Transient Voltage Suppressor multicomp



Features:

- Glass Passivated Junction
- · Low Incremental Surge Resistance, Excellent Clamping Capability
- Low Profile Package With Built-In Strain Relief for Surface Mounted Applications
 - 600W Peak Pulse Power Capability with a 10/1,000µs Wave Form, Repetition Rate (duty cycle): 0.01%
 - · Very Fast Response Time
 - High Temperature Soldering Guaranteed : 250°C/10 seconds at Terminals

Mechanical Data

- · Case: JEDEC DO-214AA molded plastic over passivated chip
- Terminals : solder plated, solderable per MIL-STD-750, method 2026
- Polarity : forint-directional types the color band denotes the cathode, which is positive with respect to the anode under normal TVS operation
- Mounting position : any Weight: 0.002oz, 0.64g

Devices for Bidirectional Applications

For bi-directional devices, use suffix C or CA (e.g. SMBJ10C, SMBJ10CA). Electrical characteristics apply in both directions.

Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)

Characteristic	Symbol	Value	Unit
Peak power dissipation with a 10/1,000µs waveform (Note 1,2, Fig.1)	Рррм	Min. 600	W
Peak pulse current with a 10/1,000µs waveform (Note 1)	Іррм	See Next Table	А
Typical thermal resistance, junction to ambient (Note 2)	Reja	100	°C/W
Peak forward surge current, 8.3ms single half sine-wave uni-directional only (Note 3)	Ігѕм	100	А
Typical thermal resistance, junction to ambient	Rejl	20	°C/W
Operating junction and storage temperature range	ТJ, Tsтg	-55 to +150	°C

Note:

(1) Non-repetitive current pules, per Fig. 3 and derated above $T_A=25$ per Fig. 2.

- (2) Mounted on minimum recommended pad layout.
- (3) Mounted on 0.2" × 0.2" (5mm × 5mm) copper pads to each terminal.



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Dort Number	Dynamic		Vwm	Ігм	Іррм	Vc	
Part Number	, ,	/	@Iт		Vwм		Іррм
	Min.	Max.	mA	v	uA	Α	V
SMBJ10A	11.1	12.3	$ \begin{array}{r} 10 \\ 11 \\ 130 \\ 130 \\ 130 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 13 \\ 14 \\ 58 \\ 58 \\ \end{array} $	10		35.3	17
SMBJ11A	12.2	13.5		11		33	18.2
SMBJ130	144	176			2.6	231	
SMBJ130A	144	159		130		2.9	209
SMBJ13A	14.4	15.9		13	5	27.9	21.5
SMBJ160A	178	197		160		2.3	259
SMBJ22A	24.4	26.9		22]	16.9	35.5
SMBJ33A	36.7	40.6		33		11.3	53.3
SMBJ48A	53.3	58.9		48]	7.8	77.4
SMBJ58A	64.4	71.2		58		6.4	93.6
SMBJ7.0A	7.78	8.6		7	200	50	12

Electrical Characteristics (T_A = 25°C)

FIG.1 -- PEAK PULSE POWER RATING CURVE



td, PULSE WIDTH, SEC.

FIG.2 - PULSE DERATING CURVE



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PEAK PULSE POWER P(PP)OR CURRENT (IPPN) DERATING IN PERCENTAGE, %



FIG.3 -- PULSE WAVEFORM

t, TIME, ms

FIG.4 -- TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL



FIG.5 -- TYPICAL TRANSIENT THERMAL IMPEDANCE



FIG.6 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT





Package Outline Dimensions



DO-214AA(SMB)				
Dim.	Min.	Max.		
А	4.3	4.7		
В	3.3	3.7		
С	2	2.3		
D	5.05	5.55		
E	0.1	0.3		
F	0.95	1.55		
G	0.2 Max.			
Н	2.1	2.5		
l	1.85	2.15		

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Package Information

Device	Package	Shipping
SMBJ10A-13-F SMBJ11CA-13-F SMBJ130A-13-F SMBJ130CA-13-F SMBJ13CA-13-F SMBJ160CA-13-F SMBJ22CA-13-F SMBJ33CA-13-F SMBJ48A-13-F SMBJ58A-13-F SMBJ58A-13-F	DO-214AA(SMB)	3,000 / Tape & Reel



Part Number Table

Description	Part Number
Transient Voltage Suppressor	SMBJ10A-13-F
	SMBJ11CA-13-F
	SMBJ130A-13-F
	SMBJ130CA-13-F
	SMBJ13CA-13-F
	SMBJ160CA-13-F
	SMBJ22CA-13-F
	SMBJ33CA-13-F
	SMBJ48A-13-F
	SMBJ58A-13-F
	SMBJ7.0CA-13-F

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