GOODWORK

SMAJ SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSORS

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 1 A above 10V
* High temperature soldering guaranteed: 260°C / 10 seconds at terminals

MECHANICAL DATA

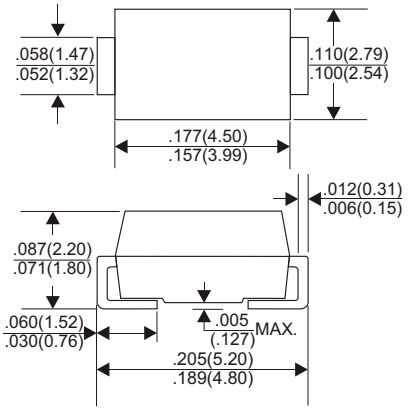
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end except Bidirectional
* Mounting position: Any
* Weight: 0.063 grams

VOLTAGE RANGE

5.0 to 440 Volts

400 Watts Peak Power

DO-214AC(SMA)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies 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°C, T_P=1ms(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 Instantenous 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°C per Fig. 2.
2. Mounted on Copper Pad area of 5.0mm^2(.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

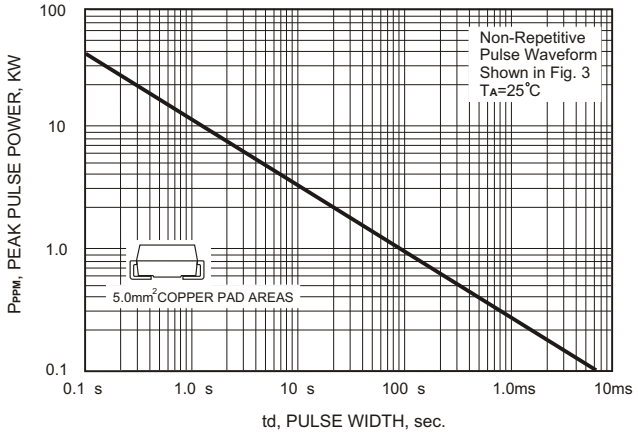


FIG.2-PULSE DERATING CURVE

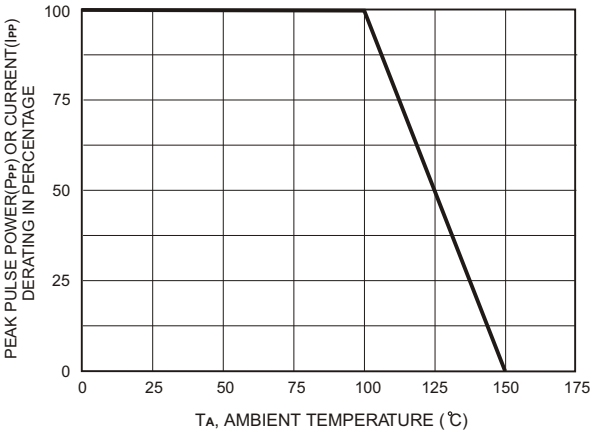


FIG.3-PULSE WAVE FORM

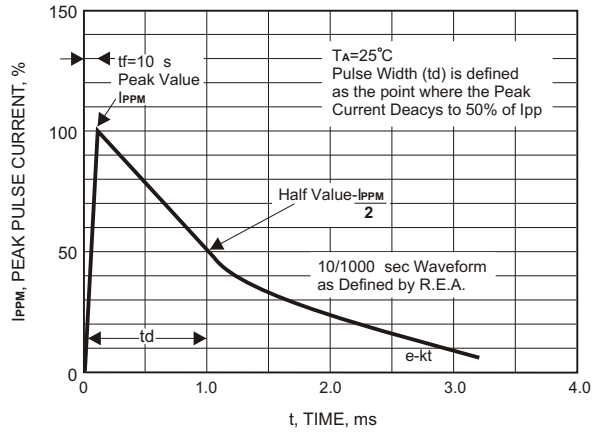


FIG.4-TYPICAL JUNCTION CAPACITANCE

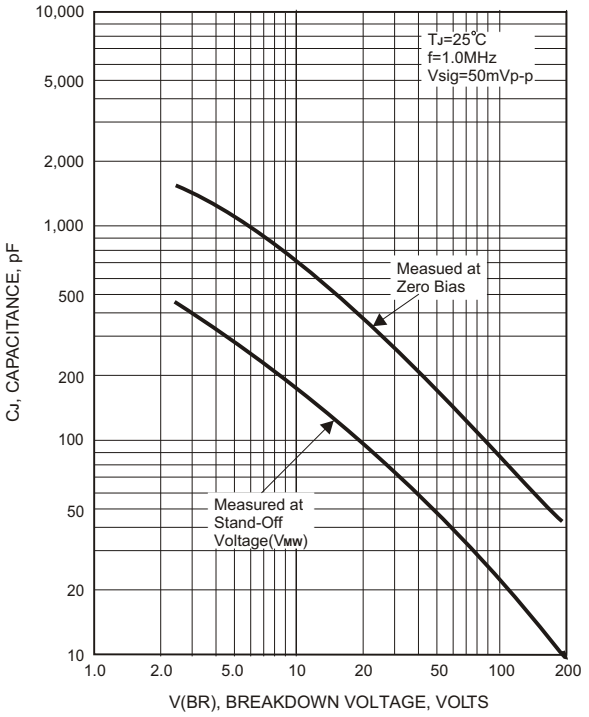
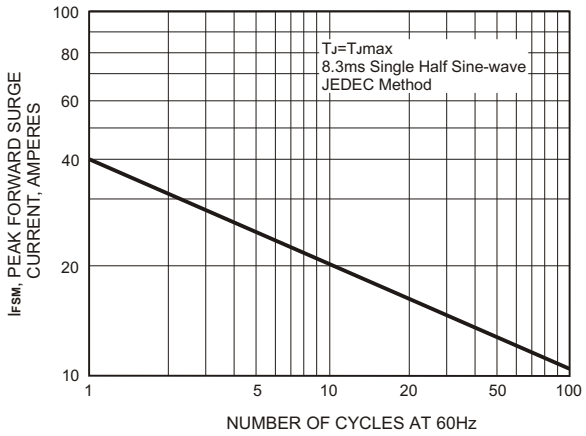


FIG.5-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT



400 Watt Surface Mount TVS

PART NUMBER ADD C FOR BI-DIRECTIONAL	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE VBR (V)	BREAKDOWN VOLTAGE VBR (V)	TEST CURRENT IT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT	REVERSE LEAKAGE @ VRWM	MARKING CODE	
See Note 1	VRWM (V)	MIN. @IT	MAX. @IT	(mA)	@Ipp Vc (V)	Ipp (A)	IR(μA)	UNI	BI
SMAJ5.0(C)A	5.0	6.40	7.25	10	9.2	43.5	800	AE	WE
SMAJ6.0(C)A	6.0	6.67	7.67	10	10.3	38.8	800	AG	WG
SMAJ6.5(C)A	6.5	7.22	8.30	10	11.2	35.7	500	AK	WK
SMAJ7.0(C)A	7.0	7.78	8.95	10	12.0	33.3	200	AM	WM
SMAJ7.5(C)A	7.5	8.33	9.58	1	12.9	31.0	100	AP	WP
SMAJ8.0(C)A	8.0	8.89	10.23	1	13.6	29.4	50	AR	WR
SMAJ8.5(C)A	8.5	9.44	10.82	1	14.4	27.7	10	AT	WT
SMAJ9.0(C)A	9.0	10.0	11.50	1	15.4	26.0	5	AV	WV
SMAJ10(C)A	10	11.1	12.80	1	17.0	23.5	5	AX	WX
SMAJ11(C)A	11	12.2	14.00	1	18.2	22.0	5	AZ	WZ
SMAJ12(C)A	12	13.3	15.30	1	19.9	20.1	5	BE	XE
SMAJ13(C)A	13	14.4	16.50	1	21.5	18.6	5	BG	XG
SMAJ14(C)A	14	15.6	17.90	1	23.2	17.2	5	BK	XK
SMAJ15(C)A	15	16.7	19.20	1	24.4	16.4	5	BM	XM
SMAJ16(C)A	16	17.8	20.50	1	26.0	15.3	5	BP	XP
SMAJ17(C)A	17	18.9	21.70	1	27.6	14.5	5	BR	XR
SMAJ18(C)A	18	20.0	23.30	1	29.2	13.7	5	BT	XT
SMAJ20(C)A	20	22.2	25.50	1	32.4	12.3	5	BV	XV
SMAJ22(C)A	22	24.4	28.00	1	35.5	11.2	5	BX	XX
SMAJ24(C)A	24	26.7	30.70	1	38.9	10.3	5	BZ	XZ
SMAJ26(C)A	26	28.9	33.20	1	42.1	9.5	5	CE	YE
SMAJ28(C)A	28	31.1	35.80	1	45.4	8.8	5	CG	YG
SMAJ30(C)A	30	33.3	38.30	1	48.4	8.3	5	CK	YK
SMAJ33(C)A	33	36.7	42.20	1	53.3	7.5	5	CM	YM
SMAJ36(C)A	36	40.0	46.00	1	58.1	6.9	5	CP	YP
SMAJ40(C)A	40	44.4	51.10	1	64.5	6.2	5	CR	YR
SMAJ43(C)A	43	47.8	54.90	1	69.4	5.7	5	CT	YT
SMAJ45(C)A	45	50.0	57.50	1	72.7	5.5	5	CV	YV
SMAJ48(C)A	48	53.3	61.30	1	77.4	5.2	5	CX	YX
SMAJ51(C)A	51	56.7	65.20	1	82.4	4.9	5	CZ	YZ
SMAJ54(C)A	54	60.0	69.00	1	87.1	4.6	5	RE	ZE
SMAJ58(C)A	58	64.4	74.10	1	93.6	4.3	5	RG	ZG

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See Note 1	VRWM (V)	MIN. @IT	MAX. @IT	(mA)	@Ipp Vc (V)	Ipp (A)	IR(μA)	UNI	BI
SMAJ60(C)A	60	66.7	76.7	1	96.8	4.1	5	RK	ZK
SMAJ64(C)A	64	71.1	81.8	1	103	3.9	5	RM	ZM
SMAJ70(C)A	70	77.8	89.5	1	113	3.5	5	RP	ZP
SMAJ75(C)A	75	83.3	95.8	1	121	3.3	5	RR	ZR
SMAJ78(C)A	78	86.7	99.7	1	126	3.2	5	RT	ZT
SMAJ85(C)A	85	94.4	108.2	1	137	2.2	5	RV	ZV
SMAJ90(C)A	90	100	115.5	1	146	2.1	5	RX	ZX
SMAJ100(C)A	100	111	128.0	1	162	1.9	5	RZ	ZZ
SMAJ110(C)A	110	122	140.5	1	177	1,7	5	SE	VE
SMAJ120(C)A	120	133	153.0	1	193	1.6	5	VG	VG
SMAJ130(C)A	130	144	165.5	1	209	1.4	5	VK	VK
SMAJ150(C)A	150	167	192.5	1	243	1.2	5	VM	VM
SMAJ160(C)A	160	178	205.0	1	259	1.2	5	SP	VP
SMAJ170(C)A	170	189	217.5	1	275	1.09	5	SR	VR
SMAJ188(C)A	188	209	231.0	1	328	0.91	5	SS	VS
SMAJ200(C)A	200	224	247.0	1	332	0.89	5	SV	VV
SMAJ210(C)A	210	237	263.0	1	340	0.86	5	SW	VW
SMAJ220(C)A	220	246	272	1	352	0.8	5	SZ	VZ
SMAJ250(C)A	250	279	309	1	405	0.75	5	VM	VM
SMAJ300(C)A	300	335	371	1	486	0.7	5	TE	UE
SMAJ400(C)A	400	447	494	1	648	0.6	5	TK	UK
SMAJ440(C)A	440	492	543	1	713	0.6	5	TM	UM