

## Surface Mount Transient Voltage Suppressor



### Features

- Ideal for automated placement
- High surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Bi-directional TVS
- Glass passivated junction
- Low clamping voltage under surge

### Typical Applications

- High power DC bus protection

### Mechanical Data

- **Package:** SMG  
Molding compound meets UL 94 V-0 flammability rating, -compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

### ■ Maximum Ratings ( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	VALUE
Peak power dissipation, with a 10/1000us waveform <sup>(1)</sup> (Fig.3)	$P_{PPM}$	W	15000
Peak pulse current, with a 10/1000us waveform <sup>(1)</sup>	$I_{PPM}$	A	See Next Table
Peak pulse current rating per 8/20μs waveform <sup>(5)</sup> IEC 61000-4-5	$I_{pp}$	A	2500
Storage temperature	$T_{stg}$	°C	-55 ~+150
Junction temperature	$T_j$	°C	-55 ~+125

(1)、Non-repetitive current pulse, per Fig. 3 and derated above  $T_A = 25^{\circ}\text{C}$  per Fig.2.

(2)、Non-repetitive current pulse, per Fig. 5

### ■ Electrical Characteristics ( $T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Part Number	Breakdown Voltage VBR@IT			Maximum Reverse Leakage I <sub>R</sub> @V <sub>RWM</sub> (μA)	Working Peak Reverse Voltage V <sub>RWM</sub> (V)	Maximum Reverse Surge Current IPP(A)	Maximum Clamping Voltage Vc@ I <sub>PP</sub> (V)
(Bi)	Min(V)	Max (V)	IT(mA)				
SMGJ100CA	111	123	1	5	100	92.7	162

## ■ Performance Graphs

FIG.1 V-I Characteristic

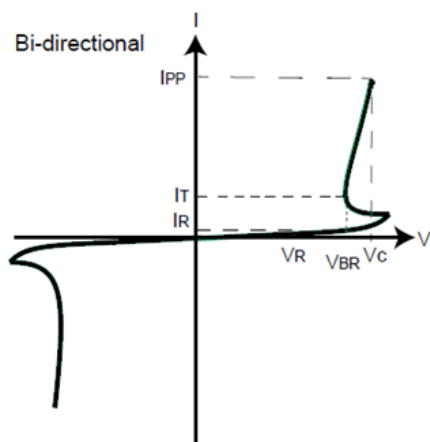


FIG.2 Pulse Derating Curve

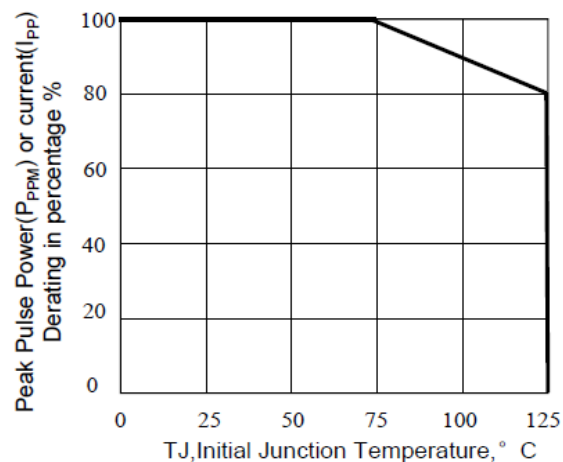


FIG.3: Current 10/1000us Waveform

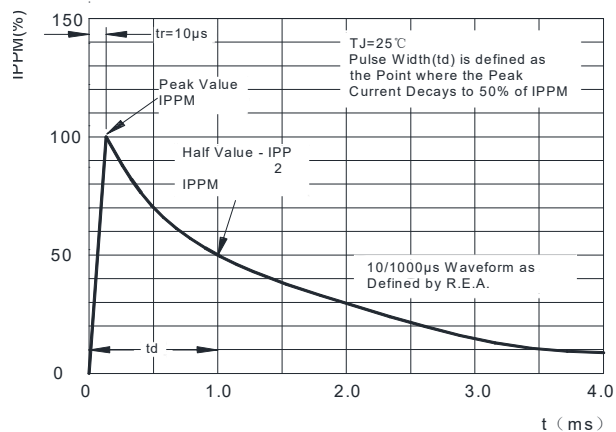


FIG.4: Typical VBR vs. junction temperature

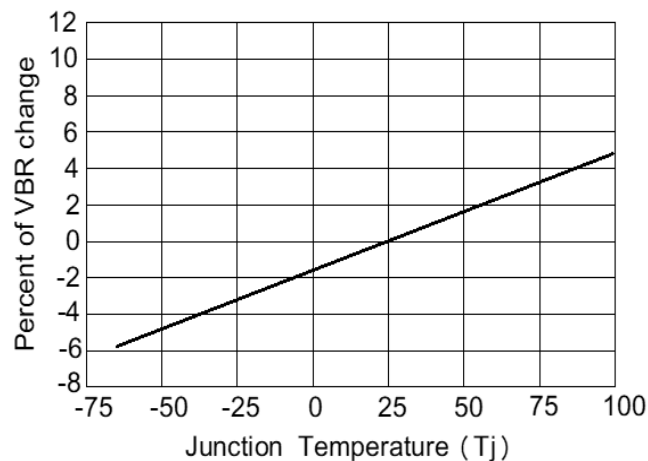
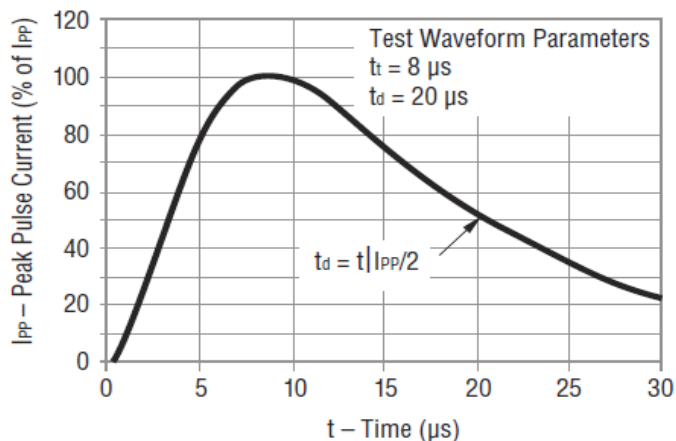


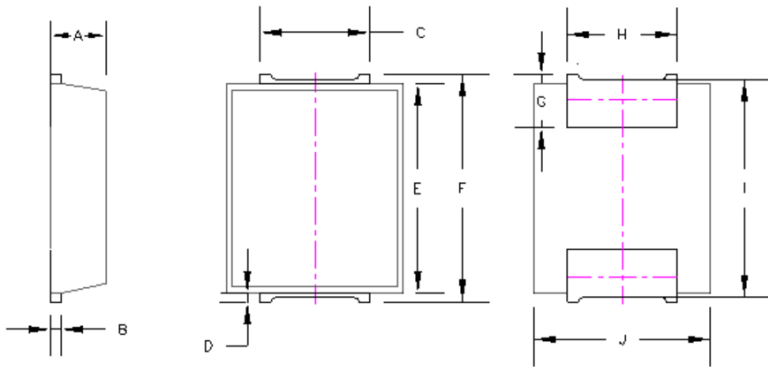
Fig.5 Current 8/20us Waveform per IEC 6100-4-5



## ■ Ordering Information(Example)

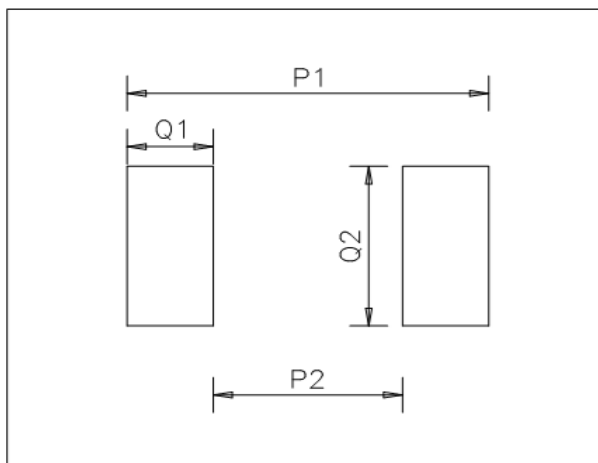
PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SMGJ100CA	F1	Approximate 0.60	1500	3000	15000	15" reel

## ■ Outline Dimensions



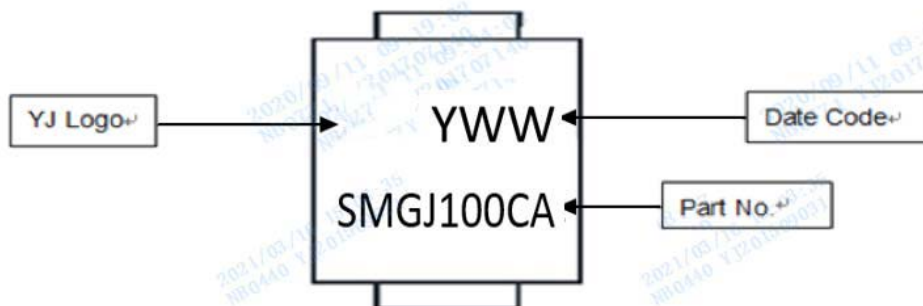
SMG		
Dim	Min	Max
A	2.45	2.55
B	0.45	0.55
C	4.90	5.10
D	0.40	0.60
E	9.20	9.60
F	10.20	10.60
G	2.30	2.50
H	4.90	5.10
J	7.90	8.10
I	9.9	10.10

## ■ Suggested pad layout



Dim	Millimeters
P1	10.70
P2	5.60
Q1	2.60
Q2	5.10

## ■ Marking Information



### Note:

- 1、 All marking is at middle of the product body
- 2、 All marking is in laser printing
- 3、 SMGJ100CA is part no.
- 4、 YWW is date code, "Y" is year, "WW" is week.

For instance:

3<sup>th</sup> week of 2021, date code is 103

15<sup>th</sup> week of 2021, date code is 115

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