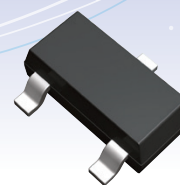


SOT-23 Package Products

<Feature>

- The most major package in the world.
- AEC-Q101 qualified (products for Automotive).
- Solderable per MIL-STD-202
- Molding compound meets UL 94 V-0 flammability rating.
- MSL level 1, J-STD-020, LF maximum peak of 260°C
- PPAP prepared (products for Automotive).



SOT-23

MOSFETs

P/N for General use	P/N for Automotive*1	Polarity	V _{DSS} (V)	I _D (A)	Drive Voltage (V)	R _{DS(on)} Typ (Ω)						
						V _{GS} (V)						
						0.9	1.2	1.5	2.5	4.0	4.5	10.0
RUC002N05	RUC002N05HZG	N	50	0.20	1.2	—	2.4	2.0	1.7	—	1.6	—
RK7002BM	RK7002BMHZG	N	60	0.25	2.5	—	—	—	3.0	2.3	2.1	1.7
BSS84	BSS84AHZG	P	-60	-0.23	4.5	—	—	—	—	—	4.3	3.6
BSS138BK	BSS138BKAHZG	N	60	0.40	2.5	—	—	—	1.0	—	0.6	0.5
BSS670	BSS670AHZG	N	60	0.60	2.5	—	—	—	1.0	—	0.6	0.5
RSC002P03	—	P	-30	-0.25	4.0	—	—	—	—	1.6	1.4	0.9

*1 AEC-Q101 qualified

Bipolar Transistors

P/N for General use	P/N for Automotive*1	Polarity	V _{CE} (V)	I _C (A)	h _{FE}	Application
BC848B	BC848BHZG	NPN	30	0.1	200 to 450	General Purpose
BC858B	BC858BHZG	PNP	-30	-0.1	200 to 450	
BSS5130A	BSS5130AHZG	NPN	30	1.0	270 or more	
BSS4130A	BSS4130AHZG	PNP	-30	-1.0	270 or more	
BC847B	BC847BHZG	NPN	45	0.1	200 to 450	
BC857B	BC857BHZG	PNP	-45	-0.1	200 to 450	
BC847C	BC847CHZG	NPN	45	0.15	420 to 800	
BC857C*2	BC857CHZG*2	PNP	-45	-0.1	420 to 800	
BC846B	BC846BHZG	NPN	65	0.12	200 to 450	
BC856B	BC856BHZG	PNP	-65	-0.1	220 to 475	
BSS64A	BSS64AHZG	NPN	100	0.1	30 or more	
BSS63A	BSS63AHZG	PNP	-100	-0.1	30 or more	
2SCRC41C	2SCRC41CHZG	NPN	120	0.05	180 to 560	
2SARA41C	2SARA41CHZG	PNP	-120	-0.05	180 to 560	
BC817-16	BC817-16HZG	NPN	45	0.8	100 to 250	Driver
BC807-16	BC807-16HZG	PNP	-45	-0.8	100 to 250	
BC817-25	BC817-25HZG	NPN	45	0.8	160 to 400	
BC807-25	BC807-25HZG	PNP	-45	-0.8	160 to 400	
BC817-40	BC817-40HZG	NPN	45	0.8	250 to 600	
BC807-40	BC807-40HZG	PNP	-45	-0.8	250 to 600	
BCX19	BCX19HZG	NPN	45	0.5	100 to 600	
BCX17	BCX17HZG	PNP	-45	-0.5	100 to 600	
SSTA06	SSTA06HZG	NPN	80	0.5	100 or more	
SSTA56	SSTA56HZG	PNP	-80	-0.5	100 or more	
SST3904	SST3904HZG	NPN	40	0.2	100 to 300	Switching
SST3906	SST3906HZG	PNP	-40	-0.2	100 to 300	
SST4401	SST4401HZG	NPN	40	0.6	100 to 300	
SST4403	SST4403HZG	PNP	-40	-0.6	100 to 300	
SST2222A	SST2222AHZG	NPN	40	0.6	100 to 300	
SST2907A	SST2907AHZG	PNP	-60	-0.6	100 to 300	Darlington
SSTA28	—	NPN	80	0.3	10K or more	

*1 AEC-Q101 qualified

*2 Under development. Spec is subject to change.

Digital Transistors

PNP		NPN		V _{CC} (V _{CEO}) (V)	I _O (I _C) (A)	R1 (KΩ)	R2 (KΩ)	G _I (h _{FE})
P/N for General use	P/N for Automotive*1	P/N for General use	P/N for Automotive*1					
DTA123ECA	DTA123ECAHZG	DTC123ECA	DTC123ECAHZG	50	0.1	2.2	2.2	20 or more
DTA143ECA	DTA143ECAHZG	DTC143ECA	DTC143ECAHZG	50	0.1	4.7	4.7	30 or more
DTA114ECA	DTA114ECAHZG	DTC114ECA	DTC114ECAHZG	50	0.05	10	10	30 or more
DTA124ECA	DTA124ECAHZG	DTC124ECA	DTC124ECAHZG	50	0.03	22	22	56 or more
DTA144ECA	DTA144ECAHZG	DTC144ECA	DTC144ECAHZG	50	0.03	47	47	68 or more
DTA115ECA	DTA115ECAHZG	DTC115ECA	DTC115ECAHZG	50	0.02	100	100	82 or more
DTA113ZCA	DTA113ZCAHZG	DTC113ZCA	DTC113ZCAHZG	50	0.1	1	10	33 or more
DTA123YCA	DTA123YCAHZG	DTC123YCA	DTC123YCAHZG	50	0.1	2.2	10	33 or more
DTA123JCA	DTA123JCAHZG	DTC123JCA	DTC123JCAHZG	50	0.1	2.2	47	80 or more
DTA143XCA	DTA143XCAHZG	DTC143XCA	DTC143XCAHZG	50	0.1	4.7	10	30 or more
DTA143ZCA	DTA143ZCAHZG	DTC143ZCA	DTC143ZCAHZG	50	0.1	4.7	47	80 or more
DTA114YCA	DTA114YCAHZG	DTC114YCA	DTC114YCAHZG	50	0.07	10	47	68 or more
DTA124XCA	DTA124XCAHZG	DTC124XCA	DTC124XCAHZG	50	0.05	22	47	68 or more
DTA143TCA	DTA143TCAHZG	DTC143TCA	DTC143TCAHZG	50	0.1	4.7	—	100 to 600
DTA114TCA	DTA114TCAHZG	DTC114TCA	DTC114TCAHZG	50	0.1	10	—	100 to 600
DTA124TCA	DTA124TCAHZG	DTC124TCA	DTC124TCAHZG	50	0.1	22	—	100 to 600
DTA144VCA	DTA144VCAHZG	DTC144VCA	DTC144VCAHZG	50	0.03	47	10	33 or more
DTA144WCA	DTA144WCAHZG	DTC144WCA	DTC144WCAHZG	50	0.03	47	22	56 or more
DTA123TCA	DTA123TCAHZG	DTC123TCA	DTC123TCAHZG	50	0.1	2.2	—	100 to 600
DTA144TCA	DTA144TCAHZG	DTC144TCA	DTC144TCAHZG	50	0.1	47	—	100 to 600
DTA115TCA	DTA115TCAHZG	DTC115TCA	DTC115TCAHZG	50	0.1	100	—	100 to 600
DTB113EC	DTB113ECHZG	DTD113EC	DTD113ECHZG	50	0.5	1	1	33 or more
DTB123EC	DTB123ECHZG	DTD123EC	DTD123ECHZG	50	0.5	2.2	2.2	39 or more
DTB143EC	DTB143ECHZG	DTD143EC	DTD143ECHZG	50	0.5	4.7	4.7	47 or more
DTB114EC	DTB114ECHZG	DTD114EC	DTD114ECHZG	50	0.5	10	10	56 or more
DTB113ZC	DTB113ZCHZG	DTD113ZC	DTD113ZCHZG	50	0.5	1	10	56 or more
DTB123YC	DTB123YCHZG	DTD123YC	DTD123YCHZG	50	0.5	2.2	10	56 or more
DTB114GC	DTB114GCHZG	DTD114GC	DTD114GCHZG	50	0.5	—	10	56 or more
DTB123TC	DTB123TCHZG	DTD123TC	DTD123TCHZG	40	0.5	2.2	—	100 to 600

*1 AEC-Q101 qualified.

Schottky Barrier Diodes

P/N for General use	P/N for Automotive*1	V _{RM} (V)	I _F (mA)	V _F (mV)		I _R (μA)		Configuration
				Max	I _F (mA)	Max	V _R (V)	
BAT54HY	BAT54HYFH	30	200	800	100	2	25	
BAT54SHY	BAT54SHYFH	30	200	800	100	2	25	
BAT54CHY	BAT54CHYFH	30	200	800	100	2	25	
BAT54AHY	BAT54AHYFH	30	200	800	100	2	25	
BAS40HY	BAS40HYFH	40	120	1000	40	1	30	
BAS40-04HY	BAS40-04HYFH	40	120	1000	40	1	30	
BAS40-05HY	BAS40-05HYFH	40	120	1000	40	1	30	
BAS40-06HY	BAS40-06HYFH	40	120	1000	40	1	30	

*1 AEC-Q101 qualified

Switching Diodes

P/N for General use	P/N for Automotive*1	V _{RM} (V)	V _R (V)	I _F (mA)	V _F (V)		I _R (nA)		trr (ns)			Configuration
					Max	I _F (mA)	Max	V _R (V)	Max	I _R (mA)	I _F (mA)	
BAV70HY	BAV70HYFH	90	80	215	1.25	150	500	80	4	10	10	
BAW56HY	BAW56HYFH	100	80	215	1.25	150	100	80	4	10	10	
BAV99HY	BAV99HYFH	100	80	215	1.25	150	100	80	4	10	10	
BAS16HY	BAS16HYFH	100	80	215	1.25	150	100	80	4	10	10	
BAS21HY	BAS21HYFH	250	200	200	1.25	200	100	200	50	30	30	
BAS116HY	BAS116HYFH	100	80	215	1.25	150	5	75	3000	10	10	
BAV170HY	BAV170HYFH	90	80	215	1.25	150	5	75	3000	10	10	
BAW156HY	BAW156HYFH	100	80	215	1.25	150	5	75	3000	10	10	
BAV199HY	BAV199HYFH	100	80	215	1.25	150	5	75	3000	10	10	

*1 AEC-Q101 qualified

Zener Diodes

C Rank (5%)		V _Z (V)		B Rank (2%)		V _Z (V)		Power Dissipation (mW)	Configuration
P/N for General use	P/N for Automotive*1	Max	Min	P/N for general use	P/N for Automotive*1	Max	Min		
BZX84C2V4LY	BZX84C2V4LYFH	2.2	2.6	—	—	—	—	250	
BZX84C2V7LY	BZX84C2V7LYFH	2.5	2.9	—	—	—	—		
BZX84C3V0LY	BZX84C3V0LYFH	2.8	3.2	—	—	—	—		
BZX84C3V3LY	BZX84C3V3LYFH	3.1	3.5	—	—	—	—		
BZX84C3V6LY	BZX84C3V6LYFH	3.4	3.8	—	—	—	—		
BZX84C3V9LY	BZX84C3V9LYFH	3.7	4.1	—	—	—	—		
BZX84C4V3LY	BZX84C4V3LYFH	4.0	4.6	—	—	—	—		
BZX84C4V7LY	BZX84C4V7LYFH	4.4	5.0	—	—	—	—		
BZX84C5V1LY	BZX84C5V1LYFH	4.8	5.4	BZX84B5V1LY	BZX84B5V1LYFH	5.00	5.20		
BZX84C5V6LY	BZX84C5V6LYFH	5.2	6.0	BZX84B5V6LY	BZX84B5V6LYFH	5.49	5.71		
BZX84C6V2LY	BZX84C6V2LYFH	5.8	6.6	BZX84B6V2LY	BZX84B6V2LYFH	6.08	6.32		
BZX84C6V8LY	BZX84C6V8LYFH	6.4	7.2	BZX84B6V8LY	BZX84B6V8LYFH	6.66	6.94		
BZX84C7V5LY	BZX84C7V5LYFH	7.0	7.9	BZX84B7V5LY	BZX84B7V5LYFH	7.35	7.65		
BZX84C8V2LY	BZX84C8V2LYFH	7.7	8.7	BZX84B8V2LY	BZX84B8V2LYFH	8.04	8.36		
BZX84C9V1LY	BZX84C9V1LYFH	8.5	9.6	BZX84B9V1LY	BZX84B9V1LYFH	8.92	9.28		
BZX84C10VLY	BZX84C10VLYFH	9.4	10.6	BZX84B10VLY	BZX84B10VLYFH	9.80	10.20		
BZX84C11VLY	BZX84C11VLYFH	10.4	11.6	BZX84B11VLY	BZX84B11VLYFH	10.80	11.20		
BZX84C12VLY	BZX84C12VLYFH	11.4	12.7	BZX84B12VLY	BZX84B12VLYFH	11.80	12.20		
BZX84C13VLY	BZX84C13VLYFH	12.4	14.1	BZX84B13VLY	BZX84B13VLYFH	12.70	13.30		
BZX84C15VLY	BZX84C15VLYFH	13.8	15.6	BZX84B15VLY	BZX84B15VLYFH	14.70	15.30		
BZX84C16VLY	BZX84C16VLYFH	15.3	17.1	BZX84B16VLY	BZX84B16VLYFH	15.70	16.30		
BZX84C18VLY	BZX84C18VLYFH	16.8	19.1	BZX84B18VLY	BZX84B18VLYFH	17.60	18.40		
BZX84C20VLY	BZX84C20VLYFH	18.8	21.2	BZX84B20VLY	BZX84B20VLYFH	19.60	20.40		
BZX84C22VLY	BZX84C22VLYFH	20.8	23.3	BZX84B22VLY	BZX84B22VLYFH	21.60	22.40		
BZX84C24VLY	BZX84C24VLYFH	22.8	25.6	BZX84B24VLY	BZX84B24VLYFH	23.50	24.50		
BZX84C27VLY	BZX84C27VLYFH	25.1	28.9	BZX84B27VLY	BZX84B27VLYFH	26.50	27.50		
BZX84C30VLY	BZX84C30VLYFH	28.0	32.0	BZX84B30VLY	BZX84B30VLYFH	29.40	30.60		
BZX84C33VLY	BZX84C33VLYFH	31.0	35.0	BZX84B33VLY	BZX84B33VLYFH	32.30	33.70		
BZX84C36VLY	BZX84C36VLYFH	34.0	38.0	BZX84B36VLY	BZX84B36VLYFH	35.30	36.70		

*1 AEC-Q101 qualified



ESD Protection Diodes

P/N for General use	P/N for Automotive*1	P _{PP} (W) 10/1000μs	ESD (kV) IEC61000-4-2	V _{BR} (V)	V _{RWM} (V)	Capacitance Typ (pF)	Configuration
MMBZ5V6ALY	MMBZ5V6ALYFH	24	±30	5.32 to 5.88	3.0	230	
MMBZ6V2ALY	MMBZ6V2ALYFH	24	±30	5.89 to 6.51	3.0	180	
MMBZ6V8ALY	MMBZ6V8ALYFH	24	±30	6.46 to 7.14	4.5	165	
MMBZ9V1ALY	MMBZ9V1ALYFH	24	±30	8.65 to 9.56	6.0	120	
MMBZ10VALY	MMBZ10VALYFH	24	±30	9.50 to 10.50	6.5	105	
MMBZ12VALY	MMBZ12VALYFH	40	±30	11.40 to 12.60	8.5	85	
MMBZ15VALY	MMBZ15VALYFH	40	±30	14.25 to 15.75	12.0	75	
MMBZ16VALY	MMBZ16VALYFH	40	±30	15.20 to 16.80	13.0	70	
MMBZ18VALY	MMBZ18VALYFH	40	±30	17.10 to 18.90	14.5	60	
MMBZ20VALY	MMBZ20VALYFH	40	±30	19.00 to 21.00	17.0	55	
MMBZ24VALY	MMBZ24VALYFH	40	±30	22.80 to 25.20	20.0	46	
MMBZ27VALY	MMBZ27VALYFH	40	±30	25.65 to 28.35	22.0	42	
MMBZ30VALY	MMBZ30VALYFH	40	±30	28.50 to 31.50	24.0	38	
MMBZ33VALY	MMBZ33VALYFH	40	±30	31.35 to 34.65	26.0	34	
MMBZ36VALY	MMBZ36VALYFH	40	±30	34.2 to 37.8	28.0	32	
MMBZ27VCLY	MMBZ27VCLYFH	40	±30	25.65 to 28.35	22.0	—	
RES1CANY*3	RES1CANYFH	350*2	±30	26.20 to 32.00	24.0	30 (Max)	

P/N for General use	P/N for Automotive*1	P _{PP} (W) 8/20μs	ESD (kV) IEC61000-4-2	V _{BR} (V)	V _{RWM} (V)	Capacitance Typ (pF)	Configuration
ESD16VHY	ESD16VHYFH	100	±30	15.96 to 17.64	12	13	
ESD18VHY	ESD18VHYFH	100	±30	17.86 to 19.74	16	12	
ESD27VHY	ESD27VHYFH	100	±30	26.41 to 29.19	24	8	

*1 AEC-Q101 qualified

*2 P_{PP}(W) 8/20μs

*3 Developing

<Part No. Explanation>

Transistors

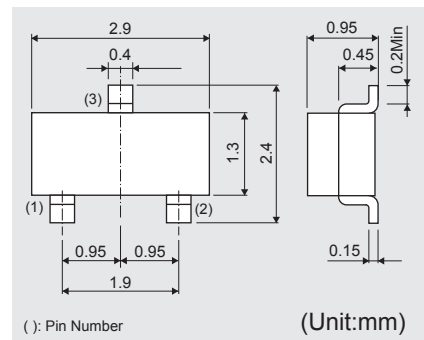
• RK7002BM (HZG) T116
P/N *1 Taping Code
*1 Additional code "HZG" is given after P/N for Automotive grade.

Diodes

• BAV99HY (FH) T116
P/N *2 Taping Code
*2 Additional code "FH" is given after P/N for Automotive grade.

Code	Packaging Styles	The material of reel	Direction	Basic ordering unit (pcs)
T116	Embossed tape	polystyrene	One terminal on sprocket hole side	3,000
T316	Embossed tape	Special carbon paints are coated both sides of polystyrene	One terminal on sprocket hole side	3,000

<Dimensions>



The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request. Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of such information, ROHM shall bear no responsibility for such damage. The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM and other parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the use of such technical information. If you intend to export or ship overseas any Product or technology specified herein that may be controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to obtain a license or permit under the Law.

The contents specified in this document is correct as of July 1st, 2018.

ROHM Sales Offices

Contact us for further information about the products.

Santa Clara	+1-408-720-1900	Nuremberg	+49-911-810452-26	Shanghai	+86-21-6072-8612	Kyoto	+81-75-365-1077
Atlanta	+1-770-754-5972	France	+33 (0) 1 40 60 87 30	Shenzhen	+86-755-8307-3008	Yokohama	+81-45-476-2121
Boston	+1-781-565-1138	United Kingdom	+44-1-908-272400	Hong Kong	+852-2740-6262		
Chicago	+1-847-368-1006	Finland	+358-400-726 124	Taiwan	+886-2-2500-6956		
Detroit	+1-248-348-9920	Spain	+34-9375-24320	Singapore	+65-6436-5100		
San Diego	+1-858-625-3600	Hungary	+36-1-950-5859	Philippines	+63-2-8807-6872		
Mexico	+52-33-3123-2001	Italy	+39-039-5783432	Thailand	+66-2-254-4890		
Germany	+49-2154-921-0	Seoul	+82-2-8182-700	Malaysia	+60-3-7931-8155		
Stuttgart	+49-711-7272370	Beijing	+86-10-8525-2483	India	+91-80-4125-0811		

Catalog No.60P7123E-C 07.2020 PDF © 2020 ROHM Co., Ltd.

ROHM Co., Ltd.

21 Saiin Mizosaki-cho, Ukyo-ku,
Kyoto 615-8585 Japan

TEL : +81-75-311-2121 FAX : +81-75-315-0172

www.rohm.com

ROHM
SEMICONDUCTOR

R1109A