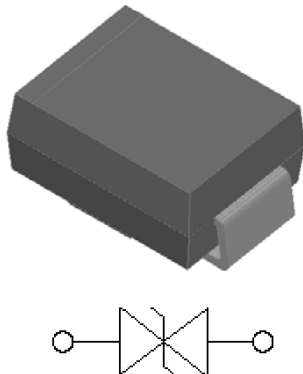


## Surface Mount Transient Voltage Suppressors

Bi-directional



### Features

- UL recognition, file # E517074
- For surface mounted applications
- Low-profile package
- Ideal for automated placement
- 2000 W peak pulse power capability with a 10/1000  $\mu$ s waveform
- Low incremental surge resistance, excellent clamping capability
- Very fast response time
- High temperature soldering guaranteed: 260 °C/10 s at terminals
- Meets MSL level 1
- Component in accordance to RoHS

### Typical Applications

Use in sensitive electronics protection against voltage transients induced by inductive load switching and lighting on ICs, MOSFET, signal lines of sensor units for consumer, computer, industrial, telecommunication.

### Mechanical Data

- **Package:** DO-214AA (SMB)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** no marking on bi-directional types

### ■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> <sup>(2)</sup> (Fig.2)	$P_{PPM}$	W	2000
Peak pulse current, with a 10/1000us waveform <sup>(1)</sup>	$I_{PPM}$	A	See Next Table
Power dissipation, on infinite heat sink at $T_L=75^\circ\text{C}$	$P_D$	W	5.0
Operating junction and storage temperature range	$T_J, T_{STG}$	$^\circ\text{C}$	-55 to +150
Peak surge voltage on 10/700us&40 $\Omega$ waveform	$V_{pp}$	V	3500

Notes:

- (1) Non-repetitive current pulse, per Fig. 4 and derated above  $T_A = 25^\circ\text{C}$  per Fig.3.
- (2) Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal.



# PSMB20J58CA

## Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
PSMB20J58CA	F1	Approximate 0.0975	3000	48000	13" reel

## Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Part Number (Bi)	Breakdown Voltage V <sub>BR</sub> @I <sub>T</sub>			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 I <sub>PP</sub> <sup>(4)</sup> (A)	Maximum Clamping VC @10/1000us (V)	Maximum Clamping VC @10/700us/4KV, //40 Ω (V)
	Min(V)	Max (V)	I <sub>T</sub> <sup>(3)</sup> (mA)					
PSMB20J58CA	64.40	71.20	1	5	58.0	21.37	93.6	85

Notes:

(3) Pulse test: t<sub>p</sub>≤50ms.

(4) Surge current waveform per Fig. 4 and derated per Fig.3.

## Characteristics (Typical)

FIG.1 V-I Characteristic

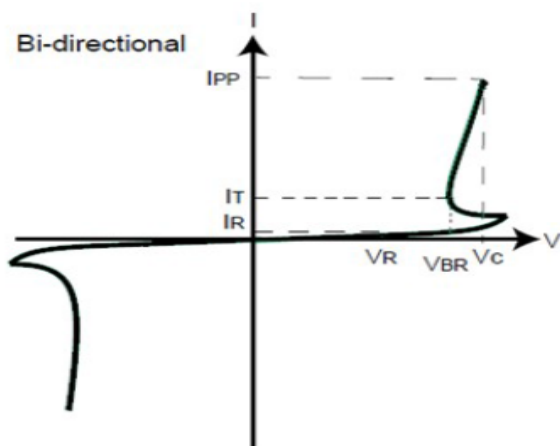


FIG2: Peak Pulse Power Rating Curve

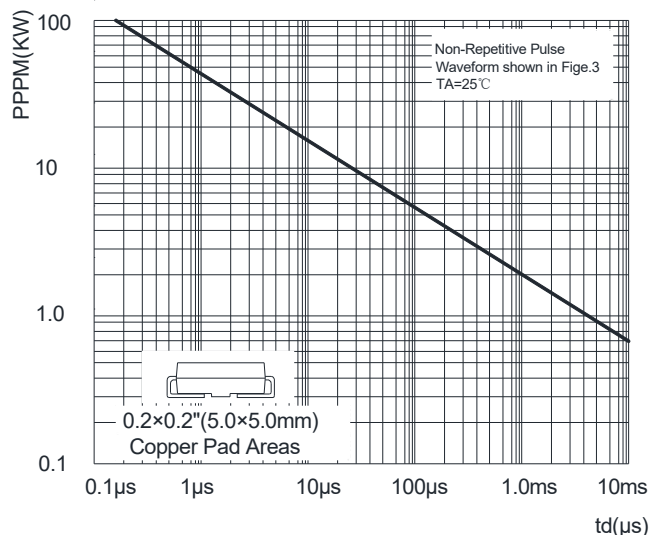


FIG3: Pulse Power or Current vs. Initial Junction Temperature

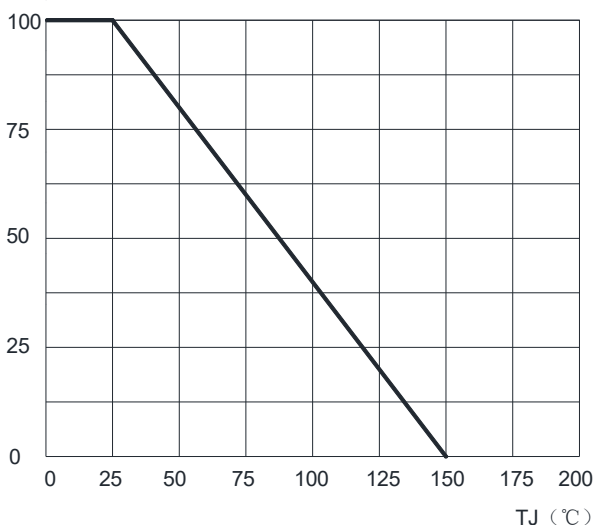
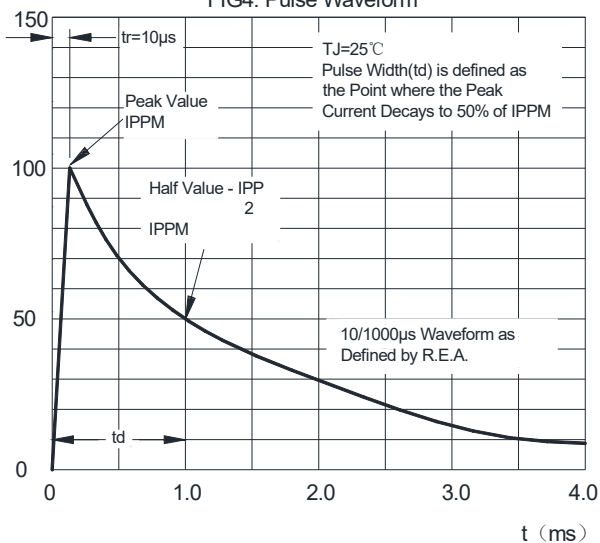
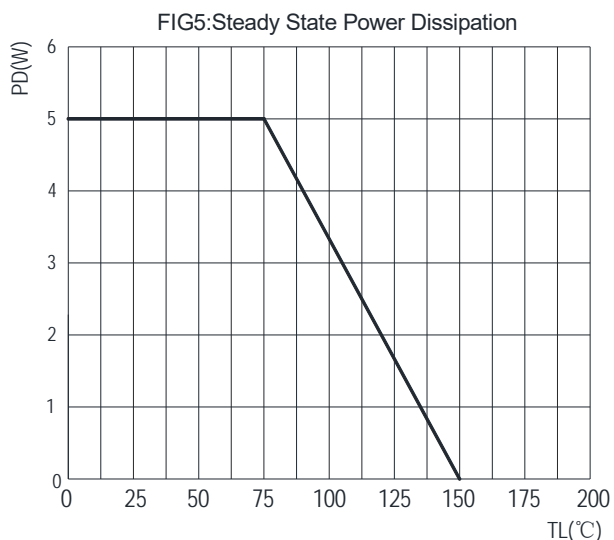
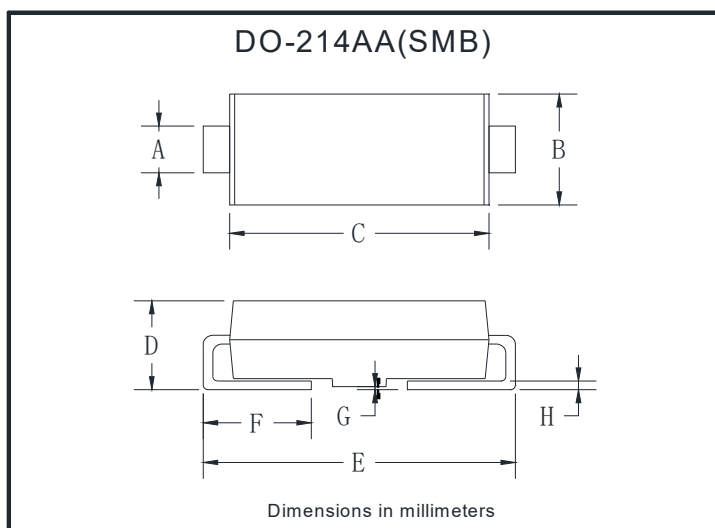


FIG4: Pulse Waveform



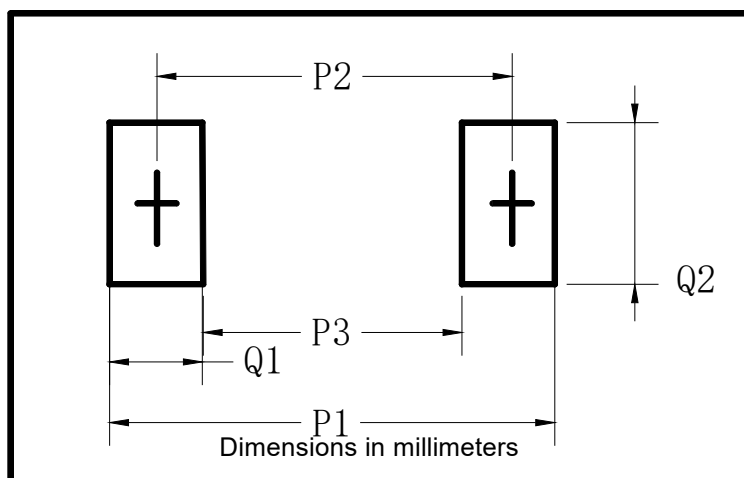


## ■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31

## ■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



## PSMB20J58CA

---

### Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.