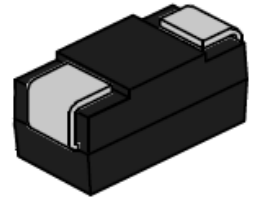


SMBJ3.3A 600W Transient Voltage Suppressor

Rev.2

FEATURES:

- ✧ Planar technology.
- ✧ Halogen-free and ROHS compliant.
- ✧ Stand-off voltage:3.3V.
- ✧ 600W peak pulse power capability at 10×1000μs waveform.
- ✧ Excellent clamping capability.
- ✧ Fast response time.



SMB



Symbol

ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage operating junction temperature range	T _{STG} /T _J	-55 to +150	°C
Steady state power dissipation at T _L =75°C	P _{M(AV)}	5.0	W
Peak pulse power dissipation on 10/1000μs waveform	P _{PP}	600	W

MARKING



U03A : Device Marking Code
1409: In ninth week, 2014

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Part Number	V _R	I _R @V _R	V _{BR} @I _T	I _T	V _C @I _{PP}	I _{PP} ^①	C _O ^②	Marking
	V	μA	V (min)	mA	V (max)	A (max)	pF(typ.)	
SMBJ3.3A	3.3	100	4.1	1	7.3	82.5	4100	U03A

① Surge waveform: 10/1000μs

② C_O is measured at: V_{bias}=0V, V_{RMS}=1V, f=1MHz

V_R: Stand-off voltage -- Maximum voltage that can be applied

V_{BR}: Breakdown voltage

V_C: Clamping voltage -- Peak voltage measured across the suppressor at a specified I_{PP}

I_R: Reverse leakage current

ORDERING INFORMATION

SMBJ		3.3	A
600W SMB Series		V_R Voltage	5% V_{BR} voltage tolerance

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1:V- I curve characteristics
(Uni-directional)

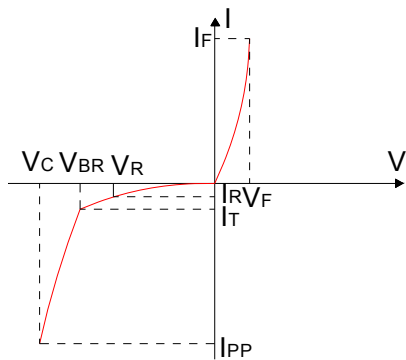


FIG.2: Pulse waveform

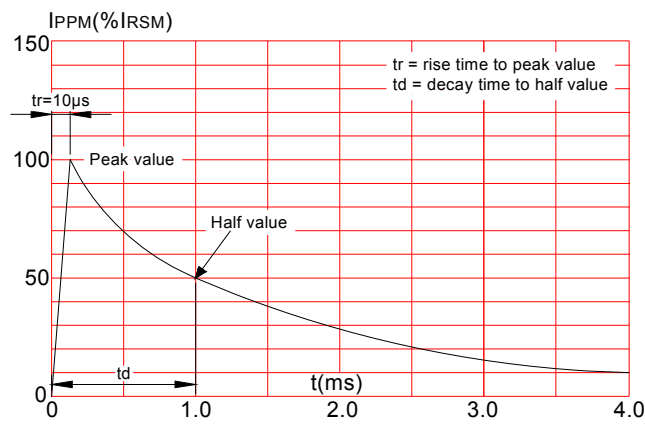
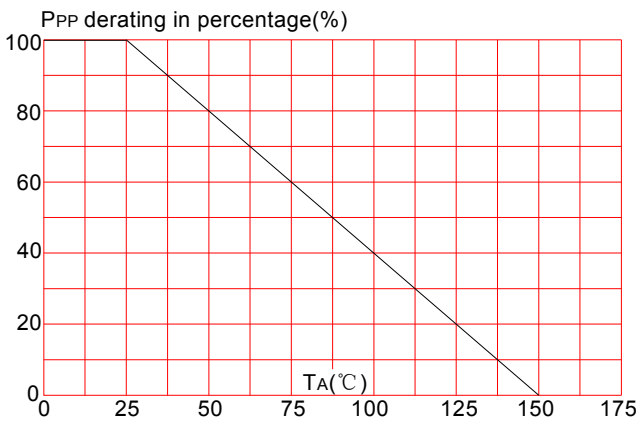
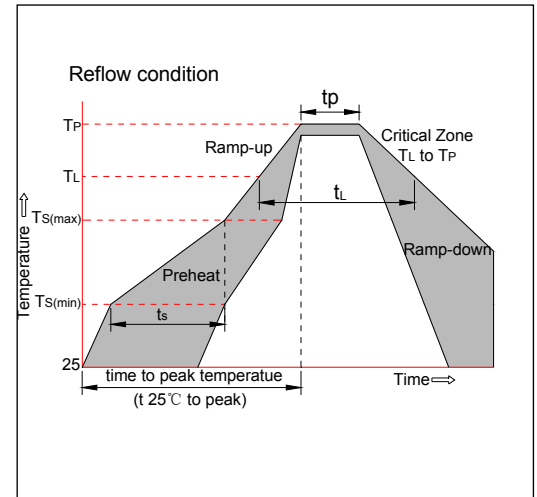
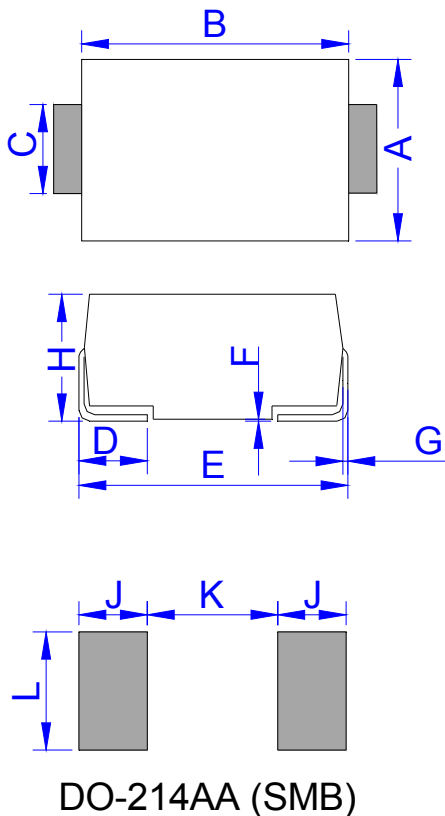


FIG.3: Pulse derating curve



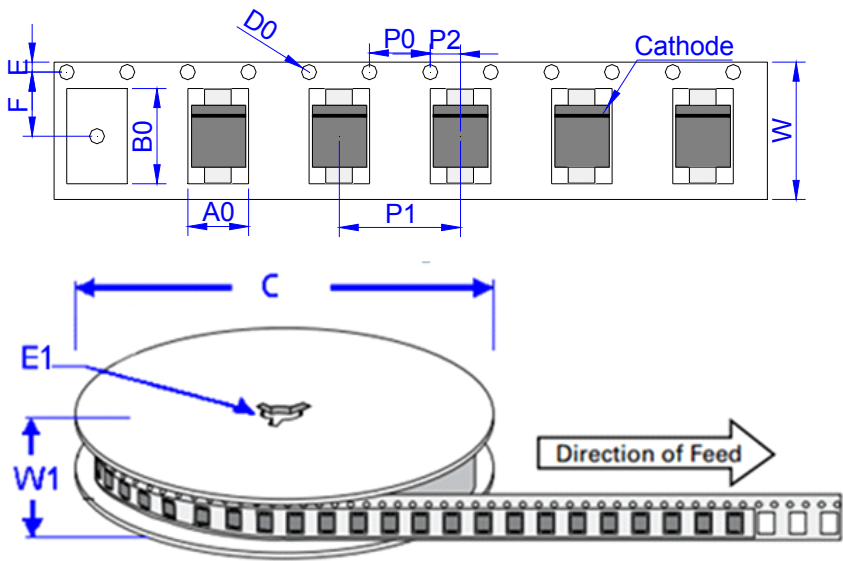
SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see figure at right)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquidus)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_p)		20-40secs.
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C


PACKAGE MECHANICAL DATA


Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.30	4.80	0.169	0.189
C	1.90	2.20	0.075	0.087
D	0.95	1.52	0.037	0.060
E	5.20	5.60	0.205	0.220
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.10	2.40	0.083	0.094
J	2.20		0.087	
K		2.60		0.102
L	2.30		0.091	

TAPE AND REEL SPECIFICATION-SMB



Ref.	Dimensions	
	Millimeters	Inches
A0	3.76 ± 0.3	0.148 ± 0.012
B0	5.69± 0.3	0.224 ± 0.012
C	330.0	13.0
D0	1.55 ± 0.1	0.061 ± 0.004
E	1.75 ± 0.2	0.069 ± 0.008
E1	13.3 ± 0.3	0.524± 0.012
F	5.5 ± 0.2	0.217 ± 0.008
P0	4.00 ± 0.2	0.157 ± 0.008
P1	8.00 ± 0.2	0.3145 ± 0.008
P2	2.00 ± 0.2	0.079 ± 0.008
W	12.0± 0.2	0.472 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	REEL DIAMETERS (mm)
SMBJ3.3A	0.098	3,000	48,000	330