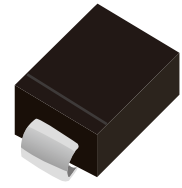
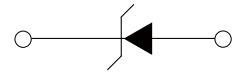


FEATURES

- | 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



DO-214AA(SMB)



Schematic Symbol

MECHANICAL DATA

- | Case : Molded plastic body
- | Polarity : Polarity symbol marking on body
- | Mounting Position : Any

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbo	Value	Unit
DC Power dissipation at $T_L = 75^{\circ}\text{C}^{(1)}$	P_D	3.0	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	$^{\circ}\text{C}$

Note:

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

ELECTRICAL CHARACTERISTICS

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 (μA)@V _R	V _R (V)	
SMB3Z3.3A	3H0	3.3	3.14	3.47	227.3	10.0	500.0	1.00	100.0	1.0	817.0
SMB3Z3.6A	3H1	3.6	3.42	3.78	208.3	9.0	500.0	1.00	100.0	1.0	749.0
SMB3Z3.9A	3H2	3.9	3.71	4.10	192.0	4.5	400.0	1.00	100.0	1.0	691.0
SMB3Z4.3A	3H3	4.3	4.09	4.52	174.0	4.5	400.0	1.00	50.0	1.0	627.0
SMB3Z4.7A	3H4	4.7	4.47	4.94	160.0	4.0	500.0	1.00	50.0	1.0	573.0
SMB3Z5.1A	3H5	5.1	4.85	5.36	147.0	3.5	550.0	1.00	10.0	1.0	528.0
SMB3Z5.6A	3H6	5.6	5.32	5.88	134.0	2.5	600.0	1.00	10.0	2.0	481.0
SMB3Z6.2A	3A0	6.2	5.89	6.51	121.0	1.5	700.0	1.00	10.0	3.0	435.0
SMB3Z6.8A	3A1	6.8	6.46	7.14	110.0	2.0	700.0	1.00	10.0	4.0	393.0
SMB3Z7.5A	3A2	7.5	7.13	7.88	100.0	2.0	700.0	0.50	10.0	5.0	360.0
SMB3Z8.2A	3A3	8.2	7.79	8.61	91.0	2.3	700.0	0.50	10.0	6.0	330.0
SMB3Z9.1A	3A4	9.1	8.65	9.56	82.0	2.5	700.0	0.50	10.0	7.0	297.0
SMB3Z10A	3A5	10.0	9.50	10.50	75.0	3.5	700.0	0.25	10.0	7.6	270.0
SMB3Z11A	3A6	11.0	10.45	11.55	68.0	4.0	700.0	0.25	0.5	8.4	225.0
SMB3Z12A	3A7	12.0	11.40	12.60	63.0	4.5	700.0	0.25	0.5	9.1	246.0
SMB3Z13A	3A8	13.0	12.35	13.65	58.0	4.5	700.0	0.25	0.5	9.9	208.0
SMB3Z14A	3A9	14.0	13.30	14.70	53.0	5.0	700.0	0.25	0.5	10.6	193.0
SMB3Z15A	3B0	15.0	14.25	15.75	50.0	5.5	700.0	0.25	0.5	11.4	180.0
SMB3Z16A	3B1	16.0	15.20	16.80	47.0	5.5	700.0	0.25	0.5	12.2	169.0
SMB3Z17A	3B2	17.0	16.15	17.85	44.0	6.0	750.0	0.25	0.5	13.0	159.0
SMB3Z18A	3B3	18.0	17.10	18.90	42.0	6.0	750.0	0.25	0.5	13.7	150.0
SMB3Z19A	3B4	19.0	18.05	19.95	40.0	7.0	750.0	0.25	0.5	14.4	142.0
SMB3Z20A	3B5	20.0	19.00	21.00	37.0	7.0	750.0	0.25	0.5	15.2	135.0
SMB3Z22A	3B6	22.0	20.90	23.10	34.0	8.0	750.0	0.25	0.5	16.7	123.0
SMB3Z24A	3B7	24.0	22.80	25.20	31.0	9.0	750.0	0.25	0.5	18.2	112.0
SMB3Z27A	3B8	27.0	25.65	28.35	28.0	10.0	750.0	0.25	0.5	20.6	100.0
SMB3Z30A	3B9	30.0	28.50	31.50	25.0	16.0	1000.0	0.25	0.5	22.5	90.0
SMB3Z33A	3C0	33.0	31.35	34.65	23.0	20.0	1000.0	0.25	0.5	25.1	82.0
SMB3Z36A	3C1	36.0	34.20	37.80	21.0	22.0	1000.0	0.25	0.5	27.4	75.0
SMB3Z39A	3C2	39.0	37.05	40.95	19.0	28.0	1000.0	0.25	0.5	29.7	69.0

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 (μ A) @ V_R	V_R (V)	
SMB3Z43A	3C3	43.0	40.85	45.15	17.0	33.0	1500.0	0.25	0.5	32.7	63.0
SMB3Z47A	3C4	47.0	44.65	49.35	16.0	38.0	1500.0	0.25	0.5	35.6	57.0
SMB3Z51A	3C5	51.0	48.45	53.55	15.0	45.0	1500.0	0.25	0.5	38.8	53.0
SMB3Z56A	3C6	56.0	53.20	58.80	13.0	50.0	2000.0	0.25	0.5	42.6	48.0
SMB3Z62A	3C7	62.0	58.90	65.10	12.0	55.0	2000.0	0.25	0.5	47.1	44.0
SMB3Z68A	3C8	68.0	64.60	71.40	11.0	70.0	2000.0	0.25	0.5	51.7	40.0
SMB3Z75A	3C9	75.0	71.25	78.75	10.0	85.0	2000.0	0.25	0.5	56.0	36.0
SMB3Z82A	3F0	82.0	77.90	86.10	9.1	95.0	3000.0	0.25	0.5	62.2	33.0
SMB3Z91A	3F1	91.0	86.45	95.55	8.2	115.0	3000.0	0.25	0.5	69.2	30.0
SMB3Z100A	3F2	100.0	95.00	105.00	7.5	160.0	3000.0	0.25	0.5	76.0	27.0
SMB3Z110A	3F3	110.0	104.50	115.50	6.8	225.0	4000.0	0.25	0.5	83.6	25.0
SMB3Z120A	3F4	120.0	114.00	126.00	6.3	300.0	4500.0	0.25	0.5	91.2	22.0
SMB3Z130A	3F5	130.0	123.50	136.50	5.8	375.0	5000.0	0.25	0.5	98.8	21.0
SMB3Z140A	3F6	140.0	133.00	147.00	5.3	475.0	5000.0	0.25	0.5	106.4	19.0
SMB3Z150A	3F7	150.0	142.50	157.50	5.0	550.0	6000.0	0.25	0.5	114.0	18.0
SMB3Z160A	3F8	160.0	152.00	168.00	4.7	625.0	6500.0	0.25	0.5	121.6	17.0
SMB3Z170A	3F9	170.0	161.50	178.50	4.4	650.0	7000.0	0.25	0.5	130.4	16.0
SMB3Z180A	3G1	180.0	171.00	189.00	4.2	700.0	7000.0	0.25	0.5	136.8	15.0
SMB3Z190A	3G2	190.0	180.50	199.50	4.0	800.0	8000.0	0.25	0.5	144.8	14.0
SMB3Z200A	3G3	200.0	190.00	210.00	3.7	875.0	8000.0	0.25	0.5	152.0	13.0

CHARACTERISTIC CURVES

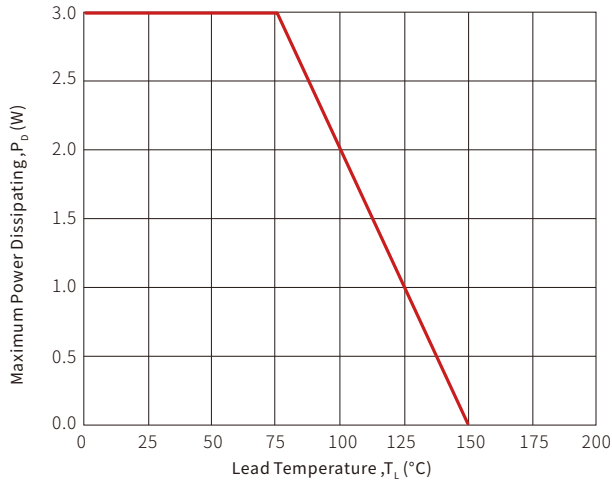
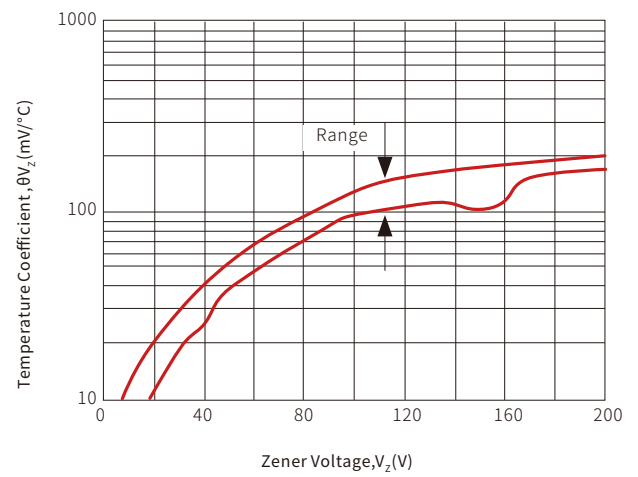
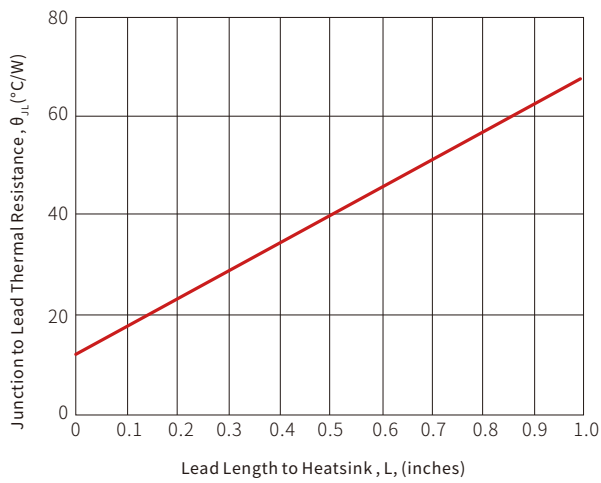
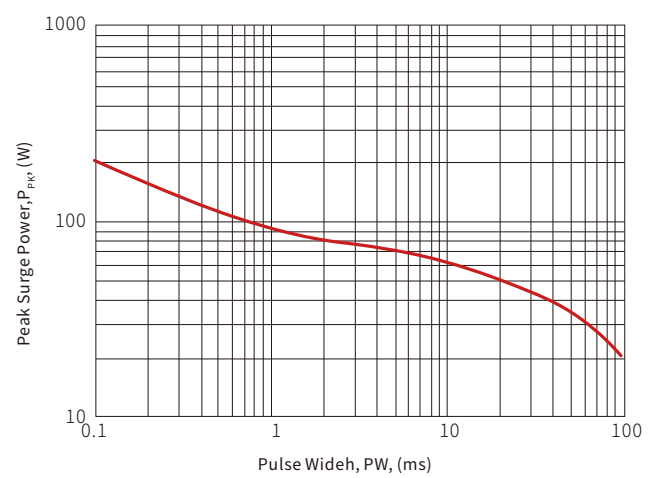
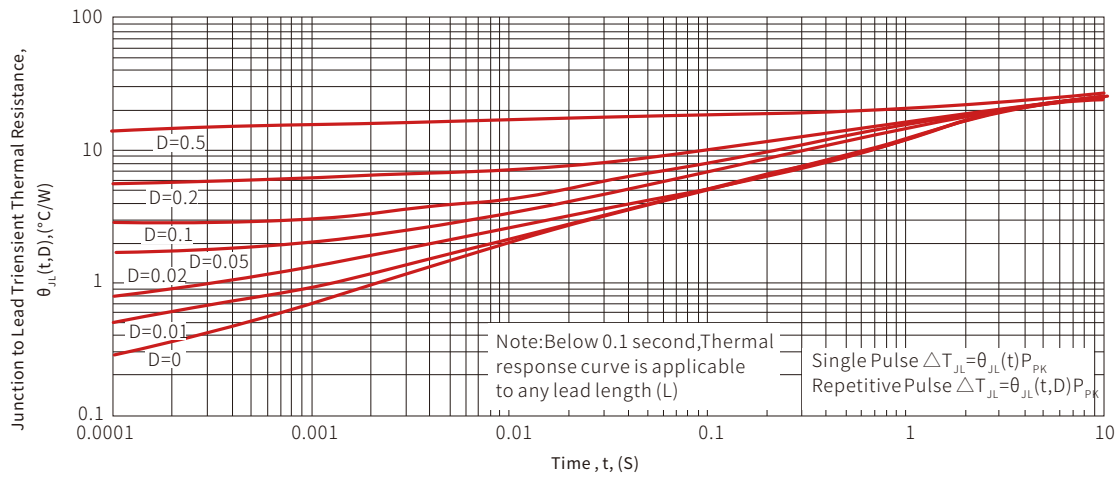
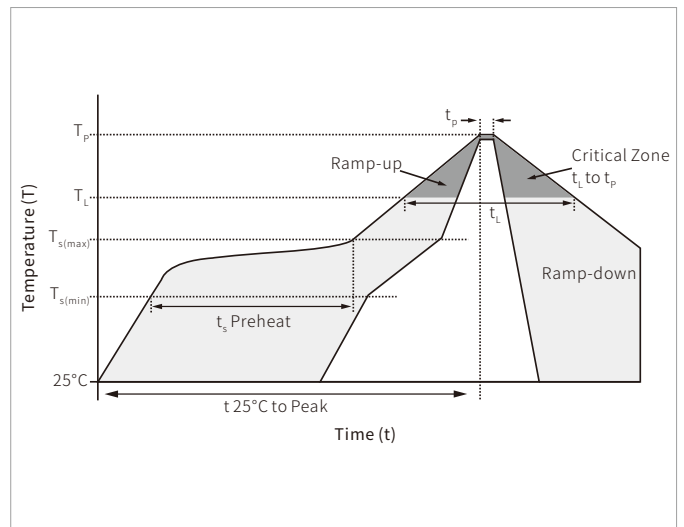
Fig.1-Power Temperature Derating Curve

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

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

Fig.4-Maximum Surge Power


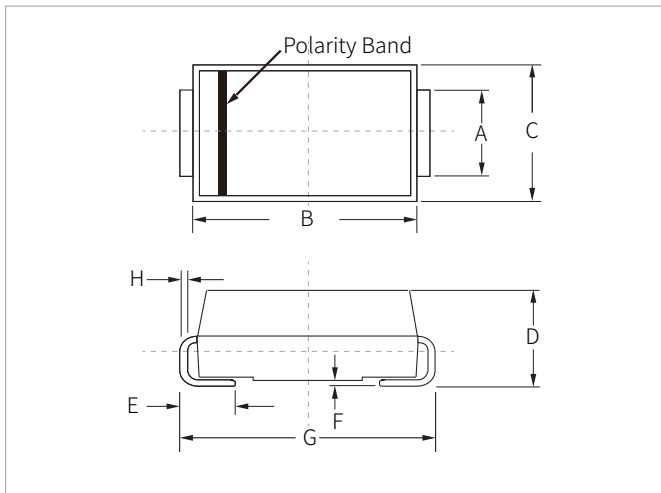
Fig.5-Typical Thermal Response L, Lead Length=3/8inch


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

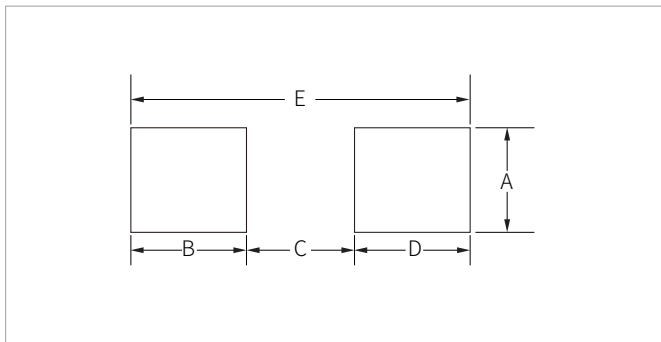


DO-214AA(SMB) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.80	2.20	0.071	0.087
B	4.30	4.70	0.170	0.185
C	3.40	3.90	0.134	0.153
D	2.15	2.75	0.085	0.108
E	1.00	1.50	0.039	0.059
F	0.02	0.20	0.001	0.008
G	5.10	5.50	0.200	0.216
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	-	0.087	-
B	1.45	-	0.057	-
C	-	2.55	-	0.010
D	1.45	-	0.057	-
E	5.60REF		0.220REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SMB3Z3.3A-SMB3Z200A	DO-214AA(SMB)	3000PCS	13"

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