



Features:

- Optimized for LAN Protection Applications
- Low Profile Package With Built-In Strain Relief For Surface Mounted Applications
- Low Incremental Surge Resistance, Excellent Clamping Capability
- 400W Peak Pulse Power Capability with a 10/1,000µs Wave Form, Repetition Rate (duty cycle): 0.01% (300W above 78V)
- Very Fast Response Time
- High Temperature Soldering Guaranteed : 260°C/10 seconds at Terminals

Mechanical Data

- · Case: JEDEC DO-214AC molded plastic over passivated chip
- Terminals: solder plated, solderable per MIL-STD-750, method 2026
- Polarity: forint-directional types the colour band denotes the cathode, which is positive with respect to the anode under normal TVS operation
- Mounting position: any Weight: 0.002oz, 0.064g

Devices for Bidirectional Applications

For Bi-directional devices, use suffix C or CA (e.g. SMAJ10C, SMAJ10CA). 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. 400	W
Peak pulse current with a 10/1,000µs waveform (Note 1)	Іррм	See Next Table	А
Typical thermal resistance, junction to ambient (Note 3)	Reja	120	°C/W
Peak forward surge current, 8.3ms single half sine-wave uni-directional only (Note 2)	lғsм	40	А
Typical thermal resistance, junction to ambient (Note 3)	Røjl	30	°C/W
Operating junction and storage temperature range	ТJ, Tsтg	-55 to +150	°C

Note:

- (1) Non-repetitive current pules, per Fig. 3 and derate above TA=25 per Fig. 2. Rating is 300W above 78V.
- (2) Mounted on 0.2" × 0.2" (5mm × 5mm) copper pads to each terminal.
- (3) Mounted on minimum recommended pad layout

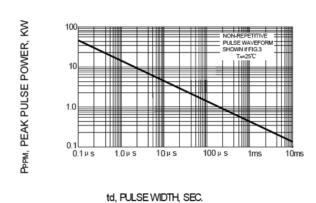




Electrical Characteristics (TA = 25°C)

	Device Marking code		Dynamic		Vwm	lгм	IPPM	V c		
Part Number	11111	DI	V	7	@ Iт			Vwm		Іррм
	UNI	ВІ	Min.	Max.	mA	V	uA	Α	V	
SMAJ6.5A-13-F	AAH	AWH	7.22	8.82	10	6.5	500	32.5	12.3	
SMAJ6.5CA-13-F	AAK	AWK	7.22	7.98	10	6.5	500	35.7	11.2	
SMAJ10A-13-F	AAX	AWX	11.1	12.3	1	10	5	23.5	17	
SMAJ11CA-13-F	AAZ	AWZ	12.2	13.5	1	11	5	22	18.2	
SMAJ15CA-13-F	ABM	AXM	16.7	18.5	1	15	5	16.4	24.4	
SMAJ16A-13-F	ABP	AXP	17.8	19.7	1	16	5	15.4	26	
SMAJ17A-13-F	ABR	AXR	18.9	20.9	1	17	5	14.5	27.6	
SMAJ20A-13-F	ABV	AXV	22.2	24.5	1	20	5	12.3	32.4	
SMAJ22A-13-F	ABX	AXX	24.4	26.9	1	22	5	11.3	35.5	
SMAJ24CA-13-F	ABZ	AXZ	26.7	29.5	1	24	5	10.3	38.9	
SMAJ33A-13-F	ACM	AYM	36.7	40.6	1	33	5	5.6	53.3	
SMAJ43CA-13-F	ACT	AYT	47.8	52.8	1	43	5	4.3	69.4	
SMAJ60A-13-F	ARK	AZK	66.7	73.7	1	60	5	3.1	96.8	
SMAJ60A-13-F	ART	AZT	86.7	95.8	1	78	5	2.4	126	
SMAJ78CA-13-F	ART	AZT	86.7	95.8	1	78	5	2.4	126	
SMAJ160A-13-F	ASP	AVP	178	197	1	160	5	1.2	259	

FIG.1 -- PEAK PULSE POWER RATING CURVE



PEAK PULSE POWER #POR CURRENT (IPPM) DERATING IN PERCENTAGE, %

FIG.2 - PULSE DERATING CURVE

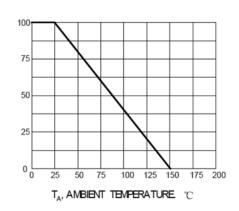




FIG.3 -- PULSE WAVEFORM

PEAK PULSE CURRENT,

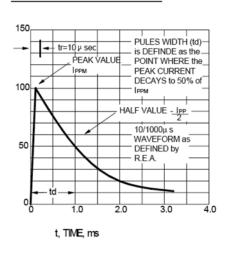


FIG.4 - TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

Cu, JUNCTION CAPACITANCE, pF

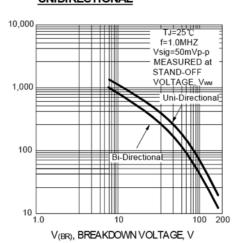
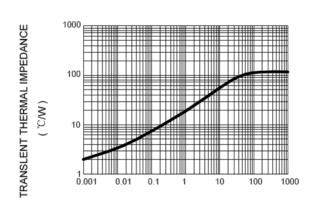
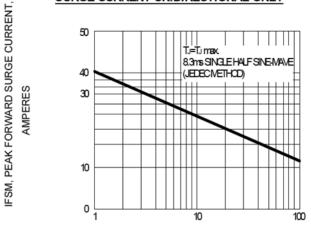


FIG.5 - TYPICAL TRANSIENT THERMAL IMPEDANCE



TL, LEAD TEMPERATURE, °C

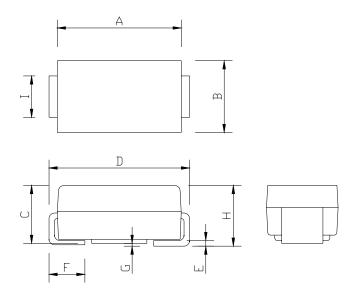
FIG.6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY



NUMBER OF CYCLES AT 60 Hz



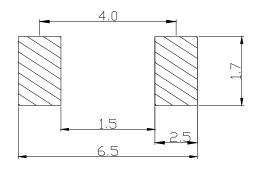
Package Outline Dimensions



DO-214AC(SMA)			
Dim.	Min.	Max.	
А	4.25	4.65	
В	2.4	2.8	
С	1.85	2.15	
D	4.85	5.35	
Е	0.2 Typ.		
F	0.9	1.5	
G	0.2 Max.		
Н	1.9 2.3		
I	1.35	1.65	

Dimensions: Millimetres

Soldering Footprint



Dimensions: Millimetres

Package Information

Device	Package	Shipping
SMAJ6.5A-13-F SMAJ6.5CA-13-F SMAJ10A-13-F SMAJ11CA-13-F SMAJ15CA-13-F SMAJ16A-13-F SMAJ20A-13-F SMAJ22A-13-F SMAJ24CA-13-F SMAJ33A-13-F SMAJ43CA-13-F SMAJ60A-13-F SMAJ60A-13-F SMAJ78CA-13-F	DO-214AC(SMA)	5,000 / Tape & Reel

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Part Number Table

Description	Part Number
	SMAJ6.5A-13-F
	SMAJ6.5CA-13-F
	SMAJ10A-13-F
	SMAJ11CA-13-F
	SMAJ15CA-13-F
	SMAJ16A-13-F
	SMAJ17A-13-F
Transient Veltage Suppresser	SMAJ20A-13-F
Transient Voltage Suppressor	SMAJ22A-13-F
	SMAJ24CA-13-F
	SMAJ33A-13-F
	SMAJ43CA-13-F
	SMAJ60A-13-F
	SMAJ60A-13-F
	SMAJ78CA-13-F
	SMAJ160A-13-F

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