



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMB3EZ6.2  
THRU  
SMB3EZ200

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON ZENER DIODES

VOLTAGE RANGE - 6.2 to 200 Volts

POWER - 3.0 Watts

FEATURES

- \* Voltage Range:6.2V to 200V
- \* Build-in strain relief
- \* Glass passivated junction
- \* Low inductance
- \* Excellent clamping capability
- \* Low profile package

MECHANICAL DATA

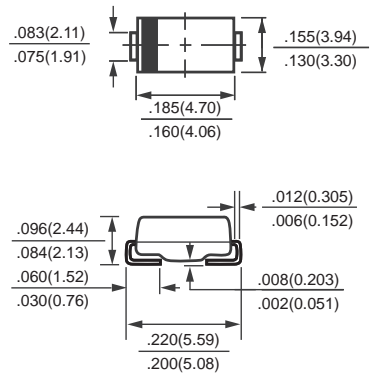
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As Marked
- \* Mounting position: Any
- \* Weight: 0.093 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



SMB(DO-214AA)



Dimensions in inches(millimeters)

	SYMBOL	VALUE	UNITS
Zener Current see Table "Characteristics"			
Power Dissipation (Notes 1) at Tamb=25°C	Ptot	3	W
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Notes 2)	IFSM	15	Amps
Maximum Forward Voltage at IF=500mA	VF	1.2	Volts
Operating and Storage Temperature	TJ,Tstg	-55 to + 150	°C

Notes: 1. Mounted on 5.0mm<sup>2</sup> (.013mm thick) land areas.

2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

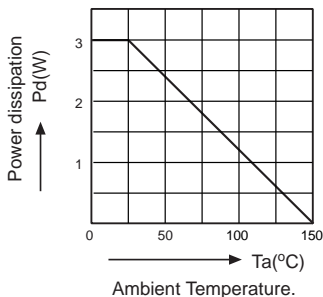


Fig. 1 - Changes in the power dissipation due to the ambient temperature.

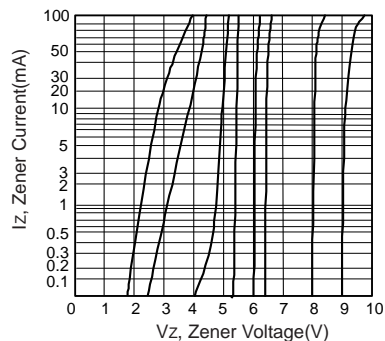


Fig. 2 - VZ=3.9 Thru 10 Volts

# RATING AND CHARACTERISTIC CURVES (SMB3EZ6.2 THRU SMB3EZ200)

TYPE	Nominal Zener Voltage $V_Z@I_{ZT}$	Zener Test Current $I_{ZT}$ mA	Maximum Zener Impedance		$I_{ZK}$ mA	Maximum Reverse Leakage Current		Maximum Regulator Current $I_{ZM}$ mA
			$Z_{ZT}@I_{ZT}$ Ohms	$Z_{ZK}@I_{ZK}$ Ohms		$I_R$ uA	@ $V_R$ Volts	
SMB3EZ6.2	6.2	121	1.5	700	1.00	5.0	3.0	435
SMB3EZ6.8	6.8	110	2.0	700	1.00	50.0	4.0	393
SMB3EZ7.5	7.5	100	2.0	700	0.50	50.0	5.0	360
SMB3EZ8.2	8.2	91	2.3	700	0.50	50.0	6.0	330
SMB3EZ9.1	9.1	82	2.5	700	0.50	50.0	7.0	297
SMB3EZ10	10	75	3.5	700	0.25	50.0	7.6	270
SMB3EZ11	11	68	4.0	700	0.25	1.0	8.4	225
SMB3EZ12	12	63	4.5	700	0.25	1.0	9.1	246
SMB3EZ13	13	58	4.5	700	0.25	0.5	9.9	208
SMB3EZ15	15	50	5.5	700	0.25	0.5	11.4	180
SMB3EZ16	16	47	5.5	700	0.25	0.5	12.2	169
SMB3EZ18	18	42	6.0	750	0.25	0.5	13.7	159
SMB3EZ20	20	37	7.0	750	0.25	0.5	15.2	135
SMB3EZ22	22	34	8.0	750	0.25	0.5	16.7	123
SMB3EZ24	24	31	9.0	750	0.25	0.5	18.2	112
SMB3EZ27	27	28	10	750	0.25	0.5	20.6	100
SMB3EZ30	30	25	16	1000	0.25	0.5	22.5	90
SMB3EZ33	33	23	20	1000	0.25	0.5	25.1	82
SMB3EZ36	36	21	22	1000	0.25	0.5	27.4	75
SMB3EZ39	39	19	28	1000	0.25	0.5	29.7	69
SMB3EZ43	43	17	33	1500	0.25	0.5	32.7	63
SMB3EZ47	47	16	38	1500	0.25	0.5	35.6	57
SMB3EZ51	51	15	45	1500	0.25	0.5	38.8	53
SMB3EZ56	56	13	50	2000	0.25	0.5	42.6	48
SMB3EZ62	62	12	55	2000	0.25	0.5	47.1	44
SMB3EZ68	68	11	70	2000	0.25	0.5	51.7	40
SMB3EZ75	75	10	85	2000	0.25	0.5	56.0	36
SMB3EZ82	82	9.1	95	3000	0.25	0.5	62.2	33
SMB3EZ91	91	8.2	115	3000	0.25	0.5	69.2	30
SMB3EZ100	100	7.5	160	3000	0.25	0.5	76.0	27
SMB3EZ110	110	6.8	225	4000	0.25	0.5	83.6	25
SMB3EZ120	120	6.3	300	4500	0.25	0.5	91.2	22
SMB3EZ130	130	5.8	375	5000	0.25	0.5	98.8	21
SMB3EZ150	150	5.0	550	6000	0.25	0.5	114.0	18
SMB3EZ160	160	4.7	625	6500	0.25	0.5	121.6	17
SMB3EZ180	180	4.2	700	7000	0.25	0.5	136.8	15
SMB3EZ200	200	3.7	875	8000	0.25	0.5	152.0	13

NOTE: Standard Zener Voltage Tolerance  $\pm 5\%$

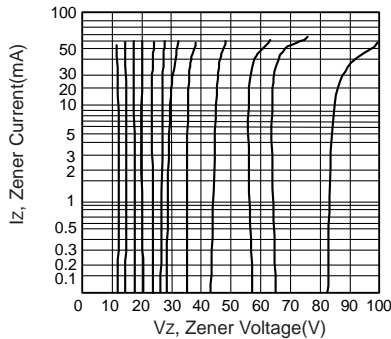


Fig. 3 -  $V_Z=12$  Thru 82 Volts

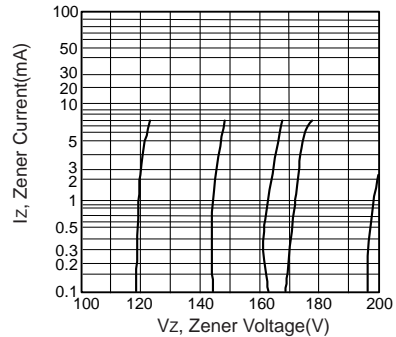


Fig. 4 -  $V_Z=100$  Thru 200 Volts

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