

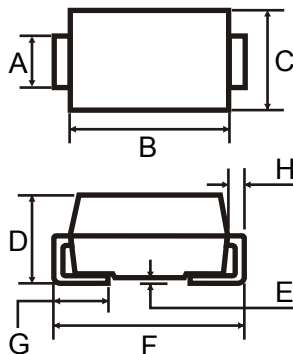
RoHS Compliant Product

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



FEATURES

- * For surface mount application
- * Built-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



	Dimensions in Millimeters		Dimensions in Inches	
A	1.25	1.65	0.049	0.065
B	3.99	4.60	0.157	0.181
C	2.50	2.90	0.098	0.114
D	1.98	2.44	0.078	0.096
E	0.051	0.203	0.002	0.008
F	4.78	5.28	0.188	0.208
G	0.76	1.52	0.030	0.060
H	0.006	0.012	0.305	0.152

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end except Bidirectional
- * Mounting position: Any
- * Weight: 0.063 grams

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 at $T_A=25^\circ\text{C}$, $T_P=1\text{ms}$ (NOTE 1)	P_{PK}	Minimum 400	Watts
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load (JEDEC method) (NOTE 3)	I_{FSM}	40	Amps
Maximum Instantaneous Forward Voltage at 25.0A for Unidirectional only	V_F	3.5	Volts
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 $T_A=25^\circ\text{C}$ per Fig. 2.
2. Mounted on Copper Pad area of 5.0mm²(.013mm Thick) to each terminal.
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

DEVICES FOR BIPOLAR APPLICATIONS

1. For Bidirectional use C or CA Suffix for types SMAJ5.0 thru SMAJ170.
2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES (SMAJ SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

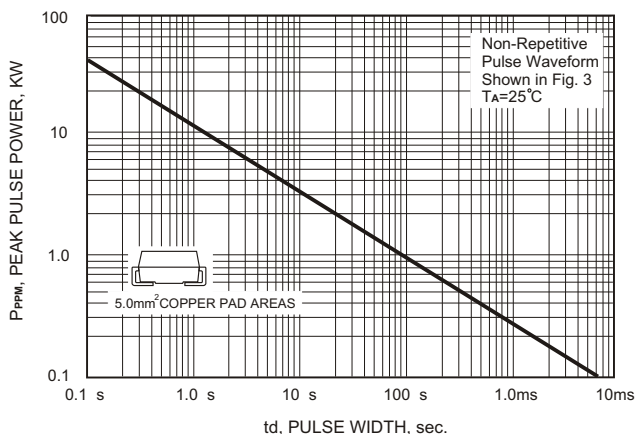


FIG.2-PULSE DERATING CURVE

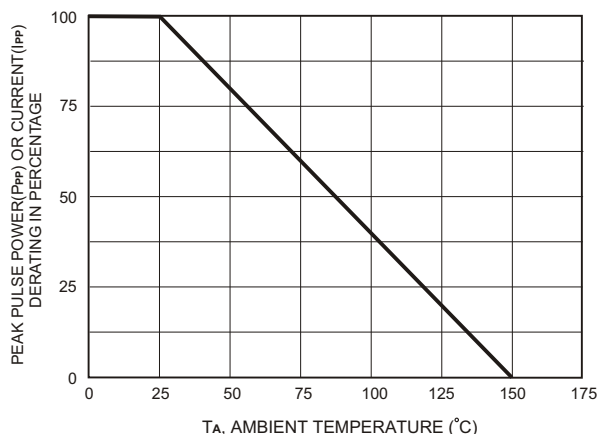


FIG.3-PULSE WAVE FORM

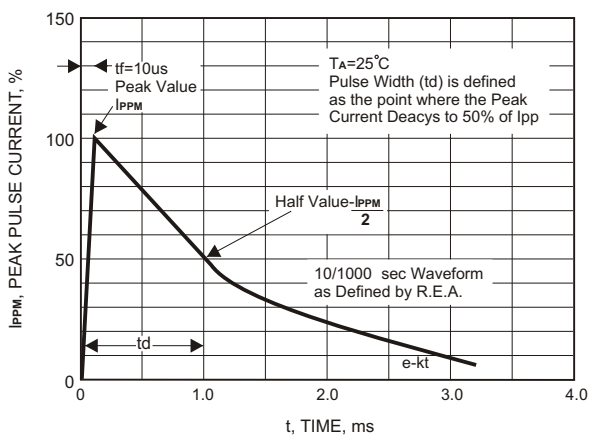


FIG.4-TYPICAL JUNCTION CAPACITANCE

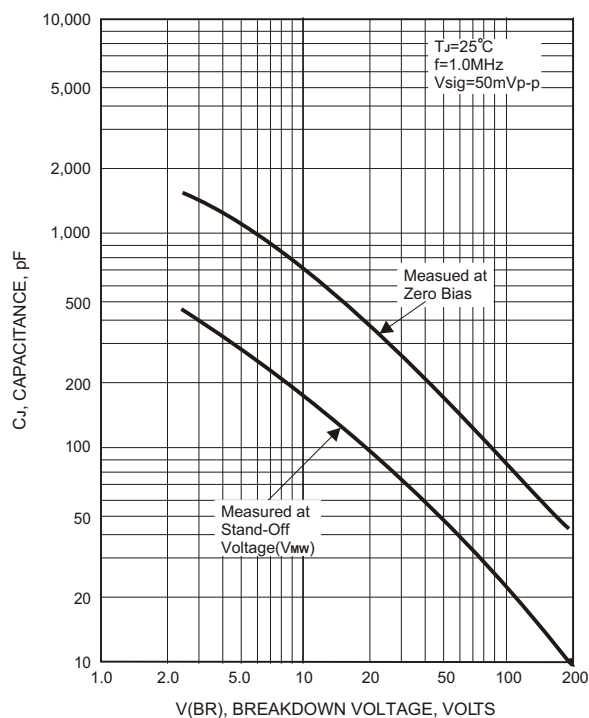
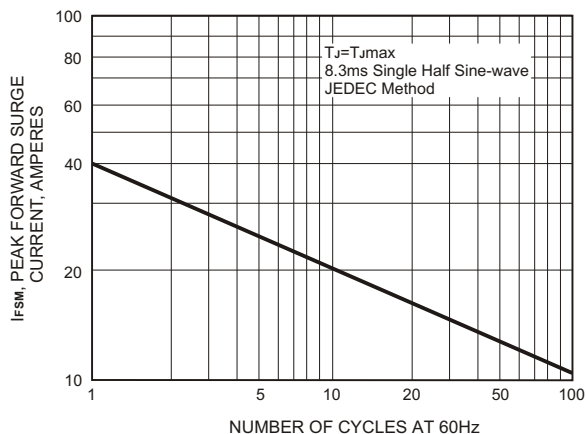


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



PART NUMBER ADD C FOR BI- DIRECTIONAL See Note 1	REVERSE STAND-OFF VOLTAGE V _{RWM} (V)	BREAKDOWN VOLTAGE V _{BR} (V) MIN. @ I _T	BREAKDOWN VOLTAGE V _{BR} (V) MAX. @ I _T	TEST CURRENT I _T (mA)	MAXIMUM CLAMPING VOLTAGE @I _{PP} V _C (V)	PEAK PULSE CURRENT I _{PP} (A)	REVERSE LEAKAGE @V _{RWM} I _R (μA)	MARKING CODE
SMAJ5.0(C)	5.0	6.40	7.30	10	9.6	41.6	800	AJ05
SMAJ5.0(C)A	5.0	6.40	7.00	10	9.2	43.5	800	AJ05A
SMAJ6.0(C)	6.0	6.67	8.15	10	11.4	35.1	800	AJ06
SMAJ6.0(C)A	6.0	6.67	7.37	10	10.3	38.8	800	AJ06A
SMAJ6.5(C)	6.5	7.22	8.82	10	12.3	32.5	500	AJ6.5
SMAJ6.5(C)A	6.5	7.22	7.98	10	11.2	35.7	500	AJ6.5A
SMAJ7.0(C)	7.0	7.78	9.51	10	13.3	30.1	200	AJ07
SMAJ7.0(C)A	7.0	7.78	8.60	10	12.0	33.3	200	AJ07A
SMAJ7.5(C)	7.5	8.33	10.3	1	14.3	28.0	100	AJ7.5
SMAJ7.5(C)A	7.5	8.33	9.21	1	12.9	31.0	100	AJ7.5A
SMAJ8.0(C)	8.0	8.89	10.9	1	15.0	26.5	50	AJ08
SMAJ8.0(C)A	8.0	8.89	9.83	1	13.6	29.4	50	AJ08A
SMAJ8.5(C)	8.5	9.44	11.5	1	15.9	25.1	10	AJ8.5
SMAJ8.5(C)A	8.5	9.44	10.4	1	14.4	27.7	10	AJ8.5A
SMAJ9.0(C)	9.0	10.0	12.2	1	16.9	23.6	5	AJ09
SMAJ9.0(C)A	9.0	10.0	11.1	1	15.4	26.0	5	AJ09A
SMAJ10(C)	10	11.1	13.6	1	18.8	21.1	5	AJ10
SMAJ10(C)A	10	11.1	12.3	1	17.0	23.5	5	AJ10A
SMAJ11(C)	11	12.2	14.9	1	20.1	20.0	5	AJ11
SMAJ11(C)A	11	12.2	13.5	1	18.2	22.0	5	AJ11A
SMAJ12(C)	12	13.3	16.3	1	22.0	18.1	5	AJ12
SMAJ12(C)A	12	13.3	14.7	1	19.9	20.1	5	AJ12A
SMAJ13(C)	13	14.4	17.6	1	23.8	16.8	5	AJ13
SMAJ13(C)A	13	14.4	15.9	1	21.5	18.6	5	AJ13A
SMAJ14(C)	14	15.6	19.1	1	25.8	15.5	5	AJ14
SMAJ14(C)A	14	15.6	17.2	1	23.2	17.2	5	AJ14A
SMAJ15(C)	15	16.7	20.4	1	26.9	14.8	5	AJ15
SMAJ15(C)A	15	16.7	18.5	1	24.4	16.4	5	AJ15A
SMAJ16(C)	16	17.8	21.8	1	28.8	13.8	5	AJ16
SMAJ16(C)A	16	17.8	19.7	1	26.0	15.3	5	AJ16A
SMAJ17(C)	17	18.9	23.1	1	30.5	13.1	5	AJ17
SMAJ17(C)A	17	18.9	20.9	1	27.6	14.5	5	AJ17A
SMAJ18(C)	18	20.0	24.4	1	32.2	12.4	5	AJ18
SMAJ18(C)A	18	20.0	22.1	1	29.2	13.7	5	AJ18A
SMAJ20(C)	20	22.2	27.1	1	35.8	11.1	5	AJ20
SMAJ20(C)A	20	22.2	24.5	1	32.4	12.3	5	AJ20A
SMAJ22(C)	22	24.4	29.8	1	39.4	10.1	5	AJ22
SMAJ22(C)A	22	24.4	26.9	1	35.5	11.2	5	AJ22A
SMAJ24(C)	24	26.7	32.6	1	43.0	9.3	5	AJ24
SMAJ24(C)A	24	26.7	29.5	1	38.9	10.3	5	AJ24A
SMAJ26(C)	26	28.9	35.3	1	46.6	8.6	5	AJ26
SMAJ26(C)A	26	28.9	31.9	1	42.1	9.5	5	AJ26A
SMAJ28(C)	28	31.1	38.0	1	50.0	8.0	5	AJ28
SMAJ28(C)A	28	31.1	34.4	1	45.4	8.8	5	AJ28A
SMAJ30(C)	30	33.3	40.7	1	53.5	7.5	5	AJ30
SMAJ30(C)A	30	33.3	36.8	1	48.4	8.3	5	AJ30A
SMAJ33(C)	33	36.7	44.9	1	59.0	6.8	5	AJ33
SMAJ33(C)A	33	36.7	40.6	1	53.3	7.5	5	AJ33A
SMAJ36(C)	36	40.0	48.9	1	64.3	6.2	5	AJ36
SMAJ36(C)A	36	40.0	44.2	1	58.1	6.9	5	AJ36A
SMAJ40(C)	40	44.4	54.3	1	71.4	5.6	5	AJ40
SMAJ40(C)A	40	44.4	49.1	1	64.5	6.2	5	AJ40A
SMAJ43(C)	43	47.8	58.4	1	76.7	5.2	5	AJ43
SMAJ43(C)A	43	47.8	52.8	1	69.4	5.7	5	AJ43A
SMAJ45(C)	45	50.0	61.1	1	80.3	5.0	5	AJ45
SMAJ45(C)A	45	50.0	55.3	1	72.7	5.5	5	AJ45A
SMAJ48(C)	48	53.3	65.1	1	85.5	4.7	5	AJ48
SMAJ48(C)A	48	53.3	58.9	1	77.4	5.2	5	AJ48A
SMAJ51(C)	51	56.7	69.3	1	91.1	4.4	5	AJ51
SMAJ51(C)A	51	56.7	62.7	1	82.4	4.9	5	AJ51A
SMAJ54(C)	54	60.0	73.3	1	96.3	4.2	5	AJ54
SMAJ54(C)A	54	60.0	66.3	1	87.1	4.6	5	AJ54A
SMAJ58(C)	58	64.4	78.7	1	103	3.9	5	AJ58
SMAJ58(C)A	58	64.4	71.2	1	93.6	4.3	5	AJ58A

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SMAJ60(C)	60	66.7	81.5	1	107	3.7	5	AJ60
SMAJ60(C)A	60	66.7	73.7	1	96.8	4.1	5	AJ60A
SMAJ64(C)	64	71.1	86.4	1	114	4.5	5	AJ64
SMAJ64(C)A	64	71.1	78.6	1	103	3.9	5	AJ64A
SMAJ70(C)	70	77.8	95.1	1	125	3.2	5	AJ70
SMAJ70(C)A	70	77.8	86.0	1	113	3.5	5	AJ70A
SMAJ75(C)	75	83.3	102	1	134	3.0	5	AJ75
SMAJ75(C)A	75	83.3	92.1	1	121	3.3	5	AJ75A
SMAJ78(C)	78	86.7	106	1	139	2.9	5	AJ78
SMAJ78(C)A	78	86.7	95.8	1	126	3.2	5	AJ78A
SMAJ85(C)	85	94.4	115	1	151	2.6	5	AJ85
SMAJ85(C)A	85	94.4	104	1	137	2.9	5	AJ85A
SMAJ90(C)	90	100	122	1	160	2.5	5	AJ90
SMAJ90(C)A	90	100	111	1	146	2.7	5	AJ90A
SMAJ100(C)	100	111	136	1	179	2.2	5	AJ100
SMAJ100(C)A	100	111	123	1	162	2.5	5	AJ100A
SMAJ110(C)	110	122	149	1	196	2.0	5	AJ110
SMAJ110(C)A	110	122	135	1	177	2.3	5	AJ110A
SMAJ120(C)	120	133	163	1	214	1.9	5	AJ120
SMAJ120(C)A	120	133	147	1	193	2.0	5	AJ120A
SMAJ130(C)	130	144	176	1	231	1.7	5	AJ130
SMAJ130(C)A	130	144	159	1	209	1.9	5	AJ130A
SMAJ150(C)	150	167	204	1	268	1.5	5	AJ150
SMAJ150(C)A	150	167	185	1	243	1.6	5	AJ150A
SMAJ160(C)	160	178	218	1	287	1.4	5	AJ160
SMAJ160(C)A	160	178	197	1	259	1.5	5	AJ160A
SMAJ170(C)	170	189	231	1	304	1.3	5	AJ170
SMAJ170(C)A	170	189	209	1	275	1.4	5	AJ170A