



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMAFJ5.0A
THRU
SMAFJ170A

TECHNICAL SPECIFICATIONS OF TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE RANGE - 5.0 to 170Volts PEAK PULAE POWER - 400 Watts

FEATURES

- * Glass passivated junction
- * 400 Watts Peak Pulse Power capability on 10/1000 μ s waveform
- * Excellent clamping capability
- * Low inductance
- * Fast response time

MECHANICAL DATA

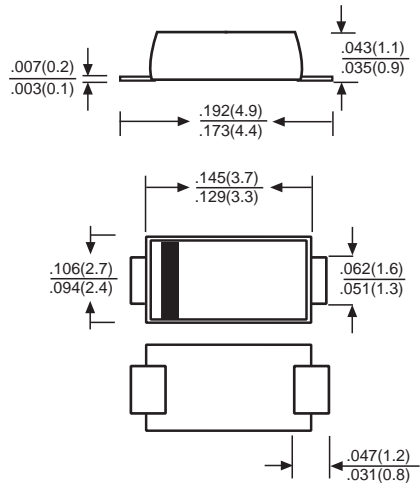
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes positive end (cathode) except bidirectional types
- * Mounting position: Any
- * Weight: 0.064 gram

MAXIMUM RATINGS AND ELECTRICAL 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%.



SMAFL



DEVICES FOR BIPOLAR APPLICATIONS

	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μ s waveform (Note1, FIG.1)	PPPM	400	Watts
Steady State Power Dissipation at TA = 25°C Lead Lengths .375"(9.5mm) (Note 2)	PM(AV)	1.0	Watts
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) (Note 3)	IFSM	40	Amps
Operating and Storage Temperature Range	TJ, TSTG	-55 to + 150	°C

- NOTES : 1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig. 2.
2. Mounted on Copper Leaf area of 0.2 X 0.2" (5.0 X 5.0mm) per Fig. 5
3. 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

RATING AND CHARACTERISTIC CURVES (SMAFJ5.0A THRU SMAFJ170A)

FIG. 1
PEAK PULSE POWER RATING CURVE

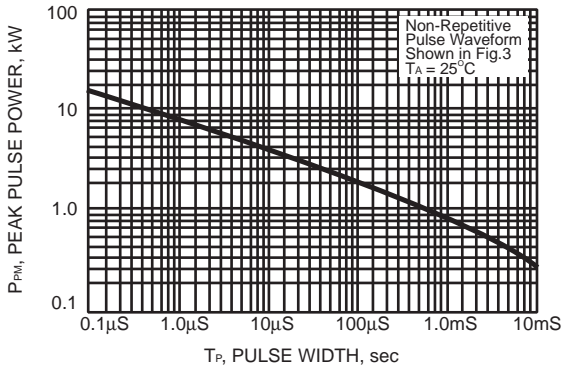


FIG. 2 - PULSE DERATING CURVE

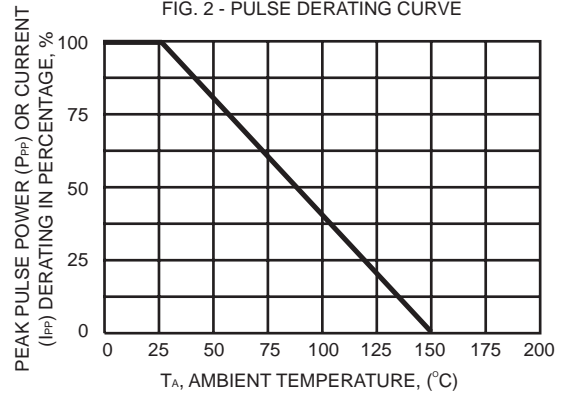


FIG. 3 - PULSE WAVEFORM

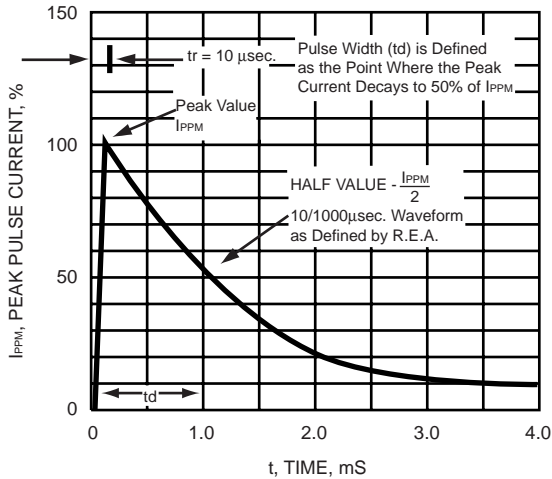


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

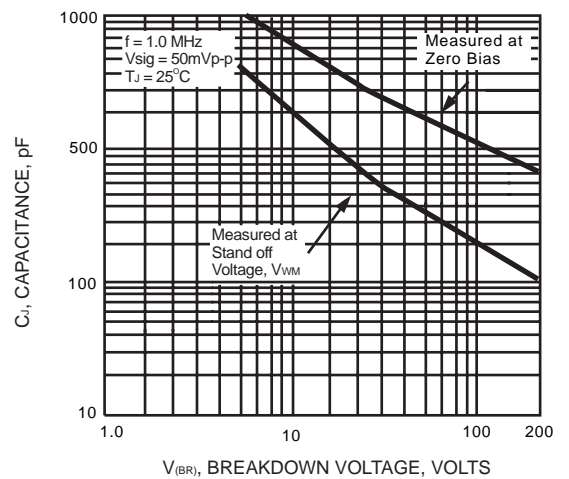
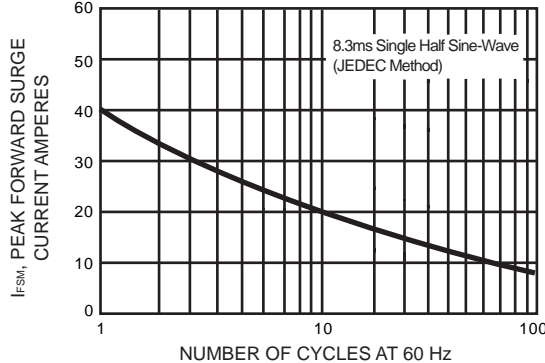


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL



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SMAFJ (400W) SERIES TRANSIENT VOLTAGE SUPPRESSORS

TYPE	Reverse Stand-off Voltage	Breakdown Voltage @ I _T		Test Current	Maximum Reverse Leakage @ VRWM	Maximum Clamping Voltage @ I _{PP}	Maximum Peak Pulse Current
		V _{BR}					
		Min. V	Max. V				
				I _T mA	I _R μA	V _C V	I _{PP} A
SMAFJ5.0A	5.0	6.4	7.0	10	200	9.2	21.7
SMAFJ6.0A	6.0	6.7	7.4	10	100	10.3	19.4
SMAFJ6.5A	6.5	7.2	8.0	10	75	11.2	17.9
SMAFJ7.0A	7.0	7.8	8.6	10	50	12.0	16.7
SMAFJ7.5A	7.5	8.3	9.2	1	50	12.9	15.5
SMAFJ8.0A	8.0	8.9	9.8	1	25	13.6	14.7
SMAFJ8.5A	8.5	9.4	10.4	1	10	14.4	13.9
SMAFJ9.0A	9.0	10.0	11.5	1	5	15.4	13.0
SMAFJ10A	10	11.1	12.3	1	5	17.0	11.8
SMAFJ11A	11	12.2	13.5	1	1	18.2	11.0
SMAFJ12A	12	13.3	14.7	1	1	19.9	10.1
SMAFJ13A	13	14.4	15.9	1	1	21.5	9.3
SMAFJ14A	14	15.6	17.2	1	1	23.2	8.6
SMAFJ15A	15	16.7	18.5	1	1	24.4	8.2
SMAFJ16A	16	17.8	19.7	1	1	26.0	7.7
SMAFJ17A	17	18.9	20.9	1	1	27.6	7.2
SMAFJ18A	18	20.0	22.1	1	1	29.2	6.8
SMAFJ20A	20	22.2	24.5	1	1	32.4	6.2
SMAFJ22A	22	24.4	26.9	1	1	35.5	5.6
SMAFJ24A	24	26.7	29.5	1	1	38.9	5.1
SMAFJ26A	26	28.9	31.9	1	1	42.1	4.8
SMAFJ28A	28	31.1	34.4	1	1	45.4	4.4
SMAFJ30A	30	33.3	36.8	1	1	48.4	4.1
SMAFJ33A	33	36.7	40.6	1	1	53.3	3.8
SMAFJ36A	36	40.0	44.2	1	1	58.1	3.4
SMAFJ40A	40	44.4	49.1	1	1	64.5	3.1
SMAFJ43A	43	47.8	52.8	1	1	69.4	2.9
SMAFJ45A	45	50.0	55.3	1	1	72.7	2.8
SMAFJ48A	48	53.3	58.9	1	1	77.4	2.6
SMAFJ51A	51	56.7	62.7	1	1	82.4	2.4
SMAFJ54A	54	60.0	66.3	1	1	87.1	2.3
SMAFJ58A	58	64.4	71.2	1	1	93.6	2.1
SMAFJ60A	60	66.7	73.7	1	1	96.8	1.8
SMAFJ64A	64	71.1	78.6	1	1	103	1.7
SMAFJ70A	70	77.8	86.0	1	1	113	1.5
SMAFJ75A	75	83.3	92.1	1	1	121	1.4
SMAFJ78A	78	86.7	95.8	1	1	126	1.4
SMAFJ85A	85	94.4	104	1	1	137	1.3
SMAFJ90A	90	100	111	1	1	146	1.2
SMAFJ100A	100	111	123	1	1	162	1.1
SMAFJ110A	110	122	135	1	1	177	1.0
SMAFJ120A	120	133	147	1	1	193	0.9
SMAFJ130A	130	144	159	1	1	209	0.8
SMAFJ150A	150	167	185	1	1	243	0.7
SMAFJ160A	160	178	197	1	1	259	0.7
SMAFJ170A	170	189	209	1	1	275	0.6



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