



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMAFJ5.0A
THRU
SMAFJ170A

TECHNICAL SPECIFICATIONS OF TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE RANGE - 5.0 to 170Volts PEAK PULSE 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

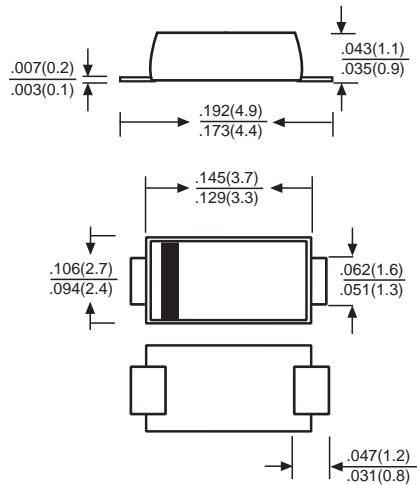
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes positive end (cathode) except bidirectional types
- * Mounting position: Any
- * Weight: 0.064 gram

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



Dimensions in inches and (millimeters)

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

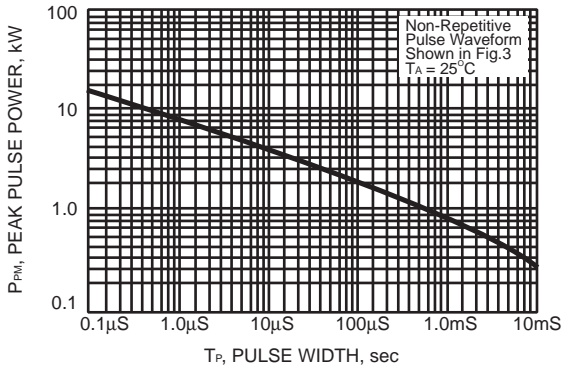


FIG. 2 - PULSE DERATING CURVE

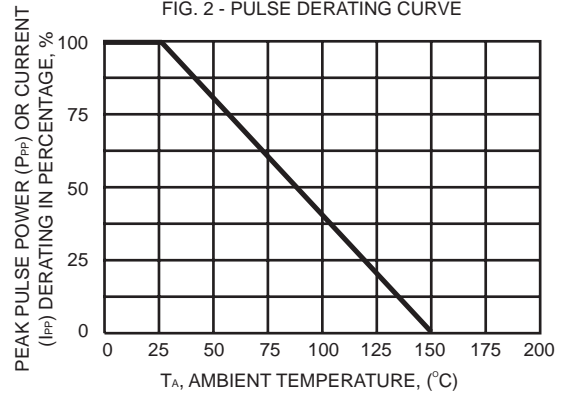


FIG. 3 - PULSE WAVEFORM

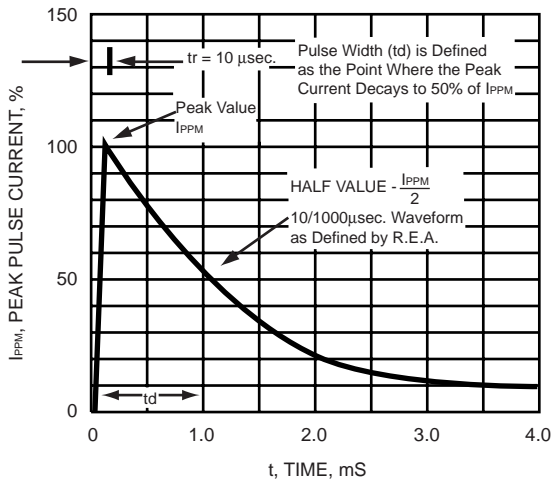


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

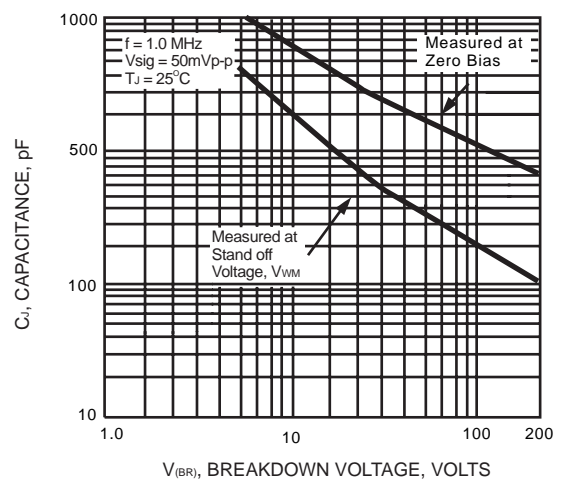
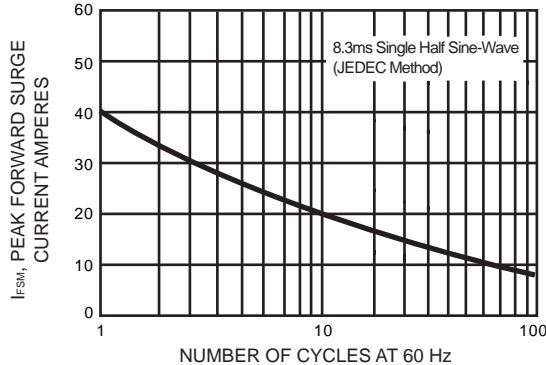


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL



SMAFJ (400W) SERIES TRANSIENT VOLTAGE SUPPRESSORS

TYPE	Reverse Stand-off Voltage	Breakdown Voltage @ I_T		Test Current	Maximum Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage @ I_{PP}	Maximum Peak Pulse Current
		V_{BR}					
	V_{RWM}	Min.	Max.	I_T	I_R	V_C	I_{PP}
	V	V	V	mA	μA	V	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

Disclaimer

Any Customer or user of this document or products described herein in such applications shall assume all risks of such use and will agree to hold *DC COMPONENTS* harmless against all damages.

DC COMPONENTS disclaims any and all liability arising out of the application or use of any product, including consequential or incidental damages. Statement regarding the suitability of products for certain types of applications are based on *DC COMPONENTS*'s knowledge of typical requirements that are often placed on *DC COMPONENTS* products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application.

DC COMPONENTS reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to this document and any product described herein, and disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product. Parameters provided in datasheets and specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify *DC COMPONENTS*'s terms and conditions of purchase, including but not limited to the warranty expressed therein.

Unless otherwise in writing, *DC COMPONENTS* products are intended for use as general electronic components in standard applications (eg: Consumer electronic, Computer equipment, Office equipment, etc.), and not recommended for use in a high specific application where a failure or malfunction of the device could result in human injury or death (eg: Aerospace equipment, Submarine cables, Combustion equipment, Safety devices, Life support systems, etc.)

Customers using or selling *DC COMPONENTS* products not expressly indicated for use in such applications do so at their own risk. If customer intended to use *DC COMPONENTS* standard quality grade devices for applications not envisioned by *DC COMPONENTS*, please contact our sales representatives in advance.



DC COMPONENTS CO., LTD.