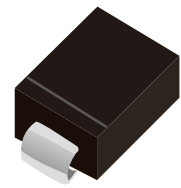
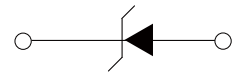


FEATURES

- | 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	Symbol	Value	Unit
DC Power dissipation at $T_L = 75^{\circ}\text{C}^{(1)}$	P_D	5.0	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)	
SMB5333A	333A	3.3	3.14	3.47	380	3.0	400	1.00	300	1.0	1437.0
SMB5334A	334A	3.6	3.42	3.78	350.0	2.5	500	1.00	150	1.0	1317.0
SMB5335A	335A	3.9	3.71	4.10	320.0	2.0	500	1.00	50	1.0	1216.0
SMB5336A	336A	4.3	4.09	4.52	290.0	2.0	500	1.00	10	1.0	1103.0
SMB5337A	337A	4.7	4.47	4.94	260.0	2.0	450	1.00	5	1.0	1009.0
SMB5338A	338A	5.1	4.85	5.36	240.0	1.5	400	1.00	1.0	1.0	930.0
SMB5339A	339A	5.6	5.32	5.88	220.0	1.0	400	1.00	1.0	2.0	846.0
SMB5340A	340A	6.0	5.70	6.30	200.0	1.0	300	1.00	1.0	3.0	790.0
SMB5341A	341A	6.2	5.89	6.51	200.0	1.0	200	1.00	1.0	3.0	765.0
SMB5342A	342A	6.8	6.46	7.14	175.0	1.0	200	1.00	10.0	5.2	700.0
SMB5343A	343A	7.5	7.13	7.88	175.0	1.5	200	1.00	10.0	5.7	630.0
SMB5344A	344A	8.2	7.79	8.61	150.0	1.5	200	1.00	10.0	6.2	580.0
SMB5345A	345A	8.7	8.27	9.14	150.0	2.0	200	1.00	10.0	6.6	545.0
SMB5346A	346A	9.1	8.65	9.56	150.0	2.0	150	1.00	7.5	6.9	520.0
SMB5347A	347A	10.0	9.50	10.50	125.0	2.0	125	1.00	5	7.6	475.0
SMB5348A	348A	11.0	10.45	11.55	125.0	2.5	125	1.00	5	8.4	430.0
SMB5349A	349A	12.0	11.40	12.60	100.0	2.5	125	1.00	2	9.1	395.0
SMB5350A	350A	13.0	12.35	13.65	100.0	2.5	100	1.00	1	9.9	365.0
SMB5351A	351A	14.0	13.30	14.70	100.0	2.5	75	1.00	1	10.6	340.0
SMB5352A	352A	15.0	14.25	15.75	75.0	2.5	75	1.00	1	11.5	315.0
SMB5353A	353A	16.0	15.20	16.80	75.0	2.5	75	1.00	1	12.2	295.0
SMB5354A	354A	17.0	16.15	17.85	70.0	2.5	75	1.00	0.5	12.9	280.0
SMB5355A	355A	18.0	17.10	18.90	65.0	2.5	75	1.00	0.5	13.7	265.0
SMB5356A	356A	19.0	18.05	19.95	65.0	3.0	75	1.00	0.5	14.4	250.0
SMB5357A	357A	20.0	19.00	21.00	65.0	3.0	75	1.00	0.5	15.2	237.0
SMB5358A	358A	22.0	20.90	23.10	50.0	3.5	75	1.00	0.5	16.7	216.0
SMB5359A	359A	24.0	22.80	25.20	50.0	3.5	100	1.00	0.5	18.2	198.0
SMB5360A	360A	25.0	23.75	26.25	50.0	4.0	110	1.00	0.5	19.0	190.0
SMB5361A	361A	27.0	25.65	28.35	50.0	5.0	120	1.00	0.5	20.6	176.0
SMB5362A	362A	28.0	26.60	29.40	50.0	6.0	130	1.00	0.5	21.2	170.0

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 (uA)@V _R	V _R (V)	
SMB5363A	363A	30.0	28.50	31.50	40.0	8.0	140	1.00	0.5	22.8	158.0
SMB5364A	364A	33.0	31.35	34.65	40.0	10.0	150	1.00	0.5	25.1	144.0
SMB5365A	365A	36.0	34.20	37.80	30.0	11.0	160	1.00	0.5	27.4	132.0
SMB5366A	366A	39.0	37.05	40.95	30.0	14.0	170	1.00	0.5	29.7	122.0
SMB5367A	367A	43.0	40.85	45.15	30.0	20.0	190	1.00	0.5	32.7	110.0
SMB5368A	368A	47.0	44.65	49.35	25.0	25.0	210	1.00	0.5	35.8	100.0
SMB5369A	369A	51.0	48.45	53.55	25.0	27.0	230	1.00	0.5	38.8	93.0
SMB5370A	370A	56.0	53.20	58.80	20.0	35.0	280	1.00	0.5	42.6	86.0
SMB5371A	371A	60.0	57.00	63.00	20.0	40.0	350	1.00	0.5	42.5	79.0
SMB5372A	372A	62.0	58.90	65.10	20.0	42.0	400	1.00	0.5	47.1	76.0
SMB5373A	373A	68.0	64.60	71.40	20.0	44.0	500	1.00	0.5	51.7	70.0
SMB5374A	374A	75.0	71.25	78.75	20.0	45.0	620	1.00	0.5	56.0	63.0
SMB5375A	375A	82.0	77.90	86.10	15.0	65.0	720	1.00	0.5	62.2	58.0
SMB5376A	376A	87.0	82.65	91.35	15.0	75.0	760	1.00	0.5	66.0	54.5
SMB5377A	377A	91.0	86.45	95.55	15.0	75.0	760	1.00	0.5	69.2	52.5
SMB5378A	378A	100.0	95.00	105.00	12.0	90.0	800	1.00	0.5	76.0	47.5
SMB5379A	379A	110.0	104.50	115.50	12.0	125.0	1000	1.00	0.5	83.6	43.0
SMB5380A	380A	120.0	114.00	126.00	10.0	170.0	1150	1.00	0.5	91.2	39.5
SMB5381A	381A	130.0	123.50	136.50	10.0	190.0	1250	1.00	0.5	98.8	36.6
SMB5382A	382A	140.0	133.00	147.00	8.0	230.0	1500	1.00	0.5	106.0	34.0
SMB5383A	383A	150.0	142.50	157.50	8.0	330.0	1500	1.00	0.5	114.0	31.6
SMB5384A	384A	160.0	152.00	168.00	8.0	350.0	1650	1.00	0.5	122.0	29.4
SMB5385A	385A	170.0	161.50	178.50	8.0	380.0	1750	1.00	0.5	129.0	28.0
SMB5386A	386A	180.0	171.00	189.00	5.0	430.0	1750	1.00	0.5	137.0	26.4
SMB5387A	387A	190.0	180.50	199.50	5.0	450.0	1850	1.00	0.5	144.0	25.0
SMB5388A	388A	200.0	190.00	210.00	5.0	480.0	1850	1.00	0.5	152.0	23.6

CHARACTERISTIC CURVES

Fig.1-Power Temperature Derating Curve

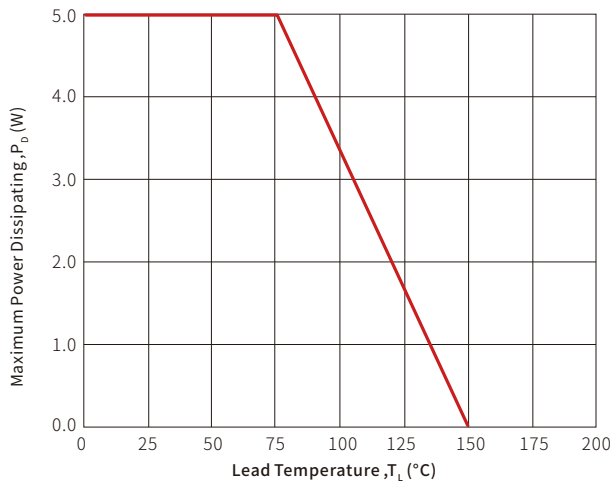


Fig.2-Temperature Coefficients v.s. Zener Voltage

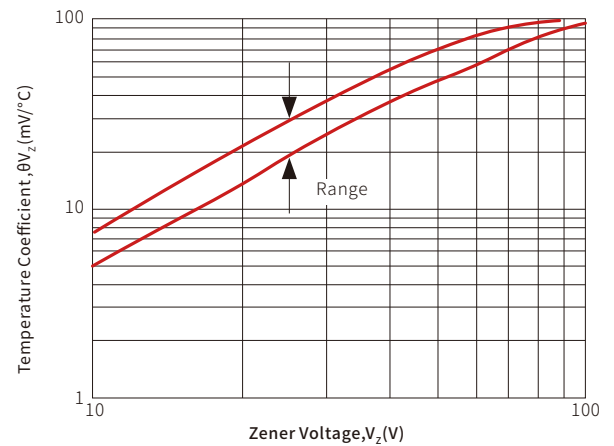


Fig.3-Typical Thermal Resistance v.s. Lead Length

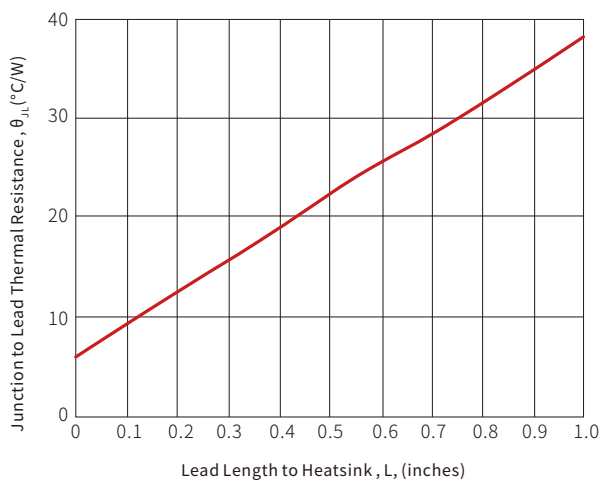


Fig.4-Maximum Surge Power

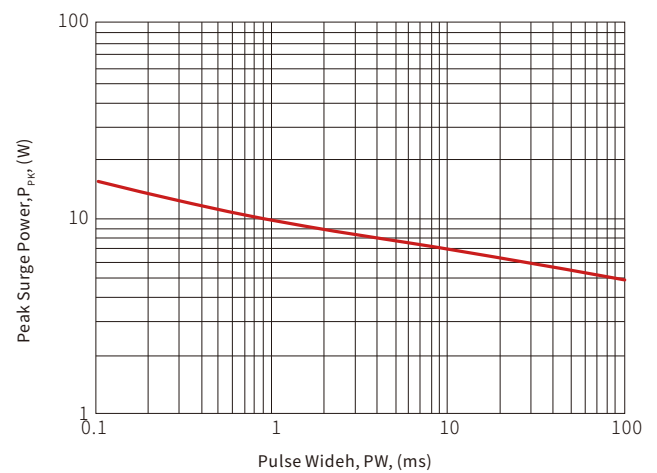
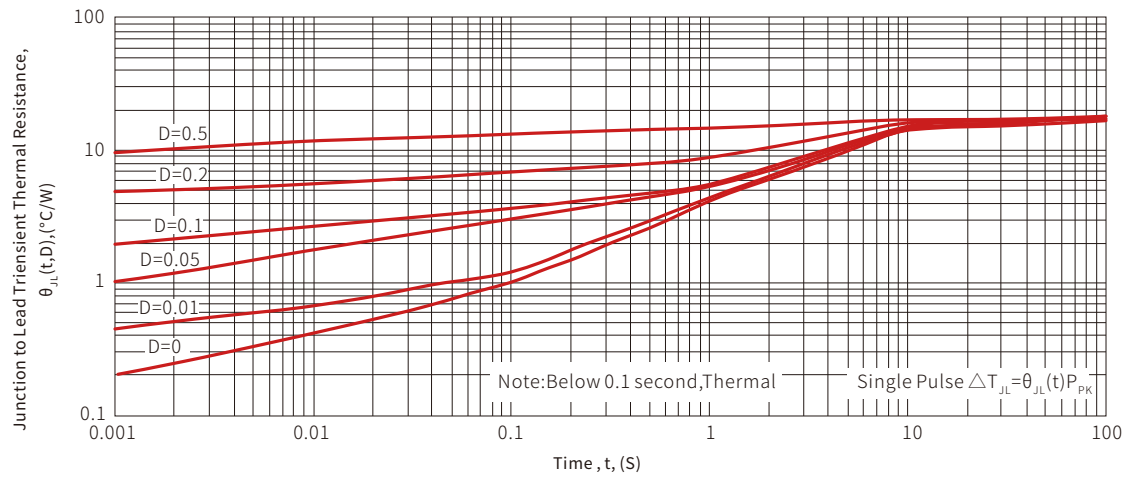
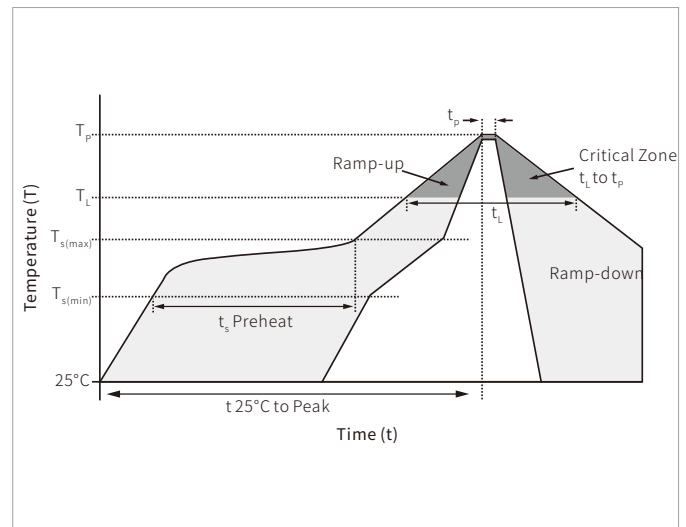


Fig.5-Typical Thermal Response L, Lead Length=3/8inch

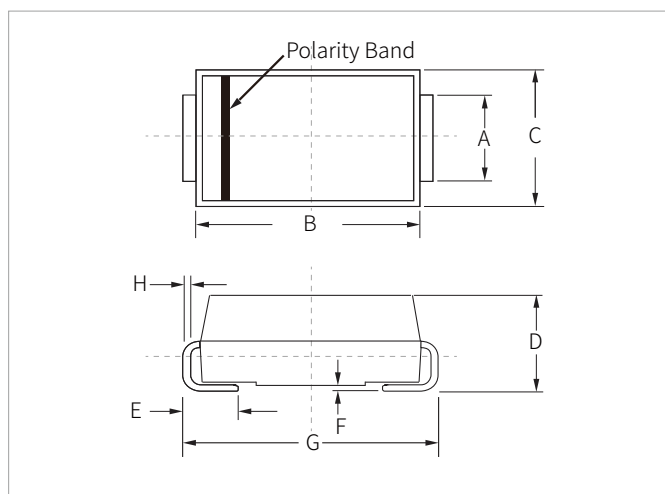


SOLDERING PARAMETERS

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

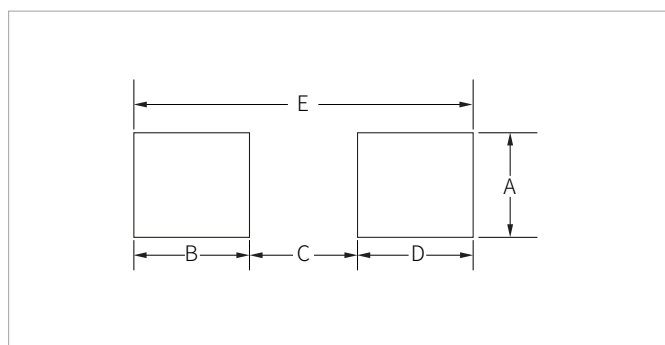


DO-214AA(SMB) PACKAGE INFORMATION



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
SMB53xxA	DO-214AA(SMB)	3000PCS	13"

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