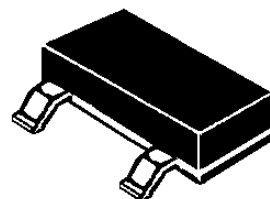


SMZ3.3 thru SMZ200

ZENERarray™ Series



DESCRIPTION

This data sheet defines a series of dual zeners with a common anode. It may be used for voltage regulation for two different lines to ground or as a bidirectional voltage regulator between two lines. This product also provides ESD protection per IEC 1000-4-2 and EFT protection per IEC 1000-4-4.

FEATURES

- Provides common-anode-dual zeners 3.3 to 200 volts
- Provides unidirectional zener-regulation for 2 lines to ground for pins 1 to 3 and pins 2 to 3 or bidirectional regulation between pins 1 and 2
- ESD non sensitive Human Body Model (HBM) >15,999 volts per MIL-STD-750 Method 1020
- SOT-23 Packaging

MAXIMUM RATINGS

- Operating Temperatures: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- 250 mW maximum combined power (both legs)
- Thermal resistance $R_{\theta JL} = 400^{\circ}\text{C/W}$
- Derate 250 mW power linearly from 50°C to zero at 150°C

PACKAGING

- Tape & Reel EIA Standard 481
- 7 inch reel 5,000 pieces
- 13 inch reel 10,000 pieces

MECHANICAL

- Molded SOT-23 Surface Mount
- Weight: .014 grams (approximate)
- Body Marked with device number

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless otherwise specified

PART NUMBER	DEVICE MARKING	NOMINAL ZENER VOLTAGE	ZENER TEST CURRENT	MAX. ZENER IMPEDANCE @ I _{ZT}	MAX. DC ZENER CURRENT	MAX REVERSE LEAKAGE CURRENT I _R @ V _R		MAX TEMP COEFFICIENT	TYPICAL CAPACITANCE C @ ZERO VOLTS
		V _Z	I _{ZT}		I _{ZM}			ΔV _Z	
		NOTE 1		Z _{ZT}	NOTE 2	I _R	V _R		
		VOLTS	mA	OHMS	mA	μA	VOLTS	%/°C	pF
SMZ3.3	3Z3	3.3	10.0	50	35	25	1.0	-0.070	200
SMZ5.1	5Z1	5.1	10.0	30	22.5	5	2.0	±0.030	150
SMZ12	Z12	12	1.0	100	9.6	1	9.1	+0.077	65
SMZ15	Z15	15	1.0	120	7.5	1	11.4	+0.082	55
SMZ24	Z24	24	1.0	130	4.8	1	18.2	+0.088	34
SMZ33	Z33	33	1.0	140	3.5	1	25.1	+0.092	24
SMZ36	Z36	36	1.0	150	3.2	1	27.4	+0.093	22
SMZ47	Z47	47	1.0	200	2.4	1	35.8	+0.095	15
SMZ82	Z82	82	1.0	400	1.4	1	62.2	+0.098	10
SMZ100	10Z	100	1.0	600	1.1	1	76.0	+0.11	9
SMZ200	20Z	200	0.5	2000	0.55	1	152.0	+0.11	8

NOTE 1: Nominal zener voltage has a plus or minus 5% tolerance at I_{ZT} (1 ms pulse).

NOTE 2: Each leg for simultaneous operation.

