



Discrete Devices

Transistors

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Small Signal MOSFETs

Quick Reference for Small Signal MOSFET series

Single type<Nch>



V _{DSS} (V)	I _D (A)										
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.5
20	0.15A DFN0604-3(VML0604) / P.C3										
	0.15A DFN0806-3(VML0806) / P.C3										
	0.18A DFN1006-3(VML1006)[SC-101] / P.C3										
	0.1A 0.2A SOT-723(VMT3)[SC-105AA] / P.C3										
	0.1A 0.2A SOT-416FL(EMT3F)[SC-89] / P.C3										
30	0.1A 0.2A SOT-323FL(UMT3F)[SC-85] / P.C3										
	DFN1006-3(VML1006)[SC-101] / P.C3 1.4A										
45	0.15A 0.5A SOT-23(SST3) / P.C3										
50	0.2A SOT-723(VMT3)[SC-105AA] / P.C3										
	0.2A SOT-416FL(EMT3F)[SC-89] / P.C3										
	0.2A SOT-323FL(UMT3F)[SC-85] / P.C3										
	0.2A SOT-23(SST3) / P.C3										
60	DFN1006-3(VML1006)[SC-101] / P.C3 0.9A										
	0.25A SOT-723(VMT3)[SC-105AA] / P.C3										
	0.25A SOT-416FL(EMT3F)[SC-89] / P.C3										
	0.31A 0.38A SOT-323(UMT3) / P.C3										
100	0.25A SOT-323FL(UMT3F)[SC-85] / P.C3										
	0.32A 0.6A SOT-23(SST3) / P.C3										
100	0.2A SOT-23(SST3) / P.C3										

Dual type<Nch+Nch>



V _{DSS} (V)	I _D (A)				
	0.1	0.2	0.3	0.4	0.5
20/20	0.1A VMT6[SC-105B] / P.C3				
50/50	0.2A 0.3A SOT-563(EMT6)[SC-107C] / P.C3				
	0.2A SOT-563(EMT6)[SC-107C] / P.C3				
60/60	0.2A SOT-363(UMT6)[SC-88] / P.C3				
	0.25A SOT-563(EMT6)[SC-107C] / P.C3				
	0.25A SOT-363(UMT6)[SC-88] / P.C3				

Single type<Pch>



V _{DSS} (V)	I _D (A)										
	-0.1	-0.2	-0.3	-0.4	-0.5	-0.6	-0.7	-0.8	-0.9	-1	-1.5
-20	-0.1A DFN0604-3(VML0604) / P.C3										
	-0.1A DFN0806-3(VML0806) / P.C3										
	-0.1A DFN1006-3(VML1006)[SC-101] / P.C3										
	-0.1A -0.2A SOT-723(VMT3)[SC-105AA] / P.C3										
	-0.1A -0.2A SOT-416FL(EMT3F)[SC-89] / P.C3										
-30	-0.1A -0.2A SOT-323FL(UMT3F)[SC-85] / P.C3										
	DFN1006-3(VML1006)[SC-101] / P.C3 -1.4A										
-30	-0.2A SOT-723(VMT3)[SC-105AA] / P.C3										
	-0.25A SOT-416FL(EMT3F)[SC-89] / P.C3										
	-0.25A SOT-323FL(UMT3F)[SC-85] / P.C3										
	-0.25A SOT-23(SST3) / P.C3										
-60	-0.25A SOT-323(UMT3) / P.C3										
	-0.23A SOT-23(SST3) / P.C3										

Dual type<Pch+Pch>



V _{DSS} (V)	I _D (A)				
	-0.1	-0.2	-0.3	-0.4	-0.5
-20/-20	-0.1A VMT6[SC-105B] / P.C3				
-30/-30	-0.2A SOT-563(EMT6)[SC-107C] / P.C3				
	-0.2A SOT-363(UMT6)[SC-88] / P.C3				

Dual type<Nch+Pch>



V _{DSS} (V)	I _D (A)				
	-0.1	-0.2	-0.3	-0.4	-0.5
20/-20	-0.1A VMT6[SC-105B] / P.C3				
	-0.2A SOT-563(EMT6)[SC-107C] / P.C3				

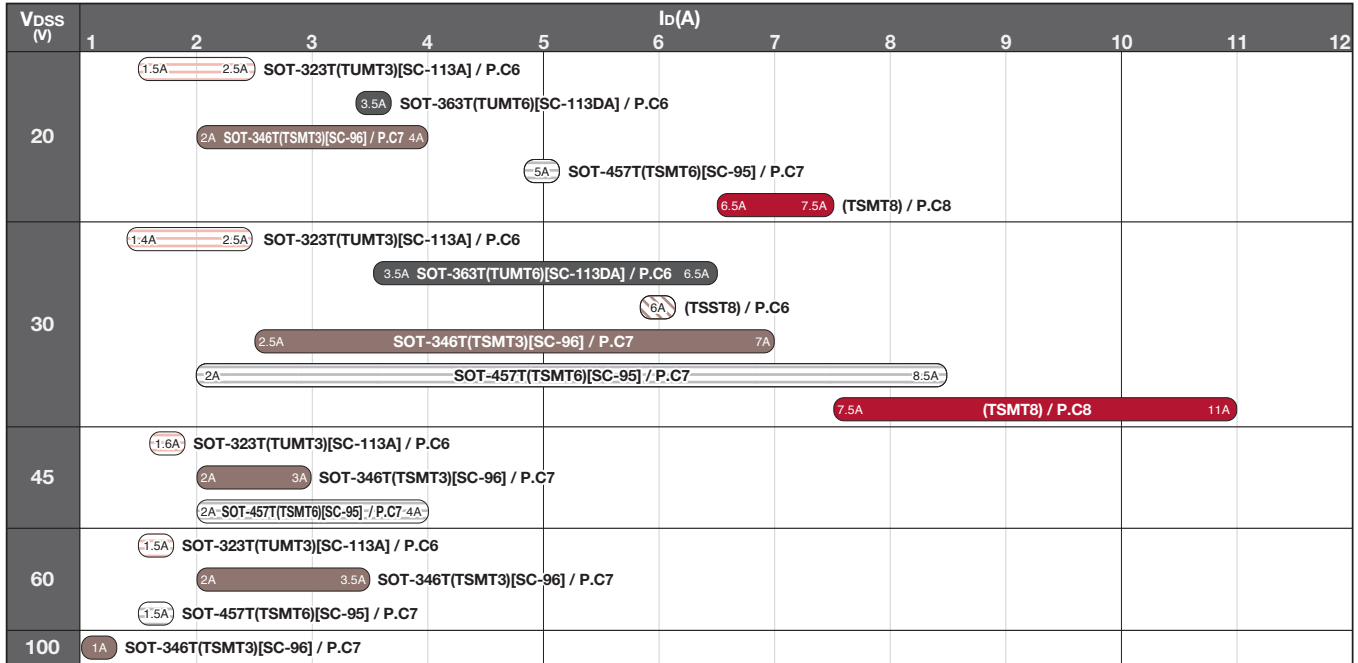
Notes1 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code
Notes2 : P.Cxx represents page number.

Small Signal MOSFETs

Quick Reference for Small Signal MOSFET series

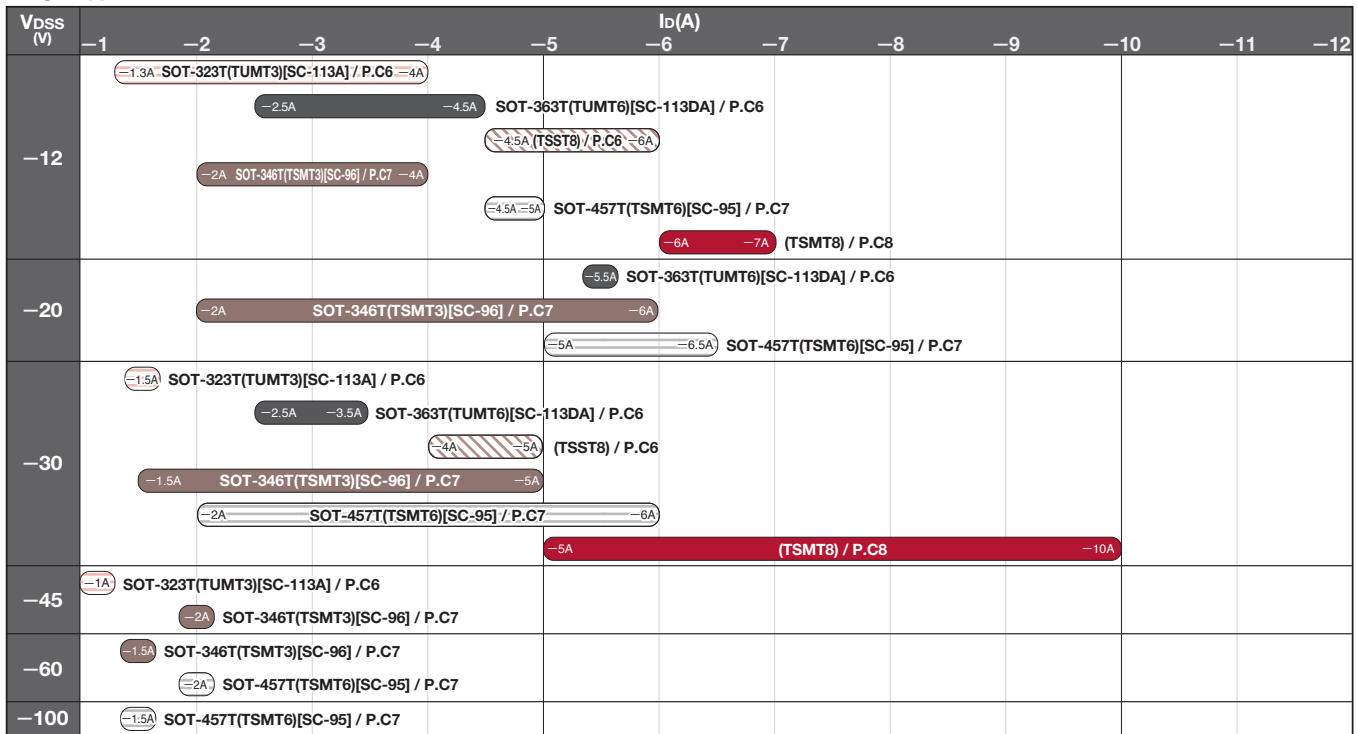
SOT-323T (TUMT3) [SC-113A]	SOT-363T (TUMT6) [SC-113DA]	(TSST8)	SOT-346T (TSMT3) [SC-96]	SOT-457T (TSMT6) [SC-95]	(TSMT8)
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Single type<Nch>



SOT-323T (TUMT3) [SC-113A]	SOT-363T (TUMT6) [SC-113DA]	(TSST8)	SOT-346T (TSMT3) [SC-96]	SOT-457T (TSMT6) [SC-95]	(TSMT8)
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Single type<Pch>



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

C Transistors

Dual type<Nch+Nch>



V _{DSS} (V)	1	2	3	4	5	6	7	8	9	10
20/20	1.5A SOT-363T(TUMT6)[SC-113DA] / P.C6	2.5A (TSST8) / P.C6								
30/30	1.4A 1.5A SOT-363T(TUMT6)[SC-113DA] / P.C6	2A SOT-25T(TSMT5) / P.C7	2.5A 3.0A (TSST8) / P.C6							
40/40						3.5A (TSMT8) / P.C8			9A	
45/45	1A SOT-457T(TSMT6)[SC-95] / P.C7					6A 7A (TSMT8) / P.C8				
100/100		2A (TSMT8) / P.C8								

Dual type<Pch+Pch>



V _{DSS} (V)	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-12/-12	-1.3A -2A SOT-363T(TUMT6)[SC-113DA] / P.C6	2.5A (TSST8) / P.C6	2A SOT-457T(TSMT6)[SC-95] / P.C7							
-20/-20			2.5A (TSST8) / P.C6							
-30/-30			2.5A (TSST8) / P.C6							

Dual type<Nch+Pch>



V _{DSS} (V)	1	2	3	4	5	6	7	8	9	10
20/-12	3A 1.5A SOT-363T(TUMT6)[SC-113DA] / P.C6									
20/-20		2.4A 2.5A (TSST8) / P.C6								
30/-20	1A 1.5A SOT-363T(TUMT6)[SC-113DA] / P.C6		2.5A (TSST8) / P.C6							
30/-30			2.5A 3A (TSST8) / P.C6							
40/-40		2A (TSMT8) / P.C8			4.5A					
60/-60		2A 3A (TSMT8) / P.C8								
100/-100	1.5A 2A (TSMT8) / P.C8									

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


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.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V			V _{GS} =1.5V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.		Typ.	Max.	
SOT-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	TR		30	4.5	1	—	—	16.9	23.7	—	—	23.9	33.5	—	—	—	8.1	
RTL035N03	TR	N	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		20	1.5	1	—	—	130	180	—	—	170	240	220*1	310*1	1.8		
US6K1	TR	N+N	30	1.5	1	—	—	170	240	180	250	240	340	—	—	—	1.6	
US6K2	TR		30	1.4	1	170	240	250	350	270	380	—	—	—	—	—	1.4*2	
RAL045P01	TCR		-12	-4.5	1	—	—	22	30	—	—	28	39	50	100	40		
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		
			-12	-1.3	1	—	—	190	260	—	—	280	390	530	1,060	2.4		
US6M2	TR		30	1.5	1	—	—	170	240	180	250	240	340	—	—	—	1.6	
US6M1	TR	N+P	-20	-1	1	—	—	280	390	310	430	570	800	—	—	—	2.1	
			30	1.4	1	170	240	250	350	270	380	—	—	—	—	—	1.4*2	
		-20	-1	1	—	—	280	390	310	430	570	800	—	—	—	2.1		
(TSST8) 3019 size	RT1E060XN	TR	N	30	6	1.25	16	22	21	29	23	32	—	—	—	—	6.8*2	
	TT8K1	TR		20	2.5	1.25	—	—	52	72	—	—	65	90	100	140	3.6	
	TT8K11	TR	N+N	30	3	1.25	51	71	67	94	78	109	—	—	—	—	2.5*2	
	TT8K2	TR		30	2.5	1.25	—	—	65	90	70	95	95	130	—	—	—	3.2
	RT1A060AP	TR		-12	-6	1.25	—	—	14	19	—	—	17	24	27	54	80	
	RT1A050ZP	TR	P	-12	-5	1.25	—	—	19	26	—	—	26	36	48	96	34	
	RT1A045AP	TR		-12	-4.5	1.25	—	—	22	30	—	—	28	39	50	100	40	
	RT1E050RP	TR		-30	-5	1.25	26	36	36	50	40	56	—	—	—	—	—	13*2
	RT1E040RP	TR		-30	-4	1.25	32	45	45	63	52	72	—	—	—	—	—	10.5
	TT8J11	TR	P+P	-12	-3.5	1.25	—	—	31	43	—	—	43	60	80	160	22	
	TT8J13	TR		-12	-2.5	1.25	—	—	44	62	—	—	55	77	90	180	16	
	TT8J21	TR		-20	-2.5	1.25	—	—	49	68	—	—	68	95	140	280	12	
	TT8J2	TR	N+P	-30	-2.5	1.25	60	84	95	130	115	160	—	—	—	—	—	4.8*2
	TT8J3	TR		-30	-2.5	1.25	65	84	100	130	120	160	—	—	—	—	—	4.8*2
	TT8M1	TR		20	2.5	1.25	—	—	52	72	—	—	65	90	100	140	3.6	
				-20	-2.5	1.25	—	—	49	68	—	—	68	95	140	280	12	
	TT8M3	TR	N+P	20	2.5	1.25	—	—	52	72	—	—	65	90	100	140	3.6	
				-20	-2.4	1.25	—	—	80	105	—	—	105	140	180	360	6.7	
	TT8M2	TR		30	2.5	1.25	—	—	65	90	70	95	95	130	—	—	—	3.2
				-20	-2.5	1.25	—	—	49	68	—	—	68	95	140	280	12	
TT8M11	TCR	30		3	1.25	51	71	67	94	78	109	—	—	—	—	—	2.5*2	
		-30	-2.5	1.25	60	84	95	130	115	160	—	—	—	—	—	4.8*2		

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

Small Signal MOSFET series																						
Package	Product No.		Polarity (ch)	V _{BSS} (V)	I _D (A)	P _D (W) (Ta=25°C)	R _{DS(on)} (mΩ)										Qg(nC) (VGS=4.5)					
	Part No.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V			V _{GS} =1.5V				
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.		Typ.	Max.			
SOT-346T (TSMT3) [SC-96] 2928 size	RUR040N02	TL	N	20	4	1	—	—	25	35	—	—	33	46	42	59	55	110	8			
	RUR020N02	TL		20	2	1	—	—	75	105	—	—	95	135	130	185	170	240	2			
	RQ5E070BN	TCL		30	7	1	12.4	16.1	16.5	20.4	—	—	—	—	—	—	—	—	—	11.7		
	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	—	—	
	RQ5A030AP	TL		-12	-3	1	—	—	44	62	—	—	55	77	75	110	90	180	16	—	—	
	RQ5A025ZP	TL		-12	-2.5	1	—	—	44	61	—	—	60	84	81	121	110	220	13	—	—	
	RQ5A020ZP	TL		-12	-2	1	—	—	75	105	—	—	105	145	150	225	200	400	6.5	—	—	
	RQ5C060BC	TCL		-20	-6	1	—	—	16.1	21.1	—	—	20.3	26.9	27.4	51.0	—	—	—	—	—	19.2
	RQ5C035BC	TCL		-20	-3.5	1	—	—	42	59	—	—	54	76	84	135	—	—	—	—	—	6.5
	RQ5C030TP	TL		-20	-3	1	—	—	55	75	60	85	90	125	—	—	—	—	—	—	—	9.3
	RQ5C025TP	TL		-20	-2.5	1	—	—	70	95	75	105	115	160	—	—	—	—	—	—	—	7
RQ5C020TP	TL	-20	-2	1	—	—	100	135	110	150	180	250	—	—	—	—	—	—	—	4.9		
RQ5E050AT	TCL	-30	-5	1	21	26	30	37	—	—	—	—	—	—	—	—	—	—	—	9.7		
RQ5E040RP	TL	-30	-4	1	32	45	45	63	52	72	—	—	—	—	—	—	—	—	—	10.5*1		
RQ5E035AT	TCL	-30	-3.5	1	38	50	54	70	—	—	—	—	—	—	—	—	—	—	—	5.2		
RQ5E030RP	TL	-30	-3	1	55	75	85	115	95	125	—	—	—	—	—	—	—	—	—	5.2*1		
RQ5E025SP	TL	-30	-2.5	1	70	98	100	140	115	160	—	—	—	—	—	—	—	—	—	5.4*1		
RQ5E025AT	TCL	-30	-2.5	1	70	91	104	135	—	—	—	—	—	—	—	—	—	—	—	2.7		
RQ5E020SP	TL	-30	-2	1	85	120	135	190	150	210	—	—	—	—	—	—	—	—	—	4.3*1		
RQ5E015RP	TL	-30	-1.5	1	115	160	170	240	190	270	—	—	—	—	—	—	—	—	—	3.2*1		
RQ5H020SP	TL	-45	-2	1	130	190	180	260	200	280	—	—	—	—	—	—	—	—	—	9.5*2		
RQ5L015SP	TL	-60	-1.5	1	200	280	240	340	255	360	—	—	—	—	—	—	—	—	—	10*2		
SOT-25T (TSMT5) 2928 size	QS5K2	TR	N+N	30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	—	2.8		
SOT-457T (TSMT6) [SC-95] 2928 size	RQ6C050UN	TR	N	20	5	1.25	—	—	22	30	—	—	27	38	32	45	40	80	12	—		
	RQ6E085BN	TCR		30	8.5	1.25	11.1	14.4	13.9	17.3	—	—	—	—	—	—	—	—	—	—	16.6	
	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	—	—	
	RQ6A045AP	TCR		-12	-4.5	1.25	—	—	22	30	—	—	28	39	38	57	50	100	40	—	—	
	RQ6A045ZP	TR		-12	-4.5	1.25	—	—	25	35	—	—	31	43	39	58	50	100	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
	RQ6E030SP	TR		-30	-3	1.25	60	80	90	125	100	140	—	—	—	—	—	—	—	—	—	6*1
	RRQ020P03	TR		-30	-2	1.25	115	160	170	240	190	270	—	—	—	—	—	—	—	—	—	3.2*1
New RQ6L020SP	TCR	-60	-2	1.25	150	210	180	252	190	266	—</											

Small Signal MOSFETs

Small Signal MOSFET series																				
Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (Ta=25°C)	R _{DS(on)} (mΩ)										Qg(nC) (VGS=4.5)			
	Part No.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V			V _{GS} =1.5V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.		Typ.	Max.	
(TSMT8) 3028 size 	RQ1C075UN	TR	N	20	7.5	1.5	—	—	11	16	—	—	14	20	17	24	20	40	18	
	RQ1C065UN	TR		20	6.5	1.5	—	—	16	22	—	—	19	27	24	32	29	58	11	
	RQ7E110AJ	TCR		30	11	1.5	—	—	6.8	9	—	—	9.1	12.4	—	—	—	—	—	22
	RQ1E100XN	TR		30	10	1.5	7.5	10.5	9.5	13.3	10	14	—	—	—	—	—	—	—	12.7*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
	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	
	New 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	—	
	New 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	—	
	New QH8JA1	TCR	-20	-5	1.5	—	—	28	38	—	—	35	48	49	77	—	—	—	10.2	
	QS8J5	TR	-30	-5	1.5	28	39	40	56	45	63	—	—	—	—	—	—	—	10*1	
	QS8J4	TR	-30	-4	1.5	40	56	55	77	60	84	—	—	—	—	—	—	—	8.4*1	
	QH8MA4	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		

Notes1 : () : ROHM Packages
Notes2 : *1 : V_{GS}=5V *2 : P_w≤1s

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

Dual type<MOSFET+SBD>

V _{DSS} (V)	I _D (A)			
	0.5	1	1.5	2
20			1.5A	2.5A
30			1.4A, 1.5A	2A
-20		-1A	-1.5A	-2A
-30		-1A	-1.5A	-2A
-45	-0.7A			

Legend: SOT-353T (TUMT5) [SC-113CA], (TSST8), SOT-25T (TSMT5), SOT-457T (TSMT6) [SC-95]

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

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.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.5V				
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.			
SOT-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		-45	-0.7	1	600	800	900	1,300	1,000	1,400	—	—	—	—	—	1.7*1	
(TSST8) 3019 size	TT8U1	TR	P+SBD(1A)	-20	-2.4	1.25	—	—	80	105	—	—	105	140	180	360	—	—	6.7
	TT8U2	TR		-20	-2.4	1.25	—	—	80	105	—	—	105	140	180	360	—	—	6.7
SOT-25T (TSMT5) 2928 size	QS5U36	TR	N+SBD(0.7A)	20	2.5	1.25	—	—	58	81	—	—	74	104	120	240	—	—	3.5
	QS5U34	TR	N+SBD(0.5A)	20	1.5	1.25	—	—	130	180	—	—	170	240	220*6	310*6	—	—	1.8
	QS5U13*2	TR	N+SBD(0.5A)	30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	2.8
	QS5U16*2	TR		30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	2.8
	QS5U12*3	TR	N+SBD(1A)	30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	2.8
	QS5U17*3	TR		30	2	1.25	—	—	71	100	76	107	110	154	—	—	—	—	2.8
	QS5U28	TR	P+SBD(1A)	-20	-2	1.25	—	—	90	125	97	135	175	245	—	—	—	—	4.8
	QS5U23*4	TR		-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	—	4.2
	QS5U26*4	TR	P+SBD(0.5A)	-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	—	4.2
	QS5U21*5	TR		-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	—	4.2
QS5U27*5	TR	P+SBD(1A)	-20	-1.5	1.25	—	—	160	200	180	240	260	340	—	—	—	—	4.2	
QS5U33	TR		-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

Notes1 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code

Notes2 : *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

● Quick Reference for Power MOSFET series



Single type<Nch>

V _{DSS} (V)	I _D (A)										20	30	40	50	
	1	2	3	4	5	6	7	8	9	10					
30			(3A) SOT-89(MPT3)[SC-62] / P.C11				(6A) DFN2020-8S(HUML2020L8 Single) / P.C11			(11A)		(15A) (HSMT8) / P.C11	(39A)		
40						DFN2020-8S(HUML2020L8 Single) / P.C11			(9A)		(HSMT8) / P.C11	(27A)	(39A)		
60		(2A) SOT-89(MPT3)[SC-62] / P.C11				(5.5A) DFN2020-8S(HUML2020L8 Single) / P.C11						(13A) (HSMT8) / P.C11	(30A)		
100												(HSMT8) / P.C11	(36A)		

Dual type<Nch+Nch>

V _{DSS} (V)	I _D (A)										20	30	40	50	
	1	2	3	4	5	6	7	8	9	10					
30/30					(5.5A) DFN2020-8D(HUML2020L8 Dual) / P.C11					(7A) (HSML3030L10) / P.C11	(11A)				
60/60			(3A) DFN2020-8D(HUML2020L8 Dual) / P.C11												

Single type<Pch>

V _{DSS} (V)	I _D (A)										-20	-30	-40	-50
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10				
-20										(10A) DFN2020-8S(HUML2020L8 Single) / P.C11		(30A) (HSMT8) / P.C11		
-30							(7.5A) DFN2020-8S(HUML2020L8 Single) / P.C11					(18A) (HSMT8) / P.C11	(39A)	

Dual type<Pch+Pch>

V _{DSS} (V)	I _D (A)									
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
-20/-20					(5A) DFN2020-8D(HUML2020L8 Dual) / P.C11					
-30/-30			(4A) DFN2020-8D(HUML2020L8 Dual) / P.C11							

Dual type<Nch+Pch>

V _{DSS} (V)	I _D (A)										20	30	40	50
	1	2	3	4	5	6	7	8	9	10				
20/-20					(5A, 5.5A) DFN2020-8D(HUML2020L8 Dual) / P.C11									
30/-30			(4A) DFN2020-8D(HUML2020L8 Dual) / P.C11											

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

Power MOSFETs <MPT3·HUML2020L8·HSMT8·HSML3030L10 Package>																							
Package	Application	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (Ta=25°C)	R _{DS(on)} (mΩ)												Qg (nC) (V _{GS} =4.5V)			
		Part No.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V					
								Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.				
	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	
	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		
		New 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	
	Load Switch Switching	RF4E100AJ	TCR		30	10	2	—	—	9.4	12.4	—	—	13.3	17.9	—	—	—	—	—	—	13	
		RF4E080BN	TR		30	8	2	13.5	17.6	18.9	24.6	—	—	—	—	—	—	—	—	—	—	7.2	
		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	
	Load Switch Switching	UT6K3	TCR	N+N	30	5.5	2	—	—	30	42	—	—	45	63	—	—	—	—	4			
		New 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	
	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		30	4	2	37	46	59	80	—	—	—	—	—	—	—	—	—	—	2.2	
		UT6MA2	TCR		-30	-4	2	55	70	80	103	—	—	—	—	—	—	—	—	—	—	3.3	
		UT6MA3	TBR		30	5.5	2	—	—	30	42	—	—	45	63	—	—	—	—	—	—	4	
		UT6MA2	TCR		-20	-5	2	—	—	42	59	—	—	54	76	—	—	—	—	—	—	6.5	
	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	
		New RQ3L090GN	TB		60	30*1	20*1	10.3	13.9	14.6	21.4	—	—	—	—	—	—	—	—	—	—	13	
		RQ3L050GN	TB		60	13*1	15*1	43	61	61	86	—	—	—	—	—	—	—	—	—	—	2.8	
		New RQ3P300BE	TB1		100	36*1	32*1	16	21	—	—	—	—	—	—	—	—	—	—	—	—	19.1*1	
	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
DC/DC Converter	DC/DC Converter	HS8S2	TB	N+N	30	10	2	11.2	14.6	14.7	20	—	—	—	—	—	—	—	—	2.7			
		HS8K1	TB		30	11	2	10.5	12.6	12.1	16.5	—	—	—	—	—	—	—	—	12			
		HS8K1	TB		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		
	DC/DC Converter	HS8K11	TB	N+N	30	7	2	12.8	17.9	20.8	29.1	—	—	—	—	—	—	—	—	5.7			
		HS8K11	TB		30	11	2	10.2	13.3	11.8	15.4	—	—	—	—	—	—	—	—	—	9		

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

Power MOSFETs

● Quick Reference for (SOP8)Single/Dual Package



Single type<Nch>

V _{DSS} (V)	I _D (A)																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18						
30							7A	(SOP8)Single / P.C13						13.5A										
45							7A	(SOP8)Single / P.C13																
60					4.5A	(SOP8)Single / P.C13													14A					

Dual type<Nch+Nch>

V _{DSS} (V)	I _D (A)																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					
30/30				3.5A	(SOP8)Dual / P.C13													15A					
40/40					5.2A	6A	(SOP8)Dual / P.C13																
60/60					4.5A	(SOP8)Dual / P.C13													13A				
80/80				3.4A	(SOP8)Dual / P.C13																		
100/100			3A	(SOP8)Dual / P.C13																			

Single type<Pch>

V _{DSS} (V)	I _D (A)																							
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18						
-30				14A	(SOP8)Single / P.C13													18A						
-45							17A	(SOP8)Single / P.C13																

Dual type<Pch+Pch>

V _{DSS} (V)	I _D (A)																						
	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	-16	-17	-18					
-30/-30					-4.5A	(SOP8)Dual / P.C13													-9A				
-60/-60					-4.5A	(SOP8)Dual / P.C13																	

Dual type<Nch+Pch>

V _{DSS} (V)	I _D (A)																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					
30/-30					4.5A	(SOP8)Dual / P.C13													9A				
45/-45				3.5A	4.5A	(SOP8)Dual / P.C13																	
60/-60					4.5A	(SOP8)Dual / P.C13																	
80/-80				2.6A	3.4A	(SOP8)Dual / P.C13																	
100/-100			2.5A	(SOP8)Dual / P.C13																			

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

<SOP8 Package> (Single type)

Package	Product No.		Polarity (ch)	V _{DSS} (V)	I _D (A)	P _D (W) (Ta=25°C)	R _{DS(on)} (mΩ)						Qg(nC) (VGS=5V)
	Part No.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	
	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	TB		30	7	2	20	28	25	35	28	39	5.8
	RSH070N05	TB		45	7	2	18	25	23	32	25	35	12
	New RS3L140GN	TB		60	14	2	4.9	6.5	6.8	9.6	—	—	31*1
	RSH065N06	TB		60	6.5	2	24	37	28	44	31	48	11
	New RS3L045GN	TB		60	4.5	2	43	59	62	92	—	—	3*1
	New 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
	RRH100P03	TB		-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
	RSH050P03	TB		-30	-5	2	30	42	47	65	55	77	13
	RRH050P03	TB1		-30	-5	2	36	50	52	72	58	80	9.2
	RSH040P03	TB		-30	-4	2	42	58	68	92	78	106	8
	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) (Ta=25°C)	R _{DS(on)} (mΩ)						Qg(nC) (VGS=5V)	
	Part No.	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V			
							Typ.	Max.	Typ.	Max.	Typ.	Max.		
	SH8K10S	TB	N N+SBD	30	7	2	17	24	23	33	25	35	8.4	
				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	TB		40	6	2	27	38	35	50	—	—	2.9	
	SH8K25	TB		40	5.2*3	3*3	60	85	80	112	—	—	1.7	
	New SH8K39	TB		60	13*3	5.8*3	15	21	20	30	—	—	12.8*1	
	New SH8K37	TB		60	5.5	2	33	46	44	66	—	—	5.2*1	
	SH8K32	TB	P+P	60	4.5	2	46	65	52	73	55	77	7	
	SH8K41	TB		80	3.4	2	90	130	110	150	120	160	6.6	
	SH8K52	TB		100	3	2	120	170	135	190	—	—	8.5	
	SH8J66	TB		-30	-9	2	13.5	18.5	17.5	23.6	19	24.7	35	
	SH8J65	TB		-30	-7	2	21.5	29	29	39	31	40.8	18	
	SH8J62	TB		-30	-4.5	2	40	56	55	77	60	84	8	
	SH8J31	TB		-60	-4.5	2	50	70	55	80	60	85	40*2	
	New SH8MA4	TB1		N+P	30	9*3	3.0*3	16.5	21.4	22.2	32.5	—	—	7.9*1
	SH8MA4	TB			-30	-8.5*3		23	29.6	32	41.3	—	—	9.8*1
	New SH8MA3	TB1			30	7*3	2.8*3	23	28	42	57	—	—	3.7*1
			-30		-6*3	40		50	60	73	—	—	5.2*1	
	New SH8MA2	TB	30		4.5*3	2.7*3	57	80	88	125	—	—	1.5*1	
			-30		-4.5*3		63	82	89	115	—	—	3.4*1	
	SH8M24	TB	45		4.5	2	33	46	41	57	46	64	6.8	
			-45		-3.5		45	63	60	84	66	92	13	
	SH8M31	TB	60		4.5	2	46	65	52	73	55	77	7*1	
			-60		-4.5		50	70	55	80	60	85	20*1	
	SH8M41	TB	80	3.4	2	90	130	110	150	120	160	6.6		
-80			-2.6	165		240	220	300	230	310	8.2			
SH8M51	TB	100	3	2	120	170	130	180	135	190	8.5			
		-100	-2.5		210	290	230	320	240	340	12.5			

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

Power MOSFETs

Quick Reference for Power MOSFET series (HSOP8)Single type

Single type<Nch>

(HSOP8) Single

V _{DSS} (V)	Feature	10	20	30	40	50	60	70	80
30	Switching				35A		(HSOP8)Single		80A
40					34A		(HSOP8)Single		80A
60					36A		68A	(HSOP8)Single	
100							60A	(HSOP8)Single	

Single type<Pch>

V _{DSS} (V)	Feature	-10	-20	-30	-40	-50	-60	-70	-80
-30	Switching								(HSOP8)Single -76A-80A

Notes1 : () : ROHM Packages

(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.	Taping 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
		RS1E280BN	TB		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	
		New RS1E260AT	TB1		P	-30	-80	40	2.5	3.1	3.5	4.3	
	New 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	
New RS1P600BE		TB1	100		60	35	7.5	9.7	-	-	33*	10	

Notes1 : () : ROHM Packages Notes2 : *V_{GS}=10V

Quick Reference for Power MOSFET series (HSOP8)Dual type

Dual type<Nch+Nch>

(HSOP8) Dual

V _{DSS} (V)	Feature	10	20	30	40	50	60	70	80	
30/30	Switching	14A		(HSOP8)Dual(N+N)						80A
		27A		(HSOP8)Dual(N+N+SBD)						80A

Dual type<Nch+Pch>

V _{DSS} (V)	Feature	1	5	10	15	20	25
30/-30	Motor				15A	18A	(HSOP8)Dual
60/-60				8.5A	(HSOP8)Dual		
100/-100				4.5A	(HSOP8)Dual		

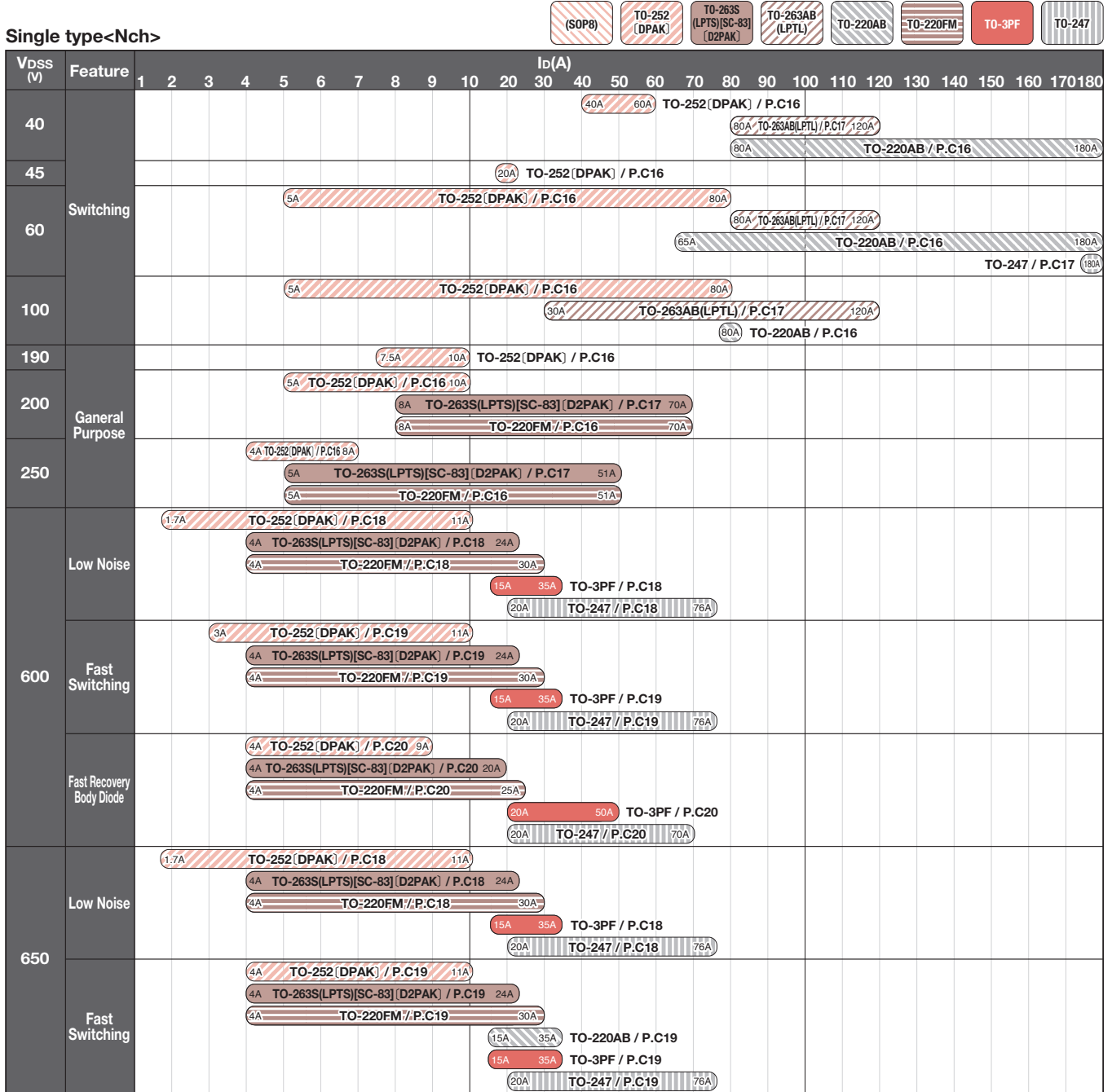
Notes1 : () : ROHM Packages

(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.	Taping 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		
		HP8S36	TB		N	30	80*1	29*1	2	2.4	2.3	2.8		47
					N+SBD	30	27*1	22*1	6.7	8.8	9.1	13.3		4.8
	Motor	HP8MA2	TB1	N+P	30	18*2	7*2	7.5	9.6	11.7	16.5	10.5		
					-30	-15*2	7*2	13.2	17.9	21	29	12.8		
		New HP8M31	TB1		60	8.5*2	7*2	46	65	52	73	6.2		
		-60	-8.5*2		7*2	50	70	55	80	15.7				
		New HP8M51	TB1		100	4.5*2	7*2	120	170	130	180	8.5		
				-100	-4.5*2	7*2	210	290	230	320	12.5			
	Load Switch	HP8KA1	TB	N+N	30	14*1	3*1	3.5	5	5	7	24		

Notes1 : () : ROHM Packages
Notes2 : *1 : T_c=25°C *2 : P_w≤1s

Quick Reference for Power MOSFET series



Dual type<Nch+Nch>




V _{DSS} (V)	Feature	I _D (A)	1
500/500	General Purpose	0.5A	(SOP8) / P.C19

Single type<Pch>

V _{DSS} (V)	Feature	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-20	-30
-45	Switching												
-60													
-100													

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

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 _{DSON} (mΩ)								Q _g (nC) (V _{GS} =10V)
	Part No.	Taping Code					V _{GS} =10V		V _{GS} =6.0V		V _{GS} =4.5V		V _{GS} =4.0V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
TO-252 (DPAK) 	New RD3G600GN	TL	N	40	60	40	2.8	3.6	—	—	3.3	4.3	—	—	46.5
	New RD3G500GN	TL		40	50	35	3.9	4.9	—	—	4.7	6.3	—	—	31
	RD3G400GN	TL		40	40	26	5.6	7.5	—	—	7	9.5	—	—	19
	New RD3H200SN	TL1		45	20	20	20	28	—	—	25	35	28	40	12*1
	New 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
	New 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 	RXC700N20	—	N	200	70	83	30.5	42.7	—	—	—	—	—	125	
	RXC450N20	—		200	45	69	42	55	—	—	—	—	—	80	
	RXC300N20	—		200	30	61	60	80	—	—	—	—	—	60	
	RXC200N20	—		200	20	48	100	130	—	—	—	—	—	40	
	RXC160N20	—		200	16	43	135	180	—	—	—	—	—	26	
	RXC120N20	—		200	12	40	250	325	—	—	—	—	—	15	
	RXC081N20	—		200	8	40	470	770	—	—	—	—	—	9	
	RXC511N25	—		250	51	84	48	65	—	—	—	—	—	120	
	RXC330N25	—		250	33	69	77	105	—	—	—	—	—	80	
	RXC220N25	—		250	22	61	105	140	—	—	—	—	—	60	
	RXC120N25	—		250	12	48	180	235	—	—	—	—	—	35	
	RXC100N25	—		250	10	43	245	320	—	—	—	—	—	26.5	
	RXC080N25	—		250	8	35	460	600	—	—	—	—	—	15	
	RXC051N25	—		250	5	30	970	1,360	—	—	—	—	—	9	
TO-220AB 	RX1G18BGN	C10	N	40	180	125	1.17	1.64	—	—	1.33	1.87	—	168	
	RX1G08CGN	C10		40	80	78	3.5	4.7	—	—	4.4	5.9	—	32	
	RX1L18CGN	C10		60	180	208	1.59	2.15	—	—	2.17	3.26	—	190	
	RX1L18BGN	C10		60	180	166	2	2.7	—	—	2.77	4.16	—	139	
	RX1L16BGN	C10		60	160	125	2.9	4	—	—	4.1	6.2	—	88	
	New RX1L08BGN	C10		60	80	96	5.2	7.2	—	—	7.3	10.9	—	55	
	RX1L06BGN	C10		60	65	65	10.2	13.8	—	—	14.5	23.8	—	25	

Notes1 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code, [] : GENERAL code
Notes2 : *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.	Taping Code					V _{GS} =10V		V _{GS} =6.0V		V _{GS} =4.5V		V _{GS} =4.0V		
							Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	
TO-263AB (LPTL)	New 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
	New RJ1L08CGN	TLL		60	80*2	96	5.3	7	—	—	7.4	10.7	—	—	55
	New 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	1360	—	—	—	—	—	—	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-247	New RZ2L18BGN	C11	N	60	180*2	208	2.1	2.9	—	—	—	—	—	190	
	New RZ2L18CGN	C11		60	180*2	166	2.5	3.4	—	—	—	—	—	—	139

Notes1 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code, { } : GENERAL code
 Notes2 : *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) (Tc=25°C)	R _{DS(on)} (Ω)		Q _g (nC) V _{GS} =10V	Drive Voltage (V)
		Part No.	Taping Code					V _{GS} =10V			
								Typ.	Max.		
TO-252 (DPAK)		R6011END3	TL1	N	600	11	124	0.340	0.390	32	10
		R6009END3	TL1		600	9	94	0.500	0.535	23	10
		R6007END3	TL1		600	7	78	0.570	0.620	20	10
		R6004END3	TL1		600	4	59	0.900	0.980	15	10
		New R6002END3	TL1		600	1.7	26	2.800	3.400	6.5	10
		☆R6511END3	TL1		650	11	124	0.360	0.400	32	10
		☆R6509END3	TL1		650	9	94	0.530	0.585	24	10
		☆R6507END3	TL1		650	7	78	0.605	0.665	20	10
		☆R6504END3	TL1		650	4	59	0.955	1.050	15	10
		☆R6502END3	TL1		650	1.7	24	3.000	3.300	6.5	10
TO-263S (LPTS) [SC-83] (D2PAK)		R6024ENJ	TL	N	600	24	245	0.150	0.165	70	10
		R6020ENJ	TL		600	20	231	0.170	0.196	60	10
		R6015ENJ	TL		600	15	184	0.260	0.290	40	10
		R6011ENJ	TL		600	11	124	0.340	0.390	32	10
		R6009ENJ	TL		600	9	94	0.500	0.535	23	10
		R6007ENJ	TL		600	7	78	0.570	0.620	20	10
		R6004ENJ	TL		600	4	58	0.900	0.980	15	10
		R6524ENJ	TL		650	24	245	0.160	0.185	70	10
		R6520ENJ	TL		650	20	231	0.185	0.205	61	10
		R6515ENJ	TL		650	15	184	0.280	0.315	40	10
		R6511ENJ	TL		650	11	124	0.360	0.400	32	10
		R6509ENJ	TL		650	9	94	0.530	0.585	24	10
		R6507ENJ	TL		650	7	78	0.605	0.665	20	10
		R6504ENJ	TL		650	4	58	0.955	1.050	15	10
TO-220FM		R6030ENX	---	N	600	30	86	0.115	0.130	85	10
		R6024ENX	---		600	24	74	0.150	0.165	70	10
		R6020ENX	---		600	20	68	0.170	0.196	60	10
		R6015ENX	---		600	15	60	0.260	0.290	40	10
		R6011ENX	---		600	11	53	0.340	0.390	32	10
		R6009ENX	---		600	9	48	0.500	0.535	23	10
		R6007ENX	---		600	7	46	0.570	0.620	20	10
		R6004ENX	---		600	4	35	0.900	0.980	15	10
		R6530ENX	---		650	30	86	0.125	0.140	90	10
		R6524ENX	---		650	24	74	0.160	0.185	70	10
		R6520ENX	---		650	20	68	0.185	0.205	61	10
		R6515ENX	---		650	15	60	0.280	0.315	40	10
		R6511ENX	---		650	11	53	0.360	0.400	32	10
		R6509ENX	---		650	9	48	0.530	0.585	24	10
		R6507ENX	---		650	7	46	0.605	0.665	20	10
		R6504ENX	---		650	4	35	0.955	1.050	15	10
TO-3PF		R6035ENZ	C8	N	600	35	102	0.095	0.102	110	10
		R6030ENZ	C8		600	30	86	0.115	0.130	85	10
		R6024ENZ	C8		600	24	74	0.150	0.165	70	10
		R6020ENZ	C8		600	20	68	0.170	0.196	60	10
		R6015ENZ	C8		600	15	60	0.260	0.290	40	10
		R6535ENZ	C8		650	35	102	0.098	0.115	113	10
		R6530ENZ	C8		650	30	86	0.125	0.140	90	10
		R6524ENZ	C8		650	24	74	0.160	0.185	70	10
		R6520ENZ	C8		650	20	68	0.185	0.205	61	10
		R6515ENZ	C8		650	15	60	0.280	0.315	40	10
TO-247		New R6076ENZ4	C13	N	600	76	735	0.038	0.042	260	10
		New R6047ENZ4	C13		600	47	481	0.066	0.072	145	10
		☆R6035ENZ4	C13		600	35	379	0.095	0.102	110	10
		☆R6030ENZ4	C13		600	30	305	0.115	0.130	85	10
		☆R6024ENZ4	C13		600	24	245	0.150	0.165	70	10
		☆R6020ENZ4	C13		600	20	231	0.170	0.196	60	10
		New R6576ENZ4	C13		650	76	735	0.040	0.046	260	10
		☆R6547ENZ4	C13		650	47	481	0.070	0.080	145	10
		☆R6535ENZ4	C13		650	35	379	0.098	0.115	110	10
		☆R6530ENZ4	C13		650	30	305	0.125	0.140	85	10
☆R6524ENZ4	C13	650	24	245	0.160	0.185	70	10			
☆R6520ENZ4	C13	650	20	231	0.185	0.205	60	10			

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

☆ : 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	Drive Voltage (V)			
		Part No.	Taping Code					V _{GS} =10V						
								Typ.	Max.					
TO-252 (DPAK)		R6011KND3	TL1	N	600	11	124	0.340	0.390	22	10			
		R6009KND3	TL1		600	9	94	0.500	0.535	16.5	10			
		R6007KND3	TL1		600	7	78	0.570	0.620	15	10			
		R6006KND3	TL1		600	6	70	0.720	0.830	12	10			
		R6003KND3	TL1		600	3	44	1.300	1.500	8	10			
		☆R6511KND3	TL1		650	11	124	0.360	0.400	22	10			
		☆R6509KND3	TL1		650	9	94	0.530	0.585	16.5	10			
		☆R6507KND3	TL1		650	7	78	0.605	0.665	15	10			
		☆R6504KND3	TL1		650	4	58	0.955	1.050	10	10			
		TO-263S (LPTS) [SC-83] (D2PAK)			R6024KNJ	TL	N	600	24	245	0.150	0.165	46	10
R6020KNJ	TL			600	20	231		0.170	0.196	40	10			
R6015KNJ	TL			600	15	184		0.260	0.290	30	10			
R6011KNJ	TL			600	11	124		0.340	0.390	22	10			
R6009KNJ	TL			600	9	94		0.500	0.535	16.5	10			
R6007KNJ	TL			600	7	78		0.570	0.620	15	10			
R6004KNJ	TL			600	4	58		0.900	0.980	10	10			
R6524KNJ	TL			650	24	245		0.160	0.185	46	10			
R6520KNJ	TL			650	20	231		0.185	0.205	40	10			
R6515KNJ	TL			650	15	184		0.280	0.315	30	10			
R6511KNJ	TL			650	11	124		0.360	0.400	22	10			
R6509KNJ	TL			650	9	94		0.530	0.585	16.5	10			
R6507KNJ	TL			650	7	78		0.605	0.665	15	10			
R6504KNJ	TL			650	4	58		0.955	1.050	10	10			
TO-220FM				R6030KNX	—*	N		600	30	86	0.115	0.130	56	10
				R6024KNX	—*			600	24	74	0.150	0.165	46	10
		R6020KNX	—*	600	20		68	0.170	0.196	40	10			
		R6015KNX	—*	600	15		60	0.260	0.290	30	10			
		R6011KNX	—*	600	11		53	0.340	0.390	22	10			
		R6009KNX	—*	600	9		48	0.500	0.535	16.5	10			
		R6007KNX	—*	600	7		46	0.570	0.620	15	10			
		R6006KNX	—*	600	6		40	0.720	0.830	12	10			
		R6004KNX	—*	600	4		35	0.900	0.980	10	10			
		R6530KNX	—*	650	30		86	0.125	0.140	56	10			
		R6524KNX	—*	650	24		74	0.160	0.185	46	10			
		R6520KNX	—*	650	20		68	0.185	0.205	40	10			
		R6515KNX	—*	650	15		60	0.280	0.315	30	10			
		R6511KNX	—*	650	11		53	0.360	0.400	22	10			
		R6509KNX	—*	650	9		48	0.530	0.585	16.5	10			
		R6507KNX	—*	650	7		46	0.605	0.665	15	10			
		R6504KNX	—*	650	4		35	0.955	1.050	10	10			
		TO-3PF		R6035KNZ	C8		N	600	35	102	0.095	0.102	72	10
R6030KNZ	C8			600	30	86		0.115	0.130	56	10			
R6024KNZ	C8			600	24	74		0.150	0.165	46	10			
R6020KNZ	C8			600	20	68		0.170	0.196	40	10			
R6015KNZ	C8			600	15	60		0.260	0.290	30	10			
R6535KNZ	C8			650	35	102		0.098	0.115	72	10			
R6530KNZ	C8			650	30	86		0.125	0.140	56	10			
R6524KNZ	C8			650	24	74		0.160	0.185	46	10			
R6520KNZ	C8			650	20	68		0.185	0.205	40	10			
R6515KNZ	C8			650	15	60		0.280	0.315	30	10			
TO-247		New R6076KNZ4	C13	N	600	76	735	0.040	0.042	165	10			
		New R6047KNZ4	C13		600	47	481	0.070	0.072	100	10			
		☆R6035KNZ4	C13		600	35	379	0.095	0.102	72	10			
		☆R6030KNZ4	C13		600	30	305	0.115	0.130	56	10			
		☆R6024KNZ4	C13		600	24	245	0.150	0.165	46	10			
		☆R6020KNZ4	C13		600	20	231	0.170	0.196	40	10			
		☆R6576KNZ4	C13		650	76	735	0.040	0.046	165	10			
		New R6547KNZ4	C13		650	47	481	0.070	0.080	100	10			
		☆R6535KNZ4	C13		650	35	379	0.098	0.115	72	10			
		☆R6530KNZ4	C13		650	30	305	0.125	0.140	56	10			
		☆R6524KNZ4	C13		650	24	245	0.160	0.185	45	10			
New R6520KNZ4	C13	650	20	231	0.185	0.205	40	10						
TO-220AB		R6535KNX1	C10	N	650	35	102	0.098	0.115	72	10			
		R6530KNX1	C10		650	30	86	0.125	0.140	56	10			
		R6524KNX1	C10		650	24	74	0.160	0.185	45	10			
		R6520KNX1	C10		650	20	68	0.185	0.205	40	10			
		R6515KNX1	C10		650	15	60	0.280	0.315	27.5	10			

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

☆ : Under Development

Power MOSFETs

Fast Recovery Body Diode type (PrestoMOS™)												
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 Typ.(nC) V _{GS} =15V	trr (Typ.) (ns)	Drive Voltage (V)
		Part No.	Taping Code					V _{GS} =15V				
								Typ.	Max.			
TO-252 (DPAK)		New R6009JND3	TL1	N	600	9	125	0.450	0.585	22	65	15
		New R6007JND3	TL1		600	7	96	0.600	0.780	17.5	60	15
		New R6006JND3	TL1		600	6	86	0.720	0.936	15.5	58	15
		New R6004JND3	TL1		600	4	60	1.100	1.430	10.5	45	15
TO-263S (LPTS) [SC-83] (D2PAK)		New R6020JNJ	TL	N	600	20	252	0.200	0.260	50	85	15
		New R6018JNJ	TL		600	18	220	0.220	0.286	42	80	15
		New R6012JNJ	TL		600	12	160	0.300	0.390	28	70	15
		New R6009JNJ	TL		600	9	125	0.450	0.585	22	65	15
		New R6007JNJ	TL		600	7	96	0.600	0.780	17.5	60	15
		New R6006JNJ	TL		600	6	86	0.720	0.936	15.5	58	15
		New R6004JNJ	TL		600	4	60	1.100	1.430	10.5	45	15
		New R6025JNX	C7 G		N	600	25	85	0.140	0.182	57	90
New R6020JNX	C7 G	600	20	76		0.200	0.260	45	85	15		
New R6018JNX	C7 G	600	18	72		0.220	0.286	42	80	15		
New R6012JNX	C7 G	600	12	60		0.300	0.390	28	70	15		
New R6009JNX	C7 G	600	9	53		0.450	0.585	22	65	15		
New R6007JNX	C7 G	600	7	46		0.600	0.780	17.5	60	15		
New R6006JNX	C7 G	600	6	43		0.720	0.936	15.5	58	15		
New R6004JNX	C7 G	600	4	35		1.100	1.430	10.5	45	15		
TO-3PF		☆ R6050JNZ	C8	N	600	50	120	0.064	0.083	120	120	15
		New R6030JNZ	C8		600	30	93	0.110	0.143	75	100	15
		New R6025JNZ	C8		600	25	85	0.140	0.182	65	90	15
		New R6020JNZ	C8		600	20	76	0.180	0.234	50	85	15
TO-247		☆ R6070JNZ4	C13	N	600	70	770	0.045	0.058	160	135	15
		☆ R6050JNZ4	C13		600	50	615	0.064	0.083	120	120	15
		☆ R6042JNZ4	C13		600	42	495	0.080	0.104	100	110	15
		☆ R6030JNZ4	C13	N	600	30	370	0.110	0.143	74	100	15
		☆ R6025JNZ4	C13		600	25	306	0.150	0.195	65	90	15
		☆ R6020JNZ4	C13		600	20	252	0.180	0.234	45	85	15


Notes1 : 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)										Q _g Typ. (nC)	C _{iss} Typ. (pF)	Automotive Grade AEC-Q101			
	Part No.	Grade Code	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =2.5V		V _{GS} =1.8V		V _{GS} =1.5V							
								Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.						
SOT-323 (UMT3) [SC-70] 2021 size	RJU003N03	FRA	T106	N	30	0.3	±12	—	—	800	1,100	1,400	1,900	—	—	—	—	24	YES				
	RHU003N03	FRA	T106		30	0.3	±20	800	1,200	1,200	1,900	—	—	—	—	—	—	20	YES				
	RJU002N06	FRA	T106		60	0.2	±12	—	—	1,600	2,300	2,200	3,100	—	—	—	—	18	YES				
	RHU002N06	FRA	T106		60	0.2	±20	1,700	2,400	2,800*3	4,000*3	—	—	—	—	—	—	2.2*1	15	YES			
	☆BSS138BKW	HZG	T106		60	0.38	±20	500	700	600	840	1,000	4,000	—	—	—	—	—	—	YES			
	☆BSS138W	HZG	T106		60	0.31	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	—	—	YES			
	☆BSS84W	HZG	T106	P	-60	-0.21	±20	3,600	5,300	4,300	6,400	—	—	—	—	—	—	—	YES				
SOT-363 (UMT6) [SC-88] 2021 size	UM6K31N	FHA	TCN	N+N	60	0.25	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	15*4	YES				
SOT-323T (TUMT3) [SC-113A] 2021 size	RUF025N02	FRA	TL	N	20	2.5	±10	—	—	39	54	49	68	65	91	80	160	5*2	370	YES			
	RTF025N03	FRA	TL		30	2.5	±12	—	—	48	67	70	98	—	—	—	—	3.7*2	270	YES			
	RTF016N05	FRA	TL		45	1.6	±12	—	—	140	190	200	280	—	—	—	—	—	2.3*2	150	YES		
	RSF015N06	FRA	TL		60	1.5	±20	210	290	240	330	—	—	—	—	—	—	—	2	110	YES		
SOT-363T (TUMT6) [SC-113DA] 2021 size	RTL035N03	FRA	TR	N	30	3.5	±12	—	—	40	56	56	79	—	—	—	—	4.6*2	350	YES			
	US6K41	FRA	TR	N+N	20	1	±8	—	—	130	190	170	240	220	310	290	410	2*2	75	YES			
	RTL020P02	FRA	TR	P	-20	-2	±12	—	—	100	135	180	250	—	—	—	—	—	4.9*2	430	YES		
	RRL035P03	FRA	TR		-30	-3.5	±20	36	50	52	72	—	—	—	—	—	—	—	8	800	YES		
	RRL025P03	FRA	TR		-30	-2.5	±20	55	75	85	115	—	—	—	—	—	—	—	5.2	480	YES		
	RSL020P03	FRA	TR		-30	-2	±20	80	120	125	190	—	—	—	—	—	—	—	3.9	350	YES		
	US6J41	FRA	TR	P+P	-20	-1	±8	—	—	180	260	240	340	320	450	400	560	2*2	80	YES			
SOT-23 (SST3) 2924 size	RUC002N05	HZG	T116	N	50	0.2	±8	—	—	1,600	2,200	1,700	2,400	—	—	2,000	4,000	—	25	YES			
	New BSS670	HZG	T116		60	0.6	±20	500	650	600	820	—	—	—	—	—	—	—	—	YES			
	New BSS138BKW	HZG	T116		60	0.4	±20	500	700	600	840	—	—	—	—	—	—	—	—	YES			
	RK7002BM	HZG	T116		60	0.25	±20	1,700	2,400	2,100	3,000	3,000	12,000	—	—	—	—	—	—	15	YES		
	☆BSS123	HZG	T116		100	0.2	±20	5,500	7,700	5,900	8,200	—	—	—	—	—	—	—	—	—	YES		
	New BSS84W	HZG	T116		P	-60	-0.2	±20	3,600	5,300	4,300	6,400	—	—	—	—	—	—	—	—	YES		
SOT-346 (SMT3HP) [SC-59] 2928 size	RJK005N03	FRA	T146	N	30	0.5	±12	—	—	400	580	650	940	—	—	—	—	2*3	60	YES			
	RHK005N03	FRA	T146		30	0.5	±20	350	550	510	720	—	—	—	—	—	—	—	45	YES			
	RHK003N06	FRA	T146		60	0.3	±20	700	1,000	1,100*3	1,500*3	—	—	—	—	—	—	—	3*1	33	YES		
SOT-346T (TSMT3) [SC-96] 2928 size	New RUR040N02	HZG	TL	N	20	4	±10	—	—	25	35	33	46	—	—	55	110	8*2	680	YES			
	New RTR040N03	HZG	TL		30	4	±12	—	—	34	48	47	66	—	—	—	—	—	5.9*2	475	YES		
	New RTR025N03	HZG	TL		30	2.5	±12	—	—	66	92	95	133	—	—	—	—	—	3.3*2	220	YES		
	New RSR025N03	HZG	TL		30	2.5	±20	50	70	74	105	—	—	—	—	—	—	—	—	2.9	165	YES	
	New RTR030N05	HZG	TL		45	3	±12	—	—	48	67	68	95	—	—	—	—	—	—	6.2*2	510	YES	
	New RSR025N05	HZG	TL		45	2.5	±20	70	100	95	150	—	—	—	—	—	—	—	—	3.6	260	YES	
	New RTR025N05	HZG	TL		45	2.5	±12	—	—	95	130	125	175	—	—	—	—	—	—	3.2*2	250	YES	
	New RTR020N05	HZG	TL		45	2	±12	—	—	130	180	180	250	—	—	—	—	—	—	2.9*2	200	YES	
	New RSR030N06	HZG	TL		60	3	±20	60	85	70	100	—	—	—	—	—	—	—	—	5	380	YES	
	New RSR020N06	HZG	TL		60	2	±20	120	170	140	195	—	—	—	—	—	—	—	—	2.7	180	YES	
	New RSR010N10	HZG	TL		100	1	±20	370	520	400	560	—	—	—	—	—	—	—	—	3.5	140*4	YES	
	New RTR030P02	HZG	TL		-20	-3	±12	—	—	55	75	90	125	—	—	—	—	—	—	9.3*2	840	YES	
	New RTR025P02	HZG	TL		-20	-2.5	±12	—	—	70	95	115	160	—	—	—	—	—	—	7*2	630	YES	
	New RTR020P02	HZG	TL		-20	-2	±12	—	—	100	135	180	250	—	—	—	—	—	—	4.9*2	430	YES	
	New RRR040P03	HZG	TL		-30	-4	±20	32	45	45	63	—	—	—	—	—	—	—	—	10.5	1,000	YES	
	New RRR030P03	HZG	TL		-30	-3	±20	55	75	85	115	—	—	—	—	—	—	—	—	5.2	480	YES	
	New RSR025P03	HZG	TL		-30	-2.5	±20	70	98	100	140	—	—	—	—	—	—	—	—	5.4	460	YES	
New RSR020P05	HZG	TL	-45	-2	±20	130	190	180	260	—	—	—	—	—	—	—	—	4.5*2	500	YES			
New RSR015P06	HZG	TL	-60	-1.5	±20	200	280	240	340	—	—	—	—	—	—	—	—	10*1	500	YES			
SOT-457T (TSMT6) [SC-95] 2928 size	New RUQ050N02	HZG	TR	N	20	5	±10	—	—	22	30	27	38	—	—	40	80	12*2	900	YES			
	New RTQ045N03	HZG	TR		30	4.5	±12	—	—	30	43	42	60	—	—	—	—	—	7.6*2	540	YES		
	New RSQ045N03	HZG	TR		30	4.5	±20	27	38	36	51	—	—	—	—	—	—	—	—	6.8	520	YES	
	New RSQ035N03	HZG	TR		30	3.5	±20	44	62	60	84	—	—	—	—	—	—	—	—	5.3	290	YES	
	New RTQ035N03	HZG	TR		30	3.5	±12	—	—	38	54	55	77	—	—	—	—	—	—	4.6*2	285	YES	
	New RSQ020N03	HZG	TR		30	2	±20	96	134	148	207	—	—	—	—	—	—	—	—	2.2	110	YES	
	New RVQ040N05	HZG	TR		45	4	±21	38	53	47	66	—	—	—	—	—	—	—	—	6.3	530	YES	
	New RTQ020N05	HZG	TR		45	2	±12	—	—	140	190	200	280	—	—	—	—	—	—	2.3*2	150	YES	
	New RSQ035N06	HZG	TR		60	3.5	±20	50	70	58	82	—	—	—	—	—	—	—	—	6.5	430	YES	
	New RSQ015N06	HZG	TR		60	1.5	±20	210	290	240	330	—	—	—	—	—	—	—	—	2	110	YES	
	QS6K1	FRA	TR		N+N	30	1	±12	—	—	170	238	260	364	—	—	—	—	—	—	1.7*2	77	YES
	QS6K21	FRA	TR			45	1	±12	—	—	300	420	415	585	—	—	—	—	—	—	1.5*2	95	YES
	New RTQ035P02	HZG	TR		-20	-3.5	±12	—	—	50	65	80	100	—	—	—	—	—	—	10.5*2	1,200	YES	
	New RTQ025P02	HZG	TR		-20	-2.5	±12	—	—	72	100	140	190	—	—	—	—	—	—	—	6.4*2	580	YES
	New RRR045P03	HZG	TR		-30	-4.5	±20	25	35	34	48	—	—	—	—	—	—	—	—	—	14	1,350	YES
	New RSQ035P03	HZG	TR		-30	-3.5	±20	45	65	65	90	—	—	—	—	—	—	—	—	—	9.2	780	YES
	New RRR030P03	HZG	TR		-30	-3	±20	55	75	85	115	—	—	—	—	—	—	—	—	—	5.2	480	YES
New RSQ025P03	HZG	TR	-30	-2.5	±20	80	110	120	165	—	—	—	—	—	—	—	—	—	4.4	320	YES		
New RSQ015P10	HZG	TR	-100	-1.5	±20	350	470	380	510	—	—	—	—										

Selector Guide for Automotive MOSFETs

Automotive MOSFETs																				
Package	Product No.			Polarity (ch)	V _{DSS} (V)	I _D (A)	V _{GS} (V)	R _{DS(on)} (mΩ)						Qg Typ. (nC)	Ciss Typ. (pF)	Automotive Grade AEC-Q101				
	Part No.	Grade Code	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =2.5V					V _{GS} =1.8V		V _{GS} =1.5V	
								Typ.	Max.	Typ.	Max.	Typ.	Max.				Typ.	Max.	Typ.	Max.
 (TSMT8) 3028 size	New RQ1C075UN	HZG	TR	N	20	7.5	±10	—	—	11	16	14	20	—	—	20	40	18*1	1,400	YES
	New QS8K2	HZG	TR	N+N	30	3.5	±12	—	—	38	54	55	77	—	—	—	—	4.6*1	285	YES
	New RQ1A070ZP	HZG	TR	P	-12	-7	±10	—	—	8	12	11	16	—	—	19	38	58*1	7,400*3	YES
	New RQ1E070RP	HZG	TR		-30	-7	±20	12	17	24	—	—	—	—	—	—	—	26	2,700	YES
	New RQ1E050RP	HZG	TR		-30	-5	±20	22	31	32	45	—	—	—	—	—	—	13	1,300	YES
	New QS8J4	HZG	TR	P+P	-30	-4	±20	40	56	55	77	—	—	—	—	—	—	8.4	800	YES
	New QS8M51	HZG	TR	N+P	100	2	±20	240	325	250	340	—	—	—	—	—	—	—	4.7	290*2
-100					-1.5	±20	350	470	380	510	—	—	—	—	—	—	—	—	17	950*2


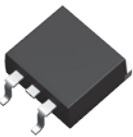
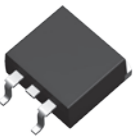
Notes1 : () : ROHM Packages.
Notes2 : *1 : V_{GS}=4.5V *2 : V_{GS}=25V *3 : V_{GS}=6V

Selector Guide for Automotive Power MOSFETs

Automotive Power MOSFETs																
Package	Product No.			Polarity (ch)	V _{DSS} (V)	I _D (A)	V _{GS} (V)	R _{DS(on)} (mΩ)						Qg Typ. (nC)	Ciss Typ. (pF)	Automotive Grade AEC-Q101
	Part No.	Grade Code	Taping Code					V _{GS} =10V		V _{GS} =4.5V		V _{GS} =4.0V				
								Typ.	Max.	Typ.	Max.	Typ.	Max.			
 SOT-89 (MPT3) [SC-62] 4540 size	RHP030N03	FRA	T100	N	30	3	±20	90	120	160	210	—	—	6.5*1	160	YES
	RJP020N06	FRA	T100		60	2	±12	—	—	165	240	210	300	5*2	160	YES
	RHP020N06	FRA	T100		60	2	±20	150	200	200	280	—	—	7*1	140	YES
 (HSMT8AG) 3333 size	☆AG009DGQ3	—	TB	N	40	30	±20	6	8.8	7.3	11	—	—	32*1	1,790	YES
 (SOP8) 5060 size	RSS130N03	FRA	TB	N	30	13	±20	5.9	8.3	7.4	10.4	—	—	25	2,000	YES
	RSS100N03	FRA	TB		30	10	±20	9.5	13.3	12.5	17.5	—	—	14	1,070	YES
	RSS095N05	FRA	TB		45	9.5	±20	11	16	14	20	—	—	18.9	1,830	YES
	RSS070N05	FRA	TB		45	7	±20	18	25	23	32	—	—	12	1,000	YES
	RSS065N06	FRA	TB		60	6.5	±20	24	37	28	44	—	—	11	900	YES
	SP8K3	FRA	TB	N+N	30	7	±20	17	24	23	33	—	—	8.4	600	YES
	SP8K2	FRA	TB		30	6	±20	21	30	30	42	—	—	7.2	520	YES
	SP8K24	FRA	TB		45	6	±20	18	25	24	34	—	—	15.4	1,400	YES
	SP8K22	FRA	TB		45	4.5	±20	33	46	41	57	—	—	6.8	550	YES
	SP8K33	FRA	TB		60	5	±20	34	48	38	54	—	—	8	620	YES
	SP8K32	FRA	TB		60	4.5	±20	46	65	52	73	—	—	7	500	YES
	SP8K31	FRA	TB		60	3.5	±20	85	120	100	140	—	—	3.7	250	YES
	SP8K41	FRA	TB		80	3.4	±20	90	130	110	150	120	160	6.6	600	YES
	SP8K52	FRA	TB		100	3	±20	120	170	130	180	—	—	8.5	610*3	YES
	RRS140P03	FRA	TB		P	-30	-14	±20	5	7	6.7	9.4	—	—	80	8,000
	RRS100P03	FRA	TB	-30		-10	±20	9	12.6	12.5	17.5	—	—	39	3,600	YES
	RRS090P03	FRA	TB	-30		-9	±20	11	15.4	15	21	—	—	30	3,000	YES
	RRS050P03	FRA	TB	-30		-5	±20	36	50	52	72	—	—	9.2	850	YES
	RSS070P05	FRA	TB	-45		-7	±20	19	27	25	35	—	—	34	4,100	YES
	RSS060P05	FRA	TB	-45	-6	±20	26	36	35	49	—	—	23	2,700	YES	
	SP8J66	FRA	TB	P+P	-30	-9	±20	13.5	18.5	17.5	23.6	—	—	35	3,000	YES
	SP8M4	FRA	TB	N+P	30	9	±20	12	18	16	24	—	—	15	1,190	YES
					-30	-7	±20	20	28	25	35	—	—	25	2,600	YES
					30	6	±20	21	30	30	42	—	—	7.2	520	YES
					-30	-7	±20	20	28	25	35	—	—	25	2,600	YES
					30	5	±20	36	51	52	73	—	—	3.9	230	YES
					-30	-4.5	±20	40	56	57	80	—	—	8.5	850	YES
					30	5	±20	36	51	52	73	—	—	3.9	230	YES
-30					-3.5	±20	65	90	100	140	—	—	5.5	490	YES	
45					6	±20	18	25	24	34	—	—	15.4	1,400	YES	
-45					-4	±20	33	46	43	60	—	—	20	2,400	YES	
45					4.5	±20	33	46	41	57	—	—	6.8	550	YES	
-45					-3.5	±20	45	63	60	84	—	—	13	1,700	YES	
80					3.4	±20	90	130	110	150	—	—	6.6	600	YES	
-80					-2.6	±20	165	240	220	300	—	—	8.2	1,000	YES	
100					3	±20	120	170	130	180	—	—	8.5	610*3	YES	
-100	-2.5	±20	210	290	230	320	—	—	12.5	1,550*3	YES					

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

☆ : Under Development

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	Taping Code					V _{GS} =10V		V _{GS} =4.5V						
								Typ.	Max.	Typ.	Max.	V _{GS} =10V	V _{DSS} =10V			
 TO-252 (DPAK)	New RD3H200SN	FRA	TL	N	45	20	±20	20	28	25	35	12*3	950	YES		
	New RD3L220SN	FRA	TL		60	22	±20	18	26	21	30	30	1,500	YES		
	New RD3L150SN	FRA	TL		60	15	±20	28	40	33	47	18	930	YES		
	New RD3L080SN	FRA	TL		60	8	±20	57	80	70	98	9.4	380	YES		
	New RD3L050SN	FRA	TL		60	5	±20	78	109	94	131	8	290	YES		
	New RD3P200SN	FRA	TL		100	20	±20	33	46	36*2	50*2	55	2,100*1	YES		
	New RD3P175SN	FRA	TL		100	17.5	±20	75	105	80	112	24	950*1	YES		
	New RD3P100SN	FRA	TL		100	10	±20	95	133	100	140	18	700*1	YES		
	New RD3P050SN	FRA	TL		100	5	±20	135	190	142	200	14	530*1	YES		
	☆ RD3U080AA	FRA	TL		250	8	±30	225	300	—	—	25	1,440*1	YES		
	☆ RD3U041AA	FRA	TL		250	4	±30	930	1,300	—	—	8.5	350*1	YES		
	☆ R5205PND3	FRA	TL		525	5	±25	1,300	1,600	—	—	10.8	320*1	YES		
	☆ R6006PND3	FRA	TL		600	6	±30	900	1,200	—	—	15	460*1	YES		
	☆ R6004PND3	FRA	TL		600	4	±25	1,400	1,800	—	—	11	280*1	YES		
	☆ R8002CND3	FRA	TL		800	2	±30	3,300	4,300	—	—	12.1	240*1	YES		
	☆ R8001CND3	FRA	TL		800	1	±30	6,700	8,700	—	—	7.2	60*1	YES		
	 TO-263S (LPTS) [SC-83] (D2PAK)	New RD3H160SP	FRA		TL	P	-45	-16	±20	35	50	45	63	16*3	2,000	YES
		New RD3H080SP	FRA		TL		-45	-8	±20	65	91	95	133	9*3	1,000	YES
New RD3H045SP		FRA	TL	-45	-4.5		±20	110	155	160	225	12*3	550	YES		
New RD3L140SP		FRA	TL	-60	-14		±20	60	84	73	103	27	1,900	YES		
New 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	YES			

Notes1 : Package is JEDEC code. () : ROHM Packages, [] : JEITA Code, [] : GENERAL Code.
 Notes2 : *1 : V_{DSS}=25V *2 : V_{GS}=4V *3 : V_{GS}=5V

☆ : Under Development

Bipolar Transistors

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

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

General Purpose Amplification Bipolar Transistors (Flat type)												
Package	Application	Part No.	Product No.			Polarity (ch)	P _D *1 (W)	V _{CEO} (V)	I _c (A)	h _{FE} *2	Automotive Grade AEC-Q101	
			General	Automotive	Taping Code							h _{FE} *2 Code
SOT-723 (VMT3) [SC-105AA] 1212 size	General Purpose Amplification	2SAR522M	—	—	T2L	Q	R	S	0.15 -20 -0.2 120 to 560	—		
		2SAR523M	—	—	T2L	Q	R	S	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	Q	R	S	0.15 -12 -0.5 270 to 680	—		
		2SCR522M	—	—	T2L	Q	R	S	0.15 20 0.2 120 to 560	—		
		2SCR523M	—	—	T2L	Q	R	S	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	Q	R	S	0.15 12 0.5 270 to 680	—		
		2SD2696	—	—	T2L	Q	R	S	0.15 30 0.4 270 to 680	—		
		SOT-416FL (EMT3F) [SC-89] 1616 size	General Purpose Amplification	2SAR522EB	—	—	TL	Q	R	S	0.15 -20 -0.2 120 to 560	—
2SAR523EB	—			—	TL	Q	R	S	0.15 -50 -0.1 120 to 560	—		
2SA1774EB	HZG			—	T2L	Q	R	S	0.15 -50 -0.15 120 to 560	S : No Recommended YES		
Driver	2SAR502EB		—	—	TL	Q	R	S	0.15 -30 -0.5 200 to 500	YES		
	2SCR522EB		—	—	TL	Q	R	S	0.15 20 0.2 120 to 560	—		
	2SCR523EB		—	—	TL	Q	R	S	0.15 50 0.1 120 to 560	—		
	2SC4617EB		HZG	—	TL	Q	R	S	0.15 50 0.15 120 to 560	S : No Recommended YES		
	2SCR502EB		HZG	—	TL	Q	R	S	0.15 30 0.5 200 to 500	YES		
	SOT-323FL (UMT3F) [SC-85] 2021 size		General Purpose Amplification	2SAR522UB	—	—	TL	Q	R	S	0.2 -20 -0.2 120 to 560	—
				2SAR523UB	—	—	TL	Q	R	S	0.2 -50 -0.1 120 to 560	—
2SA1576UB		HZG		—	TL	Q	R	S	0.2 -50 -0.15 120 to 560	S : No Recommended YES		
Driver		2SAR502UB	HZG	—	TL	Q	R	S	0.2 -30 -0.5 200 to 500	YES		
		2SCR522UB	—	—	TL	Q	R	S	0.2 20 0.2 120 to 560	—		
		2SCR523UB	—	—	TL	Q	R	S	0.2 50 0.1 120 to 560	—		
		2SC4081UB	HZG	—	TL	Q	R	S	0.2 50 0.15 120 to 560	S : No Recommended YES		
		2SCR502UB	HZG	—	TL	Q	R	S	0.2 30 0.5 200 to 500	YES		

Notes1 : * : General part No. have no grade code.
 Notes2 : *1 : With reference land installed.
 Notes3 : *2 : For h_{FE}, N : 56 to 120, P : 82 to 180, Q : 120 to 270, R : 180 to 390, S : 270 to 560. Please see the technical specifications.
 Notes4 : 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) [SC-85] 2924 size		V _{CEO} (V)	I _c (A)	h _{FE} *2	
	P _D =0.15W		P _D =0.2W		P _D =0.2W		P _D =0.2W					
Application	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN				
General Purpose Amplification	2SA1774	2SC4617	2SA1576A	2SC4081	2SA1037AK	2SC2412K			50	0.15	120 to 560	
			2SA1576U3	2SC4081U3					50	0.15	120 to 560	
Low V _{CE(sat)}	2SA2018	2SC5585			2SA2119K				12	0.5	270 to 680	
			2SB1689	2SD2652					12	1.5	270 to 680	
					2SB1690K	2SD2653K			12	2	270 to 680	
						2SD1757K			15	0.5	120 to 560	
					2SB1590K				15	1	120 to 390	
						2SD2444K			15	1	180 to 390	
									30	1	270 to 680	
					2SB1695K				30	1.5	270 to 680	
Driver			2SAR502U3						30	0.5	200 to 500	
				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	
			2SA2088	2SC5876					60	0.5	120 to 270 120 to 390	
High Voltage			2SA1579U3	2SC4102U3			2SARA41C	2SCRC41C	120	0.05	180 to 560	
			2SA1579	2SC4102	2SA1514K	2SC3906K 2SC4061K			120 300	0.05 0.1	180 to 560 56 to 120	

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

General Purpose Amplification Bipolar Transistors(Gull type)															
Package	Application	Part No.	Product No.						Polarity (ch)	P _D *1 (W)	V _{CE0} (V)	I _c (A)	h _{FE} *2		Automotive Grade AEC-Q101
			Grade Code	Taping 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	2SA1576A	*	FRA	T106	Q	R	S	PNP	0.2	-50	-0.15	120 to 560	S : No Recommended	YES
		2SA1576U3	*	HZG	T106	Q	R	S		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
		2SA2088	*	FRA	T106	Q				0.2	-60	-0.5	120 to 390		YES
	High Voltage	2SA1579U3	*	HZG	T106	R	S			0.2	-120	-0.05	180 to 560		YES
		2SA1579	*	FRA	T106	R	S			0.2	-120	-0.05	180 to 560		YES
	General Purpose Amplification	2SC4081	*	FRA	T106	Q	R	S	NPN	0.2	50	0.15	120 to 560	S : No Recommended	YES
		2SC4081U3	*	HZG	T106	Q	R	S		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
		2SC5876	*	FRA	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
	2SC4102	*	FRA	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	—
		2SA2119K	*	—	T146					0.2	-12	-0.5	270 to 680		—
	Low V _{CE(sat)}	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
		2SD2653K	*	—	T146				0.2		12	2	270 to 680		—
	Low V _{CE(sat)}	2SD1757K	*	—	T146	Q	R	S	0.2		15	0.5	120 to 560		—
		2SD2444K	*	—	T146	R			0.2		15	1	180 to 390		—
		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

Notes1 : * : General Part No. have no grade code.
 Notes2 : *1 : With reference land installed
 Notes3 : *2 : For h_{FE}, N : 56 to 120, P : 82 to 180, Q : 120 to 270, R : 180 to 390, S : 270 to 560. Please see the technical specifications.
 Notes4 : 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 _{CEO} (V)	I _c (A)	h _{FE} *2
Application	P _D =0.15W		P _D =0.2W				
Polarity	PNP	NPN	PNP	NPN			
General Purpose Amplification	BC858BW	BC848BW	BC858B	BC848B	30	0.1	200 to 450
	☆BC857BU3	☆BC847BU3	BC857B	BC847B	45	0.1	200 to 450
			☆BC857C	☆BC847C	45	0.15	210 to 480
				☆BC846B	65	0.12	420 to 800
			BC856B		65	0.1	200 to 450
Driver			New BSS63	New BSS64	100	0.1	30 or more
			New BSS5130	New BSS4130	30	1	270 to 680
			BC807-16	BC817-16	45	0.8	100 to 250
			BC807-25	BC817-25	45	0.8	160 to 400
			BC807-40	BC817-40	45	0.8	250 to 600
Switching			BCX17	BCX19	45	0.5	100 to 600
			SSTA56	SSTA06	80	0.5	100 or more
	UMT3906	UMT3904	SST3906	SST3904	40	0.2	100 to 300
	UMT4403U3	UMT4401U3	SST4403	SST4401	40	0.6	100 to 300
		UM2222AU3		SST2222A	40	0.6	100 to 300
Darlington*3	UMT2907A		SST2907A	60	0.6	100 to 300	
			SSTA28	80(V _{CEs})	0.3	10,000 or more	

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

☆ : Under Development

Bipolar Transistors(For Oversea Customer)												
Package	Application	Product No.			Polarity (ch)	P _D *1 (W)	V _{CEO} (V)	I _c (A)	h _{FE} *2	Automotive Grade AEC-Q101		
		Part No.	General	Automotive							Taping 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	
	Switching	UMT3906		—	T106		0.15	-40	-0.6	100 to 300	—	
		UMT4403U3		HZG	T106		0.15	-40	-0.6	100 to 300	YES	
		UMT2907A		—	T106		0.15	-60	-0.6	100 to 300	—	
		BC848BW	*	—	T106		0.15	30	0.1	200 to 450	—	
	General Purpose Amplification	☆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	
SOT-23 (SST3) 2924 size	General Purpose Amplification	BC858B		HZG	T116	PNP	0.2	-30	-0.1	200 to 450	YES	
		BC857B		HZG	T116		0.2	-45	-0.1	200 to 480	YES	
		☆BC857C		HZG	T116		0.2	-45	-0.15	420 to 800	YES	
		BC856B		HZG	T116		0.2	-65	-0.1	220 to 475	YES	
		New BSS63		HZG	T116		0.2	-100	-0.1	30 or more	YES	
	Driver	New BSS5130		HZG	T116		0.2	-30	-1	270 to 680	YES	
		BCX17		HZG	T116		0.2	-45	-0.5	100 to 600	YES	
		BC807-16		HZG	T116		0.2	-45	-0.8	100 to 250	YES	
		BC807-25		HZG	T116		0.2	-45	-0.8	160 to 400	YES	
		BC807-40		HZG	T116		0.2	-45	-0.8	250 to 600	YES	
		SSTA56		HZG	T116		0.2	-80	-0.5	100 or more	YES	
		SST4403		HZG	T116		0.2	-40	-0.6	100 to 300	YES	
		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	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	
	New BSS64			HZG	T116		0.2	100	0.1	30 or more	YES	
	Driver		New BSS4130		HZG		T116	0.2	30	1	270 to 680	YES
			BCX19		HZG		T116	0.2	45	0.5	100 to 600	YES
			BC817-16		HZG		T116	0.2	45	0.8	100 to 250	YES
			BC817-25		HZG		T116	0.2	45	0.8	160 to 400	YES
			BC817-40		HZG		T116	0.2	45	0.8	250 to 600	YES
		SSTA06		HZG	T116		0.2	80	0.5	100 or more	YES	
		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	—

Notes1 : * : General Part No. have no grade code.
 Notes2 : *1 : With reference land installed
 Notes3 : *2 : For h_{FE}, please see the technical specifications.
 Notes4 : *3 : For internal circuit, please see the technical specifications.
 Notes5 : 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} • Muting									25 (V_{EBO})	0.3	820 to 2,700
									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

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

High h_{FE} • Muting/Darlington Bipolar Transistors														
Package	Application	Product No.					Polarity (ch)	P_D^{*1} (W)	V_{CE0} (V)	I_C (A)	h_{FE}^{*2}	Automotive Grade AEC-Q101		
		Part No.	Grade Code		Taping 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		—	

Notes1 : * : General Part No. have no grade code.
 Notes2 : *1 : With reference land installed
 Notes3 : *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.
 Notes4 : *3 : For internal circuit, please see the technical specifications.
 Notes5 : 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_{CE0} (V)	I_c (A)	h_{FE}^{*2}
	$P_D=0.15W$ ^{*1}		$P_D=0.15W$ ^{*1}		$P_D=0.2W$ ^{*1}		$P_D=0.2W$ ^{*1}				
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 ($f_T=3,200MHz$)

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

High Frequency Bipolar Transistors														
Package	Application	Product No.						Polarity (ch)	P_D^{*1} (W)	V_{CE0} (V)	I_c (A)	h_{FE}^{*2}	f_T (MHz)	Automotive Grade AEC-Q101
		Part No.	Grade Code		Taping Code	h _{FE} *2 Code								
			General	Automotive										
 SOT-723 (VMT3) [SC-105AA] 1212 size	High Frequency	2SC5661	*	—	T2L	P		NPN	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	NPN	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		NPN	0.2	25	0.05	82 to 180	300	—
		2SC4774	*	—	T106	R	S		0.2	6	0.05	180 to 560	800	—
		2SC4082	*	—	T106	P			0.2	20	0.05	82 to 180	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	NPN	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

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

Quick Reference for Low Saturation/Driver Bipolar Transistors											
Package	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_{CE0} (V)	I_c (A)	h_{FE}^{*2}
	$P_D=0.4W$ ^{*1}				$P_D=0.5W$ ^{*1}						
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				
	US6T4 ^{*3}	US6X3 ^{*3}	2SB1705	2SD2670	12	3	270 to 680				
			2SB1707	2SD2672	12	4	270 to 680				
			QST2 ^{*3}	QSX1 ^{*3}	12	6	270 to 680				
	2SB1733	2SD2703	2SB1710	2SD2675	30	1	270 to 680				
	2SB1731	2SD2701	2SB1695	2SD2657	30	1.5	270 to 680				
	US6T5 ^{*3}	US6X4 ^{*3}	2SB1706	2SD2671	30	2	270 to 680				
			2SB1708	2SD2673	30	3	270 to 680				
			QST3 ^{*3}	QSX2 ^{*3}	30	5	270 to 680				
Driver			2SAR512R	2SCR512R	30	2	200 to 500				
			2SAR513R	2SCR513R	50	1	180 to 450				
			2SAR553R	2SCR553R	50	2	180 to 450				
			2SAR543R	2SCR543R	50	3	180 to 450				
			2SAR514R	2SCR514R	80	0.7	120 to 390				
			2SAR554R	2SCR554R	80	1.5	120 to 390				
			2SAR544R	2SCR544R	80	2.5	120 to 390				
High Speed Switching			2SA2094	2SC5866	60	2	120 to 270				
High Voltage			2SAR340Q ^{*3}	2SCR341Q ^{*3}	400	0.1	82 to 270				

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

Low Saturation/Driver Bipolar Transistors													
Package	Application	Product No.						Polarity (ch)	P _D *1 (W)	V _{CE0} (V)	I _C (A)	h _{FE} *2	Automotive Grade AEC-Q101
		Part No.	Grade Code		Taping 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)}	US6T4*3	*	—	TR			PNP	0.4	-12	-3	270 to 680	—
		US6T5*3		—	TR				0.4	-30	-2	270 to 680	—
		US6X3*3		—	TR			NPN	0.4	12	3	270 to 680	—
		US6X4*3		—	TR				0.4	30	2	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		—	TL				0.5	-30	-2	200 to 500	—
		2SAR513R		—	TL				0.5	-50	-1	180 to 450	—
		2SAR553R		—	TL				0.5	-50	-2	180 to 450	—
		2SAR543R		—	TL				0.5	-50	-3	180 to 450	—
		2SAR514R		—	TL				0.5	-80	-0.7	120 to 390	—
		2SAR554R		—	TL				0.5	-80	-1.5	120 to 390	—
		2SAR544R		—	TL				0.5	-80	-2.5	120 to 390	—
		2SA2094		—	TL	Q			0.5	-60	-2	120 to 270	—
	Low V _{CE(sat)}	2SD2674	*	—	TL			NPN	0.5	12	1.5	270 to 680	—
		2SD2653		—	TL				0.5	12	2	270 to 680	—
		2SD2670		—	TL				0.5	12	3	270 to 680	—
		2SD2672		—	TL				0.5	12	4	270 to 680	—
		2SD2675		—	TL				0.5	30	1	270 to 680	—
		2SD2657		—	TL				0.5	30	1.5	270 to 680	—
		2SD2671		—	TL				0.5	30	2	270 to 680	—
		2SD2673		—	TL				0.5	30	3	270 to 680	—
	Driver	2SCR512R		—	TL				0.5	30	2	200 to 500	—
		2SCR513R		—	TL				0.5	50	1	180 to 450	—
		2SCR553R		—	TL				0.5	50	2	180 to 450	—
		2SCR543R		—	TL				0.5	50	3	180 to 450	—
2SCR514R			—	TL			0.5		80	0.7	120 to 390	—	
2SCR554R			—	TL			0.5		80	1.5	120 to 390	—	
2SCR544R			—	TL			0.5		80	2.5	120 to 390	—	
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	—	

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

Bipolar Transistors

Quick Reference for Power Bipolar Transistors													
Package	DFN2020-3S (HUML2020L3) 2020 size		SOT-89 (MPT3) [SC-62] 4540 size		SOT-428 (CPT3)[SC-63] [DPAK]		TO-252 [DPAK]		TO-263AB (LPTL)		V _{CEO} (V)	I _C (A)	h _{FE} *3
	Polarity	P _D =0.5W *1		P _D =0.5W *1		P _D =10W *2		P _D =10W *2		P _D =40W *2			
Application	PNP	NPN	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
							<i>New</i> 2SAR582D3	<i>New</i> 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
							<i>New</i> 2SAR583D3	<i>New</i> 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		<i>New</i> 2SCR586J	80	5	120 to 390
				<i>New</i> 2SAR372P5	2SCR372P 2SCR372P5						120	0.7	120 to 390
				<i>New</i> 2SAR375P5	2SCR375P 2SCR375P5						120	1.5	120 to 390
						<i>New</i> 2SAR587D3	<i>New</i> 2SCR587D3			120	3	120 to 390	
					2SB1275	2SD1918				160	1.5	82 to 180 120 to 270	
High Voltage			2SAR340P	2SCR346P						400	0.1	82 to 270	
High Speed Switching			2SA2071P5	2SC5824						60	3	120 to 270 120 to 390	
High h _{FE}				2SD2537						25	1.2	820 to 1,800	
			2SB1427							20	2	390 to 820	
Darlington*4				2SD2153						25	2	560 to 2,700	
				2SD1834						60 (V _{CE} S)	1	2k or more	
						2SD2143				60±10	2	1k to 10k	
					2SB1316	2SD1980				100	2	1k to 10k	

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

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		Taping Code	h _{FE} *3 Code								
General	Automotive													
DFN2020-3S (HUMML2020L3) 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		FRA	T100				0.5	-30	-1	270 to 680	YES	
		2SAR293P5	*	—	T100				0.5	-30	-1	270 to 680	—	
		2SAR512P		FRA	T100				0.5	-30	-2	200 to 500	YES	
		2SAR512P5	*	—	T100				0.5	-30	-2	200 to 500	—	
		2SAR552P		FRA	T100				0.5	-30	-3	200 to 500	YES	
		2SAR552P5	*	—	T100				0.5	-30	-3	200 to 500	—	
		2SAR542P	*	FRA	T100				0.5	-30	-5	200 to 500	YES	
		2SAR513P		FRA	T100				0.5	-50	-1	180 to 450	YES	
		2SAR513P5	*	—	T100				0.5	-50	-1	180 to 450	—	
		2SAR553P		FRA	T100				0.5	-50	-2	180 to 450	YES	
		2SAR553P5	*	—	T100				0.5	-50	-2	180 to 450	—	
		2SAR533P		FRA	T100				0.5	-50	-3	180 to 450	YES	
		2SAR533P5	*	—	T100				0.5	-50	-3	180 to 450	—	
		2SAR514P		FRA	T100				0.5	-80	-0.7	120 to 390	YES	
		2SAR514P5	*	—	T100				0.5	-80	-0.7	120 to 390	—	
		2SAR554P		FRA	T100				0.5	-80	-1.5	120 to 390	YES	
		2SAR554P5	*	—	T100				0.5	-80	-1.5	120 to 390	—	
		2SAR544P		FRA	T100				0.5	-80	-2.5	120 to 390	YES	
		2SAR544P5	*	—	T100				0.5	-80	-2.5	120 to 390	—	
		New 2SAR372P5	*	—	T100	Q	R		0.5	-120	-0.7	120 to 390	—	
		New 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		FRA	T100			0.5	30	1	270 to 680	YES		
		2SCR293P5	*	—	T100			0.5	30	1	270 to 680	—		
		2SCR512P		FRA	T100			0.5	30	2	200 to 500	YES		
		2SCR512P5	*	—	T100			0.5	30	2	200 to 500	—		
		2SCR552P		FRA	T100			0.5	30	3	200 to 500	YES		
		2SCR552P5	*	—	T100			0.5	30	3	200 to 500	—		
		2SCR542P	*	FRA	T100			0.5	30	5	200 to 500	YES		
		2SCR513P		FRA	T100			0.5	50	1	180 to 450	YES		
		2SCR513P5	*	—	T100			0.5	50	1	180 to 450	—		
		2SCR553P		FRA	T100			0.5	50	2	180 to 450	YES		
		2SCR553P5	*	—	T100			0.5	50	2	180 to 450	—		
		2SCR533P		FRA	T100			0.5	50	3	180 to 450	YES		
		2SCR533P5	*	—	T100			0.5	50	3	180 to 450	—		
		2SCR514P		FRA	T100			0.5	80	0.7	120 to 390	YES		
		2SCR514P5	*	—	T100			0.5	80	0.7	120 to 390	—		
		2SCR554P		FRA	T100			0.5	80	1.5	120 to 390	YES		
2SCR554P5		*	—	T100			0.5	80	1.5	120 to 390	—			
2SCR544P			FRA	T100			0.5	80	2.5	120 to 390	YES			
2SCR544P5		*	—	T100			0.5	80	2.5	120 to 390	—			
2SCR372P			FRA	T100	Q	R	0.5	120	0.7	120 to 390	YES			
2SCR372P5		*	—	T100	Q	R	0.5	120	0.7	120 to 390	—			
2SCR375P			FRA	T100	Q	R	0.5	120	1.5	120 to 390	YES			
2SCR375P5		*	—	T100	Q	R	0.5	120	1.5	120 to 390	—			
High Voltage		2SCR346P	*	—	T100	P	Q	0.5	400	0.1	82 to 270	—		
High Speed Switching		2SC5824	*	—	T100	Q	R	0.5	60	3	120 to 390	—		
High h _{FE}		2SD2537	*	—	T100	V		0.5	25	1.2	820 to 1,800	—		
		2SD2153	*	—	T100	U	V	0.5	25	2	560 to 2,700	—		
Darlington*4		2SD1834	*	—	T100			0.5	60 (V _{CEs})	1	2k or more	—		
TO-428 (CPT3) [SC-63] [DPAK]		Driver	2SB1275		—	TL	P		PNP	10*2	-160	-1.5	82 to 180	—
		Darlington*4	2SB1316		—	TL				10*2	-100	-2	1k to 10k	—
		Driver	2SD1918	*	—	TL	Q		NPN	10*2	160	1.5	120 to 270	—
	Darlington*4	2SD2143		—	TL			10*2		60±10	2	1k to 10k	—	
		2SD1980		—	TL			10*2		100	2	1k to 10k	—	

Notes1 : * : General Part No. have no grade code.
 Notes2 : *1 : With reference land installed
 Notes3 : *2 : Tc=25° C
 Notes4 : *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.
 Notes5 : *4 : For internal circuit, please see the technical specifications.
 Notes6 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code, [] : GENERAL code

General Purpose Amplification Complex Bipolar Transistors												
Package	Configuration	Application	Product No.			Equivalent Element Transistors	V _{CEO} (V)	I _C (A)	h _{FE}	Automotive Grade AEC-Q101		
			Part No.	Grade Code							Taping Code	
				General	Automotive							
 (VMT6) [SC-105B] 1212 size	PNP×2	Pre 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	—	
—	—	—	—	—	T2R	2SC2412K	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	
			EMX26		—	T2R	2SD2654×2	50	0.15	820 to 2,700	—	
			EMX18		—	T2R	2SC5585×2	12	0.5	270 to 680	—	
			PNP+NPN		EMZ51	—	T2R	2SAR522EB	−20	−0.2	120 to 560	—
					EMZ52	—	T2R	2SCR522EB	20	0.2	120 to 560	—
						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	—		
2SC5585×2	12	0.5	270 to 680	—								
EMZ8	—	T2R	2SA2018	−12	−0.5	270 to 680	—					
2SC2412K	50	0.15	120 to 560	—								
 SOT-353 (UMT5) [SC-88A] 2021 size	PNP+NPN	Pre Amplifier	UMY1N	*	—	TR	2SA1037AK	−50	−0.15	120 to 560	—	
—	—	—	—	—	—	—	2SC2412K	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		FHA	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	
—	—	—	—	—	—	—	2SC2412K	50	0.15	120 to 560	—	
 SOT-457 (SMT6) [SC-74] 2928 size	PNP×2	Pre Amplifier	IMT1A	*	—	T110	2SA1037AK×2	−50	−0.5	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	—			

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

Complex Bipolar Transistors

Quick Reference for Complex Bipolar Transistors(For 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	

Notes1 : For Pin location, please see the technical specifications.
Notes2 : () : 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		Taping 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%	—

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

Complex Bipolar Transistors

Quick Reference for Complex Bipolar Transistors for Driver									
Configuration	Package	Item	Equivalent Circuit Diagram (TOP View)	SOT-363T (TUMT6) [SC-113DA] 2021 size	SOT-25T/SOT-457T (TSMT5/TSMT6) [—/SC-95] 2928 size	Equivalent Element Transistors	V _{CEO} (V)	I _c (A)	h _{FE}
Application				Part No.					
PNP×2	Driver			US6T8	QST8	2SB1709×2	−12	−1.5	270 to 680
				US6T9	QST9	2SB1710×2	−30	−1	270 to 680
NPN×2	Driver			US6X7	QSX7	2SD2674×2	12	1.5	270 to 680
	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				

Notes1 : For Pin location, please see the technical specifications.
Notes2 : 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		Taping 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	—

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

Digital Transistors

Quick Reference for 100mA Digital Transistors(For Automotive use)																														
Item	Part No.		R ₁ (k.Ω)	R ₂ (k.Ω)	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																
					P _D =150mW*1							P _D =200mW*1																		
	PNP	NPN			PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN														
	Quick Reference No.																													
Specifications																			50											
					R ₁ =R ₂ Potential Divider type	DTA123Ex	DTC123Ex	2.2	2.2	1	20	40	55	70	85	100	115	130				154	New 179	New 194	211	232	253	268	0.1	20 or more
						DTA143Ex	DTC143Ex	4.7	4.7	2	21	41	56	71	86	101	116	131				155	New 180	New 195	212	233	254	269	0.1	30 or more
						DTA114Ex	DTC114Ex	10	10	3	22	42	57	72	87	102	117	132				156	New 181	New 196	213	234	255	270	0.05	30 or more
						DTA124Ex	DTC124Ex	22	22	4	23	43	58	73	88	103	118	133				157	New 182	New 197	214	235	256	271	0.03	56 or more
						DTA144Ex	DTC144Ex	47	47	5	24	44	59	74	89	104	119	134				158	New 183	New 198	215	236	257	272	0.03	68 or more
DTA115Ex	DTC115Ex	100	100	6		25	45	60	75	90	105	120	135	159	New 184	New 199	216	237	258	273	0.02	82 or more								
R ₁ ≠R ₂ Leak Absorption type	DTA113Zx	DTC113Zx	1	10	New 7	New 26	46	62	76	91	106	121	136	160	New 185	New 200	217	238	259	274	0.1	33 or more								
	DTA123Yx	DTC123Yx	2.2	10	New 8	New 27	47	63	77	92	107	122	137	161	New 186	New 201	218	239	260	275	0.1	33 or more								
	DTA123Jx	DTC123Jx	2.2	47	9	28	48	64	78	93	108	123	138	162	New 187	New 202	219	240	261	276	0.1	80 or more								
	DTA143Xx	DTC143Xx	4.7	10	10	29	49	65	79	94	109	124	139	163	New 188	New 203	220	241	262	277	0.1	30 or more								
	DTA143Zx	DTC143Zx	4.7	47	11	30	50	66	80	95	110	125	140	164	New 189	New 204	221	242	263	278	0.1	80 or more								
	DTA114Wx	DTC114Wx	10	4.7	New 12	New 31								141	165							0.1	24 or more							
	DTA114Yx	DTC114Yx	10	47	13	32	51	67	81	96	111	126	142	166	New 190	New 205	222	243	264	279	0.07	68 or more								
	DTA124Xx	DTC124Xx	22	47	14	33	52	68	82	97	112	127	143	167	New 191	New 206	223	244	265	280	0.05	68 or more								
	DTA144Vx	DTC144Vx	47	10	New 15	New 34											New 224	New 245				0.03	33 or more							
	DTA144Wx	DTC144Wx	47	22	New 16	New 35							144	168			New 225	New 246				0.03	56 or more							
Type Using R ₁ Alone as Input Resistor	DTA123Tx	DTC123Tx	2.2	—	New 17	New 36							New 145	New 169			New 226	New 247			0.1	100 to 600								
	DTA143Tx	DTC143Tx	4.7	—	18	37	53	61	83	98	113	128	146	170	New 192	New 207	227	248	266	281	0.1	100 to 600								
	DTA114Tx	DTC114Tx	10	—	19	38	54	69	84	99	114	129	147	171	New 193	New 208	228	249	267	282	0.1	100 to 600								
	DTA124Tx	DTC124Tx	22	—									148	172			New 229	New 250			0.1	100 to 600								
	DTA144Tx	DTC144Tx	47	—		39							149	173			New 230	New 251			0.1	100 to 600								
	DTA115Tx	DTC115Tx	100	—									150	174			New 231	New 252			0.1	100 to 600								
Type Using R ₂ Alone as Input Resistor	DTA114Gx	DTC114Gx	—	10									151	175	New 209						0.1	30 or more								
	DTA124Gx	DTC124Gx	—	22									176								0.1	56 or more								
	DTA144Gx	DTC144Gx	—	47									152	177							0.1	68 or more								
	DTA115Gx	DTC115Gx	—	100									153	178	New 210						0.1	82 or more								
x: Packaging designation symbol					M	EB	E	UB	UA	U3	CA	KA																		

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

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		Taping 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	New DTA113ZM	*	FHA	T2L		150	1	10	-50	-0.1	33 or more	YES
	8	New DTA123YM	*	FHA	T2L		150	2.2	10	-50	-0.1	33 or more	YES
	9	DTA123JM	*	FHA	T2L		150	2.2	47	-50	-0.1	80 or more	YES
	10	DTA143XM	*	FHA	T2L		150	4.7	10	-50	-0.1	30 or more	YES
	11	DTA143ZM	*	FHA	T2L		150	4.7	47	-50	-0.1	80 or more	YES
	12	New DTA114WMM	*	FHA	T2L		150	10	4.7	-50	-0.1	24 or more	YES
	13	DTA114YM	*	FHA	T2L		150	10	47	-50	-0.07	68 or more	YES
	14	DTA124XM	*	FHA	T2L		150	22	47	-50	-0.05	68 or more	YES
	15	New DTA144VMM	*	FHA	T2L		150	47	10	-50	-0.03	33 or more	YES
	16	New DTA144WMM	*	FHA	T2L		150	47	22	-50	-0.03	56 or more	YES
	17	New DTA123TM	*	FHA	T2L		150	2.2	—	-50	-0.1	100 to 600	YES
	18	DTA143TM	*	FHA	T2L		150	4.7	—	-50	-0.1	100 to 600	YES
	19	DTA114TM	*	FHA	T2L		150	10	—	-50	-0.1	100 to 600	YES
	20	DTC123EM	*	FHA	T2L		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	*	FRA	T2L		150	100	100	50	0.02	82 or more	YES
	26	New DTC113ZM	*	FHA	T2L		150	1	10	50	0.1	33 or more	YES
	27	New DTC123YM	*	FHA	T2L		150	2.2	10	50	0.1	33 or more	YES
	28	DTC123JM	*	FHA	T2L		150	2.2	47	50	0.1	80 or more	YES
	29	DTC143XM	*	FHA	T2L		150	4.7	10	50	0.1	30 or more	YES
	30	DTC143ZM	*	FHA	T2L		150	4.7	47	50	0.1	80 or more	YES
	31	New DTC114WMM	*	FHA	T2L		200	10	4.7	50	0.1	24 or more	YES
	32	DTC114YM	*	FHA	T2L		150	10	47	50	0.07	68 or more	YES
	33	DTC124XM	*	FHA	T2L		150	22	47	50	0.05	68 or more	YES
	34	New DTC144VMM	*	FHA	T2L		150	47	10	50	0.03	33 or more	YES
	35	New DTC144WMM	*	FHA	T2L		150	47	22	50	0.03	56 or more	YES
	36	New DTC123TM	*	FHA	T2L		150	2.2	—	50	0.1	100 to 600	YES
	37	DTC143TM	*	FHA	T2L		150	4.7	—	50	0.1	100 to 600	YES
	38	DTC114TM	*	FHA	T2L		150	10	—	50	0.1	100 to 600	YES
	39	DTC144TM	*	FHA	T2L		0.15	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	*	HZG	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	*	HZG	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	*	HZG	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	*	HZG	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		

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

Digital Transistors

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		Taping Code								
			General	Automotive									
<p>SOT-416 (EMT3) [SC-75A] 1616 size</p>	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		
<p>SOT-323FL (UMT3F) [SC-85] 2021 size</p>	100	DTA123EUB	*	HZG	TL	PNP	200	2.2	2.2	-50	-0.1	20 or more	YES
	101	DTA143EUB	*	HZG	TL		200	4.7	4.7	-50	-0.1	30 or more	YES
	102	DTA114EUB	*	HZG	TL		200	10	10	-50	-0.05	30 or more	YES
	103	DTA124EUB	*	HZG	TL		200	22	22	-50	-0.03	56 or more	YES
	104	DTA144EUB	*	HZG	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	*	HZG	TL		200	2.2	47	-50	-0.1	80 or more	YES
	109	DTA143XUB	*	HZG	TL		200	4.7	10	-50	-0.1	30 or more	YES
	110	DTA143ZUB	*	HZG	TL		200	4.7	47	-50	-0.1	80 or more	YES
	111	DTA114YUB	*	HZG	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	*	HZG	TL	200	2.2	2.2	50	0.1	20 or more	YES	
	116	DTC143EUB	*	HZG	TL	200	4.7	4.7	50	0.1	30 or more	YES	
	117	DTC114EUB	*	HZG	TL	200	10	10	50	0.05	30 or more	YES	
	118	DTC124EUB	*	HZG	TL	200	22	22	50	0.03	56 or more	YES	
	119	DTC144EUB	*	HZG	TL	200	47	47	50	0.03	68 or more	YES	
	120	DTC115EUB	*	HZG	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	*	HZG	TL	200	2.2	47	50	0.1	80 or more	YES	
	124	DTC143XUB	*	HZG	TL	200	4.7	10	50	0.1	30 or more	YES	
	125	DTC143ZUB	*	HZG	TL	200	4.7	47	50	0.1	80 or more	YES	
	126	DTC114YUB	*	HZG	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		

Notes1 : * : General part No. have no grade code.
 Notes2 : *1 : With reference land installed.
 Notes3 : 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 ₀ (I _c) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Taping Code								
			General	Automotive									
	130	DTA123EUA	*	FRA	T106	PNP	200	2.2	2.2	-50	-0.1	20 or more	YES
	131	DTA143EUA	*	FRA	T106		200	4.7	4.7	-50	-0.1	30 or more	YES
	132	DTA114EUA	*	FRA	T106		200	10	10	-50	-0.05	30 or more	YES
	133	DTA124EUA	*	FRA	T106		200	22	22	-50	-0.03	56 or more	YES
	134	DTA144EUA	*	FRA	T106		200	47	47	-50	-0.03	68 or more	YES
	135	DTA115EUA	*	FRA	T106		200	100	100	-50	-0.02	82 or more	YES
	136	DTA113ZUA	*	FRA	T106		200	1	10	-50	-0.1	33 or more	YES
	137	DTA123YUA	*	FRA	T106		200	2.2	10	-50	-0.1	33 or more	YES
	138	DTA123JUA	*	FRA	T106		200	2.2	47	-50	-0.1	80 or more	YES
	139	DTA143XUA	*	FRA	T106		200	4.7	10	-50	-0.1	30 or more	YES
	140	DTA143ZUA	*	FRA	T106		200	4.7	47	-50	-0.1	80 or more	YES
	141	DTA114WUA	*	FRA	T106		200	10	4.7	-50	-0.1	24 or more	YES
	142	DTA114YUA	*	FRA	T106		200	10	47	-50	-0.07	68 or more	YES
	143	DTA124XUA	*	FRA	T106		200	22	47	-50	-0.05	68 or more	YES
	144	DTA144WUA	*	FRA	T106		200	47	22	-50	-0.03	56 or more	YES
	145	New DTA123TUA	*	FRA	T106		200	2.2	—	-50	-0.1	100 to 600	YES
	146	DTA143TUA	*	FRA	T106		200	4.7	—	-50	-0.1	100 to 600	YES
	147	DTA114TUA	*	FRA	T106		200	10	—	-50	-0.1	100 to 600	YES
	148	DTA124TUA	*	FRA	T106		200	22	—	-50	-0.1	100 to 600	YES
	149	DTA144TUA	*	FRA	T106		200	47	—	-50	-0.1	100 to 600	YES
	150	DTA115TUA	*	FRA	T106		200	100	—	-50	-0.1	100 to 600	YES
	151	DTA114GUA	*	FRA	T106		200	—	10	-50	-0.1	30 or more	YES
	152	DTA144GUA	*	FRA	T106		200	—	47	-50	-0.1	68 or more	YES
	153	DTA115GUA	*	FRA	T106		200	—	100	-50	-0.1	82 or more	YES
	154	DTC123EUA	*	FRA	T106		200	2.2	2.2	50	0.1	20 or more	YES
	155	DTC143EUA	*	FRA	T106		200	4.7	4.7	50	0.1	30 or more	YES
	156	DTC114EUA	*	FRA	T106		200	10	10	50	0.05	30 or more	YES
	157	DTC124EUA	*	FRA	T106		200	22	22	50	0.03	56 or more	YES
	158	DTC144EUA	*	FRA	T106		200	47	47	50	0.03	68 or more	YES
	159	DTC115EUA	*	FRA	T106		200	100	100	50	0.02	82 or more	YES
	160	DTC113ZUA	*	FRA	T106		200	1	10	50	0.1	33 or more	YES
	161	DTC123YUA	*	FRA	T106		200	2.2	10	50	0.1	33 or more	YES
	162	DTC123JUA	*	FRA	T106		200	2.2	47	50	0.1	80 or more	YES
	163	DTC143XUA	*	FRA	T106		200	4.7	10	50	0.1	30 or more	YES
	164	DTC143ZUA	*	FRA	T106		200	4.7	47	50	0.1	80 or more	YES
	165	DTC114WUA	*	FRA	T106		200	10	4.7	50	0.1	24 or more	YES
	166	DTC114YUA	*	FRA	T106		200	10	47	50	0.07	68 or more	YES
	167	DTC124XUA	*	FRA	T106		200	22	47	50	0.05	68 or more	YES
	168	DTC144WUA	*	FRA	T106		200	47	22	50	0.03	56 or more	YES
	169	New DTC123TUA	*	FRA	T106		200	2.2	—	50	0.1	100 to 600	YES
	170	DTC143TUA	*	FRA	T106		200	4.7	—	50	0.1	100 to 600	YES
	171	DTC114TUA	*	FRA	T106		200	10	—	50	0.1	100 to 600	YES
	172	DTC124TUA	*	FRA	T106		200	22	—	50	0.1	100 to 600	YES
	173	DTC144TUA	*	FRA	T106		200	47	—	50	0.1	100 to 600	YES
	174	DTC115TUA	*	FRA	T106		200	100	—	50	0.1	100 to 600	YES
	175	DTC114GUA	*	FRA	T106		200	—	10	50	0.1	30 or more	YES
	176	DTC124GUA	*	FRA	T106		200	—	22	50	0.1	56 or more	YES
	177	DTC144GUA	*	FRA	T106		200	—	47	50	0.1	68 or more	YES
178	DTC115GUA	*	FRA	T106	200	—	100	50	0.1	82 or more	YES		
179	DTC123YUA	*	FRA	T106	200	2.2	10	50	0.1	33 or more	YES		
180	DTC123JUA	*	FRA	T106	200	2.2	47	50	0.1	80 or more	YES		
181	DTC143XUA	*	FRA	T106	200	4.7	10	50	0.1	30 or more	YES		
182	DTC143ZUA	*	FRA	T106	200	4.7	47	50	0.1	80 or more	YES		
183	DTC114WUA	*	FRA	T106	200	10	4.7	50	0.1	24 or more	YES		
184	DTC114YUA	*	FRA	T106	200	10	47	50	0.07	68 or more	YES		
185	DTC124XUA	*	FRA	T106	200	22	47	50	0.05	68 or more	YES		
186	DTC144WUA	*	FRA	T106	200	47	22	50	0.03	56 or more	YES		
187	New DTC123TUA	*	FRA	T106	200	2.2	—	50	0.1	100 to 600	YES		
188	DTC143TUA	*	FRA	T106	200	4.7	—	50	0.1	100 to 600	YES		
189	DTC114TUA	*	FRA	T106	200	10	—	50	0.1	100 to 600	YES		
190	DTC124TUA	*	FRA	T106	200	22	—	50	0.1	100 to 600	YES		
191	DTC144TUA	*	FRA	T106	200	47	—	50	0.1	100 to 600	YES		
192	DTC115TUA	*	FRA	T106	200	100	—	50	0.1	100 to 600	YES		
193	DTC114GUA	*	FRA	T106	200	—	10	50	0.1	30 or more	YES		
194	DTC124GUA	*	FRA	T106	200	—	22	50	0.1	56 or more	YES		
195	DTC144GUA	*	FRA	T106	200	—	47	50	0.1	68 or more	YES		
196	DTC115GUA	*	FRA	T106	200	—	100	50	0.1	82 or more	YES		

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 Notes2 : *1 : With reference land installed.
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Digital Transistors

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

Notes1 : * : General part No. have no grade code.

Notes2 : *1 : With reference land installed.

Notes3 : 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 _{CEO}) (V)	I _O (I _C) (A)	G _i (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Taping Code								
			General	Automotive									
 SOT-346 (SMT3) [SC-59] 2928 size	253	DTA123EKA	*	FRA	T146	PNP	200	2.2	2.2	-50	-0.1	20 or more	YES
	254	DTA143EKA		FRA	T146		200	4.7	4.7	-50	-0.1	30 or more	YES
	255	DTA114EKA		FRA	T146		200	10	10	-50	-0.05	30 or more	YES
	256	DTA124EKA		FRA	T146		200	22	22	-50	-0.03	56 or more	YES
	257	DTA144EKA		FRA	T146		200	47	47	-50	-0.03	68 or more	YES
	258	DTA115EKA		FRA	T146		200	100	100	-50	-0.02	82 or more	YES
	259	DTA113ZKA		FRA	T146		200	1	10	-50	-0.1	33 or more	YES
	260	DTA123YKA		FRA	T146		200	2.2	10	-50	-0.1	33 or more	YES
	261	DTA123JKA		FRA	T146		200	2.2	47	-50	-0.1	80 or more	YES
	262	DTA143XKA		FRA	T146		200	4.7	10	-50	-0.1	30 or more	YES
	263	DTA143ZKA		FRA	T146		200	4.7	47	-50	-0.1	80 or more	YES
	264	DTA114YKA		FRA	T146		200	10	47	-50	-0.07	68 or more	YES
	265	DTA124XKA		FRA	T146		200	22	47	-50	-0.05	68 or more	YES
	266	DTA143TKA		FRA	T146		200	4.7	—	-50	-0.1	100 to 600	YES
	267	DTA114TKA		FRA	T146	200	10	—	-50	-0.1	100 to 600	YES	
	268	DTC123EKA		FRA	T146	200	2.2	2.2	50	0.1	20 or more	YES	
	269	DTC143EKA		FRA	T146	200	4.7	4.7	50	0.1	30 or more	YES	
	270	DTC114EKA		FRA	T146	200	10	10	50	0.05	30 or more	YES	
	271	DTC124EKA		FRA	T146	200	22	22	50	0.03	56 or more	YES	
	272	DTC144EKA		FRA	T146	200	47	47	50	0.03	68 or more	YES	
	273	DTC115EKA		FRA	T146	200	100	100	50	0.02	82 or more	YES	
	274	DTC113ZKA		FRA	T146	200	1	10	50	0.1	33 or more	YES	
	275	DTC123YKA		FRA	T146	200	2.2	10	50	0.1	33 or more	YES	
	276	DTC123JKA		FRA	T146	200	2.2	47	50	0.1	80 or more	YES	
	277	DTC143XKA		FRA	T146	200	4.7	10	50	0.1	30 or more	YES	
	278	DTC143ZKA		FRA	T146	200	4.7	47	50	0.1	80 or more	YES	
	279	DTC114YKA		FRA	T146	200	10	47	50	0.07	68 or more	YES	
	280	DTC124XKA		FRA	T146	200	22	47	50	0.05	68 or more	YES	
281	DTC143TKA	FRA	T146	200	4.7	—	50	0.1	100 to 600	YES			
282	DTC114TKA	FRA	T146	200	10	—	50	0.1	100 to 600	YES			

Notes 1 : * : General part No. have no grade code.
 Notes2 : *1 : With reference land installed.
 Notes3 : 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		
	DTA024Xx	DTC024Xx	22	47	13	30	47	64	81	98		0.05	80 or more		
Type Using R ₁ Alone as Input Resistor	DTA043Tx	DTC043Tx	4.7	—	14	31	48	65	82	99		0.1	100 to 600		
	DTA014Tx	DTC014Tx	10	—	15	32	49	66	83	100		0.1	100 to 600		
	DTA044Tx	DTC044Tx	47	—	16	33	50	67	84	101	0.06	100 to 600			
	DTA015Tx	DTC015Tx	100	—	17	34	51	68	85	102	0.1	100 to 600			
x:Packaging designation symbol					M		EB		UB						

Notes1 : PNP (—) symbol omitted.
 Notes2 : *1 : With reference land installed.
 Notes3 : 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 _{CE0}) (V)	I ₀ (I _c) (A)	G _I (h _{FE})	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Taping 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	—

Notes1 : * : General part No. have no grade code.
 Notes2 : *1 : With reference land installed.
 Notes3 : 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 _o (I _c) (A)	G _I (hFE)	Automotive Grade AEC-Q101
	Quick Reference No.	Part No.	Grade Code		Taping Code								
			General	Automotive									
<p>SOT-323FL (UMT3F) [SC-85] 2021 size</p>	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		NPN	—		TL	200	2.2	2.2	50	0.1	20 or more
	87	DTC043EUB			—	TL	200	4.7	4.7	50	0.1	20 or more	—
	88	DTC014EUB			—	TL	200	10	10	50	0.05	35 or more	—
	89	DTC024EUB			—	TL	200	22	22	50	0.03	60 or more	—
	90	DTC044EUB			—	TL	200	47	47	50	0.03	80 or more	—
	91	DTC015EUB			—	TL	200	100	100	50	0.02	80 or more	—
	92	DTC013ZUB			—	TL	200	1	10	50	0.1	30 or more	—
	93	DTC023YUB			—	TL	200	2.2	10	50	0.1	35 or more	—
	94	DTC023JUB			—	TL	200	2.2	47	50	0.1	80 or more	—
	95	DTC043XUB			—	TL	200	4.7	10	50	0.1	35 or more	—
	96	DTC043ZUB			—	TL	200	4.7	47	50	0.1	80 or more	—
	97	DTC014YUB			—	TL	200	10	47	50	0.07	80 or more	—
	98	DTC024XUB			—	TL	200	22	47	50	0.05	80 or more	—
	99	DTC043TUB			—	TL	200	4.7	—	50	0.1	100 to 600	—
	100	DTC014TUB			—	TL	200	10	—	50	0.1	100 to 600	—
	101	DTC044TUB			—	TL	200	47	—	50	0.06	100 to 600	—
	102	DTC015TUB			—	TL	200	100	—	50	0.1	100 to 600	—

Notes1 : * : General part No. have no grade code.

Notes2 : *1 : With reference land installed.

Notes3 : 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 _{CE0}) (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							

Notes1 : PNP (—) symbol omitted. Notes2 : *1 : With reference land installed.
Notes3 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code.

☆ : Under Development

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										Taping 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
	PNP	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
	NPN	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	—
	NPN	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	—

Notes1 : * : General part No. have no grade code. Notes2 : *1 : With reference land installed.
Notes3 : 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				

Notes1 : PNP (–) symbol omitted.
 Notes2 : *1 : With reference land installed.
 Notes3 : Package is JEDEC code. () : ROHM packages , [] : JEITA code.

12V/500mA Digital Transistors														
Package	Quick Reference No.	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.	General	Automotive									Taping Code	
	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	—

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

C 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
	x : Packaging designation symbol				UB	U	K			

Notes1 : *1 : With reference land installed.

Notes2 : 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										Taping Code
		General	Automotive									
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	—

Notes1 : * : General part No. have no grade code.

Notes2 : *1 : With reference land installed.

Notes3 : Package is JEDEC code. () : ROHM packages , [] : JEITA code.

Quick Reference for Power Digital Transistors

Item	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

Notes1 : *1 : With reference land installed.

Notes2 : For internal circuit, please see the technical specifications.

Notes3 : Package is JEDEC code. () : ROHM packages , [] : JEITA code.

Power Digital Transistors

Package	Product No.			Polarity	P _D *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										Taping Code
		General	Automotive									
SOT-89 (MPT3) [SC-62] 4540 size	DTDG23YP	*	FRA	T100	NPN	0.5	2.2	10	60±10	1	300 or more	YES
	DTDG14GP	*	FRA	T100		0.5	—	10	60±10	1	300 or more	YES

Notes1 : * : General part No. have no grade code.

Notes2 : *1 : With reference land installed.

Notes3 : For internal circuit, please see the technical specifications.

Notes4 : Package is JEDEC code. () : ROHM packages , [] : JEITA code.

Complex Digital Transistors

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)	
										Part No.
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	
EMH10		UMH10N		DTC123J×2	2.2	47	0.1			
NPN×2		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			New UMD25N		DTA123J	2.2	47	50	0.1	
					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	50	0.1	
					DTC144E	47	47		0.03	
		EMD4	UMD4N			DTA114Y	10		47	0.1
						DTC114Y	47		47	0.03

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

☆ : Under Development

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								Taping Code
			General	Automotive							
SOT-563 (EMT6) [SC-107C] 1616 size	PNP×2	EMB10	FHA	T2R	DTA123J×2	2.2	47	-50	-0.1	YES	
		EMB11	FHA	T2R	DTA114E×2	10	10		-0.05	YES	
		EMB2	FHA	T2R	DTA144E×2	47	47		-0.03	YES	
		EMB3	FHA	T2R	DTA143T×2	4.7	—		-0.1	YES	
	NPN×2	EMB4	FHA	T2R	DTA114T×2	10	—	50	-0.1	YES	
		EMH10	FHA	T2R	DTC123J×2	2.2	47		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	
	PNP+NPN Complimentary	EMH4	FHA	T2R	DTC114T×2	10	—	0.1	YES		
		EMD22	FHA	T2R	DTA143Z	4.7	47	-50	-0.1	YES	
			DTC143Z	4.7	47	50	0.1				
		EMD3	FHA	T2R	DTA114E	10	10	-50	-0.05	YES	
			DTC114E	10	10	50	0.05				
		EMD9	FHA	T2R	DTA114Y	10	47	-50	-0.07	YES	
			DTC114Y	10	47	50	0.07				
		EMD2	FHA	T2R	DTA124E	22	22	-50	-0.03	YES	
			DTC124E	22	22	50	0.03				
		EMD12	FHA	T2R	DTA144E	47	47	-50	-0.03	YES	
	DTC144E		47	47	50	0.03					
	PNP+NPN Different type	EMD6	FHA	T2R	DTA143T	4.7	—	-50	-0.1	YES	
			DTC143T	4.7	—	50	0.1				
		EMD5	—	T2R	DTA143X	4.7	10	-50	-0.1	—	
			DTC144E	47	47	50	0.03				
	EMD4	—	T2R	DTA114Y	10	47	-50	-0.1	—		
DTC144E		7	47	50	0.03						
SOT-363 (UMT6) [SC-88] 2021 size	PNP×2	UMB10N	FHA	TN	DTA123J×2	2.2	47	-50	-0.1	YES	
		UMB11N	FHA	TN	DTA114E×2	10	10		-0.05	YES	
		UMB2N	FHA	TN	DTA144E×2	47	47		-0.03	YES	
		UMB3N	FHA	TN	DTA143T×2	4.7	—		-0.1	YES	
	NPN×2	UMB4N	FHA	TN	DTA114T×2	10	—	50	-0.1	YES	
		UMH10N	FHA	TN	DTC123J×2	2.2	47		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	
	PNP+NPN Complimentary	UMH4N	FHA	TN	DTC114T×2	10	—	0.1	YES		
		New UMD25N	—	TR	DTA123J	2.2	47	-50	-0.1	—	
			DTC123J	2.2	47	50	0.1				
		UMD22N	FHA	TR	DTA143Z	4.7	47	-50	-0.1	YES	
			DTC143Z	4.7	47	50	0.1				
		UMD3N	FHA	TR	DTA114E	10	10	-50	-0.05	YES	
			DTC114E	10	10	50	0.05				
		UMD9N	FHA	TR	DTA114Y	10	47	-50	-0.07	YES	
			DTC114Y	10	47	50	0.07				
		UMD2N	FHA	TR	DTA124E	22	22	-50	-0.03	YES	
	DTC124E		22	22	50	0.03					
	UMD12N	FHA	TR	DTA144E	47	47	-50	-0.03	YES		
		DTC144E	47	47	50	0.03					
	PNP+NPN Different type	UMD6N	FHA	TR	DTA143T	4.7	—	-50	-0.1	YES	
			DTC143T	4.7	—	50	0.1				
		UMD5N	—	TR	DTA143X	4.7	10	-50	-0.1	—	
DTC144E			47	47	50	0.03					
UMD4N	—	TR	DTA114Y	10	47	-50	-0.1	—			
	DTC144E	47	47	50	0.03						

Notes1 : * : General part No. have no grade code.

Notes2 : For Pin location, please see the technical specifications.

Notes3 : Package is JEDEC code. () : ROHM Packages , [] : JEITA code.

☆ : Under Development

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								Taping Code
			General	Automotive							
<p>SOT-457 (SMT6) [SC-74] 2928 size</p>	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			

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

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
		EMB53	DTA043T×2	4.7	—		0.1
NPN×2		EMH60	DTC023J×2	2.2	47		0.1
		EMH75	DTC043Z×2	4.7	47		0.1
		EMH61	DTC014E×2	10	10		0.05
		EMH59	DTC014Y×2	10	47		0.07
		EMH51	DTC024E×2	22	22		0.03
		EMH52	DTC044E×2	47	47	0.03	
		EMH53	DTC043T×2	4.7	—	0.1	
PNP+NPN Complimentary		EMD72	DTA043Z	4.7	47	50	0.1
			DTC043Z	4.7	47		
		EMD53	DTA014E	10	10		0.05
			DTC014E	10	10		
		EMD59	DTA014Y	10	47		0.07
			DTC014Y	10	47		
		EMD52	DTA024E	22	22		0.03
			DTC024E	22	22		
EMD62	DTA044E	47	47	0.03			
	DTC044E	47	47				

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

100mA Complex Digital Transistors(For Consumer only) 1											
Package	Configuration	Product No.			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								Taping 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	—	
			EMB53	—	T2R	DTA043T×2	4.7	—	-0.1	—	
	NPN×2	EMH60	—	T2R	DTC023J×2	2.2	47	50	0.1	—	
		EMH75	—	T2R	DTC043Z×2	4.7	47		0.1	—	
		EMH61	—	T2R	DTC014E×2	10	10		0.05	—	
		EMH59	—	T2R	DTC014Y×2	10	47		0.07	—	
		EMH51	—	T2R	DTC024E×2	22	22		0.03	—	
		EMH52	—	T2R	DTC044E×2	47	47		0.03	—	
			EMH53	—	T2R	DTC043T×2	4.7	—	0.1	—	
	PNP+NPN Complimentary	EMD72	—	T2R	DTA043Z	4.7	47	-50	-0.1	—	
			—	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	—		

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

Complex 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
NPN×2		EMA3	UMA3N	FMA3A	DTA143T×2	4.7	—		0.1
		EMA4	UMA4N	FMA4A	DTA114T×2	10	—		0.1
		EMG11	UMG11N		DTC123J×2	2.2	47		0.1
		EMG8	UMG8N		DTC143Z×2	4.7	47		0.1
NPN×2		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	

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

100mA Complex Digital Transistors(For Consumer only) 2

Package	Configuration	Product No.			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								Taping 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	DTA114T×2	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	DTC114T×2	10	—	50	0.1	—	
		EMG6	—	T2R	DTC144T×2	47	—	50	0.1	—	
SOT-353 (UMT5) [SC-88A] 2021 size	PNP×2	UMA5N	—	TR	DTA123J×2	2.2	47	—50	—0.1	—	
		UMA9N	—	TR	DTA114E×2	10	10	—50	—0.05	—	
		UMA1N	—	TR	DTA124E×2	22	22	—50	—0.03	—	
		UMA2N	—	TR	DTA144E×2	47	47	—50	—0.03	—	
		UMA3N	—	TR	DTA143T×2	4.7	—	—50	—0.1	—	
		UMA4N	—	TR	DTA114T×2	10	—	—50	—0.1	—	
	NPN×2	UMG11N	—	TR	DTC123J×2	2.2	47	50	0.1	—	
		UMG8N	—	TR	DTC143Z×2	4.7	47	50	0.1	—	
		UMG9N	—	TR	DTC114E×2	10	10	50	0.05	—	
		UMG5N	—	TR	DTC114Y×2	10	47	50	0.07	—	
		UMG1N	—	TR	DTC124E×2	22	22	50	0.03	—	
		UMG2N	—	TR	DTC144E×2	47	47	50	0.03	—	
		UMG3N	—	TR	DTC143T×2	4.7	—	50	0.1	—	
		UMG4N	—	TR	DTC114T×2	10	—	50	0.1	—	
UMG6N	—	TR	DTC144T×2	47	—	50	0.1	—			
SOT-25 (SMT5) [SC-74A] 2928 size	PNP×2	FMA5A	—	T148	DTA123J×2	2.2	47	—50	—0.1	—	
		FMA9A	—	T148	DTA114E×2	10	10	—50	—0.05	—	
		FMA1A	—	T148	DTA124E×2	22	22	—50	—0.03	—	
		FMA2A	—	T148	DTA144E×2	47	47	—50	—0.03	—	
		FMA3A	—	T148	DTA143T×2	4.7	—	—50	—0.1	—	
		FMA4A	—	T148	DTA114T×2	10	—	—50	—0.1	—	
	NPN×2	FMG9A	—	T148	DTC114E×2	10	10	50	0.05	—	
		FMG1A	—	T148	DTC124E×2	22	22	50	0.03	—	
		FMG2A	—	T148	DTC144E×2	47	47	50	0.03	—	
		FMG3A	—	T148	DTC143T×2	4.7	—	50	0.1	—	
		FMG4A	—	T148	DTC114T×2	10	—	50	0.1	—	
		FMG6A	—	T148	DTC144T×2	47	—	50	0.1	—	

Notes1 : * : General part No. have no grade code.
 Notes2 : For No.1 Pin location, please see the technical specifications.
 Notes3 : 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 IMH21	DTC643T×2 DTC614T×2	4.7 10	— —	
			UMH33N		DTC923TUB×2	2.2	—	
			UMH32N		DTC943TUB×2	4.7	—	
			UMH37N		DTC914TUB×2	10	—	
NPN×2 Driver					QSH29	60±10V/500mA×2	—	10

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

Complex Digital Transistors(For Power Management, Muting and Driver)											
Package	Configuration	Product No.			Equivalent Element Transistors	R ₁ (kΩ)	R ₂ (kΩ)	V _{CC} (V _{CEO}) (V)	I _o (I _c) (A)	Automotive Grade AEC-Q101	
		Part No.	General	Automotive							Taping 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	—
		UMH32N		—	TN	DTC943TUB×2	4.7	—	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	—

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

IC Transistor Array

* The following products are belonging to ICs. (Refer P.A18) 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

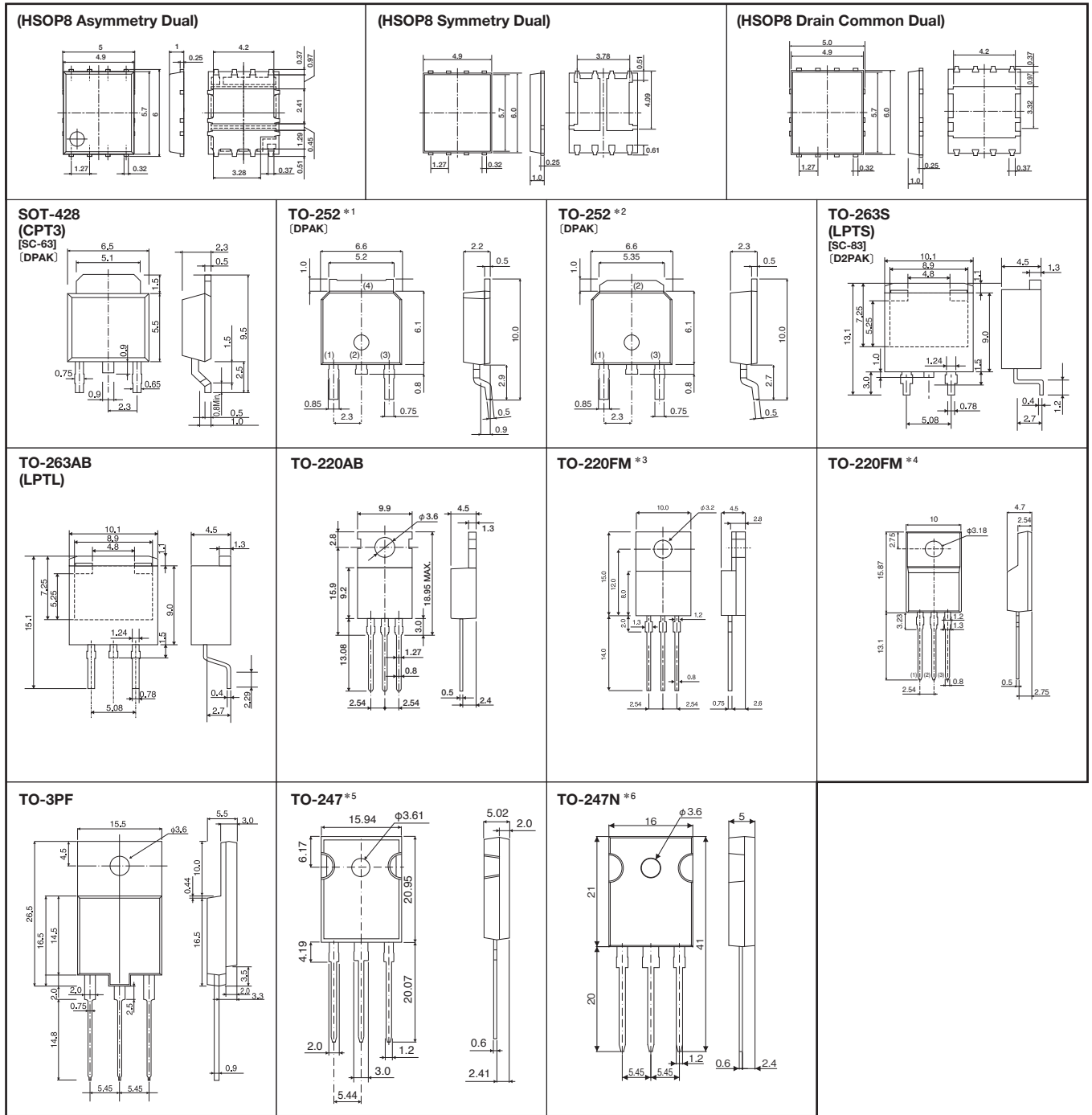
Packages

● 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-563T (WEMT6) [SC-120] 	SOT-346T (TSMT3) [SC-96] 	SOT-25T (TSMT5) 		
SOT-457T (TSMT6) [SC-95] 	(TSMT8) 	DFN2020-3S (HUML2020L3) 	DFN2020-8S (HUML2020L8 Single) 	DFN2020-8D (HUML2020L8 Dual) 			
(HSMT8) 	(HSMT8AG) 	(HSML3030L10) 	SOT-89 (MPT3) [SC-62] 				
(SOP8) 	(HSOP8 Single) 						

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

● Dimensions (Unit : mm)



Notes1 : *1 : Taping code : TL, *2 : Taping code : TL1
 Notes2 : *3 : Packing code : -, *4 : Packing code : C7 G
 Notes3 : *5 : Packing code : C13, *6 : Packing code : C11
 Notes4 : Package is JEDEC code. () : ROHM Packages, [] : JEITA code, [] : GENERAL code
 Notes5 : For details of dimensions, please refer to the technical specifications.

Product No. Explanation

• MOSFET Part No. Explanation

<Single-Chip type>

Example: **R T Q 0 3 5 P 0 2 T R**

ROHM: R, Drive Voltage: T, Polarity: Q, I_D (Unit: 100mA): 035, Package: P02, V_{DS}: TR

I_D (Unit: 100mA)
ex.)
035=3,500mA(3.5A)

Polarity
N Nch
P Pch

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

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

Symbol	V _{DS} (V)
01	12
02	20
03	30
05	45
06	60
10	100
20	200
25	250

<Single-Chip type>

Example: **R T 1 A 0 4 0 Z P T L**

ROHM: R, Package: T1A, V_{DS}: 040, I_D (A): 0Z, Polarity: P, Drive Voltage: TL

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

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

Symbol	I_D (A)
040	4A
013	1.3A

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

<Dual-Chip type>

Example: **S H 8 M 3** () **T B**

Package: SH8M3, Polarity: (), Serial No. (include alphabets): TB

Symbol	Package
VT6	(VMT6)
EM6	SOT-563
UM6	SOT-363
ES6	SOT-563T
US5	SOT-363T
US6	SOT-363T
TT8	(TSST8)
QS5	SOT-25T
QS6	SOT-457T
QH6	SOT-457T
QS8	(TSMT8)
QH8	(TSMT8)
UT6	DFN2020-8D
HS8	(HSM13030L10)
SH8	(SOP8)
SP8	(SOP8)
HP8	(HSOP8)

Symbol	Configuration
K	Nch+Nch
J	Pch+Pch
M	Nch+Pch
U	MOS+SBD
S	Nch+Nch+SBD

Note) "N" is put to UMT5 & UMT6 packages

<Single-Chip type>

Example: **R 6 0 2 0 E N Z (4) C 1 3**

ROHM: R, V_{DS}(V): 60=600V, I_D (A): 20=20A, Polarity: N=Nch, Package: C13

A=No G-S Protection Diode
C=With G-S Protection Diode
E=Low Noise
J=Fast Recovery Body Diode
K=Fast Switching

Symbol	Package
D3	TO-252
J	TO-263
X	TO-220FM
X1	TO-220AB
Z	TO-3PF
Z4	TO-247
Z2	TO-247N

<Automotive type>

Example: **A G 0 0 9 D G Q 3 T B**

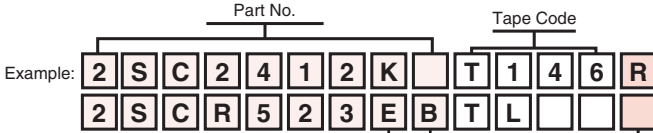
ROHM AEC-Q101 Qualified, Serial No.: AG009, Drive Voltage: D, Polarity: G, V_{DS}: Q3, Package: TB

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

Symbol	V _{DS} (V)
G	40

Symbol	Package
Q3	HSMT8AG

• Bipolar Transistor Part No. Explanation



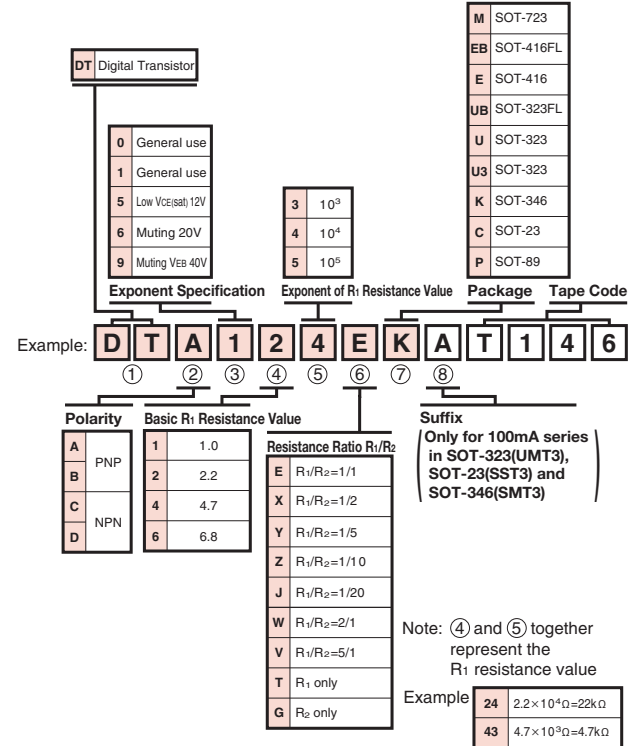
• Package

Code	Package
M	SOT-723
EB	SOT-416FL
E	SOT-416
UB	SOT-323FL
U	SOT-323
U3	SOT-323
K	SOT-346
C	SOT-23
R	SOT-346T
F3	DFN2020-3S
P	SOT-89
P5	SOT-89
D	SOT-428
D3	TO-252
J	TO-263

• hFE Ranking Code

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

• Digital Transistor Part No. Explanation



• Packaging type

	Package	Code	ROHM Package	JEITA Package	Size	Height	Package Style	Direction	Basic ordering unit(pcs)
Surface Mount type	DFN0604-3	T2L,T2CL	VML0604	—	0604	0.36	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
	DFN0806-3	T2L,T2CL	VML0806	—	0806	0.36	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
	DFN1006-3	T2L,T2CL	VML1006	SC-101	1006	0.37	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
	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	UMT6	SC-88	2120	0.9	Embossed tape	Terminal No.1 on sprocket hole side	3,000
		TN,TCN					Embossed tape	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
		T110					Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
	SOT-457	T108	SMT6	SC-74	2829	1.1	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
		T110					Embossed tape	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
	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
	(HSMT8)	TB,TB1	HSMT8	—	3333	0.8	Embossed tape	Terminal No.1 on sprocket hole side	3,000
	(HSMT8AG)	TB	HSMT8AG	—	3333	0.8	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
	(SOP8)	TB,TB1	SOP8	—	6050	1.75	Embossed tape	Terminal No.1 on sprocket hole side	2,500
	SOT-89	T100	MPT3	SC-62	4045	1.5	Embossed tape	Three terminals on sprocket hole side	1,000
	(HSOP8)	TB,TB1	HSOP8	SC-111BB	6050	1	Embossed tape	Three terminals on sprocket hole side	2,500
	SOT-428	TL	CPT3	SC-63	—	2.3	Embossed tape	Fin 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
		TL					LPTS	SC-83	—
TO-263	TL	TO-263	—	—	4.5	Embossed tape	Fin on sprocket hole side	1,000	
	TLL					LPTL	—	—	4.5
Leaded type	(TO-220FM)	C7 G	TO-220FM	[SC-46]	29×10	4.5	Balk	—	500
	—					4.7	Stick	—	2,000
	TO-220AB	C10	TO-220AB	[SC-46]	29×9.9	4.5	Stick	—	1,000
	TO-3PF	C8	TO-3PF	[SC-94]	43.3×15.5	5.5	Stick	—	360
	TO-247AD	C13	TO-247	[SC-65]	41.26×15.94	5.02	Stick	—	600
(TO-247N)	C11	TO-247N	41×16		5	Stick	—	450	

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

