



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SMA1EZ6.2
THRU
SMA1EZ300**

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT ZENER DIODES

VOLTAGE RANGE - 6.2 to 300 Volts

POWER - 1.0 Watts

FEATURES

- * Voltage Range: 6.2V to 300V
- * Low leakage
- * Low inductance
- * High peak reverse power dissipation
- * Glass passivated junction
- * Build-in strain relief

MECHANICAL DATA

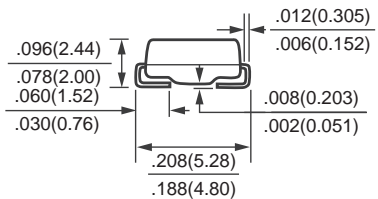
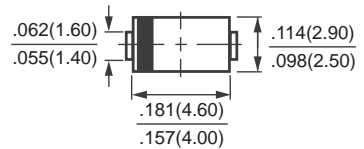
- * Case: Molded Plastic
- * Terminals: Solder plated, solderable per MIL-STD-705, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram Approx.

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 and (millimeters)

	SYMBOL	VALUE	UNITS
Maximum Power Dissipation @TL=50°C (Note 1)	Ptot	1.0	W
Peak pulse current with a 10/1000µs waveform	VF	1.2	Volts
Maximum Thermal Resistance Junction to Ambient Air	RθJA	170	°C/W
Junction Temperature Range	TJ	-55 to +175	°C
Storage Temperature Range	TSTG	-55 to +175	°C

NOTES : 1. TL=Lead temperature at 3/8" (9.5mm) from body.

2. Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

Fig. 1 - POWER TEMPERATURE DERATING CURVE

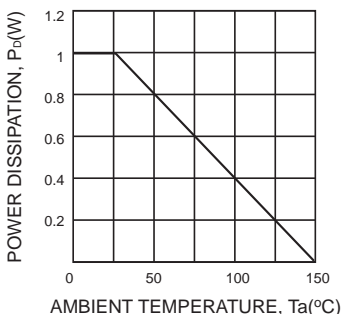


Fig. 2 - TYPICAL THERMAL RESISTANCE VERSUS LEAD LENGTH

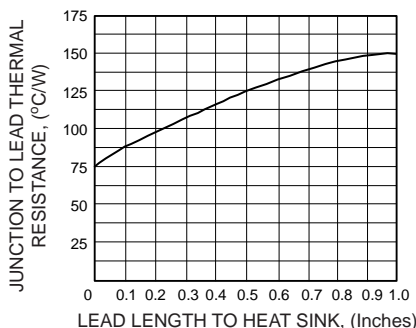
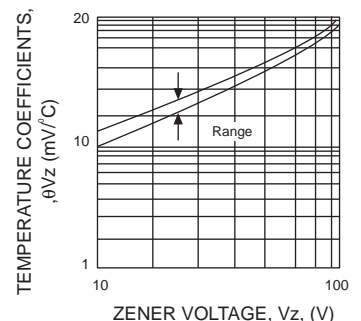


Fig. 3 - TEMPERATURE COEFFICIENTS v.s. ZENER VOLTAGE



RATING AND CHARACTERISTIC CURVES (SMA1EZ6.2 THRU SMA1EZ300)

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 µA	@V _R Volts	
SMA1EZ6.2	6.2	41.0	2.0	700	1.00	10.0	3.0	730
SMA1EZ6.8	6.8	37.0	3.5	700	1.00	5.0	4.0	660
SMA1EZ7.5	7.5	34.0	4.0	700	0.50	5.0	5.0	605
SMA1EZ8.2	8.2	31.0	4.5	700	0.50	5.0	6.0	550
SMA1EZ9.1	9.1	28.0	5.0	700	0.50	0.5	7.0	500
SMA1EZ10	10.0	25.0	7.0	700	0.25	0.5	7.6	454
SMA1EZ11	11.0	23.0	8.0	700	0.25	0.1	8.4	414
SMA1EZ12	12.0	21.0	9.0	700	0.25	0.1	9.1	380
SMA1EZ13	13.0	19.0	10	700	0.25	0.1	9.9	344
SMA1EZ15	15.0	17.0	14	700	0.25	0.1	11.4	305
SMA1EZ16	16.0	15.5	16	700	0.25	0.1	12.2	285
SMA1EZ18	18.0	14.0	20	750	0.25	0.1	13.7	250
SMA1EZ20	20.0	12.5	22	750	0.25	0.1	15.2	225
SMA1EZ22	22.0	11.5	23	750	0.25	0.1	16.7	205
SMA1EZ24	24.0	10.5	25	750	0.25	0.1	18.2	190
SMA1EZ27	27.0	9.5	35	750	0.25	0.1	20.6	170
SMA1EZ30	30.0	8.5	40	1000	0.25	0.1	22.8	150
SMA1EZ33	33.0	7.5	45	1000	0.25	0.1	25.1	135
SMA1EZ36	36.0	7.0	50	1000	0.25	0.1	27.4	125
SMA1EZ39	39.0	6.5	60	1000	0.25	0.1	29.7	115
SMA1EZ43	43.0	6.0	70	1500	0.25	0.1	32.7	110
SMA1EZ47	47.0	5.5	80	1500	0.25	0.1	35.8	95
SMA1EZ51	51.0	5.0	95	1500	0.25	0.1	38.8	90
SMA1EZ56	56.0	4.5	110	2000	0.25	0.1	42.6	80
SMA1EZ62	62.0	4.0	125	2000	0.25	0.1	47.1	70
SMA1EZ68	68.0	3.7	150	2000	0.25	0.1	51.7	65
SMA1EZ75	75.0	3.3	175	2000	0.25	0.1	56.0	60
SMA1EZ82	82.0	3.0	200	3000	0.25	0.1	62.2	55
SMA1EZ91	91.0	2.8	250	3000	0.25	0.1	69.2	50
SMA1EZ100	100.0	2.5	350	3000	0.25	0.1	76.0	45
SMA1EZ110	110.0	2.3	450	4000	0.25	0.1	83.6	40
SMA1EZ120	120.0	2.0	550	4500	0.25	0.1	91.2	37
SMA1EZ130	130.0	1.9	700	5000	0.25	0.1	98.8	34
SMA1EZ150	150.0	1.7	1000	6000	0.25	0.1	114.0	30
SMA1EZ160	160.0	1.6	1100	6500	0.25	0.1	121.6	28
SMA1EZ180	180.0	1.4	1200	7000	0.25	0.1	136.8	25
SMA1EZ200	200.0	1.2	1900	9990	0.25	0.1	152.0	22
SMA1EZ220	220.0	1.0	1600	8000	0.25	0.1	167.2	20
SMA1EZ240	240.0	0.9	1800	8500	0.25	0.1	182.4	19
SMA1EZ250	250.0	0.9	2000	9000	0.25	0.1	190.0	18
SMA1EZ270	270.0	0.8	2100	9000	0.25	0.1	205.0	16
SMA1EZ300	300.0	0.8	2300	9500	0.25	0.1	228.0	15

NOTE: Standard Zener Voltage Tolerance ± 5%

Fig. 4 - MAXIMUM SURGE POWER

