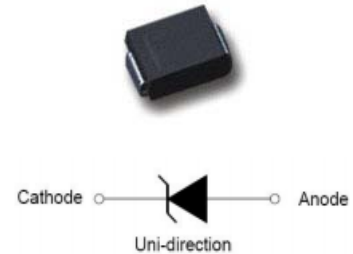


### Features

- For surface mounted applications
- Low-profile package
- Ideal for automated placement
- Available in Unidirectional and Bidirectional
- 600 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

### SMB/DO-214AA



### 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:** For uni-directional types the band denotes cathode end, no marking on bi-directional types

### Order information

Device	Marking	Shipping
P6SMB33A(Uni)	PJ725 MG	500/Tape&Reel

### 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.

### ■Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Max
Peak power dissipation, with a 10/1000us waveform (1) (2) (Fig.1)	PPPM	W	600
Peak pulse current, with a 10/1000us waveform(1)	IPPM	A	See Next Table
Peak forward surge current, 8.3 ms single half sine-wave unidirectional only (2)	IFSM	A	100
Operating junction and storage temperature range	T <sub>J</sub> ,T <sub>STG</sub>	°C	-55 to +150

#### Notes:

- (1) Non-repetitive current pulse, per Fig. 3 and derated above T<sub>A</sub> = 25°C per Fig.2.
- (2) Mounted on 0.2 x 0.2" (5.0 x 5.0 mm) copper pads to each terminal.

**■ Electrical Characteristics** ( $T_a=25^{\circ}\text{C}$  Unless otherwise specified)

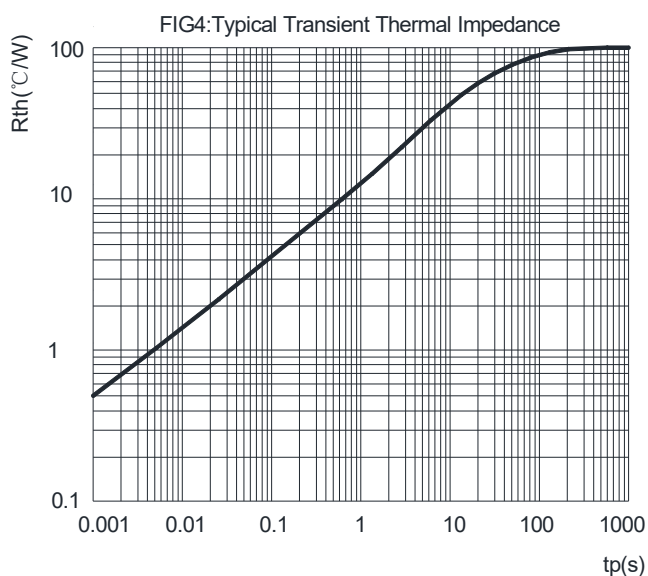
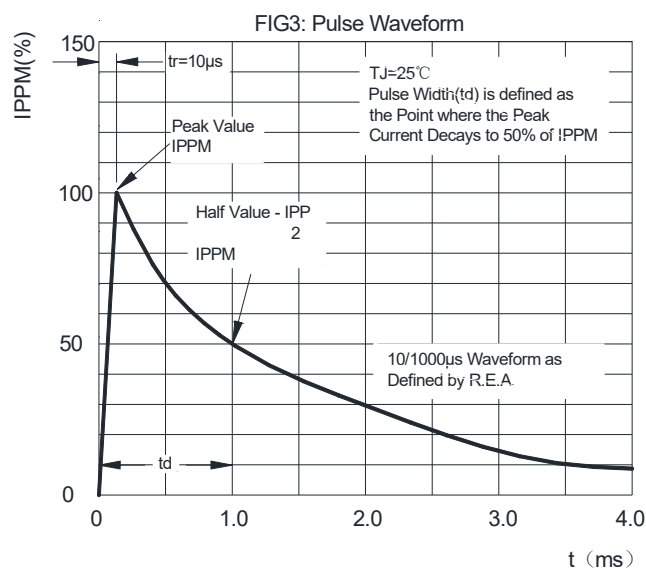
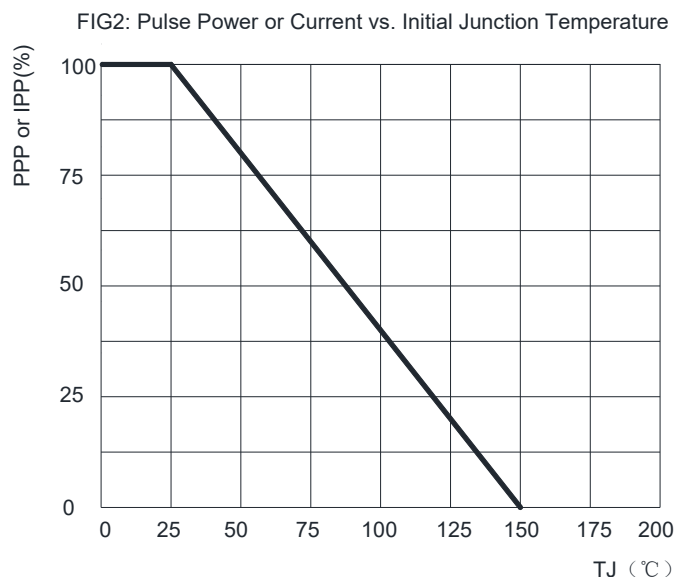
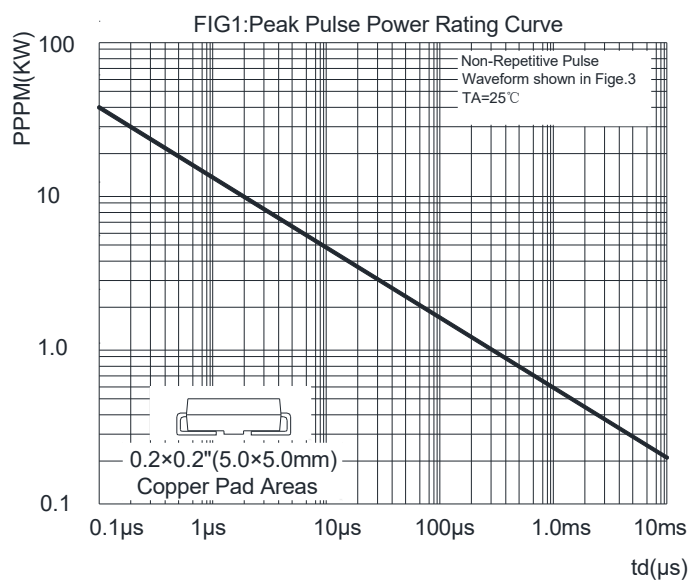
Part Number	Breakdown Voltage $V_{BR}@I_T$			Maximum Reverse Leakage $I_R^{(6)}$ @ $V_{RWM}$ ( $\mu\text{A}$ )	Working Peak Reverse Voltage $V_{RWM}$ (V)	Maximum Reverse Surge Current $I_{PP}^{(5)}$ (A)	Maximum Clamping Voltage $V_c$ @ $I_{PP}$ (V)
	Min(V)	Max (V)	$I_T^{(4)}$ (mA)				
P6SMB33A	31.4	34.7	1	5	28.2	13.3	45.7

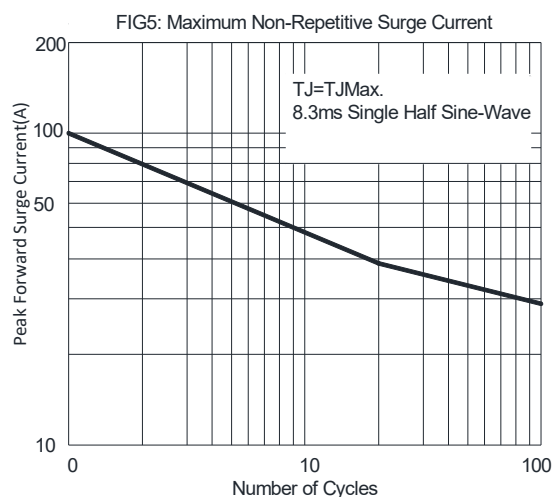
Notes:

(4) Pulse test:  $t_p \leq 50\text{ms}$ .

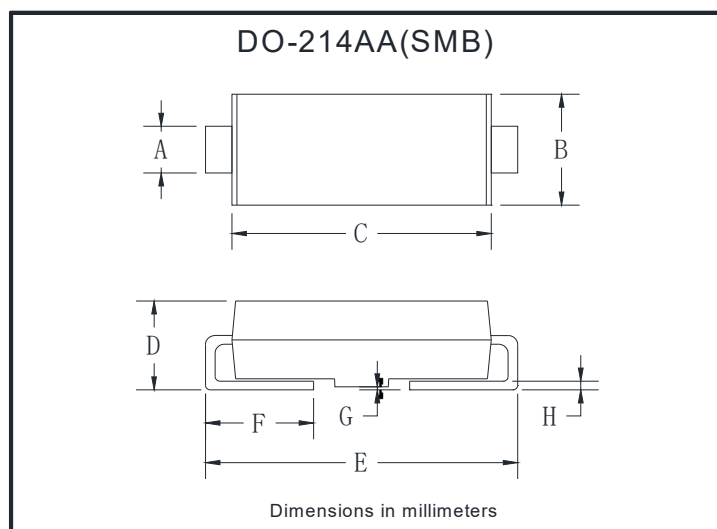
(5) Surge current waveform per Fig. 3 and derated per Fig.2.

(6) For bi-directional types having  $V_{RWM}$  of 10 V and less, the  $I_R$  limit is doubled.

**■ Characteristics (Typical)**


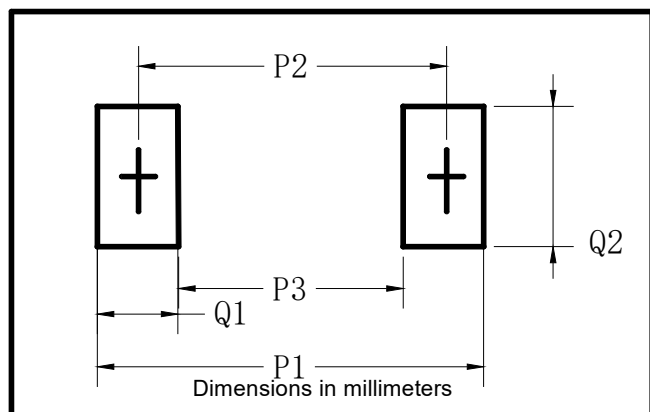


### ■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.25	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