

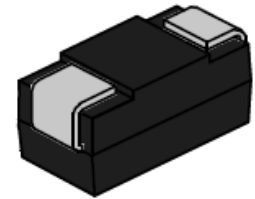


## SMBJ3.3A 600W Transient Voltage Suppressor

Rev.2.3

### FEATURES:

- ✧ Planar technology.
- ✧ Halogen-free and RoHS compliant.
- ✧ Stand-off voltage: 3.3V.
- ✧ 600W peak pulse power capability at 10/1000μs waveform.
- ✧ Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C.
- ✧ Terminal: solder plated, solderable per J-STD-002.
- ✧ Excellent clamping capability.
- ✧ Fast response time.
- ✧ IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact).



SMB

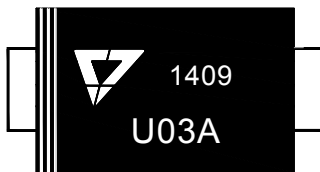


Symbol

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage operating junction temperature range	T <sub>STG</sub> /T <sub>J</sub>	-55 to +150	°C
Steady state power dissipation at T <sub>L</sub> =75°C	P <sub>M(AV)</sub>	5.0	W
Peak pulse power dissipation at 10/1000μs waveform	P <sub>PP</sub>	600	W

### MARKING



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

### ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

Part Number	V <sub>R</sub>	I <sub>R@V<sub>R</sub></sub>	V <sub>BR@I<sub>T</sub></sub>	I <sub>T</sub>	V <sub>C@I<sub>PP</sub></sub>	I <sub>PP</sub> <sup>①</sup>	C <sub>O</sub> <sup>②</sup>	Marking
	V	μA(max)	V(min)	mA	V(max)	A(max)	pF(typ.)	
SMBJ3.3A	3.3	100	4.1	1	8	75	4100	U03A

① Surge waveform: 10/1000μs

② C<sub>O</sub> is measured at: V<sub>bias</sub>=0V, V<sub>RMS</sub>=0.1V, f=1MHz

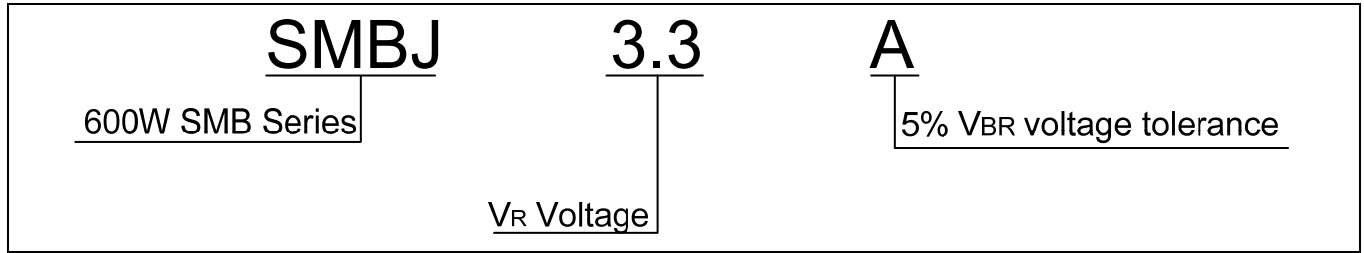
V<sub>R</sub>: Stand-off voltage -- Maximum voltage that can be applied

V<sub>BR</sub>: Breakdown voltage

V<sub>C</sub>: Clamping voltage -- Peak voltage measured across the suppressor at a specified I<sub>PP</sub>

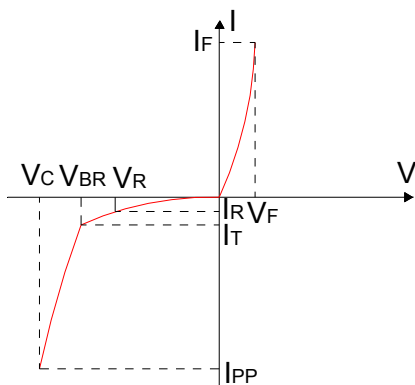
$I_R$ : Reverse leakage current

**ORDERING INFORMATION**

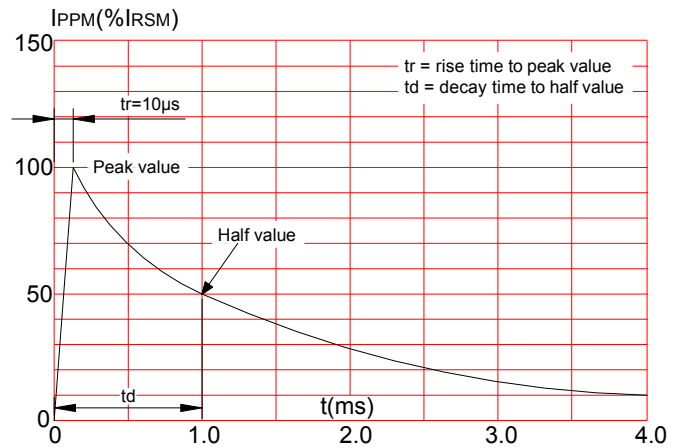


**RATINGS AND V-I CHARACTERISTICS CURVES** ( $T_A=25^{\circ}C$ , unless otherwise noted)

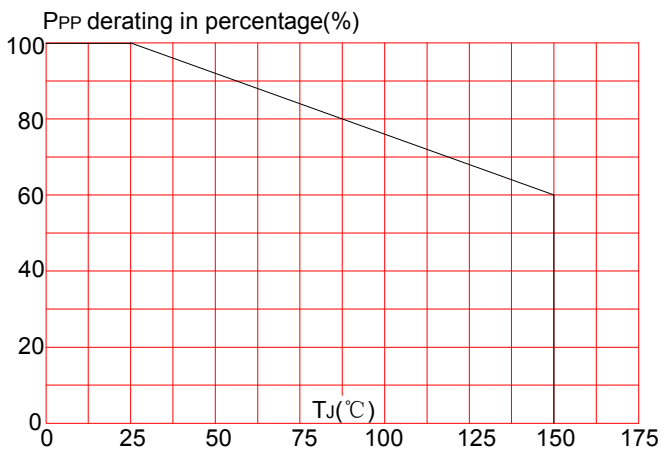
**FIG.1:V- I curve characteristics (Uni-directional)**



**FIG.2: Pulse waveform**

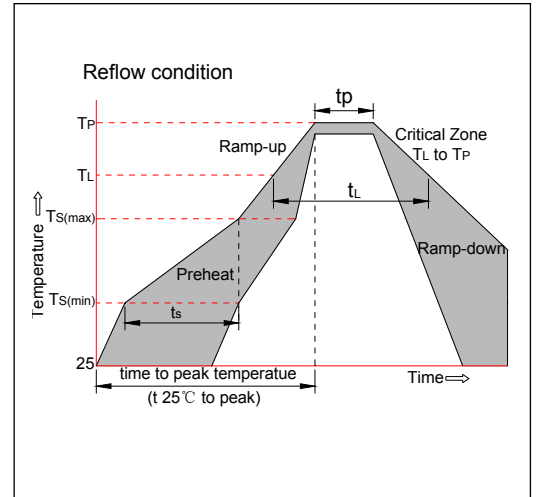


**FIG.3: Pulse derating curve**

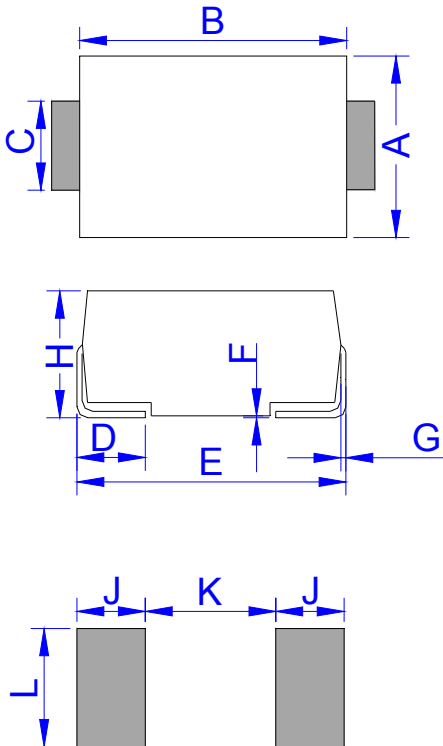


**SOLDERING PARAMETERS**

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) ( $t_s$ )	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



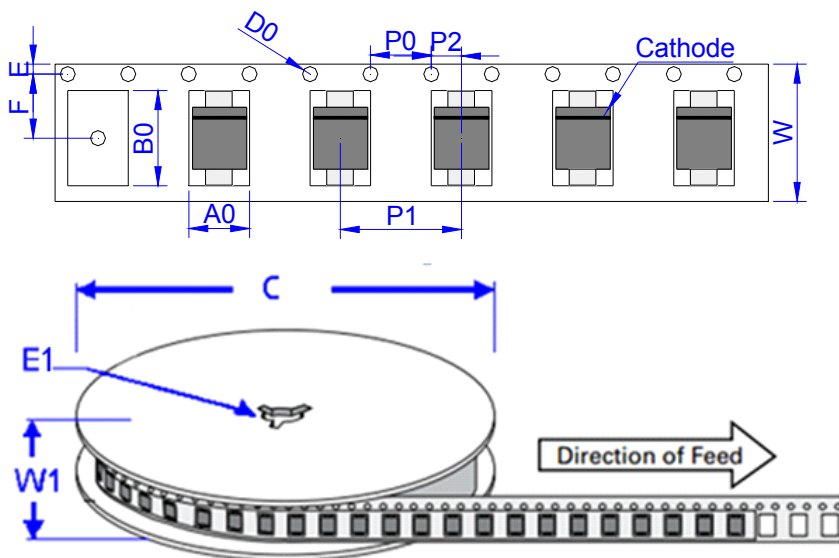
**PACKAGE MECHANICAL DATA**



DO-214AA (SMB)

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

PART No.	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
SMBJ3.3A	0.098	3,000	48,000	13 inch reel pack

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