



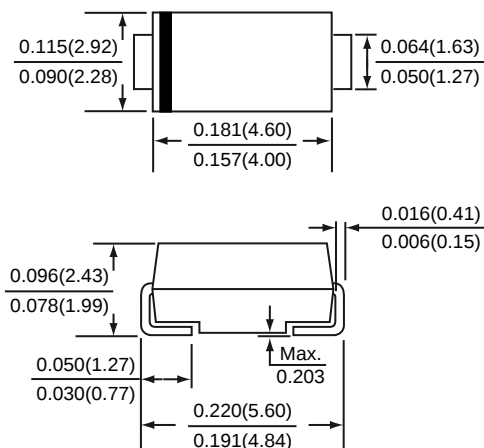
SMAJ SERIES

GLASS PASSIVATED SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Breakdown Voltage - 5.0 to 400 Volts

Peak Pulse Power-400 Watts

SMA/DO-214AC



*Dimensions in inches and (millimeters)



FEATURES

- * Glass passivated chip
- * 400 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle) : 0.01%
- * Low leakage
- * Excellent clamping capability
- * Very fast response time

MECHANICAL DATA

Case : JEDEC DO-214AC molded plastic

Terminals : Plated axial leads , solderable per MIL-STD-750, Method 2026

Polarity : Color band denotes positive end (cathode) except for bidirectional types

Weight : 0.002 ounces, 0.064 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%*

RATING	SYMBOL	VALUE	UNITS
Peak power dissipation with a 10/1000 μ s waveform (note 1)	P _{PPM}	400	Watts
Peak pulse current with a 10/1000 μ s waveform (note 1)	I _{PPM}	See next table	Amps
Power dissipation on infinite heatsink at T _L = 75	P _D	1.0	Watts
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (note 2)	I _{FSM}	40	Amps
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	

NOTES : (1) Non-repetitive current pulse per Fig. 5 and derated above T_A = 25 °C per Fig. 1
(2) Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

SMAJ PART NUMBER		Device Marking Code		Working Peak Reverse Voltage V _{RWM} (V)	Breakdown Voltage V _{BR} @ I _T			Maximum Clamping Voltage V _C (V) @ I _{PP}	Maximum Reverse Surge Current I _{PP} (A) @ 10 x 1000 μs sinewave	Maximum Reverse Leakage I _R (μA) @ V _{RWM}
UNI- POLAR	BI-POLAR	UNI	BI		Min. (V)	Max. (V)	I _T (mA)			
SMAJ5.0A	SMAJ5.0CA	AE	WE	5.0	6.40	7.00	10	9.2	43.50	800
SMAJ6.0A	SMAJ6.0CA	AG	WG	6.0	6.67	7.37	10	10.3	38.80	800
SMAJ6.5A	SMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	35.70	500
SMAJ7.0A	SMAJ7.0CA	AM	WM	7.0	7.78	8.60	10	12.0	33.30	200
SMAJ7.5A	SMAJ7.5CA	AP	WP	7.5	8.33	9.21	1	12.9	31.00	100
SMAJ8.0A	SMAJ8.0CA	AR	WR	8.0	8.89	9.83	1	13.6	29.40	50
SMAJ8.5A	SMAJ8.5CA	AT	WT	8.5	9.44	10.40	1	14.4	27.80	10
SMAJ9.0A	SMAJ9.0CA	AV	WV	9.0	10.00	11.10	1	15.4	26.00	5
SMAJ10A	SMAJ10CA	AX	WX	10.0	11.10	12.30	1	17.0	23.50	5
SMAJ11A	SMAJ11CA	AZ	WZ	11.0	12.20	13.50	1	18.2	22.00	5
SMAJ12A	SMAJ12CA	BE	XE	12.0	13.30	14.70	1	19.9	20.10	5
SMAJ13A	SMAJ13CA	BG	XG	13.0	14.40	15.90	1	21.5	18.60	5
SMAJ14A	SMAJ14CA	BK	XK	14.0	15.60	17.20	1	23.2	17.20	5
SMAJ15A	SMAJ15CA	BM	XM	15.0	16.70	18.50	1	24.4	16.40	5
SMAJ16A	SMAJ16CA	BP	XP	16.0	17.80	19.70	1	26.0	15.40	5
SMAJ17A	SMAJ17CA	BR	XR	17.0	18.90	20.90	1	27.6	14.50	5
SMAJ18A	SMAJ18CA	BT	XT	18.0	20.00	22.10	1	29.2	13.70	5
SMAJ19A	SMAJ19CA	BB	XB	19.0	21.10	23.30	1	30.8	13.00	5
SMAJ20A	SMAJ20CA	BV	XV	20.0	22.20	24.50	1	32.4	12.30	5
SMAJ22A	SMAJ22CA	BX	XX	22.0	24.40	26.90	1	35.5	11.30	5
SMAJ24A	SMAJ24CA	BZ	XZ	24.0	26.70	29.50	1	38.9	10.30	5
SMAJ26A	SMAJ26CA	CE	YE	26.0	28.90	31.90	1	42.1	9.50	5
SMAJ28A	SMAJ28CA	CG	YG	28.0	31.10	34.40	1	45.4	8.81	5
SMAJ30A	SMAJ30CA	CK	YK	30.0	33.30	36.80	1	48.4	8.26	5
SMAJ33A	SMAJ33CA	CM	YM	33.0	36.70	40.60	1	53.3	7.50	5
SMAJ36A	SMAJ36CA	CP	YP	36.0	40.00	44.20	1	58.1	6.88	5
SMAJ40A	SMAJ40CA	CR	YR	40.0	44.40	49.10	1	64.5	6.20	5
SMAJ43A	SMAJ43CA	CT	YT	43.0	47.80	52.80	1	69.4	5.76	5
SMAJ45A	SMAJ45CA	CV	YV	45.0	50.00	55.30	1	72.7	5.50	5
SMAJ48A	SMAJ48CA	CX	YX	48.0	53.30	58.90	1	77.4	5.17	5
SMAJ51A	SMAJ51CA	CZ	YZ	51.0	56.70	62.70	1	82.4	4.85	5
SMAJ54A	SMAJ54CA	RE	ZE	54.0	60.00	66.30	1	87.1	4.59	5
SMAJ58A	SMAJ58CA	RG	ZG	58.0	64.40	71.20	1	93.6	4.27	5
SMAJ60A	SMAJ60CA	RK	ZK	60.0	66.70	73.70	1	96.8	4.13	5
SMAJ64A	SMAJ64CA	RM	ZM	64.0	71.10	78.60	1	103.0	3.88	5
SMAJ70A	SMAJ70CA	RP	ZP	70.0	77.80	86.00	1	113.0	3.54	5
SMAJ75A	SMAJ75CA	RR	ZR	75.0	83.30	92.10	1	121.0	3.31	5
SMAJ78A	SMAJ78CA	RT	ZT	78.0	86.70	95.80	1	126.0	3.17	5
SMAJ80A	SMAJ80CA	RB	ZB	80.0	88.80	97.60	1	130.0	3.09	5
SMAJ85A	SMAJ85CA	RV	ZV	85.0	94.40	104.00	1	137.0	2.92	5
SMAJ90A	SMAJ90CA	RX	ZX	90.0	100.00	111.00	1	146.0	2.74	5
SMAJ100A	SMAJ100CA	RZ	ZZ	100.0	111.00	123.00	1	162.0	2.47	5
SMAJ110A	SMAJ110CA	SE	VE	110.0	122.00	135.00	1	177.0	2.26	5
SMAJ120A	SMAJ120CA	SG	VG	120.0	133.00	147.00	1	193.0	2.07	5
SMAJ130A	SMAJ130CA	SK	VK	130.0	144.00	159.00	1	209.0	1.91	5
SMAJ140A	SMAJ140CA	SB	VB	140.0	155.00	171.00	1	227.0	1.76	5
SMAJ150A	SMAJ150CA	SM	VM	150.0	167.00	185.00	1	243.0	1.65	5
SMAJ160A	SMAJ160CA	SP	VP	160.0	178.00	197.00	1	259.0	1.54	5
SMAJ170A	SMAJ170CA	SR	VR	170.0	189.00	209.00	1	275.0	1.45	5
SMAJ180A	SMAJ180CA	ST	VT	180.0	200.00	220.00	1	292.0	1.37	5
SMAJ190A	SMAJ190CA	SV	VV	190.0	211.00	232.00	1	308.0	1.30	5
SMAJ200A	SMAJ200CA	SW	VW	200.0	224.00	247.00	1	324.0	1.23	5
SMAJ220A	SMAJ220CA	SX	VX	220.0	246.00	272.00	1	356.0	1.12	5
SMAJ250A	SMAJ250CA	SZ	VZ	250.0	279.00	309.00	1	405.0	0.99	5
SMAJ300A	SMAJ300CA	DE	HE	300.0	335.00	371.00	1	486.0	0.82	5
SMAJ350A	SMAJ350CA	DG	HG	350.0	391.00	432.00	1	567.0	0.71	5
SMAJ400A	SMAJ400CA	DK	HK	400.0	447.00	494.00	1	648.0	0.62	5

NOTE : For bidirectional type having V_{RWM} of 10V and less, the I_R limit is double.
For parts without A, the V_{BR} is ± 10%

RATINGS AND CHARACTERISTIC CURVES SMAJ SERIES

FIG. 1- PULSE DERATING CURVE

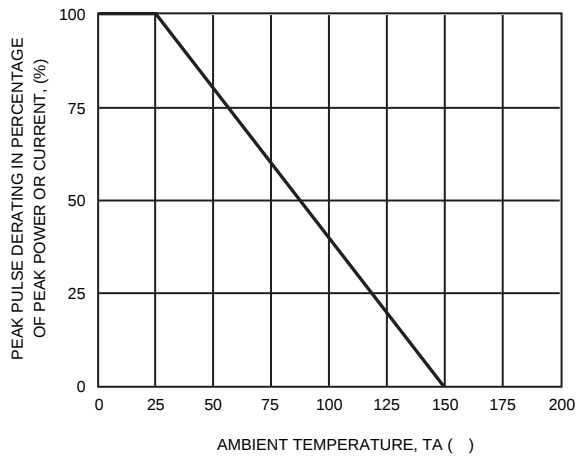


FIG. 2 - MAXIMUM NON-REPETITIVE

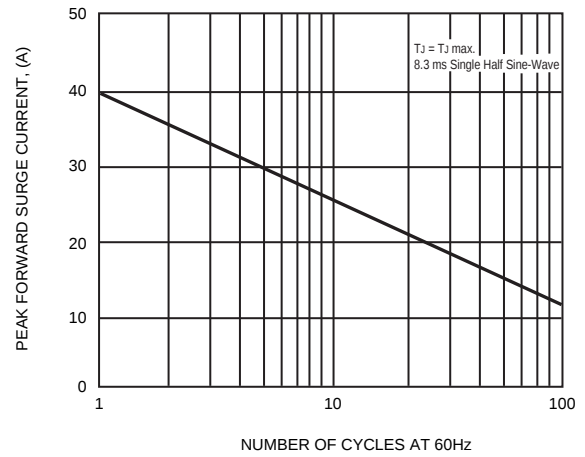


FIG. 3 - STEADY STATE POWER DERATING CURVE

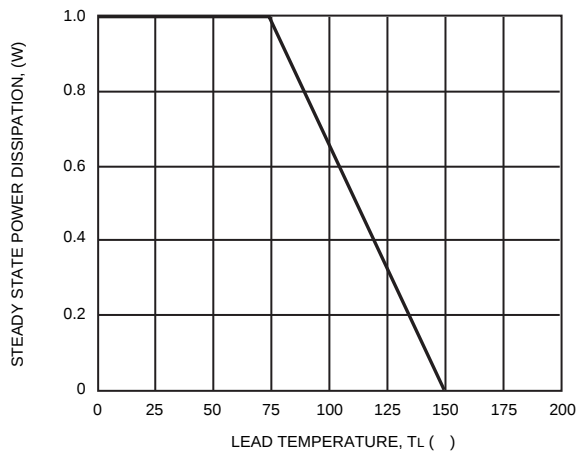


FIG. 4 - PEAK PULSE POWER RATING CURVE

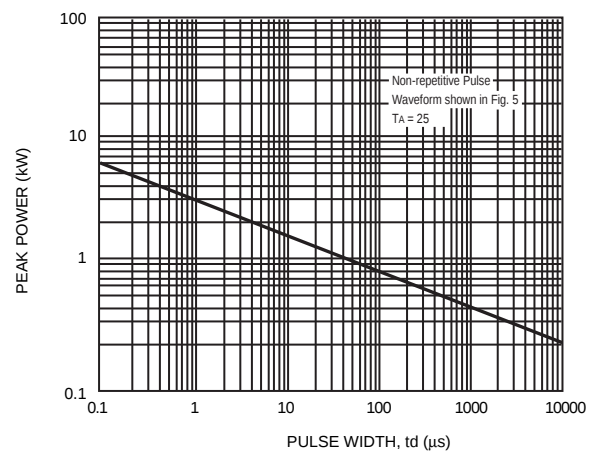


FIG. 5 - PULSE WAVEFORM

