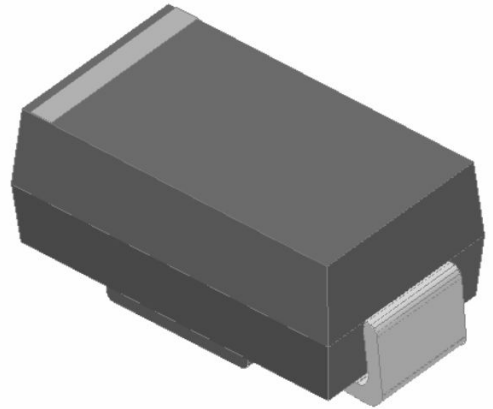


SMA2Z SERIES

SILICON PLANAR POWER ZENER DIODES

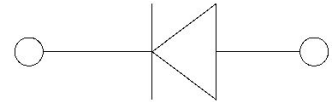
■ Features

- Silicon Planar Power Zener Diodes for use in stabilizing and clipping circuits with high power rating. Standard Zener voltage tolerance is 10%. Other tolerances available upon request.



Mechanical Data

- ✧ Case: Molded plastic over passivated junction
- ✧ Terminals: Pure tin plated lead free, solderable per MIL-STD-750, Method 2025
- ✧ Polarity: Color Band denotes positive end (cathode)
- ✧ Standard packaging: 12mm tape (EIA-481)
- ✧ Weight: 0.002 ounces, 0.04 gram



Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation (Note A) Derate above 75 °C	P_D	2 24	Watts mW/°C
Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) (Note B)	I_{FSM}	15	Amps
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

NOTES:

A. Mounted on 5.0mm² (.013mm thick) land areas.

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



SMA2Z SERIES

Electrical Characteristics @T_A = 25°C unless otherwise noted

Type No. (Note 1.)	Nominal Zener Voltage V _Z @ I _{ZT} volts (Note 2.)	Test current I _{ZT} mA	Maximum Zener Impedance (Note 3.)			Leakage Current		Maximum Zener Current I _{ZM} Madc	Surge Current @ T _A = 25 °C I _{RS} - mA (Note 4.)
			Z _{KT} @ I _{ZT} Ohms	Z _{KK} @ I _{ZK} Ohms	I _{ZK} mA	I _R µA Max @	V _R Volts		
SMA2Z11A	11.0	45.5	4.0	700	0.25	1.0	8.4	166	1.82
SMA2Z12A	12.0	41.5	4.5	700	0.25	1.0	9.1	152	1.66
SMA2Z13A	13.0	38.5	5.0	700	0.25	0.5	9.9	138	1.54
SMA2Z14A	14.0	35.7	5.5	700	0.25	0.5	10.6	130	1.43
SMA2Z15A	15.0	33.4	7.0	700	0.25	0.5	11.4	122	1.33
SMA2Z16A	16.0	31.2	8.0	700	0.25	0.5	12.2	114	1.25
SMA2Z17A	17.0	29.4	9.0	750	0.25	0.5	13.0	107	1.18
SMA2Z18A	18.0	27.8	10.0	750	0.25	0.5	13.7	100	1.11
SMA2Z19A	19.0	26.3	11.0	750	0.25	0.5	14.4	95	1.05
SMA2Z20A	20.0	25.0	11.0	750	0.25	0.5	15.2	90	1.00
SMA2Z22A	22.0	22.8	12.0	750	0.25	0.5	16.7	82	0.91
SMA2Z24A	24.0	20.8	13.0	750	0.25	0.5	18.2	76	0.83
SMA2Z27A	27.0	18.5	18.0	750	0.25	0.5	20.6	68	0.74
SMA2Z30A	30.0	16.6	20.0	1000	0.25	0.5	22.5	60	0.67
SMA2Z33A	33.0	15.1	23.0	1000	0.25	0.5	25.1	55	0.61
SMA2Z36A	36.0	13.9	25.0	1000	0.25	0.5	27.4	50	0.56
SMA2Z39A	39.0	12.8	30.0	1000	0.25	0.5	29.7	47	0.51
SMA2Z43A	43.0	11.6	35.0	1500	0.25	0.5	32.7	43	0.45
SMA2Z47A	47.0	10.6	40.0	1500	0.25	0.5	35.8	39	0.42
SMA2Z51A	51.0	9.8	48.0	1500	0.25	0.5	38.8	36	0.39
SMA2Z56A	56.0	9.0	55.0	2000	0.25	0.5	42.6	32	0.36
SMA2Z62A	62.0	8.1	60.0	2000	0.25	0.5	47.1	29	0.32
SMA2Z68A	68.0	7.4	75.0	2000	0.25	0.5	51.7	27	0.29
SMA2Z75A	75.0	6.7	90.0	2000	0.25	0.5	56.0	24	0.27
SMA2Z82A	82.0	6.1	100.0	3000	0.25	0.5	62.2	22	0.24
SMA2Z91A	91.0	5.5	125.0	3000	0.25	0.5	69.2	20	0.22
SMA2Z100A	100.0	5.0	175.0	3000	0.25	0.5	76.0	18	0.20
SMA2Z110A	110.0	4.5	250.0	4000	0.25	0.5	83.6	17	0.18
SMA2Z120A	120.0	4.2	325.0	4500	0.25	0.5	91.2	15	0.16
SMA2Z130A	130.0	3.8	400.0	5000	0.25	0.5	98.8	14	0.15
SMA2Z140A	140.0	3.6	500.0	5500	0.25	0.5	106.4	13	0.14
SMA2Z150A	150.0	3.3	575.0	6000	0.25	0.5	114.0	12	0.13
SMA2Z160A	160.0	3.1	650.0	6500	0.25	0.5	121.6	11	0.12
SMA2Z170A	170.0	2.9	675.0	7000	0.25	0.5	130.4	11	0.12
SMA2Z180A	180.0	2.8	725.0	7000	0.25	0.5	136.8	10	0.11
SMA2Z190A	190.0	2.6	825.0	8000	0.25	0.5	144.8	10	0.10
SMA2Z200A	200.0	2.5	900.0	8000	0.25	0.5	152.0	9	0.10



SMA2Z SERIES

RATINGS AND CHARACTERISTIC CURVES

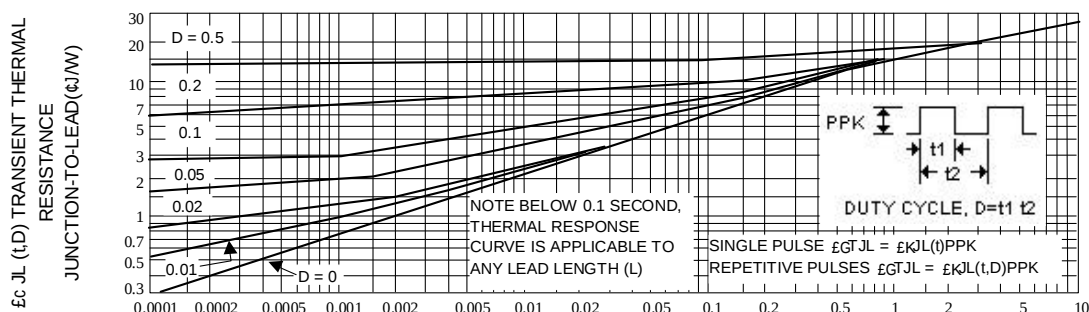


Fig. 2-TYPICAL THERMAL RESPONSE L,

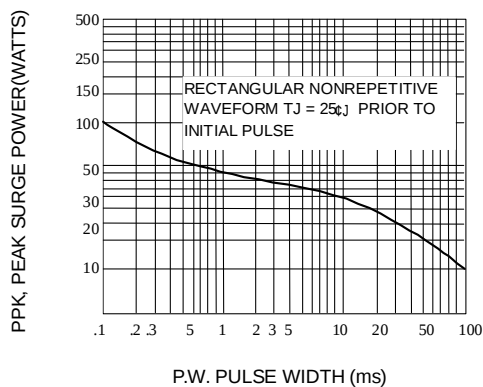


Fig. 3-MAXIMUM SURGE POWER

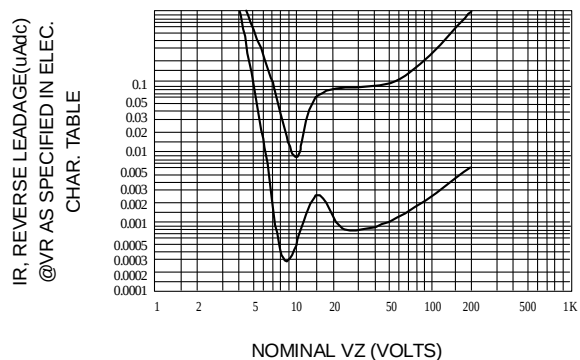


Fig. 4-TYPICAL REVERSE LEAKAGE

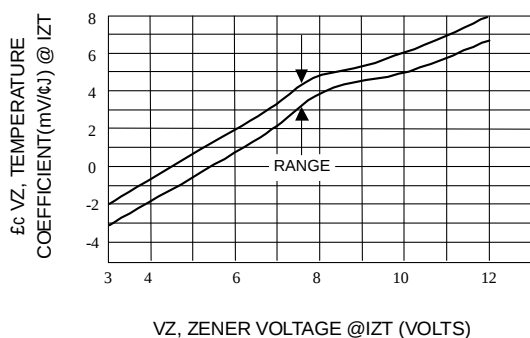


Fig. 5-UNITS TO 12 VOLTS

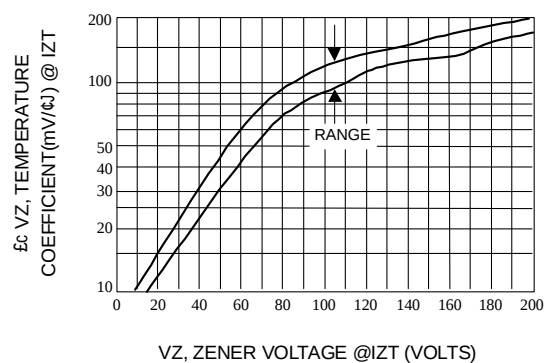


Fig. 6-UNITS 10 TO 200 VOLTS



SMA2Z SERIES

RATINGS AND CHARACTERISTIC CURVES

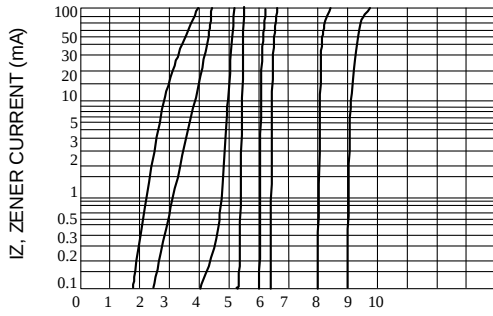


Fig. 7-VZ = 3.9 THRU 10 VOLTS

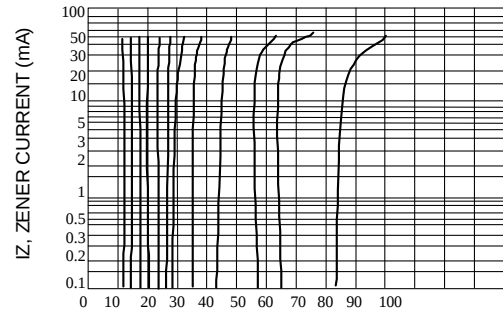


Fig. 8-VZ = 12 THRU 82 VOLTS

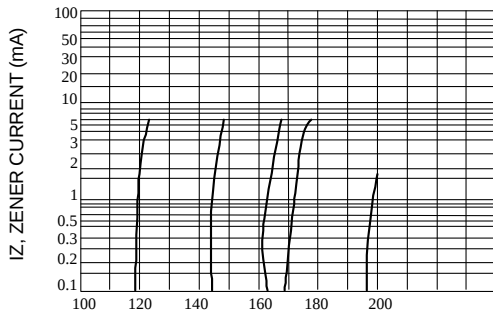


Fig. 9-VZ = 100 THRU 200 VOLTS

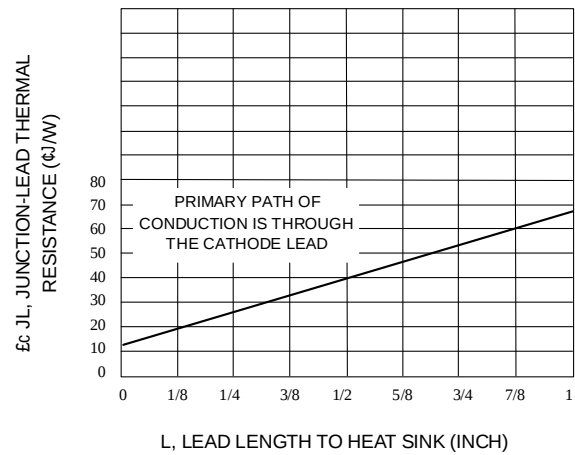


Fig. 10-TYPICAL THERMAL RESISTANCE

■ Ordering Information (Example)

PREFERRED	PACKAGE CODE	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMA2Z series	SMA	5000	10000	80000	13" reel

■ Outline Dimensions

