

Surface Mount Silicon Zener Diodes

Zener Voltage 3.0 ~ 390 V

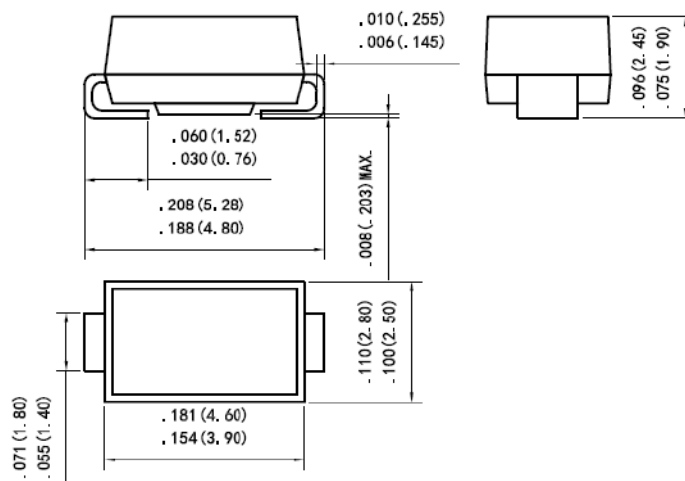
Features

- Glass passivated chip
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Low reverse leakage
- For use in stabilizing and clipping with high power rating
- RoHS compliant

Mechanical Data

- Case: DO214AC Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Mounting position: Any

DO-214AC(SMA)



Unit: inch(mm)

Parameter	Symbols	Value	Unit
DC Power dissipation $T_{amb}=60^{\circ}\text{C}$ $T_{amb}=25^{\circ}\text{C}$	P_D	3.0 1.25	W
Maximum forward voltage at $I_f=200\text{mA}$	V_F	1.2	V
Junction temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	T_J, T_{STG}	-55 to +150	$^{\circ}\text{C}$
Typical thermal resistance ⁽²⁾	$R_{\theta JC}$ $R_{\theta JA}$	42 105	$^{\circ}\text{C/W}$

Note :

- 1) Thermal resistance from junction to ambient, PCB mounted.

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

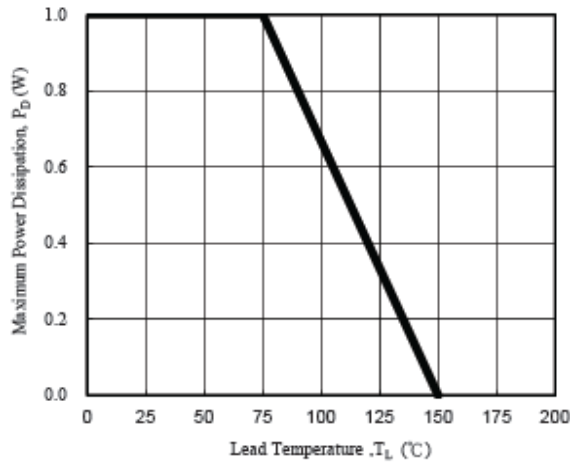


Fig. 1 - Power Temperature Derating Curve

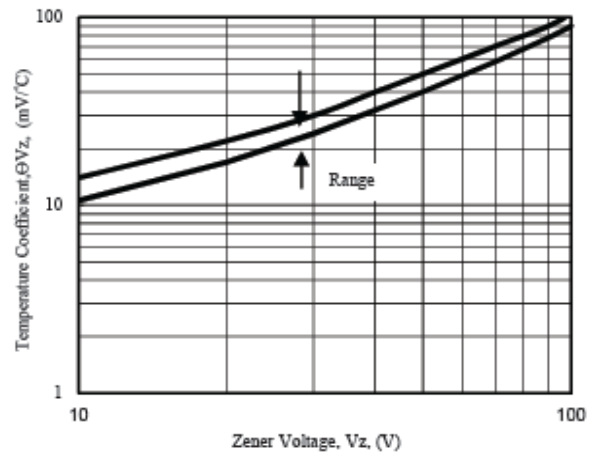


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

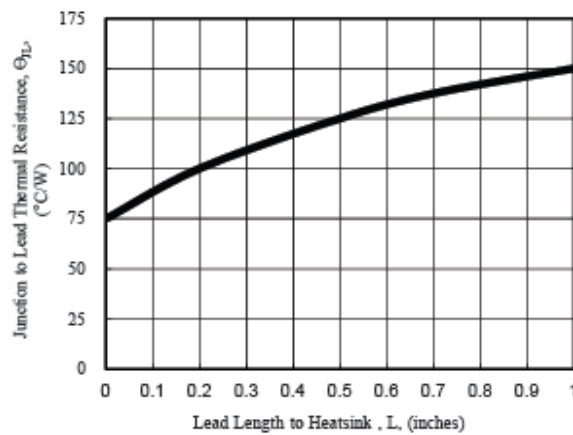


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

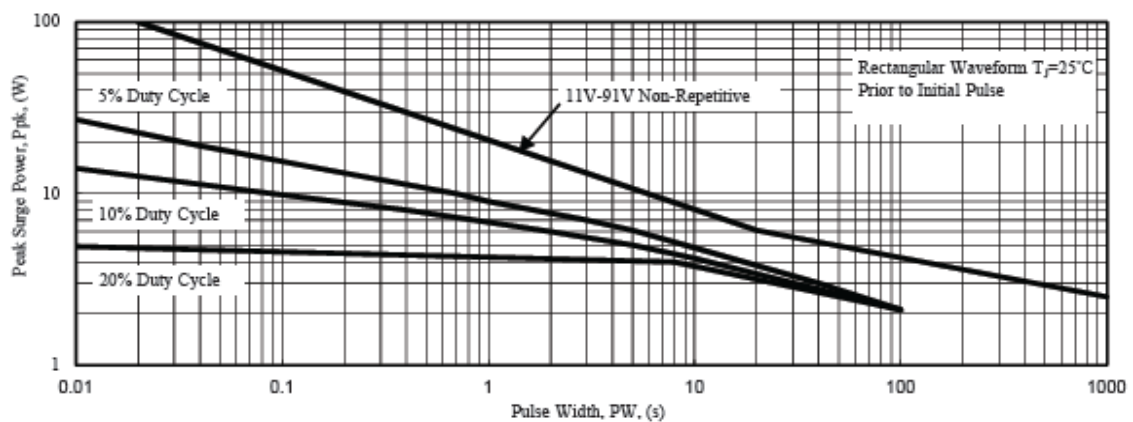


Fig. 4 - Maximum Surge Power

Part Number BZG05C...	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) @I _{ZT}	Z _{ZK MAX.} (Ω) @I _{ZK}	I _{ZK} (mA)	I _R (uA)@V _R	V _R (V)	
3V0	3.0	2.85	3.15	80.0	10.0	400.0	1.00	80.0	1.0	288.0
3V3	3.3	3.14	3.47	76.0	10.0	400.0	1.00	40.0	1.0	274.0
3V6	3.6	3.42	3.78	69.0	10.0	400.0	1.00	20.0	1.0	251.0
3V9	3.9	3.71	4.10	64.0	9.0	400.0	1.00	10.0	1.0	232.0
4V3	4.3	4.09	4.52	58.0	9.0	400.0	1.00	3.0	1.0	210.0
4V7	4.7	4.47	4.94	53.0	8.0	500.0	1.00	3.0	1.0	192.0
5V1	5.1	4.85	5.36	49.0	7.0	550.0	1.00	1.0	1.0	177.0
5V6	5.6	5.32	5.88	45.0	5.0	600.0	1.00	1.0	2.0	161.0
6V2	6.2	5.89	6.51	41.0	2.0	700.0	1.00	1.0	3.0	146.0
6V8	6.8	6.46	7.14	37.0	3.5	700.0	1.00	1.0	4.0	133.0
7V5	7.5	7.13	7.88	34.0	4.0	700.0	0.50	1.0	5.0	121.0
8V2	8.2	7.79	8.61	31.0	4.5	700.0	0.50	1.0	6.0	110.0
9V1	9.1	8.65	9.56	28.0	5.0	700.0	0.50	1.0	7.0	100.0
10	10.0	9.50	10.50	25.0	7.0	700.0	0.25	0.5	7.6	91.0
11	11.0	10.45	11.55	23.0	8.0	700.0	0.25	0.5	8.4	83.0
12	12.0	11.40	12.60	21.0	9.0	700.0	0.25	0.5	9.1	76.0
13	13.0	12.35	13.65	19.0	10.0	700.0	0.25	0.5	9.9	69.0
15	15.0	14.25	15.75	17.0	14.0	700.0	0.25	0.5	11.4	61.0
16	16.0	15.20	16.80	15.5	16.0	700.0	0.25	0.5	12.2	57.0
18	18.0	17.10	18.90	14.0	20.0	750.0	0.25	0.5	13.7	50.0
20	20.0	19.00	21.00	12.5	22.0	750.0	0.25	0.5	15.2	45.0
22	22.0	20.90	23.10	11.5	23.0	750.0	0.25	0.5	16.7	41.0
24	24.0	22.80	25.20	10.5	25.0	750.0	0.25	0.5	18.2	38.0
27	27.0	25.65	28.35	9.5	35.0	750.0	0.25	0.5	20.6	34.0
30	30.0	28.50	31.50	8.5	40.0	1000.0	0.25	0.5	22.8	30.0
33	33.0	31.35	34.65	7.5	45.0	1000.0	0.25	0.5	25.1	27.0
36	36.0	34.20	37.80	7.0	50.0	1000.0	0.25	0.5	27.4	25.0
39	39.0	37.05	40.95	6.5	60.0	1000.0	0.25	0.5	29.7	23.0
43	43.0	40.85	45.15	6.0	70.0	1500.0	0.25	0.5	32.7	22.0
47	47.0	44.65	49.35	5.5	80.0	1500.0	0.25	0.5	35.8	19.0
51	51.0	48.45	53.55	5.0	95.0	1500.0	0.25	0.5	38.8	18.0
56	56.0	53.20	58.80	4.5	110.0	2000.0	0.25	0.5	42.6	16.0
62	62.0	58.90	65.10	4.0	125.0	2000.0	0.25	0.5	47.1	14.0
68	68.0	64.60	71.40	3.7	150.0	2000.0	0.25	0.5	51.7	13.0
75	75.0	71.25	78.75	3.3	175.0	2000.0	0.25	0.5	56.0	12.0
82	82.0	77.90	86.10	3.0	200.0	3000.0	0.25	0.5	62.2	11.0
91	91.0	86.45	95.55	2.8	250.0	3000.0	0.25	0.5	69.2	10.0
100	100.0	95.00	105.00	2.5	350.0	3000.0	0.25	0.5	76.0	9.0
110	110.0	104.50	115.50	2.3	450.0	4000.0	0.25	0.5	83.6	8.6
120	120.0	114.00	126.00	2.0	550.0	4500.0	0.25	0.5	91.2	7.8
130	130.0	123.50	136.50	1.9	700.0	5000.0	0.25	0.5	98.8	7.0
150	150.0	142.50	157.50	1.7	1000.0	6000.0	0.25	0.5	114.0	6.4
160	160.0	152.00	168.00	1.6	1100.0	6500.0	0.25	0.5	121.6	5.8
180	180.0	171.00	189.00	1.4	1200.0	7000.0	0.25	0.5	136.8	5.2
200	200.0	190.00	210.00	1.2	1900.0	9990.0	0.25	0.5	152.0	4.7
220	220.0	209.00	231.00	1.0	1600.0	8000.0	0.25	0.5	167.2	4.0
240	240.0	228.00	252.00	0.9	1800.0	8500.0	0.25	0.5	182.4	3.8
250	250.0	237.50	262.50	0.9	2000.0	9000.0	0.25	0.5	190.0	3.6
270	270.0	256.50	283.50	0.8	2100.0	9000.0	0.25	0.5	205.0	3.3
300	300.0	285.00	315.00	0.8	2300.0	9500.0	0.25	0.5	228.0	3.0
330	330.0	313.50	346.50	0.7	2500.0	9500.0	0.25	0.5	250.2	2.7
360	360.0	342.00	378.00	0.7	2700.0	10000.0	0.25	0.5	275.0	2.5
390	390.0	370.50	409.50	0.7	3000.0	10000.0	0.25	0.5	300.0	2.2