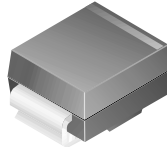


## SMBJ12A933



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

### 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	$^\circ\text{C/W}$
$R_{\theta JL}$	Thermal Resistance from Junction to Leads	20	$^\circ\text{C/W}$
$T_{STG}$	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 – 13.8	V
$\alpha T$	Maximum Temperature coefficient of $V_{BR}$	0.083	$\%/^\circ\text{C}$
$V_{RWM}$	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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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET®	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic®
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I <sup>2</sup> C™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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## PRODUCT STATUS DEFINITIONS

### Definition of Terms

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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