



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMA2EZ6.2  
THRU  
SMA2EZ330

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON ZENER DIODES  
VOLTAGE RANGE - 6.2 to 330 Volts  
POWER - 2.0 Watts

FEATURES

- \* Voltage Range: 6.2V to 330V
- \* Build-in strain relief
- \* Glass passivated junction
- \* Low inductance
- \* Excellent clamping capability
- \* Low profile package

MECHANICAL DATA

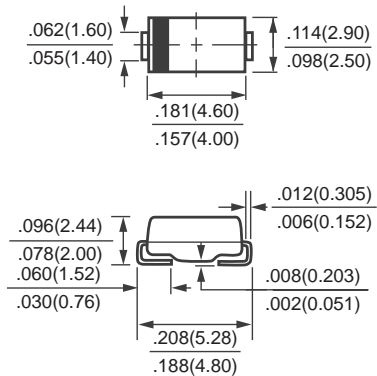
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

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%.



SMA ( DO-214AC )



Dimensions in inches (millimeters)

	SYMBOL	VALUE	UNITS
Zener Current see Table "Characteristics"			
Power Dissipation (Notes 1) at Tamb=25°C	Ptot	2	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.

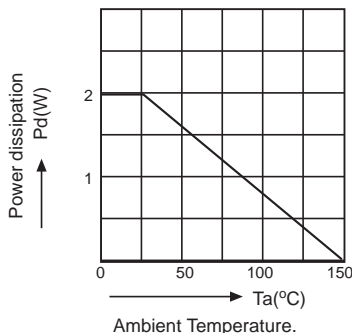


Fig. 1 - changes in the power dissipation due to the ambient temperature.

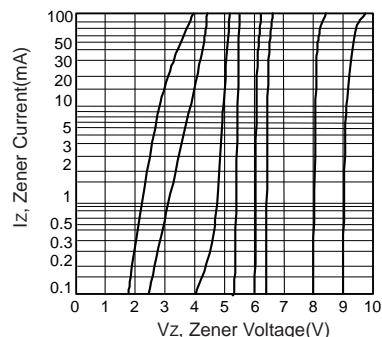


Fig. 2 - Vz=3.9 Thru 10 Volts

# RATING AND CHARACTERISTIC CURVES (SMA2EZ6.2 THRU SMA2EZ330)

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	
SMA2EZ6.2	6.2	80.5	1.5	700	1.00	50.0	3.0	292.0
SMA2EZ6.8	6.8	73.5	2.0	700	1.00	50.0	4.0	266.0
SMA2EZ7.5	7.5	66.5	2.0	700	0.50	50.0	5.0	242.0
SMA2EZ8.2	8.2	61.0	2.3	700	0.50	50.0	6.0	220.0
SMA2EZ9.1	9.1	55.0	2.5	700	0.50	50.0	7.0	200.0
SMA2EZ10	10	50.0	3.5	700	0.25	50.0	7.6	182.0
SMA2EZ11	11	45.5	4.0	700	0.25	50.0	8.4	166.0
SMA2EZ12	12	41.5	4.5	700	0.25	1.0	9.1	152.0
SMA2EZ13	13	38.5	5.0	700	0.25	0.5	9.9	138.0
SMA2EZ15	15	33.4	7.0	700	0.25	0.5	11.4	122.0
SMA2EZ16	16	31.2	8.0	700	0.25	0.5	12.2	114.0
SMA2EZ18	18	27.8	10	750	0.25	0.5	13.7	100.0
SMA2EZ20	20	25.0	11	750	0.25	0.5	15.2	90.0
SMA2EZ22	22	22.8	12	750	0.25	0.5	16.7	82.0
SMA2EZ24	24	20.8	13	750	0.25	0.5	18.2	76.0
SMA2EZ27	27	18.5	18	750	0.25	0.5	20.6	68.0
SMA2EZ30	30	16.6	20	1000	0.25	0.5	22.5	60.0
SMA2EZ33	33	15.1	23	1000	0.25	0.5	25.1	55.0
SMA2EZ36	36	13.9	25	1000	0.25	0.5	27.4	50.0
SMA2EZ39	39	12.8	30	1000	0.25	0.5	29.7	47.0
SMA2EZ43	43	11.6	35	1500	0.25	0.5	32.7	43.0
SMA2EZ47	47	10.6	40	1500	0.25	0.5	35.8	39.0
SMA2EZ51	51	9.8	48	1500	0.25	0.5	38.8	36.0
SMA2EZ56	56	9.0	55	2000	0.25	0.5	42.6	32.0
SMA2EZ62	62	8.1	60	2000	0.25	0.5	47.1	29.0
SMA2EZ68	68	7.4	75	2000	0.25	0.5	51.7	27.0
SMA2EZ75	75	6.7	90	2000	0.25	0.5	56.0	24.0
SMA2EZ82	82	6.1	100	3000	0.25	0.5	62.2	22.0
SMA2EZ91	91	5.5	125	3000	0.25	0.5	69.2	20.0
SMA2EZ100	100	5.0	175	3000	0.25	0.5	76.0	18.0
SMA2EZ110	110	4.5	250	4000	0.25	0.5	83.6	17.0
SMA2EZ120	120	4.2	325	4500	0.25	0.5	91.2	15.0
SMA2EZ130	130	3.8	400	5000	0.25	0.5	98.8	14.0
SMA2EZ140	140	3.6	500	5500	0.25	0.5	106.4	13.0
SMA2EZ150	150	3.3	575	6000	0.25	0.5	114.0	12.0
SMA2EZ160	160	3.1	650	6500	0.25	0.5	121.6	11.0
SMA2EZ170	170	2.9	675	7000	0.25	0.5	130.4	11.0
SMA2EZ180	180	2.8	725	7000	0.25	0.5	136.8	10.0
SMA2EZ190	190	2.6	825	8000	0.25	0.5	144.8	10.0
SMA2EZ200	200	2.5	1900	9990	0.25	0.5	152.0	9.0
SMA2EZ220	220	2.0	2000	8500	0.25	0.5	167.0	8.0
SMA2EZ270	270	1.6	2200	8500	0.25	0.5	205.0	6.7
SMA2EZ300	300	1.5	2200	9000	0.25	0.5	228.0	5.9
SMA2EZ330	330	1.4	2300	9000	0.25	0.5	250.0	5.4

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

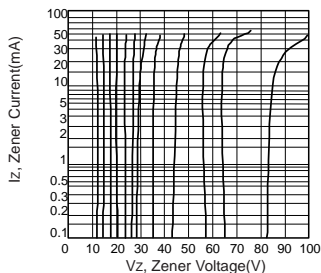


Fig. 3 -  $V_Z=12$  Thru 82 Volts

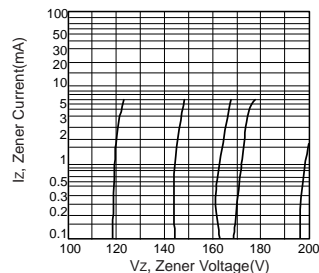


Fig. 4 -  $V_Z=100$  Thru 200 Volts

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