

RoHS Compliant Product

A suffix of "-C" specifies halogen-free and lead-free

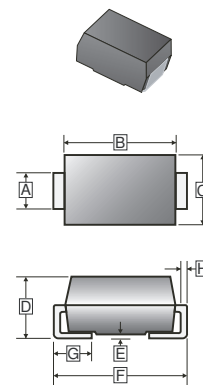
FEATURES

- For surface mount application
- Build-in strain relief
- Excellent clamping capability
- Low profile package
- Fast response time: Typically less than 1.0ps from 0 volt to BV min.
- Typical I_R less than 1mA above 10V
- High temperature soldering guaranteed:
260°C / 10 seconds at terminals

MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Solder-able per MIL-STD-202,
Method 208 Guaranteed
- Polarity: Color band denotes cathode end except bidirectional
- Mounting position: Any
- Weight: 0.093 grams

SMB



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.91	2.11	E	-	0.203
B	4.06	4.7	F	5.08	5.59
C	3.3	3.94	G	0.76	1.27
D	2.13	2.44	H	0.15	0.31

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SMB	3K	13' inch

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Ratings	Symbol	Value	Units
Peak Power Dissipation @ $T_A=25^\circ\text{C}$, $T_P=1\text{ms}$ ¹	P_{PK}	600 (Min.)	W
Peak Forward Surge Current @ 8.3ms single Half Sine-Wave superimposed on rated load (JEDEC method) ²	I_{FSM}	100	A
Maximum Instantaneous Forward voltage @ 35A for unidirectional only	V_F	3.5	V
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~ 150	°C

Notes:

1. Non-repetitive current pulse per Fig. 3 and derated above $T_A=25^\circ\text{C}$ per Fig. 2.
2. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

RATINGS AND CHARACTERISTIC CURVES

FIG.1-PEAK PULSE POWER DERATING CURVE

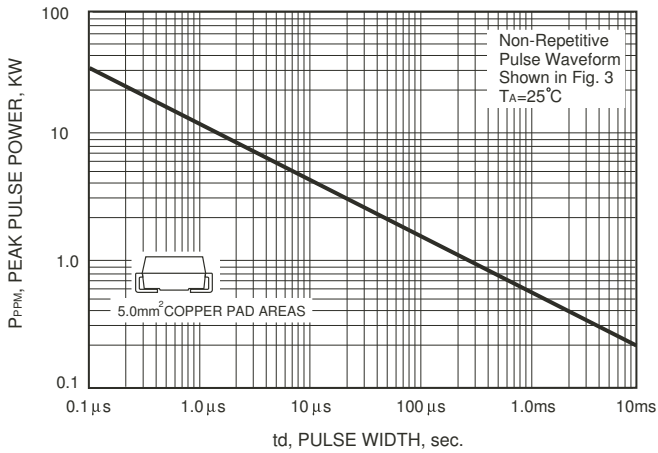


FIG.2-PULSE DERATING CURVE

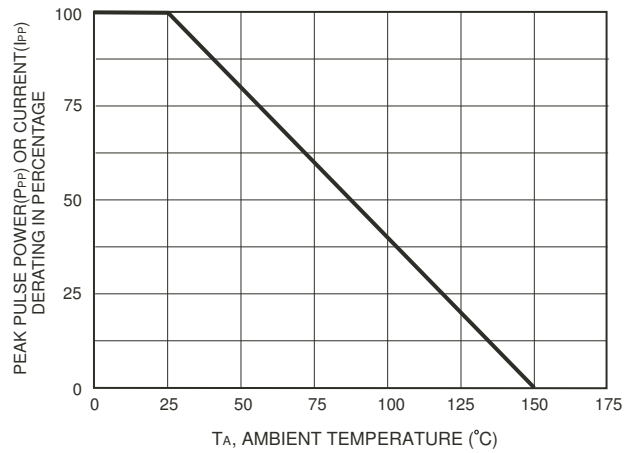


FIG.3-PULSE WAVE FORM

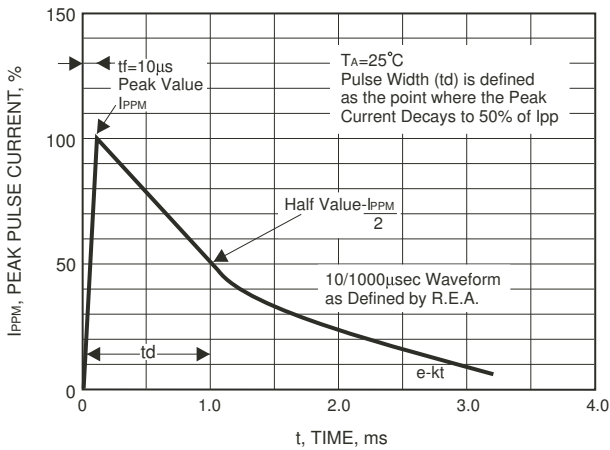


FIG.4-TYPICAL JUNCTION CAPACITANCE

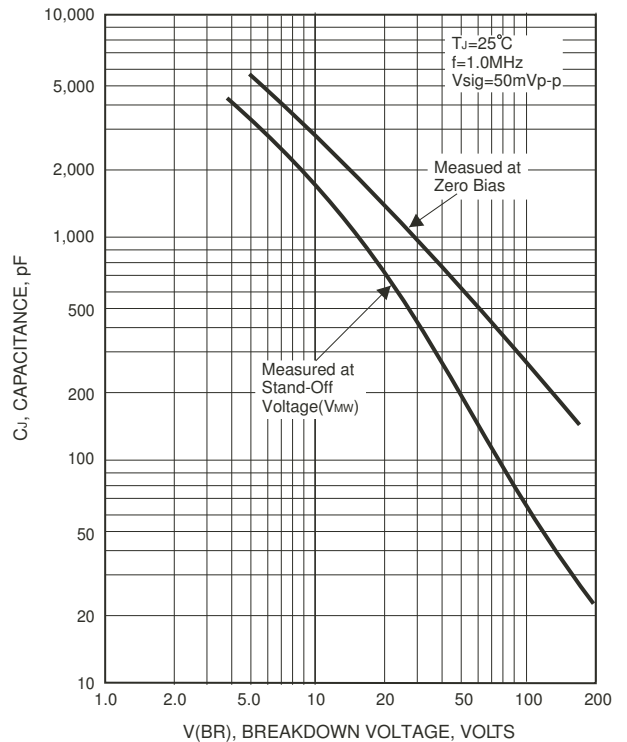
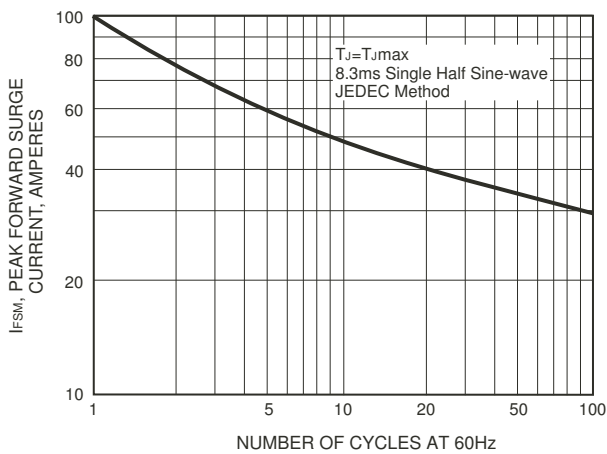


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



PART NUMBER (See Note)		REVERSE STANDOFF VOLTAGE V_{RWM}	BREAKDOWN VOLTAGE		TEST CURRENT	MAX CLAMPING VOLTAGE $V_C @ I_{PP}$	PEAK PULSE CURRENT I_{PP}	REVERSE LEAKAGE $I_R @ V_{RWM}$
			Min $V_{BR} @ I_T$	Max $V_{BR} @ I_T$				
Uni-direction	Bi-direction	V	V	V	mA	V	A	μA
SMBJ5.0A	SMBJ5.0CA	5	6.4	7.25	10	9.2	65.2	800
SMBJ6.0A	SMBJ6.0CA	6	6.67	7.67	10	10.3	58.3	800
SMBJ6.5A	SMBJ6.5CA	6.5	7.22	8.3	10	11.2	53.6	500
SMBJ7.0A	SMBJ7.0CA	7	7.78	8.95	10	12.0	50	200
SMBJ7.5A	SMBJ7.5CA	7.5	8.33	9.58	1	12.9	46.5	100
SMBJ8.0A	SMBJ8.0CA	8	8.89	10.23	1	13.6	44.1	50
SMBJ8.5A	SMBJ8.5CA	8.5	9.44	10.82	1	14.4	41.7	10
SMBJ9.0A	SMBJ9.0CA	9	10.0	11.5	1	15.4	39	5
SMBJ10A	SMBJ10CA	10	11.1	12.8	1	17.0	35.3	5
SMBJ11A	SMBJ11CA	11	12.2	14.0	1	18.2	33	5
SMBJ12A	SMBJ12CA	12	13.3	15.3	1	19.9	30.2	5
SMBJ13A	SMBJ13CA	13	14.4	16.5	1	21.5	27.9	5
SMBJ14A	SMBJ14CA	14	15.6	17.9	1	23.2	25.8	5
SMBJ15A	SMBJ15CA	15	16.7	19.2	1	24.4	24	5
SMBJ16A	SMBJ16CA	16	17.8	20.5	1	26.0	23.1	5
SMBJ17A	SMBJ17CA	17	18.9	21.7	1	27.6	21.7	5
SMBJ18A	SMBJ18CA	18	20	23.3	1	29.2	20.5	5
SMBJ20A	SMBJ20CA	20	22.2	25.5	1	32.4	18.5	5
SMBJ22A	SMBJ22CA	22	24.4	28.0	1	35.5	16.9	5
SMBJ24A	SMBJ24CA	24	26.7	30.7	1	38.9	15.4	5
SMBJ26A	SMBJ26CA	26	28.9	33.2	1	42.1	14.2	5
SMBJ28A	SMBJ28CA	28	31.1	35.8	1	45.4	13.2	5
SMBJ30A	SMBJ30CA	30	33.3	38.3	1	48.4	12.4	5
SMBJ33A	SMBJ33CA	33	36.7	42.2	1	53.3	11.3	5
SMBJ36A	SMBJ36CA	36	40.0	46.0	1	58.1	10.3	5
SMBJ40A	SMBJ40CA	40	44.4	51.1	1	64.5	9.3	5
SMBJ43A	SMBJ43CA	43	47.8	54.9	1	69.4	8.6	5
SMBJ45A	SMBJ45CA	45	50.0	57.5	1	72.7	8.3	5
SMBJ48A	SMBJ48CA	48	53.3	61.3	1	77.4	7.7	5
SMBJ51A	SMBJ51CA	51	56.7	65.2	1	82.4	7.3	5

Note :

1. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device.
2. For Bidirectional use CA suffix for types SMBJ5.0CA thru SMBJ440CA.
3. Electrical Characteristics apply in both directions.

PART NUMBER (See Note)		REVERSE STANDOFF VOLTAGE V_{RWM}	BREAKDOWN VOLTAGE		TEST CURRENT	MAX CLAMPING VOLTAGE $V_C @ I_{PP}$	PEAK PULSE CURRENT I_{PP}	REVERSE LEAKAGE $I_R @ V_{RWM}$
			Min $V_{BR} @ I_T$	Max $V_{BR} @ I_T$				
Uni -direction	Bi -direction	V	V	V	mA	V	A	μA
SMBJ54A	SMBJ54CA	54	60.0	69.0	1	87.1	6.9	5
SMBJ58A	SMBJ58CA	58	64.4	74.1	1	93.6	6.4	5
SMBJ60A	SMBJ60CA	60	66.7	76.7	1	96.8	6.2	5
SMBJ64A	SMBJ64CA	64	71.1	81.8	1	103	5.8	5
SMBJ70A	SMBJ70CA	70	77.8	89.5	1	113	5.3	5
SMBJ75A	SMBJ75CA	75	83.3	95.8	1	121	4.9	5
SMBJ78A	SMBJ78CA	78	86.7	99.7	1	126	4.7	5
SMBJ85A	SMBJ85CA	85	94.4	108.2	1	137	4.4	5
SMBJ90A	SMBJ90CA	90	100	115.5	1	146	4.1	5
SMBJ100A	SMBJ100CA	100	111	128	1	162	3.7	5
SMBJ110A	SMBJ110CA	110	122	140.5	1	177	3.4	5
SMBJ120A	SMBJ120CA	120	133	153	1	193	3.1	5
SMBJ130A	SMBJ130CA	130	144	165.5	1	209	2.9	5
SMBJ150A	SMBJ150CA	150	167	192.5	1	243	2.5	5
SMBJ160A	SMBJ160CA	160	178	205	1	259	2.3	5
SMBJ170A	SMBJ170CA	170	189	217.5	1	275	2.2	5
SMBJ180A	SMBJ180CA	180	200	220	1	292	2.06	5
SMBJ190A	SMBJ190CA	190	211	232	1	308	1.95	5
SMBJ200A	SMBJ200CA	200	224	247	1	324	1.9	5
SMBJ220A	SMBJ220CA	220	246	272	1	356	1.7	5
SMBJ250A	SMBJ250CA	250	279	309	1	405	1.5	5
SMBJ300A	SMBJ300CA	300	335	371	1	486	1.3	5
SMBJ350A	SMBJ350CA	350	391	432	1	567	1.1	5
SMBJ400A	SMBJ400CA	400	447	494	1	648	0.9	5
SMBJ440A	SMBJ440CA	440	492	543	1	713	0.9	5

Note :

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