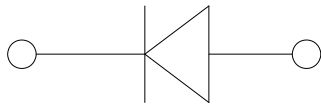
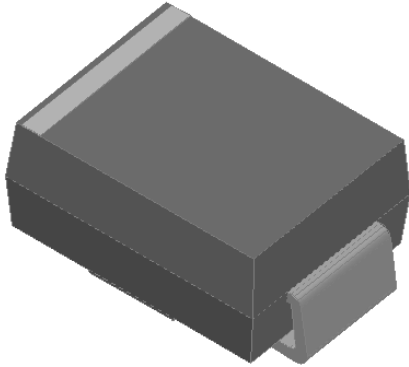


SMB2ZxxA SERIES

Surface Mount Silicon Zener Diodes



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
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Mechanical Date

- **Package:** DO214AA(SMB)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Color band denotes cathode end

■ Maximum Ratings (T_a=25°C Unless otherwise specified)

Parameter	Symbols	Value	Unit
DC Power dissipation at T _L = 75 °C ⁽¹⁾	P _D	2.0	W
Junction temperature range	T _J , T _{STG}	-55 to +150	°C
Storage temperature range	T _J , T _{STG}	-55 to +150	°C

Note :

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

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

Parameter	Symbols	Value	Unit
Maximum forward voltage at I _f =200mA	V _F	1.2	V



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■Electrical Characteristics (Ta=25°C Unless otherwise specified)

Part Number	Device Marking Code	Nominal Zener Voltage @IT			IZT(mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
		VZ AVE.(V)	VZ MIN.(V)	VZ MAX.(V)		ZZT MAX.(Ω) @IZT	ZZK MAX.(Ω) @IZK	IZK(mA)	IR(μA)@VR	VR(V)	
SMB2Z3.3A	2H2	3.3	3.14	3.47	145	8.0	400	1.00	100.0	1.0	548.0
SMB2Z3.6A	2H3	3.6	3.42	3.78	139	5.0	400	1.00	100.0	1.0	502.0
SMB2Z3.9A	2H4	3.9	3.71	4.10	128	5.0	400	1.00	50.0	1.0	464.0
SMB2Z4.3A	2H5	4.3	4.09	4.52	116	4.5	400	1.00	50.0	1.0	421.0
SMB2Z4.7A	2H6	4.7	4.47	4.94	106	4.5	550	1.00	10.0	1.0	385.0
SMB2Z5.1A	2H7	5.1	4.85	5.36	98.0	3.5	600	1.00	10.0	1.0	354.0
SMB2Z5.6A	2H8	5.6	5.32	5.88	89.5	2.5	500	1.00	10.0	2.0	323.0
SMB2Z6.2A	2A0	6.2	5.89	6.51	80.5	1.5	700	1.00	10.0	3.0	292.0
SMB2Z6.8A	2A1	6.8	6.46	7.14	73.5	2.0	700	1.00	10.0	4.0	266.0
SMB2Z7.5A	2A2	7.5	7.13	7.88	66.5	2.0	700	0.50	10.0	5.0	242.0
SMB2Z8.2A	2A3	8.2	7.79	8.61	61.0	2.3	700	0.50	10.0	6.0	220.0
SMB2Z9.1A	2A4	9.1	8.65	9.56	55.0	2.5	700	0.50	10.0	7.0	200.0
SMB2Z10A	2A5	10.0	9.50	10.50	50.0	3.5	700	0.25	10.0	7.6	182.0
SMB2Z11A	2A6	11.0	10.45	11.55	45.5	4.0	700	0.25	0.5	8.4	166.0
SMB2Z12A	2A7	12.0	11.40	12.60	41.5	4.5	700	0.25	0.5	9.1	152.0
SMB2Z13A	2A8	13.0	12.35	13.65	38.5	5.0	700	0.25	0.5	9.9	138.0
SMB2Z14A	2A9	14.0	13.30	14.70	35.7	5.5	700	0.25	0.5	10.6	130.0
SMB2Z15A	2B0	15.0	14.25	15.75	33.4	7.0	700	0.25	0.5	11.4	122.0
SMB2Z16A	2B1	16.0	15.20	16.80	31.2	8.0	700	0.25	0.5	12.2	114.0
SMB2Z17A	2B2	17.0	16.15	17.85	29.4	9.0	750	0.25	0.5	13.0	107.0
SMB2Z18A	2B3	18.0	17.10	18.90	27.8	10.0	750	0.25	0.5	13.7	100.0
SMB2Z19A	2B4	19.0	18.05	19.95	26.3	11.0	750	0.25	0.5	14.4	95.0
SMB2Z20A	2B5	20.0	19.00	21.00	25.0	11.0	750	0.25	0.5	15.2	90.0
SMB2Z22A	2B6	22.0	20.90	23.10	22.8	12.0	750	0.25	0.5	16.7	82.0
SMB2Z24A	2B7	24.0	22.80	25.20	20.8	13.0	750	0.25	0.5	18.2	76.0



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SMB2Z27A	2B8	27.0	25.65	28.35	18.5	18.0	750	0.25	0.5	20.6	68.0
SMB2Z30A	2B9	30.0	28.50	31.50	16.6	20.0	1000	0.25	0.5	22.5	60.0
SMB2Z33A	2C0	33.0	31.35	34.65	15.1	23.0	1000	0.25	0.5	25.1	55.0
SMB2Z36A	2C1	36.0	34.20	37.80	13.9	25.0	1000	0.25	0.5	27.4	50.0
SMB2Z39A	2C2	39.0	37.05	40.95	12.8	30.0	1000	0.25	0.5	29.7	47.0
SMB2Z43A	2C3	43.0	40.85	45.15	11.6	35.0	1500	0.25	0.5	32.7	43.0
SMB2Z47A	2C4	47.0	44.65	49.35	10.6	40.0	1500	0.25	0.5	35.8	39.0
SMB2Z51A	2C5	51.0	48.45	53.55	9.8	48.0	1500	0.25	0.5	38.8	36.0
SMB2Z56A	2C6	56.0	53.20	58.80	9.0	55.0	2000	0.25	0.5	42.6	32.0
SMB2Z62A	2C7	62.0	58.90	65.10	8.1	60.0	2000	0.25	0.5	47.1	29.0
SMB2Z68A	2C8	68.0	64.60	71.40	7.4	75.0	2000	0.25	0.5	51.7	27.0
SMB2Z75A	2C9	75.0	71.25	78.75	6.7	90.0	2000	0.25	0.5	56.0	24.0
SMB2Z82A	2F0	82.0	77.90	86.10	6.1	100.0	3000	0.25	0.5	62.2	22.0
SMB2Z91A	2F1	91.0	86.45	95.55	5.5	125.0	3000	0.25	0.5	69.2	20.0
SMB2Z100A	2F2	100.0	95.00	105.00	5.0	175.0	3000	0.25	0.5	76.0	18.0
SMB2Z110A	2F3	110.0	104.50	115.50	4.5	250.0	4000	0.25	0.5	83.6	17.0
SMB2Z120A	2F4	120.0	114.00	126.00	4.2	325.0	4500	0.25	0.5	91.2	15.0
SMB2Z130A	2F5	130.0	123.50	136.50	3.8	400.0	5000	0.25	0.5	98.8	14.0
SMB2Z140A	2F6	140.0	133.00	147.00	3.6	500.0	5500	0.25	0.5	106.4	13.0
SMB2Z150A	2F7	150.0	142.50	157.50	3.3	575.0	6000	0.25	0.5	114.0	12.0
SMB2Z160A	2F8	160.0	152.00	168.00	3.1	650.0	6500	0.25	0.5	121.6	11.0
SMB2Z170A	2F9	170.0	161.50	178.50	2.9	675.0	7000	0.25	0.5	130.4	11.0
SMB2Z180A	2G1	180.0	171.00	189.00	2.8	725.0	7000	0.25	0.5	136.8	10.0
SMB2Z190A	2G2	190.0	180.50	199.50	2.6	825.0	8000	0.25	0.5	144.8	10.0
SMB2Z200A	2G3	200.0	190.00	210.00	2.5	1900.0	9990	0.25	0.5	152.0	9.0



SMB2ZxxA SERIES

Characteristics (Typical)

FIG1: Power Temperature Derating Curve

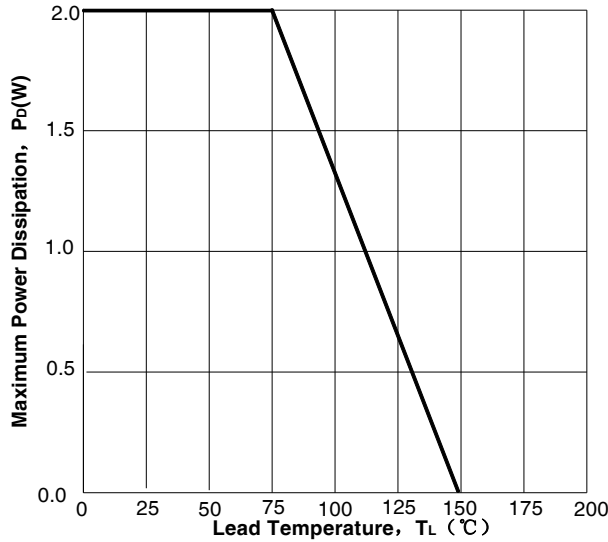


FIG2: Temperature Coefficients v.s. Zener Voltage

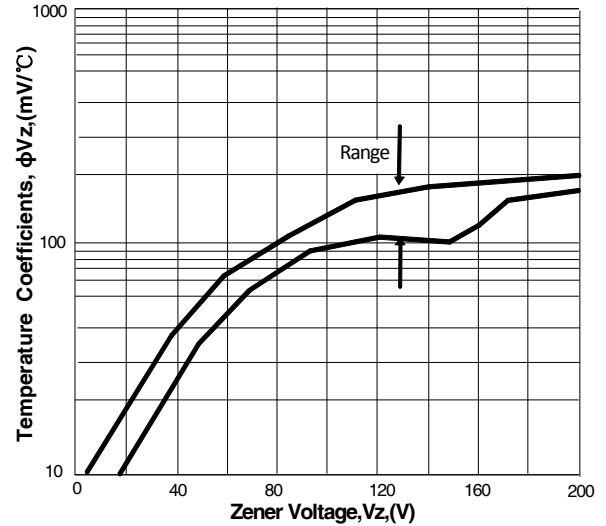


FIG3: Typical Thermal Resistance v.s. Lead Length

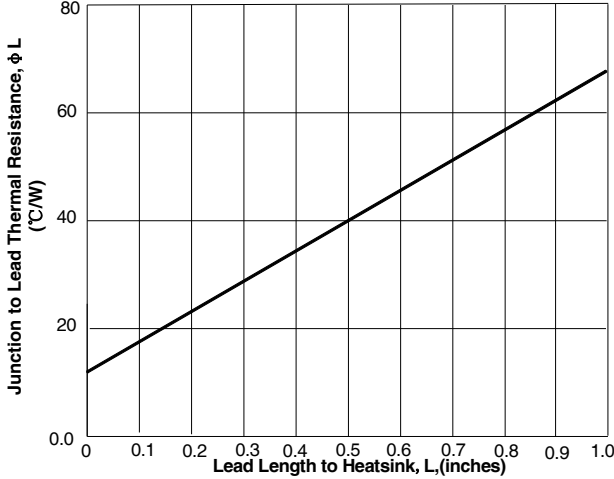


FIG4: Maximum Surge Power

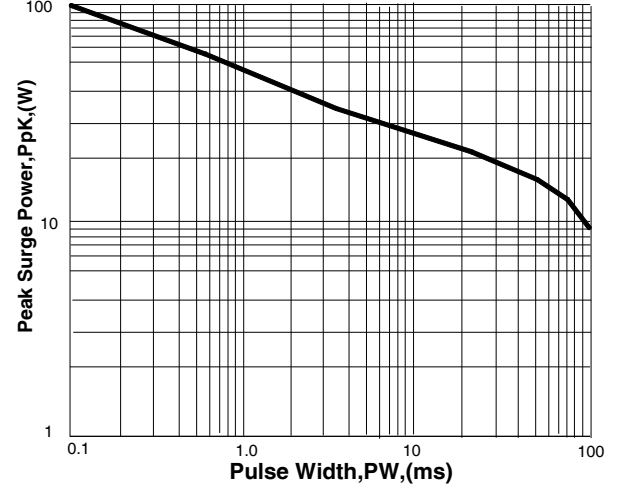
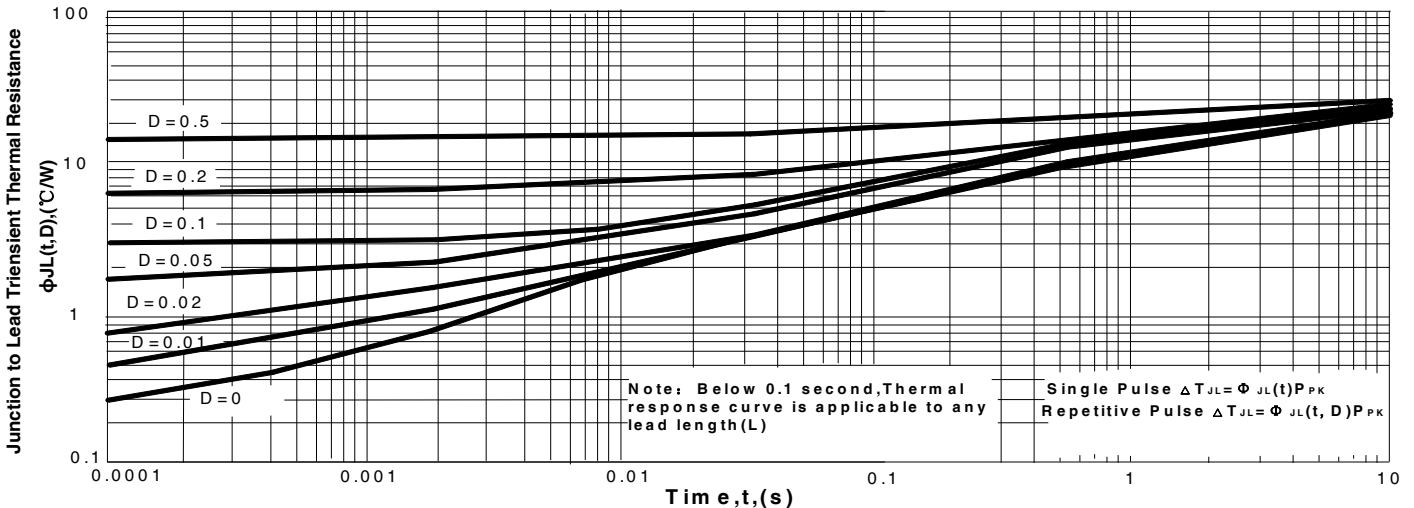


FIG 5: Typical Thermal Response L, Lead Length = 3/8 inch



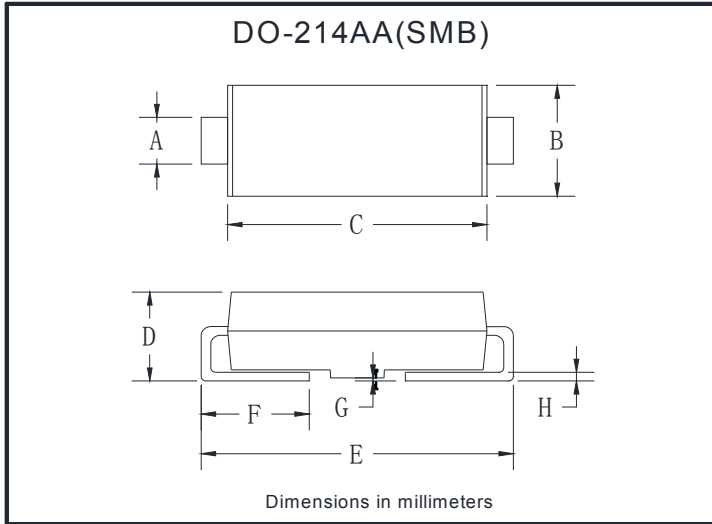
Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMB2ZxxA	F1	Approximate 0.096	3000	6000	48000	13" reel



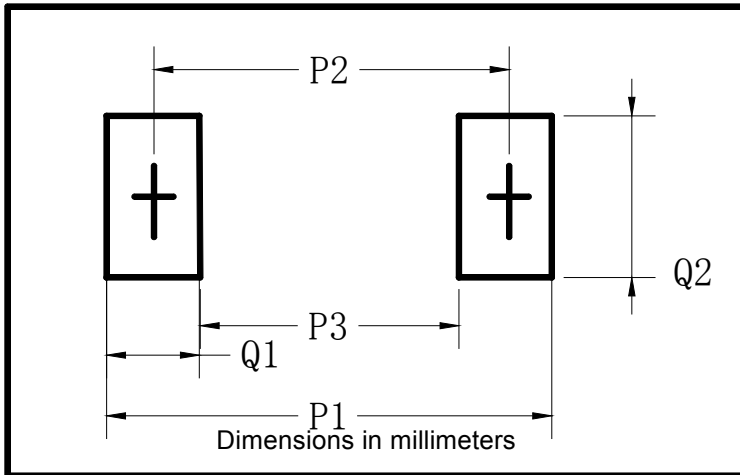
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■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



SMB2ZxxA SERIES

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