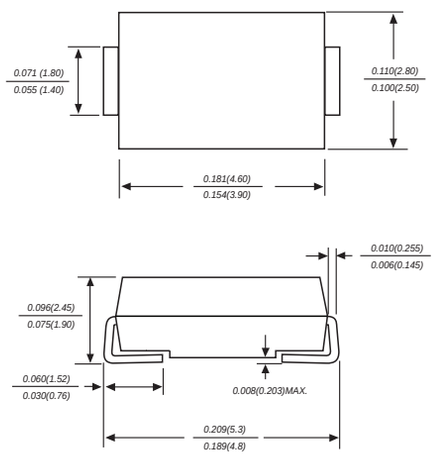
SURFACE MOUNT SILICON ZENER DIODES

Vz : 3.0 - 300 Volts, Pd : 1 Watts

SMA/ DO-214AC Dimensions : inch [mm]



Dimensions in inches and (millimeters)

Features

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping with high power rating

Mechanical Data

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.0025 ounce, 0.07gram

Maximum Ratings(T_A =25℃ unless otherwise noted)

Parameter	Symbol	Value	Units
DC power dissipation at T_L = 50 °C (1)	P_D	1	W
Maximum forward voltage at I_F = 200 mA	V_F	1.2	V
Maximum thermal resistance junction to ambient air (2)	$R_{\theta JA}$	170	K/W
Junction temperature range	T_J	- 55 to + 150	°C
Storage temperature range	T_{STG}	- 55 to + 150	°C

Note:

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

Ratings and Characteristics Curves (T_A=25℃ unless otherwise noted)

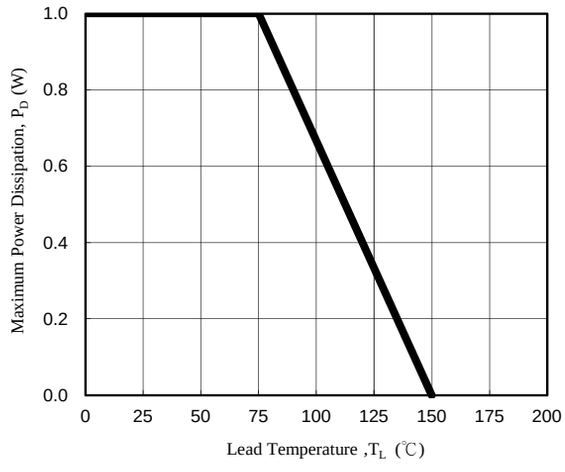


Fig. 1 - Power Temperature Derating Curve

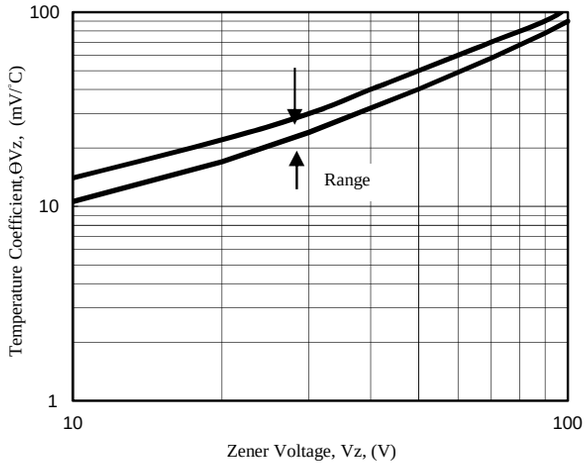


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

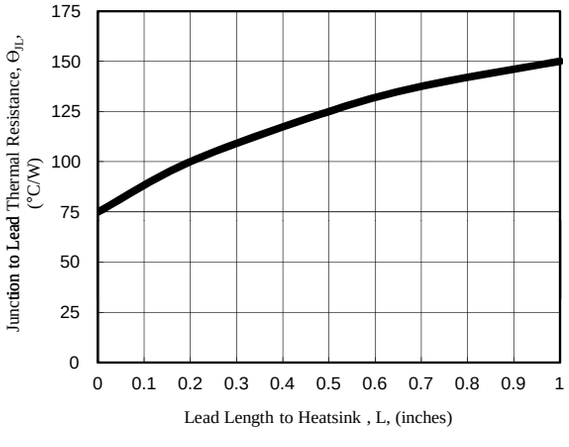


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

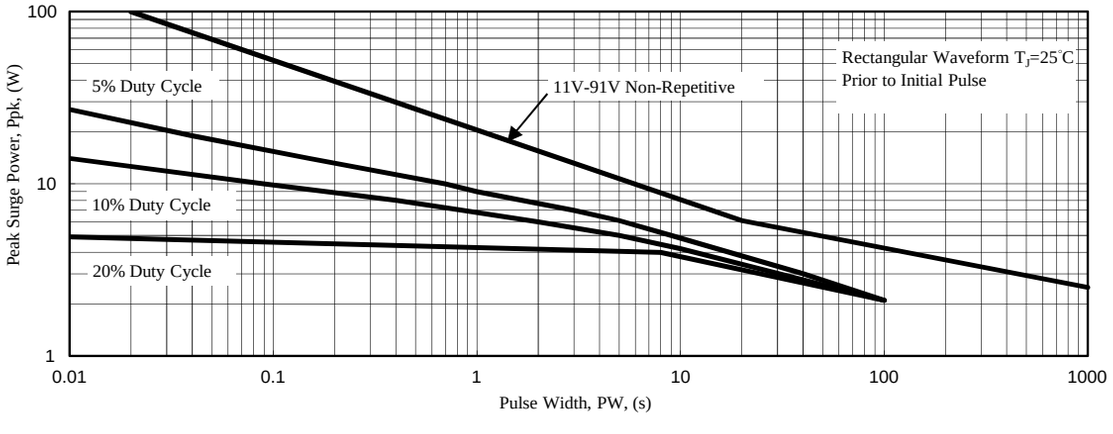


Fig. 4 - Maximum Surge Power

Electrical Characteristics(T_A=25℃ unless otherwise noted)

Part Number	Device Marking Code	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
		V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}	I_{RM}
		(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)	(mApk)
1SMA4727A	27A	3.0	86.0	10.0	400	1.00	150.0	1.0	274.0	1370
1SMA4728A	28A	3.3	76.0	10.0	400	1.00	100.0	1.0	274.0	1370
1SMA4729A	29A	3.6	69.0	10.0	400	1.00	100.0	1.0	251.0	1255
1SMA4730A	30A	3.9	64.0	9.0	400	1.00	50.0	1.0	232.0	1160
1SMA4731A	31A	4.3	58.0	9.0	400	1.00	20.0	1.0	210.0	1050
1SMA4732A	32A	4.7	53.0	8.0	500	1.00	10.0	1.0	192.0	960
1SMA4733A	33A	5.1	49.0	7.0	550	1.00	10.0	1.0	177.0	885
1SMA4734A	34A	5.6	45.0	5.0	600	1.00	10.0	2.0	161.0	805
1SMA4735A	35A	6.2	41.0	2.0	700	1.00	10.0	3.0	146.0	730
1SMA4736A	36A	6.8	37.0	3.5	700	1.00	5.0	4.0	133.0	660
1SMA4737A	37A	7.5	34.0	4.0	700	0.50	5.0	5.0	121.0	605
1SMA4738A	38A	8.2	31.0	4.5	700	0.50	5.0	6.0	110.0	550
1SMA4739A	39A	9.1	28.0	5.0	700	0.50	0.5	7.0	100.0	500
1SMA4740A	40A	10.0	25.0	7.0	700	0.25	0.5	7.6	91.0	454
1SMA4741A	41A	11.0	23.0	8.0	700	0.25	0 1	8.4	83.0	414
1SMA4742A	42A	12.0	21.0	9.0	700	0.25	0 1	9.1	76.0	380
1SMA4743A	43A	13.0	19.0	10.0	700	0.25	0.1	9.9	69.0	344
1SMA4744A	44A	15.0	17.0	14.0	700	0.25	0.1	11.4	61.0	305
1SMA4745A	45A	16.0	15.5	16.0	700	0.25	0.1	12.2	57.0	285
1SMA4746A	46A	18.0	14.0	20.0	750	0.25	0 1	13.7	50.0	250
1SMA4747A	47A	20.0	12 5	22.0	750	0.25	0 1	15.2	45.0	225
1SMA4748A	48A	22.0	11 5	23.0	750	0.25	0 1	16.7	41.0	205
1SMA4749A	49A	24.0	10 5	25.0	750	0.25	0 1	18.2	38.0	190
1SMA4750A	50A	27.0	9 5	35.0	750	0.25	0 1	20.6	34.0	170
1SMA4751A	51A	30.0	8 5	40.0	1000	0.25	0 1	22.8	30.0	150
1SMA4752A	52A	33.0	7 5	45.0	1000	0.25	0 1	25.1	27.0	135
1SMA4753A	53A	36.0	7.0	50.0	1000	0.25	0 1	27.4	25.0	125
1SMA4754A	54A	39.0	6 5	60.0	1000	0.25	0 1	29.7	23.0	115
1SMA4755A	55A	43.0	6.0	70.0	1500	0.25	0 1	32.7	22.0	110
1SMA4756A	56A	47.0	5 5	80.0	1500	0.25	0.1	35.8	19.0	95
1SMA4757A	57A	51.0	5.0	95.0	1500	0.25	0.1	38.8	18.0	90
1SMA4758A	58A	56.0	4 5	110.0	2000	0.25	0.1	42.6	16.0	80
1SMA4759A	59A	62.0	4.0	125.0	2000	0.25	0.1	47.1	14.0	70
1SMA4760A	60A	68.0	3.7	150.0	2000	0.25	0.1	51.7	13.0	65
1SMA4761A	61A	75.0	3.3	175.0	2000	0.25	0.1	56.0	12.0	60
1SMA4762A	62A	82.0	3.0	200.0	3000	0.25	0.1	62.2	11.0	55
1SMA4763A	63A	91.0	2.8	250.0	3000	0.25	0.1	69.2	10.0	50
1SMA4764A	64A	100.0	2.5	350.0	3000	0.25	0.1	76.0	9.0	45
1SZ1110A	110A	110.0	2.3	450.0	4000	0.25	0.1	83.6	8.6	40
1SZ1120A	120A	120.0	2.0	550.0	4500	0.25	0.1	91.2	7.8	37
1SZ1130A	130A	130.0	1.9	700.0	5000	0.25	0.1	98.8	7.0	34
1SZ1150A	150A	150.0	1.7	1000.0	6000	0.25	0.1	114.0	6.4	30
1SZ1160A	160A	160.0	1.6	1100.0	6500	0.25	0.1	121.6	5.8	28
1SZ1180A	180A	180.0	1.4	1200.0	7000	0.25	0.1	136.8	5.2	25
1SZ1200A	200A	200.0	1.2	1900.0	9990	0.25	0.1	152.0	4.7	22
1SZ1220A	220A	220.0	1.0	1600.0	8000	0.25	0.1	167.2	4.0	20
1SZ1240A	240A	240.0	0.9	1800.0	8500	0.25	0 1	182.4	3.8	19
1SZ1250A	250A	250.0	0.9	2000.0	9000	0.25	0 1	190.0	3.6	18
1SZ1270A	270A	270.0	0.8	2100.0	9000	0.25	0 1	205.0	3.3	16
1SZ1300A	300A	300.0	0.8	2300.0	9500	0.25	0 1	228.0	3.0	15

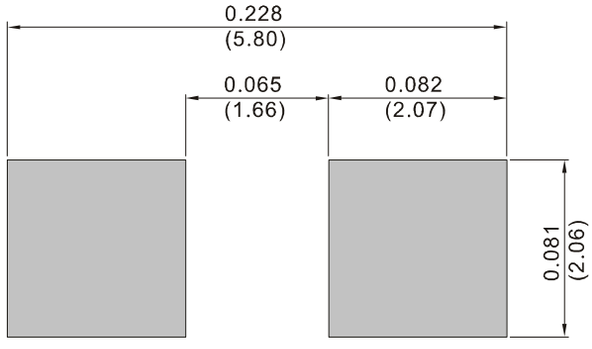
Notes :

(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 JEDEC

Mounting Pad Layout

SMA/ DO-214AC Dimensions : inch [mm]



ORDER INFORMATION

- Packing information
  T/R - 5/7.5K per 13" plastic Reel
  T/R - 2K per 7" plastic Reel