2.0 Watt Surface Mounted Zener Diodes

Pinning

1.Cathode	2.Anode



DO-214AC/SMA

FEATURES

- Complete voltage range 3.0 to 300 volts
- High peak reverse power dissipation
- High reliability
- Low leakage current
- Standard zener voltage tolerance is ± 5%.

MECHANICAL DATA

- Case : Molded plastic body
- Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity : Polarity symbol marking on body
- Mounting Position : Any
- Weight : 0.0023 ounce, 0.07 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.

Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 50 °C (Note1)	P_D	2.0	W
Maximum Forward Voltage at I_F = 200 mA	V_F	1.2	V
Junction Temperature Range	T_J	- 55 to + 150	°C
Storage Temperature Range	Ts	- 55 to + 150	°C

Note：

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

Part Number	Device Marking Code	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)	I_{ZM}（mA）
SMA2Z3.0A	2H1	3.0	2.85	3.15	160	8.0	400	1.00	100	1.0	603.0
SMA2Z3.3A	2H2	3.3	3.14	3.47	145.0	8.0	400	1.00	100	1.0	548.0
SMA2Z3.6A	2H3	3.6	3.42	3.78	139.0	5.0	400	1.00	100	1.0	502.0
SMA2Z3.9A	2H4	3.9	3.71	4.10	128.0	5.0	400	1.00	50	1.0	464.0
SMA2Z4.3A	2H5	4.3	4.09	4.52	116.0	4.5	400	1.00	50	1.0	421.0
SMA2Z4.7A	2H6	4.7	4.47	4.94	106.0	4.5	550	1.00	10	1.0	385.0
SMA2Z5.1A	2H7	5.1	4.85	5.36	98.0	3.5	600	1.00	10	1.0	354.0
SMA2Z5.6A	2H8	5.6	5.32	5.88	89.5	2.5	500	1.00	10	2.0	323.0
SMA2Z6.2A	2A0	6.2	5.89	6.51	80.5	1.5	700	1.00	10	3.0	292.0
SMA2Z6.8A	2A1	6.8	6.46	7.14	73.5	2.0	700	1.00	10	4.0	266.0
SMA2Z7.5A	2A2	7.5	7.13	7.88	66.5	2.0	700	0.50	10	5.0	242.0
SMA2Z8.2A	2A3	8.2	7.79	8.61	61.0	2.3	700	0.50	10	6.0	220.0
SMA2Z9.1A	2A4	9.1	8.65	9.56	55.0	2.5	700	0.50	10	7.0	200.0
SMA2Z10A	2A5	10.0	9.50	10.50	50.0	3.5	700	0.25	10	7.6	182.0
SMA2Z11A	2A6	11.0	10.45	11.55	45.5	4.0	700	0.25	1.0	8.4	166.0
SMA2Z12A	2A7	12.0	11.40	12.60	41.5	4.5	700	0.25	1.0	9.1	152.0
SMA2Z13A	2A8	13.0	12.35	13.65	38.5	5.0	700	0.25	0.5	9.9	138.0
SMA2Z14A	2A9	14.0	13.30	14.70	35.7	5.5	700	0.25	0.5	10.6	130.0
SMA2Z15A	2B0	15.0	14.25	15.75	33.4	7.0	700	0.25	0.5	11.4	122.0
SMA2Z16A	2B1	16.0	15.20	16.80	31.2	8.0	700	0.25	0.5	12.2	114.0
SMA2Z17A	2B2	17.0	16.15	17.85	29.4	9.0	750	0.25	0.5	13.0	107.0
SMA2Z18A	2B3	18.0	17.10	18.90	27.8	10.0	750	0.25	0.5	13.7	100.0
SMA2Z19A	2B4	19.0	18.05	19.95	26.3	11.0	750	0.25	0.5	14.4	95.0
SMA2Z20A	2B5	20.0	19.00	21.00	25.0	11.0	750	0.25	0.5	15.2	90.0
SMA2Z22A	2B6	22.0	20.90	23.10	22.8	12.0	750	0.25	0.5	16.7	82.0
SMA2Z24A	2B7	24.0	22.80	25.20	20.8	13.0	750	0.25	0.5	18.2	76.0
SMA2Z27A	2B8	27.0	25.65	28.35	18.5	18.0	750	0.25	0.5	20.6	68.0
SMA2Z30A	2B9	30.0	28.50	31.50	16.6	20.0	1000	0.25	0.5	22.5	60.0
SMA2Z33A	2C0	33.0	31.35	34.65	15.1	23.0	1000	0.25	0.5	25.1	55.0
SMA2Z36A	2C1	36.0	34.20	37.80	13.9	25.0	1000	0.25	0.5	27.4	50.0
SMA2Z39A	2C2	39.0	37.05	40.95	12.8	30.0	1000	0.25	0.5	29.7	47.0
SMA2Z43A	2C3	43.0	40.85	45.15	11.6	35.0	1500	0.25	0.5	32.7	43.0
SMA2Z47A	2C4	47.0	44.65	49.35	10.6	40.0	1500	0.25	0.5	35.8	39.0
SMA2Z51A	2C5	51.0	48.45	53.55	9.8	48.0	1500	0.25	0.5	38.8	36.0
SMA2Z56A	2C6	56.0	53.20	58.80	9.0	55.0	2000	0.25	0.5	42.6	32.0
SMA2Z62A	2C7	62.0	58.90	65.10	8.1	60.0	2000	0.25	0.5	47.1	29.0
SMA2Z68A	2C8	68.0	64.60	71.40	7.4	75.0	2000	0.25	0.5	51.7	27.0
SMA2Z75A	2C9	75.0	71.25	78.75	6.7	90.0	2000	0.25	0.5	56.0	24.0
SMA2Z82A	2F0	82.0	77.90	86.10	6.1	100.0	3000	0.25	0.5	62.2	22.0
SMA2Z91A	2F1	91.0	86.45	95.55	5.5	125.0	3000	0.25	0.5	69.2	20.0
SMA2Z100A	2F2	100.0	95.00	105.00	5.0	175.0	3000	0.25	0.5	76.0	18.0
SMA2Z110A	2F3	110.0	104.50	115.50	4.5	250.0	4000	0.25	0.5	83.6	17.0
SMA2Z120A	2F4	120.0	114.00	126.00	4.2	325.0	4500	0.25	0.5	91.2	15.0
SMA2Z130A	2F5	130.0	123.50	136.50	3.8	400.0	5000	0.25	0.5	98.8	14.0
SMA2Z140A	2F6	140.0	133.00	147.00	3.6	500.0	5500	0.25	0.5	106.4	13.0
SMA2Z150A	2F7	150.0	142.50	157.50	3.3	575.0	6000	0.25	0.5	114.0	12.0
SMA2Z160A	2F8	160.0	152.00	168.00	3.1	650.0	6500	0.25	0.5	121.6	11.0
SMA2Z170A	2F9	170.0	161.50	178.50	2.9	675.0	7000	0.25	0.5	130.4	11.0
SMA2Z180A	2G1	180.0	171.00	189.00	2.8	725.0	7000	0.25	0.5	136.8	10.0
SMA2Z190A	2G2	190.0	180.50	199.50	2.6	825.0	8000	0.25	0.5	144.8	10.0
SMA2Z200A	2G3	200.0	190.00	210.00	2.5	1900.0	9990	0.25	0.5	152.0	9.0
SMA2Z220A	2G4	220.0	209.00	231.00	2.0	2000.0	8500	0.25	0.5	167.0	8.0
SMA2Z270A	2G5	270.0	256.50	283.50	1.6	2200.0	8500	0.25	0.5	205.0	6.7
SMA2Z300A	2G6	300.0	285.00	315.00	1.5	2200.0	9000	0.25	0.5	228.0	5.9
SMA2Z330A	2G7	330.0	313.50	346.50	1.4	2300.0	9000	0.25	0.5	250.0	5.4

Ratings And Characteristic Curves

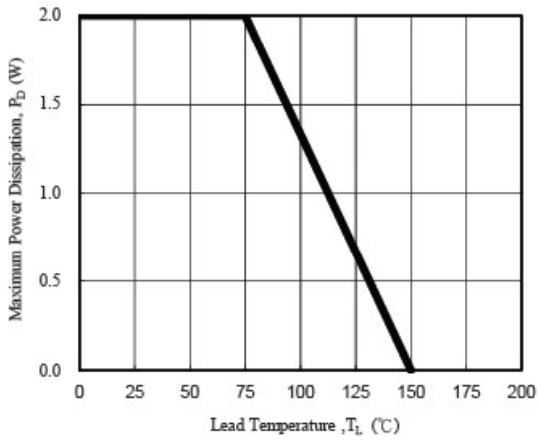


Fig. 1 - Power Temperature Derating Curve

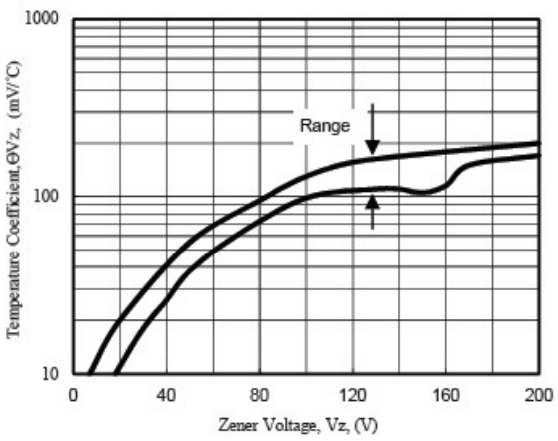


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

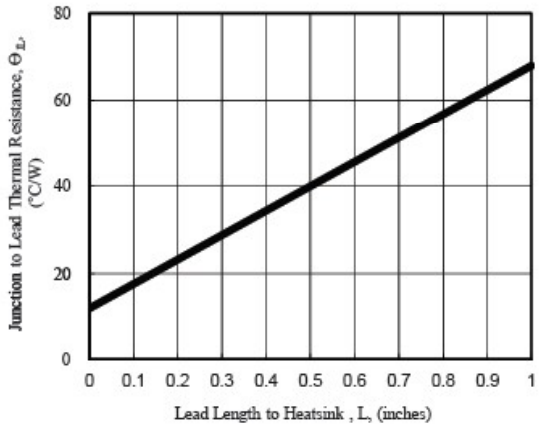


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

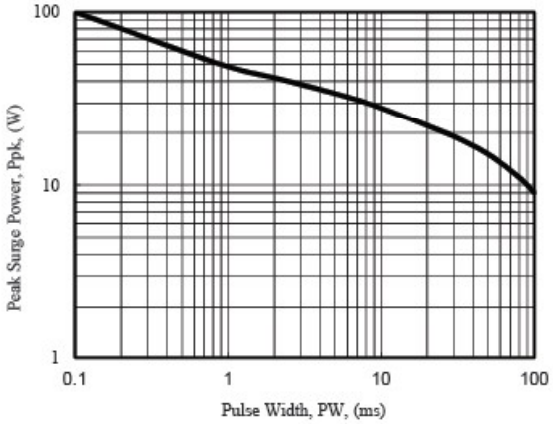


Fig. 4 - Maximum Surge Power

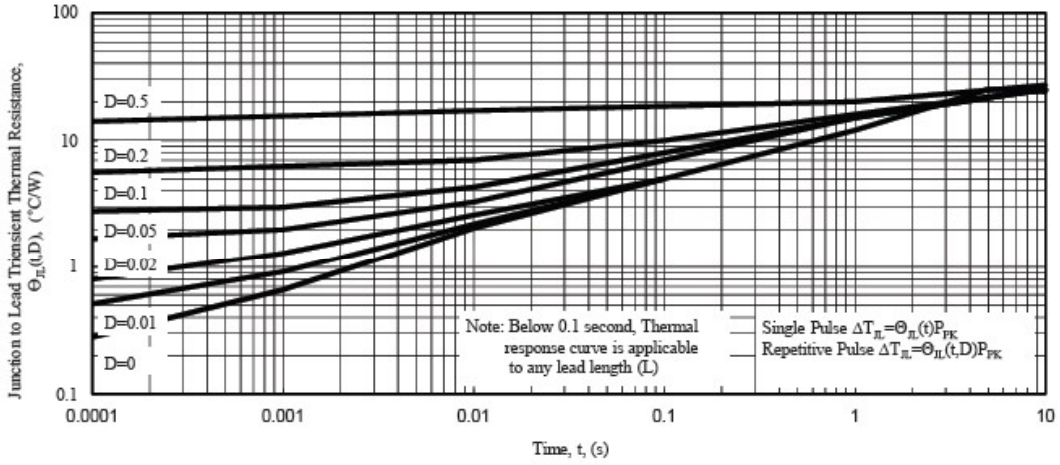
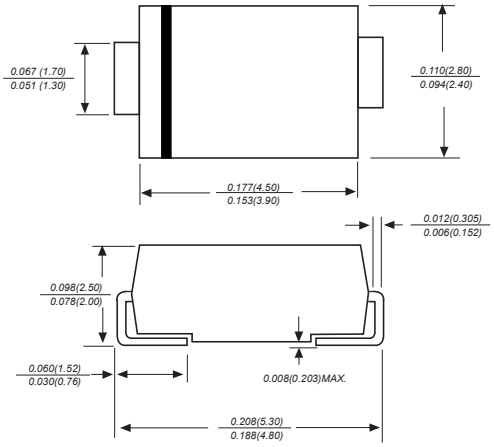


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

Package Outline DO-214AC SMA



Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-214AC SMA	Tape/Reel,11”reel	5000	EIA-481-1
	Tape/Reel,7”reel	2000	EIA-481-1