SZCJ Shenzhen Changji Semiconductor Co., LTD.

SMAG Plastic-Encapsulate Diodes

SMA2Z SERIES Zener Diodes

Features

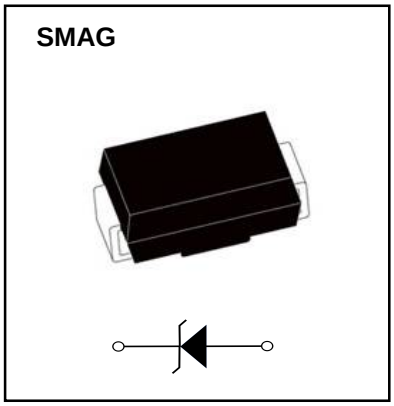
- P_{tot} 2W
- V_Z 3.3V- 200V
- The marking bar indicates the cathode

Applications

- Stabilizing Voltage

Marking

- SMA2ZXXA
  XX : From 13 To 56



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Max
Power dissipation	P_d	W	T_L=75℃	2
Zener current	I_Z	mA		P_V /V_Z
Operation Junction and Storage Temperature Range	T_J,T_{stg}	℃		-55 ~ +150

Electrical Characteristics（T_a=25℃ Unless otherwise specified）

Item	Symbol	Unit	Conditions	Max
Thermal resistance	$R_{\theta JA}$	℃/W	Between junction to ambient	75
	$R_{\theta JL}$	℃/W	Between junction to lead	30
Forward voltage	V_F	V	I_F=200mA	1.2

Electrical Characteristics (T_A=25℃ unless otherwise noted)

Part Number	Nominal Zener Voltage @I_T			I_{ZT}(mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	^{V}Z AVE.(V)	^{V}Z MIN.(V)	^{V}Z MAX.(V)		^{z}zt max.(Ω) @Izt	^{Z}ZK MAX.(Ω) @IZK	I_{ZK}(mA)	Ir(uA)@VR	VR(V)	I_{ZM} (mA)
SMA2Z3.3A	3.3	3.14	3.47	145.0	8.0	400	1.00	100	1.0	548.0
SMA2Z3.6A	3.6	3.42	3.78	139.0	5.0	400	1.00	100	1.0	502.0
SMA2Z3.9A	3.9	3.71	4.10	128.0	5.0	400	1.00	50	1.0	464.0
SMA2Z4.3A	4.3	4.09	4.52	116.0	4.5	400	1.00	50	1.0	421.0
SMA2Z4.7A	4.7	4.47	4.94	106.0	4.5	550	1.00	10	1.0	385.0
SMA2Z5.1A	5.1	4.85	5.36	98.0	3.5	600	1.00	10	1.0	354.0
SMA2Z5.6A	5.6	5.32	5.88	89.5	2.5	500	1.00	10	2.0	323.0
SMA2Z6.2A	6.2	5.89	6.51	80.5	1.5	700	1.00	10	3.0	292.0
SMA2Z6.8A	6.8	6.46	7.14	73.5	2.0	700	1.00	10	4.0	266.0
SMA2Z7.5A	7.5	7.13	7.88	66.5	2.0	700	0.50	10	5.0	242.0
SMA2Z8.2A	8.2	7.79	8.61	61.0	2.3	700	0.50	10	6.0	220.0
SMA2Z9.1A	9.1	8.65	9.56	55.0	2.5	700	0.50	10	7.0	200.0
SMA2Z10A	10.0	9.50	10.50	50.0	3.5	700	0.25	10	7.6	182.0
SMA2Z11A	11.0	10.45	11.55	45.5	4.0	700	0.25	1.0	8.4	166.0
SMA2Z12A	12.0	11.40	12.60	41.5	4.5	700	0.25	1.0	9.1	152.0
SMA2Z13A	13.0	12.35	13.65	38.5	5.0	700	0.25	0.5	9.9	138.0
SMA2Z14A	14.0	13.30	14.70	35.7	5.5	700	0.25	0.5	10.6	130.0
SMA2Z15A	15.0	14.25	15.75	33.4	7.0	700	0.25	0.5	11.4	122.0
SMA2Z16A	16.0	15.20	16.80	31.2	8.0	700	0.25	0.5	12.2	114.0
SMA2Z17A	17.0	16.15	17.85	29.4	9.0	750	0.25	0.5	13.0	107.0
SMA2Z18A	18.0	17.10	18.90	27.8	10.0	750	0.25	0.5	13.7	100.0
SMA2Z19A	19.0	18.05	19.95	26.3	11.0	750	0.25	0.5	14.4	95.0
SMA2Z20A	20.0	19.00	21.00	25.0	11.0	750	0.25	0.5	15.2	90.0
SMA2Z22A	22.0	20.90	23.10	22.8	12.0	750	0.25	0.5	16.7	82.0
SMA2Z24A	24.0	22.80	25.20	20.8	13.0	750	0.25	0.5	18.2	76.0
SMA2Z27A	27.0	25.65	28.35	18.5	18.0	750	0.25	0.5	20.6	68.0
SMA2Z30A	30.0	28.50	31.50	16.6	20.0	1000	0.25	0.5	22.5	60.0
SMA2Z33A	33.0	31.35	34.65	15.1	23.0	1000	0.25	0.5	25.1	55.0
SMA2Z36A	36.0	34.20	37.80	13.9	25.0	1000	0.25	0.5	27.4	50.0
SMA2Z39A	39.0	37.05	40.95	12.8	30.0	1000	0.25	0.5	29.7	47.0
SMA2Z43A	43.0	40.85	45.15	11.6	35.0	1500	0.25	0.5	32.7	43.0
SMA2Z47A	47.0	44.65	49.35	10.6	40.0	1500	0.25	0.5	35.8	39.0
SMA2Z51A	51.0	48.45	53.55	9.8	48.0	1500	0.25	0.5	38.8	36.0
SMA2Z56A	56.0	53.20	58.80	9.0	55.0	2000	0.25	0.5	42.6	32.0
SMA2Z62A	62.0	58.90	65.10	8.1	60.0	2000	0.25	0.5	47.1	29.0
SMA2Z68A	68.0	64.60	71.40	7.4	75.0	2000	0.25	0.5	51.7	27.0
SMA2Z75A	75.0	71.25	78.75	6.7	90.0	2000	0.25	0.5	56.0	24.0
SMA2Z82A	82.0	77.90	86.10	6.1	100.0	3000	0.25	0.5	62.2	22.0
SMA2Z91A	91.0	86.45	95.55	5.5	125.0	3000	0.25	0.5	69.2	20.0
SMA2Z100A	100.0	95.00	105.00	5.0	175.0	3000	0.25	0.5	76.0	18.0
SMA2Z110A	110.0	104.50	115.50	4.5	250.0	4000	0.25	0.5	83.6	17.0
SMA2Z120A	120.0	114.00	126.00	4.2	325.0	4500	0.25	0.5	91.2	15.0
SMA2Z130A	130.0	123.50	136.50	3.8	400.0	5000	0.25	0.5	98.8	14.0
SMA2Z140A	140.0	133.00	147.00	3.6	500.0	5500	0.25	0.5	106.4	13.0
SMA2Z150A	150.0	142.50	157.50	3.3	575.0	6000	0.25	0.5	114.0	12.0
SMA2Z160A	160.0	152.00	168.00	3.1	650.0	6500	0.25	0.5	121.6	11.0
SMA2Z170A	170.0	161.50	178.50	2.9	675.0	7000	0.25	0.5	130.4	11.0
SMA2Z180A	180.0	171.00	189.00	2.8	725.0	7000	0.25	0.5	136.8	10.0
SMA2Z190A	190.0	180.50	199.50	2.6	825.0	8000	0.25	0.5	144.8	10.0
SMA2Z200A	200.0	190.00	210.00	2.5	1900.0	9990	0.25	0.5	152.0	9.0

Notes :

(1) The type number listed have a standard tolerance on the nominal zener voltage of ± 5 %

(2) The revese surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IZT per method.

Typical Characteristics

Fig. 1 - Power Temperature Derating Curve

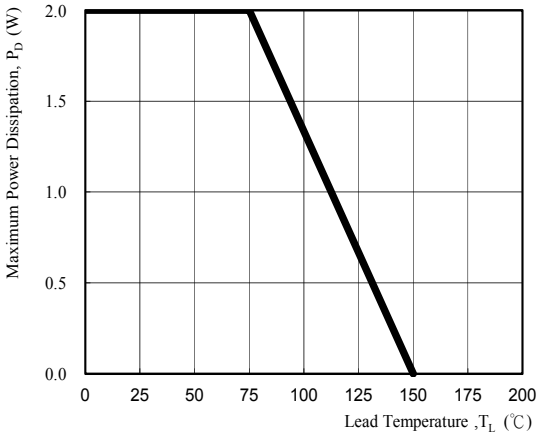


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

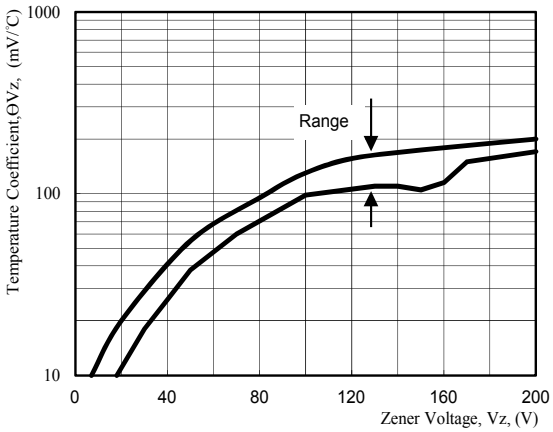


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

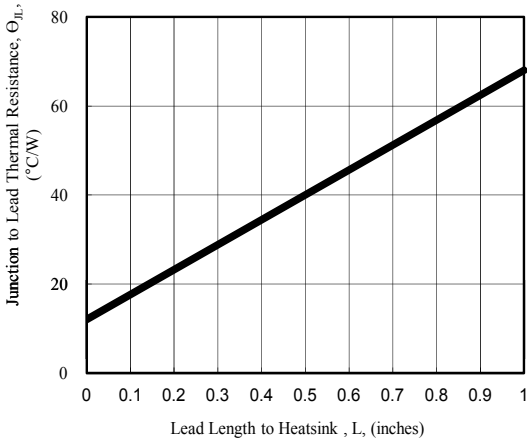


Fig. 4 - Maximum Surge Power

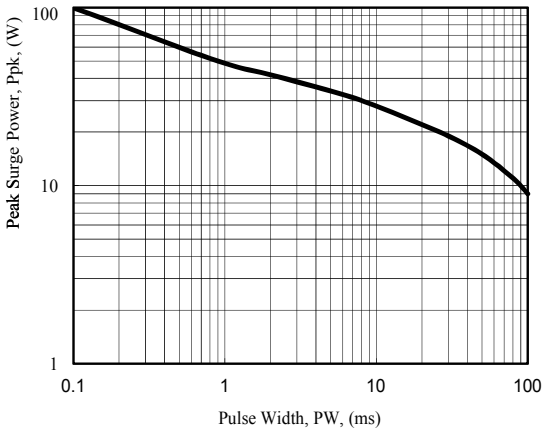
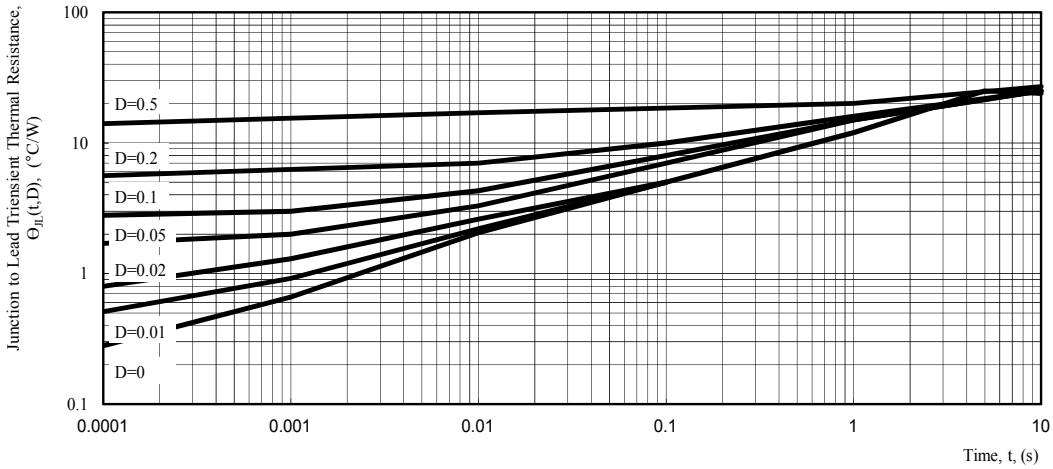
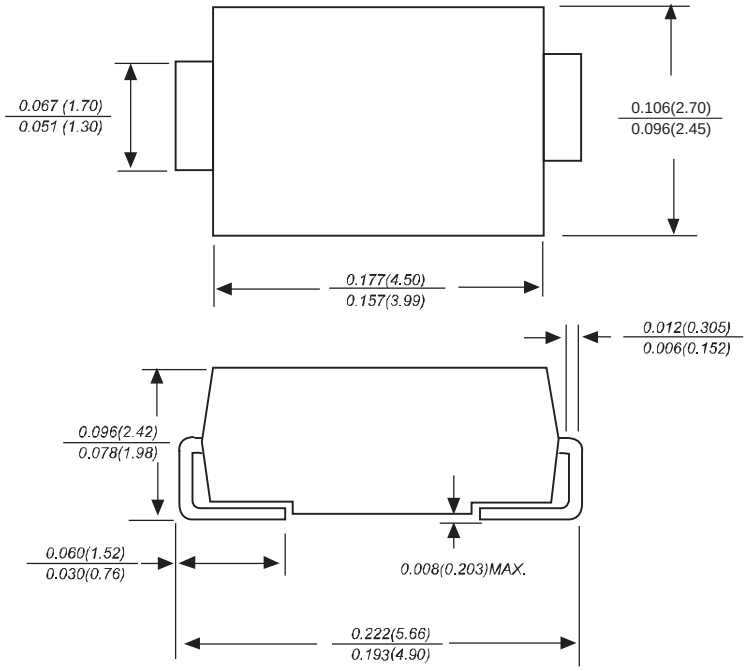


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

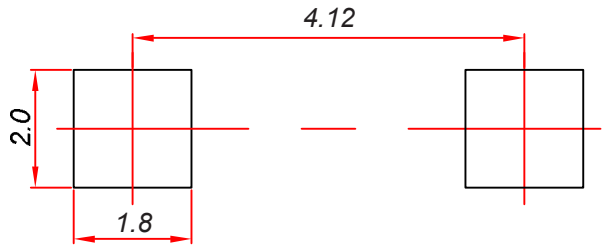


SMAG Package Outline Dimensions



Dimensions in inches and (millimeters)

SMAG Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserves the right to make modifications,enhancements,improvements,corrections or other changes without further notice to any product herein.SZCJ does not assume any liability arising out of the application or use of any product described .

Reel Taping Specifications For Surface Mount Devices- SMAG

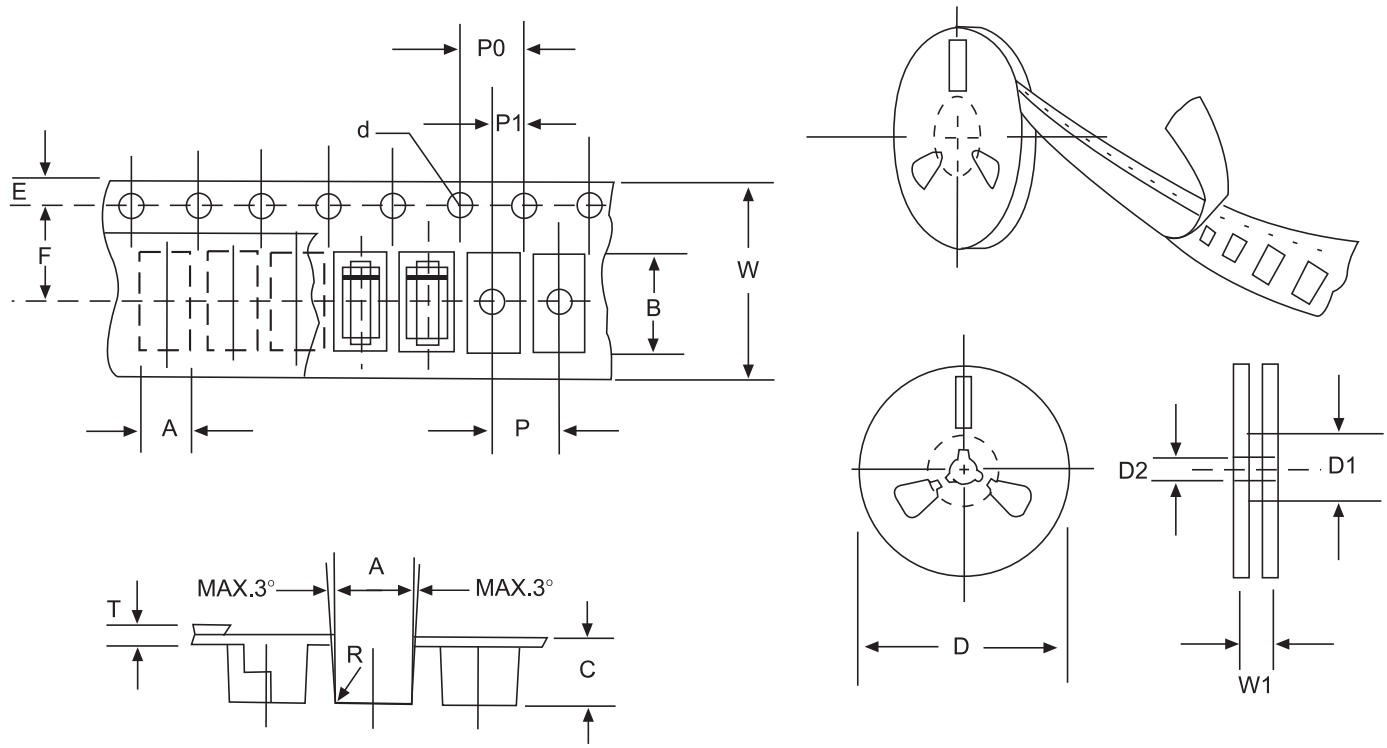


FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	SMAG mm(inch)
Carrier width	A	2.79±0.1(0.110±0.004)
Carrier length	B	5.33±0.1(0.210±0.004)
Carrier depth	C	2.36±0.1(0.093±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	279±2.0 (11± 0.079)
Reel inner diameter	D1	75 ±1.0 (2.95 ±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Strocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.5±0.05(0.217±0.002)
Punch hole pitch	P	4.0±0.1(0.157±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Totall tape thickness	T	0.28±0.02(0.011±0.0008)
Tape width	W	12.0±0.2(0.472±0.008)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE:Devices are packed in accordance with EIA standard RS-481-A and specification given above.