




Small Signal MOSFET series																						
Package	Product No.		Polarity (ch)	V _{bss} (V)	I _b (A)	P _D (W) (T _s =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	—	—	—	—
	RV3C001ZP	T2CL		-20	-0.10	0.10	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	—	—	—	—
DFN0806-3 (VML0806) • 0806 size	RV1C002UN	T2CL	N	20	0.15	0.10	—	—	1.40	2.00	—	—	1.70	2.60	—	—	2.70	5.40	3.80	11.40	—	—
	RV1C001ZP	T2CL	P	-20	-0.10	0.10	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
DFN1006-3 (VML1006) [SC-101] 1006 size	RV2C010UN	T2L	N	20	1.00	0.40	—	—	0.34	0.47	—	—	0.40	0.56	—	—	0.54	0.81	0.70	1.05	—	—
	RV2C002UN	T2L		20	0.18	0.10	—	—	1.40	2.00	—	—	1.70	2.60	—	—	2.70	5.40	3.80	11.40	—	—
	RV2E014AJ	T2CL		30	1.40*2	0.6*2	—	—	0.17	0.29	—	—	0.225	0.38	—	—	—	—	—	—	—	—
	RV2L009GN	T2CL	P	60	0.90*2	0.60*2	0.48	0.72	0.66	1.06	—	—	—	—	—	—	—	—	—	—	—	—
	RV2C014BC	T2CL		-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	—	—	—	—	—	—	—	—	—	—	—	—	—	
DFN1616-6	New RV5A040AP	TCR1	P	-12	-4.00	1.50	—	—	0.044	0.062	—	—	0.055	0.077	0.075	0.110	0.090	0.180	—	—	—	—
	New RV5C040AP	TCR1		-20	-4.00	1.50	—	—	0.060	0.085	—	—	0.065	0.095	0.095	0.155	0.130	0.260	—	—	—	—
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	P	50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	RSM002N06	T2L		60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RZM002P02	T2L		-20	-0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	RZM001P02	T2L		-20	-0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
RSM002P03	T2L	-30	-0.20	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—	—	
(VMT6) [SC-105B] 1212 size	VT6K1	T2CR	N+N	20	0.10	0.15	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
	VT6J1	T2CR	P+P	-20	0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	VT6M1	T2CR	N+P	20	0.10	0.15	—	—	2.50	3.50	—	—	3.00	4.20	—	—	4.50	9.00	6.00	18.00	—	—
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	P	60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RE1C002ZP	TL		-20	-0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	RE1C001ZP	TL		-20	-0.10	0.15	—	—	2.50	3.80	—	—	3.40	5.10	—	—	6.00	13.20	10.00	40.00	—	—
	RE1E002SP	TCL		-30	-0.25	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
SOT-563 (EMT6) [SC-107C] 1616 size	EM6K6	T2R	N+N	20	0.30	0.15	—	—	—	—	0.70	1.00	0.80	1.20	1.00	1.40	—	—	—	—	—	—
	EM6K7	T2CR		20	0.20	0.15	—	—	—	—	—	—	0.80	1.20	—	—	1.20	2.40	1.60	4.80	—	—
	EM6K33	T2R		50	0.20	0.15	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	EM6K34	T2CR	P+P	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		-20	-0.20	0.15	—	—	0.80	1.20	—	—	1.00	1.50	—	—	1.60	3.50	2.40	9.60	—	—
	EM6M2	T2R		-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	—	—
SOT-323 (UMT3) 2021 size	BSS138BKW	T106	N	60	0.38	0.30	0.50	0.70	0.60	0.84	—	—	1.00	4.00	—	—	—	—	—	—	—	—
	BSS138W	T106		60	0.31	0.30	1.70	2.40	2.10	3.00	—	—	3.00	12.00	—	—	—	—	—	—	—	—
	BSS84W	T106	P	-60	-0.21	0.30	3.60	5.30	4.30	6.40	—	—	—	—	—	—	—	—	—	—	—	—
SOT-323FL (UMT3F) [SC-85] 2021 size	RU1C002UN	TCL	N	20	0.20	0.15	—	—	—	—	—	—	0.80	1.20	—	—	1.20	2.40	1.60	4.80	—	—
	RU1C001UN	TCL		20	0.10	0.15	—	—	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	P	60	0.25	0.15	1.70	2.40	2.00	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	RU1C002ZP	TCL		-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	—	—	—	—	—	—	—	—	—	—	—	
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	P+P	60	0.25	0.15	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	UM6J1N	TN		-30	-0.20	0.15	0.90	1.40	1.40	2.10	1.60	2.40	—	—	—	—	—	—	—	—	—	—
SOT-23 (SST3) 2924 size	RYC002N05	T316	N	50	0.20	0.20	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	2.80	2.20	3.30	3.00	9.00
	RUC002N05	T116		50	0.20	0.20	—	—	1.60	2.20	—	—	1.70	2.40	—	—	2.00	4.00	2.40	7.20	—	—
	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	P	60	0.25	0.20	1.70	2.40	2.10	3.00	2.30	3.20	3.00	12.00	—	—	—	—	—	—	—	—
	BSS123	T116		100																		


Small Signal MOSFETs

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)} (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-323T (TUMT3) [SC-113A] 2021 size	RUF025N02	TL	N	20	2.5	0.8	—	—	39	54	—	—	49	68	80	160	5	
	RUF020N02	TL		20	2	0.8	—	—	75	105	—	—	95	135	170	240	2	
	RUF015N02	TL		20	1.5	0.8	—	—	130	180	—	—	170	240	220 ^{*1}	310 ^{*1}	1.8	
	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}
	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}		
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}	
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}		
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		
US6M2	TR		-12	-1.3	1	—	—	190	260	—	—	280	390	530	1,060	2.4		
US6M1	TR		30	1.5	1	—	—	170	240	180	250	240	340	—	—	—	1.6	
US6M1	TR		-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}		
US6M1	TR	-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

Small Signal MOSFET series																					
Package	Product No.		Polarity (ch)	V _{BSS} (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			
	RUR040N02	TL	N	20	4	1	—	—	25	35	—	—	33	46	42	59	55	110	8		
	RUR020N02	TL		20	2	1	—	—	75	105	—	—	95	135	130	185	170	240	2		
	RQ5E070BN	TCL		30	7	1	12.4	16.1	16.5	20.4	—	—	—	—	—	—	—	—	—	11.7	
	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
	RQ5L035GN	TCL		60	3.5	1	38	51	53	72	—	—	—	—	—	—	—	—	—	—	3.8
	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		-12	-4	1	—	—	22	30	—	—	30	42	40	60	55	110	30	—	30
	RQ5A030AP	TL		-12	-3	1	—	—	44	62	—	—	55	77	75	110	90	180	16	—	16
	RQ5A025ZP	TL		-12	-2.5	1	—	—	44	61	—	—	60	84	81	121	110	220	13	—	13
	RQ5A020ZP	TL		-12	-2	1	—	—	75	105	—	—	105	145	150	225	200	400	6.5	—	6.5
	RQ5C060BC	TCL		-20	-6	1	—	—	16.1	21.1	—	—	20.3	26.9	27.4	51.0	—	—	—	—	19.2
	RQ5C035BC	TCL		-20	-3.5	1	—	—	42	59	—	—	54	76	84	135	—	—	—	—	6.5
	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}		
	QS5K2	TR	N+N	30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	2.8		
	RQ6C050UN	TR	N	20	5	1.25	—	—	22	30	—	—	27	38	32	45	40	80	12		
	RQ6E085BN	TCR		30	8.5	1.25	11.1	14.4	13.9	17.3	—	—	—	—	—	—	—	—	—	16.6	
	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		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	35	—	35
	RQ6A045AP	TCR		-12	-4.5	1.25	—	—	22	30	—	—	28	39	38	57	50	100	40	—	40
	RQ6A045ZP	TR		-12	-4.5	1.25	—	—	25	35	—	—	31	43	39	58	50	100	31	—	31
	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}
	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
	RRQ6E030SP	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}
New RQ6L020SP	TCR	-60	-2	1.25	150	210	180	252	190	266	—	—	—	—	—	—	—	—	7.2 ^{*1}		
RQ6P015SP	TR	-100	-1.5	1.25	350	470	380	510	400												

Small Signal MOSFETs

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)} (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	
	RQ1C075UN	TR	N	20	7.5	1.5	—	—	11	16	—	—	14	20	17	24	20	40	18	
	RQ1C065UN	TR		20	6.5	1.5	—	—	16	22	—	—	19	27	24	32	29	58	11	
	RQ7E110AJ	TCR		30	11	1.5	—	—	6.8	9	—	—	9.1	12.4	—	—	—	—	—	22
	RQ1E100XN	TR		30	10	1.5	7.5	10.5	9.5	13.3	10	14	—	—	—	—	—	—	—	12.7 ^{*1}
	RQ1E075XN	TCR		30	7.5	1.5	12	17	17	24	19	27	—	—	—	—	—	—	—	6.8 ^{*1}
	QH8KA4	TCR		30	9	1.5	—	—	12.5	17	13	18	17	24	—	—	—	—	—	12
	New 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}	
	QH8K26	TR	40	7 ^{*2}	2.6 ^{*2}	27	38	35	50	—	—	—	—	—	—	—	—	—	2.9 ^{*1}	
	QH8K22	TCR	40	6 ^{*2}	2.5 ^{*2}	34.6	46	43.9	59	—	—	—	—	—	—	—	—	—	1.3	
	QS8K21	TR	45	4	1.5	38	53	48	67	53	75	—	—	—	—	—	—	—	5.4 ^{*1}	
	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}	
	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}	
	QH8MA4	TCR	30	9 ^{*2}	2.6 ^{*2}	12.3	16	18.2	23.7	—	—	—	—	—	—	—	—	—	7.9	
			-30	-8 ^{*2}	2.6 ^{*2}	22	28.6	31	40.3	—	—	—	—	—	—	—	—	—	9.8	
		TCR	30	7 ^{*2}	2.5 ^{*2}	22	29	35	46	—	—	—	—	—	—	—	—	—	—	3.7
			-30	-5.5 ^{*2}	2.5 ^{*2}	37	48	55	72	—	—	—	—	—	—	—	—	—	—	5.2
TCR		30	4.5	1.5	25	35	40	56	—	—	—	—	—	—	—	—	—	—	4.7	
		-30	-3	1.5	55	80	80	115	—	—	—	—	—	—	—	—	—	—	4.3	
TCR		40	4.5	1.5	34.6	46	43.9	59	—	—	—	—	—	—	—	—	—	—	1.3	
		-40	-2	1.5	130	190	180	260	—	—	—	—	—	—	—	—	—	—	4.4	
TR		60	3	1.5	80	112	93	130	98	137	—	—	—	—	—	—	—	—	4 ^{*1}	
		-60	-2	1.5	150	210	180	252	190	266	—	—	—	—	—	—	—	—	7.2 ^{*1}	
TR	100	2	1.5	240	325	250	340	260	355	—	—	—	—	—	—	—	—	4.7 ^{*1}		
	-100	-1.5	1.5	350	470	380	510	400	540	—	—	—	—	—	—	—	—	17 ^{*1}		








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

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

Multiple Schottky Barrier Diodes 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)} (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		-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	4.2
	QS5U21 ^{*5}	TR	P+SBD (1A)	-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	4.2
QS5U27 ^{*5}	TR	-20		-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	4.2	
QS5U33	TR	P+SBD (1A)	-30	-2	1.25	95	135	145	205	160	225	—	—	—	—	—	3.4 ^{*1}	
SOT-457T (TSMT6) [SC-95] 2928 size	QS6U22	TR	P+SBD (0.7A)	-20	-1.5	1.25	—	—	155	215	170	235	310	430	—	—	—	3
	QS6U24	TR		-30	-1	1.25	300	400	500	700	600	800	—	—	—	—	—	1.7 ^{*6}

Note1: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.
 Note2: *1 V_{GS}=5V *2, *3, *4, *5 Please note that, although the internal circuit configuration may differ between part numbers, the electrical specifications remain the same. *6 V_{GS}=1.8V

Power MOSFETs <MPT3·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} =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-89 (MPT3) [SC-62] 4540 size	DC/DC Converter Motor Drive	RHP030N03	T100	N	30	3	2	90	120	—	—	160	210	—	—	—	—	—	—	6.5 ^{*2}							
		RHP020N06	T100		60	2	2	150	200	200	280	240	340	—	—	—	—	—	—	—	7 ^{*2}						
		RJP020N06	T100		60	2	2	—	—	165	240	170	250	210	300	—	—	—	—	—	—	5 ^{*3}					
 (HEML1616L7) Single 1616 size (DFN1616-7T)	Load Switch Switching	New RW4E075AJ	TCL1	N	30	7.5	1.5	—	—	18.5	26	—	—	26.6	38	—	—	—	—	—	6.3						
		New RW4E045AJ	TCL1	N	30	4.5	1.5	—	—	28	40	—	—	41	58	—	—	—	—	—	—	4					
		New RW4C045BC	TCL1	P	-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			
		RF4L055GN	TCR		60	5.5	2	31	43	45	66	—	—	—	—	—	—	—	—	—	—	—	—	4.1			
		RF4E110BN	TR		30	11	2	8.5	11.1	11.8	15.4	—	—	—	—	—	—	—	—	—	—	—	—	12			
		RF4E100AJ	TCR		30	10	2	—	—	9.4	12.4	—	—	13.3	17.9	—	—	—	—	—	—	—	—	—	13		
	Load Switch Switching	RF4E080BN	TR	30	8	2	13.5	17.6	18.9	24.6	—	—	—	—	—	—	—	—	—	—	—	—	7.2				
		New RF4E070BN	TR	30	7	2	22	28.6	30.8	40	—	—	—	—	—	—	—	—	—	—	—	—	4.6				
		RF4E060AJ	TCR	30	6	2	—	—	28	37	—	—	41	55	—	—	—	—	—	—	—	—	4				
		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				
 (HUML2020L8) Dual 2020 size (DFN2020-8D)	Load Switch Switching	UT6K3	TCR	N+N	30	5.5	2	—	—	30	42	—	—	45	63	—	—	—	—	—	—	4					
		UT6K30	TCR		60	3	2	111	153	162	223	—	—	—	—	—	—	—	—	—	—	—	1.1 ^{*2}				
		UT6JA3	TCR	-20	-5	2	—	—	42	59	—	—	54	76	76	118	—	—	—	—	—	—	6.5				
		UT6JA2	TCR	-30	-4	2	55	70	80	103	—	—	—	—	—	—	—	—	—	—	—	—	3.4				
	New UT6J3	TCR	-20	-3	2	—	—	60	85	—	—	65	95	95	155	130	260	85	—	—	—	—					
	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			
		UT6MA3	TBR	N+P	30	4	2	37	46	59	80	—	—	—	—	—	—	—	—	—	—	—	2.2				
UT6MA2		TCR	-30		-4	2	55	70	80	103	—	—	—	—	—	—	—	—	—	—	—	—	3.3				
 (HSMT8) 3333 size	DC/DC Converter Switching	RQ3E180GN	TB	N	30	39 ^{*1}	20 ^{*1}	3.3	4.3	4.3	6.1	—	—	—	—	—	—	—	—	—	—	11					
		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		
		RQ3G150GN	TB		40	39 ^{*1}	20 ^{*1}	5.1	7.2	6.4	8.9	—	—	—	—	—	—	—	—	—	—	—	—	—	11.6		
		RQ3G100GN	TB		40	27 ^{*1}	15 ^{*1}	11	14.3	14.1	18.3	—	—	—	—	—	—	—	—	—	—	—	—	—	4.3		
		RQ3L090GN	TB		60	30 ^{*1}	20 ^{*1}	10.3	13.9	14.6	21.4	—	—	—	—	—	—	—	—	—	—	—	—	—	13		
		RQ3L050GN	TB		60	13 ^{*1}	15 ^{*1}	43	61	61	86	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8		
		Load Switch Switching	RQ3E180BN		TB	N	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		TB	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		TB	30	15 ^{*1}		13 ^{*1}	20	27	29	39	—	—	—	—	—	—	—	—	—	—	—	—	—	4.6		
	RQ3C150BC		TB	-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				
	 (HSML3030L10) 3030 size	DC/DC Converter	HS8K1	TB	N+N	30	10	2	11.2	14.6	14.7	20	—	—	—	—	—	—	—	—	—	—	—	2.7			
HS8K11			TB	30		11	2	9.1	11.8	11.9	16.5	—	—	—	—	—	—	—	—	—	—	—	—	3.3			
HS8K1			TB	30		7	2	12.8	17.9	20.8	29.1	—	—	—	—	—	—	—	—	—	—	—	—	5.7			
HS8K1			TB	30		11	2	10.2	13.3	11.8	15.4	—	—	—	—	—	—	—	—	—	—	—	—	9			
 (HSML3333L9) 3333 size (DFN3333-9DC)	Motor	New HS8MA2	TCR1	N+P	30	7.0	2	55	80	80	115	—	—	—	—	—	—	—	—	—	—	—	4.7				
		HS8MA2	TCR1		-30	-5.5	2	25	35	40	56	—	—	—	—	—	—	—	—	—	—	—	—	4.3			

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code, (): GENERAL code.
 Note2: *1 T_c=25°C *2 V_{GS}=10V *3 V_{GS}=4V

<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	TB		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	TB		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
	RS3L140GN	TB		60	14	2	4.9	6.5	6.8	9.6	—	—	31 ^{*1}
	RSH065N06	TB1		60	6.5	2	24	37	28	44	31	48	11
	RS3L045GN	TB		60	4.5	2	43	59	62	92	—	—	3 ^{*1}
	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
	New 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	TB		-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	TB		-30	-4	2	55	75	85	115	95	125	5.2
	RSH070P05	TB1		-45	-7	2	19	27	25	35	28	39	34


<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	SH8K10S	TB	N	30	7	2	17	24	23	33	25	35	8.4	
			N+SBD	30	8.5		14	19.6	17.8	24.9	19	26.6	8.9	
	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	
	SH8K26	TB1		40	6	2	27	38	35	50	—	—	2.9	
	SH8K25	TB1		40	5.2 ^{*3}	3 ^{*3}	60	85	80	112	—	—	1.7	
	SH8K39	TB		60	13 ^{*3}	5.8 ^{*3}	15	21	20	30	—	—	12.8 ^{*1}	
	SH8K37	TB		60	5.5	2	33	46	44	66	—	—	5.2 ^{*1}	
	SH8K32	TB1	60	4.5	2	46	65	52	73	55	77	7		
	SH8K41	TB1	80	3.4	2	90	130	110	150	120	160	6.6		
	SH8K52	TB	100	3	2	120	170	135	190	—	—	8.5		
	SH8J66	TB1	P+P	-30	-9	2	13.5	18.5	17.5	23.6	19	24.7	35	
				-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	
	SH8J31	TB		-60	-4.5	2	50	70	55	80	60	85	40 ^{*2}	
	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		N+P	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		N+P	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}
	SH8M24	TB	N+P	45	4.5	2	33	46	41	57	46	64	6.8	
				-45	-3.5		45	63	60	84	66	92	13	
	SH8M31	TB	N+P	60	4.5	2	46	65	52	73	55	77	7 ^{*1}	
				-60	-4.5		50	70	55	80	60	85	20 ^{*1}	
	SH8M41	TB	N+P	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	N+P	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.
 Note2: *1 V_{GS}=4.5V *2 V_{GS}=10V *3 P_W≤1s




Power MOSFETs

Quick Reference for Power MOSFET series (HSOP8) Single type

(HSOP8) 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} =4.5V				
								Typ	Max	Typ	Max			
	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		-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		
	DC/DC Converter Switching	RS1E350GN	TB	N	30	80	39	1.48	1.76	1.92	2.40	32.7		
		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		
		RS1G300GN	TB		40	80	35	1.9	2.5	2.4	3.0	28.6		
		RS1G260MN	TB		40	80	35	2.4	3.3	3.2	4.4	44*		
		RS1G180MN	TB		40	57	30	5.0	7.0	6.7	9.2	19.5*		
		RS1G150MN	TB		40	43	25	7.6	10.6	10.2	13.3	15*		
		RS1G120MN	TB		40	34	25	11.6	16.2	15.6	20.7	9.4*		
		RS1L180GN	TB		60	68	39	4.2	5.6	5.9	8.5	34		
		RS1L145GN	TB		60	46	31	6.7	9.7	9.6	14.1	19.5		
		RS1L120GN	TB		60	36	27	9.3	12.7	13.4	19.8	14		
		RS1P600BE	TB1		100	60	35	7.5	9.7	—	—	33*		10



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

Quick Reference for Power MOSFET series (HSOP8) Dual type




(HSOP8) 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		
	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	
	Motor	HP8MA2	TB1	N+P	30	18 ^{*2}	7 ^{*2}	7.5	9.6	11.7	16.5	10.5	4.5
					-30	-15 ^{*2}	7 ^{*2}	13.2	17.9	21	29	12.8	
					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	4.5 ^{*2}	7 ^{*2}	120	170	130	180	8.5	
	Load Switch	HP8KA1	TB	N+N	30	14 ^{*1}	3 ^{*1}	3.5	5	5	7	24	4.5
					-100	-4.5 ^{*2}	7 ^{*2}	210	290	230	320	12.5	

Note1: (): ROHM Packages.
 Note2: *1 T_a=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) 	RD3G600GN	TL	N	40	60	40	2.8	3.6	—	—	3.3	4.3	—	—	46.5
	RD3G500GN	TL		40	50	35	3.9	4.9	—	—	4.7	6.3	—	—	31
	RD3G400GN	TL		40	40	26	5.6	7.5	—	—	7	9.5	—	—	19
	RD3H200SN	TL1		45	20	20	20	28	—	—	25	35	28	40	12*1
	RD3L08BGN	TL		60	80*2	119	4.2	5.5	—	—	5.7	8.1	—	—	71
	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
	RD3P08BBD	TL		100	80*2	119	8.6	11.6	9.7	16	—	—	—	—	37
	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
RD3H160SP	TL1	P	-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	
RD3L140SP	TL1		-60	-14	20	60	84	—	—	73	103	77	108	27	
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	

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code, (): GENERAL code.
 Note2: *1 V_{GS}=5V *2 V_{GS}=10V

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-263AB (LPTL) 	RJ1G12BGN	TLL	N	40	120	178	1.38	1.86	—	—	1.54	2.08	—	—	165
	RJ1G08CGN	TLL		40	80	78	4.2	5.6	—	—	5	6.7	—	—	31.1
	RJ1L12BGN	TLL		60	120*2	192	2.1	2.9	—	—	2.7	4.1	—	—	175
	RJ1L12CGN	TLL		60	120*2	166	2.5	3.4	—	—	3.2	4.8	—	—	139
	RJ1L12DGN	TLL		60	120*2	125	3.9	5.3	—	—	5.1	7.7	—	—	88
	RJ1L08CGN	TLL		60	80*2	96	5.3	7	—	—	7.4	10.7	—	—	55
	RJ1P12BBD	TLL		100	120*2	178	3.8	5.3	4.9	7	—	—	—	—	91.5
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
	RCJ450N20	TL		200	45	211	42	55	—	—	—	—	—	—	80
	RCJ300N20	TL		200	30	166	60	80	—	—	—	—	—	—	60
	RCJ200N20	TL		200	20	106	100	130	—	—	—	—	—	—	40
	RCJ160N20	TL		200	16	85	135	180	—	—	—	—	—	—	26
	RCJ120N20	TL		200	12	52	250	325	—	—	—	—	—	—	15
	RCJ081N20	TL		200	8	40	550	770	—	—	—	—	—	—	9
	RCJ510N25	TL		250	51	304	48	65	—	—	—	—	—	—	120
	RCJ330N25	TL		250	33	211	77	105	—	—	—	—	—	—	80
	RCJ220N25	TL		250	22	166	105	140	—	—	—	—	—	—	60
	RCJ120N25	TL		250	12	107	180	235	—	—	—	—	—	—	35
	RCJ100N25	TL		250	10	85	245	320	—	—	—	—	—	—	26.5
	RCJ050N25	TL		250	5	30	970	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	
TO-247AD (TO-247N) 	RZ2L18CGN	C11	N	60	180*2	166	2.5	3.4	—	—	—	—	—	139	





Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA code, (): GENERAL code.
 Note2: *1 V_{GS}=5V *2 V_{GS}=10V

Power MOSFETs

Low Noise type										
Package	Application	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) 	Switching	New R6002ENH	TB1	N	600	1.7	24	3.000	3.300	6.5
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	59	0.955	1.050	15
		R6502END3	TL1		650	1.7	24	3.000	3.300	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
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	0.095	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	481	0.070	0.080	145	
	R6535ENZ4	C13		650	35	379	0.098	0.115	110	
	R6530ENZ4	C13		650	30	305	0.125	0.140	85	
	R6524ENZ4	C13		650	24	245	0.160	0.185	70	
	R6520ENZ4	C13		650	20	231	0.185	0.205	60	

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

: Under Development

Fast Switching type													
Package	Application	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			
		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			
		<i>New</i> R8006KND3	TL1		800	6	83	0.750	0.900	22			
		<i>New</i> R8003KND3	TL1		800	3	48	1.500	1.800	11.5			
		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-220FM) (TO-220FP) 	Switching			R6030KNX	C7 G	N		600	30	86	0.115	0.130	56
				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			
		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	15			
		R6504KNX	C7 G	650	4		35	0.955	1.050	10			
		<i>New</i> R8009KNX	C7 G	800	9		59	0.500	0.600	27			
		<i>New</i> R8006KNX	C7 G	800	6		52	0.750	0.900	22			
		<i>New</i> R8003KNX	C7 G	800	3		48	1.500	1.800	11.5			
TO-247AD (TO-247) 		R6076KNZ4	C13	N	600	76	735	0.040	0.042	165			
		R6047KNZ4	C13		600	47	481	0.070	0.072	100			
		<i>New</i> R6035KNZ4	C13		600	35	379	0.095	0.102	72			
		<i>New</i> R6030KNZ4	C13		600	30	305	0.115	0.130	56			
		<i>New</i> 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			

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

: Under Development


Power MOSFETs

Fast Recovery Body Diode type <PrestoMOS™>											
Package	Application	Product No.		Polarity (ch)	V _{DS} (V)	I _D (A)	P _D (W) (T _C =25°C)	R _{DS(on)} (Ω)		Q _g Typ (nC) V _{GS} =15V	t _{rr} (Typ) (ns)
		Part No.	Packing code					V _{GS} =15V			
								Typ	Max		
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
TO-263S (LPTS) [SC-83] (D2PAK)		R6020JNJ	TL	N	600	20	252	0.200	0.260	50	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
		New R6030JNX	C7 G		600	30	95	0.110	0.143	74	100
(TO-220FM) (TO-220FP)	Switching	R6025JNX	C7 G	N	600	25	85	0.140	0.182	57	90
		R6020JNX	C7 G		600	20	76	0.200	0.260	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
		R6070JNZ4	C13		600	70	770	0.045	0.058	160	135
		New R6050JNZ4	C13		600	50	615	0.064	0.083	120	120
TO-247AD (TO-247)		R6042JNZ4	C13	N	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	0.150	0.195	65	90
		R6020JNZ4	C13	N	600	20	252	0.180	0.234	45	85

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


: Under Development

Selector Guide for Automotive MOSFETs

Automotive MOSFETs																					
Package	Product No.			Polarity (ch)	V _{DSS} (V)	I _D (A)	V _{GS} (V)	R _{DS(on)} (mΩ)								Qg Typ (nC)	Ciss Typ (pF)	Automotive Grade AEC-Q101			
	Part No.	Grade Code	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		V _{GS} =5V	V _{DSS} =10V	
 (TSMT8) 3028 size	RQ1C075UN	HZG	TR	N	20	7.5	±10	—	—	11	16	14	20	—	—	20	40	18**1	1,400	YES	
	QS8K2	HZG	TR	N+N	30	3.5	±12	—	—	38	54	55	77	—	—	—	—	4.6**1	285	YES	
	RQ1A070ZP	HZG	TR	P	-12	-7	±10	—	—	8	12	11	16	—	—	19	38	58**1	7,400**3	YES	
	RQ1E070RP	HZG	TR		-30	-7	±20	12	17	17	24	—	—	—	—	—	—	26	2,700	YES	
	RQ1E050RP	HZG	TR	P+P	-30	-5	±20	22	31	32	45	—	—	—	—	—	—	—	13	1,300	YES
	QS8J4	HZG	TR		-30	-4	±20	40	56	55	77	—	—	—	—	—	—	—	8.4	800	YES
	QS8M51	HZG	TR	N+P	100	2	±20	240	325	250	340	—	—	—	—	—	—	—	4.7	290**2	YES
				-100	-1.5	±20	350	470	380	510	—	—	—	—	—	—	—	17	950**2	YES	

Note1: (): ROHM Packages.
 Note2: ** V_{GS}=4.5V ** V_{DSS}=25V ** 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)						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} =4.0V						
								Typ	Max	Typ	Max	Typ	Max	V _{GS} =5V	V _{DSS} =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		30	7	±20	17	24	23	33	—	—	8.4	600	YES		
	SP8K2	HZG	TB	N+N	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	-45		-6	±20	26	36	35	49	—	—	23	2,700	YES		
	SP8J66	HZG	TB	P+P	-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		
	N+P	SP8M5	HZG	TB	N+P	-30	-7	±20	20	28	25	35	—	—	25	2,600	YES	
		SP8M3	HZG	TB		30	6	±20	21	30	30	42	—	—	7.2	520	YES	
		SP8M6	HZG	TB		-30	-7	±20	20	28	25	35	—	—	25	2,600	YES	
		SP8M21	HZG	TB		30	5	±20	36	51	52	73	—	—	3.9	230	YES	
		SP8M24	HZG	TB		-30	-4.5	±20	40	56	57	80	—	—	8.5	850	YES	
		SP8M22	HZG	TB		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	
		SP8M24	HZG	TB		45	6	±20	18	25	24	34	—	—	15.4	1,400	YES	
SP8M21		HZG	TB	-45		-4	±20	33	46	43	60	—	—	20	2,400	YES		
SP8M24		HZG	TB	45		4.5	±20	33	46	41	57	—	—	6.8	550	YES		
SP8M24		HZG	TB	-45		-3.5	±20	45	63	60	84	—	—	13	1,700	YES		
New SP8M31		HZG	TB	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				
N+P	SP8M41	HZG	TB	N+P	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		
	SP8M51	HZG	TB		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: Package is JEDEC code. (): ROHM Packages, []: JEITA code.
 Note2: ** V_{GS}=10V ** V_{GS}=4V ** V_{DSS}=25V

: Under Development

Transistors

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				
								Typ	Max	Typ	Max	V _{GS} =10V	V _{DSS} =10V	
 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
	New RD3S100AA	FRA	TL		190	10	±20	130	182	136*2	190*2	52	2,000	YES
	New RD3U080AA	FRA	TL		250	8	±30	225	300	—	—	25	1,440*1	YES
	New RD3U041AA	FRA	TL		250	4	±30	930	1,300	—	—	8.5	350*1	YES
	New R5205PND3	FRA	TL		525	5	±25	1,300	1,600	—	—	10.8	320*1	YES
	New R6006PND3	FRA	TL		600	6	±30	900	1,200	—	—	15	460*1	YES
	New R6004PND3	FRA	TL		600	4	±25	1,400	1,800	—	—	11	280*1	YES
	New R8007AND3	FRA	TL		800	7	±30	1,200	1,600	—	—	28	850	YES
	New R8002CND3	FRA	TL		800	2	±30	3,300	4,300	—	—	12.1	240*1	YES
	New 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
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	FRA	TL	N	40	45	±20	9.5	13.5	—	—	43	2,400*1	YES
	RSJ400N06	FRA	TL		60	40	±20	11	16	—	—	52	2,400	YES
	RSJ400N10	FRA	TL		100	40	±20	19	27	21*2	30*2	90	3,600*1	YES
	RSJ301N10	FRA	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	FRA	TL		P	-100	-25	±20	45	63	48	67	60*3	8,000*1

Note1: Package is JEDEC code. (): ROHM Packages, []: JEITA Code, (): GENERAL Code.
 Note2: *1 V_{DSS}=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
	Polarity	P _D =0.15W		P _D =0.15W		P _D =0.2W			
Application	PNP	NPN	PNP	NPN	PNP	NPN			
General Purpose Amplification	2SAR522M	2SCR522M	2SAR522EB	2SCR522EB	2SAR522UB	2SCR522UB	20	0.2	120 to 560
	2SAR523M	2SCR523M	2SAR523EB	2SCR523EB	2SAR523UB	2SCR523UB	50	0.1	120 to 560
Low V _{CE(sat)}	2SA2029	2SC5658	2SA1774EB	2SC4617EB	2SA1576UB	2SC4081UB	50	0.15	120 to 560
Driver	2SA2030	2SC5663					12	0.5	270 to 680
		2SD2696					30	0.4	270 to 680
			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									
			General	Automotive		Q	R	S							
SOT-723 (VMT3) [SC-105AA] 1212 size	General Purpose Amplification	2SAR522M	-	-	T2L				PNP	0.15	-20	-0.2	120 to 560	-	
		2SAR523M	-	-	T2L					0.15	-50	-0.1	120 to 560	-	
		2SA2029	FHA	-	T2L	Q	R	S		0.15	-50	-0.15	120 to 560	S: No Recommended	YES
	Low V _{CE(sat)}	2SA2030	-	-	T2L				PNP	0.15	-12	-0.5	270 to 680	-	
		2SCR522M	-	-	T2L					0.15	20	0.2	120 to 560	-	
	General Purpose Amplification	2SCR523M	-	-	T2L				NPN	0.15	50	0.1	120 to 560	-	
		2SC5658	FHA	-	T2L	Q	R	S		0.15	50	0.15	120 to 560	S: No Recommended	YES
		2SC5663	-	-	T2L					0.15	12	0.5	270 to 680	-	
		Low V _{CE(sat)}	2SD2696	-	-	T2L					0.15	30	0.4	270 to 680	-

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
	Polarity	P _D =0.15W		P _D =0.2W		P _D =0.2W		P _D =0.2W			
Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
General Purpose Amplification	2SA1774	2SC4617	2SA1576U3	2SC4081U3	2SA1037AK	2SC2412K			50	0.15	120 to 560
	2SA2018	2SC5585	2SB1689	2SD2652	2SA2119K				12	0.5	270 to 680
Low V _{CE(sat)}					2SB1690K	2SD2653K			12	1.5	270 to 680
						2SD1757K			2	2	270 to 680
					2SB1590K				15	0.5	120 to 560
						2SD2444K			15	1	120 to 390
									15	1	180 to 390
				2SB1694	2SD2656	2SB1695K			30	1	270 to 680
Driver			2SAR502U3						30	1.5	270 to 680
				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.

Transistors

General Purpose Amplification Bipolar Transistors (Gull type)																
Package	Application	Part No.	Product No.					Polarity (ch)	P _D *1 (W)	V _{CEO} (V)	I _C (A)	h _{FE} *2		Automotive Grade AEC-Q101		
			Grade Code		Packing code	h _{FE} *2 Code										
		General		Automotive												
	General Purpose Amplification	2SA1774	*	FRA	TL	Q	R	S	PNP	0.15	-50	-0.15	120 to 560	S: No Recommended	YES	
	Low V _{CE(sat)}	2SA2018		—	TL						0.15	-12	-0.5	270 to 680		—
	General Purpose Amplification	2SC4617		FRA	TL	Q	R	S	NPN	0.15	50	0.15	120 to 560		YES	
	Low V _{CE(sat)}	2SC5585		—	TL						0.15	12	0.5	270 to 680		—
	General Purpose Amplification	2SA1576U3	*	HZG	T106	Q	R	S	PNP	0.2	-50	-0.15	120 to 560	S: No Recommended	YES	
	Low V _{CE(sat)}	2SB1689		—	T106						0.2	-12	-1.5	270 to 680		—
		2SB1694		FRA	T106						0.2	-30	-1	270 to 680		YES
	Driver	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	S	NPN	0.2	50	0.15	120 to 560	S: No Recommended	YES	
	Low V _{CE(sat)}	2SD2652		—	T106						0.2	12	1.5	270 to 680		—
		2SD2656		FRA	T106						0.2	30	1	270 to 680		YES
	Driver	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		
	General Purpose Amplification	2SA1037AK	*	—	T146	Q	R	S	PNP	0.2	-50	-0.15	120 to 560	S: No Recommended	—	
	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		FRA	T146	Q	R				0.2	-32	-0.5	120 to 390		YES
		2SB1197K		FRA	T146	Q	R			0.2	-32	-0.8	120 to 390		YES	
		2SB1198K		FRA	T146	Q	R			0.2	-80	-0.5	120 to 390		YES	
	High Voltage	2SA1514K		FRA	T146	R	S			0.2	-120	-0.05	180 to 560		YES	
	General Purpose Amplification	2SC2412K		—	T146	Q	R	S	NPN	0.2	50	0.15	120 to 560	S: No Recommended	—	
	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		FRA	T146	Q	R				0.2	32	0.5	120 to 390		YES
		2SD1781K		FRA	T146	Q	R				0.2	32	0.8	120 to 390		YES
		2SD1484K		FRA	T146	Q	R				0.2	50	0.5	120 to 390		YES
		2SD1782K		FRA	T146	Q	R				0.2	80	0.5	120 to 390		YES
High Voltage	2SC3906K	FRA	T146	R	S			0.2		120	0.05	180 to 560		YES		
	2SC4061K	—	T146	N				0.2		300	0.1	56 to 120		—		
	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.





Bipolar Transistors

Quick Reference for Bipolar Transistors (For Oversea Customer)							
Package	SOT-323 (UMT3) [SC-70] 2021 size		SOT-23 (SST3) 2924 size		V _{CE0} (V)	I _c (A)	h _{FE} *2
	Application	PNP	NPN	PNP			
General Purpose Amplification	BC858BW	BC848BW	BC858B	BC848B	30	0.1	200 to 450
	BC857BU3	BC847BU3	BC857B	BC847B	45	0.1	200 to 450
Driver			BC857C	BC847C	45	0.15	420 to 800
			BC846B	BC846B	65	0.12	200 to 450
			BC856B		65	0.1	220 to 475
			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
Switching	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: * 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.
: Under Development

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.	General	Automotive							Packing code	
SOT-323 (UMT3) [SC-70] 2021 size	General Purpose Amplification	BC858BW		-	T106	PNP	0.15	-30	-0.1	200 to 450	-	
		BC857BU3		HZG	T106		0.15	-45	-0.1	210 to 480	YES	
		UMT3906		-	T106		0.15	-40	-0.6	100 to 300	-	
	Switching	UMT4403U3		HZG	T106		0.15	-40	-0.6	100 to 300	YES	
		UMT2907A		-	T106		0.15	-60	-0.6	100 to 300	-	
		General Purpose Amplification	BC848BW	*	-		T106	0.15	30	0.1	200 to 450	-
			BC847BU3		HZG		T106	0.15	45	0.1	200 to 450	YES
	UMT3904			-	T106		0.15	40	0.2	100 to 300	-	
	Switching	UMT4401U3		HZG	T106		0.15	40	0.6	100 to 300	YES	
		UM2222AU3		HZG	T106		0.15	40	0.6	100 to 300	YES	
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	
	BC857C		HZG	T116	0.2		-45	-0.15	420 to 800	YES		
	BC856B		HZG	T116	0.2		-65	-0.1	220 to 475	YES		
	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		
	Driver	BC807-16		HZG	T116		0.2	-45	-0.8	100 to 250	YES	
		BC807-25		HZG	T116		0.2	-45	-0.8	160 to 400	YES	
		BC807-40		HZG	T116		0.2	-45	-0.8	250 to 600	YES	
		SSTA56		HZG	T116		0.2	-80	-0.5	100 or more	YES	
	Switching	SST4403		HZG	T116		0.2	-40	-0.6	100 to 300	YES	
		SST2907A		HZG	T116		0.2	-60	-0.6	100 to 300	YES	
		SST3906		HZG	T116		0.2	-40	-0.2	100 to 300	YES	
General Purpose Amplification		BC848B	*	HZG	T116	NPN	0.2	30	0.1	200 to 450	YES	
	BC847B		HZG	T116	0.2		45	0.1	200 to 450	YES		
	BC847C		HZG	T116	0.2		45	0.15	420 to 800	YES		
	BC846B		HZG	T116	0.2		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		
	BCX19		HZG	T116	0.2		45	0.5	100 to 600	YES		
	Driver	BC817-16		HZG	T116		0.2	45	0.8	100 to 250	YES	
		BC817-25		HZG	T116		0.2	45	0.8	160 to 400	YES	
		BC817-40		HZG	T116		0.2	45	0.8	250 to 600	YES	
SSTA06			HZG	T116	0.2	80	0.5	100 or more	YES			
Switching	SST3904		HZG	T116	0.2	40	0.2	100 to 300	YES			
	SST4401		HZG	T116	0.2	40	0.6	100 to 300	YES			
	SST2222A		HZG	T116	0.2	40	0.6	100 to 300	YES			
Darlington*3	SSTA28		-	T116	0.2	80 (V _{CEs})	0.3	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.
: Under Development

Quick Reference for High h_{FE} · Muting/Darlington Bipolar Transistors											
Package	SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323 (UMT3) [SC-70] 2021 size		SOT-346 (SMT3) [SC-59] 2928 size		V_{CE0} (V)	I_c (A)	h_{FE}^{*2}
	Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP			
		$P_D=0.15W$ *1		$P_D=0.15W$ *1		$P_D=0.2W$ *1		$P_D=0.2W$ *1			
High h_{FE}									25 (V_{EBO})	0.3	820 to 2,700
Muting									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_{CE0} (V)	I_c (A)	h_{FE}^{*2}	Automotive Grade AEC-Q101	
		Part No.	Grade Code		Packing code	h $_{FE}^{*2}$ Code								
			General	Automotive		V	W							
 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 2,700		–
 SOT-346 (SMT3HP) [SC-59] 2928 size	Darlington*3	2SB852K		–	T146	B	X	PNP	0.2	–32 (V_{CES})	–0.3	5,000 or more		–
	High h_{FE} · Muting	2SD2704K		–	T146	X	X	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	X	X		0.2	30	0.3	5,000 or more		–
	Darlington*3	2SD1383K		–	T146	B	X	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.

Bipolar Transistors

Quick Reference for High Frequency Bipolar Transistors											
Package	SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416 (EMT3) [SC-75A] 1616 size		SOT-323 (UMT3) [SC-70] 2021 size		SOT-346 (SMT3) [SC-59] 2928 size		V _{CEO} (V)	I _C (A)	h _{FE} *2
	Polarity		Polarity		Polarity		Polarity				
Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
High Frequency				2SC4618		2SC4098			25	0.05	82 to 180 (f _T =300MHz)
						2SC4774		2SC4713K	6	0.05	180 to 560 (f _T =800MHz)
		2SC5661		2SC4725		2SC4082		2SC3837K	20	0.05	82 to 180 (f _T =1,500MHz)
		2SC5662		2SC4726		2SC4083		2SC3838K	11	0.05	56 to 180 (f _T =3,200MHz)




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

High Frequency Bipolar Transistors													
Package	Application	Part No.	Product No.				Polarity (ch)	P _D *1 (W)	V _{CEO} (V)	I _C (A)	h _{FE} *2	f _T (MHz)	Automotive Grade AEC-Q101
			Grade Code		Packing code	h _{FE} *2 Code							
		General		Automotive									
SOT-723 (VMT3) [SC-105AA] 1212 size	High Frequency	2SC5661	*	—	T2L	P		0.15	20	0.05	82 to 180	1,500	—
		2SC5662	*	—	T2L	P		0.15	11	0.05	56 to 180	3,200	—
SOT-416 (EMT3) [SC-75A] 1616 size	High Frequency	2SC4618	*	—	TL	N	P	0.15	25	0.05	82 to 180	300	—
		2SC4725	*	—	TL	P		0.15	20	0.05	82 to 180	1,500	—
		2SC4726	*	—	TL	N	P	0.15	11	0.05	56 to 180	3,200	—
SOT-323 (UMT3) [SC-70] 2021 size	High Frequency	2SC4098	*	—	T106	P		0.2	25	0.05	82 to 180	300	—
		2SC4774	*	—	T106	R	S	0.2	6	0.05	180 to 560	800	—
		2SC4082	*	—	T106	P		0.2	20	0.05	82 to 180	1,500	—
		2SC4083	*	—	T106	N	P	0.2	11	0.05	56 to 180	3,200	—
SOT-346 (SMT3HP) [SC-59] 2928 size	High Frequency	2SC4713K	*	—	T146	R	S	0.2	6	0.05	180 to 560	800	—
		2SC3837K	*	—	T146	P		0.2	20	0.05	82 to 180	1,500	—
		2SC3838K	*	—	T146	N	P	0.2	11	0.05	56 to 180	3,200	—

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, 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 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
	Polarity		Polarity		Polarity		Polarity				
Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
Low V _{CE} (sat)	2SB1732	2SD2702	2SB1709	2SD2674	12	1.5	270 to 680				
	2SB1730	2SD2700	2SB1690	2SD2653	12	2	270 to 680				
			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				
High Speed Switching			2SAR544R	2SCR544R	80	2.5	120 to 390				
High Voltage			2SA2094	2SC5866	60	2	120 to 270 120 to 390				
			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.

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									
	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	—
	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		HZG	TL				0.5	-50	-3	180 to 450	YES
		2SAR514R		HZG	TL				0.5	-80	-0.7	120 to 390	YES
		2SAR554R		HZG	TL				0.5	-80	-1.5	120 to 390	YES
		2SAR544R		HZG	TL				0.5	-80	-2.5	120 to 390	YES
	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	HZG	TL			0.5	50	3	180 to 450	YES			
	2SCR514R	HZG	TL			0.5	80	0.7	120 to 390	YES			
	2SCR554R	HZG	TL			0.5	80	1.5	120 to 390	YES			
	2SCR544R	HZG	TL			0.5	80	2.5	120 to 390	YES			
High Speed Switching	2SC5866	—	TL	Q	R	0.5	60	2	120 to 390	—			
	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/TUMT6) For internal circuit, please see the technical specifications.
 Note5: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Bipolar Transistors

Quick Reference for Power Bipolar Transistors											
Package	(DFN2020-3S) (HUML2020L3) 2020 size		SOT-89 (MPT3) [SC-62] 4540 size		TO-252 (DPAK)		TO-263AB (LPTL)		V _{CEO} (V)	I _C (A)	h _{FE} *3
	P _D =0.5W *1		P _D =0.5W *1		P _D =10W *2		P _D =40W *2				
Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN			
Driver			2SB1697	2SD2661					12	2	270 to 680
			2SAR293P 2SAR293P5	2SCR293P 2SCR293P5					30	1	270 to 680
			2SAR512P 2SAR512P5	2SCR512P 2SCR512P5					30	2	200 to 500
			2SAR552P 2SAR552P5	2SCR552P 2SCR552P5					30	3	200 to 500
	2SAR542F3	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
					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
					2SAR586D3	2SCR586D3	New 2SAR586J	2SCR586J	80	5	120 to 390
			2SAR372P5	2SCR372P 2SCR372P5					120	0.7	120 to 390
			2SAR375P5	2SCR375P 2SCR375P5					120	1.5	120 to 390
				2SAR587D3	2SCR587D3			120	3	120 to 390	
								160	1.5	82 to 180 120 to 270	
High Voltage			2SAR340P	2SCR346P				400	0.1	82 to 270	
High Speed Switching			2SA2071P5	2SC5824				60	3	120 to 270 120 to 390	
High h _{FE}				2SD2537				25	1.2	820 to 1,800	
			2SB1427					20	2	390 to 820	
Darlington*4				2SD2153				25	2	560 to 2,700	
				2SD1834				60 (V _{CEs})	1	2k or more	
								60±10	2	1k to 10k	
								100	2	1k to 10k	



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: PNP (—) symbol omitted.
 Note6: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, () : GENERAL code.

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				PNP	0.5	-30	-6	200 to 500	—
		2SCR542F3	*	—	TR				NPN	0.5	30	3	200 to 500	—
		2SCR562F3	*	—	TR				NPN	0.5	30	6	200 to 500	—
◆ SOT-89 (MPT3) [SC-62] 4540 size	Driver	2SB1697	*	—	T100				PNP	0.5	-12	-2	270 to 680	—
		2SAR293P	—	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	—
		2SAR372P5	*	—	T100		Q	R		0.5	-120	-0.7	120 to 390	—
		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	—		
	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	0.5	25	2	560 to 2,700	—		
Darlington™		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°C
 Note4: *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: *4 For internal circuit, please see the technical specifications.
 Note6: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, () : GENERAL code.

Bipolar Transistors








Power Bipolar Transistors											
Package	Application	Part No.	Product No.			Polarity (ch)	P _D ^{*1} (W)	V _{CEO} (V)	I _C (A)	h _{FE}	Automotive Grade AEC-Q101
			General	Automotive	Packing code						
	Driver	2SAR572D3	*	—	TL1	PNP	10	-30	-5	200 to 500	—
		2SAR582D3	*	—	TL1		10	-30	-5	200 to 500	YES
		2SAR573D3	*	—	TL1		10	-30	-10	200 to 500	—
		2SAR573D3	—	FRA	TL		10	-50	-3	180 to 450	—
		2SAR583D3	*	—	TL1		10	-50	-3	180 to 450	YES
		2SAR574D3	*	—	TL1		10	-50	-7	180 to 450	—
		2SAR574D3	—	FRA	TL		10	-80	-2	120 to 390	—
		2SAR574D3	—	FRA	TL		10	-80	-2	120 to 390	YES
		2SAR586D3	*	—	TL1		10	-80	-5	120 to 390	—
		2SAR586D3	—	FRA	TL		10	-80	-5	120 to 390	YES
		2SAR587D3	*	—	TL1		10	-120	-3	120 to 390	—
		2SCR572D3	*	—	TL1		10	30	5	200 to 500	—
		2SCR582D3	*	—	TL1		10	30	5	200 to 500	YES
		2SCR582D3	—	FRA	TL		10	30	10	200 to 500	—
		2SCR573D3	*	—	TL1		10	50	3	180 to 450	—
		2SCR583D3	*	—	TL1		10	50	3	180 to 450	YES
		2SCR574D3	*	—	TL1		10	50	7	180 to 450	—
		2SCR574D3	—	FRA	TL		10	80	2	120 to 390	—
2SCR586D3	*	—	TL1	10	80	2	120 to 390	YES			
2SCR586D3	—	FRA	TL	10	80	5	120 to 390	—			
2SCR587D3	*	—	TL1	10	80	5	120 to 390	YES			
2SCR587D3	*	—	TL1	10	120	3	120 to 390	—			
	Driver	New 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, []: JEITA code, (): GENERAL code.

Complex Bipolar Transistors

Quick Reference for General Purpose Amplification Complex Bipolar Transistors											
Configuration	Package	Item	Equivalent Circuit Diagram (TOP View)	(VMT6)	SOT-553/SOT-563	SOT-353/SOT-363	SOT-25/SOT-457	Equivalent Element Transistors	V _{CEO} (V)	I _C (A)	h _{FE}
				[SC-105B] 1212 size	(EMT5/EMT6) [SC-107BB/SC-107C] 1616 size	(UMT5/UMT6) [SC-88A/SC-88] 2021 size	(SMT5/SMT6) [SC-74A/SC-74] 2928 size				
PNP×2	Pre Amplifier		VT6T1	EMT51				2SAR522EB×2	-20	-0.2	120 to 560
			VT6T2	EMT52				2SAR523EB×2	-50	-0.1	120 to 560
				EMT1	UMT1N	IMT1A	2SA1037AK×2	-50	-0.15	120 to 560	
				EMT18	UMT18N	IMT18	2SA2018×2	-12	-0.5	270 to 680	
NPN×2	Pre Amplifier		VT6X1	EMX51				2SCR522EB×2	20	0.2	120 to 560
			VT6X2	EMX52				2SCR523EB×2	50	0.1	120 to 560
				EMX1	UMX1N	IMX1	2SC2412K×2	50	0.15	120 to 560	
				EMX26			2SD2654×2	50	0.15	820 to 2,700	
				EMX18	UMX18N		2SC5585×2	12	0.5	270 to 680	
							IMX25	2SD2704K×2	20	0.3	820 to 2,700
PNP + NPN	Pre Amplifier			EMY1	UMY1N	FMY1A	2SA1037AK	-50	-0.15	120 to 560	
							2SC2412K	50	0.15	120 to 560	
			VT6Z1	EMZ51			2SAR522EB	-20	-0.2	120 to 560	
							SCR522EB	20	0.2	120 to 560	
			VT6Z2	EMZ52			2SAR523EB	-50	-0.1	120 to 560	
							2SCR523EB	50	0.1	120 to 560	
				EMZ1	UMZ1N	IMZ1A	2SA1037AK	-50	-0.15	120 to 560	
							2SC2412K	50	0.15	120 to 560	
				EMZ7			2SA2018	-12	-0.5	270 to 680	
							2SC5585	12	0.5	270 to 680	
	EMZ8			2SA2018	-12	-0.5	270 to 680				
				2SC2412K	50	0.15	120 to 560				

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

General Purpose Amplification Complex Bipolar Transistors													
Package	Configuration	Application	Product No.			Equivalent Element Transistors	V _{CEO} (V)	I _C (A)	h _{FE}	Automotive Grade AEC-Q101			
			Part No.	Grade Code							Packing code		
				General	Automotive								
 (VMT6) [SC-105B] 1212 size	PNP×2	Pre Amplifier	VT6T1	*	—	T2R	2SAR522EB×2	-20	-0.2	120 to 560	—		
			VT6T2		—	T2R	2SAR523EB×2	-50	-0.1	120 to 560	—		
			VT6X1		—	T2R	2SCR522EB×2	20	0.2	120 to 560	—		
	PNP+NPN		VT6X2		—	T2R	2SCR523EB×2	50	0.1	120 to 560	—		
			VT6Z1		—	T2R	2SAR522EB	-20	-0.2	120 to 560	—		
					2SCR522EB	20	0.2	120 to 560	—				
			VT6Z2		—	T2R	2SAR523EB	-50	-0.1	120 to 560	—		
2SCR523EB	50	0.1	120 to 560	—									
 SOT-553 (EMT5) [SC-107BB] 1616 size	PNP+NPN	Pre Amplifier	EMY1	*	—	T2R	2SA1037AK	-50	-0.15	120 to 560	—		
 SOT-563 (EMT6) [SC-107C] 1616 size	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			FHA		T2R	2SA1037AK×2	-50	-0.15	120 to 560	YES			
EMT18	—		T2R		2SA2018×2	-12	-0.5	270 to 680	—				
NPN×2	EMX51		—		T2R	2SCR522EB×2	20	0.2	120 to 560	—			
	EMX52		—		T2R	2SCR523EB×2	50	0.1	120 to 560	—			
	EMX1		FHA		T2R	2SC2412K×2	50	0.15	120 to 560	YES			
PNP+NPN	EMX26		—		T2R	2SD2654×2	50	0.15	820 to 2,700	—			
	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		FHA		T2R	2SA1037AK	-50	-0.15	120 to 560	YES			
			2SC2412K		50	0.15	120 to 560	—					
EMZ7	—	T2R	2SA2018	-12	-0.5	270 to 680	—						
EMZ8	—	T2R	2SC5585×2	12	0.5	270 to 680	—						
 SOT-353 (UMT5) [SC-88A] 2021 size	PNP+NPN	Pre Amplifier	UMY1N	*	—	TR	2SA1037AK	-50	-0.15	120 to 560	—		
 SOT-363 (UMT6) [SC-88] 2021 size	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			
			2SC2412K		50	0.15	120 to 560	—					
 SOT-25 (SMT5) [SC-74A] 2928 size	PNP+NPN		Pre Amplifier		FMY1A	*	—	T148	2SA1037AK	-50	-0.15	120 to 560	YES
 SOT-457 (SMT6) [SC-74] 2928 size	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.

Complex Bipolar Transistors

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

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

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

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

Quick Reference for Complex Bipolar Transistors for Driver								
Configuration	Package	Item	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}
	Application		Equivalent Circuit Diagram (TOP View)	Part No.				
	PNP×2	Driver		US6T8	QST8	2SB1709×2	-12	-1.5
US6T9				QST9	2SB1710×2	-30	-1	270 to 680
NPN×2	Driver		US6X7	QSX7	2SD2674×2	12	1.5	270 to 680
	DC-DC Converter		US6X8	QSX8	2SD2675×2	30	1	270 to 680
PNP + NPN	Pre Amplifier			QS5W1	Exclusive Chip	30	3	200 to 500
				QS5W2	2SCR533P×2	50	3	180 to 450
	DC-DC Converter			QS6Z5	2SAR513P 2SCR513P	-50 50	-1 1	180 to 450 180 to 450
				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}	Automotive Grade AEC-Q101
			Part No.	Grade Code		Packing code					
				General	Automotive						
	PNP×2	Driver	US6T8	*	—	TR	2SB1709×2	-12	-1.5	270 to 680	—
			US6T9	*	—	TR	2SB1710×2	-30	-1	270 to 680	—
	NPN×2		US6X7	*	—	TR	2SD2674×2	12	1.5	270 to 680	—
			US6X8	*	—	TR	2SD2675×2	30	1	270 to 680	—
	NPN×2	DC-DC Converter	QS5W1	—	—	TR	Exclusive Chip	30	3	200 to 500	—
			QS5W2	*	—	TR	2SCR533P×2	50	3	180 to 450	—
	PNP+NPN		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	—
	PNP×2	Driver	QST8	*	—	TR	2SB1709×2	-12	-1.5	270 to 680	—
			QST9	*	—	TR	2SB1710×2	-30	-1	270 to 680	—
	NPN×2		QSX7	*	—	TR	2SD2674×2	12	1.5	270 to 680	—
			QSX8	*	—	TR	2SD2675×2	30	1	270 to 680	—
	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

Quick Reference for 100mA Digital Transistors (For Automotive use)																							
Item	Part No.		R ₁ (kΩ)	R ₂ (kΩ)	Package														V _{CC} (V _{CE0}) (V)	I _O (I _C) (A)	G _I (h _{FE})		
	PNP	NPN			SOT-723 (VMT3) [SC-105AA] 1212 size	SOT-416FL (EMT3F) [SC-89] 1616 size	SOT-416 (EMT3) [SC-75A] 1616 size	SOT-323FL (UMT3F) [SC-85] 2021 size	SOT-323 (UMT3) [SC-70] 2021 size		SOT-23 (SST3) 2924 size		SOT-346 (SMT3) [SC-59] 2928 size		SOT-23 (SST3) 2924 size		SOT-346 (SMT3) [SC-59] 2928 size						
					P _D =150mW*1							P _D =200mW*1											
	PNP	NPN			PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN					
	Quick Reference No.																						
Specifications	R ₁ =R ₂ Potential Divider type	DTA123Ex	DTC123Ex	2.2	2.2	1	20	40	55	70	85	100	115			147	162	179	200	221	236	0.1	20 or more
		DTA143Ex	DTC143Ex	4.7	4.7	2	21	41	56	71	86	101	116			148	163	180	201	222	237	0.1	30 or more
		DTA114Ex	DTC114Ex	10	10	3	22	42	57	72	87	102	117			149	164	181	202	223	238	0.05	30 or more
		DTA124Ex	DTC124Ex	22	22	4	23	43	58	73	88	103	118			150	165	182	203	224	239	0.03	56 or more
		DTA144Ex	DTC144Ex	47	47	5	24	44	59	74	89	104	119			151	166	183	204	225	240	0.03	68 or more
		DTA115Ex	DTC115Ex	100	100	6	25	45	60	75	90	105	120			152	167	184	205	226	241	0.02	82 or more
R ₁ ≠R ₂ Leak Absorption type	DTA113Zx	DTC113Zx	1	10	7	26	46	62	76	91	106	121			153	168	185	206	227	242	0.1	33 or more	
	DTA123Yx	DTC123Yx	2.2	10	8	27	47	63	77	92	107	122			154	169	186	207	228	243	0.1	33 or more	
	DTA123Jx	DTC123Jx	2.2	47	9	28	48	64	78	93	108	123			155	170	187	208	229	244	0.1	80 or more	
	DTA143Xx	DTC143Xx	4.7	10	10	29	49	65	79	94	109	124			156	171	188	209	230	245	0.1	30 or more	
	DTA143Zx	DTC143Zx	4.7	47	11	30	50	66	80	95	110	125			157	172	189	210	231	246	0.1	80 or more	
	DTA114Wx	DTC114Wx	10	4.7	12	31							130	139								0.1	24 or more
	DTA114Yx	DTC114Yx	10	47	13	32	51	67	81	96	111	126			158	173	190	211	232	247	0.07	68 or more	
	DTA124Xx	DTC124Xx	22	47	14	33	52	68	82	97	112	127			159	174	191	212	233	248	0.05	68 or more	
	DTA144Vx	DTC144Vx	47	10	15	34										192	213					0.03	33 or more
	DTA144Wx	DTC144Wx	47	22	16	35							131	140		193	214					0.03	56 or more
Type Using R ₁ Alone as Input Resistor	DTA123Tx	DTC123Tx	2.2	—	17	36							132	141		194	215				0.1	100 to 600	
	DTA143Tx	DTC143Tx	4.7	—	18	37	53	61	83	98	113	128			160	175	195	216	234	249	0.1	100 to 600	
	DTA114Tx	DTC114Tx	10	—	19	38	54	69	84	99	114	129			161	176	196	217	235	250	0.1	100 to 600	
	DTA124Tx	DTC124Tx	22	—									133	142		197	218					0.1	100 to 600
	DTA144Tx	DTC144Tx	47	—		39							134	143		198	219					0.1	100 to 600
	DTA115Tx	DTC115Tx	100	—									135	144		199	220					0.1	100 to 600
Type Using R ₂ Alone as Input Resistor	DTA114Gx	DTC114Gx	—	10									136		177						0.1	30 or more	
	DTA124Gx	DTC124Gx	—	22									137	146								0.1	56 or more
	DTA144Gx	DTC144Gx	—	47									138	146								0.1	68 or more
	DTA115Gx	DTC115Gx	—	100									138		178							0.1	82 or more
x: Packaging designation symbol					M	EB	E	UB	UA	U3	CA	KA											

Note1: VMT3, EMT3F, EMT3 and UMT3F without suffix A.
 Note2: *1 With reference land installed.
 Note3: PNP (—) symbol omitted.
 Note4: Package is JEDEC code. () : ROHM packages, [] : JEITA code.

Transistors

100mA Digital Transistors (For Automotive use)													
Package	Product No.					Polarity	P _D *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Packing code								
			General	Automotive									
SOT-723 (VMT3) [SC-105AA] 1212 size	1	DTA123EM	*	FHA	T2L	PNP	150	2.2	2.2	-50	-0.1	20 or more	YES
	2	DTA143EM		FHA	T2L		150	4.7	4.7	-50	-0.1	30 or more	YES
	3	DTA114EM		FHA	T2L		150	10	10	-50	-0.05	30 or more	YES
	4	DTA124EM		FHA	T2L		150	22	22	-50	-0.03	56 or more	YES
	5	DTA144EM		FHA	T2L		150	47	47	-50	-0.03	68 or more	YES
	6	DTA115EM		FHA	T2L		150	100	100	-50	-0.02	82 or more	YES
	7	DTA113ZM		FHA	T2L		150	1	10	-50	-0.1	33 or more	YES
	8	DTA123YM		FHA	T2L		150	2.2	10	-50	-0.1	33 or more	YES
	9	DTA123JM		FHA	T2L		150	2.2	47	-50	-0.1	80 or more	YES
	10	DTA143XM		FHA	T2L		150	4.7	10	-50	-0.1	30 or more	YES
	11	DTA143ZM		FHA	T2L		150	4.7	47	-50	-0.1	80 or more	YES
	12	DTA114WM		FHA	T2L		150	10	4.7	-50	-0.1	24 or more	YES
	13	DTA114YM		FHA	T2L		150	10	47	-50	-0.07	68 or more	YES
	14	DTA124XM		FHA	T2L		150	22	47	-50	-0.05	68 or more	YES
	15	DTA144VM		FHA	T2L		150	47	10	-50	-0.03	33 or more	YES
	16	DTA144WM		FHA	T2L		150	47	22	-50	-0.03	56 or more	YES
	17	DTA123TM		FHA	T2L		150	2.2	—	-50	-0.1	100 to 600	YES
	18	DTA143TM		FHA	T2L		150	4.7	—	-50	-0.1	100 to 600	YES
	19	DTA114TM		FHA	T2L		150	10	—	-50	-0.1	100 to 600	YES
	20	DTC123EM		FHA	T2L		150	2.2	2.2	50	0.1	20 or more	YES
	21	DTC143EM		FHA	T2L		150	4.7	4.7	50	0.1	30 or more	YES
	22	DTC114EM		FHA	T2L		150	10	10	50	0.05	30 or more	YES
	23	DTC124EM		FHA	T2L		150	22	22	50	0.03	56 or more	YES
	24	DTC144EM		FHA	T2L		150	47	47	50	0.03	68 or more	YES
	25	DTC115EM		FHA	T2L		150	100	100	50	0.02	82 or more	YES
	26	DTC113ZM		FHA	T2L		150	1	10	50	0.1	33 or more	YES
	27	DTC123YM		FHA	T2L		150	2.2	10	50	0.1	33 or more	YES
	28	DTC123JM		FHA	T2L		150	2.2	47	50	0.1	80 or more	YES
	29	DTC143XM		FHA	T2L		150	4.7	10	50	0.1	30 or more	YES
	30	DTC143ZM		FHA	T2L		150	4.7	47	50	0.1	80 or more	YES
	31	DTC114WM		FHA	T2L		200	10	4.7	50	0.1	24 or more	YES
	32	DTC114YM		FHA	T2L		150	10	47	50	0.07	68 or more	YES
	33	DTC124XM		FHA	T2L		150	22	47	50	0.05	68 or more	YES
	34	DTC144VM		FHA	T2L		150	47	10	50	0.03	33 or more	YES
	35	DTC144WM		FHA	T2L		150	47	22	50	0.03	56 or more	YES
	36	DTC123TM		FHA	T2L		150	2.2	—	50	0.1	100 to 600	YES
	37	DTC143TM		FHA	T2L		150	4.7	—	50	0.1	100 to 600	YES
	38	DTC114TM		FHA	T2L		150	10	—	50	0.1	100 to 600	YES
	39	DTC144TM		FHA	T2L		150	47	—	50	0.1	100 to 600	YES
SOT-416FL (EMT3F) [SC-89] 1616 size	40	DTA123EEB	*	HZG	TL	PNP	150	2.2	2.2	-50	-0.1	20 or more	YES
	41	DTA143EEB		HZG	TL		150	4.7	4.7	-50	-0.1	30 or more	YES
	42	DTA114EEB		HZG	TL		150	10	10	-50	-0.05	30 or more	YES
	43	DTA124EEB		HZG	TL		150	22	22	-50	-0.03	56 or more	YES
	44	DTA144EEB		HZG	TL		150	47	47	-50	-0.03	68 or more	YES
	45	DTA115EEB		HZG	TL		150	100	100	-50	-0.02	82 or more	YES
	46	DTA113ZEB		HZG	TL		150	1	10	-50	-0.1	33 or more	YES
	47	DTA123YEB		—	TL		150	2.2	10	-50	-0.1	33 or more	YES
	48	DTA123JEB		HZG	TL		150	2.2	47	-50	-0.1	80 or more	YES
	49	DTA143XEB		HZG	TL		150	4.7	10	-50	-0.1	30 or more	YES
	50	DTA143ZEB		HZG	TL		150	4.7	47	-50	-0.1	80 or more	YES
	51	DTA114YEB		HZG	TL		150	10	47	-50	-0.07	68 or more	YES
	52	DTA124XEB		HZG	TL		150	22	47	-50	-0.05	68 or more	YES
	53	DTA143TEB		HZG	TL		150	4.7	—	-50	-0.1	100 to 600	YES
	54	DTA114TEB		HZG	TL		150	10	—	-50	-0.1	100 to 600	YES
	55	DTC123EEB		—	TL		150	2.2	2.2	50	0.1	20 or more	YES
	56	DTC143EEB		HZG	TL		150	4.7	4.7	50	0.1	30 or more	YES
	57	DTC114EEB		HZG	TL		150	10	10	50	0.05	30 or more	YES
	58	DTC124EEB		HZG	TL		150	22	22	50	0.03	56 or more	YES
	59	DTC144EEB		HZG	TL		150	47	47	50	0.03	68 or more	YES
	60	DTC115EEB		—	TL		150	100	100	50	0.02	82 or more	YES
	61	DTC143TEB		HZG	TL		150	4.7	—	50	0.1	100 to 600	YES
	62	DTC113ZEB		HZG	TL		150	1	10	50	0.1	33 or more	YES
	63	DTC123YEB		—	TL		150	2.2	10	50	0.1	33 or more	YES
	64	DTC123JEB		HZG	TL		150	2.2	47	50	0.1	80 or more	YES
	65	DTC143XEB		HZG	TL		150	4.7	10	50	0.1	30 or more	YES
	66	DTC143ZEB		HZG	TL		150	4.7	47	50	0.1	80 or more	YES
	67	DTC114YEB		HZG	TL		150	10	47	50	0.07	68 or more	YES
	68	DTC124XEB		HZG	TL		150	22	47	50	0.05	68 or more	YES
69	DTC114TEB	HZG	TL	150	10	—	50	0.1	100 to 600	YES			


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

Digital Transistors

100mA Digital Transistors (For Automotive use)																
Package	Product No.					Polarity	P ₀ *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I ₀ (I _c) (A)	G _i (hFE)	Automotive Grade AEC-Q101			
	Quick Reference No.	Part No.	Grade Code		Packing code											
			General	Automotive												
	70	DTA123EE	*	FRA	TL	PNP	150	2.2	2.2	-50	-0.1	20 or more	YES			
	71	DTA143EE		FRA	TL		150	4.7	4.7	-50	-0.1	30 or more	YES			
	72	DTA114EE		FRA	TL		150	10	10	-50	-0.05	30 or more	YES			
	73	DTA124EE		FRA	TL		150	22	22	-50	-0.03	56 or more	YES			
	74	DTA144EE		FRA	TL		150	47	47	-50	-0.03	68 or more	YES			
	75	DTA115EE		FRA	TL		150	100	100	-50	-0.02	82 or more	YES			
	76	DTA113ZE		FRA	TL		150	1	10	-50	-0.1	33 or more	YES			
	77	DTA123YE		FRA	TL		150	2.2	10	-50	-0.1	33 or more	YES			
	78	DTA123JE		FRA	TL		150	2.2	47	-50	-0.1	80 or more	YES			
	79	DTA143XE		FRA	TL		150	4.7	10	-50	-0.1	30 or more	YES			
	80	DTA143ZE		FRA	TL		150	4.7	47	-50	-0.1	80 or more	YES			
	81	DTA114YE		FRA	TL		150	10	47	-50	-0.07	68 or more	YES			
	82	DTA124XE		FRA	TL		150	22	47	-50	-0.05	68 or more	YES			
	83	DTA143TE		FRA	TL		150	4.7	—	-50	-0.1	100 to 600	YES			
	84	DTA114TE		FRA	TL		150	10	—	-50	-0.1	100 to 600	YES			
	85	DTC123EE		FRA	TL		150	2.2	2.2	50	0.1	20 or more	YES			
	86	DTC143EE		FRA	TL		150	4.7	4.7	50	0.1	30 or more	YES			
	87	DTC114EE		FRA	TL		150	10	10	50	0.05	30 or more	YES			
	88	DTC124EE		FRA	TL		150	22	22	50	0.03	56 or more	YES			
	89	DTC144EE		FRA	TL		150	47	47	50	0.03	68 or more	YES			
	90	DTC115EE		FRA	TL		150	100	100	50	0.02	82 or more	YES			
	91	DTC113ZE		FRA	TL		150	1	10	50	0.1	33 or more	YES			
	92	DTC123YE		FRA	TL		150	2.2	10	50	0.1	33 or more	YES			
	93	DTC123JE		FRA	TL		150	2.2	47	50	0.1	80 or more	YES			
	94	DTC143XE		FRA	TL		150	4.7	10	50	0.1	30 or more	YES			
	95	DTC143ZE		FRA	TL		150	4.7	47	50	0.1	80 or more	YES			
	96	DTC114YE		FRA	TL		150	10	47	50	0.07	68 or more	YES			
	97	DTC124XE		FRA	TL		150	22	47	50	0.05	68 or more	YES			
	98	DTC143TE		FRA	TL		150	4.7	—	50	0.1	100 to 600	YES			
	99	DTC114TE		FRA	TL		150	10	—	50	0.1	100 to 600	YES			
		100		DTA123EUB	*		—	TL	PNP	200	2.2	2.2	-50	-0.1	20 or more	YES
		101		DTA143EUB			—	TL		200	4.7	4.7	-50	-0.1	30 or more	YES
		102		DTA114EUB			—	TL		200	10	10	-50	-0.05	30 or more	YES
103		DTA124EUB	—	TL		200	22	22		-50	-0.03	56 or more	YES			
104		DTA144EUB	—	TL		200	47	47		-50	-0.03	68 or more	YES			
105		DTA115EUB	HZG	TL		200	100	100		-50	-0.02	82 or more	YES			
106		DTA113ZUB	HZG	TL		200	1	10		-50	-0.1	33 or more	YES			
107		DTA123YUB	HZG	TL		200	2.2	10		-50	-0.1	33 or more	YES			
108		DTA123JUB	—	TL		200	2.2	47		-50	-0.1	80 or more	YES			
109		DTA143XUB	—	TL		200	4.7	10		-50	-0.1	30 or more	YES			
110		DTA143ZUB	—	TL		200	4.7	47		-50	-0.1	80 or more	YES			
111		DTA114YUB	—	TL		200	10	47		-50	-0.07	68 or more	YES			
112		DTA124XUB	HZG	TL		200	22	47		-50	-0.05	68 or more	YES			
113		DTA143TUB	HZG	TL		200	4.7	—		-50	-0.1	100 to 600	YES			
114		DTA114TUB	HZG	TL		200	10	—		-50	-0.1	100 to 600	YES			
115		DTC123EUB	—	TL		200	2.2	2.2		50	0.1	20 or more	YES			
116		DTC143EUB	—	TL		200	4.7	4.7		50	0.1	30 or more	YES			
117		DTC114EUB	—	TL		200	10	10		50	0.05	30 or more	YES			
118		DTC124EUB	—	TL		200	22	22		50	0.03	56 or more	YES			
119		DTC144EUB	—	TL		200	47	47		50	0.03	68 or more	YES			
120		DTC115EUB	—	TL		200	100	100		50	0.02	82 or more	YES			
121		DTC113ZUB	HZG	TL		200	1	10		50	0.1	33 or more	YES			
122		DTC123YUB	HZG	TL		200	2.2	10		50	0.1	33 or more	YES			
123		DTC123JUB	—	TL		200	2.2	47		50	0.1	80 or more	YES			
124		DTC143XUB	—	TL		200	4.7	10		50	0.1	30 or more	YES			
125		DTC143ZUB	—	TL		200	4.7	47		50	0.1	80 or more	YES			
126		DTC114YUB	—	TL		200	10	47		50	0.07	68 or more	YES			
127		DTC124XUB	HZG	TL		200	22	47		50	0.05	68 or more	YES			
128		DTC143TUB	HZG	TL		200	4.7	—		50	0.1	100 to 600	YES			
129	DTC114TUB	HZG	TL	200	10	—	50	0.1	100 to 600	YES						

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

100mA Digital Transistors (For Automotive use)

Package	Product No.					Polarity	P _D *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Packing code								
			General	Automotive									
	130	DTA114WUA	*	FRA	T106	PNP	200	10	4.7	-50	-0.1	24 or more	YES
	131	DTA144WUA		FRA	T106		200	47	22	-50	-0.03	56 or more	YES
	132	DTA123TUA		FRA	T106		200	2.2	-	-50	-0.1	100 to 600	YES
	133	DTA124TUA		FRA	T106		200	22	-	-50	-0.1	100 to 600	YES
	134	DTA144TUA		FRA	T106		200	47	-	-50	-0.1	100 to 600	YES
	135	DTA115TUA		FRA	T106		200	100	-	-50	-0.1	100 to 600	YES
	136	DTA114GUA		FRA	T106		200	-	10	-50	-0.1	30 or more	YES
	137	DTA144GUA		FRA	T106		200	-	47	-50	-0.1	68 or more	YES
	138	DTA115GUA		FRA	T106		200	-	100	-50	-0.1	82 or more	YES
	139	DTC114WUA		FRA	T106		200	10	4.7	50	0.1	24 or more	YES
	140	DTC144WUA		FRA	T106		200	47	22	50	0.03	56 or more	YES
	141	DTC123TUA		FRA	T106		200	2.2	-	50	0.1	100 to 600	YES
	142	DTC124TUA		FRA	T106	200	22	-	50	0.1	100 to 600	YES	
	143	DTC144TUA		FRA	T106	200	47	-	50	0.1	100 to 600	YES	
	144	DTC115TUA		FRA	T106	200	100	-	50	0.1	100 to 600	YES	
	145	DTC124GUA		FRA	T106	200	-	22	50	0.1	56 or more	YES	
	146	DTC144GUA		FRA	T106	200	-	47	50	0.1	68 or more	YES	
	147	DTA123EU3		HZG	T106	200	2.2	2.2	-50	-0.1	20 or more	YES	
	148	DTA143EU3		HZG	T106	200	4.7	4.7	-50	-0.1	30 or more	YES	
	149	DTA114EU3		HZG	T106	200	10	10	-50	-0.05	30 or more	YES	
	150	DTA124EU3		HZG	T106	200	22	22	-50	-0.03	56 or more	YES	
	151	DTA144EU3		HZG	T106	200	47	47	-50	-0.03	68 or more	YES	
	152	DTA115EU3		HZG	T106	200	100	100	-50	-0.02	82 or more	YES	
	153	DTA113ZU3		HZG	T106	200	1	10	-50	-0.1	33 or more	YES	
	154	DTA123YU3		HZG	T106	200	2.2	10	-50	-0.1	33 or more	YES	
	155	DTA123JU3		HZG	T106	200	2.2	47	-50	-0.1	80 or more	YES	
	156	DTA143XU3		HZG	T106	200	4.7	10	-50	-0.1	30 or more	YES	
	157	DTA143ZU3		HZG	T106	200	4.7	47	-50	-0.1	80 or more	YES	
	158	DTA114YU3		HZG	T106	200	10	47	-50	-0.07	68 or more	YES	
	159	DTA124XU3		HZG	T106	200	22	47	-50	-0.05	68 or more	YES	
	160	DTA143TU3		HZG	T106	200	4.7	-	-50	-0.1	100 to 600	YES	
	161	DTA114TU3		HZG	T106	200	10	-	-50	-0.1	100 to 600	YES	
	162	DTC123EU3		HZG	T106	200	2.2	2.2	50	0.1	20 or more	YES	
	163	DTC143EU3		HZG	T106	200	4.7	4.7	50	0.1	30 or more	YES	
	164	DTC114EU3		HZG	T106	200	10	10	50	0.05	30 or more	YES	
	165	DTC124EU3		HZG	T106	200	22	22	50	0.03	56 or more	YES	
	166	DTC144EU3		HZG	T106	200	47	47	50	0.03	68 or more	YES	
	167	DTC115EU3		HZG	T106	200	100	100	50	0.02	82 or more	YES	
	168	DTC113ZU3		HZG	T106	200	1	10	50	0.1	33 or more	YES	
	169	DTC123YU3		HZG	T106	200	2.2	10	50	0.1	33 or more	YES	
	170	DTC123JU3		HZG	T106	200	2.2	47	50	0.1	80 or more	YES	
	171	DTC143XU3		HZG	T106	200	4.7	10	50	0.1	30 or more	YES	
	172	DTC143ZU3		HZG	T106	200	4.7	47	50	0.1	80 or more	YES	
	173	DTC114YU3		HZG	T106	200	10	47	50	0.07	68 or more	YES	
	174	DTC124XU3		HZG	T106	200	22	47	50	0.05	68 or more	YES	
	175	DTC143TU3		HZG	T106	200	4.7	-	50	0.1	100 to 600	YES	
	176	DTC114TU3		HZG	T106	200	10	-	50	0.1	100 to 600	YES	
	177	DTC114GU3		HZG	T106	200	-	10	50	0.1	30 or more	YES	
178	DTC115GU3	HZG	T106	200	-	100	50	0.1	82 or more	YES			

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

Digital Transistors


100mA Digital Transistors (For Automotive use)													
Package	Product No.					Polarity	P ₀ *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I ₀ (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Packing code								
			General	Automotive									
<p>SOT-23 (SST3) 2924 size</p>	179	DTA123ECA	*	HZG	T116	PNP	200	2.2	2.2	-50	-0.1	20 or more	YES
	180	DTA143ECA		HZG	T116		200	4.7	4.7	-50	-0.1	30 or more	YES
	181	DTA114ECA		HZG	T116		200	10	10	-50	-0.05	30 or more	YES
	182	DTA124ECA		HZG	T116		200	22	22	-50	-0.03	56 or more	YES
	183	DTA144ECA		HZG	T116		200	47	47	-50	-0.03	68 or more	YES
	184	DTA115ECA		HZG	T116		200	100	100	-50	-0.02	82 or more	YES
	185	DTA113ZCA		HZG	T116		200	1	10	-50	-0.1	33 or more	YES
	186	DTA123YCA		HZG	T116		200	2.2	10	-50	-0.1	33 or more	YES
	187	DTA123JCA		HZG	T116		200	2.2	47	-50	-0.1	80 or more	YES
	188	DTA143XCA		HZG	T116		200	4.7	10	-50	-0.1	30 or more	YES
	189	DTA143ZCA		HZG	T116		200	4.7	47	-50	-0.1	80 or more	YES
	190	DTA114YCA		HZG	T116		200	10	47	-50	-0.07	68 or more	YES
	191	DTA124XCA		HZG	T116		200	22	47	-50	-0.05	68 or more	YES
	192	DTA144VCA		HZG	T116		200	47	10	-50	-0.03	33 or more	YES
	193	DTA144WCA		HZG	T116		200	47	22	-50	-0.03	56 or more	YES
	194	DTA123TCA		HZG	T116		200	2.2	—	-50	-0.1	100 to 600	YES
	195	DTA143TCA		HZG	T116		200	4.7	—	-50	-0.1	100 to 600	YES
	196	DTA114TCA		HZG	T116		200	10	—	-50	-0.1	100 to 600	YES
	197	DTA124TCA		HZG	T116		200	22	—	-50	-0.1	100 to 600	YES
	198	DTA144TCA		HZG	T116		200	47	—	-50	-0.1	100 to 600	YES
	199	DTA115TCA		HZG	T116		200	100	—	-50	-0.1	100 to 600	YES
	200	DTC123ECA		HZG	T116		200	2.2	2.2	50	0.1	20 or more	YES
	201	DTC143ECA		HZG	T116		200	4.7	4.7	50	0.1	30 or more	YES
	202	DTC114ECA		HZG	T116		200	10	10	50	0.05	30 or more	YES
	203	DTC124ECA		HZG	T116		200	22	22	50	0.03	56 or more	YES
	204	DTC144ECA		HZG	T116		200	47	47	50	0.03	68 or more	YES
	205	DTC115ECA		HZG	T116		200	100	100	50	0.02	82 or more	YES
	206	DTC113ZCA		HZG	T116		200	1	10	50	0.1	33 or more	YES
	207	DTC123YCA		HZG	T116		200	2.2	10	50	0.1	33 or more	YES
	208	DTC123JCA		HZG	T116		200	2.2	47	50	0.1	80 or more	YES
	209	DTC143XCA		HZG	T116		200	4.7	10	50	0.1	30 or more	YES
	210	DTC143ZCA		HZG	T116		200	4.7	47	50	0.1	80 or more	YES
	211	DTC114YCA		HZG	T116		200	10	47	50	0.07	68 or more	YES
	212	DTC124XCA		HZG	T116		200	22	47	50	0.05	68 or more	YES
	213	DTC144VCA		HZG	T116		200	47	10	50	0.03	33 or more	YES
	214	DTC144WCA		HZG	T116		200	47	22	50	0.03	56 or more	YES
	215	DTC123TCA		HZG	T116		200	2.2	—	50	0.1	100 to 600	YES
	216	DTC143TCA		HZG	T116		200	4.7	—	50	0.1	100 to 600	YES
	217	DTC114TCA		HZG	T116		200	10	—	50	0.1	100 to 600	YES
	218	DTC124TCA		HZG	T116		200	22	—	50	0.1	100 to 600	YES
	219	DTC144TCA		HZG	T116		200	47	—	50	0.1	100 to 600	YES
	220	DTC115TCA		HZG	T116		200	100	—	50	0.1	100 to 600	YES

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

Note2: *1 With reference land installed.

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

100mA Digital Transistors (For Automotive use)

Package	Product No.					Polarity	P _D *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Packing code								
			General	Automotive									
 SOT-346 (SMT3) [SC-59] 2928 size	221	DTA123EKA	*	FRA	T146	PNP	200	2.2	2.2	-50	-0.1	20 or more	YES
	222	DTA143EKA		FRA	T146		200	4.7	4.7	-50	-0.1	30 or more	YES
	223	DTA114EKA		FRA	T146		200	10	10	-50	-0.05	30 or more	YES
	224	DTA124EKA		FRA	T146		200	22	22	-50	-0.03	56 or more	YES
	225	DTA144EKA		FRA	T146		200	47	47	-50	-0.03	68 or more	YES
	226	DTA115EKA		FRA	T146		200	100	100	-50	-0.02	82 or more	YES
	227	DTA113ZKA		FRA	T146		200	1	10	-50	-0.1	33 or more	YES
	228	DTA123YKA		FRA	T146		200	2.2	10	-50	-0.1	33 or more	YES
	229	DTA123JKA		FRA	T146		200	2.2	47	-50	-0.1	80 or more	YES
	230	DTA143XKA		FRA	T146		200	4.7	10	-50	-0.1	30 or more	YES
	231	DTA143ZKA		FRA	T146		200	4.7	47	-50	-0.1	80 or more	YES
	232	DTA114YKA		FRA	T146		200	10	47	-50	-0.07	68 or more	YES
	233	DTA124XKA		FRA	T146		200	22	47	-50	-0.05	68 or more	YES
	234	DTA143TKA		FRA	T146		200	4.7	—	-50	-0.1	100 to 600	YES
	235	DTA114TKA		FRA	T146		200	10	—	-50	-0.1	100 to 600	YES
	236	DTC123EKA		FRA	T146		200	2.2	2.2	50	0.1	20 or more	YES
	237	DTC143EKA		FRA	T146		200	4.7	4.7	50	0.1	30 or more	YES
	238	DTC114EKA		FRA	T146		200	10	10	50	0.05	30 or more	YES
	239	DTC124EKA		FRA	T146		200	22	22	50	0.03	56 or more	YES
	240	DTC144EKA		FRA	T146		200	47	47	50	0.03	68 or more	YES
	241	DTC115EKA		FRA	T146		200	100	100	50	0.02	82 or more	YES
	242	DTC113ZKA		FRA	T146		200	1	10	50	0.1	33 or more	YES
	243	DTC123YKA		FRA	T146		200	2.2	10	50	0.1	33 or more	YES
	244	DTC123JKA		FRA	T146		200	2.2	47	50	0.1	80 or more	YES
	245	DTC143XKA		FRA	T146		200	4.7	10	50	0.1	30 or more	YES
246	DTC143ZKA	FRA	T146	200	4.7	47	50	0.1	80 or more	YES			
247	DTC114YKA	FRA	T146	200	10	47	50	0.07	68 or more	YES			
248	DTC124XKA	FRA	T146	200	22	47	50	0.05	68 or more	YES			
249	DTC143TKA	FRA	T146	200	4.7	—	50	0.1	100 to 600	YES			
250	DTC114TKA	FRA	T146	200	10	—	50	0.1	100 to 600	YES			

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

Note2: * With reference land installed.

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

Digital Transistors

Quick Reference for 100mA Digital Transistors (For Consumer only)														
Item	Part No.		R ₁ (kΩ)	R ₂ (kΩ)	Package						V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	
	PNP	NPN			SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416FL (EMT3F) [SC-89] 1616 size		SOT-323FL (UMT3F) [SC-85] 2021 size					
								P _D =150mW*1		P _D =200mW*1				
	PNP	NPN			PNP	NPN	PNP	NPN	PNP	NPN				
	Quick Reference No.													
R ₁ =R ₂ Potential Divider type	DTA023Ex	DTC023Ex	2.2	2.2	1	18	35	52	69	86	50	0.1	20 or more	
	DTA043Ex	DTC043Ex	4.7	4.7	2	19	36	53	70	87		0.1	20 or more	
	DTA014Ex	DTC014Ex	10	10	3	20	37	54	71	88		0.05	35 or more	
	DTA024Ex	DTC024Ex	22	22	4	21	38	55	72	89		0.03	60 or more	
	DTA044Ex	DTC044Ex	47	47	5	22	39	56	73	90		0.03	80 or more	
	DTA015Ex	DTC015Ex	100	100	6	23	40	57	74	91		0.02	80 or more	
R ₁ ≠R ₂ Leak Absorption type	DTA013Zx	DTC013Zx	1	10	7	24	41	58	75	92		0.1	30 or more	
	DTA023Yx	DTC023Yx	2.2	10	8	25	42	59	76	93		0.1	35 or more	
	DTA023Jx	DTC023Jx	2.2	47	9	26	43	60	77	94		0.1	80 or more	
	DTA043Xx	DTC043Xx	4.7	10	10	27	44	61	78	95		0.1	35 or more	
	DTA043Zx	DTC043Zx	4.7	47	11	28	45	62	79	96		0.1	80 or more	
	DTA014Yx	DTC014Yx	10	47	12	29	46	63	80	97		0.07	80 or more	
Type Using R ₁ Alone as Input Resistor	DTA024Xx	DTC024Xx	22	47	13	30	47	64	81	98		0.05	80 or more	
	DTA043Tx	DTC043Tx	4.7	—	14	31	48	65	82	99		0.1	100 to 600	
	DTA014Tx	DTC014Tx	10	—	15	32	49	66	83	100		0.1	100 to 600	
	DTA044Tx	DTC044Tx	47	—	16	33	50	67	84	101		0.06	100 to 600	
	DTA015Tx	DTC015Tx	100	—	17	34	51	68	85	102		0.1	100 to 600	
x: Packaging designation symbol					M		EB		UB					


Note1: PNP (—) symbol omitted.
 Note2: * With reference land installed.
 Note3: Package is JEDEC code. () : ROHM packages , [] : JEITA code.

100mA Digital Transistors (For Consumer only)

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

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

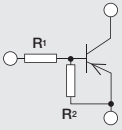
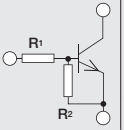



Digital Transistors

100mA Digital Transistors (For Consumer only)													
Package	Product No.					Polarity	P _D *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I ₀ (I _C) (A)	G _I (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Packing code								
			General	Automotive									
 SOT-323FL (UMT3F) [SC-85] 2021 size	69	DTA023EUB	—	—	TL	PNP	200	2.2	2.2	-50	-0.1	20 or more	—
	70	DTA043EUB	—	—	TL		200	4.7	4.7	-50	-0.1	20 or more	—
	71	DTA014EUB	—	—	TL		200	10	10	-50	-0.05	35 or more	—
	72	DTA024EUB	—	—	TL		200	22	22	-50	-0.03	60 or more	—
	73	DTA044EUB	—	—	TL		200	47	47	-50	-0.03	80 or more	—
	74	DTA015EUB	—	—	TL		200	100	100	-50	-0.02	80 or more	—
	75	DTA013ZUB	—	—	TL		200	1	10	-50	-0.1	30 or more	—
	76	DTA023YUB	—	—	TL		200	2.2	10	-50	-0.1	35 or more	—
	77	DTA023JUB	—	—	TL		200	2.2	47	-50	-0.1	80 or more	—
	78	DTA043XUB	—	—	TL		200	4.7	10	-50	-0.1	35 or more	—
	79	DTA043ZUB	—	—	TL		200	4.7	47	-50	-0.1	80 or more	—
	80	DTA014YUB	—	—	TL		200	10	47	-50	-0.07	80 or more	—
	81	DTA024XUB	—	—	TL		200	22	47	-50	-0.05	80 or more	—
	82	DTA043TUB	—	—	TL		200	4.7	—	-50	-0.1	100 to 600	—
	83	DTA014TUB	—	—	TL		200	10	—	-50	-0.1	100 to 600	—
	84	DTA044TUB	—	—	TL		200	47	—	-50	-0.06	100 to 600	—
	85	DTA015TUB	—	—	TL	200	100	—	-50	-0.1	100 to 600	—	
	86	DTC023EUB	—	—	TL	NPN	200	2.2	2.2	50	0.1	20 or more	—
	87	DTC043EUB	—	—	TL		200	4.7	4.7	50	0.1	20 or more	—
	88	DTC014EUB	—	—	TL		200	10	10	50	0.05	35 or more	—
	89	DTC024EUB	—	—	TL		200	22	22	50	0.03	60 or more	—
	90	DTC044EUB	—	—	TL		200	47	47	50	0.03	80 or more	—
	91	DTC015EUB	—	—	TL		200	100	100	50	0.02	80 or more	—
	92	DTC013ZUB	—	—	TL		200	1	10	50	0.1	30 or more	—
	93	DTC023YUB	—	—	TL		200	2.2	10	50	0.1	35 or more	—
	94	DTC023JUB	—	—	TL		200	2.2	47	50	0.1	80 or more	—
	95	DTC043XUB	—	—	TL		200	4.7	10	50	0.1	35 or more	—
	96	DTC043ZUB	—	—	TL		200	4.7	47	50	0.1	80 or more	—
	97	DTC014YUB	—	—	TL		200	10	47	50	0.07	80 or more	—
	98	DTC024XUB	—	—	TL		200	22	47	50	0.05	80 or more	—
	99	DTC043TUB	—	—	TL		200	4.7	—	50	0.1	100 to 600	—
	100	DTC014TUB	—	—	TL		200	10	—	50	0.1	100 to 600	—
	101	DTC044TUB	—	—	TL		200	47	—	50	0.06	100 to 600	—
	102	DTC015TUB	—	—	TL		200	100	—	50	0.1	100 to 600	—

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




Note2: * With reference land installed.

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

Quick Reference for 500mA Digital Transistors																
Item	Part No.		R ₁ (kΩ)	R ₂ (kΩ)	Package						V _{CC} (V _{CEO}) (V)	I _o (I _c) (A)	G _i (h _{FE})			
	PNP	NPN			SOT-323 (UMT3) [SC-70] 2021 size		SOT-23 (SST3) 2924 size		SOT-346 (SMT3) [SC-59] 2928 size							
																
	P _D =200mW*1															
					PNP	NPN	PNP	NPN	PNP	NPN				Quick Reference No.		
R ₁ =R ₂ Potential Divider type	DTB113Ex	DTD113Ex	1	1	1	9	17	25	33	41	50	0.5	33 or more			
	DTB123Ex	DTD123Ex	2.2	2.2	2	10	18	26	34	42			39 or more			
	DTB143Ex	DTD143Ex	4.7	4.7	3	11	19	27	35	43			47 or more			
	DTB114Ex	DTD114Ex	10	10	4	12	20	28	36	44			56 or more			
R ₁ ≠R ₂ Leak Absorption type	DTB113Zx	DTD113Zx	1	10	5	13	21	29	37	45	50	0.5	56 or more			
	DTB123Yx	DTD123Yx	2.2	10	6	14	22	30	38	46			56 or more			
Type Using R ₂ Alone as Bleeder Resistor	DTB114Gx	DTD114Gx	—	10	7	15	23	31	39	47	40		56 or more			
Type Using R ₁ Alone as Input Resistor	DTB123Tx	DTD123Tx	2.2	—	8	16	24	32	40	48			100 to 600			
x: Packaging designation symbol					U		C		K							

Note1: PNP (—) symbol omitted. Note2: *1 With reference land installed.
 Note3: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

: Under Development

Package	Product No.					Polarity	P _D *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Packing code								
			General	Automotive									
 SOT-323 (UMT3) [SC-70] 2021 size	1	DTB113EU3	*	HZG	T106	PNP	200	1	1	-50	-0.5	33 or more	YES
	2	DTB123EU3		HZG	T106		200	2.2	2.2	-50	-0.5	39 or more	YES
	3	DTB143EU3		HZG	T106		200	4.7	4.7	-50	-0.5	47 or more	YES
	4	DTB114EU3		HZG	T106		200	10	10	-50	-0.5	56 or more	YES
	5	DTB113ZU3		HZG	T106		200	1	10	-50	-0.5	56 or more	YES
	6	DTB123YU3		HZG	T106		200	2.2	10	-50	-0.5	56 or more	YES
	7	DTB114GU3		HZG	T106		200	—	10	-50	-0.5	56 or more	YES
	8	DTB123TU3		HZG	T106		200	2.2	—	-40	-0.5	100 to 600	YES
	9	DTD113EU3		HZG	T106		200	1	1	50	0.5	33 or more	YES
	10	DTD123EU3		HZG	T106		200	2.2	2.2	50	0.5	39 or more	YES
	11	DTD143EU3		HZG	T106		200	4.7	4.7	50	0.5	47 or more	YES
	12	DTD114EU3		HZG	T106		200	10	10	50	0.5	56 or more	YES
	13	DTD113ZU3		HZG	T106		200	1	10	50	0.5	56 or more	YES
	14	DTD123YU3		HZG	T106		200	2.2	10	50	0.5	56 or more	YES
	15	DTD114GU3		HZG	T106		200	—	10	50	0.5	56 or more	YES
	16	DTD123TU3		HZG	T106		200	2.2	—	40	0.5	100 to 600	YES
 SOT-23 (SOT-23) 2924 size	17	DTB113EC	*	HZG	T116	PNP	200	1	1	-50	-0.5	33 or more	YES
	18	DTB123EC		HZG	T116		200	2.2	2.2	-50	-0.5	39 or more	YES
	19	DTB143EC		HZG	T116		200	4.7	4.7	-50	-0.5	47 or more	YES
	20	DTB114EC		HZG	T116		200	10	10	-50	-0.5	56 or more	YES
	21	DTB113ZC		HZG	T116		200	1	10	-50	-0.5	56 or more	YES
	22	DTB123YC		HZG	T116		200	2.2	10	-50	-0.5	56 or more	YES
	23	DTB114GC		HZG	T116		200	—	10	-50	-0.5	56 or more	YES
	24	DTB123TC		HZG	T116		200	2.2	—	-40	-0.5	100 to 600	YES
	25	DTD113EC		HZG	T116		200	1	1	50	0.5	33 or more	YES
	26	DTD123EC		HZG	T116		200	2.2	2.2	50	0.5	39 or more	YES
	27	DTD143EC		HZG	T116		200	4.7	4.7	50	0.5	47 or more	YES
	28	DTD114EC		HZG	T116		200	10	10	50	0.5	56 or more	YES
	29	DTD113ZC		HZG	T116		200	1	10	50	0.5	56 or more	YES
	30	DTD123YC		HZG	T116		200	2.2	10	50	0.5	56 or more	YES
	31	DTD114GC		HZG	T116		200	—	10	50	0.5	56 or more	YES
	32	DTD123TC		HZG	T116		200	2.2	—	40	0.5	100 to 600	YES
 SOT-346 (SMT3) [SC-59] 2928 size	33	DTB113EK	*	FRA	T146	PNP	200	1	1	-50	-0.5	33 or more	YES
	34	DTB123EK		FRA	T146		200	2.2	2.2	-50	-0.5	39 or more	YES
	35	DTB143EK		FRA	T146		200	4.7	4.7	-50	-0.5	47 or more	YES
	36	DTB114EK		FRA	T146		200	10	10	-50	-0.5	56 or more	YES
	37	DTB113ZK		FRA	T146		200	1	10	-50	-0.5	56 or more	YES
	38	DTB123YK		FRA	T146		200	2.2	10	-50	-0.5	56 or more	YES
	39	DTB114GK		—	T146		200	—	10	-50	-0.5	56 or more	—
	40	DTB123TK		—	T146		200	2.2	—	-40	-0.5	100 to 600	—
	41	DTD113EK		FRA	T146		200	1	1	50	0.5	33 or more	YES
	42	DTD123EK		FRA	T146		200	2.2	2.2	50	0.5	39 or more	YES
	43	DTD143EK		FRA	T146		200	4.7	4.7	50	0.5	47 or more	YES
	44	DTD114EK		FRA	T146		200	10	10	50	0.5	56 or more	YES
	45	DTD113ZK		FRA	T146		200	1	10	50	0.5	56 or more	YES
	46	DTD123YK		FRA	T146		200	2.2	10	50	0.5	56 or more	YES
	47	DTD114GK		—	T146		200	—	10	50	0.5	56 or more	—
	48	DTD123TK		—	T146		200	2.2	—	40	0.5	100 to 600	—

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

: Under Development

Digital Transistors

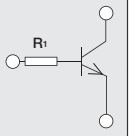



Quick Reference for 12V/500mA Digital Transistors											
Item	Part No.		R ₁ (kΩ)	R ₂ (kΩ)	Package				V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})
	PNP	NPN			SOT-723 (VMT3) [SC-105AA] 1212 size		SOT-416 (EMT3) [SC-75A] 1616 size				
					P _D =150mW* ¹						
					PNP	NPN	PNP	NPN			
	Quick Reference No.										
R ₁ =R ₂ Potential Divider type	DTB543Ex	DTD543Ex	4.7	4.7	1	6	11	16	12	0.5	115 or more
R ₁ ≠R ₂ Leak Absorption type	DTB513Zx	DTD513Zx	1	10	2	7	12	17			140 or more
	DTB523Yx	DTD523Yx	2.2	10	3	8	13	18			140 or more
	DTB543Xx	DTD543Xx	4.7	10	4	9	14	19			140 or more
	DTB543Zx	DTD543Zx	4.7	47	5	10	15	20			140 or more
x: Packaging designation symbol					M		E				

Note1: PNP (-) symbol omitted.
 Note2: * With reference land installed.
 Note3: Package is JEDEC code. (): ROHM packages, []: JEITA code.


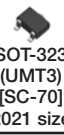

12V/500mA Digital Transistors														
Package	Product No.					Polarity	P _D * ¹ (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101	
	Quick Reference No.	Part No.	Grade Code		Packing code									
			General	Automotive										
	1	DTB543EM	-	-	T2L	PNP	150	4.7	4.7	-12	-0.5	115 or more	-	
	2	DTB513ZM	-	-	T2L		150	1	10	-12	-0.5	140 or more	-	
	3	DTB523YM	-	-	T2L		150	2.2	10	-12	-0.5	140 or more	-	
	4	DTB543XM	-	-	T2L		150	4.7	10	-12	-0.5	140 or more	-	
	5	DTB543ZM	-	-	T2L		150	4.7	47	-12	-0.5	140 or more	-	
	*	6	DTD543EM	-	-	T2L	NPN	150	4.7	4.7	12	0.5	115 or more	-
		7	DTD513ZM	-	-	T2L		150	1	10	12	0.5	140 or more	-
		8	DTD523YM	-	-	T2L		150	2.2	10	12	0.5	140 or more	-
		9	DTD543XM	-	-	T2L		150	4.7	10	12	0.5	140 or more	-
		10	DTD543ZM	-	-	T2L		150	4.7	47	12	0.5	140 or more	-
	11	DTB543EE	-	-	TL	PNP	150	4.7	4.7	-12	-0.5	115 or more	-	
	12	DTB513ZE	-	-	TL		150	1	10	-12	-0.5	140 or more	-	
	13	DTB523YE	-	-	TL		150	2.2	10	-12	-0.5	140 or more	-	
	14	DTB543XE	-	-	TL		150	4.7	10	-12	-0.5	140 or more	-	
	15	DTB543ZE	-	-	TL		150	4.7	47	-12	-0.5	140 or more	-	
	*	16	DTD543EE	-	-	TL	NPN	150	4.7	4.7	12	0.5	115 or more	-
		17	DTD513ZE	-	-	TL		150	1	10	12	0.5	140 or more	-
		18	DTD523YE	-	-	TL		150	2.2	10	12	0.5	140 or more	-
		19	DTD543XE	-	-	TL		150	4.7	10	12	0.5	140 or more	-
		20	DTD543ZE	-	-	TL		150	4.7	47	12	0.5	140 or more	-

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

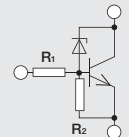

Transistors

Quick Reference for Muting Digital Transistors										
Item	Part No.		R ₁ (kΩ)	R ₂ (kΩ)	Package			V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})
	PNP	NPN			SOT-323FL (UMT3F) [SC-85] 2021 size	SOT-323 (UMT3) [SC-70] 2021 size	SOT-346 (SMT3) [SC-59] 2928 size			
Specifications	—									
					P _D =200mW*1					
Type Using R ₁ Alone as Input Resistor	—	DTC623Tx	2.2	—		DTC623TU	DTC623TK	20	0.6	820 to 2,700
	—	DTC643Tx	4.7	—		DTC643TU	DTC643TK			820 to 2,700
	—	DTC614Tx	10	—		DTC614TU	DTC614TK			820 to 2,700
	—	DTC923TUB	2.2	—	DTC923TUB			40 (V _{EBO})	0.4	820 to 2,700
	—	DTC943TUB	4.7	—	DTC943TUB					820 to 2,700
—	DTC914TUB	10	—	DTC914TUB			820 to 2,700			
					UB	U	K			


Note1: *1 With reference land installed.
 Note2: Package is JEDEC code. () : ROHM packages, [] : JEITA code.

Muting Digital Transistors												
Package	Product No.			Polarity	P _D *1 (mW)	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101	
	Part No.	Grade Code										Packing code
 SOT-323FL (UMT3F) [SC-85] 2021 size	DTC923TUB	*	—	TL	NPN	200	2.2	—	40 (V _{EBO})	0.4	820 to 2,700	—
	DTC943TUB		—	TL		200	4.7	—	40 (V _{EBO})	0.4	820 to 2,700	—
	DTC914TUB		—	TL		200	10	—	40 (V _{EBO})	0.4	820 to 2,700	—
 SOT-323 (UMT3) [SC-70] 2021 size	DTC623TU	*	—	T106	NPN	200	2.2	—	20	0.6	820 to 2,700	—
	DTC643TU		—	T106		200	4.7	—	20	0.6	820 to 2,700	—
	DTC614TU		—	T106		200	10	—	20	0.6	820 to 2,700	—
 SOT-346 (SMT3) [SC-59] 2928 size	DTC623TK	*	—	T146	NPN	200	2.2	—	20	0.6	820 to 2,700	—
	DTC643TK		—	T146		200	4.7	—	20	0.6	820 to 2,700	—
	DTC614TK		—	T146		200	10	—	20	0.6	820 to 2,700	—

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




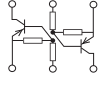
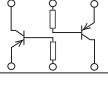
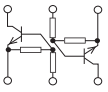
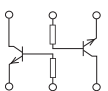
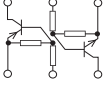
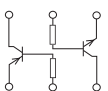
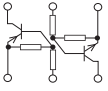
Quick Reference for Power Digital Transistors									
Item	Part No.		R ₁ (kΩ)	R ₂ (kΩ)	Package	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	G _i (h _{FE})	
	PNP	NPN							
Specifications	—				SOT-89 (MPT3) [SC-62] 4540 size 				
					P _D =0.5W*1				
Driver	—	DTDG23YP	2.2	10	DTDG23YP	60±10	1	300 or more	
	—	DTDG14GP	—	10	DTDG14GP			300 or more	

Note1: *1 With reference land installed.
 Note2: For internal circuit, please see the technical specifications.
 Note3: Package is JEDEC code. () : ROHM packages, [] : JEITA code.

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



Note1: *General part No. have no grade code.
 Note2: *1 With reference land installed.
 Note3: For internal circuit, please see the technical specifications.
 Note4: Package is JEDEC code. () : ROHM packages, [] : JEITA code.

Complex Digital Transistors

100mA Complex Digital Transistors (Including Automotive use)									
Configuration	Equivalent Circuit Diagram (TOP View)	SOT-563 (EMT6) [SC-107C] 1616 size	SOT-363 (UMT6) [SC-88] 2021 size	SOT-457 (SMT6) [SC-74] 2928 size	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _o (I _c) (A)
									
PNP×2		EMB10	UMB10N	IMB10A	DTA123J×2	2.2	47	50	0.1
		EMB11	UMB11N	IMB11A	DTA114E×2	10	10		0.05
		EMB2	UMB2N	IMB2A	DTA144E×2	47	47		0.03
		EMB3	UMB3N	IMB3A	DTA143T×2	4.7	—		0.1
		EMB4	UMB4N		DTA114T×2	10	—		0.1
NPN×2		EMH10	UMH10N		DTC123J×2	2.2	47		0.1
		EMH25	UMH25N		DTC143Z×2	4.7	47		0.1
		EMH11	UMH11N	IMH11A	DTC114E×2	10	10		0.05
		EMH9	UMH9N	IMH9A	DTC114Y×2	10	47		0.07
		EMH1	UMH1N	IMH1A	DTC124E×2	22	22		0.03
		EMH2	UMH2N	IMH2A	DTC144E×2	47	47	0.03	
		EMH3	UMH3N	IMH3A	DTC143T×2	4.7	—	0.1	
		EMH4	UMH4N	IMH4A	DTC114T×2	10	—	0.1	
			UMH8N						
		PNP+NPN Complimentary			UMD25N		DTA123J	2.2	47
	UMD22N				DTC123J	2.2	47		
EMD22	UMD22N				DTA143Z	4.7	47	0.1	
					DTC143Z	4.7	47		
EMD3	UMD3N			IMD3A	DTA114E	10	10	0.05	
					DTC114E	10	10		
EMD9	UMD9N			IMD9A	DTA114Y	10	47	0.07	
					DTC114Y	10	47		
EMD2	UMD2N		IMD2A	DTA124E	22	22	0.03		
				DTC124E	22	22			
EMD12	UMD12N			DTA144E	47	47	0.03		
				DTC144E	47	47			
	EMD6	UMD6N	IMD6A	DTA143T	4.7	—	0.1		
				DTC143T	4.7	—			
PNP+NPN Different type		EMD5	UMD5N		DTA143X	4.7	10	0.1	
					DTC144E	47	47	0.03	
		EMD4	UMD4N		DTA114Y	10	47	0.1	
					DTC114Y	47	47	0.03	

Note1: For Pin location, please see the technical specifications.
 Note2: PNP (—) symbol omitted.
 Note3: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

Transistors

100mA Complex Digital Transistors (Including Automotive use)											
Package	Configuration	Product No.				Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101
		Part No.	Grade Code		Packing code						
			General	Automotive							
	PNP×2	EMB10	FHA	T2R	DTA123J×2	2.2	47	-50	-0.1	YES	
		EMB11	FHA	T2R	DTA114E×2	10	10		-0.05	YES	
		EMB2	FHA	T2R	DTA144E×2	47	47		-0.03	YES	
		EMB3	FHA	T2R	DTA143T×2	4.7	—		-0.1	YES	
		EMB4	FHA	T2R	DTA114T×2	10	—		-0.1	YES	
	NPN×2	EMH10	FHA	T2R	DTC123J×2	2.2	47	50	0.1	YES	
		EMH25	FHA	T2R	DTC143Z×2	4.7	47		0.1	YES	
		EMH11	FHA	T2R	DTC114E×2	10	10		0.05	YES	
		EMH9	FHA	T2R	DTC114Y×2	10	47		0.07	YES	
		EMH1	FHA	T2R	DTC124E×2	22	22		0.03	YES	
		EMH2	FHA	T2R	DTC144E×2	47	47		0.03	YES	
		EMH3	FHA	T2R	DTC143T×2	4.7	—		0.1	YES	
		EMH4	FHA	T2R	DTC114T×2	10	—		0.1	YES	
	PNP+NPN Complimentary	EMD22	FHA	T2R	DTA143Z	4.7	47	-50	-0.1	YES	
		EMD3	FHA	T2R	DTC143Z	4.7	47	50	0.1	YES	
					DTA114E	10	10	-50	-0.05	YES	
		EMD9	FHA	T2R	DTC114E	10	10	50	0.05	YES	
					DTA114Y	10	47	-50	-0.07	YES	
		EMD2	FHA	T2R	DTC114Y	10	47	50	0.07	YES	
					DTA124E	22	22	-50	-0.03	YES	
		EMD12	FHA	T2R	DTC124E	22	22	50	0.03	YES	
					DTA144E	47	47	-50	-0.03	YES	
		EMD6	FHA	T2R	DTC144E	47	47	50	0.03	YES	
	DTA143T				4.7	—	-50	-0.1	YES		
	PNP+NPN Different type	EMD5	—	T2R	DTC143T	4.7	—	50	0.1	YES	
					DTA143X	4.7	10	-50	-0.1	—	
		EMD4	—	T2R	DTC144E	47	47	50	0.03	—	
					DTA114Y	10	47	-50	-0.1	—	
	PNP×2	UMB10N	FHA	TN	DTA123J×2	2.2	47	-50	-0.1	YES	
		UMB11N	FHA	TN	DTA114E×2	10	10		-0.05	YES	
		UMB2N	FHA	TN	DTA144E×2	47	47		-0.03	YES	
		UMB3N	FHA	TN	DTA143T×2	4.7	—		-0.1	YES	
		UMB4N	FHA	TN	DTA114T×2	10	—		-0.1	YES	
	NPN×2	UMH10N	FHA	TN	DTC123J×2	2.2	47	50	0.1	YES	
		UMH25N	FHA	TN	DTC143Z×2	4.7	47		0.1	YES	
		UMH11N	FHA	TN	DTC114E×2	10	10		0.05	YES	
		UMH9N	FHA	TN	DTC114Y×2	10	47		0.07	YES	
		UMH1N	FHA	TN	DTC124E×2	22	22		0.03	YES	
		UMH2N	FHA	TN	DTC144E×2	47	47		0.03	YES	
		UMH3N	FHA	TN	DTC143T×2	4.7	—		0.1	YES	
		UMH4N	FHA	TN	DTC114T×2	10	—		0.1	YES	
		New UMH8N	—	TR	DTC114T×2	10	—		0.1	—	
		PNP+NPN Complimentary	UMD25N	—	TR	DTA123J	2.2		47	-50	-0.1
	UMD22N		FHA	TR	DTC123J	2.2	47	50	0.1	—	
					DTA143Z	4.7	47	-50	-0.1	YES	
	UMD3N		FHA	TR	DTC143Z	4.7	47	50	0.1	YES	
					DTA114E	10	10	-50	-0.05	YES	
	UMD9N		FHA	TR	DTC114E	10	10	50	0.05	YES	
					DTA114Y	10	47	-50	-0.07	YES	
	UMD2N		FHA	TR	DTC114Y	10	47	50	0.07	YES	
					DTA124E	22	22	-50	-0.03	YES	
	UMD12N		FHA	TR	DTC124E	22	22	50	0.03	YES	
		DTA144E			47	47	-50	-0.03	YES		
	UMD6N	FHA	TR	DTC144E	47	47	50	0.03	YES		
				DTA143T	4.7	—	-50	-0.1	YES		
	PNP+NPN Different type	UMD5N	—	TR	DTC143T	4.7	—	50	0.1	—	
DTA143X					4.7	10	-50	-0.1	—		
UMD4N		—	TR	DTC144E	47	47	50	0.03	—		
				DTA114Y	10	47	-50	-0.1	—		
							50	0.03	—		

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.

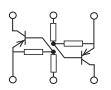
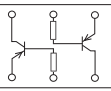
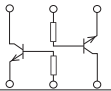
Complex Digital Transistors

100mA Complex Digital Transistors (Including Automotive use)											
Package	Configuration	Product No.			Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101	
		Part No.	Grade Code								Packing code
			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	FRA	T110	DTC114E×2	10	10	50	0.05	—	
		IMH9A	FRA	T110	DTC114Y×2	10	47		0.07	—	
		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	FRA	T108	DTA114E	10	10	-50	-0.05	—	
					DTC114E	10	10	50	0.05		
		IMD9A	FRA	T108	DTA114Y	10	47	-50	-0.07	—	
					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: *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 100mA Complex Digital Transistors (For Consumer only) 1							
Configuration	Equivalent Circuit Diagram (TOP View)	SOT-563 (EMT6) [SC-107C] 1616 size	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)
		Part No.					
PNP×2		EMB60	DTA023J×2	2.2	47	50	0.1
		EMB75	DTA043Z×2	4.7	47		0.1
		EMB59	DTA014Y×2	10	47		0.07
		EMB61	DTA014E×2	10	10		0.05
		EMB51	DTA024E×2	22	22		0.03
		EMB52	DTA044E×2	47	47		0.03
NPN×2		EMB53	DTA043T×2	4.7	—		0.1
		EMH60	DTC023J×2	2.2	47		0.1
		EMH75	DTC043Z×2	4.7	47		0.1
		EMH61	DTC014E×2	10	10		0.05
		EMH59	DTC014Y×2	10	47		0.07
		EMH51	DTC024E×2	22	22		0.03
PNP+NPN Complimentary		EMD72	DTA043Z	4.7	47	0.1	
			DTC043Z	4.7	47	0.1	
		EMD53	DTA014E	10	10	0.05	
			DTC014E	10	10	0.05	
		EMD59	DTA014Y	10	47	0.07	
			DTC014Y	10	47	0.07	
		EMD52	DTA024E	22	22	0.03	
			DTC024E	22	22	0.03	
		EMD62	DTA044E	47	47	0.03	
			DTC044E	47	47	0.03	

Note1: For Pin location, please see the technical specifications.
 Note2: PNP (—) symbol omitted.
 Note3: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

100mA Complex Digital Transistors (For Consumer only) 1											
Package	Configuration	Product No.				Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101
		Part No.	Grade Code		Packing code						
			General	Automotive							
	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	—	
	NPN×2	EMB53	—	T2R	DTA043T×2	4.7	—		-0.1	—	
		EMH60	—	T2R	DTC023J×2	2.2	47		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	—	
	PNP+NPN Complimentary	EMH52	—	T2R	DTC044E×2	47	47	0.03	—		
		EMH53	—	T2R	DTC043T×2	4.7	—	0.1	—		
		EMD72	—	T2R	DTA043Z	4.7	47	-50	-0.1	—	
			—	T2R	DTC043Z	4.7	47	50	0.1	—	
		EMD59	—	T2R	DTA014Y	10	47	-50	-0.07	—	
			—	T2R	DTC014Y	10	47	50	0.07	—	
		EMD53	—	T2R	DTA014E	10	10	-50	-0.05	—	
			—	T2R	DTC014E	10	10	50	0.05	—	
EMD52	—	T2R	DTA024E	22	22	-50	-0.03	—			
	—	T2R	DTC024E	22	22	50	0.03	—			
EMD62	—	T2R	DTA044E	47	47	-50	-0.03	—			
	—	T2R	DTC044E	47	47	50	0.03	—			

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.

Complex Digital Transistors

Quick Reference for 100mA Complex Digital Transistors (For Consumer only) 2									
Configuration	Equivalent Circuit Diagram (TOP View)	SOT-553 (EMT5) [SC-107BB] 1616 size	SOT-353 (UMT5) [SC-88A] 2021 size	SOT-25 (SMT5) [SC-74A] 2928 size	Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)
		Part No.							
PNP×2		EMA5	UMA5N	FMA5A	DTA123J×2	2.2	47	50	0.1
			UMA9N	FMA9A	DTA114E×2	10	10		0.05
			UMA1N	FMA1A	DTA124E×2	22	22		0.03
			UMA2N	FMA2A	DTA144E×2	47	47		0.03
		EMA3	UMA3N	FMA3A	DTA143T×2	4.7	—		0.1
		EMA4	UMA4N	FMA4A	DTA114T×2	10	—		0.1
NPN×2		EMG11	UMG11N		DTC123J×2	2.2	47		0.1
		EMG8	UMG8N		DTC143Z×2	4.7	47		0.1
		EMG9	UMG9N	FMG9A	DTC114E×2	10	10		0.05
		EMG5	UMG5N		DTC114Y×2	10	47		0.07
		EMG1	UMG1N	FMG1A	DTC124E×2	22	22		0.03
		EMG2	UMG2N	FMG2A	DTC144E×2	47	47		0.03
		EMG3	UMG3N	FMG3A	DTC143T×2	4.7	—	0.1	
		EMG4	UMG4N	FMG4A	DTC114T×2	10	—	0.1	

Note1: For Pin location, please see the technical specifications.
 Note2: PNP (—) symbol omitted.
 Note3: Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

100mA Complex Digital Transistors (For Consumer only) 2											
Package	Configuration	Product No.			Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101	
		Part No.	Grade Code								Packing code
			General	Automotive							
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	DTA114Tx2	10	—	-50	-0.1	—	
		EMG11	—	T2R	DTC123J×2	2.2	47	50	0.1	—	
	NPN×2	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	DTC114Tx2	10	—	50	0.1	—	
		EMG6	—	T2R	DTC144Tx2	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	DTA114Tx2	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	DTC114Tx2	10	—	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	DTA114Tx2	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	DTC114Tx2	10	—	50	0.1	—	
		FMG6A	—	T148	DTC144Tx2	47	—	50	0.1	—	

Note1: *General part No. have no grade code.
 Note2: For No.1 Pin location, please see the technical specifications.
 Note3: Package is JEDEC Code. () : ROHM Packages, [] : JEITA code.

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

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: PNP (-) symbol omitted.
 Note3: Package is JEDEC code. (): ROHM Packages, []: JEITA code.

Complex Digital Transistors (For Power Management, Muting and Driver)											
Package	Configuration	Product No.			Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CE0}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101	
		Part No.	General	Automotive							Packing code
	PNP+NPN Power Management	EMD29	*	-	T2R	DTB513Z DTC114E	1 10	10 10	-12 50	-0.5 0.1	-
	NPN×2 Muting	UMH33N	*	-	TN	DTC923TUB×2	2.2	-	40 (V _{EB0})	0.4	-
		UMH37N		-	TN	DTC914TUB×2	10	-	40 (V _{EB0})	0.4	-
	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	-
	NPN×2 Driver	QSH29	*	-	TR	Exclusive Chip×2	-	10	60±10	0.5	-

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

IC Transistor Array

The following products are belonging to ICs. (Refer P.22) Please ask IC product group for inquiry.

Transistor Arrays											
Part No.	Number of bit	Output Withstand Voltage (V)	Output Saturation Voltage (V)	Output Current (mA)	Input Resistance (kΩ)	Input/Output Relation	Input Active Level	Output Current Relation	Circuit Construction	Features	Package
BA12003DF-Z	7	60	1.46*	500	2.7	Inverting type	H	Sink	Darlington	Built-in surge/Absorbing diode	SOP-J16A
BA12004DF-Z	7	60	1.46*	500	10.5	Inverting type	H	Sink	Darlington	Built-in surge/Absorbing diode	SOP-J16A

*Output Current=350mA

Packages

Dimensions (Unit: mm)

DFN0604-3 (VML0604) 	DFN0806-3 (VML0806) 	DFN1006-3 (VML1006) [SC-101] 	SOT-723 (VMT3) [SC-105AA] 	(VMT6) [SC-105B] 	SOT-416FL (EMT3F) [SC-89] 	SOT-416 (EMT3) [SC-75A] 	SOT-553 (EMT5) [SC-107BB]
SOT-563 (EMT6) [SC-107C] 	SOT-323FL (UMT3F) [SC-85] 	SOT-323 (UMT3) [SC-70] 	SOT-353 (UMT5) [SC-88A] 	SOT-363 (UMT6) [SC-88] 			
SOT-23 (SST3) 	SOT-346 (SMT3) [SC-59] 	SOT-25 (SMT5) [SC-74A] 	SOT-457 (SMT6) [SC-74] 	(TSST8) 			
SOT-323T (TUMT3) [SC-113A] 	SOT-353T (TUMT5) [SC-113CA] 	SOT-363T (TUMT6) [SC-113DA] 	SOT-346T (TSMT3) [SC-96] 	SOT-25T (TSMT5) 			
SOT-457T (TSMT6) [SC-95] 	(TSMT8) 	DFN1616-6 	DFN1616-6W 	(HEML1616L7 Single) (DFN1616-7T) 			
(HUML2020L3) (DFN2020-3S) 	(HUML2020L8 Single) (DFN2020-8S) 	(HUML2020L8 Dual) (DFN2020-8D) 	(HSML3030L10) 				
(HSML3333L9) (DFN3333-9DC) 	(HSMT8) 	SOT-89 (MPT3) [SC-62] 	(SOP8) 				

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

Transistors

Dimensions (Unit: mm)

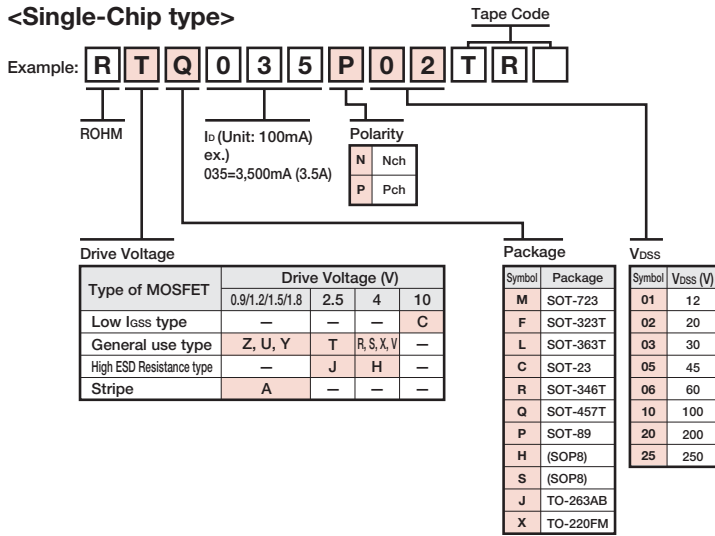
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<p>(HSOP8 Symmetry Dual)</p>	<p>(HSOP8 Drain Common Dual)</p>		
<p>TO-252*1 (DPAK)</p>	<p>TO-252*2 (DPAK)</p>	<p>TO-263S (LPTS) [SC-83] (D2PAK)</p>	<p>TO-263AB (LPTL)</p>
<p>(TO-220FM)*3 (TO-220FP)</p>	<p>(TO-220FM)*4 (TO-220FP)</p>	<p>TO-247AD (TO-247)*5</p>	<p>TO-247AD (TO-247N)*6</p>

Note1: *1 Taping code: TL, *2 Taping code: TL1
 Note2: *3 Packing code: -, *4 Packing code: C7 G
 Note3: *5 Packing code: C13, *6 Packing code: C11
 Note4: Package is JEDEC code. () : ROHM Packages, [] : JEITA code, < > : GENERAL code
 Note5: For details of dimensions, please refer to the technical specifications.

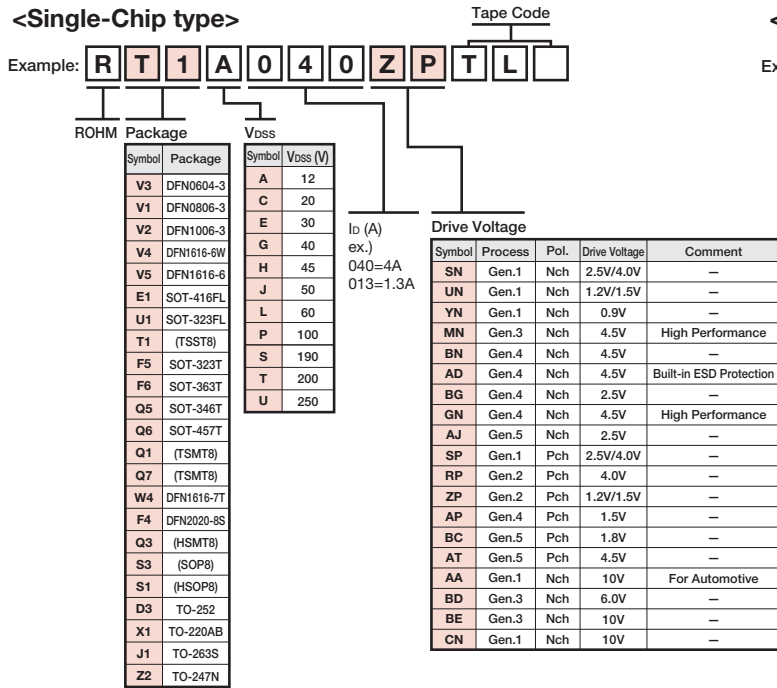
Product No. Explanation

• MOSFET Part No. Explanation

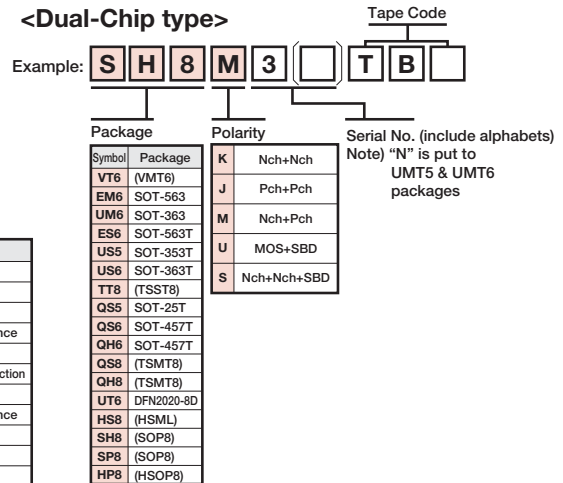
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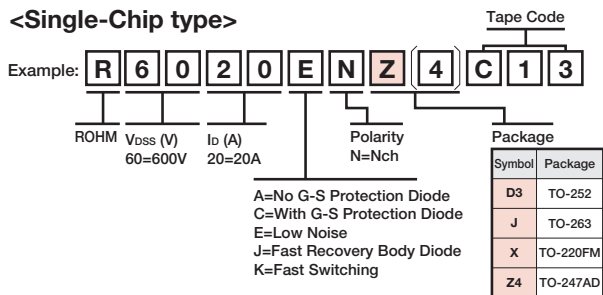
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Note: Package is JEDEC code. (): ROHM Packages.

Product No. Explanation

Bipolar Transistor Part No. Explanation

Part No. Tape Code

Example:

2	S	C	2	4	1	2	K		T	1	4	6	R
2	S	C	R	5	2	3	E	B	T	L			

Package

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

DT Digital Transistor

0	General use
1	General use
5	Low Vce (sat) 12V
6	Muting 20V
9	Muting Vce 40V

3	10 ³
4	10 ⁴
5	10 ⁵

M	SOT-723
EB	SOT-416FL
E	SOT-416
UB	SOT-323FL
U	SOT-323
U3	SOT-323
K	SOT-346
C	SOT-23
P	SOT-89

Exponent Specification Exponent of R₁ Resistance Value Package Tape Code

Example:

D	T	A	1	2	4	E	K	A	T	1	4	6
①	②	③	④	⑤	⑥	⑦	⑧					

Polarity	Basic R ₁ Resistance Value
A	PNP
B	
C	NPN
D	

Resistance Ratio R ₁ /R ₂	
1	1.0
2	2.2
4	4.7
6	6.8

Resistance Ratio R₁/R₂

E	R ₁ /R ₂ =1/1
X	R ₁ /R ₂ =1/2
Y	R ₁ /R ₂ =1/5
Z	R ₁ /R ₂ =1/10
J	R ₁ /R ₂ =1/20
W	R ₁ /R ₂ =2/1
V	R ₁ /R ₂ =5/1
T	R ₁ only
G	R ₂ only

Suffix
Only for 100mA series in SOT-323 (UMT3), SOT-23 (SST3) and SOT-346 (SMT3)

Note: ④ and ⑤ together represent the R₁ resistance value

Example:

24	2.2×10 ⁴ Ω=22kΩ
43	4.7×10 ³ Ω=4.7kΩ

Packaging type

Package	Code	ROHM Package	JEITA code	Size	Height	Package Style	Direction	Quantity (pcs)
(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
SOT-723	T2L, T2CL	VMT3	SC-105AA	1212	0.5	Embossed tape	One terminal on sprocket hole side	8,000
(VMT6)	T2R, T2CR	VMT6	SC-105B	1212	0.5	Embossed tape	Terminal No.1 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 TN, TCN	UMT6	SC-88	2120	0.9	Embossed tape Embossed tape	Terminal No.1 on sprocket hole side Non-direction	3,000
SOT-563T	T2R, T2CR	WEMT6	SC-120	1616	0.6	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-323T	TL, TCL	TUMT3	SC-113A	2120	0.77	Embossed tape	One terminal on sprocket hole side	3,000
SOT-353T	TR, TCR	TUMT5	SC-113CA	2120	0.77	Embossed tape	Terminal No.1 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	One terminal 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 T110	SMT6	SC-74	2829	1.1	Embossed tape Embossed tape	Terminal No.1 on opposite side from sprocket hole side Non-direction	3,000
(TSST8)	TR, TCR	TSST8	—	1930	0.8	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-346T	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
New DFN1616-6	TCR1	—	—	1616	0.75	Embossed tape	Terminal No.1 on sprocket hole side	3,000
New DFN1616-6W	TCR1	—	—	1616	0.75	Embossed tape	Terminal No.1 on sprocket hole side	3,000
New (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
New (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	Three terminals on sprocket hole side	1,000
(SOP8)	TB, TB1	SOP8	—	6050	1.75	Embossed tape	Terminal No.1 on sprocket hole side	2,500
(HSOP8)	TB, TB1	HSOP8	SC-111BB	6050	1	Embossed tape	Three terminals on sprocket hole side	2,500
TO-252	TL, TL1	TO-252	SC-63	—	2.2	Embossed tape	Fin on sprocket hole side	2,500
TO-263	TL	LPTS	SC-83	—	4.5	Embossed tape	Fin on sprocket hole side	1,000
	TLL	LPTL	—	—	4.5	Embossed tape	Fin on sprocket hole side	1,000
Leaded type	(TO-220FP)	—	TO-220FM	—	29×10	4.5 Bulk	—	500
		C7 G	—	—	—	4.7 Stick	—	2,000
	TO-247AD	C13	TO-247	—	41.26×15.94	5.02 Stick	—	600
		C11	TO-247N	—	41×16	5	Stick	450

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