DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

SMBFJ6.8A THRU SMBFJ550A

TECHNICAL SPECIFICATIONS OF TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE RANGE - 6.8 to 550Volts PEAK PULAE POWER - 600 Watts

FEATURES

* Glass passivated junction
* 600 Watts Peak Pulse Power capability on 10/1000 µs waveform
* Excellent clamping capability
* Low inductance
* Fast response time

MECHANICAL DATA

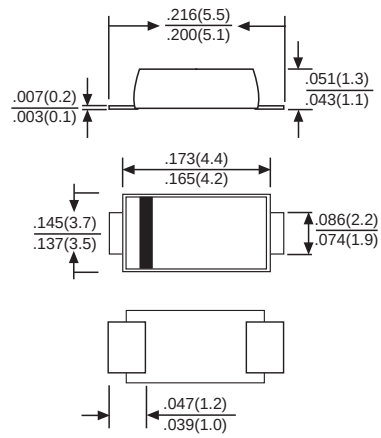
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes positive end (cathode) except bidirectional types
* Mounting position: Any
* Weight: 0.057 gram

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%.



SMBFL



Dimensions in inches and (millimeters)

DEVICES FOR BIPOLAR APPLICATIONS

	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 µs waveform (Note1,FIG.1)	P_{PPM}	600	Watts
Steady State Power Dissipation at TA = 25°C Lead Lengths .375"(9.5mm) (Note 2)	$P_{M(AV)}$	1.0	Watts
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load(JEDEC Method) (Note 3)	I_{FSM}	100	Amps
Operating and Storage Temperature Range	T_J , T_{STG}	-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 0.5 X 0.5"(12.7 X 12.7mm) 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 (SMBFJ6.8A THRU SMBFJ550A)

FIG. 1
PEAK PULSE POWER RATING CURVE

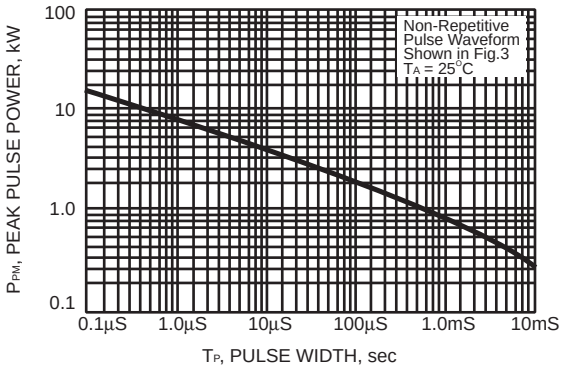


FIG. 2 - PULSE DERATING CURVE

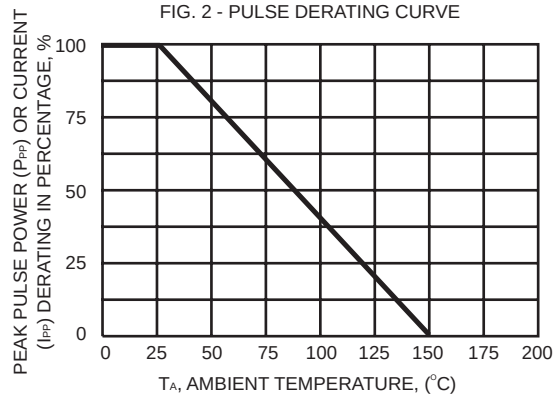


FIG. 3 - PULSE WAVEFORM

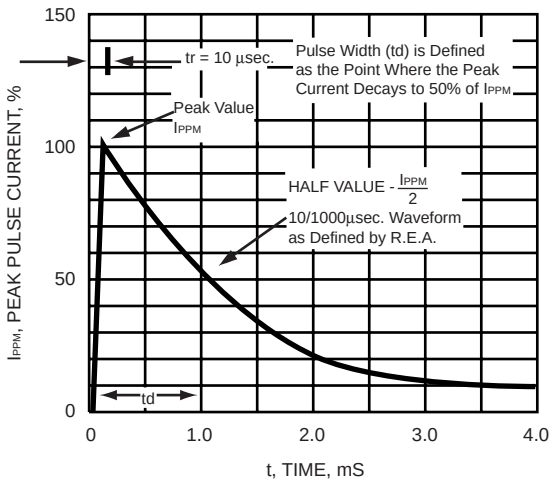


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

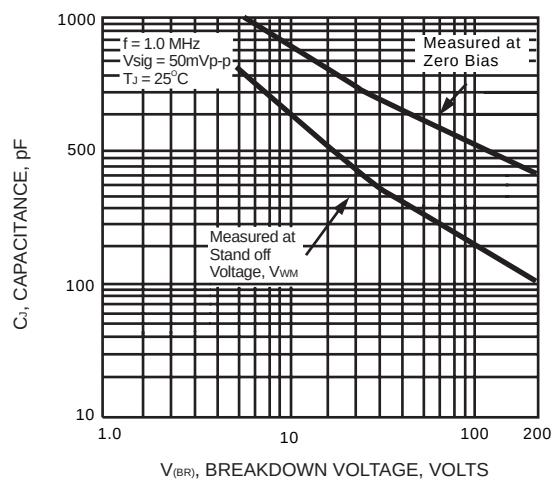
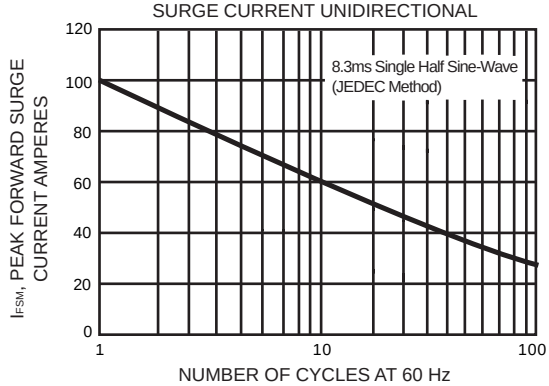


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT UNIDIRECTIONAL



SMBFJ (600W) SERIES TRANSIENT VOLTAGE SUPPRESSORS

TYPE	Reverse Stand-off Voltage	Breakdown Voltage @ IT		Test Current	Maximum Reverse Leakage @ VRWM	Maximum Clamping Voltage @ IPP	Maximum Peak Pulse Current
	VRWM	VBR Min.	VBR Max.	IT	IR	VC	IPP
	V	V	V	mA	μA	V	A
SMBFJ6.8A	5.8	6.45	7.14	10	1000	10.5	58.1
SMBFJ7.5A	6.4	7.13	7.88	10	500	11.3	54.0
SMBFJ8.2A	7.02	7.79	8.61	10	200	12.1	50.4
SMBFJ9.1A	7.78	8.65	9.55	1	50	13.4	45.5
SMBFJ10A	8.55	9.5	10.5	1	10	14.5	42.1
SMBFJ11A	9.4	10.5	11.6	1	5	15.6	39.1
SMBFJ12A	10.2	11.4	12.6	1	5	16.7	36.5
SMBFJ13A	11.1	12.4	13.7	1	1	18.2	33.5
SMBFJ15A	12.8	14.3	15.8	1	1	21.2	28.8
SMBFJ16A	13.6	15.2	16.8	1	1	22.5	27.1
SMBFJ18A	15.3	17.1	18.9	1	1	25.2	24.2
SMBFJ20A	17.1	19	21	1	1	27.7	22.0
SMBFJ22A	18.8	20.9	23.1	1	1	30.6	19.9
SMBFJ24A	20.5	22.8	25.2	1	1	33.2	18.4
SMBFJ27A	23.1	25.7	28.4	1	1	37.5	16.3
SMBFJ30A	25.6	28.5	31.5	1	1	41.4	14.7
SMBFJ33A	28.2	31.4	34.7	1	1	45.7	13.3
SMBFJ36A	30.8	34.2	37.8	1	1	49.9	12.2
SMBFJ39A	33.3	37.1	41	1	1	53.9	11.3
SMBFJ43A	36.8	40.9	45.2	1	1	59.3	10.3
SMBFJ47A	40.2	44.7	49.4	1	1	64.8	9.4
SMBFJ51A	43.6	48.5	53.6	1	1	70.1	8.7
SMBFJ56A	47.8	53.2	58.8	1	1	77	7.9
SMBFJ62A	53	58.9	65.1	1	1	85	7.2
SMBFJ68A	58.1	64.6	71.4	1	1	92	6.6
SMBFJ75A	64.1	71.3	78.8	1	1	103	5.9
SMBFJ82A	70.1	77.9	86.1	1	1	113	5.4
SMBFJ91A	77.8	86.5	95.5	1	1	125	4.9
SMBFJ100A	85.5	95	105	1	1	137	4.5
SMBFJ110A	94	105	116	1	1	152	4.0
SMBFJ120A	102	114	126	1	1	165	3.7
SMBFJ130A	111	124	137	1	1	179	3.4
SMBFJ150A	128	143	158	1	1	207	2.9
SMBFJ160A	136	152	168	1	1	219	2.8
SMBFJ170A	145	162	179	1	1	234	2.6
SMBFJ180A	154	171	189	1	1	246	2.5
SMBFJ200A	171	190	210	1	1	274	2.2
SMBFJ220A	185	209	231	1	1	328	1.9
SMBFJ250A	214	237	263	1	1	344	1.8
SMBFJ300A	256	285	315	1	1	414	1.5
SMBFJ350A	300	332	368	1	1	482	1.3
SMBFJ400A	342	380	420	1	1	548	1.1
SMBFJ440A	376	418	462	1	1	602	1.0
SMBFJ480A	408	456	504	1	1	658	0.9
SMBFJ510A	434	485	535	1	1	698	0.9
SMBFJ530A	450	503.5	556.5	1	1	725	0.8
SMBFJ540A	459	513	567	1	1	740	0.8
SMBFJ550A	467	522.5	577.5	1	1	760	0.8