2016

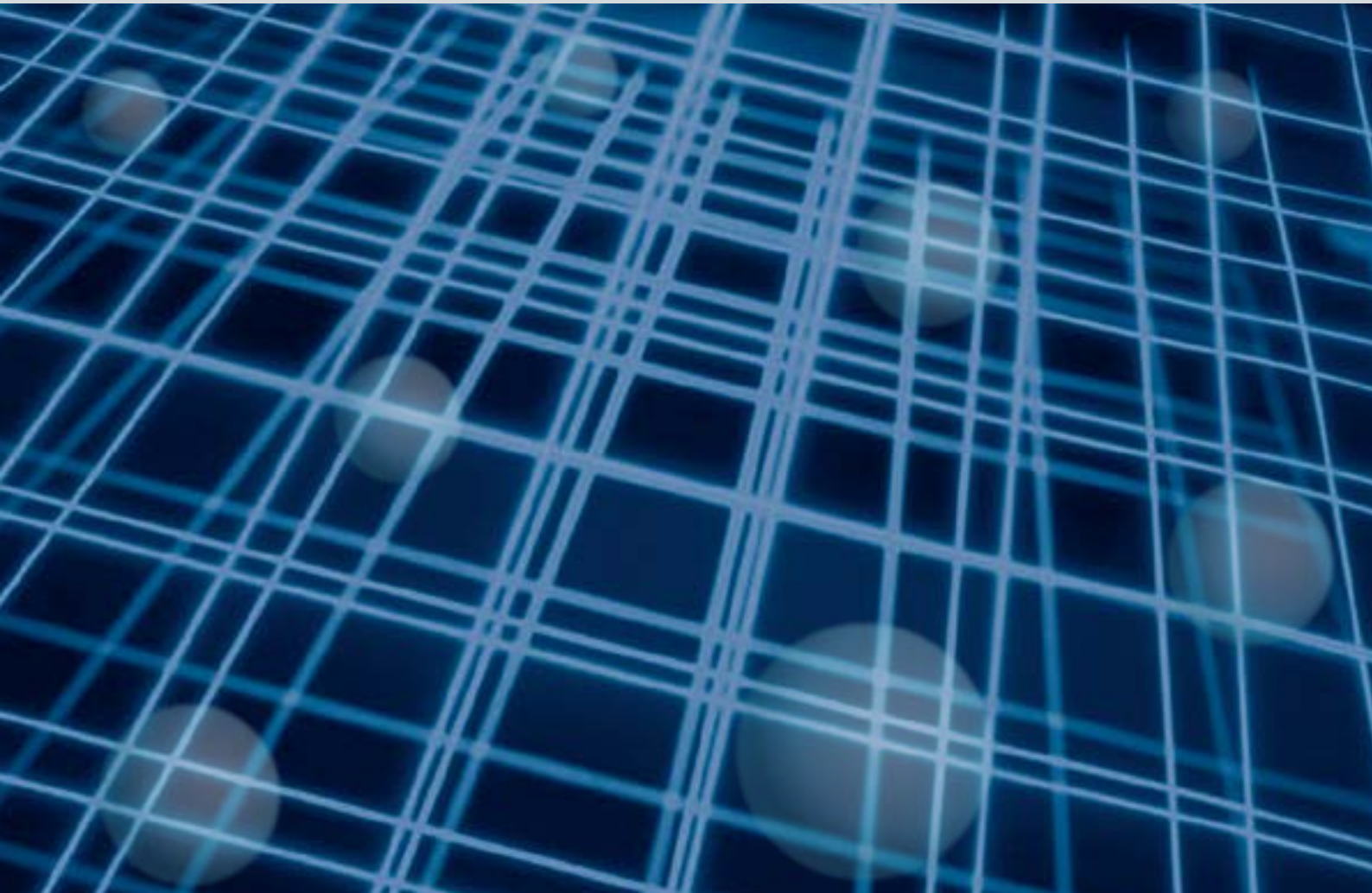
Selection Catalog

ROHM SEMICONDUCTOR

Discrete Semiconductors

Small Signal Device

Ver.1.0



Small Signal Devices

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ISO/TS 16949-approved

MOSFETs

●Quick Reference for Small Signal MOSFET Series

	Drive Voltage (V)	VDSS (V)	ID (A) 0.1 / 0.15	No.	0.2	No.	0.25	No.	0.3/0.31	No.	0.4	No.	0.5	No.	0.6	No.	0.7	No.	1	No.	1.4	No.	Package
Single Type	0.9	50			RYM002N05 (N)	20																	SOT-723 (VMT3)
					RE1J002YN (N)	36																	SOT-416FL (EMT3F)
					RU1J002YN (N)	52																	SOT-323FL (UMT3F)
					RYC002N05 (N)	63																	SOT-23 (SST3)
	1.2	20	New RV3C002UN(N)	1											New RV3C006BC(P)	4							DFN0604 (VML0604)
			New RV3C001ZP(P)	2																			
			RV1C002UN (N)	6					New RV1C001ZP HC0(P)	9			New RV1C002UN HC0(N)	7								DFN0806 (VML0806)
			RV1C001ZP (P)	8																			
			New RV2C001ZP(P)	14	New RV2C002UN(N)	13													New RV2C010UN (N)	12	New RV2G014GN(N)	19	DFN1006 (VML1006)
			RUM001L02 (N)	21	RUM002N02 (N)	22									New RZM002P02 HC1(P)	29							SOT-723 (VMT3)
			RZM001P02 (P)	24	RZM002P02 (P)	25																	
			RE1C001UN (N)	33	New RE1C002UN (N)	34									RE1C002UN HC0(N)	35							SOT-416FL (EMT3F)
			RE1C001ZP (P)	39	New RE1C002ZP (P)	40									RE1C002ZP HC1(P)	41							
			RU1C001UN (N)	50	RU1C002UN (N)	51																	SOT-323FL (UMT3F)
			RU1C001ZP (P)	54	RU1C002ZP (P)	55																	
		50			RUM002N05 (N)	23																	SOT-723 (VMT3)
					RUC002N05 (N)	61																	SOT-23 (SST3)
	1.8	20													New RUM003N02 HC2(N)	28							SOT-723 (VMT3)
															New RV3C006BC (P)	4							DFN0604 (VML0604)
																			New RV2C014BC(P)	17			DFN1006 (VML1006)
	2.5	30															New RV3E007AJ (N)	3					DFN0604 (VML0604)
																							DFN0604 (VML0604)
																			New RV1E008AJ(N)	10			DFN0806 (VML0806)
																					New RV2E014AJ(N)	15	DFN1006 (VML1006)
		60																					DFN0604 (VML0604)
							RSM002N06 (N)	26															DFN0806 (VML0806)
							New RE1L002SN (N)	37			New RE1L002SN HC1(N)	38											SOT-723 (VMT3)
							RU1L002SN (N)	53															SOT-416FL (EMT3F)
							RK7002BM (N)*	62															SOT-323FL (UMT3F)
	4/4.5	30																	New RV2E012AT(P)	17			SOT23 (SST3)
					RSM002P03 (P)	27																	DFN1006 (VML1006)
					RE1E002SP (P)	42																	SOT-723 (VMT3)
					RU1E002SP (P)	56																	SOT-416FL (EMT3F)
					RSC002P03 (P)	64																	SOT-323FL (UMT3F)
		40																					DFN1006 (VML1006)
		60											New RV1L004GN(N)	11									DFN0806 (VML0806)
											New RV3L004GN(N)	5											DFN0604 (VML0604)
																			New RV2L009GN(N)	16			DFN1006 (VML1006)
Dual Type	0.9	50			EM6K34 (N+N)	43																	DFN1006 (VML1006)
					UM6K34N (N+N)	57																	SOT-563 (EMT6)
	1.2	20	VT6K1 (N+N)	30																			VMT6
			VT6J1 (P+P)	31																			
			VT6M1 (N+P)	32																			
					EM6K7 (N+N)	44																	SOT-563 (EMT6)
					EM6J1 (P+P)	46																	
					EM6M2 (N+P)	47																	
		50			EM6K33 (N+N)	45																	SOT-563 (EMT6)
					UM6K33N (N+N)	58																	SOT-363 (UMT6)
	1.8	20							EM6K6 (N+N)	48													SOT-563 (EMT6)
	2.5	60					EM6K31 (N+N)	49															SOT-563 (EMT6)
							UM6K31N (N+N)	59															SOT-363 (UMT6)
	4	30			UM6J1N (P+P)	60																	SOT-363 (UMT6)

Character "N", "P" in parentheses indicates "N-channel", "P-channel" respectively.

☆:Under development

Small Signal MOSFET Series

Package	Application	No.	Part No.	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D (W) (Ta=25°C)	R_{DS} (on)Typ.(Ω) V_{GS} (V) 0.9	1.2	1.5 (1.8)	2.5	4	4.5	10	Drive Voltage (V)
DFN0604 (0604) <VML0604>	Switching	1	New RV3C002UN	N	20	0.15	0.1	—	3.8	2.7	2.2	—	1.4	—	1.2
		2	New RV3C001ZP	P	−20	−0.1	0.1	—	10	6	3.4	—	2.5	—	
		3	New RV3E007AJ	N	30	0.7 (Pw≦5s)	0.5	—	—	—	0.375	—	0.275	—	2.5
		4	New RV3C006BC	P	−20	−0.6 (Pw≦5s)	0.5	—	—	(0.61)	0.5	—	0.39	—	1.8
		5	New RV3L004GN	N	60	0.4 (Pw≦5s)	0.1 0.5(Pw≦5s)	—	—	—	—	—	2.5	1.7	4.5
DFN0806 (0806) <VML0806>		6	RV1C002UN	N	20	0.15	0.1	—	3.8	2.7	1.7	—	1.4	—	1.2
		7	New RV1C002UN HC0	N	20	0.15 0.5(Pw≦5s)	0.1 0.55(Pw≦5s)	—	3.8	2.7	1.7	—	1.4	—	
		8	RV1C001ZP	P	−20	−0.1	0.1	—	10	6	4.8	3.4	2.5	—	
		9	New RV1C001ZP HC0	P	−20	−0.1 −0.3(Pw≦5s)	0.1 0.55(Pw≦5s)	—	10	6	4.8	3.4	2.5	—	
		10	New RV1E008AJ	N	30	0.8 (Pw≦5s)	0.1 0.55(Pw≦5s)	—	—	—	0.76	—	0.52	—	2.5
		11	New RV1L004GN	N	60	0.4 (Pw≦5s)	0.1 0.6(Pw≦5s)	—	—	—	—	—	2.5	1.7	4.5
DFN1006 (1006) <VML1006>		12	New RV2C010UN	N	20	1	0.1	—	0.7	0.54	0.4	—	0.34	—	1.2
		13	New RV2C002UN	N	20	0.18	0.1	—	3.8	2.7	1.7	—	1.4	—	
		14	New RV2C001ZP	P	−20	−0.1	0.1	—	10	6	3.4	—	2.5	—	
		15	New RV2E014AJ	N	30	1.4 (Pw≦5s)	0.6 (Pw≦5s)	—	—	—	0.2	—	0.17	—	2.5
		16	New RV2L009GN	N	60	0.9 (Pw≦5s)	0.6 (Pw≦5s)	—	—	—	—	—	0.63	0.46	4.5
		17	New RV2E012AT	P	−30	−1.2 (Pw≦5s)	0.6 (Pw≦5s)	—	—	—	—	—	0.44	0.32	
		18	New RV2C014BC	P	−20	−1.4 (Pw≦5s)	0.6 (Pw≦5s)	—	—	(0.37)	0.28	—	0.22	—	1.8
		19	New RV2G014GN	N	40	1.4	0.6	—	—	—	—	—	0.25	0.3	4.5
SOT-723 (1212) <VMT3>		20	RYM002N05	N	50	0.2	0.15	3	2.2	2	1.7	—	1.6	—	0.9
		21	RUM001L02		20	0.1	0.15	—	6	4.5	3.8	3	2.5	—	1.2
		22	RUM002N02		20	0.2	0.15	—	1.6	—	0.8	—	—	—	
		23	RUM002N05		50	0.2	0.15	—	2.4	—	1.7	—	1.6	—	
		24	RZM001P02	P	−20	−0.1	0.15	—	10	6	4.8	3.4	2.5	—	
		25	RZM002P02		−20	−0.2	0.15	—	2.4	—	1	—	0.8	—	
		26	RSM002N06	N	60	0.25	0.15	—	—	—	3	2.3	2.1	1.7	2.5
		27	RSM002P03	P	−30	−0.2	0.15	—	—	—	—	1.6	1.4	0.9	4
		28	New RUM003N02 HC2	N	20	0.67 (Pw≦5s)	0.45 (Pw≦5s)	—	—	(1.0)	0.8	0.7	—	—	1.8
		29	New RZM002P02 HC1	P	−20	−0.61 (Pw≦5s)	0.45 (Pw≦5s)	—	2.4	1.6	1.0	—	0.8	—	1.2
VMT6 (1212)		30	VT6K1	N+N	20	0.1	0.15	—	6	4.5	3.8	3	2.5	—	1.2
		31	VT6J1	P+P	−20	−0.1	0.15	—	10	6	4.8	3.4	2.5	—	
		32	VT6M1	N	20	0.1	0.15	—	6	4.5	3.8	3	2.5	—	
				P	−20	−0.1	0.15	—	10	6	4.8	3.4	2.5	—	
SOT-416FL (1616) (SC-89) <EMT3F>		33	RE1C001UN	N	20	0.1	0.15	—	6	4.5	3.8	3	2.5	—	1.2
		34	New RE1C002UN		20	0.2	0.15	—	1.6	—	0.8	—	—	—	
		35	RE1C002UN HC0		20	0.65 (Pw≦5s)	0.5 (Pw≦5s)	—	1.6	—	0.8	—	—	—	
		36	RE1J002YN		50	0.2	0.15	3	2.2	2	1.7	—	1.6	—	0.9
		37	New RE1L002SN		60	0.25	0.2	—	—	—	3	2.3	2.1	1.7	2.5
		38	RE1L002SN HC1		60	0.46 (Pw≦5s)	0.5 (Pw≦5s)	—	—	—	3.0	2.3	2.1	—	2.5
		39	RE1C001ZP	P	−20	−0.1	0.15	—	10	6	4.8	3.4	2.5	—	1.2
		40	New RE1C002ZP		−20	−0.2	0.15	—	2.4	—	1	—	0.8	—	
		41	RE1C002ZP HC1		−20	0.65 (Pw≦5s)	0.5 (Pw≦5s)	—	2.4	—	1	—	0.8	—	
		42	RE1E002SP		−30	−0.2	0.15	—	—	—	—	1.6	1.4	0.9	4
SOT-563 (1616) (SC-107C) <EMT6>		43	EM6K34	N+N	50	0.2	0.15	3	2.2	2	1.7	—	1.6	—	0.9
		44	EM6K7		20	0.2	0.15	—	1.6	—	0.8	—	—	—	1.2
		45	EM6K33		50	0.2	0.15	—	2.4	—	1.7	—	1.6	—	
		46	EM6J1	P+P	−20	−0.2	0.15	—	2.4	—	1	—	0.8	—	
		47	EM6M2	N	20	0.2	0.15	—	1.6	—	0.8	0.7	—	—	
				P	−20	−0.2	0.15	—	2.4	—	1	—	0.8	—	
		48	EM6K6	N+N	20	0.3	0.15	—	—	(1)	0.8	0.7	—	—	1.8
		49	EM6K31		60	0.25	0.15	—	—	—	3	2.3	2.1	1.7	2.5
SOT-323FL (2021) (SC-85) <UMT3F>		50	RU1C001UN	N	20	0.1	0.2	—	6	4.5	3.8	3	2.5	—	1.2
		51	RU1C002UN		20	0.2	0.2	—	1.6	—	0.8	—	—	—	
		52	RU1J002YN		50	0.2	0.2	3	2.2	2	1.7	—	1.6	—	0.9
		53	RU1L002SN		60	0.25	0.2	—	—	—	3	2.3	2.1	1.7	2.5
		54	RU1C001ZP	P	−20	−0.1	0.15	—	10	6	4.8	3.4	2.5	—	1.2
		55	RU1C002ZP		−20	−0.2	0.15	—	2.4	—	1	—	0.8	—	
		56	RU1E002SP		−30	−0.2	0.2	—	—	—	—	1.6	1.4	0.9	4
SOT-363 (2021) (SC-88) <UMT6>		57	UM6K34N	N+N	50	0.2	0.15	3	2.2	2	1.7	—	1.6	—	0.9
		58	UM6K33N		50	0.2	0.15	—	2.4	—	1.7	—	1.6	—	1.2
		59	UM6K31N		60	0.25	0.15	—	—	—	3	2.3	2.1	1.7	2.5
		60	UM6J1N	P+P	−30	−0.2	0.15	—	—	—	—	1.6	1.4	0.9	4
SOT-23 (2924) <SST3>		61	RUC002N05	N	50	0.2	0.2	—	2.4	—	1.7	—	1.6	—	1.2
		62	RK7002BM*		60	0.25	0.2	—	—	—	3	2.3	2.1	1.7	2.5
		63	RYC002N05		50	0.2	0.2	3	2.2	2	1.7	—	1.6	—	0.9
		64	RSC002P03	P	−30	−0.2	0.2	—	—	—	—	1.6	1.4	0.9	4

*Automotive grade available ☆:Under development

MOSFETs

●Quick Reference for Small Size Power Type MOSFET Series 1

	Drive Voltage (V)	VDSS (V)	ID (A) 0.4 to 1.6	No.	2 / 2.5	No.	3 / 3.5	No.	4 / 4.5	No.	5 / 5.5	No.	6 / 6.5	No.	7 / 7.5	No.	9 to 15	No.	Package
Single Type	1.5	12	RW1A013ZP (P)	6	RW1A020ZP (P) RW1A025AP (P)	5 4	RW1A030AP (P)	3											SOT-563T (WEMT6)
			RZF013P01 (P)	16	RZF020P01 (P)	15	RZF030P01 (P)	14	RAF040P01 (P)	13									SOT-323T (TUMT3)
					RAL025P01 (P)	28	RAL035P01 (P)	27	RAL045P01 (P)	26									SOT-363T (TUMT6)
									RT1A045AP (P)	48	RT1A050ZP (P)	47	RT1A060AP (P)	46					TSST8
					RZR020P01 (P) RZR025P01 (P)	66 65			RZR040P01 (P)	64									SOT-346T (TSMT3)
									RAQ045P01 (P)	89	RZQ050P01 (P)	88							SOT-457T (TSMT6)
													RQ1A060ZP (P)	115	RQ1A070ZP (P) RQ1A070AP (P)	114 121			TSMT8
		20	RW1C015UN (N)	2	RW1C020UN (N) RW1C025ZP (P)	1 7													SOT-563T (WEMT6)
					RUF020N02 (N) RUF025N02 (N)	12 11													SOT-323T (TUMT3)
							RUL035N02 (N)	25											SOT-363T (TUMT6)
													RT1C060UN (N)	41					TSST8
					RUR020N02 (N)	61			RUR040N02 (N)	60									SOT-346T (TSMT3)
											New RQ6C050UN (N)	87							SOT-457T (TSMT6)
													RQ1C065UN (N)	113	RQ1C075UN (N)	112			TSMT8
	1.8	20	RUF015N02 (N)	17															SOT-323T (TUMT3)
	2.5	30	☆RF1E015AJ (N)	19	RTF025N03 (N)	18													SOT-323T (TUMT3)
							RTL035N03 (N)	32	☆RF6E045AJ (N)	33									SOT-363T (TUMT6)
					RTR025N03 (N)	68	☆RQ5E030AJ (N)	63	☆RQ5E040AJ (N) RTR040N03 (N)	62 67									SOT-346T (TSMT3)
					RTQ020N03 (N)	93	RTQ035N03 (N)	92	RTQ045N03 (N)	91									SOT-457T (TSMT6)
		45	RTF016N05 (N)	20															SOT-323T (TUMT3)
					RTR020N05 (N) RTR025N05 (N)	72 71	RTR030N05 (N)	70											SOT-346T (TSMT3)
					RTQ020N05 (N)	96													SOT-457T (TSMT6)
	4	30	RW1E014SN (N) RW1E015RP (P)	8 10	RW1E025RP (P)	9													SOT-563T (WEMT6)
			RSF014N03 (N) RRF015P03 (P)	21 23															TUMT3
					RRL025P03 (P)	37	RRL035P03 (P)	36											TUMT6
			RRR015P03 (P)	80	RSR025N03 (N)	74	RRR030P03 (P) RXR035N03 (N)	79 73	RRR040P03 (P)	78									SOT-346T (TSMT3)
					RSQ020N03 (N) ☆RRQ020P03 (P)	102 107	RRQ030P03 (P)	106	RXQ040N03 (N) RSQ045N03 (N) RRQ045P03 (P)	100 101 105									SOT-457T (TSMT6)
									RT1E040RP (P)	50	RT1E050RP (P)	49	RT1E060XN (N)	42					TSST8
											RQ1E050RP (P)	134			RQ1E070RP (P) RQ1E075XN (N)	135 122	RQ1E100XN (N)	120	TSMT8
		45	RSF010P05 (P)	24															SOT-323T (TUMT3)
					New RQ5H020SP (P) RSR025N05 (N)	83 75													SOT-346T (TSMT3)
									RVQ040N05 (N)	103									SOT-457T (TSMT6)
		60	RSF015N06 (N)	22															SOT-323T (TUMT3)
			New RQ5L015SP (P)	84	RSR020N06 (N)	77	RSR030N06 (N)	76											SOT-346T (TSMT3)
			RSQ015N06 (N)	104															SOT-457T (TSMT6)
		100	RSR010N10 (N)	85															SOT-346T (TSMT3)
			New RQ6P015SP (P)	111															SOT-457T (TSMT6)
	4.5	30			☆RQ5E025AT (P)	82	New RQ5E035BN (N) New RQ5E035AT (P)	69 81											SOT-346T (TSMT3)
							☆RQ6E030AT (P) New RQ6E035AT (P)	110 109	New RQ6E045BN (N)	95	☆RQ6E055BN(P) New RQ6E050AT (P)	94 108							SOT-457T (TSMT6)
											☆RQ7E055AT (P)	136							TSMT8

Character "N", "P" in parentheses indicates "N-channel", "P-channel" respectively.

☆:Under development

●Quick Reference for Small Size Power Type MOSFET Series 2

	Drive Voltage (V)	V_{DSS} (V)	I_D (A) 0.5 to 1.6	No.	2 / 2.5	No.	3 / 3.5	No.	4 / 4.5	No.	5 / 5.5	No.	6 / 6.5	No.	7 / 7.5	No.	8 / 8.5	No.	Package
Dual Type	1.5	12	US6J11 (P+P)	30	US6J12 (P+P)	29													SOT-363T (TUMT6)
					TT8J13 (P+P)	52	TT8J11 (P+P)	51											TSST8
					QS6J11 (P+P)	90													SOT-457T (TSMT6)
							QS8J11 (P+P)	118	QS8J2 (P+P) QS8J12 (P+P)	119 117	QS8J13 (P+P)	116							TSMT8
		20			TT8K1 (N+N) TT8J21 (P+P) TT8M1 (N+P) TT8M3 (N+P)	43 53 54 55													TSST8
		12 / 20	US6M11 (N+P)	40															SOT-363T (TUMT6)
	1.5 / 2.5	20 / 30			TT8M2 (N+P)	56													TSST8
	1.8	20	US6K4 (N+N)	31															SOT-363T (TUMT6)
	2.5	20 / 30	US6M2 (N+P)	35															
			QS6M4 (N+P)	99															SOT-457T (TSMT6)
		30	QS6K1 (N+N)	97															
							QS8K2 (N+N)	132									NEW QH8KA4 (N+N)	133	TSMT8
			US6K1 (N+N)	34															SOT-363T (TUMT6)
					TT8K2 (N+N)	44													TSST8
					QS5K2 (N+N)	86													SOT-25T (TSMT5)
		45	QS6K21 (N+N)	98															SOT-457T (TSMT6)
	4	30	US6M1 (N+P) US6K2 (N+N)	39 38															SOT-363T (TUMT6)
					TT8J2 (P+P) TT8J3 (P+P)	58 59	TT8K11 (N+N)	45											TSST8
					TT8M11 (N+P)			57											
							QS8K11 (N+N)	127	QS8J4 (P+P) QS8K12 (N+N)	124 126	QS8J5 (P+P)	123	QS8K13 (N+N)	125 137					TSMT8
							QS8M12 (N+P)			138	QS8M13 (N+P)								
		45							QS8K21 (N+N)	130									
		60			QS8M31 (N+P)			142											
		100			QS8K51 (N+N)	131													
			QS8M51 (N+P)			143													
	4.5	30					☆QH8KA1 (N+N)	129	QH8MA2 (N+P)	141	☆QH8KA2 (N+N)	128	☆QH8MA3 (N+P)	140	☆QH8MA4 (N+P)	139			TSMT8

Character "N", "P" in parentheses indicates "N-channel", "P-channel" respectively.

☆:Under development

MOSFETs

Small Size Power Type MOSFET Series 1

Package	Application	No.	Part No.	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D (W) (Ta=25°C)	R_{DS} (on)Typ. (mΩ) V_{GS}(V) 1.5	2.5	4	4.5	10	Q_g (nC) (V_{GS}=4.5V)	Drive Voltage (V)
SOT-563T (1616) (WEMT6) 	Load switch Switching	1	**RW1C020UN**	N	20	2.0	0.7	170	95	—	75	—	2.0	1.5
		2	**RW1C015UN**		20	1.5	0.7	300	170	—	130	—	1.8	
		3	**RW1A030AP**	P	-12	-3.0	0.7	75	40	—	30	—	22.0	
		4	**RW1A025AP**		-12	-2.5	0.7	90	55	—	44	—	16.0	
		5	**RW1A020ZP**		-12	-2.0	0.7	200	105	—	75	—	6.5	
		6	**RW1A013ZP**		-12	-1.3	0.7	530	280	—	190	—	2.4	
		7	**RW1C025ZP**		-20	-2.5	0.7	120	65	—	48	—	21.0	
		8	**RW1E014SN**	N	30	1.4	0.7	—	—	270	250	170	1.4*2	4
		9	**RW1E025RP**	P	-30	-2.5	0.7	—	—	95	85	55	5.2*2	
		10	**RW1E015RP**		-30	-1.5	0.7	—	—	190	170	115	3.2*2	
SOT-323T (2021) (TUMT3) 		11	**RUF025N02**	N	20	2.5	0.8	80	49	—	39	—	5.0	1.5
		12	**RUF020N02**		20	2.0	0.8	170	95	—	75	—	2.0	
		13	**RAF040P01**	P	-12	-4.0	0.8	40	27	—	22	—	37.0	
		14	**RZF030P01**		-12	-3.0	0.8	72	39	—	28	—	18.0	
		15	**RZF020P01**		-12	-2.0	0.8	200	105	—	75	—	6.5	
		16	**RZF013P01**		-12	-1.3	0.8	530	280	—	190	—	2.4	
		17	**RUF015N02**	N	20	1.5	0.8	220*1	170	—	130	—	1.8	1.8
		18	**RTF025N03**		30	2.5	0.8	—	70	50	48	—	3.7	2.5
		19	☆**RF1E015AJ**		30	1.5	0.8	—	240	—	170	—	0.7	
		20	**RTF016N05**		45	1.6	0.8	—	200	150	140	—	2.3	
		21	**RSF014N03**		30	1.4	0.8	—	—	270	250	170	1.4*2	4
		22	**RSF015N06**		60	1.5	0.8	—	—	255	240	210	2.0*2	
		23	**RRF015P03**	P	-30	-1.5	0.8	—	—	190	170	115	3.2*2	
		24	**RSF010P05**		-45	-1.0	0.8	—	—	490	450	325	2.4*2	
SOT-363T (2021) (TUMT6) 		25	**RUL035N02**	N	20	3.5	1.0	66	38	—	31	—	5.7	1.5
		26	**RAL045P01**	P	-12	-4.5	1.0	50	28	—	22	—	40.0	
		27	**RAL035P01**		-12	-3.5	1.0	75	40	—	30	—	22.0	
		28	**RAL025P01**		-12	-2.5	1.0	90	55	—	44	—	16.0	
		29	**US6J12**	P+P	-12	-2.0	1.0	200	105	—	75	—	7.6	
		30	**US6J11**		-12	-1.3	1.0	530	280	—	190	—	2.4	
		31	**US6K4**	N+N	20	1.5	1.0	220*1	170	—	130	—	1.8	1.8
		32	**RTL035N03**	N	30	3.5	1.0	—	56	42	40	—	4.6	2.5
		33	☆**RF6E045AJ**		30	4.5	1.0	—	21	—	15	—	5.3	
		34	**US6K1**	N+N	30	1.5	1.0	—	240	180	170	—	1.6	
		35	**US6M2**	N	30	1.5	1.0	—	240	180	170	—	1.6	
				P	-20	-1.0	1.0	—	570	310	280	—	2.1	
		36	**RRL035P03**	P	-30	-3.5	1.0	—	—	60	55	40	8.0*2	4
		37	**RRL025P03**		-30	-2.5	1.0	—	—	95	85	55	5.2*2	
		38	**US6K2**	N+N	30	1.4	1.0	—	—	270	250	170	1.4*2	
		39	**US6M1**	N	30	1.4	1.0	—	—	270	250	170	1.4*2	
				P	-20	-1.0	1.0	—	570	310	280	—	2.1	2.5
		40	**US6M11**	N	20	1.5	1.0	300	170	—	130	—	1.8	1.5
				P	-12	-1.3	1.0	530	280	—	190	—	2.4	
TSST8 (3019) 		41	**RT1C060UN**	N	20	6.0	1.25	33	24	—	20	—	11.0	
		42	**RT1E060XN**		30	6.0	1.25	—	—	23	21	16	6.8*2	4
		43	**TT8K1**	N+N	20	2.5	1.25	100	65	—	52	—	3.6	1.5
		44	**TT8K2**		30	2.5	1.25	—	95	70	65	—	3.2	2.5
		45	**TT8K11**		30	3.0	1.25	—	—	78	67	51	2.5*2	4
		46	**RT1A060AP**	P	-12	-6.0	1.25	27	17	—	14	—	80.0	1.5
		47	**RT1A050ZP**		-12	-5.0	1.25	48	26	—	19	—	34.0	
		48	**RT1A045AP**		-12	-4.5	1.25	50	28	—	22	—	40.0	
		49	**RT1E050RP**		-30	-5.0	1.25	—	—	40	36	26	13.0*2	4
		50	**RT1E040RP**		-30	-4.0	1.25	—	—	52	45	32	10.5	
		51	**TT8J11**	P+P	-12	-3.5	1.25	75	41	—	31	—	22.0	1.5
		52	**TT8J13**		-12	-2.5	1.25	90	55	—	44	—	16.0	
		53	**TT8J21**		-20	-2.5	1.25	140	68	—	49	—	12.0	
		54	**TT8M1**	N	20	2.5	1.25	100	65	—	52	—	3.6	
				P	-20	-2.5	1.25	140	68	—	49	—	12.0	
		55	**TT8M3**	N	20	2.5	1.25	100	65	—	52	—	3.6	
				P	-20	-2.4	1.25	180	105	—	80	—	6.7	
		56	**TT8M2**	N	30	2.5	1.25	—	95	70	65	—	3.2	2.5
				P	-20	-2.5	1.25	140	68	—	49	—	12.0	1.5
		57	**TT8M11**	N	30	3.0	1.25	—	—	78	67	51	2.5*2	4
				P	-30	-2.5	1.25	—	—	115	95	60	4.8*2	
		58	**TT8J2**	P+P	-30	-2.5	1.25	—	—	115	95	60	4.8*2	
		59	**TT8J3**		-30	-2.5	1.25	—	—	120	100	65	4.8*2	

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

☆:Under development

Small Size Power Type MOSFET Series 2

Package	Application	No.	Part No.	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D (W) (Ta=25°C)	R_{DS} (on)Typ. (mΩ) V_{GS} (V) 1.5	2.5	4	4.5	10	Q_g (nC) (V_{GS}=4.5V)	Drive Voltage (V)
SOT-346T (2928) (SC-96) (TSMT3) 	Load switch Switching	60	RUR040N02	N	20	4.0	1.00	55	33	—	25	—	8.0	1.5
		61	RUR020N02		20	2.0	1.00	170	95	—	75	—	2.0	
		62	☆RQ5E040AJ		30	4.0	1.00	—	39	—	27	—	2.9	2.5
		63	☆RQ5E030AJ		30	3.0	1.00	—	77	—	59	—	2.2	
		64	RZR040P01	P	-12	-4.0	1.00	55	30	—	22	—	30.0	1.5
		65	RZR025P01		-12	-2.5	1.00	110	60	—	44	—	13.0	
		66	RZR020P01		-12	-2.0	1.00	200	105	—	75	—	6.5	
		67	RTR040N03	N	30	4.0	1.00	—	47	36	34	—	5.9	2.5
		68	RTR025N03		30	2.5	1.00	—	95	70	66	—	3.3	
		69	New RQ5E035BN		30	3.5	1.00	—	—	—	46	38	1.5	4.5
		70	RTR030N05		45	3.0	1.00	—	68	53	48	—	6.2	2.5
		71	RTR025N05		45	2.5	1.00	—	125	100	95	—	3.2	
		72	RTR020N05		45	2.0	1.00	—	180	135	130	—	2.9	
		73	RXR035N03		30	3.5	1.00	—	—	50	45	35	3.3*	4
		74	RSR025N03		30	2.5	1.00	—	—	83	74	50	2.9*	
		75	RSR025N05		45	2.5	1.00	—	—	105	95	70	3.6	
		76	RSR030N06		60	3.0	1.00	—	—	75	70	60	5.0*	
		77	RSR020N06		60	2.0	1.00	—	—	150	140	120	2.7*	
		78	RRR040P03	P	-30	-4.0	1.00	—	—	52	45	32	10.5*	4
		79	RRR030P03		-30	-3.0	1.00	—	—	95	85	55	5.2*	
		80	RRR015P03		-30	-1.5	1.00	—	—	190	170	115	3.2*	
		81	New RQ5E035AT		-30	-3.5	1.00	—	—	—	54	38	5.2	4.5
		82	☆RQ5E025AT		-30	-2.5	1.00	—	—	—	116	76	2.5	
		83	New RQ5H020SP		-45	-2.0	1.00	—	—	200	180	130	5.0	4
		84	New RQ5L015SP		-60	-1.5	1.00	—	—	255	240	200	5.0	
		85	RSR010N10	N	100	1.0	1.00	—	—	470	460	440	34.0*	
SOT-25T (2928) (TSMT5) 	Load switch Switching	86	QS5K2	N+N	30	2.0	1.25	—	110	76	71	—	2.8	2.5
SOT-457T (2928) (SC-95) (TSMT6) 	Load switch Switching	87	New RQ6C050UN	N	20	5.0	1.25	40	27	—	22	—	12.0	1.5
		88	RZQ050P01	P	-12	-5.0	1.25	44	26	—	19	—	35.0	
		89	RAQ045P01		-12	-4.5	1.25	50	28	—	22	—	40.0	
		90	QS6J11	P+P	-12	-2.0	1.25	200	105	—	75	—	6.5	
		91	RTQ045N03	N	30	4.5	1.25	—	42	32	30	—	7.6	2.5
		92	RTQ035N03		30	3.5	1.25	—	55	40	38	—	4.6	
		93	RTQ020N03		30	2.0	1.25	—	138	94	89	—	2.4	
		94	☆RQ6E055BN		30	5.5	1.25	—	—	—	30	19	4.4	4.5
		95	New RQ6E045BN		30	4.5	1.25	—	—	—	35	21	4.7	
		96	RTQ020N05		45	2.0	1.25	—	200	150	140	—	2.3	2.5
		97	QS6K1	N+N	30	1.0	1.25	—	260	180	170	—	1.7	
		98	QS6K21		45	1.0	1.25	—	415	—	310	300	1.5	
		99	QS6M4	N	30	1.5	1.25	—	260	180	170	—	1.6	
				P	-20	-1.5	1.25	—	310	170	155	—	3.0	
		100	RXQ040N03	N	30	4.0	1.25	—	—	50	45	35	3.3*	4
		101	RSQ045N03		30	4.5	1.25	—	—	40	36	27	6.8*	
		102	RSQ020N03		30	2.0	1.25	—	—	168	148	96	2.2*	
		103	RVQ040N05		45	4.0	1.25	—	—	53	47	38	6.3	
		104	RSQ015N06		60	1.5	1.25	—	—	255	240	210	2.0*	
		105	RRQ045P03	P	-30	-4.5	1.25	—	—	38	34	25	14.0*	
		106	RRQ030P03		-30	-3.0	1.25	—	—	95	85	55	5.2*	
		107	☆RRQ020P03		-30	-2.0	1.25	—	—	190	170	115	3.2*	
		108	New RQ6E050AT		-30	-5.0	1.25	—	—	—	30	20	10.0	4.5
		109	New RQ6E035AT		-30	-3.5	1.25	—	—	—	54	38	5.2	
		110	☆RQ6E030AT		-30	-3.0	1.25	—	—	—	116	76	2.5	
		111	New RQ6P015SP		-100	-1.5	1.25	—	—	400	380	350	17.0*	4

* :V_{GS}=5V

☆:Under development

MOSFETs

Small Size Power Type MOSFET Series 3

Package	Application	No.	Part No.	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D (W) (Ta=25°C)	R_{DS} (on)Typ. (mΩ) V_{GS} (V) 1.5	2.5	4	4.5	10	Q_g (nC) (V_{GS}=4.5V)	Drive Voltage (V)
TSMT8 (3028) 	Load switch Switching Moter Drive	112	**RQ1C075UN**	N	20	7.5	1.5	20	14	—	11.0	—	18.0	1.5
		113	**RQ1C065UN**		20	6.5	1.5	29	19	—	16.0	—	11.0	
		114	**RQ1A070ZP**	P	-12	-7.0	1.5	19	11	—	8.0	—	58.0	
		115	**RQ1A060ZP**		-12	-6.0	1.5	39	22	—	16.0	—	34.0	
		116	**QS8J13**	P+P	-12	-5.5	1.5	29	19	—	15.0	—	60.0	
		117	**QS8J12**		-12	-4.5	1.5	49	27	—	21.0	—	40.0	
		118	**QS8J11**		-12	-3.5	1.5	75	41	—	31.0	—	22.0	
		119	**QS8J2**		-12	-4.0	1.5	66	36	—	26.0	—	20.0	
		120	**RQ1E100XN**	N	30	10.0	1.5	—	—	10	9.5	7.5	12.7*	4.0
		121	**RQ1A070AP**	P	-12	-7.0	1.5	24	13	—	10.0	—	80.0	1.5
		122	**RQ1E075XN**	N	30	7.5	1.5	—	—	19	17.0	12.0	6.8*	4.0
		123	**QS8J5**	P+P	-30	-5.0	1.5	—	—	45	40.0	28.0	10.0*	4.0
		124	**QS8J4**		-30	-4.0	1.5	—	—	60	55.0	40.0	8.4*	
		125	**QS8K13**	N+N	30	6.0	1.5	—	—	28	25.0	20.0	5.5*	4.0
		126	**QS8K12**		30	4.0	1.5	—	—	45	40.0	30.0	3.4*	
		127	**QS8K11**		30	3.5	1.5	—	—	50	45.0	35.0	3.3*	
		128	☆**QH8KA2**		30	5.0	1.5	—	—	—	40.0	25.0	2.0	4.5
		129	☆**QH8KA1**		30	3.0	1.5	—	—	—	86.0	56.0	1.5	
		130	**QS8K21**		45	4.0	1.5	—	—	53	48.0	38.0	5.4*	4.0
		131	**QS8K51**		100	2.0	1.5	—	—	260	250.0	240.0	4.7*	
		132	**QS8K2**		30	3.5	1.5	—	55	40	38.0	—	4.6	2.5
		133	New **QH8KA4**		30	8.0	1.5	—	17	—	13.0	—	6.2	
		134	**RQ1E050RP**	P	-30	-5.0	1.5	—	—	36	32.0	22.0	13.0*	4.0
		135	**RQ1E070RP**		-30	-7.0	1.5	—	—	19	17.0	12.0	26.0*	
		136	☆**RQ7E055AT**		-30	-5.5	1.5	—	—	—	30.0	20.0	10.0	
		137	**QS8M13**	N	30	6.0	1.5	—	—	28	25.0	20.0	5.5*	4.0
				P	-30	-5.0	1.5	—	—	45	40.0	28.0	10.0*	
		138	**QS8M12**	N	30	4.0	1.5	—	—	45	40.0	30.0	3.4*	
				P	-30	-3.5	1.5	—	—	60	55.0	40.0	8.4*	
		139	☆**QH8MA4**	N	30	9.0	1.5	—	—	—	18.0	12.0	2.0	4.5
				P	-30	-7.5	1.5	—	—	—	30.0	20.0	4.3	
		140	☆**QH8MA3**	N	30	6.0	1.5	—	—	—	34.2	28.6	2.0	
				P	-30	-5.5	1.5	—	—	—	60.0	40.0	3.7	
		141	**QH8MA2**	N	30	4.5	1.5	—	—	—	35.0	21.0	4.7	
				P	-30	-3.0	1.5	—	—	—	80.0	55.0	4.3	
		142	**QS8M31**	N	60	3.0	1.5	—	—	98	93.0	80.0	4.0*	4.0
				P	-60	-2.0	1.5	—	—	190	180.0	150.0	7.2*	
		143	**QS8M51**	N	100	2.0	1.5	—	—	260	250.0	240.0	4.6	
				P	-100	-1.5	1.5	—	—	400	380.0	350.0	17.0*	

* : V_{GS}=5V

☆:Under development

●Quick Reference for Multiple Schottky Barrier Diodes Small Size Power Type MOSFET Series
<Small Size Power Type Package>

	Drive Voltage (V)	V_{DSS} (V)	I_D (A) 0.7	No.	1	No.	1.3 / 1.4 / 1.5	No.	2	No.	2.4 / 2.5	No.	Package
Built-in Diode	1.5	12					**ES6U1(P)**	3					SOT-563T (1616) (WEMT6)
		20					**ES6U2(N)**	1					SOT-563T (1616) (WEMT6)
											TT8U1(P)	13	TSST8
											TT8U2(P)	14	
											QS5U36(N)	15	SOT-25T (2928) (TSMT5)
	1.8	20					**QS5U34(N)**	16					SOT-25T (2928) (TSMT5)
	2.5	20			**ES6U42(P)**	5							SOT-563T (1616) (WEMT6)
					US5U30(P)	8							TUMT5
					US5U38(P)	9							
							QS5U21(P)	23					SOT-25T (2928) (TSMT5)
							QS5U23(P)	25					
							QS5U26(P)	22					
							QS5U27(P)	24					
									QS5U28(P)	21			
							QS6U22(P)	27					SOT-457T (2928) (SC-95) (TSMT6)
		30					**ES6U41(N)**	4					SOT-563T (1616) (WEMT6)
							US5U1(N)	6					TUMT5
							US5U3(N)	7					
							US6U37(N)	12					SOT-363T (2021) (TUMT6)
									QS5U12(N)	19			SOT-25T (2928) (TSMT5)
									QS5U13(N)	17			
									QS5U16(N)	18			
									QS5U17(N)	20			
	4	30					**ES6U3(N)**	2					SOT-563T (1616) (WEMT6)
							US5U2(N)	10					TUMT5
									QS5U33(P)	26			SOT-25T (2928) (TSMT5)
					QS6U24(P)	28							SOT-457T (2928) (SC-95) (TSMT6)
		45	**US5U35(P)**	11									TUMT5

Character "N", "P" in parentheses indicates "N-channel", "P-channel" respectively.

Multiple Schottky Barrier Diodes Small Size Power Type MOSFET Series

Package	Application	No.	Part No.	Polarity (ch)	V_{DSS} (V)	I_D (A)	P_D (W) (Ta=25°C)	R_{DS} (on)Typ. (mΩ) V_{GS} (V) 1.5	2.5	4	4.5	10	Q_g (nC) (V_{GS}=4.5V)	Drive Voltage (V)
SOT-563T (1616) (WEMT6)	Load switch Switching	1	**ES6U2**	N+SBD(0.5A)	20	1.5	0.8	300	170	—	130	—	1.8	1.5
		2	**ES6U3**	N+SBD(0.5A)	30	1.4	0.8	—	—	270	250	170	1.4*1	4.0
		3	**ES6U1**	P+SBD(0.5A)	-12	-1.3	0.8	530	280	—	190	—	2.4	1.5
		4	**ES6U41**	N+SBD(0.5A)	30	1.5	0.8	—	240	180	170	—	1.6	2.5
		5	**ES6U42**	P+SBD(0.5A)	-20	-1.0	0.8	—	570	310	280	—	2.1	
TUMT5 (2021)		6	**US5U1**	N+SBD(0.5A)	30	1.5	1.0	—	240	180	170	—	1.6	2.5
		7	**US5U3**	N+SBD(0.7A)	30	1.5	1.0	—	240	180	170	—	1.6	
		8	**US5U30**	P+SBD(0.5A)	-20	-1.0	1.0	—	570	310	280	—	2.1	
		9	**US5U38**	P+SBD(0.7A)	-20	-1.0	1.0	—	570	310	280	—	2.1	
		10	**US5U2**	N+SBD(0.5A)	30	1.4	1.0	—	—	270	250	170	1.4*1	4.0
		11	**US5U35**	P+SBD(0.1A)	-45	-0.7	1.0	—	—	1000	900	600	1.7	
SOT-363T (2021) (TUMT6)		12	**US6U37**	N+SBD(0.7A)	30	1.5	1.0	—	240	180	170	—	1.6	2.5
TSST8 (3019)		13	**TT8U1**	P+SBD(1A)	-20	-2.4	1.25	180	105	—	80	—	6.7	1.5
		14	**TT8U2**		-20	-2.4	1.25	180	105	—	80	—	6.7	
SOT-25T (2928) (TSMT5)		15	**QS5U36**	N+SBD(0.7A)	20	2.5	1.25	120	74	—	58	—	3.5	
		16	**QS5U34**	N+SBD(0.5A)	20	1.5	1.25	220*6	170	—	130	—	1.8	1.8
		17	**QS5U13***2	N+SBD(0.5A)	30	2.0	1.25	—	110	76	71	—	2.8	2.5
		18	**QS5U16***2		30	2.0	1.25	—	110	76	71	—	2.8	
		19	**QS5U12***3	N+SBD(1A)	30	2.0	1.25	—	110	76	71	—	2.8	
		20	**QS5U17***3		30	2.0	1.25	—	110	76	71	—	2.8	
		21	**QS5U28**	P+SBD(1A)	-20	-2.0	1.25	—	175	97	90	—	4.8	
		22	**QS5U26***5	P+SBD(0.5A)	-20	-1.5	1.25	—	260	180	160	—	4.2	
		23	**QS5U21***4	P+SBD(1A)	-20	-1.5	1.25	—	260	180	160	—	4.2	
		24	**QS5U27***4		-20	-1.5	1.25	—	260	180	160	—	4.2	
		25	**QS5U23***5	P+SBD(0.5A)	-20	-1.5	1.25	—	260	180	160	—	4.2	
		26	**QS5U33**	P+SBD(1A)	-30	-2.0	1.25	—	—	160	145	95	3.4*1	4.0
SOT-457T (2928) (SC-95) (TSMT6)		27	**QS6U22**	P+SBD(0.7A)	-20	-1.5	1.25	—	310	170	155	—	3.0	2.5
		28	**QS6U24**	P+SBD(0.7A)	-30	-1.0	1.25	—	—	600	500	300	1.7*1	4.0

*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

Bipolar Transistors (Surface mount type)

Bipolar Transistors (Surface mount type) 1

Package / Polarity / Application	SOT-723 (1212) (VMT3)		SOT-416FL (1616) (SC-89) (EMT3F)		SOT-416 (1616) (SC-75A) (EMT3)		V_{CEO} (V)	I_C (A)	h_{FE} *2	Automotive Grade Available
	 *1 P_D=0.15W		 *1 P_D=0.15W		 *1 P_D=0.15W					
	PNP	NPN	PNP	NPN	PNP	NPN				
General Purpose Amplification	**2SAR522M**	**2SCR522M**	**2SAR522EB**	**2SCR522EB**	–	–	20	0.2	120 to 560	–
	2SAR523M	**2SCR523M**	**2SAR523EB**	**2SCR523EB**	–	–	50	0.1	120 to 560	–
	2SA2029	**2SC5658**	**2SA1774EB**	**2SC4617EB**	**2SA1774**	**2SC4617**	50	0.15	120 to 390	Yes
Low V_{CE} (sat)	**2SA2030**	**2SC5663**	–	–	**2SA2018**	**2SC5585**	12	0.5	270 to 680	–
	–	**2SD2696**	–	–	–	–	30	0.4	270 to 680	–
Driver	–	–	**2SAR502EB**	**2SCR502EB**	–	–	30	0.5	200 or more	–
High h_{FE} · muting	–	**2SD2707**	–	–	–	**2SD2654**	50	0.15	820 to 2700	–
High Frequency	–	**2SC5659**	–	–	–	**2SC4618**	25	0.05	82 to 180 (f_T=300MHz)	–
	–	**2SC5661**	–	–	–	**2SC4725**	20	0.05	82 to 180 (f_T=1500MHz)	–
	–	**2SC5662**	–	–	–	**2SC4726**	11	0.05	56 to 180 (f_T=3200MHz)	–

Notes : 1.*1 With reference land installed 2.*2 For h_{FE}, please see the technical specifications. 3.PNP (-)symbol omitted.

Bipolar Transistors (Surface mount type)<For oversea customer only>

Package / Polarity / Application	SOT-323 (2021) (SC-70) (UMT3)		SOT-23 (2924) (SST3)		V_{CEO} (V)	I_C (A)	SOT-323 SC-59 SOT-23 P_C (W) (Ta=25°C)	h_{FE} *2	Automotive Grade Available
	 *1 P_D=0.2W		 *1 P_D=0.2W						
	PNP	NPN	PNP	NPN					
General Purpose Amplification & Pre Amp	**BC858BW**	**BC848BW**	**BC858B***3	**BC848B***3	30	0.1	0.2	200 to 800	Only SOT-23 Yes
	–	–	–	–	45	0.2	0.2	140 to 630	–
	–	–	**BC857B***3	**BC847B***3	45	0.1	0.2	200 to 800	Only SOT-23 Yes
	–	–	–	–	40	0.2	0.2	100 or more	–
Driver	–	–	**BCX17***3	**BCX19***3	45	0.5	0.2	100 to 600	Only SOT-23 Yes
	–	–	**SSTA56***3	**SSTA06***3	80	0.5	0.2	100 or more	Only SOT-23 Yes
Switching	**UMT3906**	**UMT3904**	**SST3906**	**SST3904***3	40	0.2	0.2	100 to 300	Only SOT-23 Yes
	–	–	**SST4403***3	**SST4401***3	40	0.6	0.2	100 to 300	Only SOT-23 Yes
	–	**UMT2222A**	–	**SST2222A***3	40	0.6	0.2	100 to 300	Only SOT-23 Yes
	UMT2907A	–	**SST2907A***3	–	60	0.6	0.2	100 to 300	Only SOT-23 Yes
Darlington*4	–	–	–	–	30 (V_{CES})	0.5	0.2	5k or more	–
	–	–	–	**SSTA28***3	80 (V_{CES})	0.3	0.2	10k or more	–

Notes:1. *1 With reference land isstalled 2. *2 For h_{FE}, please see the technical specifications. 3. *3 SST3 package 4. *4 For internal circuit, please see the technical specifications. 5. PNP (-)symbol omitted.

Bipolar Transistors (Surface mount type)

Bipolar Transistors (Surface mount type) 2

Package / Polarity / Application	SOT-323FL (2021) (SC-85) (UMT3F) *1 PD=0.2W		SOT-323 (2021) (SC-70) (UMT3) *1 PD=0.2W		SC-59 (2928) (SMT3) *1 PD=0.2W		VCEO (V)	IC (A)	hFE *2	Automotive Grade Available
	PNP	NPN	PNP	NPN	PNP	NPN				
General Purpose Amplification	2SAR522UB	2SCR522UB	–	–	–	–	20	0.2	120 to 560	–
	2SAR523UB	2SCR523UB	–	–	–	–	50	0.1	120 to 560	–
	2SA1576UB	2SC4081UB	2SA1576A	2SC4081	2SA1037AK	2SC2412K	50	0.15	120 to 390	Yes
	–	–	2SA1579	2SC4102	2SA1514K	2SC3906K	120	0.05	180 to 560	Yes
Low VCE(sat)	–	–	–	–	2SA2119K	–	12	0.5	270 to 680	–
	–	–	–	–	–	2SD1757K	15	0.5	120 to 560	–
	–	–	–	–	2SB1590K	2SD2444K	15	1	120 to 270 180 to 390	–
	–	–	2SB1689	2SD2652	–	–	12	1.5	270 to 680	–
	–	–	–	–	2SB1690K	2SD2653K	12	2	270 to 680	–
	–	–	2SB1694	2SD2656	–	–	30	1	270 to 680	Yes
	–	–	–	–	2SB1695K	2SD2657K	30	1.5	270 to 680	–
Driver	2SAR502UB	2SCR502UB	–	–	–	–	30	0.5	200 to 500	–
	–	–	2SA1577	2SC4097	2SA1036K	2SC2411K	32	0.5	120 to 390	Only SC-59 Yes
	–	–	–	–	2SB1197K	2SD1781K	32	0.8	120 to 390	Yes
	–	–	–	2SD1949	–	2SD1484K	50	0.5	120 to 390	Yes
	–	–	–	–	2SB1198K	2SD1782K	80	0.5	120 to 390	Yes
High speed SW	–	–	2SA2088	2SC5876	–	–	60	0.5	120 to 270 120 to 390	Yes
High hFE · Muting	–	–	–	–	–	2SD2704K	25 (VEBO)	0.3	820 to 2700	–
	–	–	–	–	–	2SD2114K	20	0.5	820 to 2700	–
	–	–	–	2SD2351	–	2SD2226K	50	0.15	820 to 2700	–
High Voltage	–	–	–	–	–	2SC4061K	300	0.1	56 to 120	–
High Frequency	–	–	–	2SC4098	–	2SC2413K	25	0.05	82 to 180 (fT=300MHz)	–
	–	–	–	2SC4774	–	2SC4713K	6	0.05	180 to 560 (fT=800MHz)	–
	–	–	–	2SC4082	–	2SC3837K	20	0.05	82 to 180 (fT=1500MHz)	–
	–	–	–	2SC4083	–	2SC3838K	11	0.05	56 to 180 (fT=3200MHz)	–
Darlington *3	–	–	–	–	–	2SD2142K	30	0.3	5k or more	–
	–	–	–	–	2SB852K	2SD1383K	32 (VCES)	0.3	5k or more	–

Notes :1.*1 With reference land installed 2.*2 For hFE, please see the technical specifications. 3.*3 For internal circuit, please see the technical specifications. 4.PNP (-)symbol omitted.

Bipolar Transistors (Surface mount type) 3

Package / Polarity / Application	SOT-323T (2021) (TUMT3) *1 PD=0.4W		SOT-363T (2021) (TUMT6) *1 PD=0.4W		SOT-346T (2928) (SC-96) (TSMT3) *1 PD=0.5W		SOT-457T (2928) (SC-95) (TSMT6) *1 PD=0.5W		VCEO (V)	IC (A)	hFE *2	Automotive Grade Available
	PNP	NPN	PNP	NPN	PNP	NPN	PNP	NPN				
Low VCE(sat)	2SB1732	2SD2702	–	–	2SB1709	2SD2674	–	–	12	1.5	270 to 680	–
	2SB1730	2SD2700	–	–	2SB1690	2SD2653	–	–	12	2.0	270 to 680	–
	–	–	US6T4	US6X3	2SB1705	2SD2670	–	–	12	3.0	270 to 680	–
	–	–	–	–	2SB1707	2SD2672	–	–	12	4.0	270 to 680	–
	–	–	–	–	–	–	QST2	QSX1	12	6.0	270 to 680	–
	2SB1733	2SD2703	–	–	2SB1710	2SD2675	–	–	30	1.0	270 to 680	–
	2SB1731	2SD2701	–	–	2SB1695	2SD2657	–	–	30	1.5	270 to 680	–
	–	–	US6T5	US6X4	2SB1706	2SD2671	–	–	30	2.0	270 to 680	–
	–	–	–	–	2SB1708	2SD2673	–	–	30	3.0	270 to 680	–
	–	–	–	–	New 2SB1708Q5	–	–	–	30	3.0	270 to 680	–
	–	–	–	–	–	–	QST3	QSX2	30	5.0	270 to 680	–
Driver	–	–	–	–	2SAR512R	2SCR512R	–	–	30	2.0	200 to 500	–
	–	–	–	–	2SAR513R	2SCR513R	–	–	50	1.0	180 to 450	–
	–	–	–	–	2SAR553R	2SCR553R	–	–	50	2.0	180 to 450	–
	–	–	–	–	2SAR543R	2SCR543R	–	–	50	3.0	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	–
	–	–	–	–	–	–	New 2SAR340Q	New 2SCR341Q	400	0.1	82 to 270	Yes
High speed SW	–	–	–	–	2SA2094	2SC5866	–	–	60	2.0	120 to 270/ 120 to 390	–

Notes : 1.*1 With reference land installed 2.*2 For hFE, please see the technical specifications. 3.*3 For internal circuit, please see the technical specifications. 4.PNP (-)symbol omitted.

Complex Bipolar Transistors

Complex Bipolar Transistors 1

Configuration	Package / Item / Application	Equivalent circuit diagram (TOP View)	VMT6 (1212)	SOT-553/SOT-563 (1616) (SC-107BB) / (SC-107C) (EMT5) / (EMT6)	SOT-353 / SOT-363 (2021) (SC-88A) (SC-88) (UMT5) / (UMT6)	SOT-25/SOT-457 (2928) (SC-74A) / (SC-74) (SMT5) / (SMT6)	SOT-353T / SOT-363T (2021) (TUMT5) / (TUMT6)	SOT-25T / SOT-457T (2928) (SC-95) (TSMT5) / (TSMT6)	Equivalent element transistors	V_{CEO} (V)	I_C (mA)	h_{FE}	Automotive Grade Available
			Part No.										
PNP×2	Pre Amp.		—	EMT51	—	—	—	—	2SAR522EB×2	-20	-200	120 to 560	—
			—	EMT52	—	—	—	—	2SAR523EB×2	-50	-100	120 to 560	—
			—	EMT1	UMT1N	IMT1A	—	—	2SA1037AK×2	-50	-150	120 or more	Yes
			—	EMT18	UMT18N	IMT18	—	—	2SA2018×2	-12	-500	270 to 680	—
			VT6T1	—	—	—	—	—	2SAR522M×2	-20	-200	120 to 560	—
			VT6T2	—	—	—	—	—	2SAR523M×2	-50	-100	120 to 560	—
			—	EMT2	UMT2N	IMT2A	—	—	2SA1037AK×2	-50	-150	120 to 560	—
			—	EMT3	—	IMT3A	—	—	2SA1037AK×2	-50	-150	120 to 560	—
			—	—	—	IMT4	—	—	2SA1514K×2	-120	-50	180 or more	Yes
	Driver		—	—	—	—	US6T8	QST8	2SB1709×2	-12	-1.5(A)	270 to 680	—
			—	—	—	—	US6T9	QST9	2SB1710×2	-30	-1(A)	270 to 680	—
	Suitable for current mirror circuit		VT6T11	—	—	—	—	—	2SAR522M×2	-20	-200	120 to 560	—
			VT6T12	—	—	—	—	—	2SAR523M×2	-50	-100	120 to 560	—
NPN×2	Pre Amp.		—	EMX51	—	—	—	—	2SCR522EB×2	20	200	120 to 560	—
			—	EMX52	—	—	—	—	2SCR523EB×2	50	100	120 to 560	—
			—	EMX1	UMX1N	IMX1	—	—	2SC2412K×2	50	150	120 or more	Yes
			—	EMX26	—	—	—	—	2SD2654×2	50	150	820 to 2700	—
			—	EMX18	UMX18N	—	—	—	2SC5585×2	12	500	270 to 680	—
			—	—	—	IMX25	—	—	2SD2704K×2	20	300	820 to 2700	—
			VT6X1	—	—	—	—	—	2SCR522M×2	20	200	120 to 560	—
			VT6X2	—	—	—	—	—	2SCR523M×2	50	100	120 to 560	—
			—	EMX2	UMX2N	IMX2	—	—	2SC2412K×2	50	150	120 to 560	—
			—	EMX3	UMX3N	IMX3	—	—	2SC2412K×2	50	150	120 to 560	—
			—	—	—	IMX8	—	—	2SC3906K×2	120	50	180 or more	Yes
	High Frequency		—	EMX4	UMX4N	—	—	—	2SC3837K×2	20	50	56 to 180	—
			—	EMX5	UMX5N	—	—	—	2SC3838K×2	11	50	56 to 120	—
	Driver		—	—	—	—	US6X7	QSX7	2SD2674×2	12	1.5(A)	270 to 680	—
			—	—	—	—	US6X8	QSX8	2SD2675×2	30	1(A)	270 to 680	—
	Suitable for current mirror circuit		VT6X11	—	—	—	—	—	2SCR522M×2	20	200	120 to 560	—
			VT6X12	—	—	—	—	—	2SCR523M×2	50	100	120 to 560	—
	DC-DC Converter		—	—	—	—	—	QS5W1	—	30	3(A)	200 to 500	—
			—	—	—	—	—	QS5W2	2SCR533P×2	50	3(A)	180 to 450	—
PNP + NPN	Amplifier		—	EMY1	UMY1N	FMY1A	—	—	2SA1037AK 2SC2412K	-50 50	-150 150	120 or more 120 or more	—
	Inverter Driver		—	—	—	FMY4A	—	—	2SA1037AK 2SC2412K	-50 50	-150 150	120 to 560 120 to 560	—
	Pre Amp.		—	EMZ51	—	—	—	—	2SAR522EB 2SCR522EB	-20 20	-200 200	120 to 560 120 to 560	—
			—	EMZ52	—	—	—	—	2SCR523EB 2SCR523EB	-50 50	-100 100	120 to 560 120 to 560	—
			—	EMZ1	UMZ1N	IMZ1A	—	—	2SA1037AK 2SC2412K	-50 50	-150 150	120 or more 120 or more	Yes
			—	EMZ7	—	—	—	—	2SA2018 2SC5585	-12 12	-500 500	270 to 680 270 to 680	—
			—	—	—	—	—	QS6Z5	2SAR513P 2SCR513P	-50 50	-1(A) 1(A)	180 to 450 180 to 450	—
			—	EMZ2	UMZ2N	IMZ2A	—	—	2SA1037AK 2SC2412K	-50 50	-150 150	120 to 560 120 to 560	—
			—	EMZ8	—	—	—	—	2SA2018 2SC2412K	-12 50	-500 150	270 to 680 120 to 560	—
			VT6Z1	—	—	—	—	—	2SAR522M 2SCR522M	-20 20	-200 200	120 to 560 120 to 560	—
			VT6Z2	—	—	—	—	—	2SCR523M 2SCR523M	-50 50	-100 100	120 to 560 120 to 560	—

No.1 Pin is located on the upper right of equivalent circuit diagram for VMT6, EMT5, EMT6, UMT5, UMT6, TUMT5, TUMT6, TSMT5 and TSMT6 packages.
No.1 Pin is located on the lower right of equivalent circuit diagram for SMT5 and SMT6 packages.

Complex Bipolar Transistors

Complex Bipolar Transistors 2

Configuration	Package / Item / Application	Equivalent circuit diagram(TOP View)	VMT6 (1212)	SOT-553 / SOT-563 (1616) (SC-107BB) / (SC-107C) (EMT5) / (EMT6)	SOT-353 / SOT-363 (2021) (SC-88A) (SC-88) (UMT5) / (UMT6)	SOT-25/SOT-457 (2928) (SC-74A) / (SC-74) (SMT5) / (SMT6)	SOT-353T / SOT-363T (2021) (TUMT5) / (TUMT6)	SOT-25T / SOT-457T (2928) (SC-95) (TSMT5) / (TSMT6)	Equivalent element transistors	V_{CEO} (V)	I_C (mA)	h_{FE}	Automotive Grade Available
			Part No.										
PNP + NPN	DC-DC Converter		–	–	–	–	–	QSZ1	2SB1690 2SD2653	-12 12	-2(A) 2(A)	270 to 680 270 to 680	–
			–	–	–	–	–	QSZ2	2SB1695 2SD2657	-30 30	-1.5(A) 1.5(A)	270 to 680 270 to 680	–
			–	–	–	–	–	QS5Y1	–	-30 30	-3(A) 3(A)	200 to 500 200 to 500	–
			–	–	–	–	–	QSZ4	2SB1706 2SD2671	-30 30	-2(A) 2(A)	270 to 680 270 to 680	–
			–	–	–	–	–	QS5Y2	2SAR533P 2SCR533P	-50 50	-3(A) 3(A)	180 to 450 180 to 450	–

No.1 Pin is located on the upper right of equivalent circuit diagram for VMT6, EMT5, EMT6, UMT5, UMT6, TUMT5, TUMT6, TSMT5 and TSMT6 packages.
No.1 Pin is located on the lower right of equivalent circuit diagram for SMT5 and SMT6 packages.

Complex Bipolar Transistors 3

Configuration	Package / Item / Application	Equivalent circuit diagram (TOP View)	EMT5 / EMT6 (1616) (1616) (SC-107BB) (SC-107C)	UMT5 / UMT6 (2021) (2021) (SC-88A) (SC-88) <SOT-353> <SOT-363>	Equivalent element transistors	V_{CEO} (V)	I_C (mA)	h_{FE}	Automotive Grade Available
			Part No.						
PNP+DTR	Power Manegement		EMF5	UMF5N	2SA2018 DTC144E	-12 50	-500 100	270 to 680 68 or more	–
			–	UMF28N	2SA1774 DTC124X	-50 50	-150 100	180 to 390 68 or more	–
PNP+Di	DC-DC Converter		–	UML1N	2SA1774 DAN202K	-50 80	-150 100	120 or more –	–
			–	UML4N	2SA2018 RB521S-30	-12 30	-500 200	270 to 680 –	–
NPN+Di			–	UML2N	2SC4617 DAN202K	50 80	150 100	120 or more –	–
			–	UML6N	2SC5585 RB521S-30	12 30	500 200	270 to 680 –	–
NPN+Di	Shunt Regulator		EML22	UML23N	2SC2412K VDZ6.8B	50 Vz=6.8	150 Iz=5	120 to 270 –	–

No.1 Pin is located on the upper right of equivalent circuit diagram for EMT5, EMT6, UMT5 and UMT6 packages.

Digital Transistors

Digital Transistors

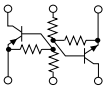
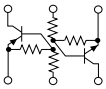
Specifications: Item / Type	Part No. PNP	Part No. NPN	R1 (kΩ)	R2 (kΩ)	Package: SOT-723 (1212) (SC-105AA) (VMT3)	SOT-416FL (1616) (SC-89) (EMT3F)	SOT416 (1616) (SC-75A) (EMT3)	SOT-323F (2021) (SC-85) (UMT3F)	SOT-323 (2021) (SC-70) (UMT3)	SOT-23 <2924> (SST3)	SOT-346 (2928) (SC-59) (SMT3)	V_{CC} (V_{CEO}) (V)	I_O (I_C) (mA)	GI (h_{FE})	Automotive Grade Available
					Pd=150mW			Pd=200mW							
R1=R2 Potential Divider Type / 100mA	DTA123ExA	DTC123ExA	2.2	2.2	●	–	●	–	●	●	●	50	100	20 or more	Yes
	DTA023Ex	DTC023Ex	2.2	2.2	●	●	–	●	–	–	–	50	100	20 or more	–
	DTA143ExA	DTC143ExA	4.7	4.7	●	●	●	●	●	●	●	50	100	20 or more	Yes
	DTA043Ex	DTC043Ex	4.7	4.7	●	●	–	●	–	–	–	50	100	20 or more	–
	DTA114ExA	DTC114ExA	10	10	●	●	●	●	●	●	●	50	50	30 or more	Yes
	DTA014Ex	DTC014Ex	10	10	●	●	–	●	–	–	–	50	50	30 or more	–
	DTA124ExA	DTC124ExA	22	22	●	●	●	●	●	●	●	50	30	56 or more	Yes
	DTA024Ex	DTC024Ex	22	22	●	●	–	●	–	–	–	50	30	56 or more	–
	DTA144ExA	DTC144ExA	47	47	●	●	●	●	●	●	●	50	30	68 or more	Yes
	DTA044Ex	DTC044Ex	47	47	●	●	–	●	–	–	–	50	30	80 or more	–
	DTA115ExA	DTC115ExA	100	100	●	●	●	–	●	●	●	50	20	82 or more	Only SOT-23 Yes
	DTA015Ex	DTC015Ex	100	100	●	●	–	●	–	–	–	50	20	80 or more	–
500mA	DTB543Ex	DTD543Ex	4.7	4.7	●	–	●	–	–	–	–	12	500	115 or more	–
	DTB113Ex	DTD113Ex	1	1	–	–	–	–	–	●	●	50	500	33 or more	–
	DTB123Ex	DTD123Ex	2.2	2.2	–	–	–	–	–	●	●	50	500	39 or more	–
	DTB143Ex	DTD143Ex	4.7	4.7	–	–	–	–	–	●	●	50	500	47 or more	Only SOT-23 Yes
	DTB114Ex	DTD114Ex	10	10	–	–	–	–	–	●	●	50	500	56 or more	–
R1 ≠ R2 Leak Absorption Type / 100mA	DTA113ZxA	DTC113ZxA	1	10	–	–	DTA only	–	●	●	●	50	100	33 or more	Yes
	DTA013Zx	DTC013Zx	1	10	●	●	–	●	–	–	–	50	100	30 or more	–
	DTA123YxA	DTC123YxA	2.2	10	–	–	●	–	●	●	●	50	100	33 or more	Yes
	DTA023Yx	DTC023Yx	2.2	10	●	●	–	●	–	–	–	50	100	33 or more	–
	DTA123JxA	DTC123JxA	2.2	47	●	●	●	●	●	●	●	50	100	80 or more	Yes
	DTA023Jx	DTC023Jx	2.2	47	●	●	–	●	–	–	–	50	100	80 or more	–
	DTA143XxA	DTC143XxA	4.7	10	●	●	●	●	●	●	●	50	100	30 or more	Yes
	DTA043Xx	DTC043Xx	4.7	10	●	●	–	●	–	–	–	50	100	35 or more	–
	DTA143ZxA	DTC143ZxA	4.7	47	●	●	●	●	●	●	●	50	100	80 or more	Yes
	DTA043Zx	DTC043Zx	4.7	47	●	●	–	●	–	–	–	50	100	80 or more	–
	DTA114WxA	DTC114WxA	10	4.7	–	–	●	–	●	–	●	50	100	24 or more	–
	DTA114YxA	DTC114YxA	10	47	●	●	●	●	●	●	●	50	70	68 or more	Yes
	DTA014Yx	DTC014Yx	10	47	●	●	–	●	–	–	–	50	70	68 or more	–
	DTA124XxA	DTC124XxA	22	47	●	–	●	–	●	●	●	50	50	68 or more	Yes
	DTA024Xx	DTC024Xx	22	47	●	●	–	●	–	–	–	50	50	80 or more	–
	DTA144VxA	DTC144VxA	47	10	–	–	–	–	DTC only	–	●	50	100	33 or more	–
	DTA144WxA	DTC144WxA	47	22	–	–	●	–	●	–	●	50	30	56 or more	–
500mA	DTB513Zx	DTD513Zx	1	10	●	–	●	–	–	–	–	12	500	140 or more	–
	DTB523Yx	DTD523Yx	2.2	10	●	–	●	–	–	–	–	12	500	140 or more	–
	DTB543Xx	DTD543Xx	4.7	10	●	–	●	–	–	–	–	12	500	140 or more	–
	DTB543Zx	DTD543Zx	4.7	47	●	–	●	–	–	–	–	12	500	140 or more	–
	DTB113Zx	DTD113Zx	1	10	–	–	–	–	DTD only	●	●	50	500	56 or more	–
	DTB123Yx	DTD123Yx	2.2	10	–	–	–	–	DTB only	●	●	50	500	56 or more	Only SOT-23 Yes
Type using R1 alone as input Resistor / 100mA	DTA113TKA	–	1	None	–	–	–	–	–	–	●	50	100	100 to 600	–
	–	DTC123TKA	2.2	None	–	–	–	–	–	–	●	50	100	100 to 600	–
	DTA143TxA	DTC143TxA	4.7	None	●	●	●	●	●	●	●	50	100	100 to 600	Yes
	DTA043Tx	DTC043Tx	4.7	None	●	●	–	●	–	–	–	50	100	100 to 600	–
	DTA114TxA	DTC114TxA	10	None	●	●	●	●	●	●	●	50	100	100 to 600	Yes
	DTA014Tx	DTC014Tx	10	None	●	●	–	●	–	–	–	50	100	100 to 600	–
	DTA124TxA	DTC124TxA	22	None	●	–	●	–	●	–	●	50	100	100 to 600	Yes
	DTA144TxA	DTC144TxA	47	None	●	–	●	–	●	–	●	50	100	100 to 600	Yes
	DTA044Tx	DTC044Tx	47	None	●	●	–	●	–	–	–	50	60	100 to 600	–
	DTA115TxA	DTC115TxA	100	None	●	–	●	–	●	–	●	50	100	100 to 600	–
	DTA015Tx	DTC015Tx	100	None	●	●	–	●	–	–	–	50	100	100 to 600	–
	DTA125TxA	DTC125TxA	200	None	–	–	–	–	●	–	●	50	100	100 to 600	–
500mA	DTB123TK	DTD123TK	2.2	None	–	–	–	–	–	–	●	40	500	100 to 600	–
	DTB143TK	DTD143TK	4.7	None	–	–	–	–	–	●	●	40	500	100 to 600	–
	DTB114TK	–	10	None	–	–	–	–	–	–	●	40	500	100 to 600	–
For muting	–	DTC614Tx	10	None	–	–	–	–	●	–	●	20	600	820 to 2700	–
	–	DTC623Tx	2.2	None	–	–	–	–	●	–	●	20	600	820 to 2700	–
	–	DTC643Tx	4.7	None	–	–	–	–	●	–	●	20	600	820 to 2700	–
	–	DTC923TUB	2.2	None	–	–	–	●	–	–	–	40 (V_{EBO})	400	820 to 2700	–
	–	DTC943TUB	4.7	None	–	–	–	●	–	–	–	40 (V_{EBO})	400	820 to 2700	–
	–	DTC914TUB	10	None	–	–	–	●	–	–	–	40 (V_{EBO})	400	820 to 2700	–
Type using R2 alone as Bleeder Resistor / 100mA	DTA114GxA	DTC114GxA	None	10	–	–	–	–	●	●	●	50	100	30 or more	Except SOT-346 Yes
	DTA124GxA	DTC124GxA	None	22	–	–	–	–	DTC only	–	●	50	100	68 or more	Only SOT-323 Yes
	DTA144GxA	DTC144GxA	None	47	–	–	DTC only	–	●	–	●	50	100	68 or more	Only SOT-323 Yes
	DTA115GxA	DTC115GxA	None	100	–	–	–	–	●	–	●	50	100	68 or more	–
500mA	DTB114GK	DTD114GK	None	10	–	–	–	–	–	–	●	–	500	56 or more	–
x : Packaging designation symbol					M	EB	E	UB	U	C	K				

Complex Digital Transistors

Complex Digital Transistors 1

Configuration	Equivalent circuit diagram (TOP View)	SOT-553 / SOT-563 (1616) (SC-107BB) / (SC-107C) (EMT5) / (EMT6)	SOT-353 / SOT-363 (2021) (SC-88A) / (SC-88) (UMT5) / (UMT6)	SOT-25/SOT-457 (2928) (SC-74A) / (SC-74) (SMT5) / (SMT6)	SOT-353T / SOT-363T (2021) (TUMT5) / (TUMT6)	SOT-457T (2928) (SC-95) (TSMT6)	Equivalent element transistors	R1 (kΩ)	R2 (kΩ)	Automotive Grade Available
		Part No.								
PNP ×2 (100mA)		EMA5	UMA5N	FMA5A	–	–	DTA123J×2	2.2	47.0	–
		–	UMA9N	FMA9A	–	–	DTA114E×2	10.0	10.0	–
		–	UMA1N	FMA1A	–	–	DTA124E×2	22.0	22.0	–
		EMA2	UMA2N	FMA2A	–	–	DTA144E×2	47.0	47.0	–
		EMA3	UMA3N	FMA3A	–	–	DTA143T×2	4.7	–	–
		EMA4	UMA4N	FMA4A	–	–	DTA114T×2	10.0	–	–
		EMB10	UMB10N	IMB10A	–	–	DTA123J×2	2.2	47.0	Yes
		EMB60	–	–	–	–	DTA023J×2	2.2	47.0	–
		EMB75	–	–	–	–	DTA043Z×2	4.7	47.0	–
		EMB59	–	–	–	–	DTA014Y×2	10.0	47.0	–
		EMB11	UMB11N	IMB11A	–	–	DTA114E×2	10.0	10.0	Yes
		EMB61	–	–	–	–	DTA014E×2	10.0	10.0	–
		EMB51	–	–	–	–	DTA024E×2	22.0	22.0	–
		EMB2	UMB2N	IMB2A	–	–	DTA144E×2	47.0	47.0	Yes
		EMB52	–	–	–	–	DTA044E×2	47.0	47.0	–
		EMB6	UMB6N	–	–	–	DTA144E×2	47.0	47.0	–
		EMB3	UMB3N	IMB3A	–	–	DTA143T×2	4.7	–	Yes
		EMB53	–	–	–	–	DTA043T×2	4.7	–	–
		EMB4	UMB4N	–	–	–	DTA114T×2	10.0	–	Yes
NPN ×2 (100mA)		EMG11	UMG11N	–	–	–	DTC123J×2	2.2	47.0	–
		EMG8	UMG8N	–	–	–	DTC143Z×2	4.7	47.0	–
		EMG9	UMG9N	FMG9A	–	–	DTC114E×2	10.0	10.0	–
		EMG5	UMG5N	–	–	–	DTC114Y×2	10.0	47.0	–
		EMG1	UMG1N	FMG1A	–	–	DTC124E×2	22.0	22.0	–
		EMG2	UMG2N	FMG2A	–	–	DTC144E×2	47.0	47.0	–
		EMG3	UMG3N	FMG3A	–	–	DTC143T×2	4.7	–	–
		EMG4	UMG4N	FMG4A	–	–	DTC114T×2	10.0	–	–
		EMG6	UMG6N	FMG6A	–	–	DTC144T×2	47.0	–	–
		EMH10	UMH10N	–	–	–	DTC123J×2	2.2	47.0	Yes
		EMH60	–	–	–	–	DTC023J×2	2.2	47.0	–
		EMH25	–	–	–	–	DTC143Z×2	4.7	47.0	Yes
		EMH75	–	–	–	–	DTC043Z×2	4.7	47.0	–
		EMH11	UMH11N	IMH11A	–	–	DTC114E×2	10.0	10.0	Yes
		EMH61	–	–	–	–	DTC014E×2	10.0	10.0	–
		EMH9	UMH9N	IMH9A	–	–	DTC114Y×2	10.0	47.0	Yes
		EMH59	–	–	–	–	DTC014Y×2	10.0	47.0	–
		EMH1	UMH1N	IMH1A	–	–	DTC124E×2	22.0	22.0	Yes
		EMH51	–	–	–	–	DTC024E×2	22.0	22.0	–
		EMH2	UMH2N	IMH2A	–	–	DTC144E×2	47.0	47.0	Yes
		EMH52	–	–	–	–	DTC044E×2	47.0	47.0	–
		–	UMH5N	IMH5A	–	–	DTC124E×2	22.0	22.0	–
		EMH6	UMH6N	IMH6A	–	–	DTC144E×2	47.0	47.0	–
		EMH3	UMH3N	IMH3A	–	–	DTC143T×2	4.7	–	Yes
		EMH53	–	–	–	–	DTC043T×2	4.7	–	–
		EMH4	UMH4N	IMH4A	–	–	DTC114T×2	10.0	–	Yes
		EMH15	–	IMH15A	–	–	DTC144T×2	47.0	–	Yes
		–	UMH8N	IMH8A	–	–	DTC114T×2	10.0	–	–
		–	UMH14N	IMH14A	–	–	DTC144T×2	47.0	–	–
NPN ×2 muting		–	UMH33N	–	–	–	DTC923TUB×2	2.2	–	–
		–	–	IMH23	US6H23	–	DTC643T×2	4.7	–	–
		–	UMH32N	–	–	–	DTC943TUB×2	4.7	–	–
		–	–	IMH21	–	–	DTC614T×2	10.0	–	–
		–	UMH37N	–	–	–	DTC914TUB×2	10.0	–	–
NPN ×2 Driver		–	–	–	–	QSH29	60±10V/500mA×2	–	10.0	–

Complex Digital Transistors 2

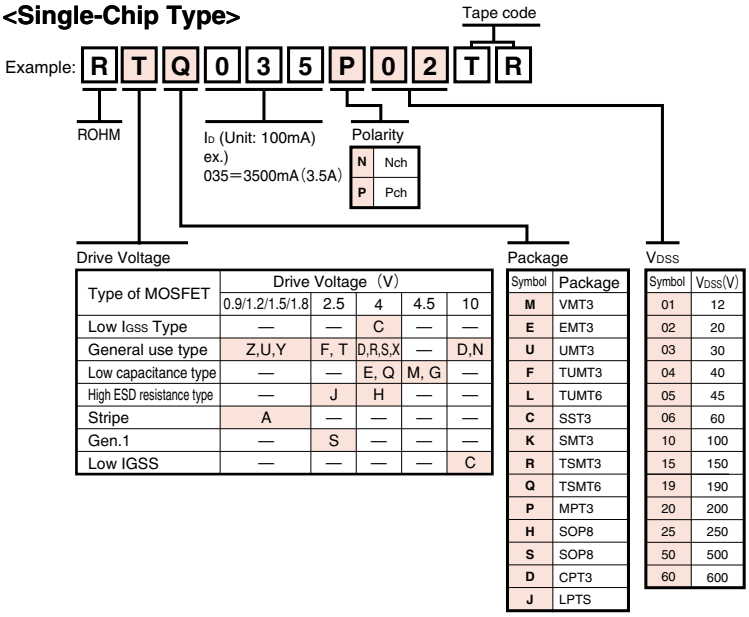
Configuration	Equivalent circuit diagram (TOP View)	SOT-553 / SOT-563 (1616) (SC-107BB) (SC-107C) (EMT5) / (EMT6)	SOT-353 / SOT-363 (2021) (SC-88A) (SC-88) (UMT5) / (UMT6)	SOT-25 / SOT-457 (2928) (SC-74A) (SC-74) (SMT5) / (SMT6)	Equivalent element transistors	R1 (kΩ)	R2 (kΩ)	Automotive Grade Available
								
		Part No.						
PNP+NPN (100mA) complimentary		**EMD22**	**UMD22N**	**—**	DTA143Z DTC143Z	4.7 4.7	47 47	Yes
		EMD72	**—**	**—**	DTA043Z DTC043Z	4.7 4.7	47 47	—
		EMD3	**UMD3N**	**IMD3A**	DTA114E DTC114E	10.0 10.0	10 10	Yes
		EMD53	**—**	**—**	DTA014E DTC014E	10.0 10.0	10 10	—
		EMD9	**UMD9N**	**IMD9A**	DTA114Y DTC114Y	10.0 10.0	47 47	Yes
		EMD59	**—**	**—**	DTA014Y DTC014Y	10.0 10.0	47 47	—
		EMD2	**UMD2N**	**IMD2A**	DTA124E DTC124E	22.0 22.0	22 22	Yes
		EMD52	**—**	**—**	DTA024E DTC024E	22.0 22.0	22 22	—
		EMD12	**UMD12N**	**—**	DTA144E DTC144E	47.0 47.0	47 47	Yes
		EMD62	**—**	**—**	DTA044E DTC044E	47.0 47.0	47 47	—
		**EMD6**	**UMD6N**	**IMD6A**	DTA143T DTC143T	4.7 4.7	— —	Yes
PNP+NPN (100mA) different type		**EMD38**	**—**	**—**	DTA113Z DTC114Y	1.0 10.0	10 47	—
		EMD5	**UMD5N**	**—**	DTA143X DTC144E	4.7 47.0	10 47	—
		EMD4	**UMD4N**	**—**	DTA114Y DTC144E	10.0 47.0	47 47	—
PNP+NPN Power management		**EMD29**	**—**	**—**	DTB513Z DTC114E	1.0 10.0	10 10	—
		EMD30	**—**	**—**	DTB713Z DTC114E	1.0 10.0	10 10	—
		**—**	**—**	**IMD10A**	–50V/–0.5A DTC114T	0.1 10.0	10 —	—
		—	**—**	**IMD16A**	–50V/–0.5A DTC115T	2.2 100.0	10 —	—

No.1 Pin is located on the upper right of equivalent circuit diagram for EMT5, EMT6, UMT5 and UMT6 packages.
No.1 Pin is located on the lower right of equivalent circuit diagram for SMT5 and SMT6 packages.

Part No. Explanation

•MOSFET Part No. Explanation

<Single-Chip Type>

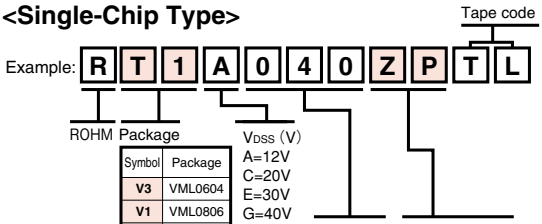


Type of MOSFET	Drive Voltage (V)				
	0.9/1.2/1.5/1.8	2.5	4	4.5	10
Low IGSS Type	—	—	C	—	—
General use type	Z,U,Y	F, T	D,R,S,X	—	D,N
Low capacitance type	—	—	E, Q	M, G	—
High ESD resistance type	—	J	H	—	—
Stripe	A	—	—	—	—
Gen.1	—	S	—	—	—
Low IGSS	—	—	—	—	C

Symbol	Package
M	VMT3
E	EMT3
U	UMT3
F	TUMT3
L	TUMT6
C	SST3
K	SMT3
R	TSMT3
Q	TSMT6
P	MPT3
H	SOP8
S	SOP8
D	CPT3
J	LPTS

Symbol	VDSS(V)
01	12
02	20
03	30
04	40
05	45
06	60
10	100
15	150
19	190
20	200
25	250
50	500
60	600

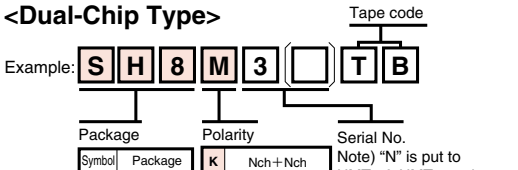
<Single-Chip Type>



Symbol	Package
V3	VML0604
V1	VML0806
V2	VML1006
M1	VMT3
EB	EMT3F
UB	UMT3F
W1	WEMT6
T1	TSST8
Q5	TSMT3
Q6	TSMT6
Q1	TSMT8
Q7	TSMT8
F4	HUML2020L8
Q3	HSMT8
S3	SOP8

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	—
XN	Gen.3	Nch	4.0V	—
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	—
AT	Gen.4	Pch	4.5V	—
AB	Planar	Nch	10V	Low IGSS
AC	Planar	Nch	10V	—

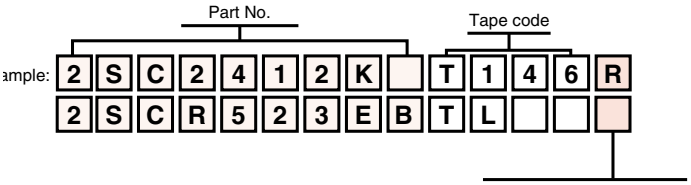
<Dual-Chip Type>



Symbol	Package
VT6	VMT6
EM6	EMT6
UM5	UMT5
UM6	UMT6
ES6	WEMT6
US5	TUMT5
US6	TUMT6
TT8	TSST8
SM6	SMT6
QS5	TSMT5
QS6	TSMT6
QH6	TSMT6
QS8	TSMT8
QH8	TSMT8
UT6	HUML2020L8
HS8	HSML3030L10
SH8	SOP8
SP8	SOP8
HP8	HSOP8

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

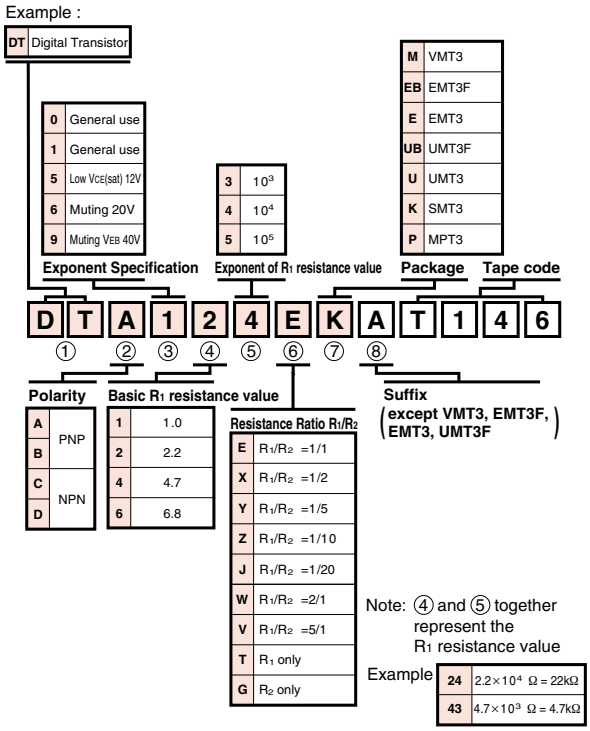
•Bipolar Transistor Part No. Explanation



•h_{FE} Ranking Code

Code	h_{FE} Range
A	16 to 32
B	25 to 50
C	40 to 80
D	60 to 120
E	100 to 200
F	160 to 320
M	39 to 82
N	56 to 120
P	82 to 180
Q	120 to 270
R	180 to 390
S	270 to 560
E	390 to 820
U	560 to 1200
V	820 to 1800
W	1200 to 2700

• Digital Transistor Part No. Explanation



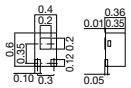
•Packaging type

Standard Package Name	Package	Code	Packaging style	Direction	Basic ordering unit (pcs)
DFN-0604	VML0604	T2L,T2CL	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
DFN-0806	VML0806	T2L,T2CL	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
DFN-1006	VML1006	T2L,T2CL	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	8,000
SOT-723	VMT3	T2L,T2CL	Embossed tape	One terminal on sprocket hole side	8,000
VMT6	VMT6	T2R,T2CR	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-416FL	EMT3F	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-416	EMT3	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-553	EMT5	T2R,T2CR	Embossed tape	Three terminals on sprocket hole side	8,000
SOT-563	EMT6	T2R,T2CR	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-323FL	UMT3F	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-323	UMT3	T106,T306	Embossed tape	One terminal on sprocket hole side	3,000
SOT-353	UMT5	TR,TCR	Embossed tape	Three terminals on sprocket hole side	3,000
SOT-363	UMT6	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
		TN,TCN	Embossed tape	Non-direction	3,000
SOT-23	SST3	T116,T316	Embossed tape	One terminal on sprocket hole side	3,000
SOT-346	SMT3	T146	Embossed tape	One terminal on sprocket hole side	3,000
SOT-25	SMT5	T148	Embossed tape	Three terminals on sprocket hole side	3,000
SOT-457	SMT6	T108	Embossed tape	Terminal No.1 on opposite side from sprocket hole side	3,000
		T110	Embossed tape	Non-direction	3,000
TSST8	TSST8	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-323T	TUMT3	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-353T	TUMT5	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-363T	TUMT6	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-563T	WEMT6	T2R,T2CR	Embossed tape	Terminal No.1 on sprocket hole side	8,000
SOT-346T	TSMT3	TL,TCL	Embossed tape	One terminal on sprocket hole side	3,000
SOT-25T	TSMT5	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
SOT-457T	TSMT6	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000
TSMT8	TSMT8	TR,TCR	Embossed tape	Terminal No.1 on sprocket hole side	3,000

Packages

●Dimensions (Unit : mm)

VML0604
<DFN0604-3>



VML0806
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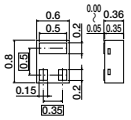

VML1006
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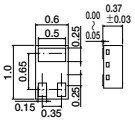

VMT3
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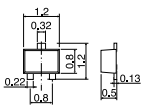
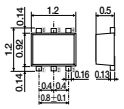
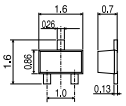
〔SC-105AA〕



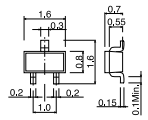
VMT6



EMT3F
<SOT-416FL>
〔SC-89〕



EMT3
<SOT-416>
〔SC-75A〕



EMT5
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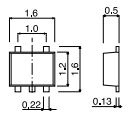
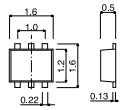
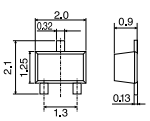
〔SC-107BB〕



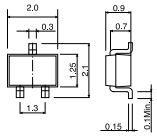
EMT6
<SOT-563>
〔SC-107C〕



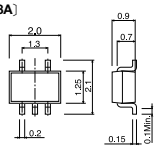
UMT3F
<SOT-323FL>
〔SC-85〕



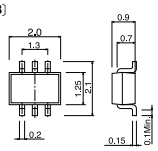
UMT3
<SOT-323>
〔SC-70〕



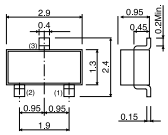
UMT5
<SOT-323>
〔SC-88A〕



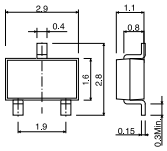
UMT6
<SOT-363>
〔SC-88〕



SST3
<SOT-23>



SMT3
<SOT-346>
〔SC-59〕



SMT5
<SOT-25>
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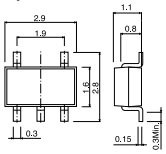

SMT6
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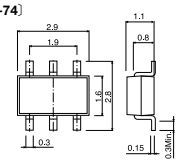
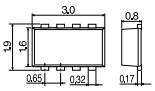
〔SC-74〕



TSST8



TUMT3
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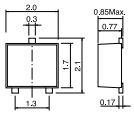

TUMT5
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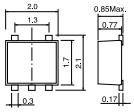

TUMT6
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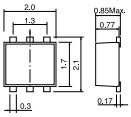
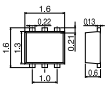
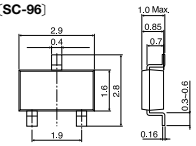


WEMT6
<SOT-563T>



TSMT3
<SOT-346T>
〔SC-96〕



TSMT5
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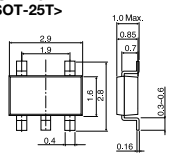

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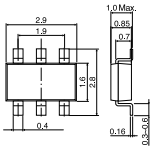

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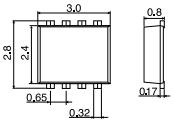

Schottky Barrier Diodes

●Quick Reference for Small Signal Type Schottky Barrier Diodes

V_R (V)	I_O (mA)	Package															
		0603 Size		0603 Size		1006 Size		1006 Size		1006 Size		1406 Size		1608 Size		2512 Size	
		DSN0603-2 (SMD0603)	No.	SOD-962 (GMD2)	No.	DFN1006-2 (VML2)	No.	SOD-923 (VMN2)	No.	SOD-923 (VMN2M)	No.	SOD-723 (VMD2)	No.	SOD-523 (EMD2)	No.	SOD-323FL (UMD2)	No.
20	200													New RBE02SM20A	30		
30	30							RB751CS-40	13	New RB751CM-40	18	RB751G-40	27	RB751SM-40	39	RB751VM-40	55
30	100	RASMID New RB521ES-30	1	RB521ZS-30 RB520ZS-30	3 4			RB521CS-30 RB520CS-30	11 12	New RB521CM-30 New RB520CM-30 New RB530CM-30 New RB531CM-30	14 15 16 17	RB521G-30 RB520G-30 New RB530G-30 New RB531G-30	25 26 23 24	New RB510SM-30 New RB511SM-30 New RB500SM-30 New RB501SM-30	31 32 37 38	RB530VM-30 New RB510VM-30 New RB511VM-30 New RB531VM-30	46 47 48 49
	200					RB521AS-30 RB520AS-30 New RB540AS-30 New RB541AS-30	5 6 7 8							RB521SM-30 RB520SM-30 New RB531SM-30 New RB530SM-30	36 35 33 34	New RB520VM-30 New RB521VM-30 New RB540VM-30 New RB541VM-30	50 51 52 53
	500															New RB550VM-30	54
40	30			New RB751ZS-40	2												
40	100									New RB520CM-40 New RB521CM-40	19 20	New RB520G-40 New RB521G-40	28 29	New RB530SM-40 New RB531SM-40	40 41	RB501VM-40 New RB500VM-40 RB531VM-40 RB530VM-40	58 59 56 57
	200					RB521AS-40 RB520AS-40	10 9							RB521SM-40 RB520SM-40 New RB540SM-40 New RB541SM-40	45 44 42 43	New RB540VM-40 New RB541VM-40 New RB521VM-40 New RB520VM-40	60 61 62 63
60	100									New RB530CM-60 New RB520CM-60	21 22						

V_R (V)	I_O (mA)	Package											
		1608 Size		1212 Size		1616 Size		1616 Size		1616 Size		2120 Size	
		DFN1608-8 (HMD8)	No.	SOT-723 (VMD3)	No.	SOT-416 (EMD3)	No.	SOT-416FL (EMD3F)	No.	SOT-543 (EMD4)	No.	SOT-323 (UMD3)	No.
30	30	RB521ZS8A30 RB520ZS8A30	64 65										
30	100					RB557W RB558W RB548W	73 75 76	New RB558WM	78	RB481Y RB480Y	85 86		
40	30			RB715Z	66	RB715W RB706W-40	67 77						
40	100											RB715F RB717F RB706F-40	68 74 79
	200									RB481Y-40 RB480Y-40	87 88	RB451F RB450F	81 82
90	100									RB481Y-90 RB480Y-90	89 90		

V_R (V)	I_O (mA)	Package													
		2120 Size		2120 Size		2120 Size		2924 Size		2928 Size		2928 Size		2928 Size	
		SOT-323FL (UMD3F)	No.	SOT-343 (UMD4)	No.	SOT-363 (UMD6)	No.	SOT-23 (SST3)	No.	SOT-346 (SMD3)	No.	SOT-25 (SMD5)	No.	SOT-457 (SMD6)	No.
25	400									RB495D	70				
30	30													RB731U	98
30	100					RB531XN RB530XN RB541XN	94 95 96								
	200							New BAT54HM New BAT54SHM New BAT54CHM New BAT54AHM	86 82 70 76						
40	30			RB481K	91	RB731XN	97			RB705D RB706D-40	71 80				
40	100	New RB715UM	69							RB425D RB421D RB420D	72 83 84	RB471E	93		
	120							New BAS40HM	87						
	200			RB480K	92										

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Schottky Barrier Diodes

Small Signal Type Schottky Barrier Diodes 1

Quick Reference No.	Product No. Part No.	Absolute Maximum Ratings (T_C=25°C) V_{RM} (V)	V_R (V)	I_O*1 (mA)	I_{FSM} (A)*2 60Hz.1cyc	Electrical Characteristics (T_j=25°C)*2 V_F (V) Max.	I_F (mA)	I_R (μA) Max.	V_R (V)	Package	Equivalent Circuit Diagram	Automotive Grade Available
1	RASMID New RB521ES-30	30	30	100	0.5	0.37	10	7	10	DSN0603-2 (SMD0603)		—
2	New RB751ZS-40	40	40	30	0.2	0.37	1	0.5	30	SOD-962 (GMD2)		—
3	RB521ZS-30	30	30	100	0.5	0.37	10	7	10			—
4	RB520ZS-30	30	30	100	0.5	0.46	10	0.3	10			—
5	RB521AS-30	30	30	200	1	0.5	200	30	10	DFN1006-2 (VML2)		—
6	RB520AS-30	30	30	200	1	0.6	200	1	10			—
7	New RB540AS-30	30	30	200	0.5	0.45	10	0.5	10			—
8	New RB541AS-30	30	30	200	0.5	0.35	10	30	10			—
9	RB520AS-40	40	40	200	1	0.55	100	10	40			—
10	RB521AS-40	45	40	200	1	0.45	100	90	40			—
11	RB521CS-30	—	30	100	0.5	0.35	10	10	10	SOD-923 (VMN2)		—
12	RB520CS-30	—	30	100	0.5	0.45	10	0.5	10			—
13	RB751CS-40	40	30	30	0.2	0.37	1	0.5	30			—
14	New RB521CM-30	—	30	100	0.5	0.35	10	10	10	SOD-923 (VMN2M)		—
15	New RB520CM-30	—	30	100	0.5	0.45	10	0.5	10			—
16	New RB530CM-30	30	30	100	0.5	0.46	10	0.3	10			—
17	New RB531CM-30	30	30	100	0.5	0.37	10	7	10			—
18	New RB751CM-40	40	30	30	0.2	0.37	1	0.5	30			—
19	New RB520CM-40	40	40	100	0.5	0.71	100	1.5	40			—
20	New RB521CM-40	40	40	100	0.5	0.61	100	100	40			—
21	New RB530CM-60	60	60	100	0.5	0.6	15	1	60			—
22	New RB520CM-60	60	60	100	0.5	0.47	15	3	60			—
23	New RB530G-30	30	30	100	0.5	0.46	10	3	10	SOD-723 (VMD2)		Yes
24	New RB531G-30	30	30	100	0.5	0.37	10	7	10			Yes
25	RB521G-30	—	30	100	0.5	0.35	10	10	10			Yes
26	RB520G-30	—	30	100	0.5	0.45	10	0.5	10			Yes
27	RB751G-40	40	30	30	0.2	0.37	1	0.5	30			Yes
28	New RB520G-40	40	40	100	0.5	0.71	100	15	40			Yes
29	New RB521G-40	40	40	100	0.5	0.61	100	100	40			Yes
30	New RBE02SM20A	30	20	200	1	0.49	200	80	20	SOD-523 (EMD2)		—
31	New RB510SM-30	30	30	100	0.5	0.46	10	0.3	10			Yes
32	New RB511SM-30	30	30	100	0.5	0.37	10	7	10			Yes
33	New RB531SM-30	30	30	200	1	0.35	10	10	10			Yes
34	New RB530SM-30	30	30	200	1	0.45	10	0.5	10			Yes
35	RB520SM-30	—	30	200	1	0.58	200	1	10			Yes
36	RB521SM-30	—	30	200	1	0.47	200	30	10			Yes
37	New RB500SM-30	30	30	100	0.5	0.45	10	0.5	10			Yes
38	New RB501SM-30	30	30	100	0.5	0.35	10	10	10			Yes
39	RB751SM-40	40	30	30	0.2	0.37	1	0.5	30			Yes
40	New RB530SM-40	40	40	100	0.5	0.71	100	15	40			Yes
41	New RB531SM-40	40	40	100	0.5	0.61	100	100	40			Yes
42	New RB540SM-40	40	40	200	0.5	0.71	100	15	40			Yes
43	New RB541SM-40	40	40	200	0.5	0.61	100	100	40			Yes
44	RB520SM-40	40	40	200	1	0.55	100	10	40			Yes
45	RB521SM-40	45	40	200	1	0.45	100	90	40			Yes
46	RB530VM-30	30	30	100	0.5	0.45	10	0.5	10	SOD-323FL (UMD2)		Yes
47	New RB510VM-30	30	30	100	0.5	0.46	10	0.3	10			Yes
48	New RB511VM-30	30	30	100	0.5	0.37	10	7	10			Yes
49	New RB531VM-30	30	30	100	0.5	0.35	10	10	10			Yes
50	New RB520VM-30	30	30	200	1	0.58	200	1	10			Yes
51	New RB521VM-30	30	30	200	1	0.47	200	30	10			Yes
52	New RB540VM-30	30	30	200	0.5	0.45	10	0.5	10			Yes
53	New RB541VM-30	30	30	200	0.5	0.35	10	30	10			Yes
54	New RB550VM-30	30	30	500	1	0.59	500	30	30			Yes
55	RB751VM-40	40	30	30	0.2	0.37	1	0.5	30			Yes
56	RB531VM-40	40	40	100	1	0.61	100	100	40			Yes
57	RB530VM-40	40	40	100	1	0.71	100	15	40			Yes
58	RB501VM-40	45	40	100	1	0.55	100	30	10			Yes
59	New RB500VM-40	45	40	100	1	0.45	10	1	10			Yes
60	New RB540VM-40	40	40	200	0.5	0.71	100	15	40			Yes
61	New RB541VM-40	40	40	200	0.5	0.61	100	100	40			Yes
62	New RB521VM-40	40	40	200	1	0.54	200	90	40			Yes
63	New RB520VM-40	40	40	200	1	0.55	100	10	40			Yes
64	RB521ZS8A30	30	30	100*2	0.5	0.37	10	7	10	DFN1608-8 (HMD8)		—
65	RB520ZS8A30	30	30	100*2	0.5	0.46	10	0.3	10			—

*1 :Io :Average output current per chip. In case of 1, 2 or 3 chip diodes. Io indicates average output current of 1, 2 or 3 chips.
*2 :Value / Chip

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Small Signal Type Schottky Barrier Diodes 2

Quick Reference No.	Product No.	Absolute Maximum Ratings (T_C=25°C)				Electrical Characteristics (T_j=25°C)*2				Package	Equivalent Circuit Diagram	Automotive Grade Available
	Part No.	V_{RM} (V)	V_R (V)	I_O*1 (mA)	I_{FSM} (A)*2 60Hz.1㌢	V_F (V) Max.	I_F (mA)	I_R (μA) Max.	V_R (V)			
66	RB715Z	40	40	30	0.2	0.37	1	1	10	SOT-723 (VMD3)		Yes
67	RB715W	40	40	30	0.2	0.37	1	1	10	SOT-416 (EMD3)		Yes
68	RB715F	40	40	30	0.2	0.37	1	1	10	SOT-323 (UMD3)		Yes
69	New RB715UM	40	40	30	0.2	0.37	1	1	10	SOT-323FL (UMD3F)		Yes
70	New BAT54CHM	30	30	200	1.0	0.8	100	2	25	SOT-23 (SSD3)		Yes
71	RB495D	40	25	400	2	0.5	200	70	25	SOT-346 (SMD3)		Yes
72	RB705D	40	40	30	0.2	0.37	1	1	10			Yes
73	RB425D	40	40	100	1	0.55	100	30	10			Yes
74	RB557W	—	30	100*2	0.5	0.35	10	10	10	SOT-416 (EMD3)		Yes
75	RB717F	40	40	30*2	0.2	0.37	1	1	10	SOT-323 (UMD3)		Yes
76	New BAT54AHM	30	30	200	1.0	0.8	100	2	25	SOT-23 (SSD3)		Yes
77	RB558W	—	30	100*2	0.5	0.35	10	10	10	SOT-416 (EMD3)		Yes
78	RB548W	—	30	100*2	0.5	0.45	10	0.5	10			Yes
79	RB706W-40	45	40	30	0.2	0.37	1	1	10			Yes
80	New RB558WM	—	30	100*2	0.5	0.49	100	10	10	SOT-416FL (EMD3F)		Yes
81	RB706F-40	45	40	30*2	0.2	0.37	1	1	10	SOT-323 (UMD3)		Yes
82	New BAT54SHM	30	30	200	1.0	0.8	100	2	25	SOT-23 (SSD3)		Yes
83	RB706D-40	45	40	30	0.2	0.37	1	1	10	SOT-346 (SMD3)		Yes
84	RB451F	40	40	100	1	0.55	100	30	10	SOT-323 (UMD3)		Yes
85	RB450F	45	40	100	1	0.45	10	1	10			Yes
86	New BAT54HM	30	30	200	1.0	0.8	100	2	25	SOT-23 (SSD3		Yes
87	New BAS40HM	40	40	120	—	1.0	40	1	30	SOT-23 (SSD3)		Yes
88	RB421D	40	40	100	1	0.55	100	30	10	SOT-346 (SMD3)		Yes
89	RB420D	40	40	100	1	0.45	10	1	10			Yes
90	RB481Y	—	30	100*2	1	0.43	100	30	10	SOT-543 (EMD4)		Yes
91	RB480Y	—	30	100*2	1	0.53	100	1	10			Yes
92	RB481Y-40	40	40	200	1	0.45	100	90	40			Yes
93	RB480Y-40	40	40	200	1	0.55	100	10	40			Yes
94	RB481Y-90	90	90	100*2	1	0.61	100	100	90			Yes
95	RB480Y-90	90	90	100*2	1	0.69	100	5	90			Yes
96	RB481K	30	30	200*2	1	0.5	200	30	10	SOT-343 (UMD4)		Yes
97	RB480K	45	40	100*2	1	0.6	100	1	10			Yes
98	RB471E	40	40	100*2	1	0.55	100	30	10	SOT-25 (SMD5)		Yes
99	RB531XN	—	30	100*2	1	0.43	100	30	10	SOT-363 (UMD6)		Yes
100	RB530XN	—	30	100*2	1	0.53	100	1	10			Yes
101	RB541XN	—	30	100	0.5	0.35	10	10	10			Yes
102	RB731XN	40	40	30	0.2	0.37	1	1	10			Yes
103	RB731U	40	40	30	0.2	0.37	1	1	10	SOT-457 (SMD6)		Yes

*1 : Io : Average output current per chip. In case of 1, 2 or 3 chip diodes. Io indicates average output current of 1, 2 or 3 chips.
*2 : Value / Chip

●Quick Reference for Small Sizs Power Type Schottky Barrier Diodes

V_R (V)	I_O (A)	Package											
		1006 Size		1608 Size		1608 Size		2512 Size		2120 Size		2928 Size	
		DFN1006-2 (VML2)	No.	SOD-523 (EMD2)	No.	DFN1608-2 (KMD2)	No.	SOD-323FL (UMD2)	No.	SOT-323 (UMD3)	No.	SOT-346 (SMD3)	No.
20	0.5	**RBE05AS20A**	1	**RBE05SM20A**	2	**RB551SS-30**	3	**RB551VM-30** **RBE05VM20A**	7 8			**RB411D**	183
	0.7							**RBE07V20A**	9	**RB461F**	181		
	1					**RB161SS-20**	4					**RB491D**	182
30	0.5					**RB550SS-30**	5						
40	0.5											**RB400D**	184
	1					**RB160SS-40**	6						

Schottky Barrier Diodes

Small Size Power Type Schottky Barrier Diodes 1

Quick Reference No.	Product No.	Absolute Maximum Ratings (T_C=25°C)				Electrical Characteristics (T_j=25°C)				Package	Equivalent Circuit Diagram	Automotive Grade Available
	Part No.	V_{RM} (V)	V_R (V)	I_O (A)	I_{FSM} (A) 60Hz.1∿	V_F (V) Max.	I_F (A)	I_R (mA) Max.	V_R (V)			
1	**RBE05AS20A**	30	20	0.5	1	0.53	0.5	0.15	20	DFN1006-2 (VML2)		—
2	**RBE05SM20A**	30	20	0.5	1	0.53	0.5	0.15	20	SOD-523 (EMD2)		—
3	**RB551SS-30**	30	20	0.5	5	0.47	0.5	0.1	20	DFN1608-2 (KMD2)		—
4	**RB161SS-20**	30	20	1	5	0.42	1	1	20			—
5	**RB550SS-30**	30	30	0.5	5	0.59	0.5	0.008	15			—
6	**RB160SS-40**	40	40	1	5	0.55	0.7	0.05	20			—
7	**RB551VM-30**	30	20	0.5	2	0.36	0.1	0.1	20	SOD-323FL (UMD2)		—
8	**RBE05VM20A**	30	20	0.5	2	0.43	0.5	0.2	20			—
9	**RBE07V20A**	30	20	0.7	1	0.43	0.5	0.2	20			—

Small Size Power Type Schottky Barrier Diodes 2

Quick Reference No.	Product No.	Absolute Maximum Ratings (T_C=25°C)				Electrical Characteristics (T_j=25°C)				Package	Equivalent Circuit Diagram	Automotive Grade Available
	Part No.	V_{RM} (V)	V_R (V)	I_O (A)	I_{FSM} (A) 60Hz.1∿	V_F (V) Max.	I_F (A)	I_R (mA) Max.	V_R (V)			
181	**RB461F**	25	20	0.7	3	0.49	0.7	0.2	20	SOT-323 (UMD3)		—
182	**RB491D**	25	20	1	3	0.45	1	0.2	20	SOT-346 (SMD3)		—
183	**RB411D**	40	20	0.5	3	0.5	0.5	0.03	10			Yes
184	**RB400D**	40	40	0.5	3	0.55	0.5	0.05	30			Yes

Fast Recovery Diodes

●Quick Reference for Fast Recovery Diodes

V_{RM} (V)	Io (A)	Surface Mount Type					
		1006 Size DFN1006-2 (VML2)	No.	1608 Size SOD-523 (EMD2)	No.	2512 Size SOD-323FL (UMD2)	No.
100	0.5						
200	0.1					**RF01VM2S**	3
450	0.1	**RFU01AS4S**	1	**RFU01SM4S**	2		

Fast Recovery Diodes

Quick Reference No.	Product No.	Absolute Maximum Ratings (T_C=25°C)				Electrical Characteristics (T_j=25°C)							Package	Equivalent Circuit Diagram	Automotive Grade Available
	Part No.	V_{RM} (V)	V_R (V)	I_O (A)	I_{FSM} (A) 60Hz.1∿	V_F (V) Max.	I_F (A)	I_R (μA) Max.	V_R (V)	trr (ns) Max.	I_F (A)	I_R (A)			
1	**RFU01AS4S**	450	450	0.1	1	1.8	0.1	10	450	35	0.1	0.1	DFN1006-2 (VML2)		—
2	**RFU01SM4S**	450	450	0.1	1	1.8	0.1	10	450	35	0.1	0.1	SOD-523 (EMD2)		Yes
3	**RF01VM2S**	250	250	0.1	1	1.2	0.1	10	250	50	*		SOD-323FL (UMD2)		Yes

*V_R=6V, I_F=10mA, Irr=0.1I_R

Protection Diodes

● Quick Reference for Protection Devices [2-4 Elements]

V_Z (V)	Package						
	1212 Size	1616 Size	1616 Size	2120 Size	2120 Size	2928 Size	2928 Size
							
	SOT-723 (VMD3)	SOT-416 (EMD3)	SOT-553 (EMD5)	SOT-323 (UMD3)	SOT-353 (UMD5)	SOT-346 (SMD3)	SOT-25 (SMD5)
4.3							**FTZ4.3E**
5.1				**UMZ5.1N**			
5.6						**STZ5.6N**	**FTZ5.6E**
6.2						**STZ6.2N**	
6.8	**VMZ6.8N**	**EMZ6.8N**	**EMZ6.8E**	**UMZ6.8N**	**UMZ6.8EN**	**STZ6.8T** **STZ6.8N**	**FTZ6.8E**
8.2				**UMZ8.2T** **UMZ8.2N**			
12				**UMZ12N**			
16				**UMZ16N**			
18				**UMZ18N**			
27				**UMZ27N**			
30				**UMZ30N**			**FTZ30E**
36				**UMZ36N**			

● Quick Reference for Low Capacitance Protection Devices

V_Z (V)	Package											
	0603 Size	1006 Size	1212 Size	1608 Size	1616 Size	1616 Size	1616 Size	2512 Size	2120 Size	2928 Size	2928 Size	1006 Size
	DSN0603-2 (SMD0603)	SOD-923 (VMN2)	SOT-723 (VMD3)	SOD-523 (EMD2)	SOT-416 (EMD3)	SOT-553 (EMD5)	SOT-563 (EMD6)	SOD-323FL (UMD2)	SOT-323 (UMD3)	SOT-346 (SMD3)	SOT-25 (SMD5)	SOD-923 (VMN2M)
5.1												**CDZCV5.1**
5.6								**UDZU5.6B**				
6.2								New **UDZU6.2**	**UMZU6.2N**		**FTZU6.2E**	
6.6	New **VS5V0BA1ES**											
6.8		**CDZC6.8B** **RSAC6.8CS**	**VMZT6.8N**	New **EDZCV6.8B**	**EMZC6.8N**	**EMZT6.8E**	**RSB6.8JS2**		**UMZC6.8N**	**STZC6.8N**		**RSAC6.8CM**
12			**RSB12Z**		**RSB12W**		**RSB12JS2**					
16		**RSAC16CS**										
18		**RSAC18CS**										

● Quick Reference for ESD Protection Devices

V_Z (V)	Package		
	1616 Size	2120 Size	2928 Size
			
	SOT-553 (EMD5)	SOT-353 (UMD5)	SOT-457 (SMD6)
6	**RSA6.1J4**	**RSA6.1EN**	**RSA6.1U5**

● Quick Reference for Bi-Directional Zener Diodes

V_Z (V)	Package								
	0603 Size	1006 Size	1406 Size	1608 Size	2512 Size	2120 Size			1006 Size
	SOD-962 (GMD2)	SOD-923 (VMN2)	SOD-723 (VMD2)	SOD-523 (EMD2)	SOD-323FL (UMD2)	SOT-323 (UMD3)	SOT-343 (UMD4)	SOT-363 (UMD6)	SOD-923 (VMN2M)
5.6				**RSB5.6SM**					
6.8	**RSB6.8ZS**	**RSB6.8CS**	**RSB6.8G**	**RSB6.8SM**		**RSB6.8F2**			**RSB6.8CM**
12					**RSB12V**				
16					**RSB16V**	**RSB16F2**		**RSB16X3N**	
18					**RSB18V**	**RSB18F2**			
27					**RSB27V**	**RSB27F2**	**RSB27K2**		
29					**RSB33V**	**RSB33F2**			
32					**RSB36V**	**RSB36F2**			
35					**RSB39V**	**RSB39F2**			

● Quick Reference for Ultra Low Capacitance Bi-Directional Zener Diodes

V_Z (V)	Package
	1006 Size
	SOD-923 (VMN2)
6.8	**RSBC6.8CS**

Protection Diodes

ESD Protection Devices

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C) P (mW)	Electrical Characteristics (Ta=25°C) V_Z (V)	I_Z (mA)	Peak Pulse Power (W) (tp=10×1000µs)	Package	Equivalent Circuit Diagram	Automotive Grade Available
RSA6.1J4	150	6.10 to 7.20	1	10	SOT-553 (EMD5)		Yes
RSA6.1EN	200	6.10 to 7.20	1	30	SOT-353 (UMD5)		Yes
RSA6.1U5	200	6.10 to 7.20	1	30	SOT-457 (SMD6)		Yes

Bi-Directional Zener Diodes

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C) P (mW)	Electrical Characteristics (Ta=25°C) V_Z (V)	I_Z (mA)	Remarks	Package	Equivalent Circuit Diagram	Automotive Grade Available
RSB6.8ZS	100	5.78 to 7.82	1	IEC61000-4-2 150pF,330Ω Contact 8kV Air 15kV	SOD-962 (GMD2)		—
RSB6.8CS	100	5.78 to 7.82	1		SOD-923 (VMN2)		Yes
RSB6.8CM	100	5.78 to 7.82	1		SOD-923 (VMN2M)		—
RSB6.8G	100	5.78 to 7.82	1		SOD-723 (VMD2)		Yes
RSB5.6SM	150	4.76 to 6.44	1		SOD-523 (EMD2)		Yes
RSB6.8SM	150	5.78 to 7.82	1				Yes
RSB12V	200	10.8 to 13.2	1		SOD-323FL (UMD2)		Yes
RSB16V	200	14.4 to 17.6	1				Yes
RSB18V	200	16.2 to 19.8	1				Yes
RSB27V	200	26.2 to 32.0	1				Yes
RSB33V	200	29.7 to 36.3	1				Yes
RSB36V	200	32.4 to 39.6	1				Yes
RSB39V	200	35.1 to 42.9	1				Yes
RSB6.8F2	200	5.78 to 7.82	1		SOT-323 (UMD3)		Yes
RSB16F2	200	14.4 to 17.6	1				Yes
RSB18F2	200	16.2 to 19.8	1				Yes
RSB27F2	200	26.2 to 32.0	1				Yes
RSB33F2	200	29.7 to 36.3	1				Yes
RSB36F2	200	32.4 to 39.6	1				Yes
RSB39F2	200	35.1 to 42.9	1				Yes
RSB27K2	200	26.2 to 32.0	1		SOT-343 (UMD4)		Yes
RSB16X3N	200	14.4 to 17.6	1		SOT-363 (UMD6)		Yes

Ultra Low Capacitance Bi-Directional Zener Diodes

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C) P (mW)	Electrical Characteristics (Ta=25°C) V_Z (V)	I_Z (mA)	C_t (pF)	f (MHz)	V_R (V)	Package	Equivalent Circuit Diagram	Automotive Grade Available
RSBC6.8CS	100	6.62 to 7.24	5	1	1	0	SOD-923 (VMN2)		—

General TVS

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C)			Electrical Characteristics (Ta=25°C)					Package	Equivalent Circuit Diagram	Automotive Grade Available
	P_{PP} (W) (tp=10/1000us)	P (mW)	V_{ESD}* (kV)	V_{RWM} (V) Max.	V_{BR} (V)	I_R (mA)	C_t (pF)	V_R (V)			
New MMBZ5V6AL	24	225	±30	3	5.32 to 5.88	20	230	0	SOT-23 (SSD3)		Yes
New MMBZ6V2AL	24	225	±30	3	5.89 to 6.51	1	185	0			Yes
New MMBZ6V8AL	24	225	±30	4.5	6.46 to 7.14	1	165	0			Yes
New MMBZ9V1AL	24	225	±30	6	8.65 to 9.56	1	125	0			Yes
New MMBZ10VAL	24	225	±30	6.5	9.5 to 10.5	1	110	0			Yes
New MMBZ12VAL	40	225	±30	8.5	11.4 to 12.6	1	85	0			Yes
New MMBZ15VAL	40	225	±30	12	14.25 to 15.75	1	80	0			Yes
New MMBZ16VAL	40	225	±30	13	15.2 to 16.8	1	70	0			Yes
New MMBZ18VAL	40	225	±30	14.5	17.1 to 18.9	1	65	0			Yes
New MMBZ20VAL	40	225	±30	17	19 to 21	1	60	0			Yes
New MMBZ24VAL	40	225	±30	20	22.8 to 25.2	1	48	0			Yes
New MMBZ27VAL	40	225	±30	22	25.65 to 28.35	1	44	0			Yes
New MMBZ30VAL	40	225	±30	24	28.5 to 31.5	1	40	0			Yes
New MMBZ33VAL	40	225	±30	26	31.35 to 34.65	1	36	0			Yes
New MMBZ27VCL	40	225	±30	22	25.65 to 28.35	1	—	—			Yes
New RESD1CAN	350	225	30	24	26.2 to 32	1	30	0			Yes

Low Capacitance TVS

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C)				Electrical Characteristics (Ta=25°C)							Package	Equivalent Circuit Diagram	Automotive Grade Available
	P_{PP} (W) (tp=8/20us)	P (mW)	V_{ESD}* (kV)	I_{pp} (A)	V_{RWM} (V)	V_{BR} (V)	I_R (mA)	V_{CL} (V)	Ipp (A)	C_t (pF)	V_R (V)			
New VS5V0BA1ES	10	100	±15	1	5	6.0 to 8	1	11.4	1	5	0	DSN0603-2 (SMD0603)		—
New VS5V0BB1ES	25	100	±15	2.2	5	6.0 to 9	1	12.8	2.2	7	0	DSN0603-2 (SMD0603)		—
New VS5V0BC1ES	60	100	±15	5	5	6.0 to 9	1	15	5	15	0	DSN0603-2 (SMD0603)		—
RSB6.8CM	50	100	±8	3	5	5.78 to 7.82	1	16	3	15	0	SOD-923 (VMN2M)		—

* : IEC61000-4-2 Contact mode

Zener Diodes

2-Terminal (Single) Zener Diodes

Package	Surface Mount Type																			
	0603 Size DSN0603-2 (SMD0603)				0603 Size SOD-962 (GMD2)				1006 Size SOD-923 (VMN2)				1006 Size SOD-923 (VMN2M)				1608 Size SOD-523 (EMD2)			
Equivalent Circuit Diagram																				
Series Name	New SDZ Series				GDZ Series				CDZ Series				New CDZ V Series				EDZ V Series			
Power(mW)	100				100				100				100				150			
Taping Code	T15R				T2R				T2RA				T2RA				T2R			
Electrical Characteristics (Ta=25°C)	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available
Voltage	–	–	–	–	–	–	–	–	2.0B	2.02 to 2.20	5	Yes	2.0B	2.02 to 2.20	5	–	2.0B	2.02 to 2.20	5	Yes
	–	–	–	–	–	–	–	–	2.2B	2.22 to 2.41	5	Yes	2.2B	2.22 to 2.41	5	–	2.2B	2.22 to 2.41	5	Yes
	–	–	–	–	–	–	–	–	2.4B	2.43 to 2.63	5	Yes	2.4B	2.43 to 2.63	5	–	2.4B	2.43 to 2.63	5	Yes
	–	–	–	–	–	–	–	–	2.7B	2.69 to 2.91	5	Yes	2.7B	2.69 to 2.91	5	–	2.7B	2.69 to 2.91	5	Yes
	–	–	–	–	–	–	–	–	3.0B	3.01 to 3.22	5	Yes	3.0B	3.01 to 3.22	5	–	3.0B	3.01 to 3.22	5	Yes
	–	–	–	–	–	–	–	–	3.3B	3.32 to 3.53	5	Yes	3.3B	3.32 to 3.53	5	–	3.3B	3.32 to 3.53	5	Yes
	–	–	–	–	–	–	–	–	3.6B	3.600 to 3.845	5	Yes	3.6B	3.60 to 3.85	5	–	3.6B	3.600 to 3.845	5	Yes
	–	–	–	–	3.9	3.74 to 4.16	5	–	3.9B	3.89 to 4.16	5	Yes	3.9B	3.89 to 4.16	5	–	3.9B	3.89 to 4.16	5	Yes
	–	–	–	–	–	–	–	–	4.3B	4.17 to 4.43	5	Yes	4.3B	4.17 to 4.43	5	–	4.3B	4.17 to 4.43	5	Yes
	–	–	–	–	4.7	4.42 to 4.90	5	–	4.7B	4.55 to 4.75	5	Yes	4.7B	4.55 to 4.75	5	–	4.7B	4.55 to 4.75	5	Yes
	5.1	4.84 to 5.37	5	–	5.1	4.84 to 5.37	5	–	5.1B	4.98 to 5.20	5	Yes	5.1B	4.98 to 5.20	5	–	5.1B	4.98 to 5.20	5	Yes
	5.6	5.31 to 5.92	5	–	5.6	5.31 to 5.92	5	–	5.6B	5.49 to 5.73	5	Yes	5.6B	5.49 to 5.73	5	–	5.6B	5.49 to 5.73	5	Yes
	6.2	5.86 to 6.53	5	–	6.2	5.86 to 6.53	5	–	6.2B	6.06 to 6.33	5	Yes	6.2B	6.06 to 6.33	5	–	6.2B	6.06 to 6.33	5	Yes
	6.8	6.47 to 7.14	5	–	6.8	6.47 to 7.14	5	–	6.8B	6.65 to 6.93	5	Yes	6.8B	6.65 to 6.93	5	–	6.8B	6.65 to 6.93	5	Yes
	7.5	7.06 to 7.84	5	–	7.5	7.06 to 7.84	5	–	7.5B	7.28 to 7.60	5	Yes	7.5B	7.28 to 7.60	5	–	7.5B	7.28 to 7.60	5	Yes
	8.2	7.76 to 8.64	5	–	8.2	7.76 to 8.64	5	–	8.2B	8.02 to 8.36	5	Yes	8.2B	8.02 to 8.36	5	–	8.2B	8.02 to 8.36	5	Yes
	–	–	–	–	–	–	–	–	9.1B	8.85 to 9.23	5	Yes	9.1B	8.85 to 9.23	5	–	9.1B	8.85 to 9.23	5	Yes
	–	–	–	–	–	–	–	–	10B	9.77 to 10.21	5	Yes	10B	9.77 to 10.21	5	–	10B	9.77 to 10.21	5	Yes
	–	–	–	–	–	–	–	–	11B	10.76 to 11.22	5	Yes	11B	10.76 to 11.22	5	–	11B	10.76 to 11.22	5	Yes
	–	–	–	–	–	–	–	–	12B	11.74 to 12.24	5	Yes	12B	11.74 to 12.24	5	–	12B	11.74 to 12.24	5	Yes
	–	–	–	–	–	–	–	–	13B	12.91 to 13.49	5	Yes	13B	12.91 to 13.49	5	–	13B	12.91 to 13.49	5	Yes
	–	–	–	–	–	–	–	–	15B	14.34 to 14.98	5	Yes	15B	14.34 to 14.98	5	–	15B	14.34 to 14.98	5	Yes
	–	–	–	–	–	–	–	–	16B	15.85 to 16.51	5	Yes	16B	15.85 to 16.51	5	–	16B	15.85 to 16.51	5	Yes
	–	–	–	–	–	–	–	–	18B	17.56 to 18.35	2	Yes	18B	17.56 to 18.35	2	–	18B	17.56 to 18.35	5	Yes
	–	–	–	–	–	–	–	–	20B	19.52 to 20.39	2	Yes	20B	19.52 to 20.39	2	–	20B	19.52 to 20.39	5	Yes
	–	–	–	–	–	–	–	–	22B	21.54 to 22.47	2	Yes	22B	21.54 to 22.47	2	–	22B	21.54 to 22.47	5	Yes
	–	–	–	–	–	–	–	–	24B	23.72 to 24.78	2	Yes	24B	23.72 to 24.78	2	–	24B	23.72 to 24.78	5	Yes
	–	–	–	–	–	–	–	–	27B	26.19 to 27.53	2	Yes	27B	26.19 to 27.53	2	–	27B	26.19 to 27.53	2	Yes
	–	–	–	–	–	–	–	–	30B	29.19 to 30.69	2	Yes	30B	29.19 to 30.69	2	–	30B	29.19 to 30.69	2	Yes
	–	–	–	–	–	–	–	–	33B	32.15 to 33.79	2	Yes	33B	32.15 to 33.79	2	–	33B	32.15 to 33.79	2	Yes
	–	–	–	–	–	–	–	–	36B	35.07 to 36.87	2	Yes	36B	35.07 to 36.87	2	–	36B	35.07 to 36.87	2	Yes
	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

2,3-Terminal (Single) 4-Terminal (Dual) Zener Diodes

Package	Surface Mount Type															
	2512 Size SOD-323FL (UMD2)				2512 Size SOD-323FL (UMD2)				2924 Size SOT-23 (SSD3)				2120 Size SOT-343 (UMD4)			
Equivalent Circuit Diagram																
Series Name	UDZ V Series				UDZ LV Series				BZX84C L Series				UMZ K Series			
Power(mW)	200				200				225				200			
Taping Code	TE-17				TE-17				T116				TL			
Electrical Characteristics (Ta=25°C)	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available	V_Z (V)		I_Z (mA)	Automotive Grade Available
Voltage	2.0B	2.02 to 2.20	5	Yes	–	–	–	–	2V0	–	–	–	–	–	–	–
	2.2B	2.22 to 2.41	5	Yes	–	–	–	–	2V2	–	–	–	–	–	–	–
	2.4B	2.43 to 2.63	5	Yes	–	–	–	–	2V4	2.2 to 2.6	5	Yes	–	–	–	–
	2.7B	2.69 to 2.91	5	Yes	–	–	–	–	2V7	2.5 to 2.9	5	Yes	–	–	–	–
	3.0B	3.01 to 3.22	5	Yes	–	–	–	–	3V0	2.8 to 3.2	5	Yes	–	–	–	–
	3.3B	3.32 to 3.53	5	Yes	–	–	–	–	3V3	3.1 to 3.5	5	Yes	–	–	–	–
	3.6B	3.600 to 3.845	5	Yes	–	–	–	–	3V6	3.4 to 3.8	5	Yes	3.6K	3.600 to 3.845	5	Yes
	3.9B	3.89 to 4.16	5	Yes	–	–	–	–	3V9	3.7 to 4.1	5	Yes	3.9K	3.89 to 4.16	5	Yes
	4.3B	4.17 to 4.43	5	Yes	–	–	–	–	4V3	4 to 4.6	5	Yes	4.3K	4.17 to 4.43	5	Yes
	4.7B	4.55 to 4.75	5	Yes	–	–	–	–	4V7	4.4 to 5	5	Yes	4.7K	4.55 to 4.75	5	Yes
	5.1B	4.98 to 5.20	5	Yes	–	–	–	–	5V1	4.8 to 5.4	5	Yes	5.1K	4.98 to 5.20	5	Yes
	5.6B	5.49 to 5.73	5	Yes	–	–	–	–	5V6	5.2 to 6	5	Yes	5.6K	5.49 to 5.73	5	Yes
	6.2B	6.06 to 6.33	5	Yes	–	–	–	–	6V2	5.8 to 6.6	5	Yes	6.2K	6.06 to 6.33	5	Yes
	6.8B	6.65 to 6.93	5	Yes	–	–	–	–	6V8	6.4 to 7.2	5	Yes	6.8K	6.65 to 6.93	5	Yes
	7.5B	7.28 to 7.60	5	Yes	–	–	–	–	7V5	7 to 7.9	5	Yes	7.5K	7.28 to 7.60	5	Yes
	8.2B	8.02 to 8.36	5	Yes	–	–	–	–	8V2	7.7 to 8.7	5	Yes	8.2K	8.02 to 8.36	5	Yes
	9.1B	8.85 to 9.23	5	Yes	–	–	–	–	9V1	8.5 to 9.6	5	Yes	9.1K	8.85 to 9.23	5	Yes
	10B	9.77 to 10.21	5	Yes	–	–	–	–	10V	9.4 to 10.6	5	Yes	10K	9.77 to 10.21	5	Yes
	11B	10.76 to 11.22	5	Yes	–	–	–	–	11V	10.4 to 11.6	5	Yes	11K	10.76 to 11.22	5	Yes
	12B	11.74 to 12.24	5	Yes	–	–	–	–	12V	11.4 to 12.7	5	Yes	12K	11.74 to 12.24	5	Yes
	13B	12.91 to 13.49	5	Yes	–	–	–	–	13V	12.4 to 14.1	5	Yes	13K	12.91 to 13.49	5	Yes
	15B	14.34 to 14.98	5	Yes	–	–	–	–	15V	13.8 to 15.6	5	Yes	15K	14.34 to 14.98	5	Yes
	16B	15.85 to 16.51	5	Yes	51	48 to 54	2	Yes	16V	15.3 to 17.1	5	Yes	16K	15.85 to 16.51	5	Yes
	18B	17.56 to 18.35	5	Yes	56	53 to 60	2	Yes	18V	16.8 to 19.1	5	Yes	18K	17.56 to 18.35	5	Yes
	20B	19.52 to 20.39	5	Yes	62	58 to 66	2	Yes	20V	18.8 to 21.2	5	Yes	20K	19.52 to 20.39	5	Yes
	22B	21.54 to 22.47	5	Yes	68	64 to 72	2	Yes	22V	20.8 to 23.3	5	Yes	22K	21.54 to 22.47	5	Yes
	24B	23.72 to 24.78	5	Yes	75	70 to 79	2	Yes	24V	22.8 to 25.6	5	Yes	24K	23.72 to 24.78	5	Yes
	27B	26.19 to 27.53	5	Yes	82	77 to 87	2	Yes	27V	25.1 to 28.9	2	Yes	27K	26.19 to 27.53	5	Yes
	30B	29.19 to 30.69	5	Yes	91	85 to 96	1	Yes	30V	28 to 32	2	Yes	30K	29.19 to 30.69	5	Yes
	33B	32.15 to 33.79	5	Yes	100	94 to 106	1	Yes	33V	31 to 35	2	Yes	33K	32.15 to 33.79	5	Yes
	36B	35.07 to 36.87	5	Yes	110	104 to 116	1	Yes	36V	34 to 38	2	Yes	36K	35.07 to 36.87	5	Yes
	39B	38.02 to 39.98	2	Yes	120	114 to 126	1	Yes	–	–	–	–	–	–	–	–
	UDZV43	40.00 to 45.00	2	Yes	130	122 to 138	1	Yes	–	–	–	–	–	–	–	–
	UDZV47	44.00 to 49.00	2	Yes	150	140 to 160	1	Yes	–	–	–	–	–	–	–	–

Switching Diodes

●Quick Reference for Switching Diodes

V_R (V)	Package																	
	1006 Size	1406 Size	1212 Size	1608 Size	1616 Size		1616 Size		2512 Size	2120 Size					2928 Size			
	SOD-923 (VMN2)	SOD-723 (VMD2)	SOT-723 (VMD3)	SOD-523 (EMD2)	SOT-416 (EMD3)	SOT-416FL (EMD3F)	SOT-543 (EMD4)	SOT-563 (EMD6)	SOD-323FL (UMD2)	SOT-323 (UMD3)	SOT-323FL (UMD3F)	SOT-343 (UMD4)	SOT-353 (UMD5)	SOT-363 (UMD6)	SOT-23 (SSD3)	SOT-346 (SMD3)	SOT-25 (SMD5)	SOT-457 (SMD6)
20			**DA221M**		**DA221**					**DA204U**					New **BAS16HM**	**DA204K**		
40									**1SS380**									
75 to 90	**1SS400CS**	**1SS400G**	**DAN222M** **DAP222M**	**1SS400SM**	**DAN217W** **DAN222** **DAP222** ☆**DA228W**	**DAN222WM** **DAP222WM**	**DA227Y**	**EMN11** **EMP11**	**1SS355VM**	**DA228U** **DAN202U** **DAN217U** **DAP202U** **DA380U**	**DAN202UM** **DAP202UM** **DAN217UM**	**DA227**	**UMN1N** **UMP1N**	**UMN10N** **UMN11N** **UMP11N** **UMR11N** **UMR12N** **UMN20N**	New **BAW56HM** New **BAW156HM** New **BAV70HM** New **BAV170HM** New **BAV99HM** New **BAV199HM**	**DA228K** **DAN202K** **DAN217** **DAP202K**	**FMN1** **FMP1**	**IMN10** **IMN11** **IMP11**
250															New **BAS21HM**			

☆ :Under Development

High-speed type

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C)*1					Electrical Characteristics (Ta=25°C)*1							Package	Equivalent Circuit Diagram	Automotive Grade Available
	V_{RM} (V)	V_R (V)	I_{FM} (mA)	I_O (mA)	Isurge (mA)	V_F (V) Max.	I_F (mA)	I_R (μA) Max.	V_R (V)	trr (ns) Max.	V_R (V)	I_F (mA)			
1SS400CS	90	80	—	100	500(1s)	1.2	100	0.1	80	4	6	10	SOD-923 (VMN2)		Yes
1SS400G	90	80	—	100	500(1s)	1.2	100	0.1	80	4	6	10	SOD-723 (VMD2)		Yes
1SS400SM	90	80	225	100	500(1s)	1.2	100	0.1	80	4	6	10	SOD-523 (EMD2)		Yes
1SS355VM	90	80	225	100	500(1s)	1.2	100	0.1	80	4	6	10	SOD-323FL (UMD2)		Yes
New **BAS16HM**	100	80	500	215*2	4000(1μs)	1.25	150	0.1	80	4	10	10	SOT-23 (SSD3)		Yes
New **BAS21HM**	250	200	625	200*2	4000(1μs)	1.25	200	0.1	200	tbd	tbd	tbd			Yes
DAN222M	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-723 (VMD3)		Yes
DAN222	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-416 (EMD3)		Yes
DAN222WM	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-416FL (EMD3F)		Yes
DAN202U	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-323 (UMD3)		Yes
DAN202UM	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-323FL (UMD3F)		Yes
DAN202K	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-346 (SMD3)		Yes
New **BAV70HM**	90	80	450	215*2	4000(1μs)	1.25	150	0.5	80	4	10	10	SOT-23 (SSD3)		Yes
DAP222M	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-723 (VMD3)		Yes
DAP222	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-416 (EMD3)		Yes
DAP222WM	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-416FL (EMD3F)		Yes
DAP202U	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-323 (UMD3)		Yes
DAP202UM	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-323FL (UMD3F)		Yes
DAP202K	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-346 (SMD3)		Yes
New **BAW56HM**	100	80	500	215*2	4000(1μs)	1.25	150	0.1	80	4	10	10	SOT-23 (SSD3)		Yes
DA221M	20	20	200	100	300(1μs)	1.0	10	0.1	15	—	—	—	SOT-723 (VMD3)		Yes
DA221	20	20	200	100	300(1μs)	1.0	10	0.1	15	—	—	—			Yes
DAN217W	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-416 (EMD3)		Yes
☆**DA228W**	80	80	200	100	300(1μs)	1.2	100	0.1	80	—	—	—			Yes
DA204U	20	20	200	100	300(1μs)	1.0	10	0.1	15	—	—	—	SOT-323 (UMD3)		Yes
DAN217U	80	80	300	100	4000(1μs)	1.2	100	0.2	70	4	6	5			Yes
DAN217UM	80	80	300	100	4000(1μs)	1.2	100	0.2	70	4	6	5	SOT-323FL (UMD3F)		Yes
DA228U	80	80	200	100	300(1μs)	1.2	100	0.1	80	—	—	—	SOT-323 (UMD3)		Yes
DAN217	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5			Yes
DA228K	80	80	200	100	300(1μs)	1.2	100	0.1	80	—	—	—	SOT-346 (SMD3)		Yes
DA204K	20	20	200	100	300(1μs)	1.0	10	0.1	15	—	—	—			Yes
New **BAV99HM**	100	80	500	215*2	4000(1μs)	1.25	150	0.1	80	4	10	10	SOT-23 (SSD3)		Yes
UMN1N	80	80	80	25	250(1μs)	0.9	5	0.1	70	4	6	5	SOT-353 (UMD5)		Yes
FMN1	80	80	80	25	250(1μs)	0.9	5	0.1	70	4	6	5	SOT-25 (SMD5)		Yes
UMP1N	80	80	80	25	250(1μs)	0.9	5	0.1	70	4	6	5	SOT-353 (UMD5)		Yes
FMP1	80	80	80	25	250(1μs)	0.9	5	0.1	70	4	6	5	SOT-25(SMD5)		Yes
EMN11	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-563 (EMD6)		Yes
UMN11N	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-363 (UMD6)		Yes
IMN11	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-457 (SMD6)		Yes
EMP11	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-563 (EMD6)		Yes
UMP11N	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-363 (UMD6)		Yes
IMP11	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-457 (SMD6)		Yes
UMR11N	80	80	300	100	400(1μs)	1.2	100	0.1	70	4	6	5	SOT-363 (UMD6)		Yes
UMR12N	80	80	200	100	300(1μs)	1.2	100	0.1	80	—	—	—	SOT-363 (UMD6)		Yes
DA227Y	80	80	300	100	400(1μs)	1.2	100	0.1	70	4	6	5	SOT-543 (EMD4)		Yes
DA227	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-343 (UMD4)		Yes
UMN10N	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-363 (UMD6)		Yes
IMN10	80	80	300	100	4000(1μs)	1.2	100	0.1	70	4	6	5	SOT-457 (SMD6)		Yes

*1 : Value / Chip
*2 : IF

☆ : Under Development

Switching Diodes

Low Leak type

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C)					Electrical Characteristics (Ta=25°C)							Package	Equivalent Circuit Diagram	Automotive Grade Available
	V_{RM} (V)	V_R (V)	I_{FM} (mA)	I_O (mA)	Isurge (mA)	V_F (V) Max.	I_F (mA)	I_R (μA) Max.	V_R (V)	trr (μs) Max.	V_R (V)	I_F (mA)			
1SS380	40	35	225	100	400 (1s)	1.2	100	0.01	20	—	—	—	SOD-323FL (UMD2)		Yes
DA380U	80	80	225	100	400 (1s)	1.2	100	0.01	20	—	—	—	SOT-323 (UMD3)		Yes
UMN20N	80	80	225	100	400 (1s)	1.2	100	0.01	20	—	—	—	SOT-363 (UMD6)		Yes
New **BAW156HM**	100	80	500	215*	4000 (1μs)	1.25	150	0.005	75	3	10	10	SOT-23 (SSD3)		Yes
New **BAV170HM**	90	80	500	215*	4000 (1μs)	1.25	150	0.005	75	3	10	10			Yes
New **BAV199HM**	100	80	500	215*	4000 (1μs)	1.25	150	0.005	75	3	10	10			Yes

* : IF

High Frequency Diodes

●Quick Reference for High Frequency Diodes

	V_R (V)	Package										
		0603 Size	1006 Size	1406 Size	1608 Size	1616 Size	1616 Size	2512 Size	2120 Size	2928 Size	1608 Size	2408 Size
												
		SOD-962 (GMD2)	SOD-923 (VMN2)	SOD-723 (VMD2)	SOD-523 (EMD2)	SOT-416 (EMD3)	SOT-543 (EMD4)	SOD-323FL (UMD2)	SOT-323 (UMD3)	SOT-346 (SMD3)	DFN1608-8 (HMD8)	DFN2408-12 (HMD12)
Band Switching Diodes	35				**1SS390**	**DAN235E**		**1SS356**	**DAN235U DAP236U**			
PIN Diodes	30		**RN242CS RN262CS**	**RN262G**							**RN142ZS8A**	**RN142ZS12A**
	50			**RN141G**	**RN141S**			**RN731V RN771V**	**RN739F RN779F**	**RN779D**		
	60	**RN142ZS**		**RN142G**	**RN142S**							
Detection Schottky Diodes	3						**RB851Y**					
	5		**RB886CS**	**RB886G**		**RB876W**	**RB861Y**					
	15						**RB886Y**					

Band Switching Diodes

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C)*			Electrical Characteristics (Ta=25°C)*						Package	Equivalent Circuit Diagram	Automotive Grade Available
	V_R (V)	Tj (°C)	Tstg (°C)	Ct (pF) Max.	V_R (V)	f (MHz)	rF (Ω)Max.	I_F (mA)	f (MHz)			
1SS390	35	125	-55 to +125	1.2	6	1	0.9	2	100	SOD-523 (EMD2)		Yes
1SS356	35	125	-55 to +125	1.2	6	1	0.9	2	100	SOD-323FL (UMD2)		Yes
DAN235E	35	125	-55 to +125	1.2	6	1	0.9	2	100	SOT-416 (EMD3)		Yes
DAN235U	35	125	-55 to +125	1.2	6	1	0.9	2	100	SOT-323 (UMD3)		Yes
DAP236U	35	125	-55 to +125	1.2	6	1	0.9	2	100	SOT-323 (UMD3)		Yes

PIN Diodes

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C)*				Electrical Characteristics (Ta=25°C)*						Package	Equivalent Circuit Diagram	Automotive Grade Available
	V_R (V)	I_F (mA)	Tj (°C)	Tstg (°C)	Ct (pF) Max.	V_R (V)	f (MHz)	rF (Ω) Max.	I_F (mA)	f (MHz)			
RN142ZS	30	50	150	-55 to +150	0.45	1	1	2.5	3	100	SOD-962 (GMD2)		—
RN242CS	30	100	150	-55 to +150	0.35	1	1	3	3	100	SOD-923 (VMN2)		—
RN262CS	30	100	150	-55 to +150	0.4	1	1	2.8	3	100			—
RN262G	30	100	150	-55 to +150	0.35	1	1	2.8	3	100	SOD-723 (VMD2)		—
RN141G	50	100	150	-55 to +150	0.8	1	1	2	3	100			—
RN142G	60	100	150	-55 to +150	0.45	1	1	3	3	100			—
RN141S	50	100	150	-55 to +150	0.8	1	1	2	3	100	SOD-523 (EMD2)		—
RN142S	60	100	150	-55 to +150	0.45	1	1	3	3	100			—
RN731V	50	50	125	-55 to +150	0.4	35	1	7	10	100	SOD-323FL (UMD2)		Yes
RN771V	50	50	150	-55 to +150	0.9	35	1	7	10	100			Yes
RN739F	50	50	125	-55 to +150	0.4	35	1	7	10	100	SOT-323 (UMD3)		Yes
RN779F	50	50	150	-55 to +150	0.9	35	1	7	10	100			Yes
RN779D	50	50	150	-55 to +150	0.9	35	1	7	10	100	SOT-346 (SMD3)		Yes
RN142ZS8A	30	50	150	-55 to +150	0.45	1	1	2.5	3	100	DFN1608-8 (HMD8)		—
RN142ZS12A	30	50	150	-55 to +150	0.45	1	1	2.5	3	100	DFN2408-12 (HMD12)		—

* : Value / Chip

Detection Schottky Diodes

Product No. / Part No.	Absolute Maximum Ratings (Ta=25°C) V_R (V)	I_F (mA)	Tj (°C)	Tstg (°C)	Electrical Characteristics (Ta=25°C)* V_F (V) Max.	I_F (mA)	f (MHz)	Ct (pF) Max.	V_R (V)	f (MHz)	Package	Equivalent Circuit Diagram	Automotive Grade Available
RB886CS	5	10	125	-40 to +125	0.35	1	—	0.8	1	1	SOD-923 (VMN2)		—
RB886G	5	10	125	-40 to +125	0.35	1	—	0.8	1	1	SOD-723 (VMD2)		—
RB876W	5	10	125	-40 to +125	0.35	1	—	0.8	1	1	SOT-416 (EMD3)		—
RB886Y	15	10	125	-40 to +125	0.35	1	—	0.8	1	1	SOT-543 (EMD4)		—
RB851Y	3	30	125	-40 to +125	0.46	1	—	0.8	0	1			—
RB861Y	5	10	125	-40 to +125	0.3	1	—	1.1	0	1			—

* : Value / Chip

Part No. Explanation

- When ordering, specify the part number.
- Check each code against the tables shown below.
- Fill in from the left, leaving any extra boxes empty on the right.

•Small signal / rectifier diode

Example: 1SS355VM TE-17

Part No. | Taping Code

Example: UDZV TE-17 5.1 B

Part No. | Taping Code | Zener voltage | Sub division

•Packaging type

Package	Code	ROHM Package	Package style	Direction	Basic ordering unit(pcs)
DSN0603-2	T15R	SMD0603	Embossed tape	Cathode on sprocket hole side	15,000
SOD-962	T2R	GMD2	Embossed tape	Cathode on sprocket hole side	8,000
	T2N		Embossed tape	Cathode on sprocket hole side	8,000
				Non-direction	
DFN1006-2	T2R	VML2	Embossed tape	Cathode on sprocket hole side	8,000
SOD-923	T2RA	VMN2	Embossed tape	Cathode on sprocket hole side	8,000
SOD-923	T2R	VMN2M	Embossed tape	Cathode on sprocket hole side	8,000
SOD-723	T2R	VMD2	Embossed tape	Cathode on sprocket hole side	8,000
DFN1608-2	T2R	KMD2	Embossed tape	Cathode on sprocket hole side	8,000
SOT-723	T2L	VMD3	Embossed tape	One terminal on sprocket hole side	8,000
SOD-523	TE61	EMD2	Embossed tape	Cathode on sprocket hole side	3,000
	T2R		Embossed tape	Cathode on sprocket hole side	8,000
	T2N		Embossed tape	Cathode on sprocket hole side	8,000
				Non-direction	
SOT-416	TL	EMD3	Embossed tape	One terminal on sprocket hole side	3,000
SOT-416FL	TL	EMD3F	Embossed tape	One terminal on sprocket hole side	3,000
SOT-543 **SOT-553** **SOT-563**	T2R	EMD4 EMD5 EMD6	Embossed tape	Cathode on sprocket hole side	8,000
SOD-323FL	TE-17	UMD2	Embossed tape	Cathode on sprocket hole side	3,000
	TW11*1				
SOT-323	T106	UMD3	Embossed tape	One terminal on sprocket hole side	3,000
SOT-323FL	TL	UMD3F	Embossed tape	One terminal on sprocket hole side	3,000
SOT-343	TL	UMD4	Embossed tape	Cathode on sprocket hole side (DA227)	3,000
SOT-353	TR	UMD5	Embossed tape	Three terminals on sprocket hole side	3,000
SOT-363	TR	UMD6	Embossed tape	Cathode on sprocket hole side	3,000
SOT-363	TN	UMD6	Embossed tape	Non-direction	3,000
	★TR*2			Cathode on sprocket hole side	
SOT-23	T116	SSD3	Embossed tape	One terminal on sprocket hole side	3,000
SOT-346	T146	SMD3	Embossed tape	One terminal on sprocket hole side	3,000
SOT-25	T148	SMD5	Embossed tape	Three terminals on sprocket hole side	3,000
SOT-457	T108*3	SMD6	Embossed tape	Anode on sprocket hole side	3,000
	T110			Non-direction	
DFN1608-8	TE61	HMD8	Embossed tape	Cathode on sprocket hole side	3,000
DFN2408-12	TE61	HMD12	Embossed tape	Cathode on sprocket hole side	3,000

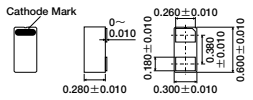
Notes:*1 Regarding the UMD2 package, only 1SS356 is available in TW11.
*2 Regarding the UMD6 package, only RB731XN is offered in TR.
*3 Regarding the SMD6 package, only IMN10 and RB731U are available in T108.
★Available outside Japan

Packages

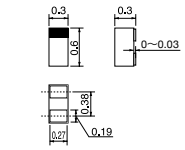
■Dimensions (Unit : mm)

Surface Mount Type

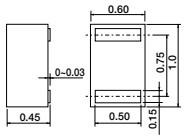
SMD0603 <DSN0603-2>



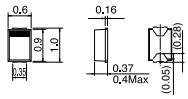
GMD2 <SOD-962>



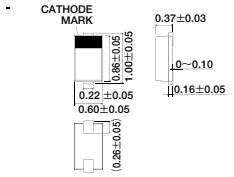
VML2 <DFN1006-2>



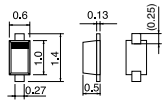
VMN2 <SOD-923>



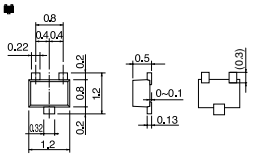
VMN2M <SOD-923>



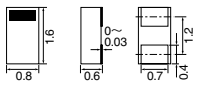
VMD2 <SOD-723>[SC-104A]



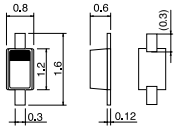
VMD3 <SOT-723>[SC-105AA]



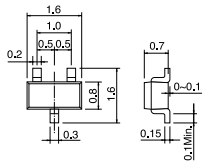
KMD2 <DFN-1608-2>



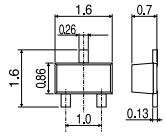
EMD2 <SOD-523>[SC-79]



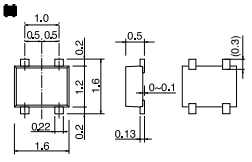
EMD3 <SOT-416>[SC-75A]



EMD3F <SOT-416FL>[SC-81]

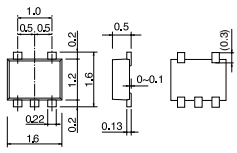


EMD4 <SOT-543>[SC-107A]

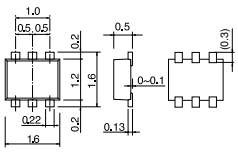


Each lead has same dimensions

EMD5 <SOT-553>[SC-107BB]

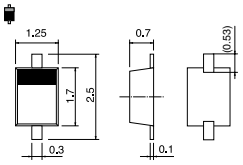


EMD6 <SOT563>[SC-107C]

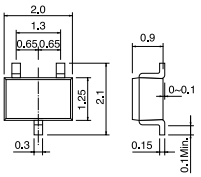


Each lead has same dimensions

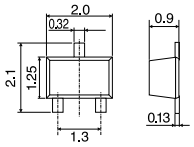
UMD2 <SOD-323FL>[SC-90/A]



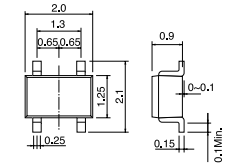
UMD3 <SOT-323>[SC-70]



UMD3F <SOT-323FL>[SC-85]

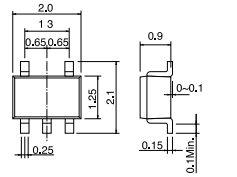


UMD4 <SOT-343>[SC-82]

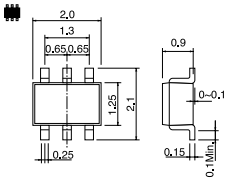


Each lead has same dimensions

UMD5 <SOT-353>[SC-88A]

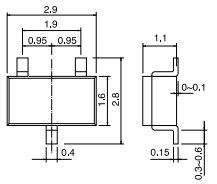


UMD6 <SOT-363>[SC-88]

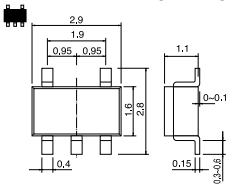


Each lead has same dimensions

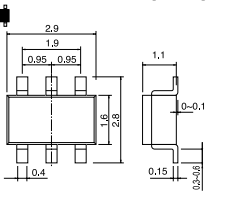
SMD3 <SOT-346>[SC-59]



SMD5 <SOT-25>[SC-74A]

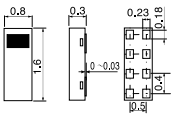


SMD6 <SOT-457>[SC-74]

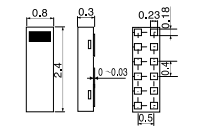


Each lead has same dimensions

HMD8 <DFN1608-8>



HMD12 <DFN2408-12>

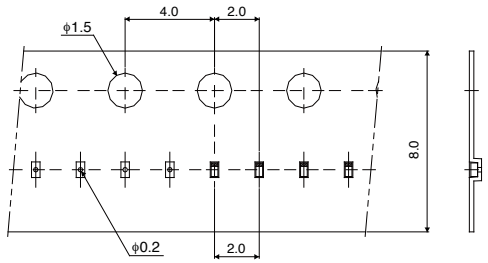


Compatibility Chart of Packages

Package Code	Size (mm)	t=	JEITA	ROHM Package
DFN0604-3	0604	0.36	—	VML0604
DFN0806-3	0806	0.36	—	VML0806
DFN1006-3	1006	0.37	(SC-101)	VML1006
SOD-962 **DFN0603-2**	0603	0.28	—	GMD2 SMD0603
SOD-923	1006	0.37	SC-121	VMN2M
DFN1006-2	1006	0.45	—	VML2
SOD-723	1406	0.5	SC-104A	VMD2
SOT-723	1212	0.5	SC-105AA	VMT3/VMD3
VMT6	1212	0.5	(SC-105B)	VMT6
DFN1608-2	1608	0.6	—	KMD2
SOD-523	1608	0.6	SC-79	EMD2
SOT-416	1616	0.7	SC-75A	EMT3/EMD3
SOT-416FL	1616	0.7	SC-89	EMT3F/EMD3F
SOT-543	1616	0.5	SC-107A	EMD4
SOT-553	1616	0.5	SC-107BB	EMT5/EMD5
SOT-563	1616	0.5	SC-107C	EMT6/EMD6
SOT-563T	1616	0.6	SC-120	WEMT6
SOD-323FL	25125	0.7	SC-90A	UMD2
SOT-323	2120	0.9	SC-70	UMT3/UMD3
SOT-323FL	2120	0.9	SC-85	UMT3F/UMD3F
SOT-343	2120	0.9	SC-82	UMD4
SOT-353	2120	0.9	SC-88A	UMT5/UMD5
SOT-363	2120	0.9	SC-88	UMT6/UMD6
DFN2020-3S	2020	0.6	—	HUML2020L3
DFN2020-8(S/D)	2020	0.6	—	HUML2020L8
SOT-323T	2120	0.77	SC-113A	TUMT3
SOT-353T	2120	0.77	SC-113CA	TUMT5/TUMD5
SOT-363T	2120	0.77	SC-113DA	TUMT6
SOT-23	2924	0.95	—	SST3
SOT-346	2928	1.1	SC-59	SMT3/SMD3
SOT-25	2928	1.1	SC-74A	SMT5/SMD5
SOT-457	2928	1.1	SC-74	SMT6/SMD6
SOT-346T	2928	0.85	SC-96	TSMT3
SOT-25T	2928	0.85	(SC-95)	TSMT5/TSMD5
SOT-457T	2928	0.85	SC-95	TSMT6/TSMD6
TSMT8/TSMD8	3028	0.8	—	TSMT8/TSMD8
TSST8	2019	0.8	—	TSST8

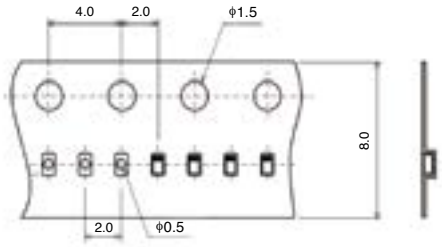
Package type (2pin)

DSN0603-2,SOD-962



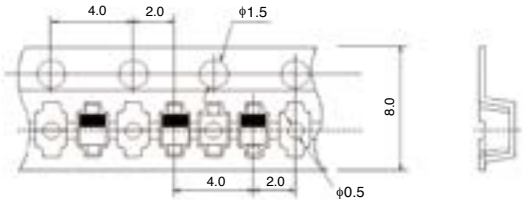
Package	ROHM Package	Taping Code
DSN0603-2	SOD0603	T15R
SOD-962	GMD2	T2R
		T2N

DFN1006-2,SOD-923,DFN1608-2



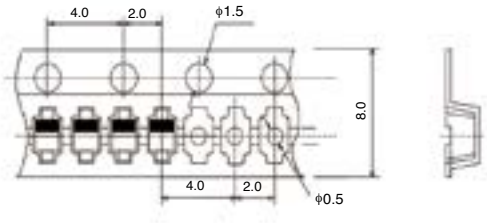
Package	ROHM Package	Taping Code
DFN1006-2	VML2	T2R
SOD-923	VMN2	T2RA
	VMN2M	T2R/T2N
DFN1608-2	KMD2	T2R

SOD-723,SOD-523



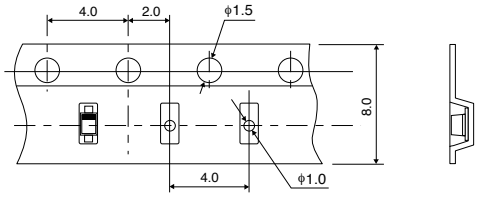
Package	ROHM Package	Taping Code
SOD-723	VMD2	T2R
SOD-523	EMD2	TE-61

SOD-523



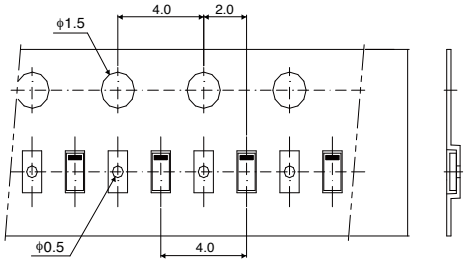
Package	ROHM Package	Taping Code
SOD-523	EMD2	T2R
		T2N

SOD-323FL



Package	ROHM Package	Taping Code
SOD-323FL	UMD2	TE-17

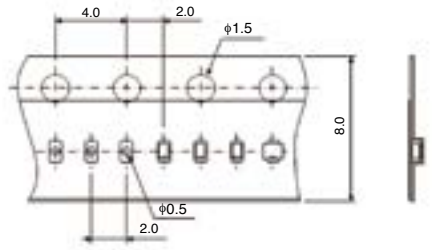
DFN1608-8,DFN2408-12



Package	ROHM Package	Taping Code
DFN1608-8	HMD8	TE-61
DFN2408-12	HMD12	TE-61

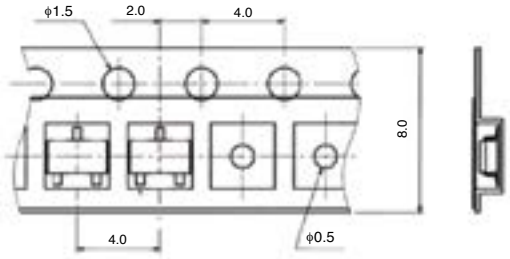
Package type (3pin / 4pin / 5pin / 6pin / 8pin)

DFN0604-3,DFN0806-3,DFN1006-3



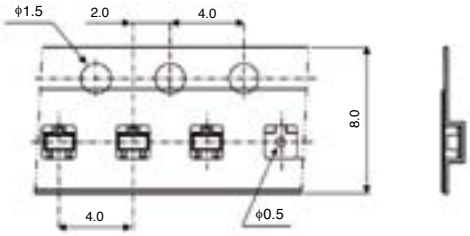
Package	ROHM Package	Taping Code
DFN0604-3	VML0604	T2L/T2CL
DFN0806-3	VML0806	T2L/T2CL
DFN1006-3	VML1006	T2L/T2CL

SOT-723,SOT-416,SOT-323



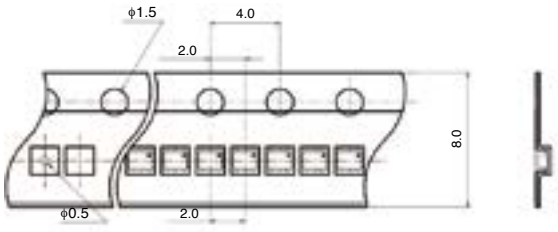
Package	ROHM Package	Taping Code
SOT-723	VMT3/VMD3	T2L/T2CL
SOT-416	EMT3/EMD3	TL
SOT-323	UMT3/UMD3	T106

SOT-416FL,SOT-323FL



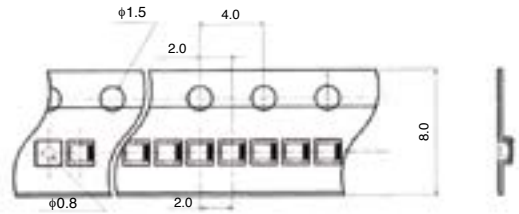
Package	ROHM Package	Taping Code
SOT-416FL	EMT3F/EMD3F	TL/TCL
SOT-323FL	UMT3F/EMD3F	TL/TCL

VMT6,SOT-563T



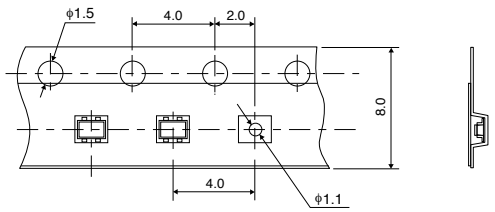
Package	ROHM Package	Taping Code
SOT-563T	WEMT6	T2R/T2CR
VMT6	VMT6	T2R/T2CR

SOT-553,SOT-563



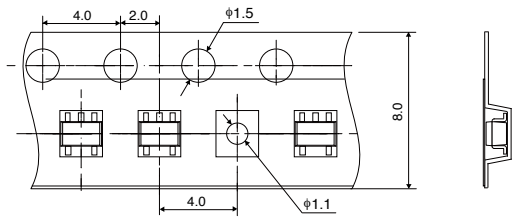
Package	ROHM Package	Taping Code
SOT-553	EMT5/EMD5	T2R/T2CR
SOT-563	EMT6/EMD6	T2R/T2CR

SOT-343



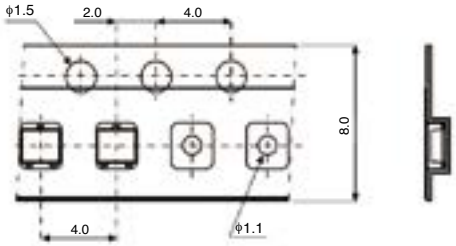
Package	ROHM Package	Taping Code
SOT-343	UMT4/UMD4	TL

SOT-353,SOT-363



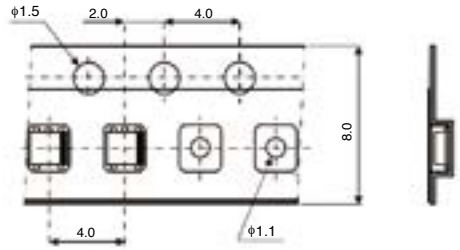
Package	ROHM Package	Taping Code
SOT-353	UMT5/UMD5	TR/TCR
SOT-363	UMT6/UMD6	TCR/TR/TCN/TN

SOT-323T



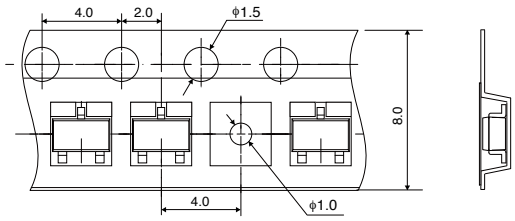
Package	ROHM Package	Taping Code
SOT-323T	TUMT3/TUMD3	TL/TCL

SOT-353T,SOT-363T



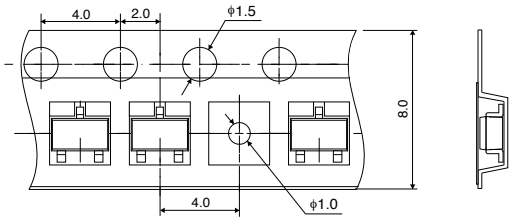
Package	ROHM Package	Taping Code
SOT-353T	TUMT5/TUMD5	TR/TCR
SOT-363T	TUMT6/TUMD6	TR/TCR

SOT-346



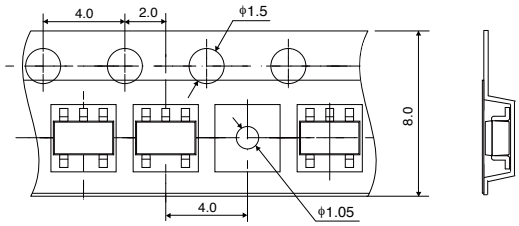
Package	ROHM Package	Taping Code
SOT-346	SMT3/SMD3	T146

SOT-23



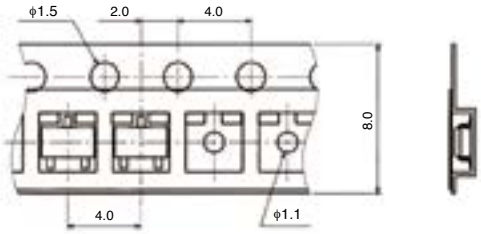
Package	ROHM Package	Taping Code
SOT-23	SST3/SSD3	T116

SOT-25,SOT-457



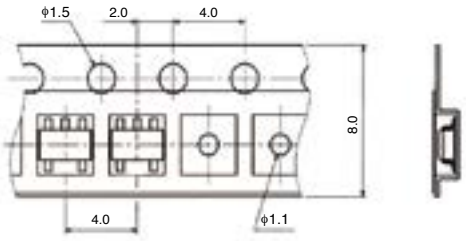
Package	ROHM Package	Taping Code
SOT-25	SMT5/SMD5	T148
SOT-457	SMT6/SMD6	T108/T110

SOT-346T



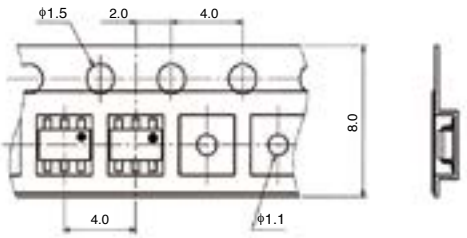
Package	ROHM Package	Taping Code
SOT-346T	TSMT3/TSMD3	TL/TCL

SOT-25T



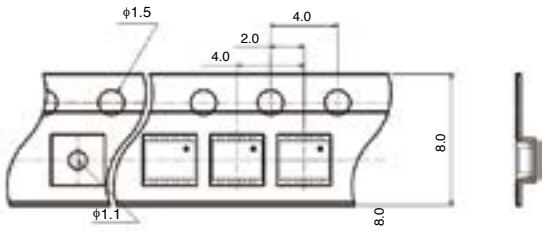
Package	ROHM Package	Taping Code
SOT-25T	TSMT5/TSMD5	TR/TCR

SOT-457T



Package	ROHM Package	Taping Code
SOT-457T	TSMT6/TSMD6	TR/TCR

TSMT8/TSMD8



Package	ROHM Package	Taping Code
TSMT8/TSMD8	TSMT8/TSMD8	TR/TCR

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