Surface Mount Transient Voltage Suppressor Rectifiers

Reverse Voltage 5.0 ~ 550 V
400 Watt Peak Pulse Power

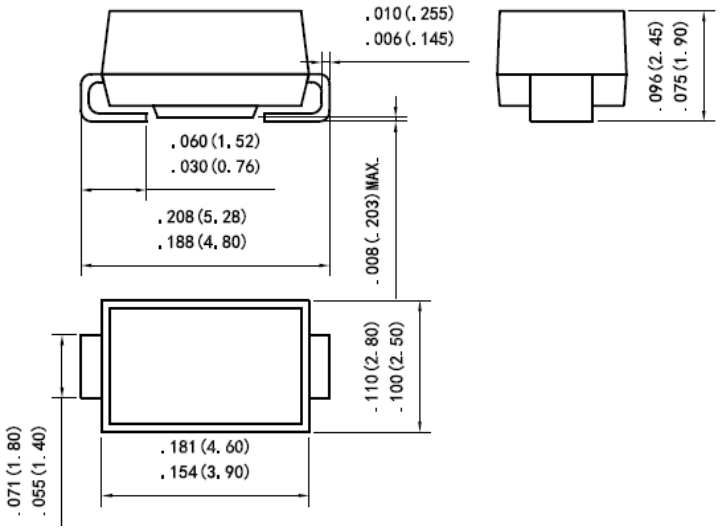
Features

- 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

- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any
- System: Accreditation through IATF16949 System
- High reliability grade (AEC Q101 qualified)

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 TL = 75 °C	P_D	3.0	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only(2)	I_{FSM}	40	A
Maximum instantaneous forward voltage at 25 A for unidirectional only(3)	V_F	3.5/6.5	V
Operating junction and storage temperature range	T_J , 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；
3)VF<3.5V for devices of VBR<200V and VF<6.5V for devices of VBR>201V。

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)
TSMAJ5.0A	TSMAJ5.0CA	AE	WE	5.0	6.40	7.00	10	9.2	43.5	800
TSMAJ6.0A	TSMAJ6.0CA	AG	WG	6.0	6.67	7.37	10	10.3	38.8	800
TSMAJ6.5A	TSMAJ6.5CA	AK	WK	6.5	7.22	7.98	10	11.2	35.7	500
TSMAJ7.0A	TSMAJ7.0CA	AM	WM	7.0	7.78	8.60	10	12.0	33.3	200
TSMAJ7.5A	TSMAJ7.5CA	AP	WP	7.5	8.33	9.21	1	12.9	31.0	100
TSMAJ8.0A	TSMAJ8.0CA	AR	WR	8.0	8.89	9.83	1	13.6	29.4	50
TSMAJ8.5A	TSMAJ8.5CA	AT	WT	8.5	9.44	10.40	1	14.4	27.8	20
TSMAJ9.0A	TSMAJ9.0CA	AV	WV	9.0	10.00	11.10	1	15.4	26.0	10
TSMAJ10A	TSMAJ10CA	AX	WX	10.0	11.10	12.30	1	17.0	23.5	5
TSMAJ11A	TSMAJ11CA	AZ	WZ	11.0	12.20	13.50	1	18.2	22.0	1
TSMAJ12A	TSMAJ12CA	BE	XE	12.0	13.30	14.70	1	19.9	20.1	1
TSMAJ13A	TSMAJ13CA	BG	XG	13.0	14.40	15.90	1	21.5	18.6	1
TSMAJ14A	TSMAJ14CA	BK	XK	14.0	15.60	17.20	1	23.2	17.2	1
TSMAJ15A	TSMAJ15CA	BM	XM	15.0	16.70	18.50	1	24.4	16.4	1
TSMAJ16A	TSMAJ16CA	BP	XP	16.0	17.80	19.70	1	26.0	15.4	1
TSMAJ17A	TSMAJ17CA	BR	XR	17.0	18.90	20.90	1	27.6	14.5	1
TSMAJ18A	TSMAJ18CA	BT	XT	18.0	20.00	22.10	1	29.2	13.7	1
TSMAJ20A	TSMAJ20CA	BV	XV	20.0	22.20	24.50	1	32.4	12.3	1
TSMAJ22A	TSMAJ22CA	BX	XX	22.0	24.40	26.90	1	35.5	11.3	1
TSMAJ24A	TSMAJ24CA	BZ	XZ	24.0	26.70	29.50	1	38.9	10.3	1
TSMAJ26A	TSMAJ26CA	CE	YE	26.0	28.90	31.90	1	42.1	9.5	1
TSMAJ28A	TSMAJ28CA	CG	YG	28.0	31.10	34.40	1	45.4	8.8	1
TSMAJ30A	TSMAJ30CA	CK	YK	30.0	33.50	36.80	1	48.4	8.3	1
TSMAJ33A	TSMAJ33CA	CM	YM	33.0	36.70	40.60	1	53.3	7.5	1
TSMAJ36A	TSMAJ36CA	CP	YP	36.0	40.00	44.20	1	58.1	6.9	1
TSMAJ40A	TSMAJ40CA	CR	YR	40.0	44.40	49.10	1	64.5	6.2	1
TSMAJ43A	TSMAJ43CA	CT	YT	43.0	47.80	52.80	1	69.4	5.8	1
TSMAJ45A	TSMAJ45CA	CV	YV	45.0	50.00	55.30	1	72.7	5.5	1
TSMAJ48A	TSMAJ48CA	CX	YX	48.0	53.30	58.90	1	77.4	5.2	1
TSMAJ51A	TSMAJ51CA	CZ	YZ	51.0	56.70	62.70	1	82.4	4.9	1
TSMAJ54A	TSMAJ54CA	RE	ZE	54.0	60.00	66.30	1	87.1	4.6	1
TSMAJ58A	TSMAJ58CA	RG	ZG	58.0	64.40	71.20	1	93.6	4.3	1
TSMAJ60A	TSMAJ60CA	RK	ZK	60.0	66.70	73.70	1	96.8	4.1	1
TSMAJ64A	TSMAJ64CA	RM	ZM	64.0	71.10	78.60	1	103.0	3.9	1
TSMAJ70A	TSMAJ70CA	RP	ZP	70.0	77.80	86.00	1	113.0	3.5	1
TSMAJ75A	TSMAJ75CA	RR	ZR	75.0	83.30	92.10	1	121.0	3.3	1
TSMAJ78A	TSMAJ78CA	RT	ZT	78.0	86.70	95.80	1	126.0	3.2	1
TSMAJ85A	TSMAJ85CA	RV	ZV	85.0	94.4	104.0	1	137.0	2.9	1
TSMAJ90A	TSMAJ90CA	RX	ZX	90.0	100.0	111.0	1	146.0	2.7	1
TSMAJ100A	TSMAJ100CA	RZ	ZZ	100.0	111.0	123.0	1	162.0	2.5	1
TSMAJ110A	TSMAJ110CA	SE	VE	110.0	122.0	135.0	1	177.0	2.3	1
TSMAJ120A	TSMAJ120CA	SG	VG	120.0	133.0	147.0	1	193.0	2.1	1
TSMAJ130A	TSMAJ130CA	SK	VK	130.0	144.0	159.0	1	209.0	1.9	1
TSMAJ150A	TSMAJ150CA	SM	VM	150.0	167.0	185.0	1	243.0	1.6	1
TSMAJ160A	TSMAJ160CA	SP	VP	160.0	178.0	197.0	1	259.0	1.5	1
TSMAJ170A	TSMAJ170CA	SR	VR	170.0	189.0	209.0	1	275.0	1.5	1
TSMAJ180A	TSMAJ180CA	ST	VT	180.0	201.0	222.0	1	292.0	1.4	1
TSMAJ190A	TSMAJ190CA	SU	YU	190.0	209.0	243.0	1	308.0	1.3	1
TSMAJ200A	TSMAJ200CA	SV	VV	200.0	224.0	247.0	1	324.0	1.2	1
TSMAJ210A	TSMAJ210CA	SW	YW	210.0	231.0	268.0	1	340.0	1.2	1
TSMAJ220A	TSMAJ220CA	GX	VX	220.0	246.0	272.0	1	356.0	1.1	1
TSMAJ250A	TSMAJ250CA	SZ	VZ	250.0	279.0	309.0	1	405.0	1.0	1
TSMAJ300A	TSMAJ300CA	TE	UE	300.0	335.0	371.0	1	486.0	0.8	1
TSMAJ350A	TSMAJ350CA	TG	UG	350.0	391.0	432.0	1	567.0	0.7	1
TSMAJ400A	TSMAJ400CA	TK	UK	400.0	447.0	494.0	1	648.0	0.6	1
TSMAJ440A	TSMAJ440CA	TM	UM	440.0	492.0	543.0	1	713.0	0.6	1
TSMAJ480A	TSMAJ480CA	TP	UP	480.0	536.0	593.0	1	750.0	0.5	1
TSMAJ520A	TSMAJ520CA	TR	UR	520.0	578.0	640.0	1	762.0	0.5	1
TSMAJ550A	TSMAJ550CA	TT	UT	550.0	615.0	680.0	1	860.0	0.4	1

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

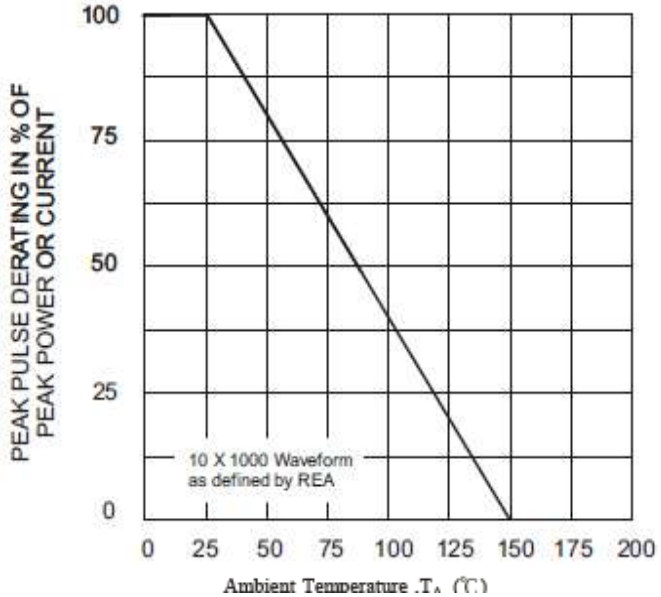


Fig. 1 - Pulse Derating Curve

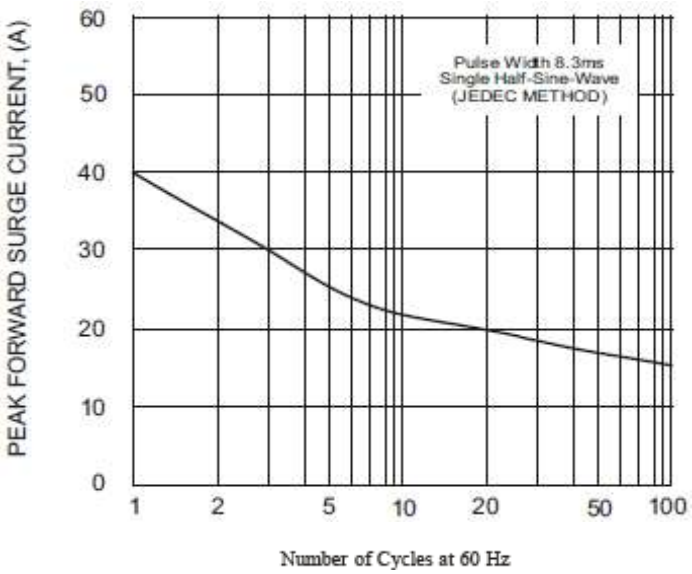


Fig. 2 - Maximum Non-Repetitive Surge Current

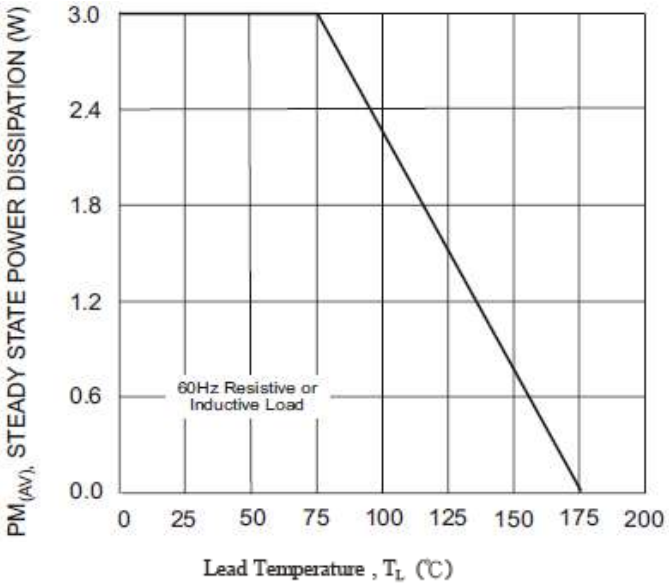


Fig. 3 - Steady State Power Derating Curve

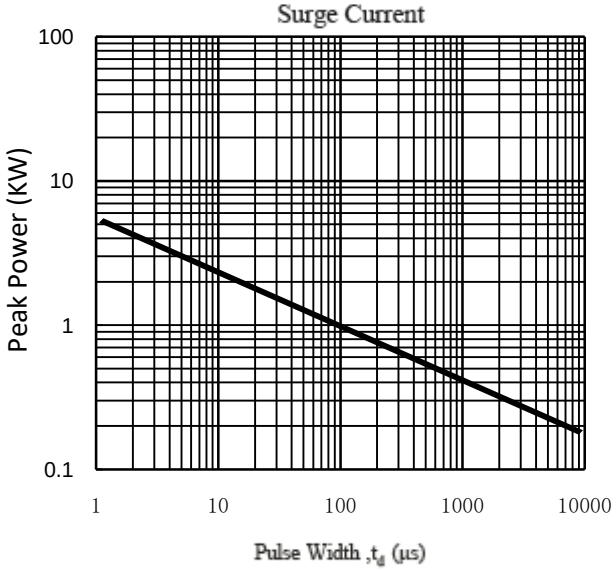


Fig. 4 - Peak Pulse Power Rating Curve

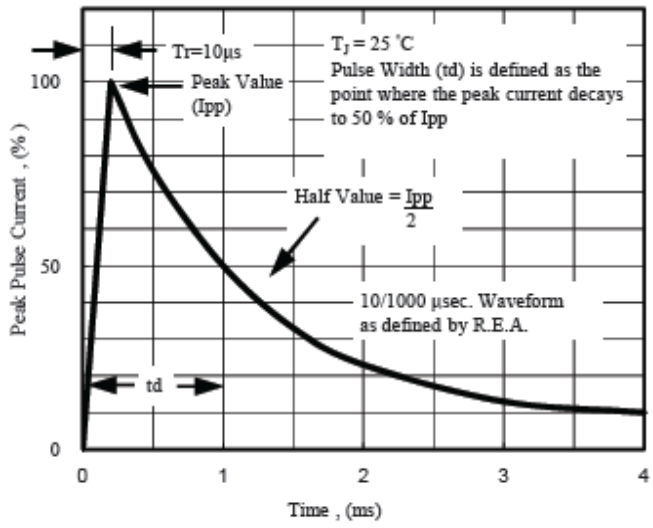


Fig. 5 - Pulse Waveform

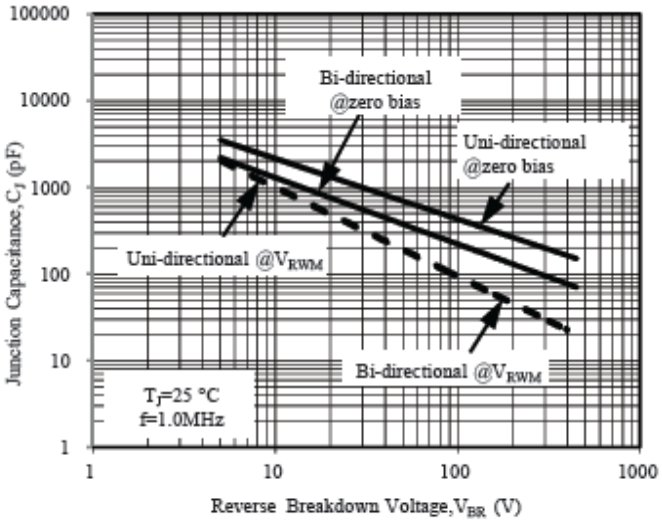


Fig. 6 - Typical Junction Capacitance