Features

•Peak power disspation 400W@10 x 1000 us Pluse

•Low incremental surge resistance

•Excellent clamping capability

•Glass passivated junction

•Fast response time

•Typical IR less than 1uA above 10V

•Halogen free and RoHS compliant

SMA top view

Bi-directional

Uni-direction

Mechanical Data

•CASE: SMAJ(DO-214AC) Molded Plastic

•Polarity: By cathode band denites uni-directional decice, none cathode band denotes bi-directional device

•Mounting Position:Any

Pb-Free RoHS Halogen-Free

Maximum Ratings(T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
P_{PPM}	Peak Pulse Power Dissipation on 10/1000 us Waveform (Note1,2,FIG.1)	Min400	W
P_D	Power Dissipation on Infinite Heat Sink at TL=50°C	3.3	W
I_{PPM}	Peak Pulse Current of on 10/1000 us Waveform (Note1,FIG.3)	SeeTable1	A
I_{FSM}	Peak Forward Surge Current,8.3ms Single Half Sine-Wave (Note2.3)	40	A
T_J	Operating Junction Temperature Range	-55~+150	°C
T_{stg}	Storage Temperature Range	-55~+150	°C

Notes:

1. Non-repetitive current pulse, per Fig.3 and derated above TA=25° C per Fig.2.
2. Mounted on 5.0x5.0mm2 (0.03mm thick) Copper Pads to each terminal.
3. Measured on 8.3ms single half sine-wave, or equivalent square wave, for Unidirectional device only.

T_a=25℃ unless otherwise specified

Typt Number		Marking		Reverse Stand-Off Voltage	Breakdown Voltage Min. @I_T	Breakdown Voltage Max. @ I_T	Test Current	Maximum Clamping Voltage @I_{PP}	Peak Pulse Current	Reverse Leakage @V_{RMW}
Uni	Bi	Uni	Bi	V_{RMW}(V)	$V_{BR\ MIN}$(V)	$V_{BR\ MAX}$(V)	IT (mA)	V_C(V)	I_{PP}(A)	I_R(uA)
SMAJ5.0A	SMAJ5.0CA	HE	TE	5.0	6.40	7.00	10	9.2	43.5	500.0
SMAJ6.0A	SMAJ6.0CA	HG	TG	6.0	6.67	7.37	10	10.3	38.8	500.0
SMAJ6.5A	SMAJ6.5CA	HK	TH	6.5	7.22	7.98	10	11.2	35.7	300.0
SMAJ7.0A	SMAJ7.0CA	HM	TM	7.0	7.78	8.60	10	12.0	33.3	200.0
SMAJ7.5A	SMAJ7.5CA	HP	TP	7.5	8.33	9.21	1	12.9	31.0	100.0
SMAJ8.0A	SMAJ8.0CA	HR	TR	8.0	8.89	9.83	1	13.6	29.4	50.0
SMAJ8.5A	SMAJ8.5CA	HT	TT	8.5	9.44	10.40	1	14.4	27.8	20.0
SMAJ9.0A	SMAJ9.0CA	HV	TV	9.0	10.00	11.10	1	15.4	26.0	10.0
SMAJ10A	SMAJ10CA	HX	TX	10.0	11.10	12.30	1	17.0	23.5	5.0
SMAJ11A	SMAJ11CA	HZ	TZ	11.0	12.20	13.50	1	18.2	22.0	1.0
SMAJ12A	SMAJ12CA	IE	UE	12.0	13.30	14.70	1	19.9	20.1	1.0
SMAJ13A	SMAJ13CA	IG	UG	13.0	14.40	15.90	1	21.5	18.6	1.0
SMAJ14A	SMAJ14CA	IK	UK	14.0	15.60	17.20	1	23.2	17.2	1.0
SMAJ15A	SMAJ15CA	IM	UM	15.0	16.70	18.50	1	24.4	16.4	1.0
SMAJ16A	SMAJ16CA	IP	UP	16.0	17.80	19.70	1	26.0	15.4	1.0
SMAJ17A	SMAJ17CA	IR	UR	17.0	18.90	20.90	1	27.6	14.5	1.0
SMAJ18A	SMAJ18CA	IT	UT	18.0	20.00	22.10	1	29.2	13.7	1.0
SMAJ20A	SMAJ20CA	IV	UV	20	22.20	24.50	1	32.4	12.3	1.0
SMAJ22A	SMAJ22CA	IX	UX	22	24.40	26.90	1	35.5	11.3	1.0
SMAJ24A	SMAJ24CA	IZ	UZ	24	26.70	29.50	1	38.9	10.3	1.0
SMAJ26A	SMAJ26CA	JE	VE	26	28.90	31.90	1	42.1	9.5	1.0
SMAJ28A	SMAJ28CA	JG	VG	28	31.10	34.40	1	45.4	8.8	1.0
SMAJ30A	SMAJ30CA	JK	VK	30	33.30	36.80	1	48.4	8.3	1.0
SMAJ33A	SMAJ33CA	JM	VM	33	36.70	40.60	1	53.3	7.5	1.0
SMAJ36A	SMAJ36CA	JP	VP	36	40.00	44.20	1	58.1	6.9	1.0
SMAJ40A	SMAJ40CA	JR	VR	40	44.40	49.10	1	64.5	6.2	1.0
SMAJ43A	SMAJ43CA	JT	VT	43	47.80	52.80	1	69.4	5.8	1.0
SMAJ45A	SMAJ45CA	JV	VV	45	50.00	55.30	1	72.7	5.5	1.0
SMAJ48A	SMAJ48CA	JX	VX	48	53.30	58.90	1	77.4	5.2	1.0
SMAJ51A	SMAJ51CA	JZ	VZ	51	56.70	62.70	1	82.4	4.9	1.0
SMAJ54A	SMAJ54CA	RE	WE	54	60.00	66.30	1	87.1	4.6	1.0
SMAJ58A	SMAJ58CA	RG	WG	58	64.40	71.20	1	93.6	4.3	1.0
SMAJ60A	SMAJ60CA	RK	WK	60	66.70	73.70	1	96.8	4.1	1.0
SMAJ64A	SMAJ64CA	RM	WM	64	71.10	78.60	1	103.0	3.9	1.0
SMAJ70A	SMAJ70CA	RP	WP	70	77.80	86.00	1	113.0	3.5	1.0
SMAJ75A	SMAJ75CA	RR	WR	75	83.30	92.10	1	121.0	3.3	1.0
SMAJ78A	SMAJ78CA	RT	WT	78	86.70	95.80	1	126.0	3.2	1.0
SMAJ85A	SMAJ85CA	RV	WV	85	94.40	104.00	1	137.0	2.9	1.0
SMAJ90A	SMAJ90CA	RX	WX	90	100.00	111.00	1	146.0	2.7	1.0
SMAJ100A	SMAJ100CA	RZ	WZ	100	111.00	123.00	1	162.0	2.5	1.0
SMAJ110A	SMAJ110CA	SE	XE	110	122.00	135.00	1	177.0	2.3	1.0
SMAJ120A	SMAJ120CA	SG	XG	120	133.00	147.00	1	193.0	2.1	1.0
SMAJ130A	SMAJ130CA	SK	XK	130	144.00	159.00	1	209.0	1.9	1.0
SMAJ150A	SMAJ150CA	SM	XM	150	167.00	185.00	1	243.0	1.6	1.0
SMAJ160A	SMAJ160CA	SP	XP	160	178.00	197.00	1	259.0	1.5	1.0
SMAJ170A	SMAJ170CA	SR	XR	170	189.00	209.00	1	275.0	1.5	1.0
SMAJ180A	SMAJ180CA	ST	XT	180	201.00	222.00	1	292.0	1.4	1.0
SMAJ190A	SMAJ190CA	SV	XV	190	211.00	233.00	1	308.0	1.3	1.0
SMAJ200A	SMAJ200CA	SX	XX	200	224.00	247.00	1	324.0	1.2	1.0
SMAJ210A	SMAJ210CA	SZ	XZ	210	237.00	263.00	1	340.0	1.2	1.0
SMAJ220A	SMAJ220CA	ZE	YE	220	246.00	272.00	1	356.0	1.1	1.0
SMAJ250A	SMAJ250CA	ZG	YG	250	279.00	309.00	1	405.0	1.0	1.0
SMAJ300A	SMAJ300CA	ZK	YK	300	335.00	371.00	1	486.0	0.8	1.0
SMAJ350A	SMAJ350CA	ZM	YM	350	391.00	432.00	1	567.0	0.7	1.0
SMAJ400A	SMAJ400CA	ZP	YP	400	447.00	494.00	1	648.0	0.6	1.0
SMAJ440A	SMAJ440CA	ZR	YR	440	492.00	543.00	1	713.0	0.6	1.0

Notes: 1. For Bi-directional type having VRWM of 10 Volts and less, the IR limit is double.
2. For parts without A, the VBR is ± 10% and VC is 5% higher than with A parts.

Typical Characteristics

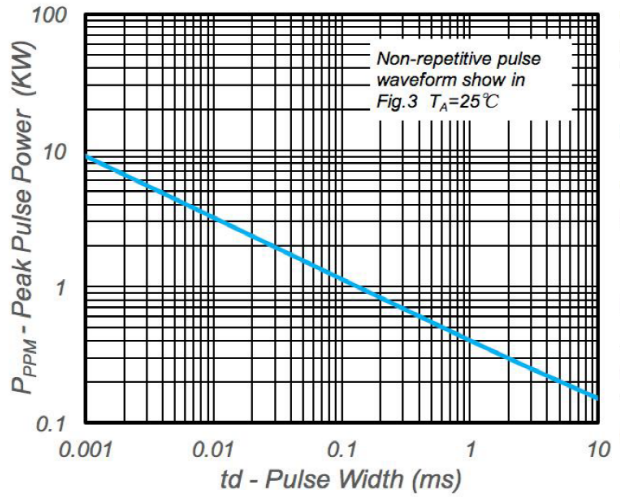


Fig.1 Peak Pulse Power Rating

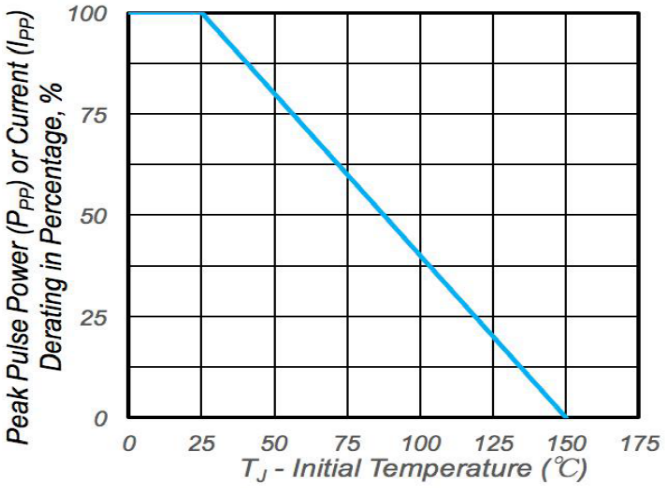


Fig.2 Pulse Derating Cure

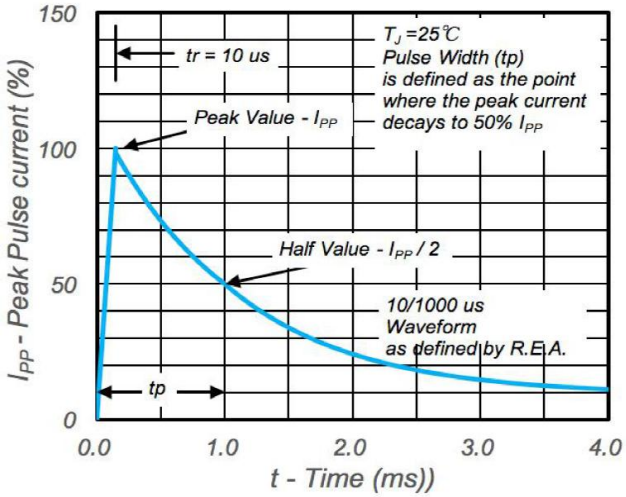


Fig.3 Pulse Waveform

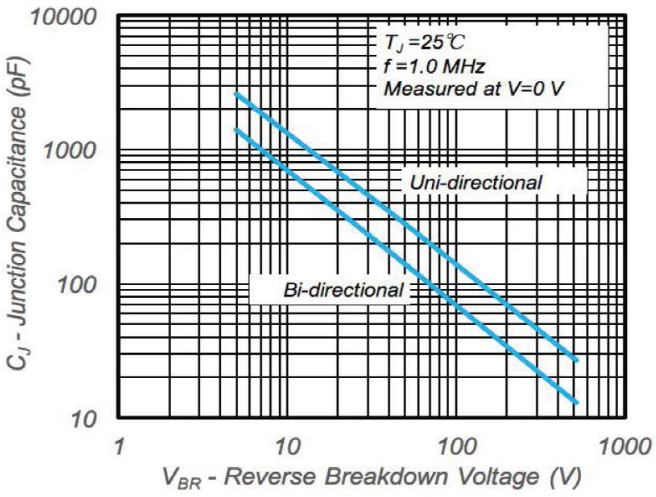
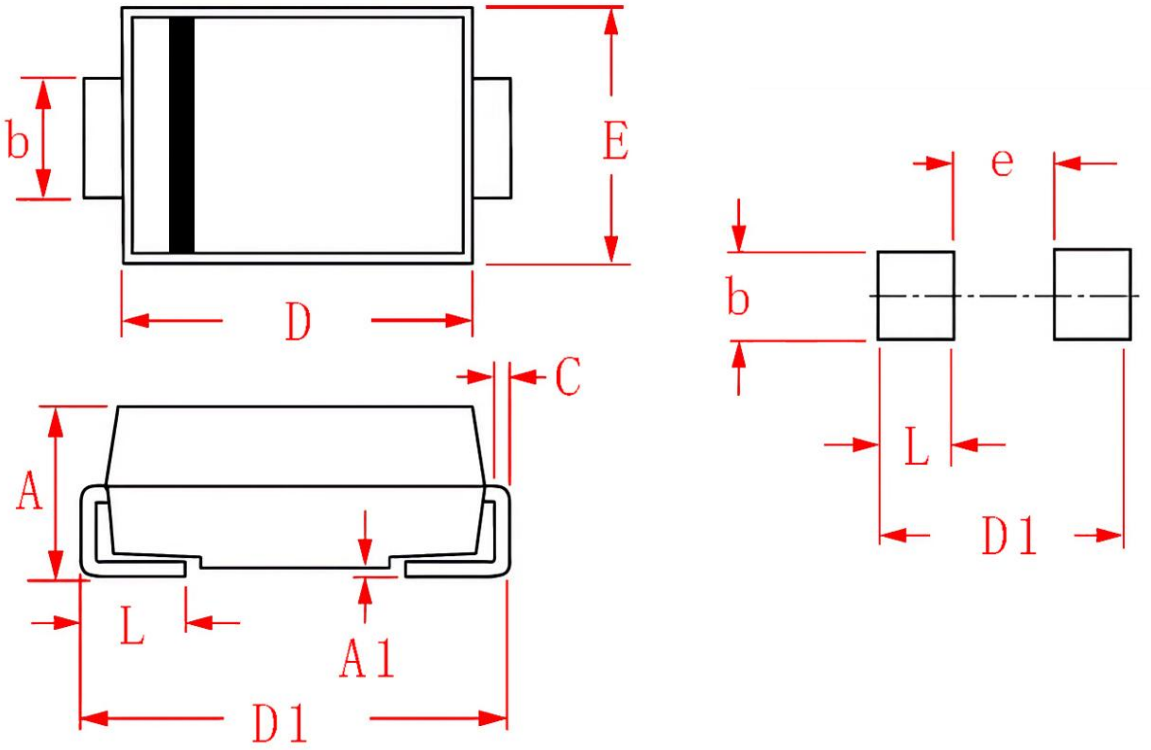


Fig.4 Typical Junction Capacitance

SMA Package information

SMA (DO-214AC)



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	1.900	2.200	0.075	0.087
A1	0.050	0.200	0.002	0.008
b	1.300	1.600	0.051	0.063
C	0.150	0.310	0.006	0.012
D	4.000	4.500	0.157	0.177
D1	4.700	5.200	0.185	0.205
E	2.300	2.700	0.090	0.106
e	-	1.880	-	0.074
L	0.900	1.500	0.035	0.059