

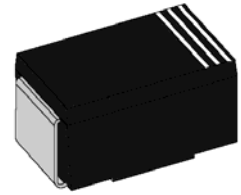


SMAJ3.3A 400W Transient Voltage Suppressor

Rev.2

FEATURES

- ✧ Planar technology
- ✧ halogen-free and ROHS compliant
- ✧ Stand-off voltage 3.3V
- ✧ 400W peak pulse power capability at 10×1000μs waveform
- ✧ Excellent clamping voltage
- ✧ Fast response time



SMA

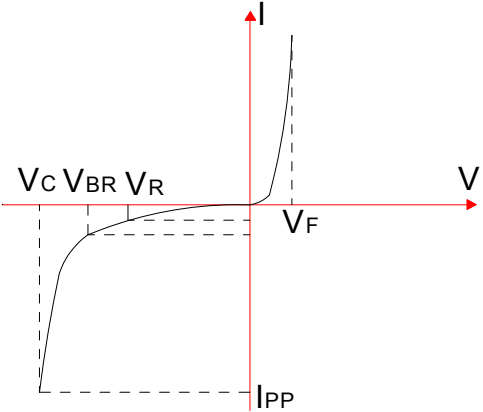


Symbol

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage and operating junction temperature range	T_{STG}/T_J	-55 to +150	$^{\circ}\text{C}$
Steady state power dissipation on infinite heat sink at $T_L=75^{\circ}\text{C}$	$P_{M(AV)}$	3.0	W
Peak pulse power dissipation on 10/1000μs waveform	P_{PP}	400	W

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	I-V curve 
V_R	Stand-off voltage	
V_{BR}	Breakdown voltage	
V_C	Clamping voltage	
I_R	Off-state reverse leakage current	
I_T	A specified reverse current	
I_{PP}	A specified peak-pulse current	
V_F	Forward voltage drop	

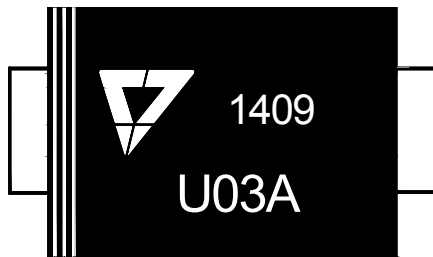
ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Part Number	V_R	$I_R@V_R$	$V_{BR}@I_T$	I_T	$V_C@I_{PP}$	$I_{PP}^{\textcircled{1}}$	$C_O^{\textcircled{2}}$	Marking
	V	μA	V (min)	mA	V (max)	A (max)	pF(typ.)	
SMAJ3.3A	3.3	100	4.1	1	7.3	50	3700	U03A

① Surge waveform: 10/1000 μs

② C_O is measured at: $V_{\text{bias}}=0\text{V}, V_{\text{RMS}}=0.1\text{V}, f=1\text{MHz}$

MARKING



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

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

FIG.1: Pulse waveform

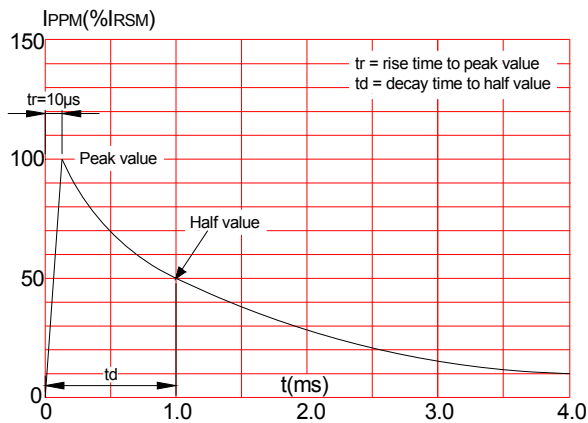
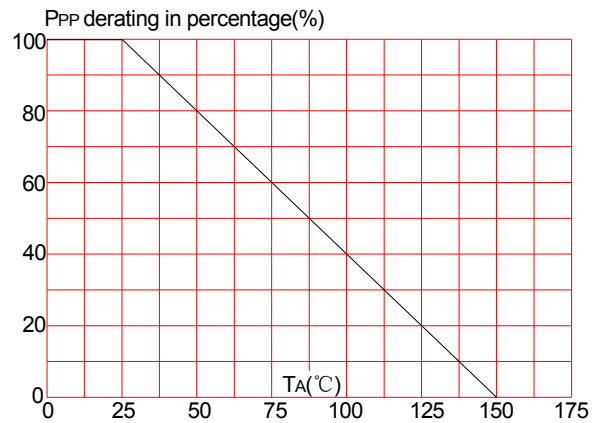
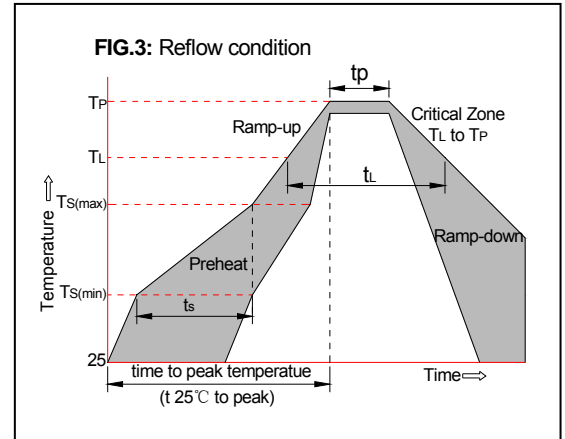


FIG.2: Pulse derating curve

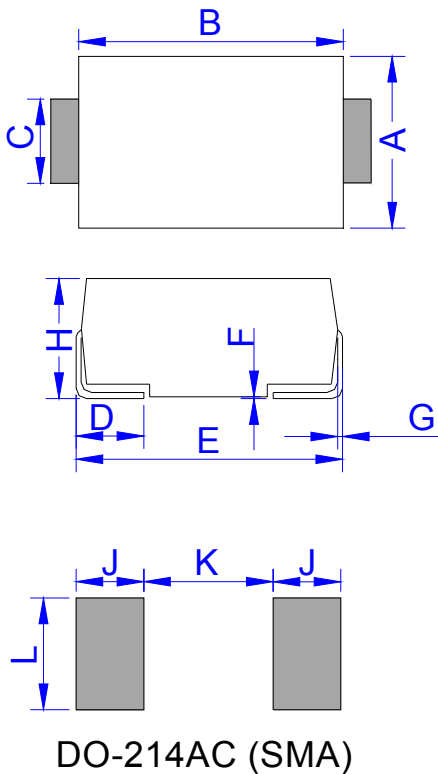


SOLDERING PARAMETERS

Reflow Condition		Pb-Free assembly (see FIG.3)
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)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_p)		8 min. Max
Do not exceed		+260°C

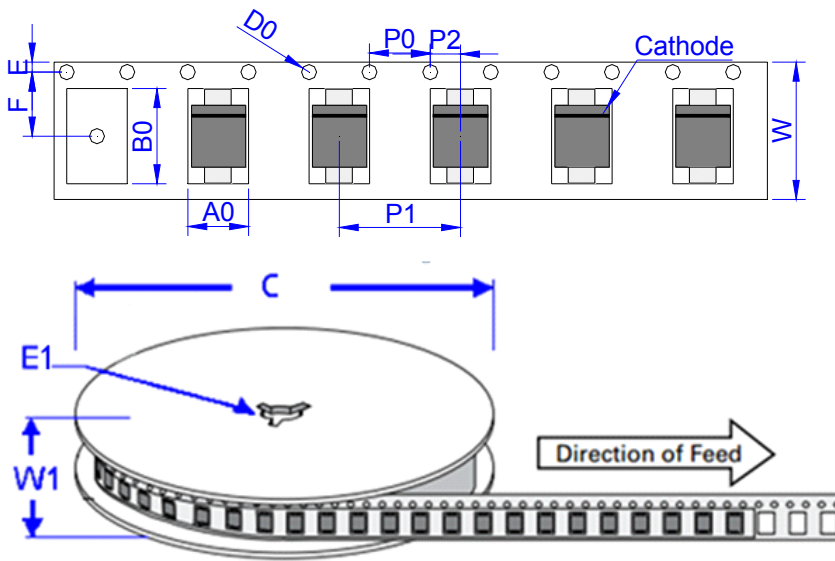


PACKAGE MECHANICAL DATA



Ref.	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.60	3.00	0.102	0.118
B	4.15	4.65	0.163	0.183
C	1.25	1.65	0.049	0.065
D	0.95	1.52	0.037	0.060
E	4.90	5.30	0.193	0.209
F	0.051	0.203	0.002	0.008
G	0.15	0.31	0.006	0.012
H	2.00	2.44	0.079	0.096
J	2.00		0.079	
K		2.30		0.091
L	1.80		0.071	

TAPE AND REEL SPECIFICATION-SMA



Ref.	Dimensions	
	Millimeters	Inches
A0	2.79 ± 0.3	0.110 ± 0.012
B0	5.33 ± 0.3	0.210 ± 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	4.00 ± 0.2	0.157 ± 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)
TAPING	0.07	5,000	80,000	330

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