

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR
VOLTAGE 5.0 TO 250 Volts
400 Watt Peak Pulse Power

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * For surface mounted applications in order to optimize board space
- * Low profile package
- * Built-in strain relief
- * Glass passivated junction
- * Low inductance
- * Excellent clamping capability
- * Repetition Rate (duty cycle):0.01%
- * Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- * Typical IR less than 1mA above 10V
- * High temperature soldering guaranteed:
260°C/10 seconds,

MECHANICAL DATA

Case: JEDEC SMA-FL molded plastic
Terminals: Plated leads, solderable per MIL-STD-202, Method 208
Polarity: Color band denoted cathode except Bipolar
Mounting Position: Any
Weight: 0.0327 gram

1.DEVICES FOR BIPOLAR APPLICATIONS

Electrical characteristics apply in both directions.marking code is all type.

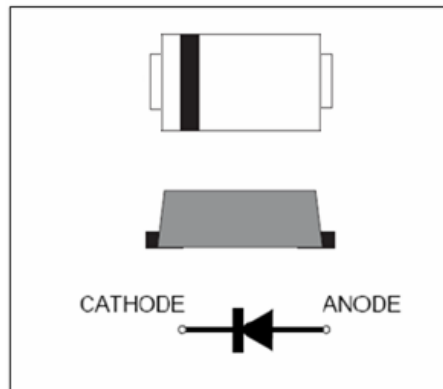
MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^{\circ}\text{C}$, $T_P=1\text{ms}$ (Note 1)	P_{PPM}	Minimum400	Watts
Steady State Power Dissipation at $T_L=75^{\circ}\text{C}$ (Note 2)	$P_{M(AV)}$	1.0	Watts
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load(JECED Method) (Note 3)	I_{FSM}	30	Amps
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +175	°C

NOTES:

1. Non-repetitive current pulse, per Fig. 3 and derated above $T_A=25^{\circ}\text{C}$ per Fig. 2.
2. Mounted on Copper Leaf area of 1.57in²(40mm²).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.



we declare that the material of product is halogen free (green epoxy compound).

Uni-Directional Part Number	Device marking code	Reverse Stand-off Voltage VRWM (V)	Breakdown Voltage VBR (V) Min. @IT	Breakdown Voltage VBR (V) Max. @IT	Test Current IT (mA)	Maximum Clamping Voltage @IPP VC (V)	Peak Pulse Current Ipp (A)	Reverse Leakage @VRWM IR (uA)
MESMAFJ5.0A	5.0A	5.00	6.40	7.00	10.00	9.20	43.5	800
MESMAFJ6.0A	6.0A	6.00	6.67	7.37	10.00	10.30	38.8	800
MESMAFJ6.5A	6.5A	6.50	7.22	7.98	10.00	11.20	35.7	500
MESMAFJ7.0A	7.0A	7.00	7.78	8.60	10.00	12.00	33.3	200
MESMAFJ7.5A	7.5A	7.50	8.33	9.21	1.00	12.90	31.0	100
MESMAFJ8.0A	8.0A	8.00	8.89	9.83	1.00	13.60	29.4	50
MESMAFJ8.5A	8.5A	8.50	9.44	10.40	1.00	14.40	27.8	20
MESMAFJ9.0A	9.0A	9.00	10.00	11.10	1.00	15.40	26.0	10
MESMAFJ10A	10A	10.00	11.10	12.30	1.00	17.00	23.5	1
MESMAFJ11A	11A	11.00	12.20	13.50	1.00	18.20	22.0	1
MESMAFJ12A	12A	12.00	13.30	14.70	1.00	19.90	20.1	1
MESMAFJ13A	13A	13.00	14.40	15.90	1.00	21.50	18.6	1
MESMAFJ14A	14A	14.00	15.60	17.20	1.00	23.20	17.2	1
MESMAFJ15A	15A	15.00	16.70	18.50	1.00	24.40	16.4	1
MESMAFJ16A	16A	16.00	17.80	19.70	1.00	26.00	15.4	1
MESMAFJ17A	17A	17.00	18.90	20.90	1.00	27.60	14.5	1
MESMAFJ18A	18A	18.00	20.00	22.10	1.00	29.20	13.7	1
MESMAFJ20A	20A	20.00	22.20	24.50	1.00	32.40	12.3	1
MESMAFJ22A	22A	22.00	24.40	26.90	1.00	35.50	11.3	1
MESMAFJ24A	24A	24.00	26.70	29.50	1.00	38.90	10.3	1
MESMAFJ26A	26A	26.00	28.90	31.90	1.00	42.10	9.5	1
MESMAFJ28A	28A	28.00	31.10	34.40	1.00	45.40	8.8	1
MESMAFJ30A	30A	30.00	33.30	36.80	1.00	48.40	8.3	1
MESMAFJ33A	33A	33.00	36.70	40.60	1.00	53.30	7.5	1
MESMAFJ36A	36A	36.00	40.00	44.20	1.00	58.10	6.9	1
MESMAFJ40A	40A	40.00	44.40	49.10	1.00	64.50	6.2	1
MESMAFJ43A	43A	43.00	47.80	52.80	1.00	69.40	5.8	1
MESMAFJ45A	45A	45.00	50.00	55.30	1.00	72.70	5.5	1
MESMAFJ48A	48A	48.00	53.30	58.90	1.00	77.40	5.2	1
MESMAFJ51A	51A	51.00	56.70	62.70	1.00	82.40	4.9	1
MESMAFJ54A	54A	54.00	60.00	66.30	1.00	87.10	4.6	1
MESMAFJ58A	58A	58.00	64.40	71.20	1.00	93.60	4.3	1
MESMAFJ60A	60A	60.00	66.70	73.70	1.00	96.80	4.1	1
MESMAFJ64A	64A	64.00	71.10	78.60	1.00	103.00	3.9	1
MESMAFJ70A	70A	70.00	77.80	86.00	1.00	113.00	3.5	1
MESMAFJ75A	75A	75.00	83.30	92.10	1.00	121.00	3.3	1
MESMAFJ78A	78A	78.00	86.70	95.80	1.00	126.00	3.2	1
MESMAFJ85A	85A	85.00	94.40	104.00	1.00	137.00	2.9	1
MESMAFJ90A	90A	90.00	100.00	111.00	1.00	146.00	2.7	1
MESMAFJ100A	100A	100.00	111.00	123.00	1.00	162.00	2.5	1
MESMAFJ110A	110A	110.00	122.00	135.00	1.00	177.00	2.3	1
MESMAFJ120A	120A	120.00	133.00	147.00	1.00	193.00	2.1	1
MESMAFJ130A	130A	130.00	144.00	159.00	1.00	209.00	1.9	1
MESMAFJ150A	150A	150.00	167.00	185.00	1.00	243.00	1.6	1
MESMAFJ160A	160A	160.00	178.00	197.00	1.00	259.00	1.5	1
MESMAFJ170A	170A	170.00	189.00	209.00	1.00	275.00	1.5	1
MESMAFJ180A	180A	180.00	198.00	221.00	1.00	291.00	1.4	1
MESMAFJ190A	190A	190.00	209.00	233.00	1.00	307.00	1.3	1
MESMAFJ200A	200A	200.00	220.00	246.00	1.00	324.00	1.2	1
MESMAFJ220A	220A	220.00	246.00	272.00	1.00	356.00	1.1	1
MESMAFJ250A	250A	250.00	279.00	309.00	1.00	405.00	1.0	1

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

For parts without A , the VBR is + 10%

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2.Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1-Peak Pulse Power Rating Curve

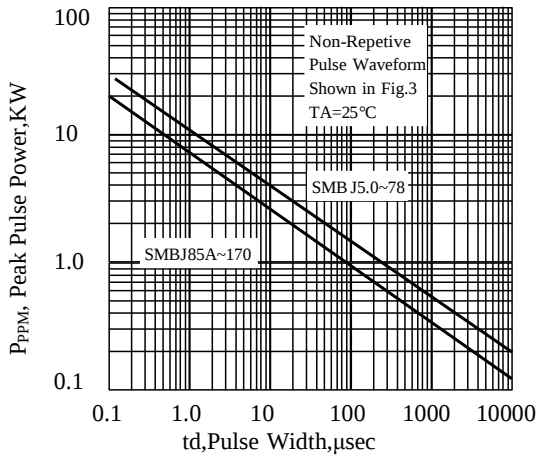


Fig. 2-Pulse Derating Curve

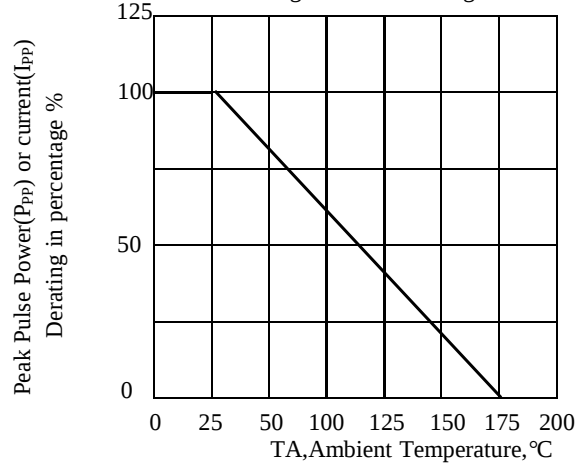


Fig. 3-Pulse Waveform

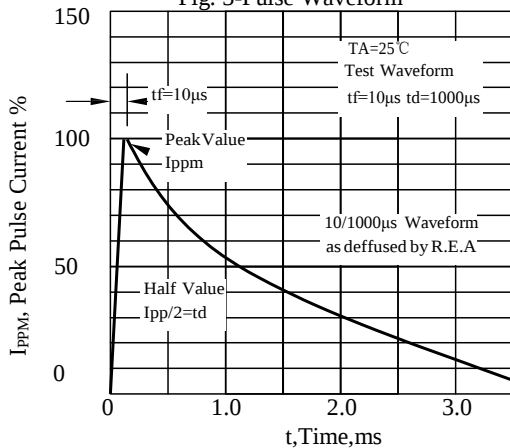


Fig. 4-Typical Junction Capacitance Unidirectional

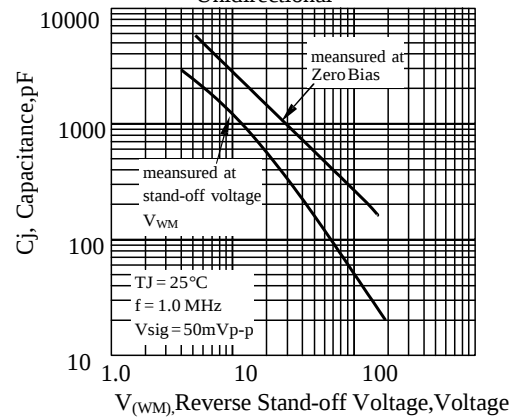


Fig 5. - typical transient thermal impedance

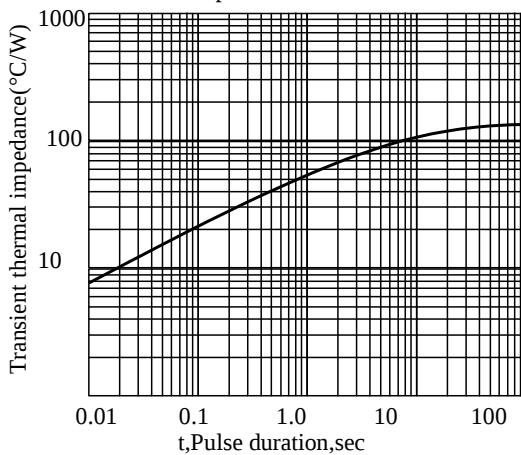
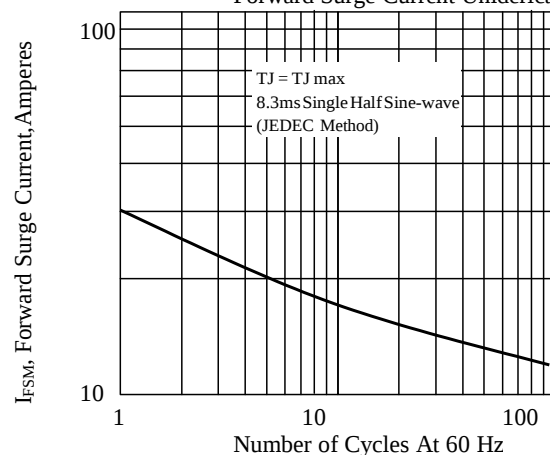


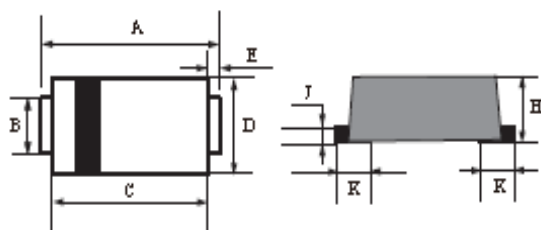
Fig. 6-Maximum Non-Repetitive Peak Forward Surge Current Unidirectional



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3. dimension:

SMA-FL

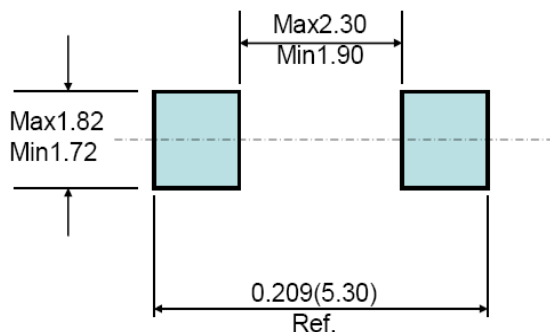


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.4	4.8	0.173	0.189
B	1.3	1.5	0.051	0.059
C	3.3	3.7	0.130	0.146
D	2.3	2.7	0.091	0.106
E	0.90Typ		0.035Typ	
H	0.9	1.2	0.036	0.047
J	0.11	0.21	0.005	0.009

Suggested solder pad layout

Mounting Pad Layout

SMA-FL



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