

SMA6F SERIES Transient Voltage Suppressor

VBR : 6.8 - 56 Volts

PPK : 600 Watts

Features

- 600W surge capability at 1ms
- Excellent clamping capability
- Low zener impedance
- Fast response time : typically less than 1.0 ps from 0 volt to VBR(min.)
- Typical IR less than 1µA above 10V
- RoHS compliant package

Applications

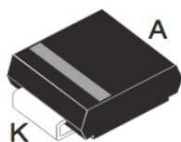
- Electrical characteristics apply in Uni- direction

Mechanical Data

- Case : SMA Molded plastic
- Epoxy : UL94V-0 rate flame retardant
- Lead : Lead Formed for Surface Mount
- Polarity : Color band denotes cathode end
- Mounting position : Any
- Weight : 0.065 gram

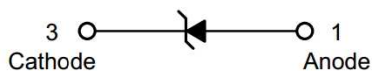
Packing & Order Information

5,000/Reel

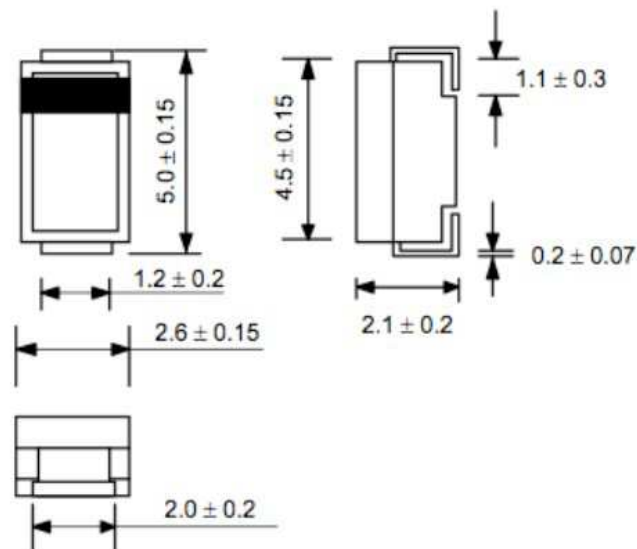


RoHS
COMPLIANT

Graphic symbol



SMA (DO-214AC)



Dimensions in millimeters

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Symbol	Parameter	Value	Unit
PPK	Peak Power Dissipation at Ta = 25°C, Tp=1ms (Note1)	600 Minimum	W
PD	Steady State Power Dissipation at TL = 75 °C	1.0	W
IFSM	Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 3)	50	A
TJ, TSTG	Operating and Storage Temperature Range	-55 to + 150	°C

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Notes:

- (1) Non-repetitive Current pulse, per Fig. 5 and derated above Ta = 25 °C per Fig. 1
- (2) Mounted on copper Lead area at 5.0 mm² (0.013 mm thick).
- (3) 8.3 ms single half sine-wave, duty cycle = 4 pulses per Minutes maximum.

ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified)

Type No.	Breakdown Voltage @ It (Note 1)		Working Peak Reverse Voltage VRWM (V)	Maximum Reverse Leakage @ VRWM IR (µA)	Maximum Reverse Current IRSM (A)	Maximum Clamping Voltage @ IRSM VRSM (V)	Maximum Temperature Co-efficient of VBR (% / °C)	
	VBR (V)							It (mA)
	Min	Max						
SMA6F6.8A	6.45	7.14	10	5.80	1000	57.0	10.5	0.057
SMA6F7.5A	7.13	7.88	10	6.40	500	53.0	11.3	0.061
SMA6F8.2A	7.79	8.61	10	7.02	200	50.0	12.1	0.065
SMA6F9.1A	8.65	9.55	1.0	7.78	50	45.0	13.4	0.068
SMA6F10A	9.50	10.5	1.0	8.55	10	41.0	14.5	0.073
SMA6F11A	10.5	11.6	1.0	9.40	5.0	38.0	15.6	0.075
SMA6F12A	11.4	12.6	1.0	10.2	5.0	36.0	16.7	0.078
SMA6F13A	12.4	13.7	1.0	11.1	5.0	33.0	18.2	0.081
SMA6F15A	14.3	15.8	1.0	12.8	5.0	28.0	21.2	0.084
SMA6F16A	15.2	16.8	1.0	13.6	5.0	27.0	22.5	0.086
SMA6F18A	17.1	18.9	1.0	15.3	5.0	24.0	25.2	0.088
SMA6F20A	19.0	21.0	1.0	17.1	5.0	22.0	27.7	0.090
SMA6F22A	20.9	23.1	1.0	18.8	5.0	20.0	30.6	0.092
SMA6F24A	22.8	25.2	1.0	20.5	5.0	18.0	33.2	0.094
SMA6F27A	25.7	28.4	1.0	23.1	5.0	16.0	37.5	0.096
SMA6F30A	28.5	31.5	1.0	25.6	5.0	14.4	41.4	0.097
SMA6F33A	31.4	34.7	1.0	28.2	5.0	13.2	45.7	0.098
SMA6F36A	34.2	37.8	1.0	30.8	5.0	12.0	49.9	0.099
SMA6F39A	37.1	41.0	1.0	33.3	5.0	11.2	53.9	0.100
SMA6F43A	40.9	45.2	1.0	36.8	5.0	10.1	59.3	0.101
SMA6F47A	44.7	49.4	1.0	40.2	5.0	9.3	64.8	0.101
SMA6F51A	48.5	53.6	1.0	43.6	5.0	8.6	70.1	0.102
SMA6F56A	53.2	58.8	1.0	47.8	5.0	7.8	77.0	0.103

Note:

- (1) "SMA6F" will be omitted in marking on the diode.

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■ RATING AND CHARACTERISTIC CURVES (SMA6F SERIES)

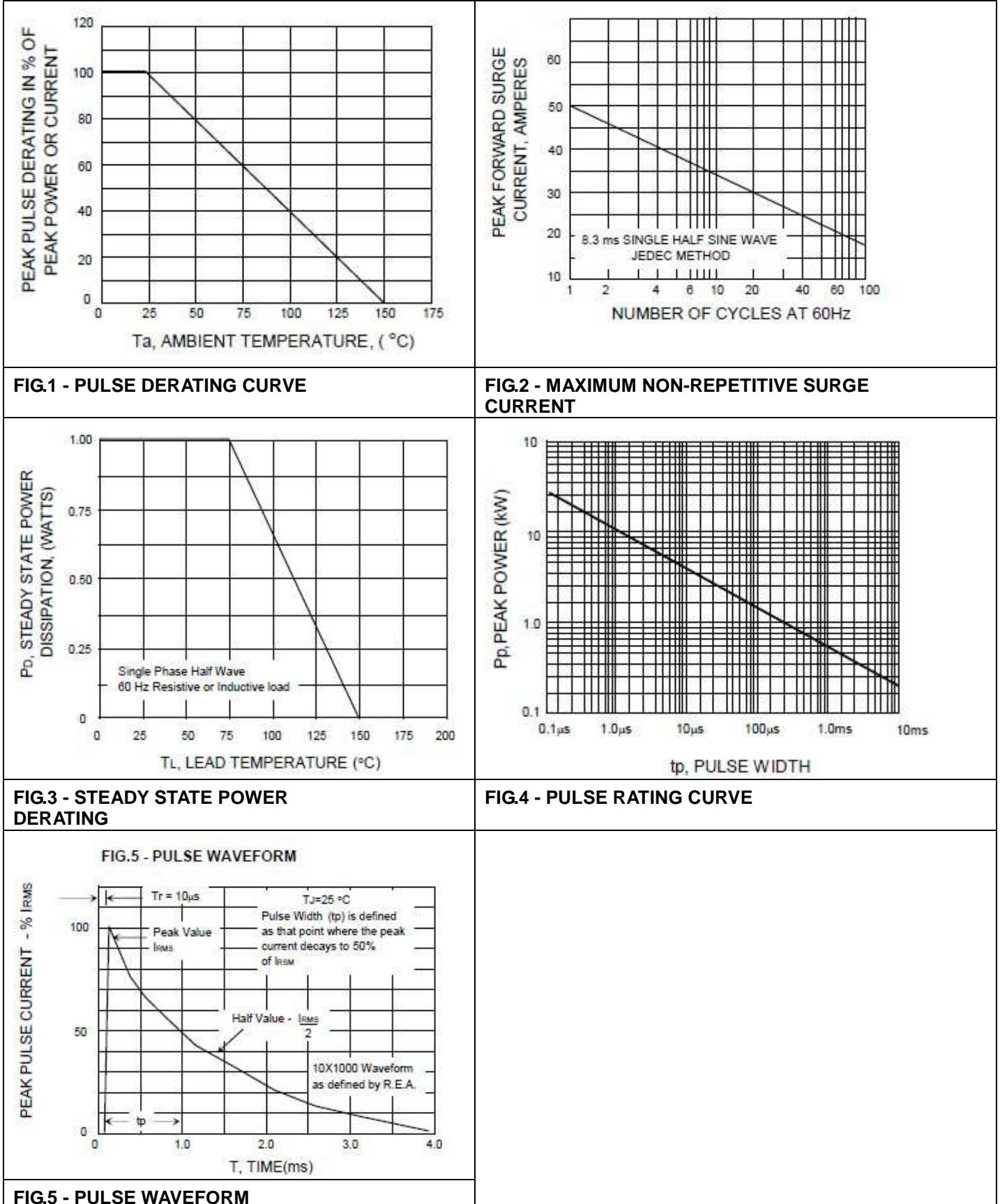


FIG.5 - PULSE WAVEFORM

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