



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMA5920B
THRU
SMA5956B

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SILICON ZENER DIODES
VOLTAGE RANGE - 6.2 to 200 Volts
POWER - 1.5 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

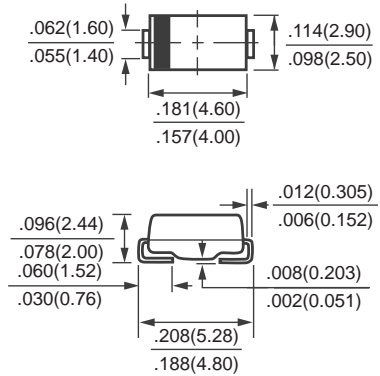
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As Marked
- * Mounting position: Any
- * Weight: 0.064 gram

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	1.5	W
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Notes 2)	IFSM	10	Amps
Maximum Forward Voltage at IF=200mA	VF	1.5	Volts
Operating and Storage Temperature	TJ, Tstg	-55 to + 150	°C

Notes: 1. Mounted on 5.0mm² (.013mm thick) land areas.

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

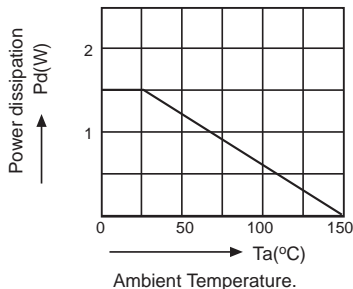


Fig. 1 - changes in the power dissipation due to the ambient temperature.

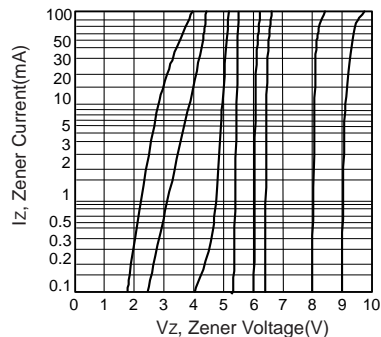


Fig. 2 - Vz=3.9 Thru 10 Volts

RATING AND CHARACTERISTIC CURVES (SMA5920B THRU SMA5956B)

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 μ A	@ V_R Volts	
SMA5920B	6.2	60.5	2.0	200	1.00	2.5	4.0	240.0
SMA5921B	6.8	55.1	2.5	200	1.00	2.5	5.2	220.0
SMA5922B	7.5	50.0	3.0	400	0.50	2.5	6.0	200.0
SMA5923B	8.2	45.7	3.5	400	0.50	2.5	6.5	182.0
SMA5924B	9.1	41.2	4.0	500	0.50	2.5	7.0	164.0
SMA5925B	10.0	37.5	4.5	500	0.25	2.5	8.0	150.0
SMA5926B	11.0	34.1	5.5	550	0.25	0.5	8.4	136.0
SMA5927B	12.0	31.2	6.5	550	0.25	0.5	9.1	125.0
SMA5928B	13.0	28.8	7.0	550	0.25	0.5	9.9	115.0
SMA5929B	15.0	25.0	9.0	600	0.25	0.5	11.4	100.0
SMA5930B	16.0	23.4	10.0	600	0.25	0.5	12.2	93.0
SMA5931B	18.0	20.8	12.0	650	0.25	0.5	13.7	83.0
SMA5932B	20.0	18.7	14.0	650	0.25	0.5	15.2	75.0
SMA5933B	22.0	17.0	17.5	650	0.25	0.5	16.7	68.0
SMA5934B	24.0	15.6	19.0	700	0.25	0.5	18.2	62.0
SMA5935B	27.0	13.9	23.0	700	0.25	0.5	20.6	55.0
SMA5936B	30.0	12.5	26.0	750	0.25	0.5	22.8	50.0
SMA5937B	33.0	11.4	33.0	800	0.25	0.5	25.1	45.0
SMA5938B	36.0	10.4	38.0	850	0.25	0.5	27.4	41.0
SMA5939B	39.0	9.6	45.0	900	0.25	0.5	29.7	38.0
SMA5940B	43.0	8.7	53.0	950	0.25	0.5	32.7	34.0
SMA5941B	47.0	8.0	67.0	1000	0.25	0.5	35.8	31.0
SMA5942B	51.0	7.3	70.0	1100	0.25	0.5	38.8	29.0
SMA5943B	56.0	6.7	86.0	1300	0.25	0.5	42.6	26.0
SMA5944B	62.0	6.0	100.0	1500	0.25	0.5	47.1	24.0
SMA5945B	68.0	5.5	120.0	1700	0.25	0.5	51.7	22.0
SMA5946B	75.0	5.0	140.0	2000	0.25	0.5	56.0	20.0
SMA5947B	82.0	4.6	160.0	2500	0.25	0.5	62.2	18.0
SMA5948B	91.0	4.1	200.0	3000	0.25	0.5	69.2	16.0
SMA5949B	100.0	3.7	250.0	3100	0.25	0.5	76.0	15.0
SMA5950B	110.0	3.4	300.0	4000	0.25	0.5	83.6	13.0
SMA5951B	120.0	3.1	380.0	4500	0.25	0.5	91.2	12.0
SMA5952B	130.0	2.9	450.0	5000	0.25	0.5	98.8	11.0
SMA5953B	150.0	2.5	600.0	6000	0.25	0.5	114.0	10.0
SMA5954B	160.0	2.3	700.0	6500	0.25	0.5	121.6	9.0
SMA5955B	180.0	2.1	900.0	7000	0.25	0.5	136.8	8.0
SMA5956B	200.0	1.9	1900.0	8000	0.25	0.5	152.0	7.0

NOTE: Standard Zener Voltage Tolerance \pm 5%

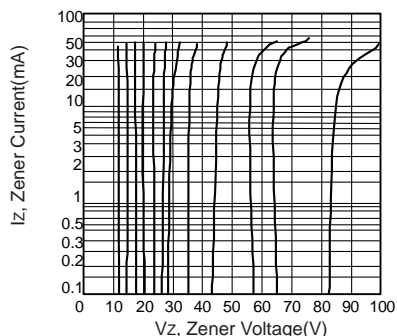


Fig. 3 - $V_Z=12$ Thru 82 Volts

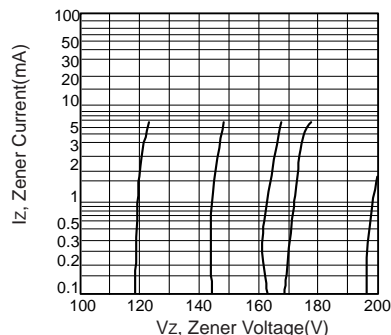


Fig. 4 - $V_Z=100$ Thru 200 Volts

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