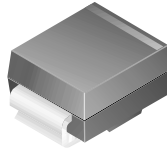


# SMBJ12A822



**DO-214AA(SMB)**  
Color Band Denotes Cathode  
Device Marking:PT

## 600 Watt Unidirectional Transient Voltage Suppressor

### Absolute Maximum Ratings (Note 1) $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
$P_{PPM}$	Peak Pulse Power Dissipation on 10/1000 $\mu\text{s}$ waveform	600	W
$I_{PPM}$	Peak Pulse Current on 10/1000 $\mu\text{s}$ waveform	17.5	A
$I_{FSM}$	Non-repetitive Peak Forward Surge Current superimposed on rated load (JEDEC method)(Note 2)	100	A

Note 1) These ratings are limiting values above which serviceability of any semiconductor device may be impaired.

Note 2) Measured on 8.3ms single half-sine wave or equivalent square wave. Duty cycle=4 pulses per minute maximum.

### Thermal Characteristics

Symbol	Parameter	Value	Units
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	100	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance from Junction to Leads	20	$^\circ\text{C}/\text{W}$
$T_{STG}$	Storage Temperature Range	-65 to +175	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +150	$^\circ\text{C}$

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

Symbol	Parameter	Value	Units
$V_{BR}$	Breakdown Voltage at $I_T = 1.0\text{mA}$	13.2 – 14.3	V
$\alpha T$	Maximum Temperature coefficient of $V_{BR}$	0.084	$\%/^\circ\text{C}$
$V_{RWM}$	Reverse Stand-off Voltage	12	V
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$	5	$\mu\text{A}$
$V_C$	Maximum Clamping Voltage @ $I_{PPM}$	15.6	V

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