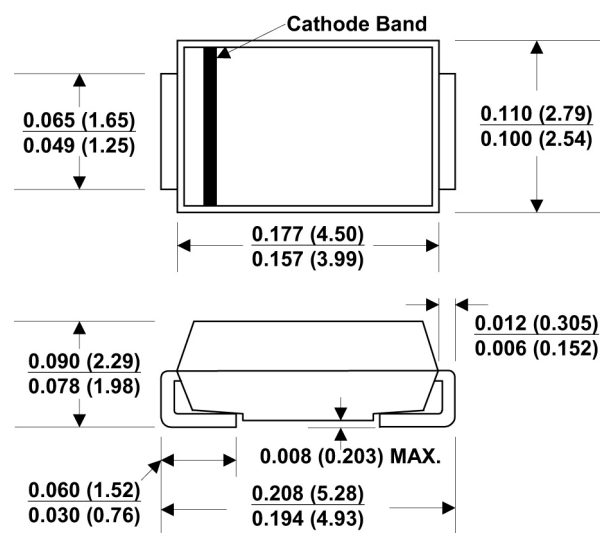


Kingtronics®**SMAJ SERIES****SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR****STAND-OFF VOLTAGE 5.0 to 440 Volts, Peak Pulse Power 400 Watt****FEATURES**

Board space, Low profile package
 Built-in strain relief, Glass passivated junction
 Low inductance, Excellent clamping capability
 Repetition Rate (duty cycle):0.01%
 Fast response time: typically less than 1.0ps from
 0 Volts to V(BR) for unidirectional types
 Typical IR less than 1mA above 10V
 High Temperature soldering: 250°C/10 seconds at terminals
 Plastic package has Underwriters Laboratory Flammability 94V-0

MECHANICAL DATA**Case:** JEDEC DO214AC. Molded plastic over glass passivated Junction**Terminal:** Solder plated, solderable per MIL-STD-750, Method 2026**Polarity:** Color band denoted positive end (cathode) except Bidirectional**Standard Packaging:** 12mm tape (EIA STD RS-481)**Weight:** 0.002 ounce, 0.061 gram**SMA (DO-214AC)****Dimensions in inches and (millimeters)****DEVICES FOR BIPOLAR APPLICATION**

For Bidirectional use C or CA Suffix for types SMAJ5.0 thru types SMAJ170 (e.g. SMAJ5.0C, SMAJ170CA)

Electrical characteristics apply in both directions

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**Ratings at 25°C ambient temperature unless otherwise specified ,**

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 μ s waveform (Note 1,2 ,FIG.1)	P _{PPM}	Min 400	Watts
Peak Pulse Current of on 10/1000 μ s waveform (Note 1,FIG.3)	I _{PPM}	TABLE 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note2,3)	I _{FSM}	40	Amps
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150	°C

1. Non-repetitive current pulse , per Fig. 3 and derated above TA = 25k per Fig. 2 .

2. Mounted on 5.0mm² (0.03mm thick) Copper Pads to each terminal

3.8.3ms single half sine-wave, or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

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SMAJ PART NUMBER		REVERSE STAND- OFF VOLTAGE VRWM(V)	BREAKDOWN VOLTAGE VBR(V) MIN. @IT	BREAKDOWN VOLTAGE VBR(V) MAX. @IT	TEST CURR ENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc(V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR(μ A)
UNI-POLAR	BI-POLAR							
SMAJ5.0A	SMAJ5.0CA	5	6.4	7	10	9.2	43.5	800
SMAJ6.0A	SMAJ6.0CA	6	6.67	7.37	10	10.3	38.8	800
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	7.98	10	11.2	35.7	500
SMAJ7.0A	SMAJ7.0CA	7	7.78	8.6	10	12	33.3	200
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.21	1	12.9	31	100
SMAJ8.0A	SMAJ8.0CA	8	8.89	9.83	1	13.6	29.4	50
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.4	1	14.4	27.8	20
SMAJ9.0A	SMAJ9.0CA	9	10	11.1	1	15.4	26	10
SMAJ10A	SMAJ10CA	10	11.1	12.3	1	17	23.5	5
SMAJ11A	SMAJ11CA	11	12.2	13.5	1	18.2	22	5
SMAJ12A	SMAJ12CA	12	13.3	14.7	1	19.9	20.1	5
SMAJ13A	SMAJ13CA	13	14.4	15.9	1	21.5	18.6	5
SMAJ14A	SMAJ14CA	14	15.6	17.2	1	23.2	17.2	5
SMAJ15A	SMAJ15CA	15	16.7	18.5	1	24.4	16.4	5
SMAJ16A	SMAJ16CA	16	17.8	19.7	1	26	15.4	5
SMAJ17A	SMAJ17CA	17	18.9	20.9	1	27.6	14.5	5
SMAJ18A	SMAJ18CA	18	20	22.1	1	29.2	13.7	5
SMAJ20A	SMAJ20CA	20	22.2	24.5	1	32.4	12.3	5
SMAJ22A	SMAJ22CA	22	24.4	26.9	1	35.5	11.3	5
SMAJ24A	SMAJ24CA	24	26.7	29.5	1	38.9	10.3	5
SMAJ26A	SMAJ26CA	26	28.9	31.9	1	42.1	9.5	5
SMAJ28A	SMAJ28CA	28	31.1	34.4	1	45.4	8.8	5
SMAJ30A	SMAJ30CA	30	33.3	36.8	1	48.4	8.3	5
SMAJ33A	SMAJ33CA	33	36.7	40.6	1	53.3	7.5	5
SMAJ36A	SMAJ36CA	36	40	44.2	1	58.1	6.9	5
SMAJ40A	SMAJ40CA	40	44.4	49.1	1	64.5	6.2	5
SMAJ43A	SMAJ43CA	43	47.8	52.8	1	69.4	5.8	5
SMAJ45A	SMAJ45CA	45	50	55.3	1	72.7	5.5	5

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SMAJ PART NUMBER		REVERSE STAND- OFF VOLTAGE VRWM(V)	BREAKDOWN VOLTAGE VBR(V) MIN. @IT	BREAKDOWN VOLTAGE VBR(V) MAX. @IT	TEST CURR ENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc(V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @VRWM IR(μ A)
SMAJ48A	SMAJ48CA	48	53.3	58.9	1	77.4	5.2	5
SMAJ51A	SMAJ51CA	51	56.7	62.7	1	82.4	4.9	5
SMAJ54A	SMAJ54CA	54	60	66.3	1	87.1	4.6	5
SMAJ58A	SMAJ58CA	58	64.4	71.2	1	93.6	4.3	5
SMAJ60A	SMAJ60CA	60	66.7	73.7	1	96.8	4.1	5
SMAJ64A	SMAJ64CA	64	71.1	78.6	1	103	3.9	5
SMAJ70A	SMAJ70CA	70	77.8	86	1	113	3.5	5
SMAJ75A	SMAJ75CA	75	83.3	92.1	1	121	3.3	5
SMAJ78A	SMAJ78CA	78	86.7	95.8	1	126	3.2	5
SMAJ85A	SMAJ85CA	85	94.4	104	1	137	2.9	5
SMAJ90A	SMAJ90CA	90	100	111	1	146	2.7	5
SMAJ100A	SMAJ100CA	100	111	123	1	162	2.5	5
SMAJ110A	SMAJ110CA	110	122	135	1	177	2.3	5
SMAJ120A	SMAJ120CA	120	133	147	1	193	2.1	5
SMAJ130A	SMAJ130CA	130	144	159	1	209	1.9	5
SMAJ150A	SMAJ150CA	150	167	185	1	243	1.6	5
SMAJ160A	SMAJ160CA	160	178	197	1	259	1.5	5
SMAJ170A	SMAJ170CA	170	189	209	1	275	1.5	5
SMAJ180A	SMAJ180CA	180	201	222	1	292	1.4	5
SMAJ200A	SMAJ200CA	200	224	247	1	342	1.2	5
SMAJ220A	SMAJ220CA	220	246	272	1	356	1.1	5
SMAJ250A	SMAJ250CA	250	279	309	1	405	1	5
SMAJ300A	SMAJ300CA	300	355	371	1	486	0.8	5
SMAJ350A	SMAJ350CA	350	391	432	1	567	0.7	5
SMAJ400A	SMAJ400CA	400	447	494	1	648	0.6	5
SMAJ440A	SMAJ440CA	440	492	543	1	713	0.6	5

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

For parts without A , the VBR is + 10%

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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Peak Pulse Power Rating

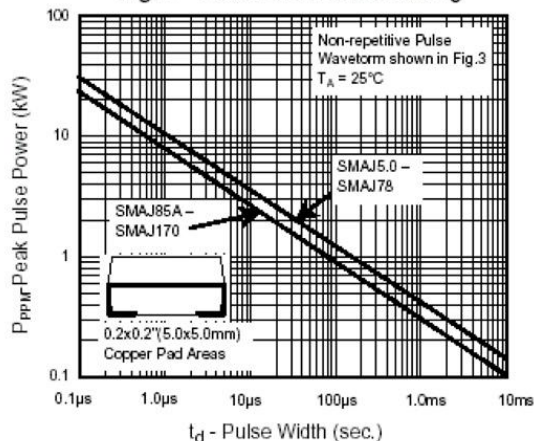


Fig.2 - Pulse Derating Curve

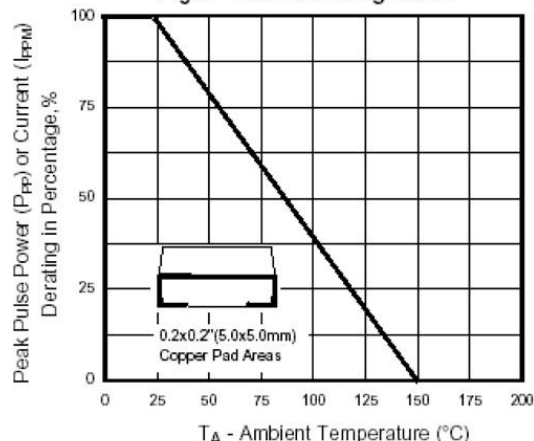


Fig.3 - Pulse Waveform

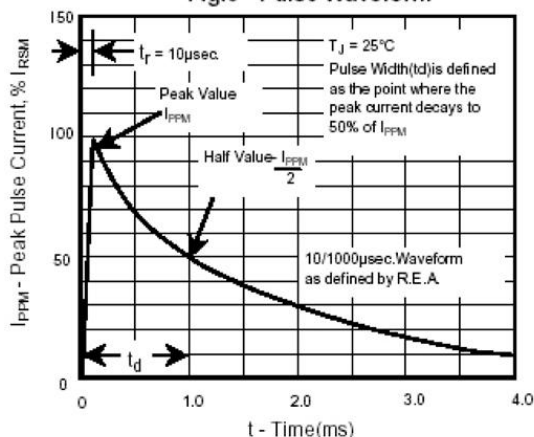


Fig.4 - Typical Junction Capacitance

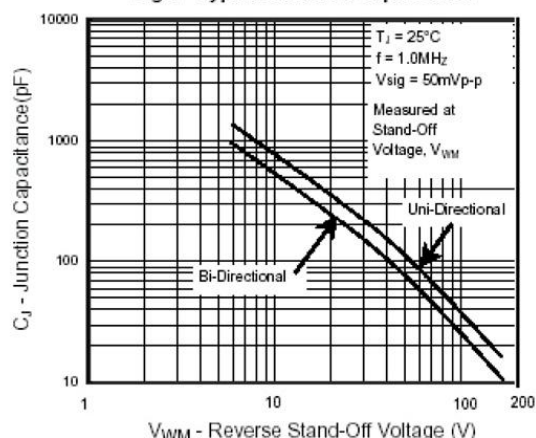


Fig. 5 - Typ. Transient Thermal Impedance

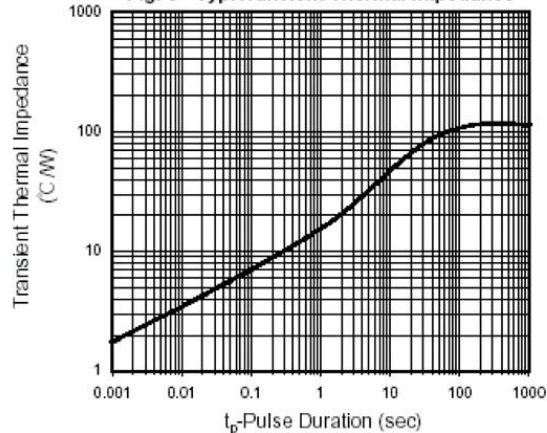
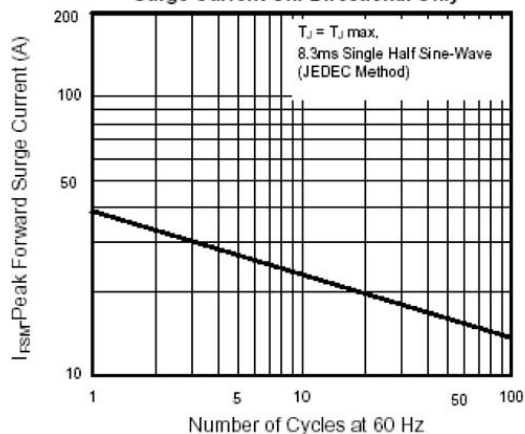


Fig.6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only



Note: Specifications are subject to change without notice.

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