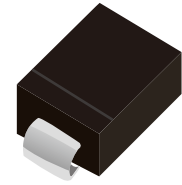
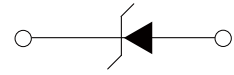


FEATURES

- | 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: DO-214AA Molded plastic
- | Polarity: Color band denotes cathode end
- | 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	Symbol	Value	Unit
DC Power dissipation at $T_L = 75^{\circ}\text{C}^{(1)}$	P_D	1.5	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 I _{ZM} (mA) @50°C @V _(BR)
		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)	
SMB5913A	913A	3.3	3.14	3.47	113.6	10.0	500.0	1.00	100.0	1.0	455.0
SMB5914A	914A	3.6	3.42	3.78	104.2	9.0	500.0	1.00	100.0	1.0	417.0
SMB5915A	915A	3.9	3.71	4.10	96.1	7.5	500.0	1.00	50.0	1.0	385.0
SMB5916A	916A	4.3	4.09	4.52	87.2	6.0	500.0	1.00	10.0	1.0	349.0
SMB5917A	917A	4.7	4.47	4.94	79.8	5.0	500.0	1.00	10.0	1.5	319.0
SMB5918A	918A	5.1	4.85	5.36	73.5	4.0	350.0	1.00	10.0	2.0	294.0
SMB5919A	919A	5.6	5.32	5.88	66.9	2.0	250.0	1.00	10.0	3.0	268.0
SMB5920A	920A	6.2	5.89	6.51	60.5	2.0	200.0	1.00	10.0	4.0	242.0
SMB5921A	921A	6.8	6.46	7.14	55.1	2.5	200.0	1.00	10.0	5.2	221.0
SMB5922A	922A	7.5	7.13	7.88	50.0	3.0	400.0	0.50	10.0	6.0	200.0
SMB5923A	923A	8.2	7.79	8.61	45.7	3.5	400.0	0.50	10.0	6.5	183.0
SMB5924A	924A	9.1	8.65	9.56	41.2	4.0	500.0	0.50	10.0	7.0	165.0
SMB5925A	925A	10.0	9.5	10.5	37.5	4.5	500.0	0.25	10.0	8.0	150.0
SMB5926A	926A	11.0	10.45	11.55	34.1	5.5	550.0	0.25	0.5	8.4	136.0
SMB5927A	927A	12.0	11.4	12.6	31.2	6.5	550.0	0.25	0.5	9.1	125.0
SMB5928A	928A	13.0	12.35	13.65	28.8	7.0	550.0	0.25	0.5	9.9	115.0
SMB5929A	929A	15.0	14.25	15.75	25.0	9.0	600.0	0.25	0.5	11.4	100.0
SMB5930A	930A	16.0	15.2	16.8	23.4	10.0	600.0	0.25	0.5	12.2	94.0
SMB5931A	931A	18.0	17.1	18.9	20.8	12.0	650.0	0.25	0.5	13.7	83.0
SMB5932A	932A	20.0	19.0	21.0	18.7	14.0	650.0	0.25	0.5	15.2	75.0
SMB5933A	933A	22.0	20.9	23.1	17.0	17.5	650.0	0.25	0.5	16.7	68.0
SMB5934A	934A	24.0	22.8	25.2	15.6	19.0	700.0	0.25	0.5	18.2	63.0
SMB5935A	935A	27.0	25.65	28.35	13.9	23.0	700.0	0.25	0.5	20.6	56.0
SMB5936A	936A	30.0	28.5	31.5	12.5	26.0	750.0	0.25	0.5	22.8	50.0
SMB5937A	937A	33.0	31.35	34.65	11.4	33.0	800.0	0.25	0.5	25.1	45.0
SMB5938A	938A	36.0	34.2	37.8	10.4	38.0	850.0	0.25	0.5	27.4	42.0
SMB5939A	939A	39.0	37.05	40.95	9.6	45.0	900.0	0.25	0.5	29.7	38.0
SMB5940A	940A	43.0	40.85	45.15	8.7	53.0	950.0	0.25	0.5	32.7	35.0
SMB5941A	941A	47.0	44.65	49.35	8.0	67.0	1000.0	0.25	0.5	35.8	32.0
SMB5942A	942A	51.0	48.45	53.55	7.3	70.0	1100.0	0.25	0.5	38.8	29.0
SMB5943A	943A	56.0	53.2	58.8	6.7	86.0	1300.0	0.25	0.5	42.6	27.0

Part Number	Device Marking Code	Nominal Zener Voltage @ I_T			I_{ZT} (mA)	Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current I_{ZM} (mA) @50°C @ $V_{(BR)}$
		$V_{Z,AVE.}$ (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)	
SMB5944A	944A	62.0	58.9	65.1	6.0	100.0	1500.0	0.25	0.5	47.1	24.0
SMB5945A	945A	68.0	64.6	71.4	5.5	120.0	1700.0	0.25	0.5	51.7	22.0
SMB5946A	946A	75.0	71.25	78.75	5.0	140.0	2000.0	0.25	0.5	56.0	20.0
SMB5947A	947A	82.0	77.9	86.1	4.6	160.0	2500.0	0.25	0.5	62.2	18.0
SMB5948A	948A	91.0	86.45	95.55	4.1	200.0	3000.0	0.25	0.5	69.2	16.0
SMB5949A	949A	100.0	95.0	105.0	3.7	250.0	3100.0	0.25	0.5	76.0	15.0
SMB5950A	950A	110.0	104.5	115.5	3.4	300.0	4000.0	0.25	0.5	83.6	14.0
SMB5951A	951A	120.0	114.0	126.0	3.1	380.0	4500.0	0.25	0.5	91.2	13.0
SMB5952A	952A	130.0	123.5	136.5	2.9	450.0	5000.0	0.25	0.5	98.8	12.0
SMB5953A	953A	150.0	142.5	157.5	2.5	600.0	6000.0	0.25	0.5	114.0	10.0
SMB5954A	954A	160.0	152.0	168.0	2.3	700.0	6500.0	0.25	0.5	121.6	9.4
SMB5955A	955A	180.0	171.0	189.0	2.1	900.0	7000.0	0.25	0.5	136.8	8.3
SMB5956A	956A	200.0	190.0	210.0	1.9	1200.0	8000.0	0.25	0.5	152.0	7.5

CHARACTERISTIC CURVES

Fig.1-Power Temperature Derating Curve

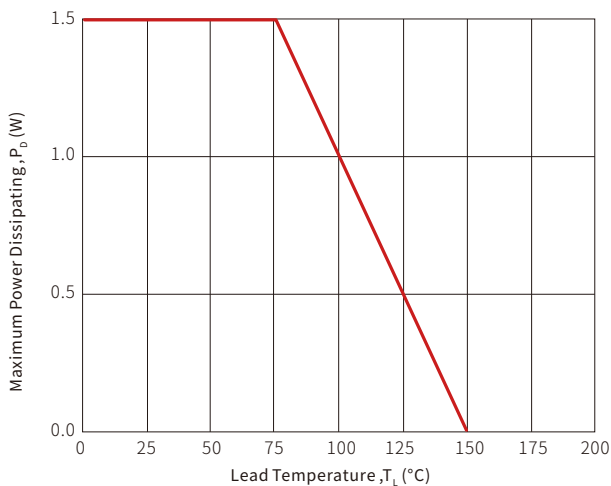


Fig.2-Temperature Coefficients v.s. Zener Voltage

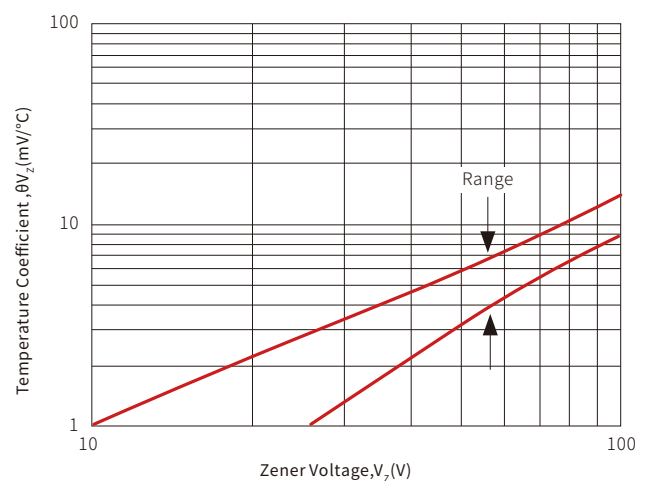


Fig.3-Typical thermal Resistance v.s, Lead Length

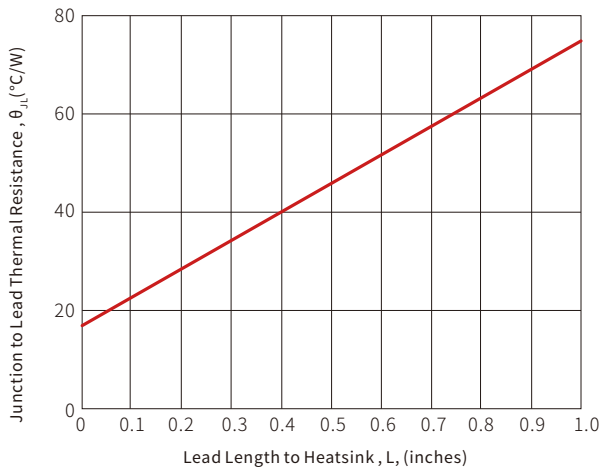


Fig.4-Maximum Surge Power

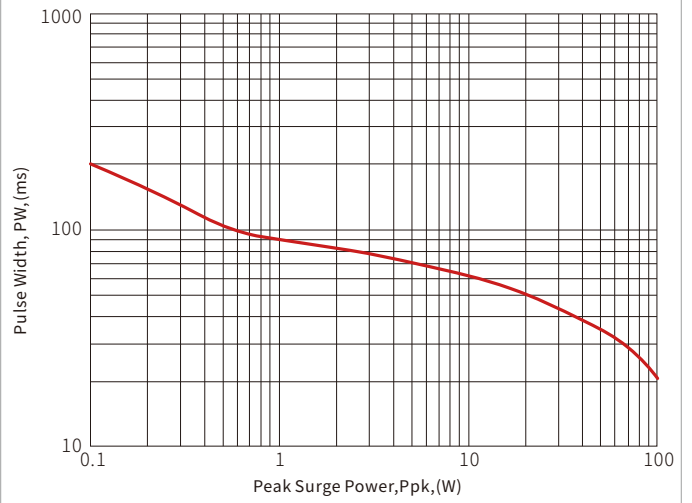
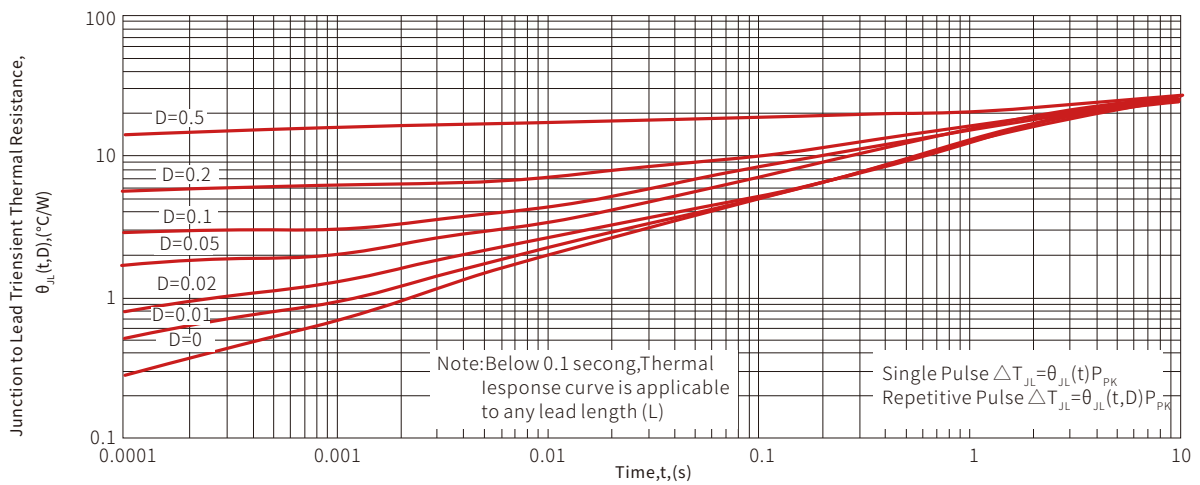
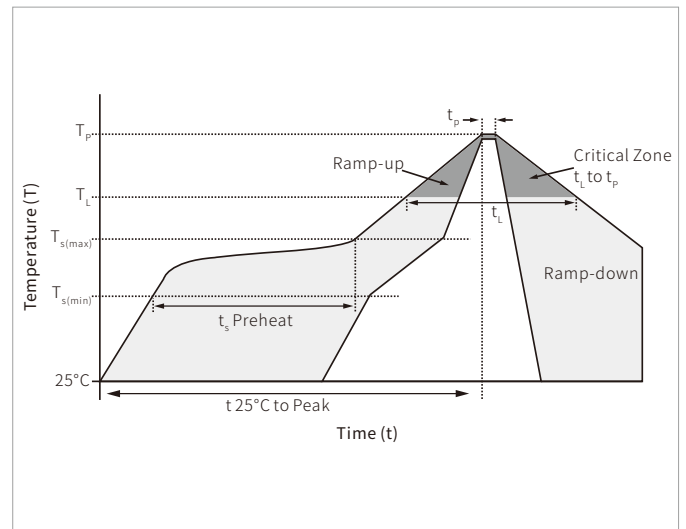


Fig.5-Typical Thermal Response L , Lead Length=3/8inch

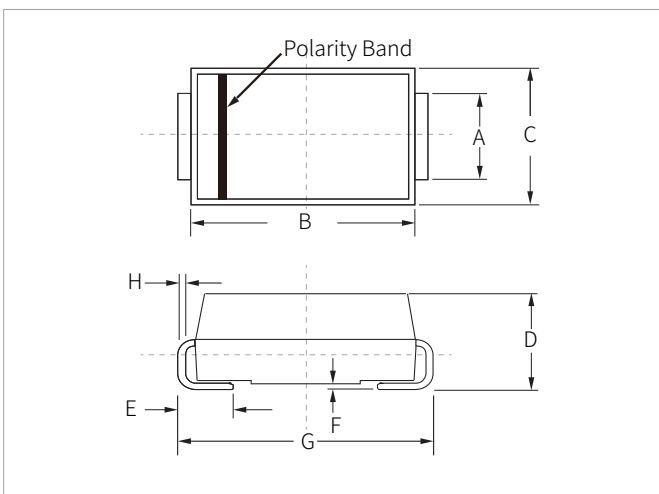


SOLDERING PARAMETERS

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

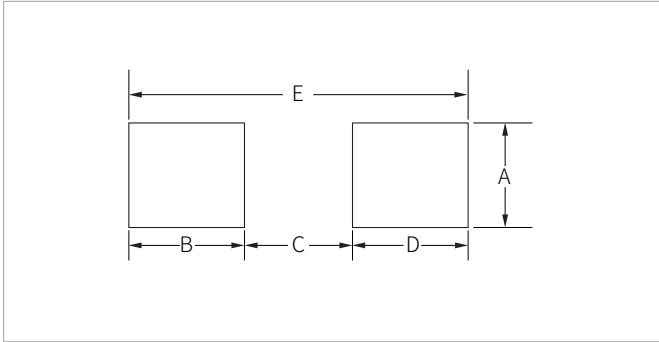


DO-214AA(SMB) PACKAGE INFORMATION



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
SMB59-A	DO-214AA(SMB)	3000PCS	13"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

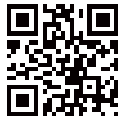
Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
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Ext: 8868
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By QR Code

Website



Wechat

To find your local partner within Semiware' s global website: www.semiware.com

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