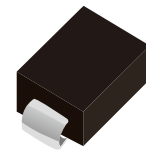
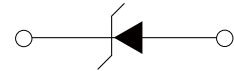


FEATURES

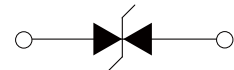
- | Low profile package
- | Ideal for automated placement
- | 1000 Watt peak pulse power capability with a 10/1000µs waveform
- | For surface mounted applications to optimize board space
- | Excellent clamping capability
- | Very fast response time
- | Low incremental surge resistance



DO-214AA(SMB)



Uni-directional



Bi-directional

APPLICATIONS

- | Power supply protection
- | Automotive application
- | Industrial application
- | Power management

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
Peak Pulse Power Dissipation on 10/1000µs waveform (Note1, Note2).	P_{PPM}	1000	Watts
Steady State Power Dissipation at $T_A=50^{\circ}\text{C}$ (Note2).	P_D	5.0	Watts

Notes : 1.Non-repetitive current pulse, $T_A=25^{\circ}\text{C}$.
 2.Mounted on 5.0mm*5.0mm (0.03mm thick) Copper Pads to each terminal.

THERMAL CONSIDERATIONS

Parameter	Symbol	Value	Unit
Operating Junction Temperature	T_J	-55 to +150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}\text{C}$
Junction to Ambient on printed circuit	$R_{\theta JA}$	90	$^{\circ}\text{C/W}$

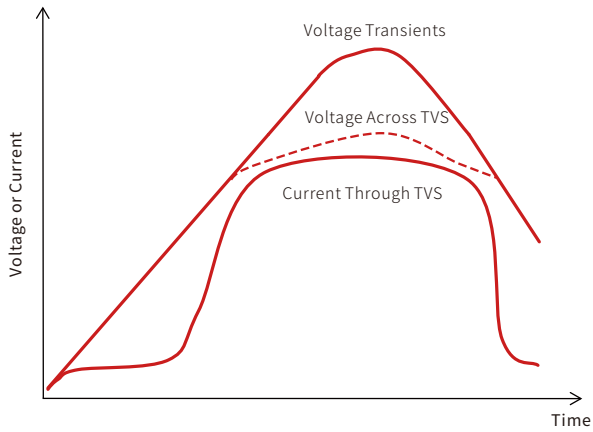
ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
Uni-Polar	Bi-Polar	Uni	Bi	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMB10J5.0A	SMB10J5.0CA	TKE	TAE	5.0	6.40	7.00	10	9.2	108.7	800
SMB10J6.0A	SMB10J6.0CA	TKG	TAG	6.0	6.67	7.37	10	10.3	97.1	800
SMB10J6.5A	SMB10J6.5CA	TKK	TAK	6.5	7.22	7.98	10	11.2	89.3	500
SMB10J7.0A	SMB10J7.0CA	TKM	TAM	7.0	7.78	8.60	10	12.0	83.3	200
SMB10J7.5A	SMB10J7.5CA	TKP	TAP	7.5	8.33	9.21	1	12.9	77.5	100
SMB10J8.0A	SMB10J8.0CA	TKR	TAR	8.0	8.89	9.83	1	13.6	73.5	50
SMB10J8.5A	SMB10J8.5CA	TKT	TAT	8.5	9.44	10.4	1	14.4	69.4	20
SMB10J9.0A	SMB10J9.0CA	TKV	TAV	9.0	10.0	11.1	1	15.4	64.9	10
SMB10J10A	SMB10J10CA	TKX	TAX	10.0	11.1	12.3	1	17.0	58.8	5
SMB10J11A	SMB10J11CA	TKZ	TAZ	11.0	12.2	13.5	1	18.2	54.9	1
SMB10J12A	SMB10J12CA	TLE	TBE	12.0	13.3	14.7	1	19.9	50.3	1
SMB10J13A	SMB10J13CA	TLG	TBG	13.0	14.4	15.9	1	21.5	46.5	1
SMB10J14A	SMB10J14CA	TLK	TBK	14.0	15.6	17.2	1	23.2	43.1	1
SMB10J15A	SMB10J15CA	TLM	TBM	15.0	16.7	18.5	1	24.4	41.0	1
SMB10J16A	SMB10J16CA	TLP	TBP	16.0	17.8	19.7	1	26.0	38.5	1
SMB10J17A	SMB10J17CA	TLR	TBR	17.0	18.9	20.9	1	27.6	36.2	1
SMB10J18A	SMB10J18CA	TLT	TBT	18.0	20.0	22.1	1	29.2	34.2	1
SMB10J20A	SMB10J20CA	TLV	TBV	20.0	22.2	24.5	1	32.4	30.9	1
SMB10J22A	SMB10J22CA	TLX	TBX	22.0	24.4	26.9	1	35.5	28.2	1
SMB10J24A	SMB10J24CA	TLZ	TBZ	24.0	26.7	29.5	1	38.9	25.7	1
SMB10J26A	SMB10J26CA	TME	TCE	26.0	28.9	31.9	1	42.1	23.8	1
SMB10J28A	SMB10J28CA	TMG	TCG	28.0	31.1	34.4	1	45.4	22.0	1
SMB10J30A	SMB10J30CA	TMK	TCK	30.0	33.3	36.8	1	48.4	20.7	1
SMB10J33A	SMB10J33CA	TMM	TCM	33.0	36.7	40.6	1	53.3	18.8	1
SMB10J36A	SMB10J36CA	TMP	TCP	36.0	40.0	44.2	1	58.1	17.2	1
SMB10J40A	SMB10J40CA	TMR	TCR	40.0	44.4	49.1	1	64.5	15.5	1
SMB10J43A	SMB10J43CA	TMT	TCT	43.0	47.8	52.8	1	69.4	14.4	1
SMB10J45A	SMB10J45CA	TMV	TCV	45.0	50.0	55.3	1	72.7	13.8	1
SMB10J48A	SMB10J48CA	TMX	TCX	48.0	53.5	58.9	1	77.4	12.9	1
SMB10J51A	SMB10J51CA	TMZ	TCZ	51.0	56.7	62.7	1	82.4	12.1	1
SMB10J54A	SMB10J54CA	TNE	TDE	54.0	60.0	66.3	1	87.1	11.5	1
SMB10J58A	SMB10J58CA	TNG	TDG	58.0	64.4	71.2	1	93.6	10.7	1

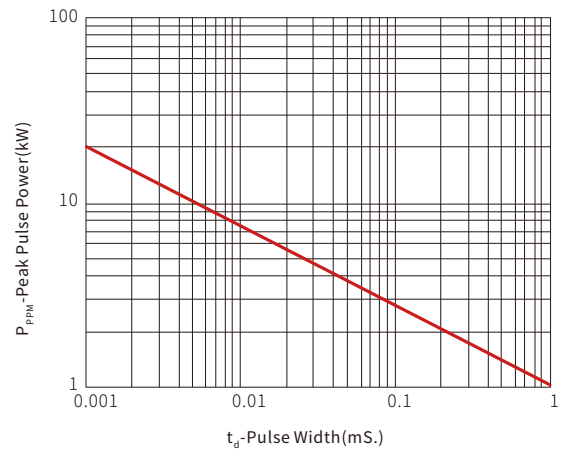
Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage Min.@I _T	Breakdown Voltage Max.@I _T	Test Current	Maximum Clamping Voltage @I _{PP}	Peak Pulse Current	Reverse Leakage @V _{RWM}
Uni-Polar	Bi-Polar	Uni	Bi	V _{RWM} (V)	V _{BR} (V)	V _{BR} (V)	I _T (mA)	V _C (V)	I _{PP} (A)	I _R (uA)
SMB10J60A	SMB10J60CA	TNK	TDK	60.0	66.7	73.7	1	96.8	10.3	1
SMB10J64A	SMB10J64CA	TNM	TDM	64.0	71.7	78.6	1	103.0	9.7	1
SMB10J70A	SMB10J70CA	TNP	TDP	70.0	77.8	86.0	1	113.0	8.8	1
SMB10J75A	SMB10J75CA	TNR	TDR	75.0	83.8	92.1	1	121.0	8.3	1
SMB10J78A	SMB10J78CA	TNT	TDT	78.0	86.7	95.8	1	126.0	7.9	1
SMB10J85A	SMB10J85CA	TNV	TDV	85.0	94.4	104.0	1	137.0	7.3	1
SMB10J90A	SMB10J90CA	TNX	TDX	90.0	100.0	111.0	1	146.0	6.8	1
SMB10J100A	SMB10J100CA	TNZ	TDZ	100.0	111.0	123.0	1	162.0	6.2	1
SMB10J110A	SMB10J110CA	TPE	TEE	110.0	122.0	135.0	1	177.0	5.6	1
SMB10J120A	SMB10J120CA	TPG	TEG	120.0	133.0	147.0	1	193.0	5.2	1
SMB10J130A	SMB10J130CA	TPK	TEK	130.0	144.0	159.0	1	209.0	4.8	1
SMB10J150A	SMB10J150CA	TPM	TEM	150.0	167.0	185.0	1	243.0	4.1	1
SMB10J160A	SMB10J160CA	TPP	TEP	160.0	178.0	197.0	1	259.0	3.9	1
SMB10J170A	SMB10J170CA	TPR	TER	170.0	189.0	209.0	1	275.0	3.6	1
SMB10J180A	SMB10J180CA	TPT	TET	180.0	201.0	222.0	1	292.0	3.4	1
SMB10J190A	SMB10J190CA	TPA	TEC	190.0	209.0	243.0	1	308.0	3.2	1
SMB10J200A	SMB10J200CA	TPV	TEV	200.0	224.0	247.0	1	324.0	3.1	1
SMB10J210A	SMB10J210CA	TPB	TED	210.0	231.0	269.0	1	340.0	2.9	1
SMB10J220A	SMB10J220CA	TPX	TEX	220.0	246.0	272.0	1	356.0	2.8	1
SMB10J250A	SMB10J250CA	TPZ	TEZ	250.0	279.0	309.0	1	405.0	2.5	1
SMB10J300A	SMB10J300CA	TQE	TFE	300.0	335.0	371.0	1	486.0	2.1	1
SMB10J350A	SMB10J350CA	TQG	TFG	350.0	391.0	432.0	1	567.0	1.8	1
SMB10J400A	SMB10J400CA	TQK	TFK	400.0	447.0	494.0	1	648.0	1.5	1
SMB10J440A	SMB10J440CA	TQM	TFM	440.0	492.0	543.0	1	713.0	1.4	1

CHARACTERISTIC CURVES

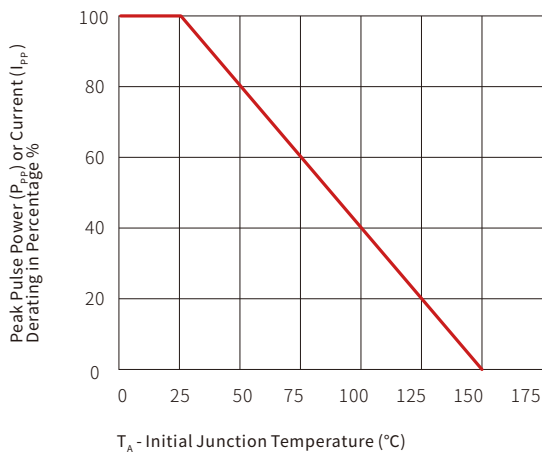
TVS Transients Clamping Waveform



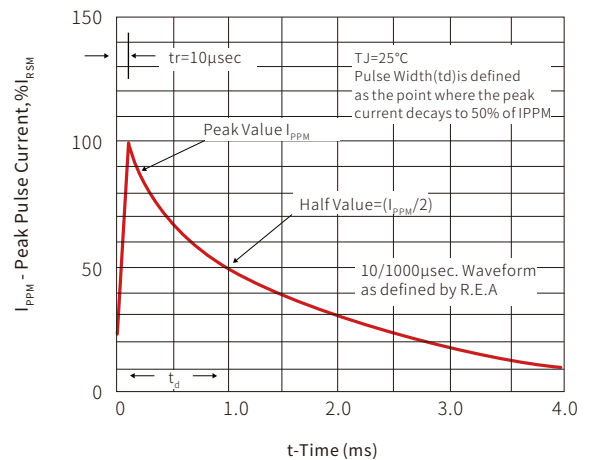
Peak Pulse Power Rating Curve

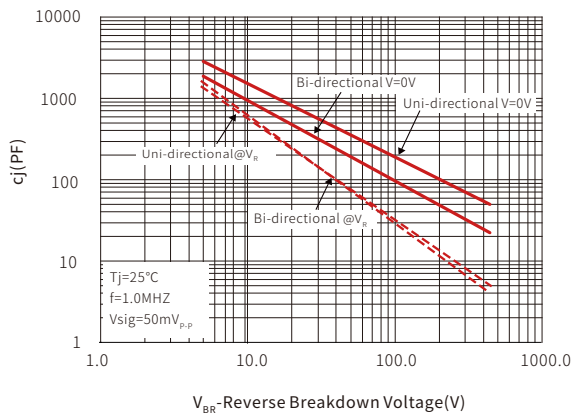
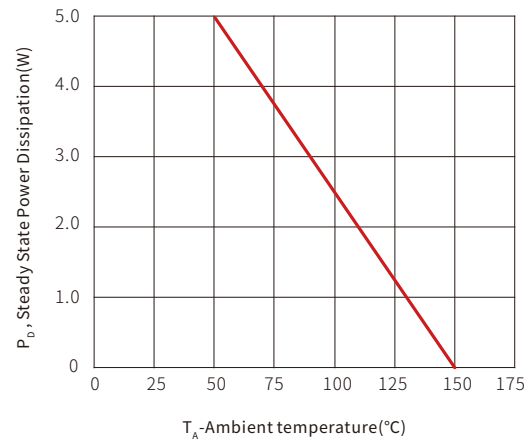


Pulse Derating Curve



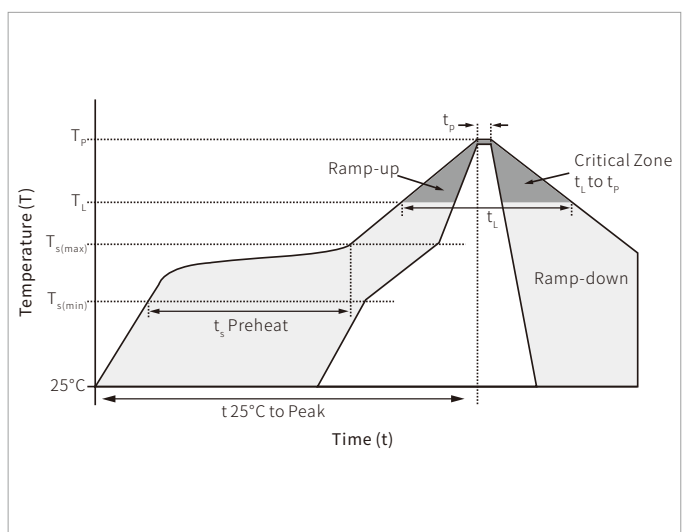
Pulse Waveform



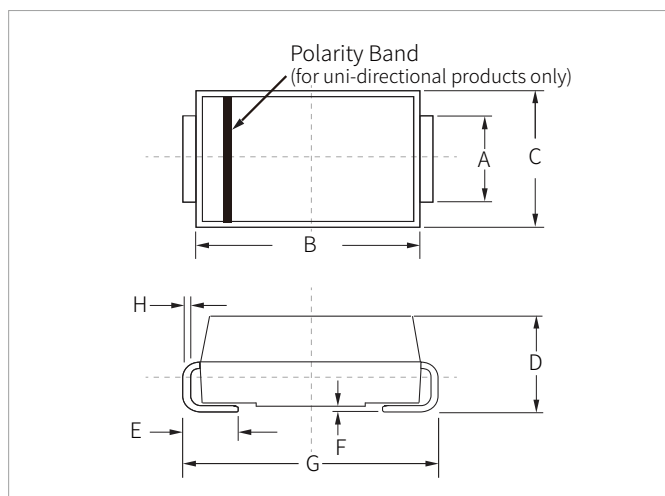
Typical Junction Capacitance

Steady State Power Dissipation Derating Curve


SOLDERING PARAMETERS

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

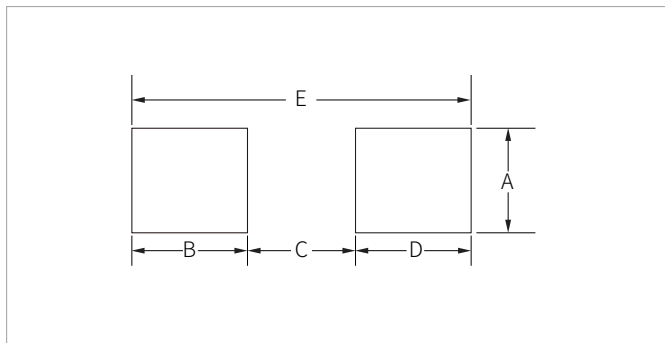


DO-214AA(SMB) PACKAGE INFORMATION



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
SMB10Jxx(C)A	DO-214AA(SMB)	3000PCS	13"

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