Surface Mount Transient Voltage Suppressor Rectifiers

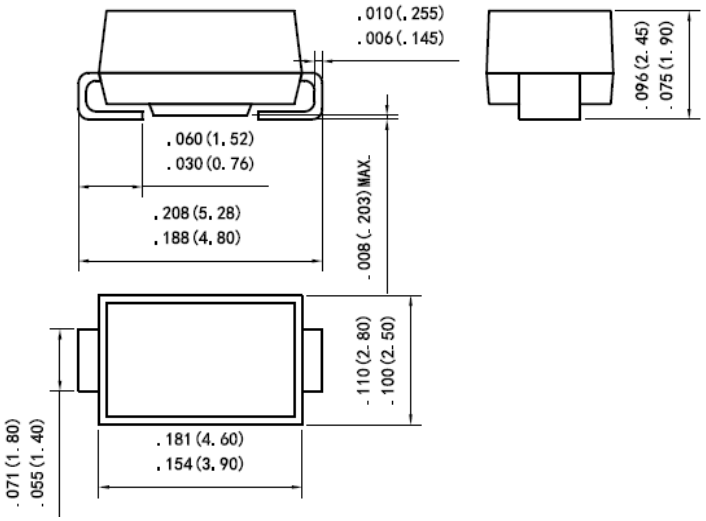
Features:

- Glass passivated chip
- 400 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data:

- Case:DO-214AC/(SMA) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

DO-214AC/(SMA)



Unit: inch (mm)

Maximum Ratings & Characteristics Ratings at 25℃ ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform(1)	P_{PP}	400	W
Peak pulse current wih a 10/1000 us waveform(1)	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at TA = 50 °C	P_D	3.3	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I_{FSM}	40	A
Operating junction	T_J	-55 to +175	℃
Storage temperature range	T_{STG}	-55 to +150	℃

Note:

1)Non-repetitive current pulse per Fig.5 and derated above TA= 25 °C per Fig.1 ;

2)Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum ;

Electrical Characteristics(T_A=25℃ unless otherwise noted)

Part Number		Device Marking Code		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	UNI	BI	V_{RWM}(V)	Min.(V)	Max.(V)	I_T(mA)	$V_{C\ MAX.}$(V)	I_{PP}(A)	I_R(uA)
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	1
SMAJ12A	SMAJ12CA	BE	XE	12.0	13.30	14.70	1	19.9	20.10	1
SMAJ13A	SMAJ13CA	BG	XG	13.0	14.40	15.90	1	21.5	18.60	1
SMAJ14A	SMAJ14CA	BK	XK	14.0	15.60	17.20	1	23.2	17.20	1
SMAJ15A	SMAJ15CA	BM	XM	15.0	16.70	18.50	1	24.4	16.40	1
SMAJ16A	SMAJ16CA	BP	XP	16.0	17.80	19.70	1	26.0	15.40	1
SMAJ17A	SMAJ17CA	BR	XR	17.0	18.90	20.90	1	27.6	14.50	1
SMAJ18A	SMAJ18CA	BT	XT	18.0	20.00	22.10	1	29.2	13.70	1
SMAJ20A	SMAJ20CA	BV	XV	20.0	22.20	24.50	1	32.4	12.30	1
SMAJ22A	SMAJ22CA	BX	XX	22.0	24.40	26.90	1	35.5	11.30	1
SMAJ24A	SMAJ24CA	BZ	XZ	24.0	26.70	29.50	1	38.9	10.30	1
SMAJ26A	SMAJ26CA	CE	YE	26.0	28.90	31.90	1	42.1	9.50	1
SMAJ28A	SMAJ28CA	CG	YG	28.0	31.10	34.40	1	45.4	8.80	1
SMAJ30A	SMAJ30CA	CK	YK	30.0	33.50	36.80	1	48.4	8.30	1
SMAJ33A	SMAJ33CA	CM	YM	33.0	36.70	40.60	1	53.3	7.50	1
SMAJ36A	SMAJ36CA	CP	YP	36.0	40.00	44.20	1	58.1	6.90	1
SMAJ40A	SMAJ40CA	CR	YR	40.0	44.40	49.10	1	64.5	6.20	1
SMAJ43A	SMAJ43CA	CT	YT	43.0	47.80	52.80	1	69.4	5.80	1
SMAJ45A	SMAJ45CA	CV	YV	45.0	50.00	55.30	1	72.7	5.50	1
SMAJ48A	SMAJ48CA	CX	YX	48.0	53.30	58.90	1	77.4	5.20	1
SMAJ51A	SMAJ51CA	CZ	YZ	51.0	56.70	62.70	1	82.4	4.90	1
SMAJ54A	SMAJ54CA	RE	ZE	54.0	60.00	66.30	1	87.1	4.60	1
SMAJ58A	SMAJ58CA	RG	ZG	58.0	64.40	71.20	1	93.6	4.30	1
SMAJ60A	SMAJ60CA	RK	ZK	60.0	66.70	73.70	1	96.8	4.10	1
SMAJ64A	SMAJ64CA	RM	ZM	64.0	71.10	78.60	1	103.0	3.90	1
SMAJ70A	SMAJ70CA	RP	ZP	70.0	77.80	86.00	1	113.0	3.50	1
SMAJ75A	SMAJ75CA	RR	ZR	75.0	83.30	92.10	1	121.0	3.30	1
SMAJ78A	SMAJ78CA	RT	ZT	78.0	86.70	95.80	1	126.0	3.20	1
SMAJ85A	SMAJ85CA	RV	ZV	85.0	94.40	104.0	1	137.0	2.90	1
SMAJ90A	SMAJ90CA	RX	ZX	90.0	100.0	111.0	1	146.0	2.70	1
SMAJ100A	SMAJ100CA	RZ	ZZ	100.0	111.0	123.0	1	162.0	2.50	1
SMAJ110A	SMAJ110CA	SE	VE	110.0	122.0	135.0	1	177.0	2.30	1
SMAJ120A	SMAJ120CA	SG	VG	120.0	133.0	147.0	1	193.0	2.10	1
SMAJ130A	SMAJ130CA	SK	VK	130.0	144.0	159.0	1	209.0	1.90	1
SMAJ150A	SMAJ150CA	SM	VM	150.0	167.0	185.0	1	243.0	1.60	1
SMAJ160A	SMAJ160CA	SP	VP	160.0	178.0	197.0	1	259.0	1.50	1
SMAJ170A	SMAJ170CA	SR	VR	170.0	189.0	209.0	1	275.0	1.50	1
SMAJ180A	SMAJ180CA	ST	VT	180.0	201.0	222.0	1	292.0	1.40	1
SMAJ190A	SMAJ190CA	SU	YU	190.0	209.0	243.0	1	308.0	1.30	1
SMAJ200A	SMAJ200CA	SV	VV	200.0	224.0	247.0	1	324.0	1.20	1
SMAJ210A	SMAJ210CA	SW	YW	210.0	231.0	268.0	1	340.0	1.20	1
SMAJ220A	SMAJ220CA	GX	VX	220.0	246.0	272.0	1	356.0	1.10	1

Ratings and Characteristics Curves (TA=25℃ unless otherwise noted)

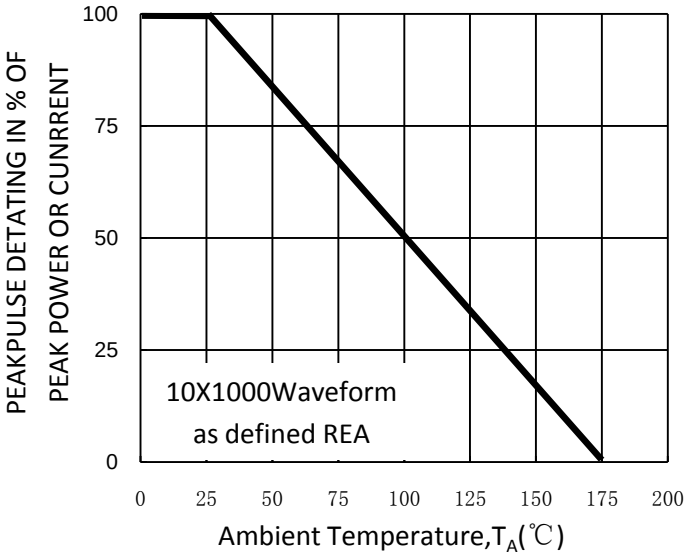


Fig. 1-Pulse Derating Curve

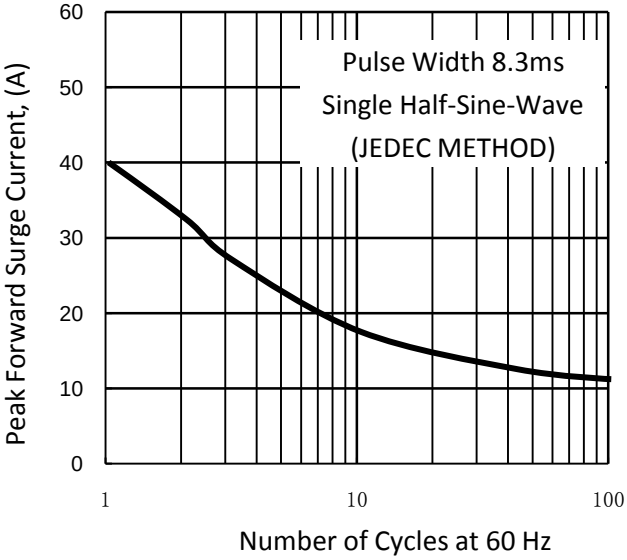


Fig. 2-Maxmum Non-Repetitive Surge Current

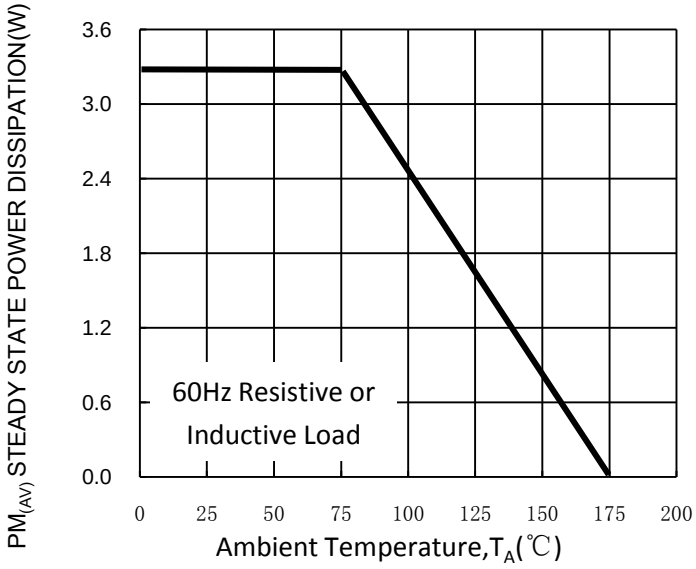


Fig. 3-Steady State Power Derating Curve

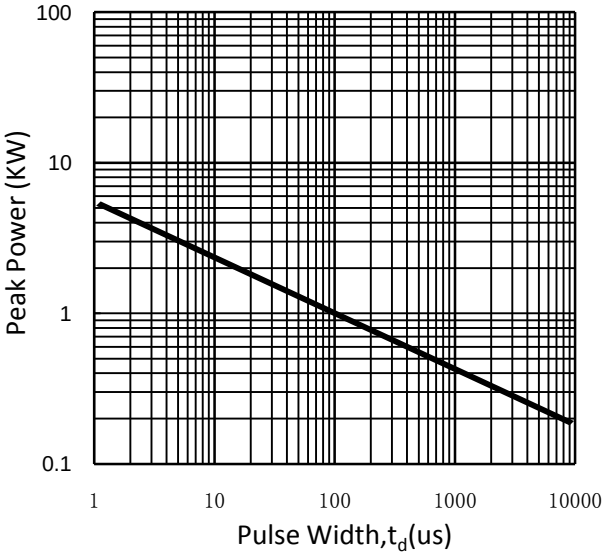


Fig. 4-Peak Pulse Power Rating Curve

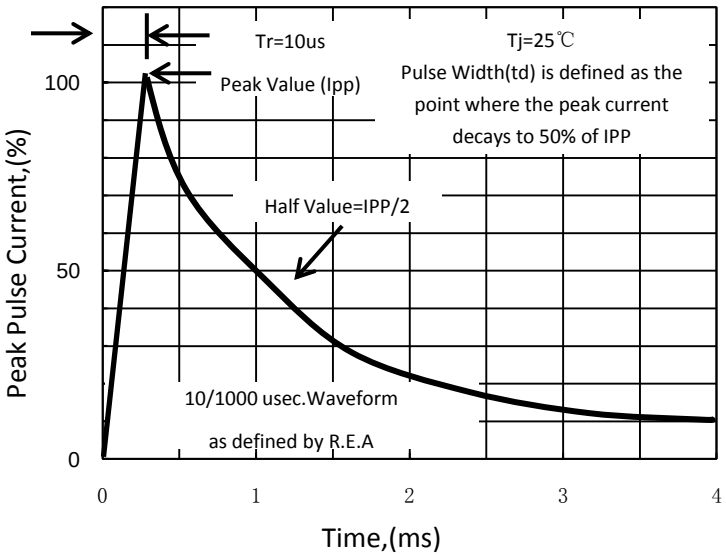


Fig. 5-Pulse Waveform

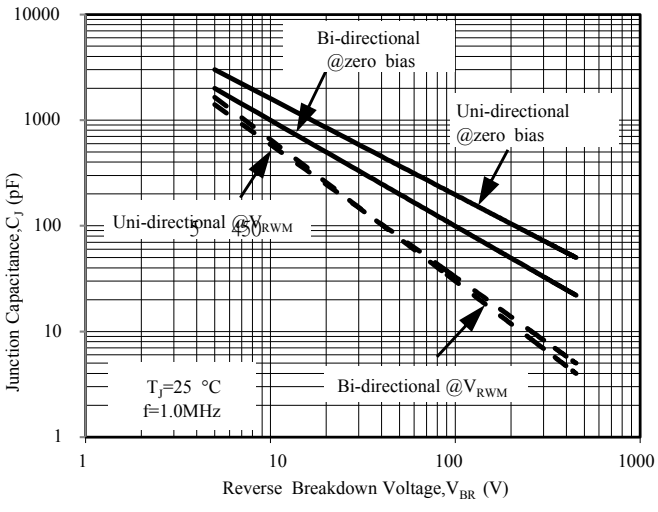


Fig. 6 - Typical Junction Capacitance