	148	207	—	—	—	—	—	—	—	2.2	110	YES		
RVQ040N05	HZG	TR	45	4		±21	38	53	47	66	—	—	—	—	—	—	—	6.3	530	YES		
RTQ020N05	HZG	TR	45	2		±12	—	—	140	190	200	280	—	—	—	—	—	2.3* ²	150	YES		
RSQ035N06	HZG	TR	60	3.5		±20	50	70	58	82	—	—	—	—	—	—	—	6.5	430	YES		
RSQ015N06	HZG	TR	60	1.5		±20	210	290	240	330	—	—	—	—	—	—	—	2	110	YES		
 SOT-457T (TSMT6) [SC-95] 2928 size	RSQ030N08	HZG	TR	N+N	80	3.0	±20	93	131	100	140	—	—	—	—	—	—	6.5* ¹	550	YES		
	QS6K1	FRA	TR		30	1	±12	—	—	170	238	260	364	—	—	—	—	—	1.7* ²	77	YES	
	QS6K21	FRA	TR	P	45	1	±12	—	—	300	420	415	585	—	—	—	—	—	1.5* ²	95	YES	
	RTQ035P02	HZG	TR		-20	-3.5	±12	—	—	50	65	80	100	—	—	—	—	—	10.5* ²	1,200	YES	
	RTQ025P02	HZG	TR		-20	-2.5	±12	—	—	72	100	140	190	—	—	—	—	—	6.4* ²	580	YES	
	RRQ045P03	HZG	TR		-30	-4.5	±20	25	35	34	48	—	—	—	—	—	—	—	14	1,350	YES	
	RSQ035P03	HZG	TR		-30	-3.5	±20	45	65	65	90	—	—	—	—	—	—	—	9.2	780	YES	
	RRQ030P03	HZG	TR		-30	-3	±20	55	75	85	115	—	—	—	—	—	—	—	5.2	480	YES	
	RSQ025P03	HZG	TR		-30	-2.5	±20	80	110	120	165	—	—	—	—	—	—	—	4.4	320	YES	
	RSQ015P10	HZG	TR		-100	-1.5	±20	350	470	380	510	—	—	—	—	—	—	—	17	950* ⁴	YES	

Note1: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

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	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V				
								Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	Typ	Max	
 (TSMT8) 3028 size	RQ1C075UN	FRA	TR	N	20	7.5	±10	—	—	11	16	14	20	—	—	20	40	18**	1,400	YES
	QS8K2	FRA	TR	N+N	30	3.5	±12	—	—	38	54	55	77	—	—	—	—	4.6**	285	YES
	RQ1A070ZP	FRA	TR	P	-12	-7	±10	—	—	8	12	11	16	—	—	19	38	58**	7,400**	YES
	RQ1E070RP	FRA	TR		-30	-7	±20	12	17	17	24	—	—	—	—	—	26	2,700	YES	
	RQ1E050RP	FRA	TR	P+P	-30	-5	±20	22	31	32	45	—	—	—	—	—	—	13	1,300	YES
	QS8J4	FRA	TR		-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**	YES
					-100	-1.5	±20	350	470	380	510	—	—	—	—	—	17	950**		

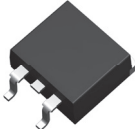
Note1: (): ROHM Packages.
Note2: *1 V_{GS}=4.5V *2 V_{DSS}=25V *3 V_{GS}=6V

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)						Q _g Typ (nC)	Ciss Typ (pF)	Automotive Grade AEC-Q101
	Part No.	Grade Code	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V				
								Typ	Max	Typ	Max	Typ	Max	V _{GS} =5V	V _{DS} =10V	
 (SOP8) 5060 size	RSS130N03	HZG	TB	N	30	13	±20	5.9	8.3	7.4	10.4	—	—	25	2,000	YES
	RSS100N03	HZG	TB		30	10	±20	9.5	13.3	12.5	17.5	—	—	14	1,070	YES
	RSS095N05	HZG	TB		45	9.5	±20	11	16	14	20	—	—	18.9	1,830	YES
	RSS070N05	HZG	TB		45	7	±20	18	25	23	32	—	—	12	1,000	YES
	RSS065N06	HZG	TB		60	6.5	±20	24	37	28	44	—	—	11	900	YES
	SP8K3	HZG	TB	N+N	30	7	±20	17	24	23	33	—	—	8.4	600	YES
	SP8K2	HZG	TB		30	6	±20	21	30	30	42	—	—	7.2	520	YES
	SP8K24	HZG	TB		45	6	±20	18	25	24	34	—	—	15.4	1,400	YES
	SP8K22	HZG	TB		45	4.5	±20	33	46	41	57	—	—	6.8	550	YES
	SP8K33	HZG	TB		60	5	±20	34	48	38	54	—	—	8	620	YES
	SP8K32	HZG	TB		60	4.5	±20	46	65	52	73	—	—	7	500	YES
	SP8K31	HZG	TB		60	3.5	±20	85	120	100	140	—	—	3.7	250	YES
	SP8K41	HZG	TB		80	3.4	±20	90	130	110	150	120	160	6.6	600	YES
	SP8K52	HZG	TB		100	3	±20	120	170	130	180	—	—	8.5	610*3	YES
	RRS140P03	HZG	TB	P	-30	-14	±20	5	7	6.7	9.4	—	—	80	8,000	YES
	RRS100P03	HZG	TB		-30	-10	±20	9	12.6	12.5	17.5	—	—	39	3,600	YES
	RRS090P03	HZG	TB		-30	-9	±20	11	15.4	15	21	—	—	30	3,000	YES
	RRS050P03	HZG	TB		-30	-5	±20	36	50	52	72	—	—	9.2	850	YES
	RSS070P05	HZG	TB		-45	-7	±20	19	27	25	35	—	—	34	4,100	YES
	RSS060P05	HZG	TB	P+P	-45	-6	±20	26	36	35	49	—	—	23	2,700	YES
	SP8J66	HZG	TB		-30	-9	±20	13.5	18.5	17.5	23.6	—	—	35	3,000	YES
	SP8M4	HZG	TB		30	9	±20	12	18	16	24	—	—	15	1,190	YES
	SP8M5	HZG	TB		-30	-7	±20	20	28	25	35	—	—	25	2,600	YES
					30	6	±20	21	30	30	42	—	—	7.2	520	YES
	SP8M3	HZG	TB		-30	-7	±20	20	28	25	35	—	—	25	2,600	YES
					30	5	±20	36	51	52	73	—	—	3.9	230	YES
	SP8M6	HZG	TB		-30	-4.5	±20	40	56	57	80	—	—	8.5	850	YES
					30	5	±20	36	51	52	73	—	—	3.9	230	YES
	SP8M21	HZG	TB		-30	-3.5	±20	65	90	100	140	—	—	5.5	490	YES
					45	6	±20	18	25	24	34	—	—	15.4	1,400	YES
	SP8M24	HZG	TB	N+P	-45	-4	±20	33	46	43	60	—	—	20	2,400	YES
					45	4.5	±20	33	46	41	57	—	—	6.8	550	YES
	SP8M31	HZG	TB		-45	-3.5	±20	45	63	60	84	—	—	13	1,700	YES
					60	4.5	±20	46	65	52	73	55	77	7	500	YES
	SP8M41	HZG	TB		-60	-4.5	±20	50	70	55	80	60	85	40	2,500	YES
					80	3.4	±20	90	130	110	150	—	—	6.6	600	YES
	SP8M51	HZG	TB		-80	-2.6	±20	165	240	220	300	—	—	8.2	1,000	YES
					100	3	±20	120	170	130	180	—	—	8.5	610*3	YES
					-100	-2.5	±20	210	290	230	320	—	—	12.5	1,550*3	YES

Note1: (): ROHM Packages.
Note2: *1 V_{GS}=10V *2 V_{GS}=4V *3 V_{DSS}=25V

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)				Q _g Typ (nC)	C _{iss} Typ (pF)	Automotive Grade AEC-Q101
	Part No.	Grade Code	Packing code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =10V	V _{DSS} =10V	
								Typ	Max	Typ	Max			
 TO-252 (DPAK)	RD3H200SN	FRA	TL	N	45	20	±20	20	28	25	35	12*3	950	YES
	RD3L220SN	FRA	TL		60	22	±20	18	26	21	30	30	1,500	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*2	50*2	55	2,100*1	YES
	RD3P175SN	FRA	TL		100	17.5	±20	75	105	80	112	24	950*1	YES
	RD3P100SN	FRA	TL		100	10	±20	95	133	100	140	18	700*1	YES
	RD3P050SN	FRA	TL		100	5	±20	135	190	142	200	14	530*1	YES
	RD3S100AA	FRA	TL		190	10	±20	130	182	136*2	190*2	52	2,000	YES
	RD3U080AA	FRA	TL		250	8	±30	225	300	—	—	25	1,440*1	YES
	RD3U041AA	FRA	TL		250	4	±30	930	1,300	—	—	8.5	350*1	YES
	R5205PND3	FRA	TL		525	5	±25	1,300	1,600	—	—	10.8	320*1	YES
	R6006PND3	FRA	TL		600	6	±30	900	1,200	—	—	15	460*1	YES
	R6004PND3	FRA	TL		600	4	±25	1,400	1,800	—	—	11	280*1	YES
	R8007AND3	FRA	TL		800	7	±30	1,200	1,600	—	—	28	850	YES
	R8002CND3	FRA	TL		800	2	±30	3,300	4,300	—	—	12.1	240*1	YES
	R8001CND3	FRA	TL		800	1	±30	6,700	8,700	—	—	7.2	60*1	YES
	RD3H160SP	FRA	TL	P	-45	-16	±20	35	50	45	63	16*3	2,000	YES
	RD3H080SP	FRA	TL		-45	-8	±20	65	91	95	133	9*3	1,000	YES
RD3H045SP	FRA	TL	-45		-4.5	±20	110	155	160	225	12*3	550	YES	
RD3L140SP	FRA	TL	-60		-14	±20	60	84	73	103	27	1,900	YES	
RD3P130SP	FRA	TL	-100		-13	±20	135	200	150	220	40	2,400*1	YES	
 TO-263S (LPTS) [SC-83] (D2PAK)	RSJ451N04	FRG	TL	N	40	45	±20	9.5	13.5	—	—	43	2,400*1	YES
	RSJ400N06	FRG	TL		60	40	±20	11	16	—	—	52	2,400	YES
	RSJ400N10	FRG	TL		100	40	±20	19	27	21*2	30*2	90	3,600*1	YES
	RSJ301N10	FRG	TL		100	30	±20	33	46	36*2	50*2	60	2,100*1	YES
	RJ1U330AA	FRG	TL		250	33	±30	77	105	—	—	80	4,500*1	YES
	R6020PNJ	FRA	TL		600	20	±30	190	250	—	—	65	2,040*1	YES
	R8008ANJ	FRG	TL		800	8	±30	790	1,030	—	—	38	1,100*1	YES
	R8005ANJ	FRG	TL		800	5	±30	1,600	2,100	—	—	20	500*1	YES
	R8002ANJ	FRG	TL		800	2	±30	3,300	4,300	—	—	13	250*1	YES
	RSJ250P10	FRG	TL	P	-100	-25	±20	45	63	48	67	60*3	8,000*1	YES

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA Code, (): GENERAL Code.

Note2: *1 V_{DS}=25V *2 V_{GS}=4V *3 V_{GS}=5V

Bipolar Transistors

Quick Reference for General Purpose Amplification Bipolar Transistors (Flat type)										
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	
	 P _D =0.15W	 P _D =0.15W	 P _D =0.2W							
Polarity	PNP	NPN	PNP	NPN	PNP	NPN				
Application	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 390
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	

Note1: *1 With reference land installed.
 Note2: *2 For h_{FE} , please see the technical specifications.
 Note3: PNP (—) symbol omitted.
 Note4: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

General Purpose Amplification Bipolar Transistors (Flat type)															
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		Packing code	h _{FE} *2 Code									
 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				0.15	−50	−0.15	120 to 390	YES
	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				0.15	50	0.15	120 to 390	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		—	TL	Q	R				0.15	−50	−0.15	120 to 390	—
	2SAR502EB	—		TL						0.15	−30	−0.5	200 to 500	—	
	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		—	TL	Q	R				0.15	50	0.15	120 to 390	—
	Driver	2SCR502EB		—	TL						0.15	30	0.5	200 to 500	—
	 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			—	TL		Q	R				0.2	−50	−0.15	120 to 390	—
2SAR502UB		—	TL						0.2		−30	−0.5	200 to 500	—	
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	—	TL		Q	R				0.2	50	0.15	120 to 390	—
Driver		2SCR502UB	—	TL							0.2	30	0.5	200 to 500	—

Note1: *General part No. have no grade code.
 Note2: *1 With reference land installed.
 Note3: *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.
 Note4: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Quick Reference for General Purpose Amplification Bipolar Transistors (Gull type)											
Package	SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323 (UMT3) [SC-70] 2021 size		SOT-346 (SMT3) [SC-59] 2928 size		SOT-23 (SST3) 2924 size		V _{CEO} (V)	I _C (A)	h _{FE} *2
	 P _D =0.15W	 P _D =0.2W	 P _D =0.2W	 P _D =0.2W							
Polarity	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
General Purpose Amplification	New 2SA1774E3	New 2SC4617E3	2SA1576U3	2SC4081U3	2SA1037AK	2SC2412K			50	0.15	120 to 390
	New 2SA2018E3	New 2SC5585E3			2SA2119K				12	0.5	270 to 680
Low V _{CE} (sat)			2SB1689	2SD2652					12	1.5	270 to 680
					2SB1690K	2SD2653K			12	2	270 to 680
						2SD1757K			15	0.5	120 to 560
					2SB1590K				15	1	120 to 390
						2SD2444K			15	1	180 to 390
			2SB1694	2SD2656					30	1	270 to 680
					2SB1695K	2SD2657K			30	1.5	270 to 680
									30	0.5	200 to 500
Driver	New 2SAR502E3	New 2SCR502E3	2SAR502U3	2SCR502U3					30	0.5	200 to 500
			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	2SC5876U3					60	0.5	120 to 270 120 to 390
High Voltage			2SA1579U3	2SC4102U3	2SA1514K	2SC3906K	2SARA41C	2SCRC41C	120	0.05	180 to 560
						2SC4061K			300	0.1	56 to 120

Note1: *1 With reference land installed.
 Note2: *2 For h_{FE} , please see the technical specifications.
 Note3: PNP (—) symbol omitted.
 Note4: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Bipolar Transistors

General Purpose Amplification Bipolar Transistors (Gull type)														
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		Packing code	h _{FE} *2 Code								
General	Automotive													
 SOT-416 (EMT3) [SC-75A] 1616 size	General Purpose Amplification	New 2SA1774E3	*	HZG	TL	Q	R		PNP	0.15	−50	−0.15	120 to 390	YES
	Low V _{CE} (sat)	New 2SA2018E3		HZG	TL					0.15	−12	−0.5	270 to 680	YES
	Driver	New 2SAR502E3		HZG	TL					0.15	−30	−0.5	200 to 500	YES
	General Purpose Amplification	New 2SC4617E3		HZG	TL	Q	R		NPN	0.15	50	0.15	120 to 390	YES
	Low V _{CE} (sat)	New 2SC5585E3		—	TL					0.15	12	0.5	270 to 680	—
	Driver	New 2SCR502E3		HZG	TL					0.15	30	0.5	200 to 500	YES
 SOT-323 (UMT3) [SC-70] 2021 size	General Purpose Amplification	2SA1576U3	*	HZG	T106	Q	R		PNP	0.2	−50	−0.15	120 to 390	YES
	Low V _{CE} (sat)	2SB1689		—	T106					0.2	−12	−1.5	270 to 680	—
		2SB1694		—	T106					0.2	−30	−1	270 to 680	—
	Driver	2SAR502U3		HZG	T106					0.2	−30	−0.5	200 to 500	YES
		2SA1577		—	T106	Q	R			0.2	−32	−0.5	120 to 390	—
	High Speed Switching	2SA2088U3		HZG	T106	Q				0.2	−60	−0.5	120 to 270	YES
	High Voltage	2SA1579U3		HZG	T106	R	S		0.2	−120	−0.05	180 to 560	YES	
	General Purpose Amplification	2SC4081U3		HZG	T106	Q	R		NPN	0.2	50	0.15	120 to 390	YES
	Low V _{CE} (sat)	2SD2652		—	T106					0.2	12	1.5	270 to 680	—
		2SD2656		—	T106					0.2	30	1	270 to 680	—
	Driver	2SCR502U3		HZG	T106					0.2	30	0.5	200 to 500	YES
		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	Q	R		0.2	60	0.5	120 to 390	YES			
High Voltage	2SC4102U3	HZG	T106	R	S		0.2	120	0.05	180 to 560	YES			
 SOT-346 (SMT3) [SC-59] 2928 size	General Purpose Amplification	2SA1037AK	*	—	T146	Q	R		PNP	0.2	−50	−0.15	120 to 390	—
	Low V _{CE} (sat)	2SA2119K		—	T146					0.2	−12	−0.5	270 to 680	—
		2SB1690K		—	T146					0.2	−12	−2	270 to 680	—
		2SB1590K		—	T146	Q				0.2	−15	−1	120 to 390	—
		2SB1695K		—	T146					0.2	−30	−1.5	270 to 680	—
	Driver	2SA1036K		—	T146	Q	R			0.2	−32	−0.5	120 to 390	—
		2SB1197K		—	T146	Q	R			0.2	−32	−0.8	120 to 390	—
		2SB1198K		—	T146	Q	R			0.2	−80	−0.5	120 to 390	—
	High Voltage	2SA1514K		—	T146	R	S			0.2	−120	−0.05	180 to 560	—
	General Purpose Amplification	2SC2412K		—	T146	Q	R		NPN	0.2	50	0.15	120 to 390	—
	Low V _{CE} (sat)	2SD2653K		—	T146					0.2	12	2	270 to 680	—
		2SD1757K		—	T146	Q	R	S		0.2	15	0.5	120 to 560	—
		2SD2444K		—	T146	R				0.2	15	1	180 to 390	—
		2SD2657K		—	T146					0.2	30	1.5	270 to 680	—
	Driver	2SC2411K		—	T146	Q	R			0.2	32	0.5	120 to 390	—
		2SD1781K		—	T146	Q	R			0.2	32	0.8	120 to 390	—
		2SD1484K		—	T146	Q	R			0.2	50	0.5	120 to 390	—
		2SD1782K		—	T146	Q	R			0.2	80	0.5	120 to 390	—
	High Voltage	2SC3906K		—	T146	R	S			0.2	120	0.05	180 to 560	—
		2SC4061K		—	T146	N				0.2	300	0.1	56 to 120	—
 SOT-23 (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

Note1: *General Part No. have no grade code.

Note2: *1 With reference land installed.

Note3: *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.

Note4: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Quick Reference for Bipolar Transistors (For Oversea Customer)							
Package	SOT-323 (UMT3) [SC-70] 2021 size		SOT-23 (SST3) 2924 size		V _{CEO} (V)	I _C (A)	h _{FE} *2
	 P _D =0.15W	 P _D =0.2W					
Polarity	PNP	NPN	PNP	NPN			
Application							
General Purpose Amplification	BC858BW	BC848BW	BC858B	BC848B	30	0.1	200 to 450
		New BC847BU3		BC847B	45	0.1	200 to 450
	New BC857BU3		BC857B		45	0.1	210 to 480
			New BC857C	New BC847C	45	0.1	420 to 800
				New BC846B	65	0.12	200 to 450
			BC856B		65	0.1	220 to 475
Driver			BSS63A	BSS64A	100	0.1	30 or more
			BSS5130A	BSS4130A	30	1	270 to 680
			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
			BCX17	BCX19	45	0.5	100 to 600
Switching			SSTA56	SSTA06	80	0.5	100 or more
	UMT3906	UMT3904	SST3906	SST3904	40	0.2	100 to 300
	UMT4403U3	UMT4401U3	SST4403	SST4401	40	0.6	100 to 300
		UM2222AU3		SST2222A	40	0.6	100 to 300
	UMT2907A		SST2907A		60	0.6	100 to 300
Darlington*3				SSTA28	80 (V _{CES})	0.3	10,000 or more

Note1: *1 With reference land installed.

Note2: *2 For h_{FE} , please see the technical specifications.

Note3: *3 For internal circuit, please see the technical specifications.

Note4: PNP (—) symbol omitted.

Note5: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Bipolar Transistors (For Oversea Customer)											
Package	Application	Product No.			Polarity (ch)	P _D *1 (W)	V _{CE0} (V)	I _C (A)	h _{FE} *2	Automotive Grade AEC-Q101	
		Part No.	Grade Code								Packing code
			General	Automotive							
 SOT-323 (UMT3) [SC-70] 2021 size	General Purpose Amplification	BC858BW	*	—	T106	PNP	0.2	−30	−0.1	200 to 450	—
		New BC857BU3		HZG	T106		0.2	−45	−0.1	210 to 480	YES
	Switching	UMT3906		—	T106		0.2	−40	−0.6	100 to 300	—
		UMT4403U3		HZG	T106		0.2	−40	−0.6	100 to 300	YES
		UMT2907A		—	T106		0.2	−60	−0.6	100 to 300	—
		BC848BW		—	T106		0.2	30	0.1	200 to 450	—
	General Purpose Amplification	New BC847BU3		HZG	T106		0.2	45	0.1	200 to 450	YES
		UMT3904		—	T106		0.2	40	0.2	100 to 300	—
	Switching	UMT4401U3		HZG	T106		0.2	40	0.6	100 to 300	YES
		UM2222AU3		HZG	T106		0.2	40	0.6	100 to 300	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 480	YES
		New BC857C		HZG	T116		0.2	−45	−0.15	420 to 800	YES
		BC856B		HZG	T116		0.2	−65	−0.1	220 to 475	YES
	Driver	BSS63A		HZG	T116		0.2	−100	−0.1	30 or more	YES
		BSS5130A		HZG	T116		0.2	−30	−1	270 to 680	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
		SST4403		HZG	T116		0.2	−40	−0.6	100 to 300	YES
	Switching	SST2907A		HZG	T116		0.2	−60	−0.6	100 to 300	YES
		SST3906		HZG	T116		0.2	−40	−0.2	100 to 300	YES
		BC848B		HZG	T116		0.2	30	0.1	200 to 450	YES
		BC847B		HZG	T116		0.2	45	0.1	200 to 450	YES
	General Purpose Amplification	New BC847C		HZG	T116		0.2	45	0.1	420 to 800	YES
		New BC846B		HZG	T116		0.2	45	0.12	200 to 450	YES
		BSS64A		HZG	T116		0.2	100	0.1	30 or more	YES
		BSS4130A		HZG	T116		0.2	30	1	270 to 680	YES
	Driver	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
		SST3904		HZG	T116		0.2	40	0.2	100 to 300	YES
	Switching	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	10,000 or more	—

Note1: *General Part No. have no grade code.

Note2: *1 With reference land installed.

Note3: *2 For h_{FE} , please see the technical specifications.

Note4: *3 For internal circuit, please see the technical specifications.

Note5: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Bipolar Transistors

Quick Reference for High h_{FE} · Muting/Darlington 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 h _{FE} · Muting								2SD2704K	25 (V _{EBO})	0.3	820 to 2,700
								2SD2114K	20	0.5	820 to 2,700
		2SD2707		2SD2654		2SD2351		2SD2226K	50	0.15	820 to 2,700
Darlington*3								2SD2142K	30	0.3	5,000 or more
							2SB852K	2SD1383K	32 (V _{CES})	0.3	5,000 or more

Note1: *1 With reference land installed.

Note2: *2 For h_{FE} , please see the technical specifications.

Note3: *3 For internal circuit, please see the technical specifications.

Note4: PNP (—) symbol omitted.

Note5: 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	
		Part No.	Grade Code		Packing 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 2,700	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 2,700	
 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 (SMT3) [SC-59] 2928 size	Darlington*3	2SB852K	★	—	T146	B		PNP	0.2	−32 (V _{CES})	−0.3	5,000 or more	
	High h _{FE} · Muting	2SD2704K		—	T146			NPN	0.2	25 (V _{EBO})	0.3	820 to 2,700	
		2SD2114K		—	T146	V	W		0.2	20	0.5	820 to 2,700	
		2SD2226K		—	T146	V	W		0.2	50	0.15	820 to 2,700	
		2SD2142K		—	T146				0.2	30	0.3	5,000 or more	
	Darlington*3	2SD1383K		—	T146	B			0.2	32 (V _{CES})	0.3	5,000 or more	

Note1: *General Part No. have no grade code.

Note2: *1 With reference land installed.

Note3: *2 For h_{FE} , B: 5,000 or more, V: 820 to 1,800, W: 1,200 to 2,700. Please see the technical specifications.

Note4: *3 For internal circuit, please see the technical specifications.

Note5: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Quick Reference for Low Saturation/Driver Bipolar Transistors							
Package	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					
Polarity	PNP	NPN	PNP	NPN			
Application							
Low V _{CE (sat)}	2SB1732	2SD2702	2SB1709	2SD2674	12	1.5	270 to 680
	2SB1730	2SD2700	2SB1690	2SD2653	12	2	270 to 680
			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
			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

Note1: *1 With reference land installed.

Note2: *2 For h_{FE} , please see the technical specifications.

Note3: *3 6pin package (TSMT6/TUMT6) For internal circuit, please see the technical specifications.

Note4: PNP (—) symbol omitted.

Note5: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

Bipolar Transistors

Low Saturation/Driver 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		Packing code	h _{FE} *2 Code								
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-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		HZG	TL				0.5	−30	−2	200 to 500	YES	
		2SAR513R		HZG	TL				0.5	−50	−1	180 to 450	YES	
		2SAR553R		HZG	TL				0.5	−50	−2	180 to 450	YES	
		2SAR543R		—	TL				0.5	−50	−3	180 to 450	—	
		2SAR514R		HZG	TL				0.5	−80	−0.7	120 to 390	YES	
		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		HZG	TL				0.5	30	2	200 to 500	YES	
		2SCR513R		HZG	TL				0.5	50	1	180 to 450	YES	
		2SCR553R		HZG	TL				0.5	50	2	180 to 450	YES	
		2SCR543R		—	TL				0.5	50	3	180 to 450	—	
		2SCR514R		HZG	TL				0.5	80	0.7	120 to 390	YES	
		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*3		*	—	TR			PNP	0.5	−12	−6	270 to 680	—
		QST3*3			—	TR				0.5	−30	−5	270 to 680	—
	High Voltage	2SAR340Q*3			—	TR	P	Q		0.5	−400	−0.1	82 to 270	—
	Low V _{CE} (sat)	QSX1*3			—	TR			NPN	0.5	12	6	270 to 680	—
		QSX2*3			—	TR				0.5	30	5	270 to 680	—
	High Voltage	2SCR341Q*3			—	TR	P	Q	0.5	400	0.1	82 to 270	—	

Note1: *General Part No. have no grade code.

Note2: *1 With reference land installed.

Note3: *2 For h_{FE}, P: 82 to 180, Q: 120 to 270, R: 180 to 390. Please see the technical specifications.

Note4: *3 6pin package (TSMT6) For internal circuit, please see the technical specifications.

Note5: Package is JEDEC code. (): ROHM Packages, [] : JEITA code.

Quick Reference for Power Bipolar Transistors											
Package Polarity Application	⋄DFN2020-3S⋄ (HUML2020L3) 2020 size		SOT-89 (MPT3) [SC-62] 4540 size		TO-252 (DPAK)		TO-263AB (LPTL)		V _{CE0} (V)	I _C (A)	h _{FE} *3
	 *1 P _D =0.5W		 *1 P _D =0.5W		 *2 P _D =10W		 *2 P _D =40W				
	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
Gate Driver			2SAR642P	2SCR642P					30	10*5	200 to 500
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	2SCR542F3							30	3	200 to 500
			2SAR542P	2SCR542P	2SAR572D3	2SCR572D3			30	5	200 to 500
	2SAR562F3	2SCR562F3							30	6	200 to 500
					2SAR582D3	2SCR582D3			30	10	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
					2SAR573D3	2SCR573D3			50	3	180 to 450
	2SAR563F3	2SCR563F3							50	6	180 to 450
					2SAR583D3	2SCR583D3			50	7	180 to 450
			2SAR514P 2SAR514P5	2SCR514P 2SCR514P5					80	0.7	120 to 390
			2SAR554P 2SAR554P5	2SCR554P 2SCR554P5					80	1.5	120 to 390
					2SAR574D3	2SCR574D3			80	2	120 to 390
			2SAR544P 2SAR544P5	2SCR544P 2SCR544P5					80	2.5	120 to 390
	2SAR564F3	2SCR564F3							80	4	120 to 390
					2SAR586D3	2SCR586D3	2SAR586J	2SCR586J	80	5	120 to 390
			New 2SAR372P 2SAR372P5	2SCR372P 2SCR372P5					120	0.7	120 to 390
			New 2SAR375P 2SAR375P5	2SCR375P 2SCR375P5					120	1.5	120 to 390
	2SAR567F3	2SCR567F3							120	2.5	120 to 390
					2SAR587D3	2SCR587D3			120	3	120 to 390
	High Voltage			2SAR340P	2SCR346P					400	0.1
High Speed Switching			2SA2071P5	2SC5824					60	3	120 to 270 120 to 390
High h _{FE}				2SD2537					25	1.2	820 to 1,800
			2SB1427						20	2	390 to 820
				2SD2153					25	2	560 to 2,700
Darlington*4				2SD1834					60 (V _{CEs})	1	2k or more

Note1: *1 With reference land installed.

Note2: *2 T_C=25°C

Note3: *3 For h_{FE}, please see the technical specifications.

Note4: *4 For internal circuit, please see the technical specifications.

Note5: P_W=1ms, Single pulse

Note6: PNP (—) symbol omitted.

Note7: Package is JEDEC code. (): ROHM Packages, []: JEITA code, (): GENERAL code.

Bipolar Transistors

Power Bipolar Transistors														
Package	Application	Product No.							Polarity (ch)	P _D *1 (W)	V _{CE0} (V)	I _C (A)	h _{FE} *3	Automotive Grade AEC-Q101
		Part No.	Grade Code		Packing code	h _{FE} *3 Code								
General	Automotive													
◆ (DFN2020-3S) (HUML2020L3) 2020 size	Driver	2SAR542F3	*	—	TR				PNP	0.5	−30	−3	200 to 500	—
		2SAR562F3		—	TR					0.5	−30	−6	200 to 500	—
		2SAR563F3		—	TR					0.5	−50	−6	180 to 450	—
		2SAR564F3		—	TR					0.5	−80	−4	120 to 390	—
		2SAR567F3		—	TR					0.5	−120	−2.5	120 to 390	—
		2SCR542F3		—	TR				NPN	0.5	30	3	200 to 500	—
		2SCR562F3		—	TR					0.5	30	6	200 to 500	—
		2SCR563F3		—	TR					0.5	50	6	180 to 450	—
		2SCR564F3		—	TR					0.5	80	4	120 to 390	—
		2SCR567F3		—	TR					0.5	120	2.5	120 to 390	—
■ SOT-89 (MPT3) [SC-62] 4540 size	Gate Driver	2SAR642P	—	HZG	T100				PNP	0.5	−30	−10*5	200 to 500	YES
	Driver	2SB1697	*	—	T100					0.5	−12	−2	270 to 680	—
		2SAR293P	—	HZG	T100					0.5	−30	−1	270 to 680	YES
		2SAR293P5	*	—	T100					0.5	−30	−1	270 to 680	—
		2SAR512P	—	HZG	T100					0.5	−30	−2	200 to 500	YES
		2SAR512P5	*	—	T100					0.5	−30	−2	200 to 500	—
		2SAR552P	—	HZG	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	—	HZG	T100					0.5	−50	−1	180 to 450	YES
		2SAR513P5	*	—	T100					0.5	−50	−1	180 to 450	—
		2SAR553P	—	HZG	T100					0.5	−50	−2	180 to 450	YES
		2SAR553P5	*	—	T100					0.5	−50	−2	180 to 450	—
		2SAR533P	—	HZG	T100					0.5	−50	−3	180 to 450	YES
		2SAR533P5	*	—	T100					0.5	−50	−3	180 to 450	—
		2SAR514P	—	HZG	T100					0.5	−80	−0.7	120 to 390	YES
		2SAR514P5	*	—	T100					0.5	−80	−0.7	120 to 390	—
		2SAR554P	—	HZG	T100					0.5	−80	−1.5	120 to 390	YES
		2SAR554P5	*	—	T100					0.5	−80	−1.5	120 to 390	—
		2SAR544P	—	HZG	T100					0.5	−80	−2.5	120 to 390	YES
		2SAR544P5	*	—	T100					0.5	−80	−2.5	120 to 390	—
	New	2SAR372P	—	HZG	T100	Q	R			0.5	−120	−0.7	120 to 390	YES
	2SAR372P5	*	—	T100	Q	R		0.5		−120	−0.7	120 to 390	—	
	New	2SAR375P	—	HZG	T100	Q	R			0.5	−120	−1.5	120 to 390	YES
	2SAR375P5	*	—	T100	Q	R		0.5	−120	−1.5	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	—	
	Gate Driver	2SCR642P	—	HZG	T100				0.5	30	10*5	200 to 500	YES	
	Driver	2SD2661	*	—	T100				0.5	12	2	270 to 680	—	
		2SCR293P	—	HZG	T100				0.5	30	1	270 to 680	YES	
		2SCR293P5	*	—	T100				0.5	30	1	270 to 680	—	
		2SCR512P	—	HZG	T100				0.5	30	2	200 to 500	YES	
		2SCR512P5	*	—	T100				0.5	30	2	200 to 500	—	
		2SCR552P	—	HZG	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	—	HZG	T100				0.5	50	1	180 to 450	YES	
		2SCR513P5	*	—	T100				0.5	50	1	180 to 450	—	
		2SCR553P	—	HZG	T100				0.5	50	2	180 to 450	YES	
2SCR553P5		*	—	T100				0.5	50	2	180 to 450	—		
2SCR533P		—	HZG	T100				0.5	50	3	180 to 450	YES		
2SCR533P5		*	—	T100				0.5	50	3	180 to 450	—		
2SCR514P		—	HZG	T100				0.5	80	0.7	120 to 390	YES		
2SCR514P5		*	—	T100				0.5	80	0.7	120 to 390	—		
2SCR554P		—	HZG	T100				0.5	80	1.5	120 to 390	YES		
2SCR554P5		*	—	T100				0.5	80	1.5	120 to 390	—		
2SCR544P		—	HZG	T100				0.5	80	2.5	120 to 390	YES		
2SCR544P5		*	—	T100				0.5	80	2.5	120 to 390	—		
2SCR372P		—	HZG	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		—	HZG	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 1,800	—		
	2SD2153	*	—	T100	U	V	W	0.5	25	2	560 to 2,700	—		
Darlington*4	2SD1834	*	—	T100				0.5	60 (V _{CEs})	1	2k or more	—		

Note1: *General Part No. have no grade code.

Note2: *1 With reference land installed.

Note3: *2 T_C=25°CNote4: *3 h_{FE} P: 82 to 180, Q: 120 to 270, R: 180 to 390, U: 560 to 1,200, V: 820 to 1,800, W: 1,200 to 2,700. Please see the technical specifications.Note5: P_w=1ms, Single pulse

Note6: *4 For internal circuit, please see the technical specifications.

Note7: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, () : GENERAL code.

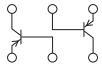
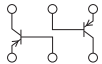
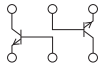
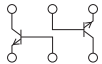
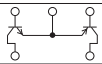
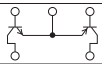
Power Bipolar Transistors											
Package	Application	Part No.	Product No.		Packing code	Polarity (ch)	P _D ^{*1} (W)	V _{CEO} (V)	I _C (A)	h _{FE}	Automotive Grade AEC-Q101
			General	Automotive							
 TO-252 (DPAK)	Driver	2SAR572D3	*	—	TL1	PNP	10	-30	-5	200 to 500	—
			—	FRA	TL		10	-30	-5	200 to 500	YES
		2SAR582D3	*	—	TL1		10	-30	-10	200 to 500	—
			—	FRA	TL		10	-30	-10	200 to 500	YES
		2SAR573D3	*	—	TL1		10	-50	-3	180 to 450	—
			—	FRA	TL		10	-50	-3	180 to 450	YES
		2SAR583D3	*	—	TL1		10	-50	-7	180 to 450	—
			—	FRA	TL		10	-50	-7	180 to 450	YES
		2SAR574D3	*	—	TL1		10	-80	-2	120 to 390	—
			—	FRA	TL		10	-80	-2	120 to 390	YES
		2SAR586D3	*	—	TL1		10	-80	-5	120 to 390	—
			—	FRA	TL		10	-80	-5	120 to 390	YES
		2SAR587D3	*	—	TL1		10	-120	-3	120 to 390	—
			—	FRA	TL		10	-120	-3	120 to 390	YES
		2SCR572D3	*	—	TL1	NPN	10	30	5	200 to 500	—
			—	FRA	TL		10	30	5	200 to 500	YES
			*	—	TL1		10	30	10	200 to 500	—
			—	FRA	TL		10	30	10	200 to 500	YES
			*	—	TL1		10	50	3	180 to 450	—
			—	FRA	TL		10	50	3	180 to 450	YES
			*	—	TL1		10	50	7	180 to 450	—
			—	FRA	TL		10	50	7	180 to 450	YES
			*	—	TL1		10	80	2	120 to 390	—
			—	FRA	TL		10	80	2	120 to 390	YES
			*	—	TL1		10	80	5	120 to 390	—
			—	FRA	TL		10	80	5	120 to 390	YES
			*	—	TL1		10	120	3	120 to 390	—
			—	FRA	TL		10	120	3	120 to 390	YES
 TO-263AB (LPTL)	Driver	2SAR586J	G	—	TLL	PNP	40	-80	-5	120 to 390	—
			—	FRG	TLL		40	-80	-5	120 to 390	YES
		2SCR586J	G	—	TLL	NPN	40	80	5	120 to 390	—
			—	FRG	TLL		40	80	5	120 to 390	YES

Note1: *General Part No. have no grade code.

Note2: *1 T_C=25°C

Note3: Package is JEDEC code. (): ROHM Packages, < > : GENERAL code.

Complex Bipolar Transistors

Quick Reference for General Purpose Amplification Complex Bipolar Transistors									
Configuration	Package	Item	Application	Equivalent Circuit Diagram (TOP View)	Part No.	Equivalent Element Transistors	V _{CEO} (V)	I _C (A)	h _{FE}
PNP×2	Pre Amplifier				EMT51	2SAR522EB×2	-20	-0.2	120 to 560
					EMT52		-50	-0.1	120 to 560
					EMT1		-50	-0.15	120 to 560
					EMT18		-12	-0.5	270 to 680
NPN×2	Pre Amplifier				EMX51	2SCR522EB×2	20	0.2	120 to 560
					EMX52		50	0.1	120 to 560
					EMX1	2SC2412K×2	50	0.15	120 to 560
					EMX26		50	0.15	820 to 2,700
					EMX18	2SC5585×2	12	0.5	270 to 680
							20	0.3	820 to 2,700
						2SD2704K×2	20	0.3	820 to 2,700
							20	0.3	820 to 2,700
PNP + NPN	Pre Amplifier				EMY1	2SA1037AK	-50	-0.15	120 to 560
							50	0.15	120 to 560
					EMZ51	2SAR522EB	-20	-0.2	120 to 560
					EMZ52		20	0.2	120 to 560
						2SAR523EB	-50	-0.1	120 to 560
							50	0.1	120 to 560
					EMZ1	2SA1037AK	-50	-0.15	120 to 560
							50	0.15	120 to 560
					EMZ7	2SA2018	-12	-0.5	270 to 680
							12	0.5	270 to 680
					EMZ8	2SA2018	-12	-0.5	270 to 680
							50	0.15	120 to 560

Note1: For Pin location, please see the technical specifications.

Note2: Package is JEDEC code. (): ROHM Packages, [] : JEITA code.

Complex Bipolar Transistors

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		Packing code					
General	Automotive										
	PNP+NPN	Pre Amplifier	EMY1	*	—	T2R	2SA1037AK	−50	−0.15	120 to 560	—
[SC-107BB]					—	T2R	2SC2412K	50	0.15	120 to 560	
	PNP×2	Pre Amplifier	EMT51	*	—	T2R	2SAR522EB×2	−20	−0.2	120 to 560	—
			EMT52		—	T2R	2SAR523EB×2	−50	−0.1	120 to 560	—
			EMT1		—	T2R	2SA1037AK×2	−50	−0.15	120 to 560	—
			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		—	T2R	2SC2412K×2	50	0.15	120 to 560	—
			EMX26		—	T2R	2SD2654×2	50	0.15	820 to 2,700	—
	PNP+NPN		EMX18		—	T2R	2SC5585×2	12	0.5	270 to 680	—
			EMZ51		—	T2R	2SAR522EB	−20	−0.2	120 to 560	—
							2SCR522EB	20	0.2	120 to 560	
			EMZ52		—	T2R	2SAR523EB	−50	−0.1	120 to 560	—
							2SCR523EB	50	0.1	120 to 560	
			EMZ1		—	T2R	2SA1037AK	−50	−0.15	120 to 560	—
							2SC2412K	50	0.15	120 to 560	
			EMZ7		—	T2R	2SA2018	−12	−0.5	270 to 680	—
							2SC5585×2	12	0.5	270 to 680	
EMZ8	—	T2R	2SA2018	−12	−0.5	270 to 680	—				
						2SC2412K	50	0.15	120 to 560	—	
	PNP+NPN	Pre Amplifier	UMY1N	*	—	TR	2SA1037AK	−50	−0.15	120 to 560	—
[SC-88A]							2SC2412K	50	0.15	120 to 560	
	PNP×2	Pre Amplifier	UMT18N	*	—	TR	2SA2018×2	−12	−0.5	270 to 680	—
			UMT1N		FHA	TN	2SA1037AK×2	−50	−0.15	120 to 560	YES
	NPN×2		UMX18N		—	TN	2SC5585×2	12	0.5	270 to 680	—
			UMX1N		FHA	TN	2SC2412K×2	50	0.15	120 to 560	YES
	PNP+NPN		UMZ1N		—	TR	2SA1037AK	−50	−0.15	120 to 560	YES
					—	TR	2SC2412K	50	0.15	120 to 560	
	PNP+NPN	Pre Amplifier	FMY1A	*	—	T148	2SA1037AK	−50	−0.15	120 to 560	YES
[SC-74A]							2SC2412K	50	0.15	120 to 560	
	PNP×2	Pre Amplifier	IMT1A	*	—	T110	2SA1037AK×2	−50	−0.15	120 to 560	—
			IMT18		—	T110	2SA2018×2	−12	−0.5	270 to 680	—
	NPN×2		IMX1		—	T110	2SC2412K×2	50	0.15	120 to 560	—
			IMX25		—	T110	2SD2704K×2	20	0.3	820 to 2,700	—
	PNP+NPN		IMZ1A		—	T108	2SA1037AK	−50	−0.15	120 to 560	—
							2SC2412K	50	0.15	120 to 560	

Note1: *General Part No. have no grade code.

Note2: For Pin location, please see the technical specifications.

Note3: Package is JEDEC code. (): ROHM packages, []: JEITA code.

Quick Reference for Complex Bipolar Transistors for Driver								
Configuration	Package		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}
	Item							
	Application	Equivalent Circuit Diagram (TOP View)	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 Amplifier			QS6Z5	2SAR513P 2SCR513P	−50 50	−1 1	180 to 450 180 to 450
	DC-DC Converter			QSZ2	2SB1695 2SD2657	−30 30	−1.5 1.5	270 to 680 270 to 680
				QSZ4	2SB1706 2SD2671	−30 30	−2 2	270 to 680 270 to 680
				QS5Y1	Exclusive Chip	−30 30	−3 3	200 to 500 200 to 500
				QS5Y2	2SAR533P 2SCR533P	−50 50	−3 3	180 to 450 180 to 450

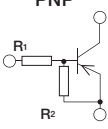
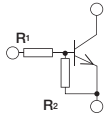
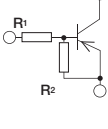
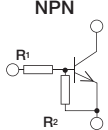
Note1: For Pin location, please see the technical specifications.
 Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

Bipolar Transistors for Driver										
Package	Configuration	Application	Product No.				Equivalent Element Transistors	V _{CEO} (V)	I _C (A)	h _{FE}
			Part No.	Grade Code		Packing code				
				General	Automotive					
 SOT-363T (TUMT6) [SC-113DA] 2021 size	PNP×2	Driver	US6T8	*	—	TR	2SB1709×2	−12	−1.5	270 to 680
	NPN×2		US6T9	*	—	TR	2SB1710×2	−30	−1	270 to 680
			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
	PNP+NPN		QS5W2	*	—	TR	2SCR533P×2	50	3	180 to 450
			QSZ2	*	—	TR	2SB1695 2SD2657	−30 30	−1.5 1.5	270 to 680 270 to 680
			QSZ4	*	—	TR	2SB1706 2SD2671	−30 30	−2 2	270 to 680 270 to 680
			QS5Y1	*	—	TR	Exclusive Chip	−30 30	−3 3	200 to 500 200 to 500
			QS5Y2	*	—	TR	2SAR533P 2SCR533P	−50 50	−3 3	180 to 450 180 to 450
 SOT-457T (TSMT6) [SC-95] 2928 size	PNP×2	Driver	QST8	*	—	TR	2SB1709×2	−12	−1.5	270 to 680
	NPN×2		QST9	*	—	TR	2SB1710×2	−30	−1	270 to 680
			QSX7	*	—	TR	2SD2674×2	12	1.5	270 to 680
			QSX8	*	—	TR	2SD2675×2	30	1	270 to 680
	PNP+NPN	Pre Amplifier	QS6Z5	*	—	TR	2SAR513P 2SCR513P	−50 50	−1 1	180 to 450 180 to 450

Note1: *General Part No. have no grade code.
 Note2: For Pin location, please see the technical specifications.
 Note3: Package is JEDEC code. (): ROHM packages, []: JEITA code.

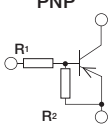
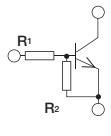
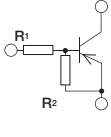
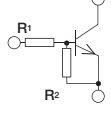
Digital Transistors

100mA Digital Transistors (Including Automotive use)

Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
			General	Automotive							
SOT-723 (VMT3) [SC-105AA] 1212 size P _D =150mW*	PNP 	R ₁ =R ₂	DTA123EM	DTA123EMFHA	T2L	2.2	2.2	-50	-0.1	20 or more	YES
			DTA143EM	DTA143EMFHA	T2L	4.7	4.7	-50	-0.1	30 or more	YES
			DTA114EM	DTA114EMFHA	T2L	10	10	-50	-0.05	30 or more	YES
			DTA124EM	DTA124EMFHA	T2L	22	22	-50	-0.03	56 or more	YES
			DTA144EM	DTA144EMFHA	T2L	47	47	-50	-0.03	68 or more	YES
			DTA115EM	DTA115EMFHA	T2L	100	100	-50	-0.02	82 or more	YES
		R ₁ ≠R ₂	DTA113ZM	DTA113ZMFHA	T2L	1	10	-50	-0.1	33 or more	YES
			DTA123YM	DTA123YMFHA	T2L	2.2	10	-50	-0.1	33 or more	YES
			DTA123JM	DTA123JMFHA	T2L	2.2	47	-50	-0.1	80 or more	YES
			DTA143XM	DTA143XMFHA	T2L	4.7	10	-50	-0.1	30 or more	YES
			DTA143ZM	DTA143ZMFHA	T2L	4.7	47	-50	-0.1	80 or more	YES
			DTA114WM	DTA114WMFHA	T2L	10	4.7	-50	-0.1	24 or more	YES
			DTA114YM	DTA114YMFHA	T2L	10	47	-50	-0.07	68 or more	YES
			DTA124XM	DTA124XMFHA	T2L	22	47	-50	-0.05	68 or more	YES
			DTA144VM	DTA144VMFHA	T2L	47	10	-50	-0.03	33 or more	YES
			DTA144WM	DTA144WMFHA	T2L	47	22	-50	-0.03	56 or more	YES
		R ₁ Alone	DTA123TM	DTA123TMFHA	T2L	2.2	—	-50	-0.1	100 to 600	YES
			DTA143TM	DTA143TMFHA	T2L	4.7	—	-50	-0.1	100 to 600	YES
			DTA114TM	DTA114TMFHA	T2L	10	—	-50	-0.1	100 to 600	YES
	NPN 	R ₁ =R ₂	DTC123EM	DTC123EMFHA	T2L	2.2	2.2	50	0.1	20 or more	YES
			DTC143EM	DTC143EMFHA	T2L	4.7	4.7	50	0.1	30 or more	YES
			DTC114EM	DTC114EMFHA	T2L	10	10	50	0.05	30 or more	YES
			DTC124EM	DTC124EMFHA	T2L	22	22	50	0.03	56 or more	YES
			DTC144EM	DTC144EMFHA	T2L	47	47	50	0.03	68 or more	YES
			DTC115EM	DTC115EMFHA	T2L	100	100	50	0.02	82 or more	YES
		R ₁ ≠R ₂	DTC113ZM	DTC113ZMFHA	T2L	1	10	50	0.1	33 or more	YES
			DTC123YM	DTC123YMFHA	T2L	2.2	10	50	0.1	33 or more	YES
			DTC123JM	DTC123JMFHA	T2L	2.2	47	50	0.1	80 or more	YES
			DTC143XM	DTC143XMFHA	T2L	4.7	10	50	0.1	30 or more	YES
			DTC143ZM	DTC143ZMFHA	T2L	4.7	47	50	0.1	80 or more	YES
			DTC114WM	DTC114WMFHA	T2L	10	4.7	50	0.1	24 or more	YES
			DTC114YM	DTC114YMFHA	T2L	10	47	50	0.07	68 or more	YES
			DTC124XM	DTC124XMFHA	T2L	22	47	50	0.05	68 or more	YES
			DTC144VM	DTC144VMFHA	T2L	47	10	50	0.03	33 or more	YES
			DTC144WM	DTC144WMFHA	T2L	47	22	50	0.03	56 or more	YES
		R ₁ Alone	DTC123TM	DTC123TMFHA	T2L	2.2	—	50	0.1	100 to 600	YES
			DTC143TM	DTC143TMFHA	T2L	4.7	—	50	0.1	100 to 600	YES
			DTC114TM	DTC114TMFHA	T2L	10	—	50	0.1	100 to 600	YES
SOT-416FL (EMT3F) [SC-89] 1616 size P _D =150mW*	PNP 	R ₁ =R ₂	DTA123EEB	—	TL	2.2	2.2	-50	-0.1	20 or more	—
			DTA143EEB	—	TL	4.7	4.7	-50	-0.1	30 or more	—
			DTA114EEB	—	TL	10	10	-50	-0.05	30 or more	—
			DTA124EEB	—	TL	22	22	-50	-0.03	56 or more	—
			DTA144EEB	—	TL	47	47	-50	-0.03	68 or more	—
			DTA115EEB	—	TL	100	100	-50	-0.02	82 or more	—
		R ₁ ≠R ₂	DTA113ZEB	—	TL	1	10	-50	-0.1	33 or more	—
			DTA123YEB	—	TL	2.2	10	-50	-0.1	33 or more	—
			DTA123JEB	—	TL	2.2	47	-50	-0.1	80 or more	—
			DTA143XEB	—	TL	4.7	10	-50	-0.1	30 or more	—
			DTA143ZEB	—	TL	4.7	47	-50	-0.1	80 or more	—
			DTA114YEB	—	TL	10	47	-50	-0.07	68 or more	—
			DTA124XEB	—	TL	22	47	-50	-0.05	68 or more	—
		R ₁ Alone	DTA143TEB	—	TL	4.7	—	-50	-0.1	100 to 600	—
			DTA114TEB	—	TL	10	—	-50	-0.1	100 to 600	—
			DTC123EEB	—	TL	2.2	2.2	50	0.1	20 or more	—
	NPN 	R ₁ =R ₂	DTC143EEB	—	TL	4.7	4.7	50	0.1	30 or more	—
			DTC114EEB	—	TL	10	10	50	0.05	30 or more	—
			DTC124EEB	—	TL	22	22	50	0.03	56 or more	—
			DTC144EEB	—	TL	47	47	50	0.03	68 or more	—
			DTC115EEB	—	TL	100	100	50	0.02	82 or more	—
		R ₁ ≠R ₂	DTC113ZEB	—	TL	1	10	50	0.1	33 or more	—
			DTC123YEB	—	TL	2.2	10	50	0.1	33 or more	—
			DTC123JEB	—	TL	2.2	47	50	0.1	80 or more	—
			DTC143XEB	—	TL	4.7	10	50	0.1	30 or more	—
			DTC143ZEB	—	TL	4.7	47	50	0.1	80 or more	—
			DTC114YEB	—	TL	10	47	50	0.07	68 or more	—
			DTC124XEB	—	TL	22	47	50	0.05	68 or more	—
		R ₁ Alone	DTC143TEB	—	TL	4.7	—	50	0.1	100 to 600	—
			DTC114TEB	—	TL	10	—	50	0.1	100 to 600	—
			DTC144TEB	—	TL	47	—	50	0.1	100 to 600	—

Note1: *With reference land installed.

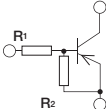
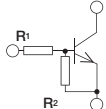
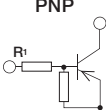
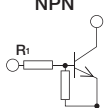
Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

100mA Digital Transistors (Including Automotive use)											
Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _O (I _C) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
			General	Automotive							
 SOT-416 (EMT3) [SC-75A] 1616 size P _D =150mW*		R ₁ =R ₂	New DTA123EE3	New DTA123EE3HZG	TL	2.2	2.2	-50	-0.1	20 or more	YES
			New DTA143EE3	New DTA143EE3HZG	TL	4.7	4.7	-50	-0.1	30 or more	YES
			New DTA114EE3	New DTA114EE3HZG	TL	10	10	-50	-0.05	30 or more	YES
			New DTA124EE3	New DTA124EE3HZG	TL	22	22	-50	-0.03	56 or more	YES
			New DTA144EE3	New DTA144EE3HZG	TL	47	47	-50	-0.03	68 or more	YES
			New DTA115EE3	New DTA115EE3HZG	TL	100	100	-50	-0.02	82 or more	YES
		R ₁ ≠R ₂	New DTA113ZE3	New DTA113ZE3HZG	TL	1	10	-50	-0.1	33 or more	YES
			New DTA123YE3	New DTA123YE3HZG	TL	2.2	10	-50	-0.1	33 or more	YES
			New DTA123JE3	New DTA123JE3HZG	TL	2.2	47	-50	-0.1	80 or more	YES
			New DTA143XE3	New DTA143XE3HZG	TL	4.7	10	-50	-0.1	30 or more	YES
			New DTA143ZE3	New DTA143ZE3HZG	TL	4.7	47	-50	-0.1	80 or more	YES
			New DTA114YE3	New DTA114YE3HZG	TL	10	47	-50	-0.07	68 or more	YES
		R ₁ Alone	New DTA124XE3	New DTA124XE3HZG	TL	22	47	-50	-0.05	68 or more	YES
			New DTA143TE3	New DTA143TE3HZG	TL	4.7	—	-50	-0.1	100 to 600	YES
			New DTA114TE3	New DTA114TE3HZG	TL	10	—	-50	-0.1	100 to 600	YES
		R ₁ =R ₂	New DTC123EE3	New DTC123EE3HZG	TL	2.2	2.2	50	0.1	20 or more	YES
			New DTC143EE3	New DTC143EE3HZG	TL	4.7	4.7	50	0.1	30 or more	YES
			New DTC114EE3	New DTC114EE3HZG	TL	10	10	50	0.05	30 or more	YES
			New DTC124EE3	New DTC124EE3HZG	TL	22	22	50	0.03	56 or more	YES
			New DTC144EE3	New DTC144EE3HZG	TL	47	47	50	0.03	68 or more	YES
			New DTC115EE3	New DTC115EE3HZG	TL	100	100	50	0.02	82 or more	YES
		R ₁ ≠R ₂	New DTC113ZE3	New DTC113ZE3HZG	TL	1	10	50	0.1	33 or more	YES
			New DTC123YE3	New DTC123YE3HZG	TL	2.2	10	50	0.1	33 or more	YES
			New DTC123JE3	New DTC123JE3HZG	TL	2.2	47	50	0.1	80 or more	YES
			New DTC143XE3	New DTC143XE3HZG	TL	4.7	10	50	0.1	30 or more	YES
			New DTC143ZE3	New DTC143ZE3HZG	TL	4.7	47	50	0.1	80 or more	YES
			New DTC114YE3	New DTC114YE3HZG	TL	10	47	50	0.07	68 or more	YES
		R ₁ Alone	New DTC124XE3	New DTC124XE3HZG	TL	22	47	50	0.05	68 or more	YES
			New DTC143TE3	New DTC143TE3HZG	TL	4.7	—	50	0.1	100 to 600	YES
			New DTC114TE3	New DTC114TE3HZG	TL	10	—	50	0.1	100 to 600	YES
 SOT-323FL (UMT3F) [SC-85] 2021 size P _D =200mW*		R ₁ =R ₂	DTA123EUB	—	TL	2.2	2.2	-50	-0.1	20 or more	—
			DTA143EUB	—	TL	4.7	4.7	-50	-0.1	30 or more	—
			DTA114EUB	—	TL	10	10	-50	-0.05	30 or more	—
			DTA124EUB	—	TL	22	22	-50	-0.03	56 or more	—
			DTA144EUB	—	TL	47	47	-50	-0.03	68 or more	—
			DTA115EUB	—	TL	100	100	-50	-0.02	82 or more	—
		R ₁ ≠R ₂	DTA113ZUB	—	TL	1	10	-50	-0.1	33 or more	—
			DTA123YUB	—	TL	2.2	10	-50	-0.1	33 or more	—
			DTA123JUB	—	TL	2.2	47	-50	-0.1	80 or more	—
			DTA143XUB	—	TL	4.7	10	-50	-0.1	30 or more	—
			DTA143ZUB	—	TL	4.7	47	-50	-0.1	80 or more	—
			DTA114YUB	—	TL	10	47	-50	-0.07	68 or more	—
		R ₁ Alone	DTA124XUB	—	TL	22	47	-50	-0.05	68 or more	—
			DTA143TUB	—	TL	4.7	—	-50	-0.1	100 to 600	—
			DTA114TUB	—	TL	10	—	-50	-0.1	100 to 600	—
		R ₁ =R ₂	DTC123EUB	—	TL	2.2	2.2	50	0.1	20 or more	—
			DTC143EUB	—	TL	4.7	4.7	50	0.1	30 or more	—
			DTC114EUB	—	TL	10	10	50	0.05	30 or more	—
			DTC124EUB	—	TL	22	22	50	0.03	56 or more	—
			DTC144EUB	—	TL	47	47	50	0.03	68 or more	—
			DTC115EUB	—	TL	100	100	50	0.02	82 or more	—
		R ₁ ≠R ₂	DTC113ZUB	—	TL	1	10	50	0.1	33 or more	—
			DTC123YUB	—	TL	2.2	10	50	0.1	33 or more	—
			DTC123JUB	—	TL	2.2	47	50	0.1	80 or more	—
			DTC143XUB	—	TL	4.7	10	50	0.1	30 or more	—
			DTC143ZUB	—	TL	4.7	47	50	0.1	80 or more	—
			DTC114YUB	—	TL	10	47	50	0.07	68 or more	—
		R ₁ Alone	DTC124XUB	—	TL	22	47	50	0.05	68 or more	—
			DTC143TUB	—	TL	4.7	—	50	0.1	100 to 600	—
			DTC114TUB	—	TL	10	—	50	0.1	100 to 600	—

Note1: *With reference land installed.
 Note2: Package is JEDEC code. () : ROHM packages, [] : JEITA code.

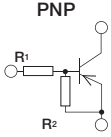
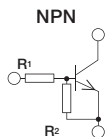
Digital Transistors

100mA Digital Transistors (Including Automotive use)

Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _C) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101	
			General	Automotive								
 SOT-323 (UMT3) [SC-70] 2021 size P_D=200mW*	PNP 	R ₁ ≠R ₂	DTA114WUA	—	T106	10	4.7	−50	−0.1	24 or more	—	
			DTA144WUA	—	T106	47	22	−50	−0.03	56 or more	—	
		R ₁ Alone	DTA123TUA	—	T106	2.2	—	−50	−0.1	100 to 600	—	
			DTA124TUA	—	T106	22	—	−50	−0.1	100 to 600	—	
			DTA144TUA	—	T106	47	—	−50	−0.1	100 to 600	—	
			DTA115TUA	—	T106	100	—	−50	−0.1	100 to 600	—	
		R ₂ Alone	DTA114GUA	—	T106	—	10	−50	−0.1	30 or more	—	
			DTA144GUA	—	T106	—	47	−50	−0.1	68 or more	—	
			DTA115GUA	—	T106	—	100	−50	−0.1	82 or more	—	
	NPN 	R ₁ ≠R ₂	DTC114WUA	—	T106	10	4.7	50	0.1	24 or more	—	
			DTC144WUA	—	T106	47	22	50	0.03	56 or more	—	
		R ₁ Alone	DTC124TUA	—	T106	22	—	50	0.1	100 to 600	—	
			DTC144TUA	—	T106	47	—	50	0.1	100 to 600	—	
			DTC115TUA	—	T106	100	—	50	0.1	100 to 600	—	
		R ₂ Alone	DTC124GUA	—	T106	—	22	50	0.1	56 or more	—	
			DTC144GUA	—	T106	—	47	50	0.1	68 or more	—	
		PNP 	R ₁ =R ₂	DTA123EU3	DTA123EU3HZG	T106	2.2	2.2	−50	−0.1	20 or more	YES
				DTA143EU3	DTA143EU3HZG	T106	4.7	4.7	−50	−0.1	30 or more	YES
	DTA114EU3			DTA114EU3HZG	T106	10	10	−50	−0.05	30 or more	YES	
	DTA124EU3			DTA124EU3HZG	T106	22	22	−50	−0.03	56 or more	YES	
	DTA144EU3			DTA144EU3HZG	T106	47	47	−50	−0.03	68 or more	YES	
	DTA115EU3			—	T106	100	100	−50	−0.02	82 or more	—	
	R ₁ ≠R ₂		DTA113ZU3	DTA113ZU3HZG	T106	1	10	−50	−0.1	33 or more	YES	
			DTA123YU3	DTA123YU3HZG	T106	2.2	10	−50	−0.1	33 or more	YES	
			DTA123JU3	DTA123JU3HZG	T106	2.2	47	−50	−0.1	80 or more	YES	
			DTA143XU3	DTA143XU3HZG	T106	4.7	10	−50	−0.1	30 or more	YES	
			DTA143ZU3	DTA143ZU3HZG	T106	4.7	47	−50	−0.1	80 or more	YES	
			DTA114YU3	DTA114YU3HZG	T106	10	47	−50	−0.07	68 or more	YES	
	R ₁ Alone		DTA124XU3	DTA124XU3HZG	T106	22	47	−50	−0.05	68 or more	YES	
			DTA143TU3	DTA143TU3HZG	T106	4.7	—	−50	−0.1	100 to 600	YES	
			DTA114TU3	DTA114TU3HZG	T106	10	—	−50	−0.1	100 to 600	YES	
			DTA114TU3	DTA114TU3HZG	T106	10	—	−50	−0.1	100 to 600	YES	
	NPN 		R ₁ =R ₂	DTC123EU3	DTC123EU3HZG	T106	2.2	2.2	50	0.1	20 or more	YES
				DTC143EU3	DTC143EU3HZG	T106	4.7	4.7	50	0.1	30 or more	YES
		DTC114EU3		DTC114EU3HZG	T106	10	10	50	0.05	30 or more	YES	
		DTC124EU3		DTC124EU3HZG	T106	22	22	50	0.03	56 or more	YES	
		DTC144EU3		DTC144EU3HZG	T106	47	47	50	0.03	68 or more	YES	
		DTC115EU3		—	T106	100	100	50	0.02	82 or more	—	
		R ₁ ≠R ₂	DTC113ZU3	DTC113ZU3HZG	T106	1	10	50	0.1	33 or more	YES	
			DTC123YU3	DTC123YU3HZG	T106	2.2	10	50	0.1	33 or more	YES	
			DTC123JU3	DTC123JU3HZG	T106	2.2	47	50	0.1	80 or more	YES	
			DTC143XU3	DTC143XU3HZG	T106	4.7	10	50	0.1	30 or more	YES	
			DTC143ZU3	DTC143ZU3HZG	T106	4.7	47	50	0.1	80 or more	YES	
			DTC114YU3	DTC114YU3HZG	T106	10	47	50	0.07	68 or more	YES	
		R ₁ Alone	DTC124XU3	DTC124XU3HZG	T106	22	47	50	0.05	68 or more	YES	
			DTC143TU3	DTC143TU3HZG	T106	4.7	—	50	0.1	100 to 600	YES	
	R ₂ Alone	DTC114TU3	DTC114TU3HZG	T106	10	—	50	0.1	100 to 600	YES		
		DTC114GU3	—	T106	—	10	50	0.1	30 or more	—		
			DTC115GU3	—	T106	—	100	50	0.1	82 or more	—	

Note1: *With reference land installed.

Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

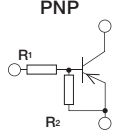
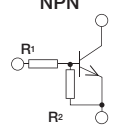
100mA Digital Transistors (Including Automotive use)											
Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _O (I _C) (A)	G ₁ (h _{FE})	Automotive Grade AEC-Q101
			General	Automotive							
 SOT-23 (SST3) 2924 size P _D =200mW*	PNP 	R ₁ =R ₂	DTA123ECA	DTA123ECAHZG	T116	2.2	2.2	-50	-0.1	20 or more	YES
			DTA143ECA	DTA143ECAHZG	T116	4.7	4.7	-50	-0.1	30 or more	YES
			DTA114ECA	DTA114ECAHZG	T116	10	10	-50	-0.05	30 or more	YES
			DTA124ECA	DTA124ECAHZG	T116	22	22	-50	-0.03	56 or more	YES
			DTA144ECA	DTA144ECAHZG	T116	47	47	-50	-0.03	68 or more	YES
			DTA115ECA	—	T116	100	100	-50	-0.02	82 or more	—
		R ₁ ≠R ₂	DTA113ZCA	DTA113ZCAHZG	T116	1	10	-50	-0.1	33 or more	YES
			DTA123YCA	DTA123YCAHZG	T116	2.2	10	-50	-0.1	33 or more	YES
			DTA123JCA	DTA123JCAHZG	T116	2.2	47	-50	-0.1	80 or more	YES
			DTA143XCA	DTA143XCAHZG	T116	4.7	10	-50	-0.1	30 or more	YES
			DTA143ZCA	DTA143ZCAHZG	T116	4.7	47	-50	-0.1	80 or more	YES
			DTA114YCA	DTA114YCAHZG	T116	10	47	-50	-0.07	68 or more	YES
			DTA124XCA	DTA124XCAHZG	T116	22	47	-50	-0.05	68 or more	YES
			DTA144VCA	DTA144VCAHZG	T116	47	10	-50	-0.03	33 or more	YES
			DTA144WCA	DTA144WCAHZG	T116	47	22	-50	-0.03	56 or more	YES
		R ₁ Alone	DTA123TCA	DTA123TCAHZG	T116	2.2	—	-50	-0.1	100 to 600	YES
			DTA143TCA	DTA143TCAHZG	T116	4.7	—	-50	-0.1	100 to 600	YES
			DTA114TCA	DTA114TCAHZG	T116	10	—	-50	-0.1	100 to 600	YES
			DTA124TCA	DTA124TCAHZG	T116	22	—	-50	-0.1	100 to 600	YES
			DTA144TCA	DTA144TCAHZG	T116	47	—	-50	-0.1	100 to 600	YES
			DTA115TCA	DTA115TCAHZG	T116	100	—	-50	-0.1	100 to 600	YES
	NPN 	R ₁ =R ₂	DTC123ECA	DTC123ECAHZG	T116	2.2	2.2	50	0.1	20 or more	YES
			DTC143ECA	DTC143ECAHZG	T116	4.7	4.7	50	0.1	30 or more	YES
			DTC114ECA	DTC114ECAHZG	T116	10	10	50	0.05	30 or more	YES
			DTC124ECA	DTC124ECAHZG	T116	22	22	50	0.03	56 or more	YES
			DTC144ECA	DTC144ECAHZG	T116	47	47	50	0.03	68 or more	YES
			DTC115ECA	—	T116	100	100	50	0.02	82 or more	—
		R ₁ ≠R ₂	DTC113ZCA	DTC113ZCAHZG	T116	1	10	50	0.1	33 or more	YES
			DTC123YCA	DTC123YCAHZG	T116	2.2	10	50	0.1	33 or more	YES
			DTC123JCA	DTC123JCAHZG	T116	2.2	47	50	0.1	80 or more	YES
			DTC143XCA	DTC143XCAHZG	T116	4.7	10	50	0.1	30 or more	YES
			DTC143ZCA	DTC143ZCAHZG	T116	4.7	47	50	0.1	80 or more	YES
			DTC114YCA	DTC114YCAHZG	T116	10	47	50	0.07	68 or more	YES
			DTC124XCA	DTC124XCAHZG	T116	22	47	50	0.05	68 or more	YES
			DTC144VCA	DTC144VCAHZG	T116	47	10	50	0.03	33 or more	YES
			DTC144WCA	DTC144WCAHZG	T116	47	22	50	0.03	56 or more	YES
		R ₁ Alone	DTC123TCA	DTC123TCAHZG	T116	2.2	—	50	0.1	100 to 600	YES
			DTC143TCA	DTC143TCAHZG	T116	4.7	—	50	0.1	100 to 600	YES
			DTC114TCA	DTC114TCAHZG	T116	10	—	50	0.1	100 to 600	YES
			DTC124TCA	DTC124TCAHZG	T116	22	—	50	0.1	100 to 600	YES
			DTC144TCA	DTC144TCAHZG	T116	47	—	50	0.1	100 to 600	YES
			DTC115TCA	DTC115TCAHZG	T116	100	—	50	0.1	100 to 600	YES

Note1: *With reference land installed.

Note2: Package is JEDEC code. (): ROHM packages.

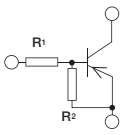
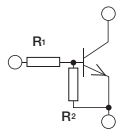
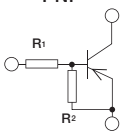
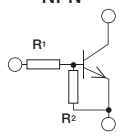
Digital Transistors

100mA Digital Transistors (Including Automotive use)

Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
			General	Automotive							
 SOT-346 (SMT3) [SC-59] 2928 size P _D =200mW*	PNP 	R ₁ =R ₂	DTA123EKA	DTA123EKAFA	T146	2.2	2.2	-50	-0.1	20 or more	YES
			DTA143EKA	DTA143EKAFA	T146	4.7	4.7	-50	-0.1	30 or more	YES
			DTA114EKA	DTA114EKAFA	T146	10	10	-50	-0.05	30 or more	YES
			DTA124EKA	DTA124EKAFA	T146	22	22	-50	-0.03	56 or more	YES
			DTA144EKA	DTA144EKAFA	T146	47	47	-50	-0.03	68 or more	YES
			DTA115EKA	DTA115EKAFA	T146	100	100	-50	-0.02	82 or more	YES
		R ₁ ≠R ₂	DTA113ZKA	DTA113ZKAFA	T146	1	10	-50	-0.1	33 or more	YES
			DTA123YKA	DTA123YKAFA	T146	2.2	10	-50	-0.1	33 or more	YES
			DTA123JKA	DTA123JKAFA	T146	2.2	47	-50	-0.1	80 or more	YES
			DTA143XKA	DTA143XKAFA	T146	4.7	10	-50	-0.1	30 or more	YES
			DTA143ZKA	DTA143ZKAFA	T146	4.7	47	-50	-0.1	80 or more	YES
			DTA114YKA	DTA114YKAFA	T146	10	47	-50	-0.07	68 or more	YES
			DTA124XKA	DTA124XKAFA	T146	22	47	-50	-0.05	68 or more	YES
		R ₁ Alone	DTA143TKA	DTA143TKAFA	T146	4.7	—	-50	-0.1	100 to 600	YES
			DTA114TKA	DTA114TKAFA	T146	10	—	-50	-0.1	100 to 600	YES
	NPN 	R ₁ =R ₂	DTC123EKA	DTC123EKAFA	T146	2.2	2.2	50	0.1	20 or more	YES
			DTC143EKA	DTC143EKAFA	T146	4.7	4.7	50	0.1	30 or more	YES
			DTC114EKA	DTC114EKAFA	T146	10	10	50	0.05	30 or more	YES
			DTC124EKA	DTC124EKAFA	T146	22	22	50	0.03	56 or more	YES
			DTC144EKA	DTC144EKAFA	T146	47	47	50	0.03	68 or more	YES
			DTC115EKA	DTC115EKAFA	T146	100	100	50	0.02	82 or more	YES
		R ₁ ≠R ₂	DTC113ZKA	DTC113ZKAFA	T146	1	10	50	0.1	33 or more	YES
			DTC123YKA	DTC123YKAFA	T146	2.2	10	50	0.1	33 or more	YES
			DTC123JKA	DTC123JKAFA	T146	2.2	47	50	0.1	80 or more	YES
			DTC143XKA	DTC143XKAFA	T146	4.7	10	50	0.1	30 or more	YES
			DTC143ZKA	DTC143ZKAFA	T146	4.7	47	50	0.1	80 or more	YES
			DTC114YKA	DTC114YKAFA	T146	10	47	50	0.07	68 or more	YES
			DTC124XKA	DTC124XKAFA	T146	22	47	50	0.05	68 or more	YES
		R ₁ Alone	DTC143TKA	DTC143TKAFA	T146	4.7	—	50	0.1	100 to 600	YES
			DTC114TKA	DTC114TKAFA	T146	10	—	50	0.1	100 to 600	YES

Note1: *With reference land installed.

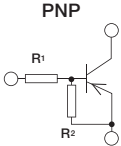
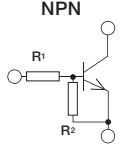
Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

100mA Digital Transistors (For Consumer only)									
Package	Polarity	Specifications	Part No.	Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _i (h _{FE})
 SOT-723 (VMT3) [SC-105AA] 1212 size P _D =150mW*	PNP 	R ₁ =R ₂	DTA023EM	T2L	2.2	2.2	-50	-0.1	20 or more
			DTA043EM	T2L	4.7	4.7	-50	-0.1	20 or more
			DTA014EM	T2L	10	10	-50	-0.05	35 or more
			DTA024EM	T2L	22	22	-50	-0.03	60 or more
			DTA044EM	T2L	47	47	-50	-0.03	80 or more
			DTA015EM	T2L	100	100	-50	-0.02	80 or more
		R ₁ ≠R ₂	DTA013ZM	T2L	1	10	-50	-0.1	30 or more
			DTA023YM	T2L	2.2	10	-50	-0.1	35 or more
			DTA023JM	T2L	2.2	47	-50	-0.1	80 or more
			DTA043XM	T2L	4.7	10	-50	-0.1	35 or more
			DTA043ZM	T2L	4.7	47	-50	-0.1	80 or more
			DTA014YM	T2L	10	47	-50	-0.07	80 or more
			DTA024XM	T2L	22	47	-50	-0.05	80 or more
		R ₁ Alone	DTA043TM	T2L	4.7	—	-50	-0.1	100 to 600
			DTA014TM	T2L	10	—	-50	-0.1	100 to 600
			DTA044TM	T2L	47	—	-50	-0.06	100 to 600
			DTA015TM	T2L	100	—	-50	-0.1	100 to 600
	NPN 	R ₁ =R ₂	DTC023EM	T2L	2.2	2.2	50	0.1	20 or more
			DTC043EM	T2L	4.7	4.7	50	0.1	20 or more
			DTC014EM	T2L	10	10	50	0.05	35 or more
			DTC024EM	T2L	22	22	50	0.03	60 or more
			DTC044EM	T2L	47	47	50	0.03	80 or more
			DTC015EM	T2L	100	100	50	0.02	80 or more
		R ₁ ≠R ₂	DTC013ZM	T2L	1	10	50	0.1	30 or more
			DTC023YM	T2L	2.2	10	50	0.1	35 or more
			DTC023JM	T2L	2.2	47	50	0.1	80 or more
			DTC043XM	T2L	4.7	10	50	0.1	35 or more
			DTC043ZM	T2L	4.7	47	50	0.1	80 or more
			DTC014YM	T2L	10	47	50	0.07	80 or more
			DTC024XM	T2L	22	47	50	0.05	80 or more
		R ₁ Alone	DTC043TM	T2L	4.7	—	50	0.1	100 to 600
			DTC014TM	T2L	10	—	50	0.1	100 to 600
			DTC044TM	T2L	47	—	50	0.06	100 to 600
			DTC015TM	T2L	100	—	50	0.1	100 to 600
 SOT-416FL (EMT3F) [SC-89] 1616 size P _D =150mW*	PNP 	R ₁ =R ₂	DTA023EEB	TL	2.2	2.2	-50	-0.1	20 or more
			DTA043EEB	TL	4.7	4.7	-50	-0.1	20 or more
			DTA014EEB	TL	10	10	-50	-0.05	35 or more
			DTA024EEB	TL	22	22	-50	-0.03	60 or more
			DTA044EEB	TL	47	47	-50	-0.03	80 or more
			DTA015EEB	TL	100	100	-50	-0.02	80 or more
		R ₁ ≠R ₂	DTA013ZEB	TL	1	10	-50	-0.1	30 or more
			DTA023YEB	TL	2.2	10	-50	-0.1	35 or more
			DTA023JEB	TL	2.2	47	-50	-0.1	80 or more
			DTA043XEB	TL	4.7	10	-50	-0.1	35 or more
			DTA043ZEB	TL	4.7	47	-50	-0.1	80 or more
			DTA014YEB	TL	10	47	-50	-0.07	80 or more
			DTA024XEB	TL	22	47	-50	-0.05	80 or more
		R ₁ Alone	DTA043TEB	TL	4.7	—	-50	-0.1	100 to 600
			DTA014TEB	TL	10	—	-50	-0.1	100 to 600
			DTA044TEB	TL	47	—	-50	-0.06	100 to 600
			DTA015TEB	TL	100	—	-50	-0.1	100 to 600
	NPN 	R ₁ =R ₂	DTC023EEB	TL	2.2	2.2	50	0.1	20 or more
			DTC043EEB	TL	4.7	4.7	50	0.1	20 or more
			DTC014EEB	TL	10	10	50	0.05	35 or more
			DTC024EEB	TL	22	22	50	0.03	60 or more
			DTC044EEB	TL	47	47	50	0.03	80 or more
			DTC015EEB	TL	100	100	50	0.02	80 or more
		R ₁ ≠R ₂	DTC013ZEB	TL	1	10	50	0.1	30 or more
			DTC023YEB	TL	2.2	10	50	0.1	35 or more
			DTC023JEB	TL	2.2	47	50	0.1	80 or more
			DTC043XEB	TL	4.7	10	50	0.1	35 or more
			DTC043ZEB	TL	4.7	47	50	0.1	80 or more
			DTC014YEB	TL	10	47	50	0.07	80 or more
			DTC024XEB	TL	22	47	50	0.05	80 or more
		R ₁ Alone	DTC043TEB	TL	4.7	—	50	0.1	100 to 600
			DTC014TEB	TL	10	—	50	0.1	100 to 600
			DTC044TEB	TL	47	—	50	0.06	100 to 600
			DTC015TEB	TL	100	—	50	0.1	100 to 600

Note1: *With reference land installed.
 Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

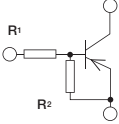
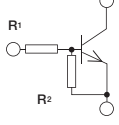
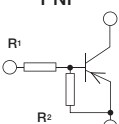
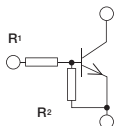
Digital Transistors

100mA Digital Transistors (For Consumer only)

Package	Polarity	Specifications	Part No.	Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _I (h _{FE})
 SOT-323FL (UMT3F) [SC-85] 2021 size P _D =200mW*	PNP 	R ₁ =R ₂	DTA023EUB	TL	2.2	2.2	-50	-0.1	20 or more
			DTA043EUB	TL	4.7	4.7	-50	-0.1	20 or more
			DTA014EUB	TL	10	10	-50	-0.05	35 or more
			DTA024EUB	TL	22	22	-50	-0.03	60 or more
			DTA044EUB	TL	47	47	-50	-0.03	80 or more
			DTA015EUB	TL	100	100	-50	-0.02	80 or more
		R ₁ ≠R ₂	DTA013ZUB	TL	1	10	-50	-0.1	30 or more
			DTA023YUB	TL	2.2	10	-50	-0.1	35 or more
			DTA023JUB	TL	2.2	47	-50	-0.1	80 or more
			DTA043XUB	TL	4.7	10	-50	-0.1	35 or more
			DTA043ZUB	TL	4.7	47	-50	-0.1	80 or more
			DTA014YUB	TL	10	47	-50	-0.07	80 or more
			DTA024XUB	TL	22	47	-50	-0.05	80 or more
		R ₁ Alone	DTA043TUB	TL	4.7	—	-50	-0.1	100 to 600
			DTA014TUB	TL	10	—	-50	-0.1	100 to 600
			DTA044TUB	TL	47	—	-50	-0.06	100 to 600
			DTA015TUB	TL	100	—	-50	-0.1	100 to 600
	NPN 	R ₁ =R ₂	DTC023EUB	TL	2.2	2.2	50	0.1	20 or more
			DTC043EUB	TL	4.7	4.7	50	0.1	20 or more
			DTC014EUB	TL	10	10	50	0.05	35 or more
			DTC024EUB	TL	22	22	50	0.03	60 or more
			DTC044EUB	TL	47	47	50	0.03	80 or more
			DTC015EUB	TL	100	100	50	0.02	80 or more
		R ₁ ≠R ₂	DTC013ZUB	TL	1	10	50	0.1	30 or more
			DTC023YUB	TL	2.2	10	50	0.1	35 or more
			DTC023JUB	TL	2.2	47	50	0.1	80 or more
			DTC043XUB	TL	4.7	10	50	0.1	35 or more
			DTC043ZUB	TL	4.7	47	50	0.1	80 or more
			DTC014YUB	TL	10	47	50	0.07	80 or more
			DTC024XUB	TL	22	47	50	0.05	80 or more
		R ₁ Alone	DTC043TUB	TL	4.7	—	50	0.1	100 to 600
			DTC014TUB	TL	10	—	50	0.1	100 to 600
			DTC044TUB	TL	47	—	50	0.06	100 to 600
			DTC015TUB	TL	100	—	50	0.1	100 to 600

Note1: *With reference land installed.

Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

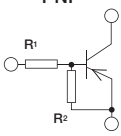
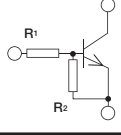
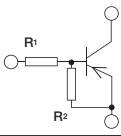
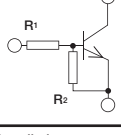
500mA Digital Transistors (Including Automotive use)											
Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _I (h _{FE})	Automotive Grade AEC-Q101
			General	Automotive							
 SOT-23 (SST3) 2924 size P _D =200mW*	 PNP	R ₁ =R ₂	DTB113EC	DTB113ECHZG	T116	1	1	-50	-0.5	33 or more	YES
			DTB123EC	DTB123ECHZG	T116	2.2	2.2	-50	-0.5	39 or more	YES
			DTB143EC	DTB143ECHZG	T116	4.7	4.7	-50	-0.5	47 or more	YES
			DTB114EC	DTB114ECHZG	T116	10	10	-50	-0.5	56 or more	YES
		R ₁ ≠R ₂	DTB113ZC	DTB113ZCHZG	T116	1	10	-50	-0.5	56 or more	YES
			DTB123YC	DTB123YCHZG	T116	2.2	10	-50	-0.5	56 or more	YES
		R ₂ Alone	DTB114GC	DTB114GCHZG	T116	—	10	-50	-0.5	56 or more	YES
		R ₁ Alone	DTB123TC	DTB123TCHZG	T116	2.2	—	-40	-0.5	100 to 600	YES
	 NPN	R ₁ =R ₂	DTD113EC	DTD113ECHZG	T116	1	1	50	0.5	33 or more	YES
			DTD123EC	DTD123ECHZG	T116	2.2	2.2	50	0.5	39 or more	YES
			DTD143EC	DTD143ECHZG	T116	4.7	4.7	50	0.5	47 or more	YES
			DTD114EC	DTD114ECHZG	T116	10	10	50	0.5	56 or more	YES
		R ₁ ≠R ₂	DTD113ZC	DTD113ZCHZG	T116	1	10	50	0.5	56 or more	YES
			DTD123YC	DTD123YCHZG	T116	2.2	10	50	0.5	56 or more	YES
		R ₂ Alone	DTD114GC	DTD114GCHZG	T116	—	10	50	0.5	56 or more	YES
		R ₁ Alone	DTD123TC	DTD123TCHZG	T116	2.2	—	40	0.5	100 to 600	YES
 SOT-346 (SMT3) [SC-59] 2928 size P _D =200mW*	 PNP	R ₁ =R ₂	DTB113EK	—	T146	1	1	-50	-0.5	33 or more	—
			DTB123EK	—	T146	2.2	2.2	-50	-0.5	39 or more	—
			DTB143EK	—	T146	4.7	4.7	-50	-0.5	47 or more	—
			DTB114EK	—	T146	10	10	-50	-0.5	56 or more	—
		R ₁ ≠R ₂	DTB113ZK	—	T146	1	10	-50	-0.5	56 or more	—
			DTB123YK	—	T146	2.2	10	-50	-0.5	56 or more	—
		R ₂ Alone	DTB114GK	—	T146	—	10	-50	-0.5	56 or more	—
		R ₁ Alone	DTB123TK	—	T146	2.2	—	-40	-0.5	100 to 600	—
	 NPN	R ₁ =R ₂	DTD113EK	—	T146	1	1	50	0.5	33 or more	—
			DTD123EK	—	T146	2.2	2.2	50	0.5	39 or more	—
			DTD143EK	—	T146	4.7	4.7	50	0.5	47 or more	—
			DTD114EK	—	T146	10	10	50	0.5	56 or more	—
		R ₁ ≠R ₂	DTD113ZK	—	T146	1	10	50	0.5	56 or more	—
			DTD123YK	—	T146	2.2	10	50	0.5	56 or more	—
		R ₂ Alone	DTD114GK	—	T146	—	10	50	0.5	56 or more	—
		R ₁ Alone	DTD123TK	—	T146	2.2	—	40	0.5	100 to 600	—

Note1: *With reference land installed.

Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

Digital Transistors

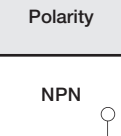
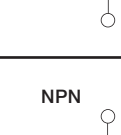
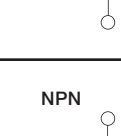
12V/500mA Digital Transistors

Package	Polarity	Specifications	Part No.	Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _I (h _{FE})
 SOT-723 (VMT3) [SC-105AA] 1212 size P _D =150mW*	PNP 	R ₁ =R ₂	DTB543EM	T2L	4.7	4.7	-12	-0.5	115 or more
			DTB513ZM	T2L	1	10	-12	-0.5	140 or more
		R ₁ ≠R ₂	DTB523YM	T2L	2.2	10	-12	-0.5	140 or more
			DTB543XM	T2L	4.7	10	-12	-0.5	140 or more
			DTB543ZM	T2L	4.7	47	-12	-0.5	140 or more
	NPN 	R ₁ =R ₂	DTD543EM	T2L	4.7	4.7	12	0.5	115 or more
			DTD513ZM	T2L	1	10	12	0.5	140 or more
		R ₁ ≠R ₂	DTD523YM	T2L	2.2	10	12	0.5	140 or more
			DTD543XM	T2L	4.7	10	12	0.5	140 or more
			DTD543ZM	T2L	4.7	47	12	0.5	140 or more
 SOT-416 (EMT3) [SC-75A] 1616 size P _D =150mW*	PNP 	R ₁ =R ₂	DTB543EE	TL	4.7	4.7	-12	-0.5	115 or more
			DTB513ZE	TL	1	10	-12	-0.5	140 or more
		R ₁ ≠R ₂	DTB523YE	TL	2.2	10	-12	-0.5	140 or more
			DTB543ZE	TL	4.7	47	-12	-0.5	140 or more
	NPN 	R ₁ =R ₂	DTD543EE	TL	4.7	4.7	12	0.5	115 or more
			DTD513ZE	TL	1	10	12	0.5	140 or more
		R ₁ ≠R ₂	DTD523YE	TL	2.2	10	12	0.5	140 or more
			DTD543XE	TL	4.7	10	12	0.5	140 or more
			DTD543ZE	TL	4.7	47	12	0.5	140 or more

Note1: *With reference land installed.

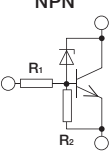
Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

Muting Digital Transistors

Package	Polarity	Specifications	Part No.	Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _I (h _{FE})
 SOT-323FL (UMT3F) [SC-85] 2021 size P _D =200mW*	NPN 	R ₁ Alone	DTC923TUB	TL	2.2	—	40 (V _{EB0})	0.4	820 to 2,700
			DTC943TUB	TL	4.7	—	40 (V _{EB0})	0.4	820 to 2,700
			DTC914TUB	TL	10	—	40 (V _{EB0})	0.4	820 to 2,700
 SOT-323 (UMT3) [SC-70] 2021 size P _D =200mW*	NPN 	R ₁ Alone	DTC623TU	T106	2.2	—	20	0.6	820 to 2,700
			DTC643TU	T106	4.7	—	20	0.6	820 to 2,700
			DTC614TU	T106	10	—	20	0.6	820 to 2,700
 SOT-346 (SMT3) [SC-59] 2928 size P _D =200mW*	NPN 	R ₁ Alone	DTC623TK	T146	2.2	—	20	0.6	820 to 2,700
			DTC643TK	T146	4.7	—	20	0.6	820 to 2,700
			DTC614TK	T146	10	—	20	0.6	820 to 2,700

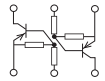
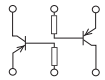
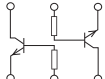
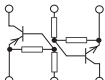
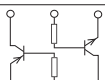
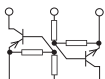
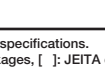
Note1: *With reference land installed.

Note2: Package is JEDEC code. (): ROHM packages, []: JEITA code.

Power Digital Transistors (Including Automotive use)											
Package	Polarity	Specifications	Part No.		Packing code	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
			General	Automotive							
 SOT-89 (MPT3) [SC-62] 4540 size P _D =0.5W*	NPN 	Driver	DTDG23YP	DTDG23YPHZG	T100	2.2	10	60±10	1	300 or more	YES
			DTDG14GP	DTDG14GPHZG	T100	—	10	60±10	1	300 or more	YES

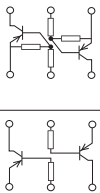
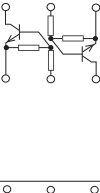
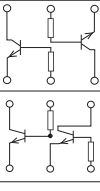
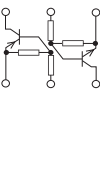
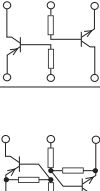
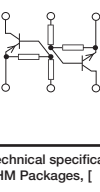
Note1: *With reference land installed.
 Note2: For internal circuit, please see the technical specifications.
 Note3: Package is JEDEC code. (): ROHM packages, []: JEITA code.

Complex Digital Transistors

100mA Complex Digital Transistors									
Package	Configuration	Equivalent Circuit Diagram (TOP View)	Part No.	Packing code	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)
 SOT-563 (EMT6) [SC-107C] 1616 size	PNP×2		EMB10	T2R	DTA123J×2	2.2	47	-50	-0.1
			EMB11	T2R	DTA114E×2	10	10		-0.05
			EMB2	T2R	DTA144E×2	47	47		-0.03
			EMB3	T2R	DTA143T×2	4.7	—		-0.1
			EMB4	T2R	DTA114T×2	10	—		-0.1
	NPN×2		EMH10	T2R	DTC123J×2	2.2	47	50	0.1
			EMH25	T2R	DTC143Z×2	4.7	47		0.1
			EMH11	T2R	DTC114E×2	10	10		0.05
			EMH9	T2R	DTC114Y×2	10	47		0.07
			EMH1	T2R	DTC124E×2	22	22		0.03
			EMH2	T2R	DTC144E×2	47	47		0.03
			EMH3	T2R	DTC143T×2	4.7	—		0.1
			EMH4	T2R	DTC114T×2	10	—		0.1
	PNP+NPN Complimentary		EMD22	T2R	DTA143Z	4.7	47	-50	-0.1
					DTC143Z	4.7	47	50	0.1
			EMD3	T2R	DTA114E	10	10	-50	-0.05
					DTC114E	10	10	50	0.05
			EMD9	T2R	DTA114Y	10	47	-50	-0.07
					DTC114Y	10	47	50	0.07
			EMD2	T2R	DTA124E	22	22	-50	-0.03
					DTC124E	22	22	50	0.03
			EMD12	T2R	DTA144E	47	47	-50	-0.03
					DTC144E	47	47	50	0.03
	PNP+NPN Different type		EMD6	T2R	DTA143T	4.7	—	-50	-0.1
					DTC143T	4.7	—	50	0.1
			EMD5	T2R	DTA143X	4.7	10	-50	-0.1
					DTC144E	47	47	50	0.03
			EMD4	T2R	DTA114Y	10	47	-50	-0.1
					DTC144E	7	47	50	0.03

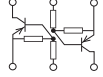
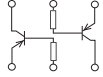
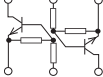
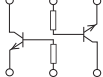
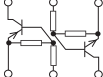
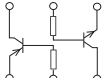
Note1: For Pin location, please see the technical specifications.

Note2: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

100mA Complex Digital Transistors (Including Automotive use)											
Package	Configuration	Equivalent Circuit Diagram (TOP View)	Part No.		Packing code	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	Automotive Grade AEC-Q101
			General	Automotive							
 SOT-363 (UMT6) [SC-88] 2021 size	PNP×2		UMB10N	UMB10NFHA	TN	DTA123J×2	2.2	47	-50	-0.1	YES
			UMB11N	UMB11NFHA	TN	DTA114E×2	10	10		-0.05	YES
			UMB2N	UMB2NFHA	TN	DTA144E×2	47	47		-0.03	YES
			UMB3N	UMB3NFHA	TN	DTA143T×2	4.7	—		-0.1	YES
			UMB4N	UMB4NFHA	TN	DTA114T×2	10	—		-0.1	YES
	NPN×2		UMH10N	UMH10NFHA	TN	DTC123J×2	2.2	47	50	0.1	YES
			UMH25N	UMH25NFHA	TN	DTC143Z×2	4.7	47		0.1	YES
			UMH11N	UMH11NFHA	TN	DTC114E×2	10	10		0.05	YES
			UMH9N	UMH9NFHA	TN	DTC114Y×2	10	47		0.07	YES
			UMH1N	UMH1NFHA	TN	DTC124E×2	22	22		0.03	YES
			UMH2N	UMH2NFHA	TN	DTC144E×2	47	47		0.03	YES
			UMH3N	UMH3NFHA	TN	DTC143T×2	4.7	—		0.1	YES
			UMH4N	UMH4NFHA	TN	DTC114T×2	10	—		0.1	YES
			UMH8N	—	TR	DTC114T×2	10	—		0.1	—
	PNP+NPN Complimentary		UMD25N	—	TR	DTA123J	2.2	47	-50	-0.1	—
						DTC123J	2.2	47	50	0.1	
			UMD22N	UMD22NFHA	TR	DTA143Z	4.7	47	-50	-0.1	YES
						DTC143Z	4.7	47	50	0.1	
			UMD3N	UMD3NFHA	TR	DTA114E	10	10	-50	-0.05	YES
						DTC114E	10	10	50	0.05	
			UMD9N	UMD9NFHA	TR	DTA114Y	10	47	-50	-0.07	YES
						DTC114Y	10	47	50	0.07	
			UMD2N	UMD2NFHA	TR	DTA124E	22	22	-50	-0.03	YES
						DTC124E	22	22	50	0.03	
			UMD12N	UMD12NFHA	TR	DTA144E	47	47	-50	-0.03	YES
						DTC144E	47	47	50	0.03	
	PNP+NPN Different type		UMD6N	UMD6NFHA	TR	DTA143T	4.7	—	-50	-0.1	YES
						DTC143T	4.7	—	50	0.1	
			UMD5N	—	TR	DTA143X	4.7	10	-50	-0.1	—
						DTC144E	47	47	50	0.03	
			UMD4N	—	TR	DTA114Y	10	47	-50	-0.1	—
						DTC144E	47	47	50	0.03	

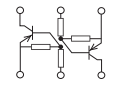
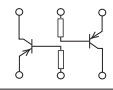
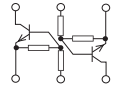
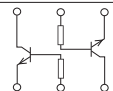
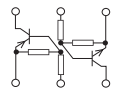
Note1: For Pin location, please see the technical specifications.
Note2: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Complex Digital Transistors

100mA Complex Digital Transistors (Including Automotive use)											
Package	Configuration	Equivalent Circuit Diagram (TOP View)	Part No.		Packing code	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101
			General	Automotive							
 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		-0.05	—
			IMB2A	—	T110	DTA144E×2	47	47		-0.03	—
			IMB3A	—	T110	DTA143T×2	4.7	—		-0.1	—
	NPN×2		IMH11A	IMH11AFRA	T110	DTC114E×2	10	10	50	0.05	YES
			IMH9A	IMH9AFRA	T110	DTC114Y×2	10	47		0.07	YES
			IMH1A	—	T110	DTC124E×2	22	22		0.03	—
			IMH2A	—	T110	DTC144E×2	47	47		0.03	—
			IMH3A	—	T110	DTC143T×2	4.7	—		0.1	—
			IMH4A	—	T110	DTC114T×2	10	—		0.1	—
	PNP+NPN Complimentary		IMD3A	IMD3AFRA	T108	DTA114E	10	10	-50	-0.05	YES
						DTC114E	10	10	50	0.05	
			IMD9A	IMD9AFRA	T108	DTA114Y	10	47	-50	-0.07	YES
						DTC114Y	10	47	50	0.07	
			IMD2A	—	T108	DTA124E	22	22	-50	-0.03	—
						DTC124E	22	22	50	0.03	
			IMD6A	—	T108	DTA143T	4.7	—	-50	-0.1	—
						DTC143T	4.7	—	50	0.1	

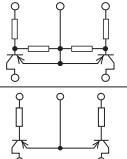
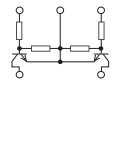
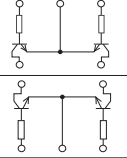
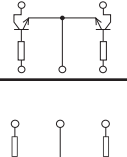
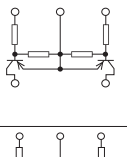
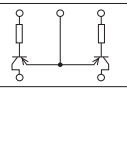
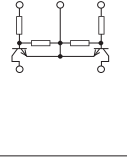
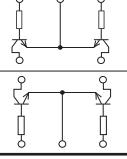
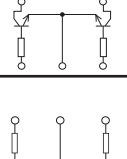
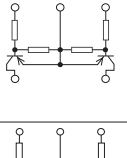
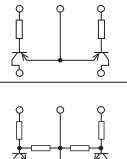
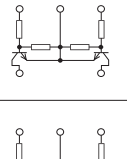
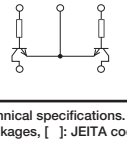
Note1: For Pin location, please see the technical specifications.

Note2: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

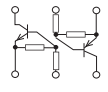
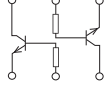
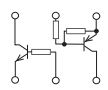
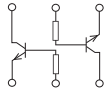
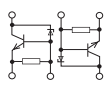
100mA Complex Digital Transistors (For Consumer only)									
Package	Configuration	Equivalent Circuit Diagram (TOP View)	Part No.	Packing code	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)
 SOT-563 (EMT6) [SC-107C] 1616 size	PNP×2		EMB60	T2R	DTA023J×2	2.2	47	-50	-0.1
			EMB75	T2R	DTA043Z×2	4.7	47		-0.1
			EMB59	T2R	DTA014Y×2	10	47		-0.07
			EMB61	T2R	DTA014E×2	10	10		-0.05
			EMB51	T2R	DTA024E×2	22	22		-0.03
			EMB52	T2R	DTA044E×2	47	47		-0.03
			EMB53	T2R	DTA043T×2	4.7	—		-0.1
	NPN×2		EMH60	T2R	DTC023J×2	2.2	47	50	0.1
			EMH75	T2R	DTC043Z×2	4.7	47		0.1
			EMH61	T2R	DTC014E×2	10	10		0.05
			EMH59	T2R	DTC014Y×2	10	47		0.07
			EMH51	T2R	DTC024E×2	22	22		0.03
			EMH52	T2R	DTC044E×2	47	47		0.03
			EMH53	T2R	DTC043T×2	4.7	—		0.1
	PNP+NPN Complimentary		EMD72	T2R	DTA043Z	4.7	47	-50	-0.1
					DTC043Z	4.7	47	50	0.1
			EMD59	T2R	DTA014Y	10	47	-50	-0.07
					DTC014Y	10	47	50	0.07
			EMD53	T2R	DTA014E	10	10	-50	-0.05
					DTC014E	10	10	50	0.05
			EMD52	T2R	DTA024E	22	22	-50	-0.03
					DTC024E	22	22	50	0.03
			EMD62	T2R	DTA044E	47	47	-50	-0.03
					DTC044E	47	47	50	0.03

Note1: For Pin location, please see the technical specifications.
 Note2: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

Complex Digital Transistors

100mA Complex Digital Transistors (For Consumer only)									
Package	Configuration	Equivalent Circuit Diagram (TOP View)	Part No.	Packing code	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)
 SOT-553 (EMT5) [SC-107BB] 1616 size	PNP×2		EMA5	T2R	DTA123J×2	2.2	47	-50	-0.1
			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

Note1: For No.1 Pin location, please see the technical specifications.
 Note2: Package is JEDEC Code. (): ROHM Packages, [] : JEITA code.

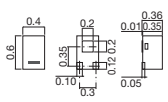
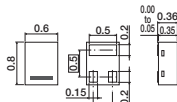
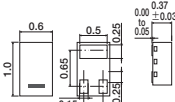
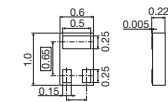
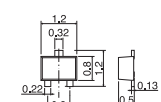
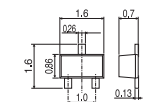
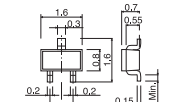
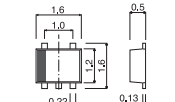
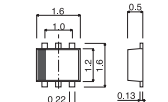
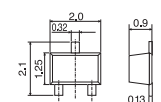
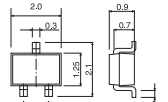
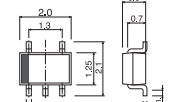
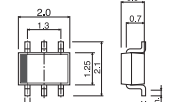
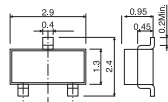
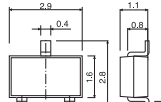
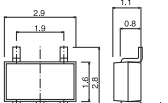
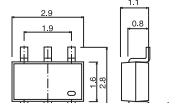
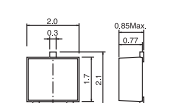
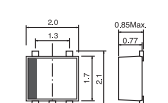
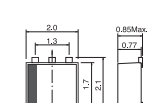
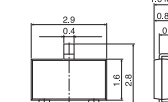
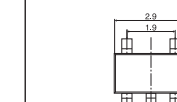
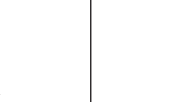
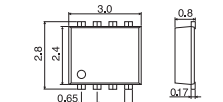
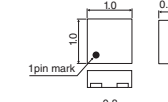
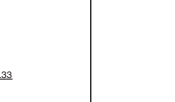
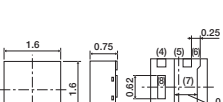
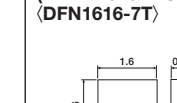
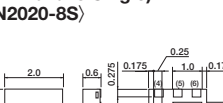
Complex Digital Transistors (For Power Management, Muting and Driver)									
Package	Configuration	Equivalent Circuit Diagram (TOP View)	Part No.	Packing code	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _O (I _C) (A)
 SOT-563 (EMT6) [SC-107C] 1616 size	PNP+NPN Power Management		EMD29	T2R	DTB513Z DTC114E	1 10	10 10	-12 50	-0.5 0.1
 SOT-363 (UMT6) [SC-88] 2021 size	NPN×2 Muting		UMH33N	TN	DTC923TUB×2	2.2	—	40 (V _{EB0})	0.4
			UMH37N	TN	DTC914TUB×2	10	—	40 (V _{EB0})	0.4
 SOT-457 (SMT6) [SC-74] 2928 size	PNP+NPN Power Management		IMD10A	T108	Exclusive Chip DTC114T	0.1 10	10 —	-50 50	-0.5 0.1
			IMD16A	T108	Exclusive Chip DTC115T	2.2 100	22 —	-50 50	-0.5 0.1
	NPN×2 Muting		IMH23	T110	DTC643T×2	4.7	—	20	0.6
			IMH21	T110	DTC614T×2	10	—	20	0.6
 SOT-457T (TSMT6) [SC-95] 2928 size	NPN×2 Driver		QSH29	TR	Exclusive Chip×2	—	10	60±10	0.5

Note1: 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.

Note2: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

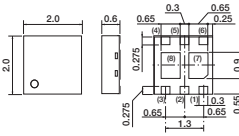
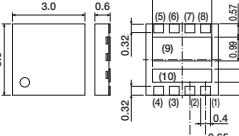
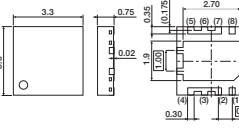
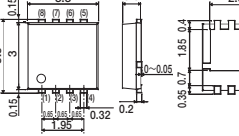
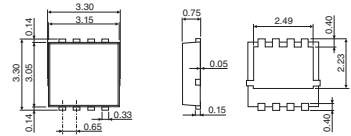
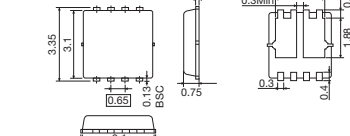
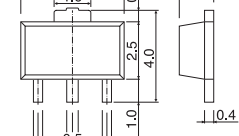
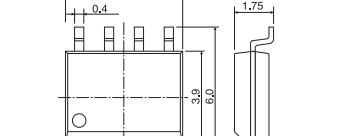
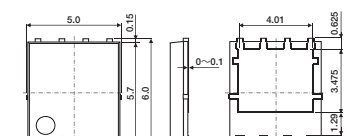
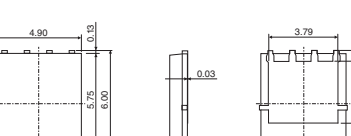
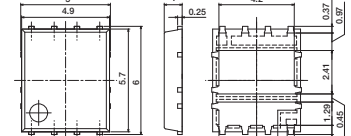
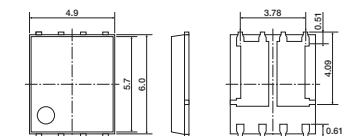
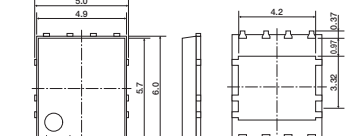
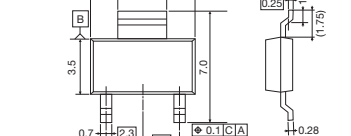
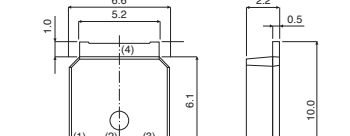
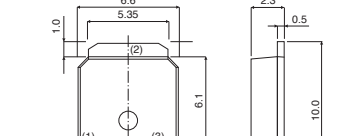
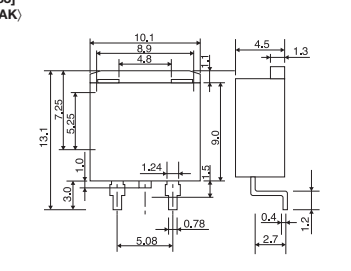
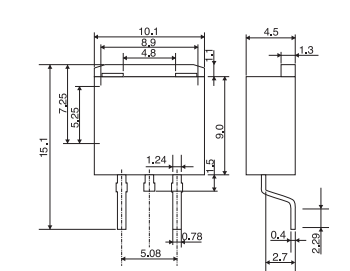
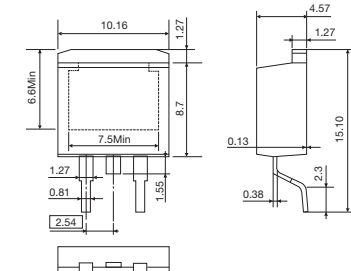
Packages

●Dimensions (Unit: mm)

DFN0604-3 (VML0604) 	DFN0806-3 (VML0806) 	DFN1006-3 (VML1006) [SC-101] 	DSN1006-3 (SMM1006) 	SOT-723 (VMT3) [SC-105AA] 
SOT-416FL (EMT3F) [SC-89] 	SOT-416 (EMT3) [SC-75A] 	SOT-553 (EMT5) [SC-107B] 	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] 	SOT-323T (TUMT3) [SC-113A] 	SOT-353T (TUMT5) [SC-113CA] 	SOT-363T (TUMT6) [SC-113DA] 
SOT-346T (TSMT3) [SC-96] 	SOT-25T (TSMT5) 	SOT-457T (TSMT6) [SC-95] 	(TSMT8) 	
DFN1010-3 	DFN1010-3W 	DFN1212-3 	DFN1616-6 	
DFN1616-6W 	(HEML1616L7 Single) (DFN1616-7T) 	(HUML2020L3) (DFN2020-3S) 	(HUML2020L8 Single) (DFN2020-8S) 	

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code, < >: GENERAL code.
Note2: For details of dimensions, please refer to the technical specifications.

● Dimensions (Unit: mm)

(HVML2020L8 Dual) (DFN2020-8D) 	(HSML3030L10) 	(HSML3333L9) (DFN3333-9DC) 	(HSMT8 Single) *1 
(HSMT8 Single) *2 	(HSMT8 Dual) 	SOT-89 (MPT3) [SC-62] 	
(SOP8) 	(HSOP8 Single) *1 	(HSOP8 Single) *2 	
(HSOP8 Asymmetry Dual) 	(HSOP8 Symmetry Dual) 	(HSOP8 Drain Common Dual) 	
(SOT-223) 	TO-252 *3 (DPAK) 	TO-252 *4 (DPAK) 	
TO-263S (LPTS) [SC-83] (D2PAK) 	TO-263AB (LPTL) 	TO-263AB (TO-263AB-3LSHYAD) 	

Note1: *1 Taping code: TB, *2 Taping code: TB1

Note2: *3 Taping code: TL, *4 Taping code: TL1

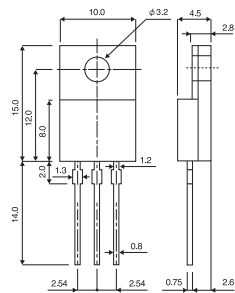
Note3: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, < > : GENERAL code

Note4: For details of dimensions, please refer to the technical specifications.

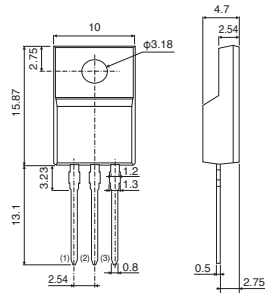
Packages

●Dimensions (Unit: mm)

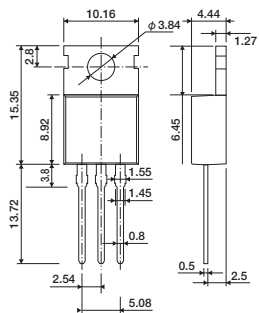
(TO-220FM)*1
(TO-220FP)



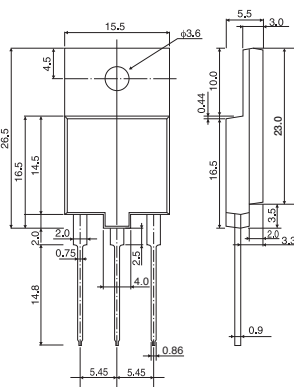
(TO-220FM)*2
(TO-220FP)



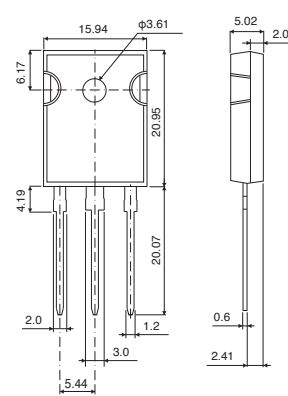
TO-220AB



(TO-3PF)



TO-247AD
(TO-247)



Note1: *1 Packing code: —, *2 Packing code: C7 G

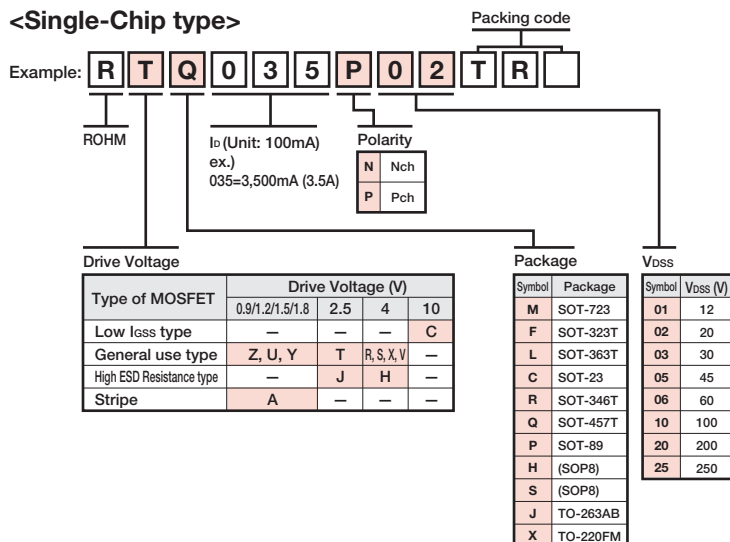
Note2: Package is JEDEC code. () : ROHM Packages, < > : GENERAL code

Note3: For details of dimensions, please refer to the technical specifications.

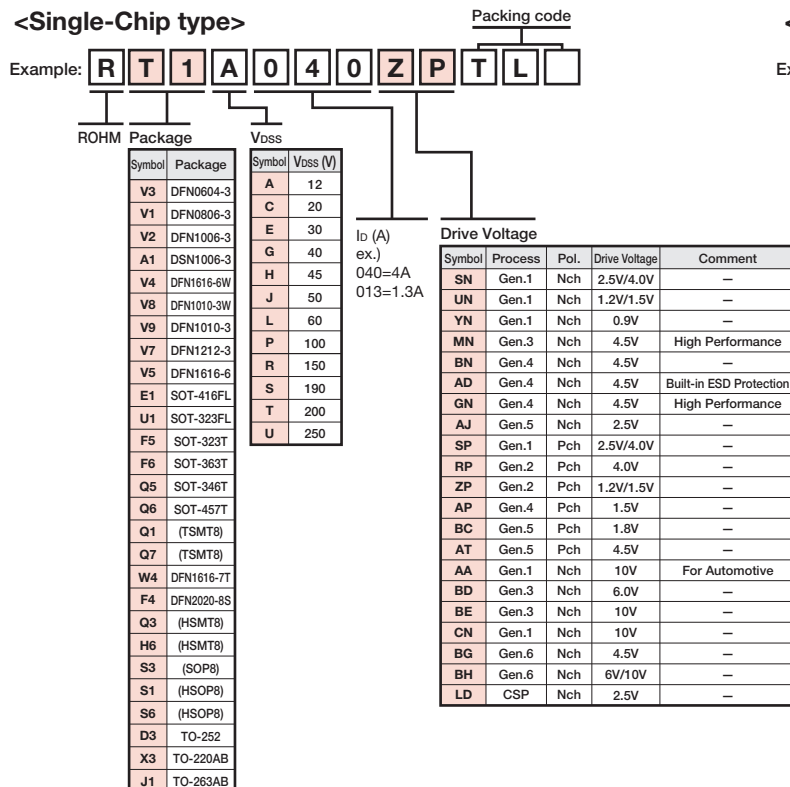
Product No. Explanation

• MOSFET Part No. Explanation

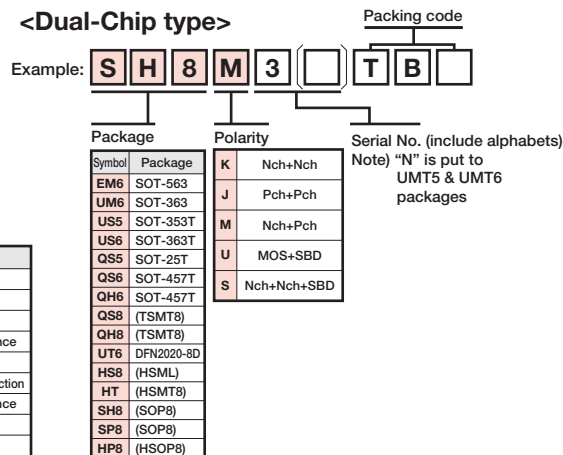
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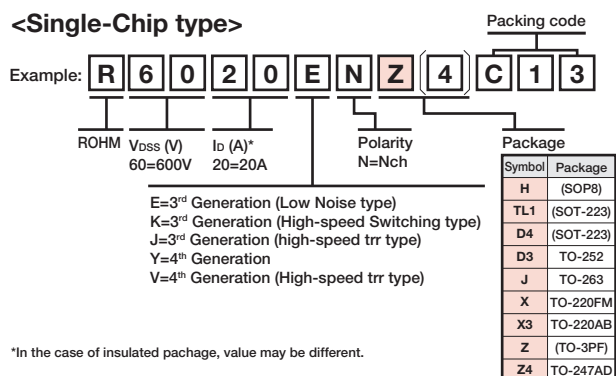
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<Dual-Chip type>



<Single-Chip type>

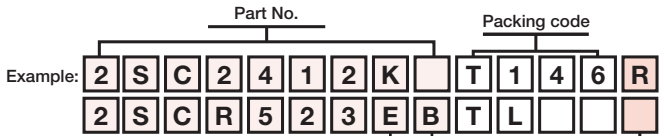


*In the case of insulated package, value may be different.

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

Product No. Explanation

•Bipolar Transistor Part No. Explanation



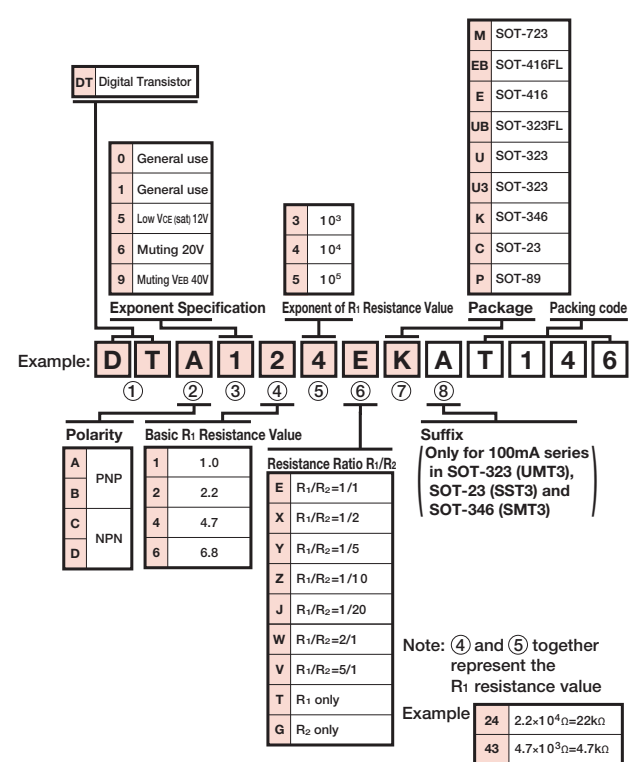
•Package

Code	Package
M	SOT-723
EB	SOT-416FL
E	SOT-416
E3	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
D3	TO-252
J	TO-263

•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	ROHM Package	JEITA code	Size (mm)	Height (mm)	Packing from	Direction	Quantity (pcs)
Surface Mount type	(DFN0604-3)	T2L, T2CL	VML0604	—	0604	0.36	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
	(DFN0806-3)	T2L, T2CL	VML0806	—	0806	0.36	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
	(DFN1006-3)	T2L, T2CL	VML1006	SC-101	1006	0.37	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
	(DSN1006-3)	T5CL	SMM1006	—	1006	0.22	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	15,000
	SOT-723	T2L, T2CL	VMT3	SC-105AA	1212	0.5	Embossed tape	One terminal on sprocket hole side	8,000
	SOT-416FL	TL, TCL	EMT3F	SC-89	1616	0.7	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-416	TL, TCL	EMT3	SC-75A	1616	0.7	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-553	T2R, T2CR	EMT5	SC-107BB	1616	0.5	Embossed tape	Three terminals on sprocket hole side	8,000
	SOT-563	T2R, T2CR	EMT6	SC-107C	1616	0.5	Embossed tape	Terminal No.1 on sprocket hole side	8,000
	SOT-323FL	TL, TCL	UMT3F	SC-85	2120	0.9	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-323	T106, T306	UMT3	SC-70	2120	0.9	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-353	TR, TCR	UMT5	SC-88A	2120	0.9	Embossed tape	Three terminals on sprocket hole side	3,000
	SOT-363	TR, TCR	UMT6	SC-88	2120	0.9	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	SOT-323T	TL, TCL	TUMT3	SC-113A	2120	0.77	Embossed tape	Non-direction	3,000
	SOT-353T	TR, TCR	TUMT5	SC-113CA	2120	0.77	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-363T	TR, TCR	TUMT6	SC-113DA	2120	0.77	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	SOT-23	T116, T316	SST3	SOT-23	2429	0.95	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	SOT-346	T146	SMT3	SC-59	2829	1.1	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-25	T148	SMT5	SC-74A	2829	1.1	Embossed tape	Three terminals on sprocket hole side	3,000
	SOT-457	T108	SMT6	SC-74	2829	1.1	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
	SOT-346T	T110	SMT6	SC-74	2829	1.1	Embossed tape	Non-direction	3,000
	SOT-25T	TL, TCL	TSMT3	SC-96	2829	0.85	Embossed tape	One terminal on sprocket hole side	3,000
	SOT-25T	TR, TCR	TSMT5	SC-95	2829	0.85	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	SOT-457T	TR, TCR	TSMT6	SC-95	2829	0.85	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	(TSMT8)	TR, TCR	TSMT8	—	2830	0.8	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	DFN1010-3	G2CR	—	—	1010	0.4	Embossed tape	Terminal No.1 on sprocket hole side	8,000
	DFN1010-3W	G2CR	—	—	1010	0.4	Embossed tape	Terminal No.1 on sprocket hole side	8,000
	DFN1212-3	TCR1	—	—	1212	0.45	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	DFN1616-6	TCR1	—	—	1616	0.75	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	DFN1616-6W	TCR1	—	—	1616	0.75	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	(DFN1616-7T)	TCL1	HEML1616L7	—	1616	0.6	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
	(DFN2020-3S)	TR, TCR	HUML2020L3	—	2020	0.6	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
	(DFN2020-8)	TR, TCR, TR1	HUML2020L8	—	2020	0.6	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	(HSML3030L10)	TB	HSML3030L10	—	3030	0.6	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	(DFN3333-9DC)	TCR1	HSML3333L9	—	3333	0.75	Embossed tape	Terminal No.1 on sprocket hole side	1,000
	(HSMT8)	TB, TB1	HSMT8	—	3333	0.8	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	SOT-89	T100	MPT3	SC-62	4045	1.5	Embossed tape	Terminal No.1 on sprocket hole side	1,000
	(SOP8)	TB, TB1	SOP8	—	6050	1.75	Embossed tape	Three terminals on sprocket hole side	2,500
	(HSOP8)	TB, TB1	HSOP8	SC-111BB	6050	1	Embossed tape	Terminal No.1 on sprocket hole side	2,500
	(SOT-223)	TL1	SOT-223	—	6.5×7.0	1.66	Embossed tape	Three terminals on sprocket hole side	4,000
	TO-252	TL, TL1	TO-252	SC-63	10.0×6.6	2.2	Embossed tape	Fin on sprocket hole side	2,500
	TO-263S	TL	LPTS	SC-83	13.1×10.1	4.5	Embossed tape	Fin on sprocket hole side	1,000
	TO-263AB	TLL	LPTL	—	15.1×10.1	4.5	Embossed tape	Fin on sprocket hole side	1,000
	TO-263AB	TL1	TO-263AB-3LSHYAD	—	15.1×10.1	4.5	Embossed tape	Fin on sprocket hole side	1,000
Leaded type	(TO-220FP)	—	TO-220FM	—	29×10	4.5	Bulk	—	500
	(TO-220AB)	C7 G	TO-220AB	—	29.07×10.16	4.7	Tube	—	1,000
	(TO-3PF)	C16	TO-220AB	SC-46	29.07×10.16	4.5	Tube	—	1,000
	(TO-247AD)	C17	TO-3PF	—	43.8×15.5	5.5	Tube	—	300
	(TO-247AD)	C13	TO-247	—	41.26×15.94	5.02	Tube	—	600
	(TO-247AD)	C11	TO-247N	—	41×16	5	Tube	—	450

Note: Package is JEDEC code. (): ROHM Packages, (): GENERAL code.