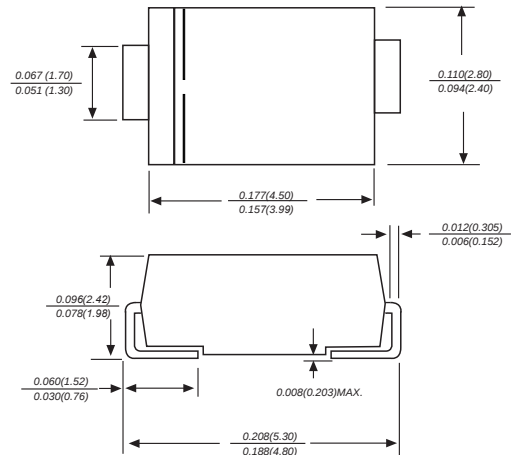


Zener Diodes

Features

1. For surface mounted applications in order to optimize board space
2. Low profile package
3. Built-in strain relief
4. Glass passivated junction
5. Low inductance
6. Typical I_R less than 5.0 μ A above 11V
7. High temperature soldering guaranteed:
260°C / 10 seconds at terminals
8. Plastic package has Underwriters Laboratory
Flammability Classification 94V-0

DO-214AC/SMA



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC DO-214AC/SMA Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.002ounce, 0.07grams

Standard packing : 12mm tape(E1A-481)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Catalog Number	SYMBOLS	VALUE	UNITS
Peak Power Dissipation at $T_A=50^{\circ}\text{C}$, Derate above 50°C (Note 1)	P_D	1.0 6.67	Watts mW/°C
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) (Note 2)	I_{FSM}	10.0	A
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	°C

Notes: 1. Mounted on 5.0mm² (0.013mm thick) land areas.

2. Measured on 8.3ms Single Half Sine-wave or Equivalent Square Wave,
Duty Cycle=4 Pulses Per Minute Maximum.

Ratings And Characteristic Curves

ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) VF=1.2V max, IF=200mA for all types.

Part Number	V _Z @ I _{ZT}			Maximum Zener Impedance				Maximum Leakage Current		Marking Code	Package
				Z _{ZT} @ I _{ZT}		Z _{ZK} @ I _{ZK}		I _R @ V _R			
	Nom. V	Min. V	Max. V	O	mA	O	mA	uA	V		
1.0 Watt ZENER Diodes -- continued											
1SMA4728A	3.3	3.1	3.5	10.0	76.0	400	1.00	100	1.0	728A	SMA
1SMA4729A	3.6	3.4	3.8	10.0	69.0	400	1.00	100	1.0	729A	SMA
1SMA4730A	3.9	3.7	4.1	9.0	64.0	400	1.00	50	1.0	730A	SMA
1SMA4731A	4.3	4.1	4.5	9.0	58.0	400	1.00	10	1.0	731A	SMA
1SMA4732A	4.7	4.5	4.9	8.0	53.0	500	1.00	10	1.0	732A	SMA
1SMA4733A	5.1	4.8	5.4	7.0	49.0	550	1.00	10	1.0	733A	SMA
1SMA4734A	5.6	5.3	5.9	5.0	45.0	600	1.00	10	2.0	734A	SMA
1SMA4735A	6.2	5.9	6.5	2.0	41.0	700	1.00	10	3.0	735A	SMA
1SMA4736A	6.8	6.5	7.1	3.5	37.0	700	1.00	10	4.0	736A	SMA
1SMA4737A	7.5	7.1	7.9	4.0	34.0	700	0.50	10	5.0	737A	SMA
1SMA4738A	8.2	7.8	8.6	4.5	31.0	700	0.50	10	6.0	738A	SMA
1SAM4739A	9.1	8.6	9.6	5.0	28.0	700	0.50	10	7.0	739A	SMA
1SMA4740A	10.0	9.5	10.5	7.0	25.0	700	0.25	10	7.6	740A	SMA
1SMA4741A	11.0	10.5	11.6	8.0	23.0	700	0.25	5.0	8.4	741A	SMA
1SMA4742A	12.0	11.4	12.6	9.0	21.0	700	0.25	5.0	9.1	742A	SMA
1SMA4743A	13.0	12.4	13.7	10.0	19.0	700	0.25	5.0	9.9	743A	SMA
1SMA4744A	15.0	14.3	15.8	14.0	17.0	700	0.25	5.0	11.4	744A	SMA
1SMA4745A	16.0	15.2	16.8	16.0	15.5	700	0.25	5.0	12.2	745A	SMA
1SMA4746A	18.0	17.1	18.9	20.0	14.0	750	0.25	5.0	13.7	746A	SMA
1SMA4747A	20.0	19.0	21.0	22.0	12.5	750	0.25	5.0	15.2	747A	SMA
1SMA4748A	22.0	20.9	23.1	23.0	11.5	750	0.25	5.0	16.7	748A	SMA
1SMA4749A	24.0	22.8	25.2	25.0	10.5	750	0.25	5.0	18.2	749A	SMA
1SMA4750A	27.0	25.7	28.4	35.0	9.5	750	0.25	5.0	20.6	750A	SMA
1SMA4751A	30.0	28.5	31.5	40.0	8.5	1000	0.25	5.0	22.8	751A	SMA
1SMA4752A	33.0	31.4	34.7	45.0	7.5	1000	0.25	5.0	25.1	752A	SMA
1SMA4753A	36.0	34.2	37.8	50.0	7.0	1000	0.25	5.0	27.4	753A	SMA
1SMA4754A	39.0	37.1	41	60.0	6.5	1000	0.25	5.0	29.7	754A	SMA
1SMA4755A	43.0	40.9	45.2	70.0	6.0	1500	0.25	5.0	32.7	755A	SMA
1SMA4756A	47.0	44.7	49.4	80.0	5.5	1500	0.25	5.0	35.8	756A	SMA
1SMA4757A	51.0	48.5	53.6	95.0	5.0	1500	0.25	5.0	38.8	757A	SMA
1SMA4758A	56.0	53.2	58.8	110	4.5	2000	0.25	5.0	42.6	758A	SMA
1SMA4759A	62.0	58.9	65.1	125	4.0	2000	0.25	5.0	47.1	759A	SMA
1SMA4760A	68.0	64.6	71.4	150	3.7	2000	0.25	5.0	51.7	760A	SMA
1SMA4761A	75.0	71.3	78.8	175	3.3	2000	0.25	5.0	56.0	761A	SMA
1SMA4762A	82.0	77.9	86.1	200	3.0	3000	0.25	5.0	62.2	762A	SMA
1SMA4763A	91.0	86.5	95.6	250	2.8	3000	0.25	5.0	69.2	763A	SMA
1SMA4764A	100	95.0	105	350	2.5	3000	0.25	5.0	76.0	100A	SMA
1SMA110A	110	104.5	115.5	450	2.3	4000	0.25	5.0	83.6	110A	SMA
1SMA120A	120	114	126	550	2.0	4500	0.25	5.0	91.2	120A	SMA
1SMA130A	130	123.5	136.5	700	1.9	5000	0.25	5.0	98.8	130A	SMA
1SMA150A	150	142.5	157.5	1000	1.7	6000	0.25	5.0	114.0	150A	SMA
1SMA160A	160	152	168	1100	1.6	6500	0.25	5.0	121.6	160A	SMA
1SMA180A	180	171	189	1200	1.4	7000	0.25	5.0	136.8	180A	SMA
1SMA200A	200	190	210	1500	1.2	8000	0.25	5.0	152.0	200A	SMA

FIG.1- POWER TEMPERATURE DERATING CURVE

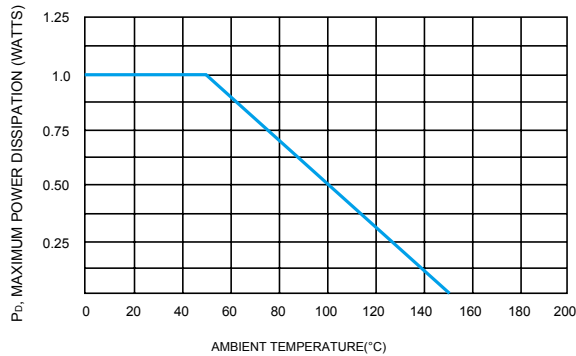


FIG.2- TYPICAL FORWARD CHARACTERISTICS

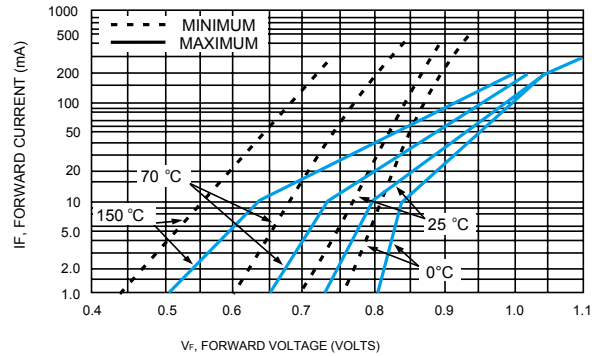


FIG.3- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

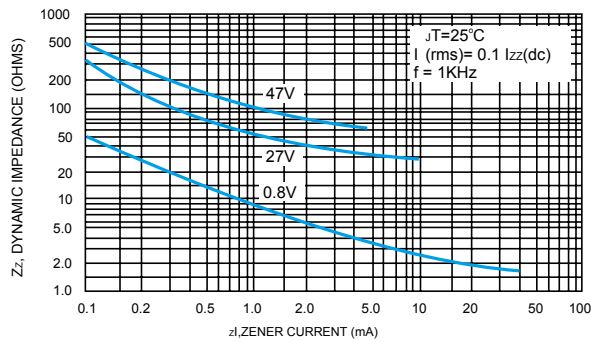


FIG.5- TYPICAL LEAKAGE CURRENT

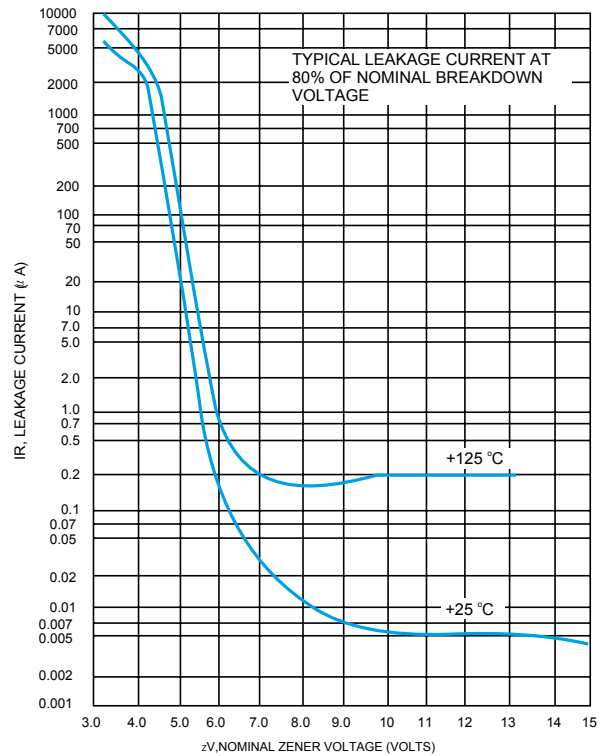


FIG.4- EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

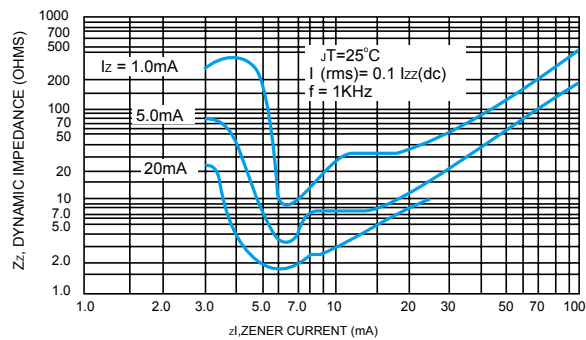


FIG.6- TYPICAL CAPACITANCE versus V_Z

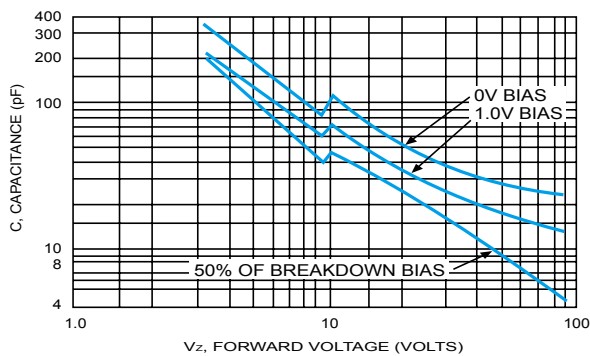


FIG.7- TEMPERATURE COEFFICIENTS

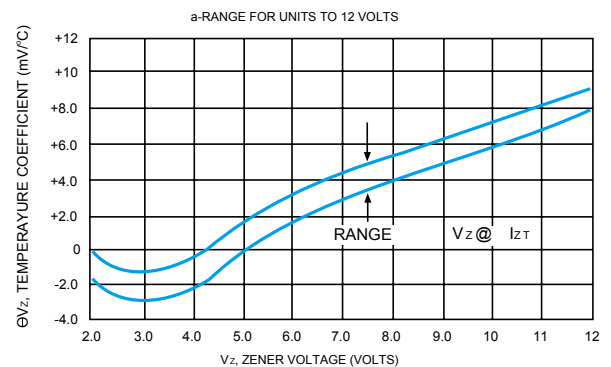


FIG.7- TEMPERATURE COEFFICIENTS

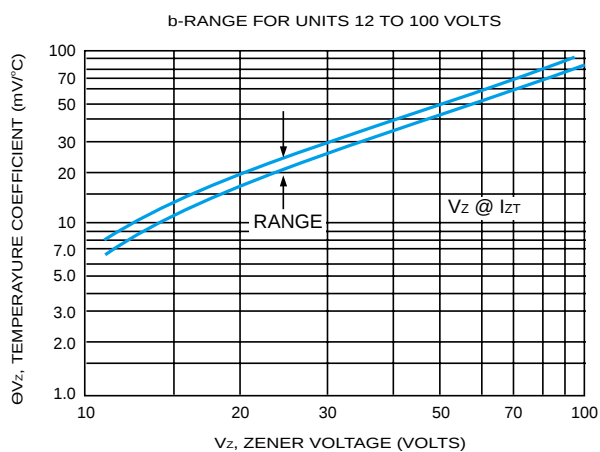


FIG.8- EFFECT OF ZENER CURRENT

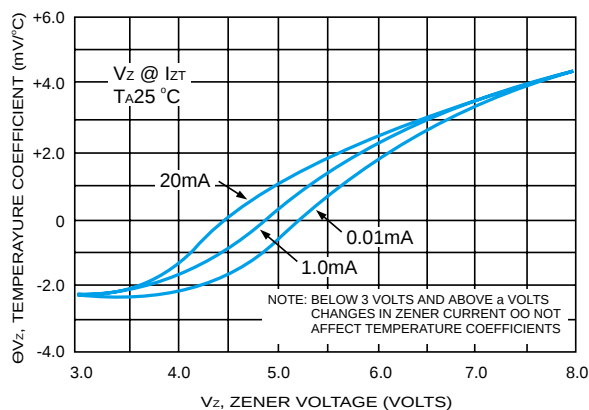
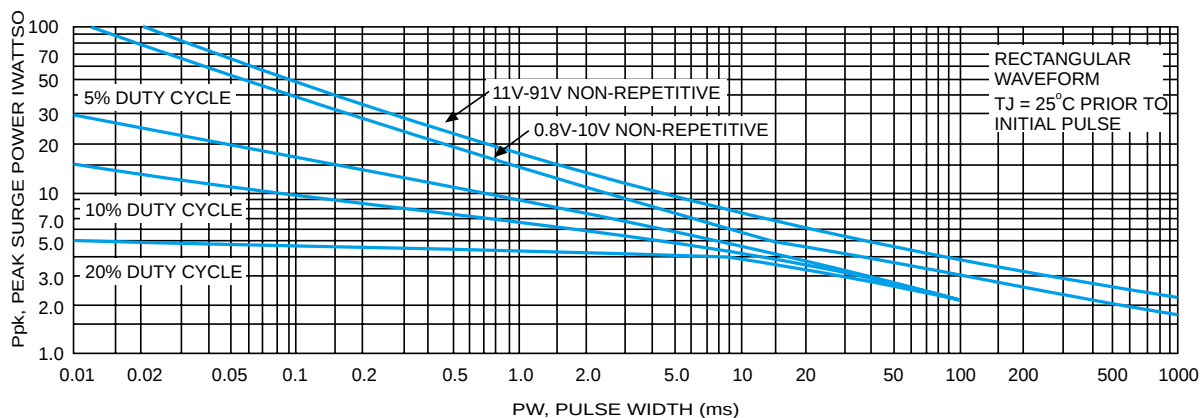
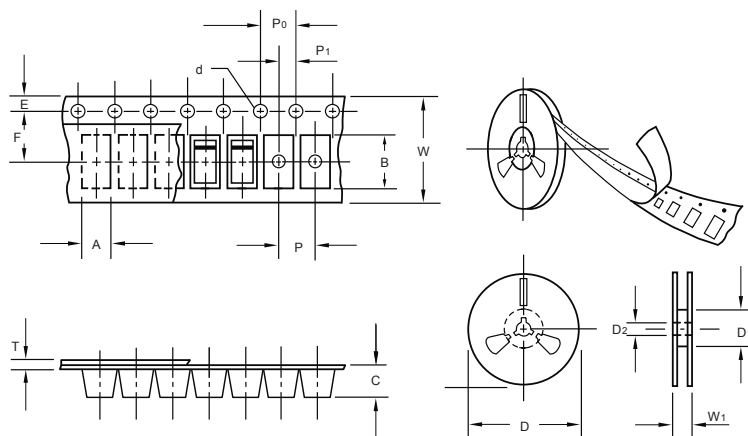


FIG.9- MAXIMUM SURGE POWER



Packing information

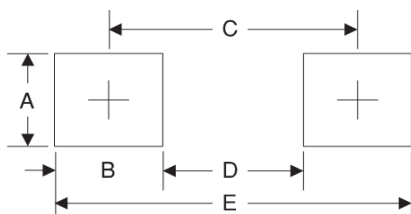


unit:mm

Item	Symbol	Tolerance	SMA
Carrier width	A	0.1	2.80
Carrier length	B	0.1	5.33
Carrier depth	C	0.1	2.36
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D ₁	min	50.00
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	62.00
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.28
Tape width	W	0.3	12.00
Reel width	W ₁	1.0	18.00

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215