

Features

- ◆ Optimized for LAN protection applications
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated junction chip
- ◆ 400w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v to V_{BRmin}

Mechanical Data

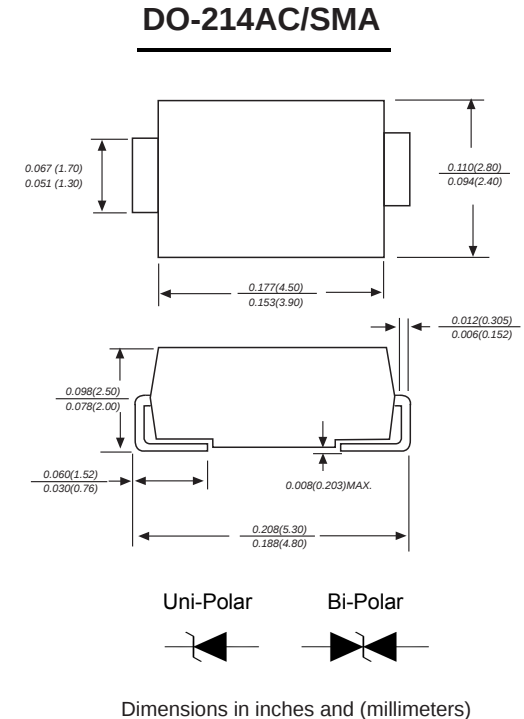
Case : Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.0023 ounce, 0.07 grams



Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	SYMBOLS	VALUE	UNITS
Peak pulse power dissipation with a 10/1000μs wavetorm(NOTE 1,2,4,FIG.1)	P_{PPM}	Minimum 400	Watts
Peak forward surge current (Note 3)	I_{FSM}	40.0	Amps
Peak pulse current with a 10/1000μs waveform(NOTE 1,2,5)Fig.2	I_{PPM}	See Table 1	Amps
Steady State Power Dissipation(Note 4)	$P_{M(AV)}$	1.0	Watts
Operating junction and storage temperature range	T_{STG}, T_J	-55 to + 150	°C

Notes:1.Non-repetitive current pulse,per Fig.3 and derated above $T_A=25^{\circ}C$ per Fig.2

2.Mounted on 5.0mm copper pads to each terminal

3.Measured on 8.3ms single half sine-wine.For uni-directional devices only.

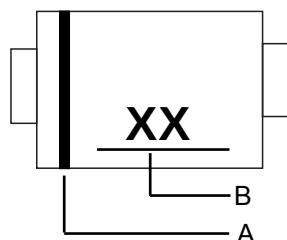
4.Lead temperature at $75^{\circ}C=T_L$

5.Peak pulse power waveform is 10/1000μs

Type	Marking	Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Uni-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
		(W)	(V)	(μ A)	Min.	Max.	(mA)	(A)	(V)
SMAJ5.0A	AE	400	5	800	6.4	7	10	43.5	9.2
SMAJ6.0A	AG	400	6	800	6.67	7.37	10	38.8	10.3
SMAJ6.5A	AK	400	6.5	500	7.22	7.98	10	35.7	11.2
SMAJ7.0A	AM	400	7	200	7.78	8.6	10	33.3	12.0
SMAJ7.5A	AP	400	7.5	100	8.33	9.21	1	31.0	12.9
SMAJ8.0A	AR	400	8	50	8.89	9.83	1	29.4	13.6
SMAJ8.5A	AT	400	8.5	20	9.44	10.4	1	27.8	14.4
SMAJ9.0A	AV	400	9	10	10	11.1	1	26.0	15.4
SMAJ10A	AX	400	10	5	11.1	12.3	1	23.5	17.0
SMAJ11A	AZ	400	11	1	12.2	13.5	1	22.0	18.2
SMAJ12A	BE	400	12	1	13.3	14.7	1	20.1	19.9
SMAJ13A	BG	400	13	1	14.4	15.9	1	18.6	21.5
SMAJ14A	BK	400	14	1	15.6	17.2	1	17.2	23.2
SMAJ15A	BM	400	15	1	16.7	18.5	1	16.4	24.4
SMAJ16A	BP	400	16	1	17.8	19.7	1	15.4	26.0
SMAJ17A	BR	400	17	1	18.9	20.9	1	14.5	27.6
SMAJ18A	BT	400	18	1	20	22.1	1	13.7	29.2
SMAJ20A	BV	400	20	1	22.2	24.5	1	12.3	32.4
SMAJ22A	BX	400	22	1	24.4	26.9	1	11.3	35.5
SMAJ24A	BZ	400	24	1	26.7	29.5	1	10.3	38.9
SMAJ26A	CE	400	26	1	28.9	31.9	1	9.5	42.1
SMAJ28A	CG	400	28	1	31.1	34.4	1	8.8	45.4
SMAJ30A	CK	400	30	1	33.3	36.8	1	8.3	48.4
SMAJ33A	CM	400	33	1	36.7	40.6	1	7.5	53.3
SMAJ36A	CP	400	36	1	40	44.2	1	6.9	58.1
SMAJ40A	CR	400	40	1	44.4	49.1	1	6.2	64.5
SMAJ43A	CT	400	43	1	47.8	52.8	1	5.8	69.4
SMAJ45A	CV	400	45	1	50	55.3	1	5.5	72.7
SMAJ48A	CX	400	48	1	53.3	58.9	1	5.2	77.4
SMAJ51A	CZ	400	51	1	56.7	62.7	1	4.9	82.4
SMAJ54A	RE	400	54	1	60	66.3	1	4.6	87.1
SMAJ58A	RG	400	58	1	64.4	71.2	1	4.3	93.6
SMAJ60A	RK	400	60	1	66.7	73.7	1	4.1	96.8
SMAJ64A	RM	400	64	1	71.1	78.6	1	3.9	103
SMAJ70A	RP	400	70	1	77.8	86	1	3.5	113
SMAJ75A	RR	400	75	1	83.3	92.1	1	3.3	121
SMAJ78A	RT	400	78	1	86.7	95.8	1	3.2	126
SMAJ85A	RV	400	85	1	94.4	104	1	2.9	137
SMAJ90A	RX	400	90	1	100	111	1	2.7	146
SMAJ100A	RZ	400	100	1	111	123	1	2.5	162

Type	Marking	Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Uni-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
		(W)	(V)	(μ A)	Min.	Max.	(mA)	(A)	(V)
SMAJ110A	SE	400	110	1	122	135	1	2.3	177
SMAJ120A	SG	400	120	1	133	147	1	2.1	193
SMAJ130A	SK	400	130	1	144	159	1	1.9	209
SMAJ150A	SM	400	150	1	167	185	1	1.6	243
SMAJ160A	SP	400	160	1	178	197	1	1.5	259
SMAJ170A	SR	400	170	1	189	209	1	1.5	275
SMAJ180A	ST	400	180	1	201	222	1	1.4	292
SMAJ200A	SV	400	200	1	224	247	1	1.2	324
SMAJ220A	SX	400	220	1	246	272	1	1.1	356
SMAJ250A	SZ	400	250	1	279	309	1	1.0	405
SMAJ300A	TE	400	300	1	335	371	1	0.8	486
SMAJ350A	TG	400	350	1	391	432	1	0.7	567
SMAJ400A	TK	400	400	1	447	494	1	0.6	648
SMAJ440A	TM	400	440	1	492	543	1	0.6	713

Marking For Uni-Polar



Symbol	Explanation
A	Color Band Denotes Cathode
B	Marking Code, as above sheet

Ratings And Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

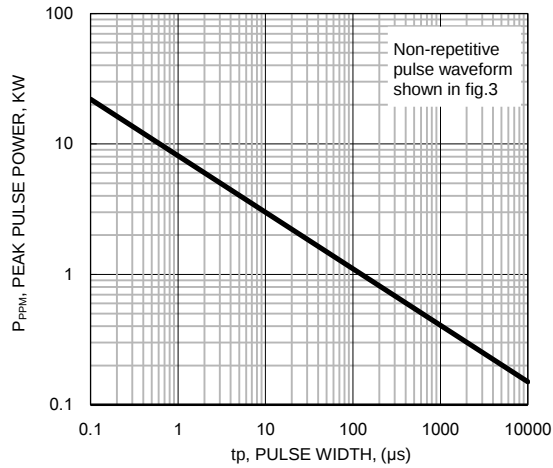


Fig.2 Pulse Derating Curve

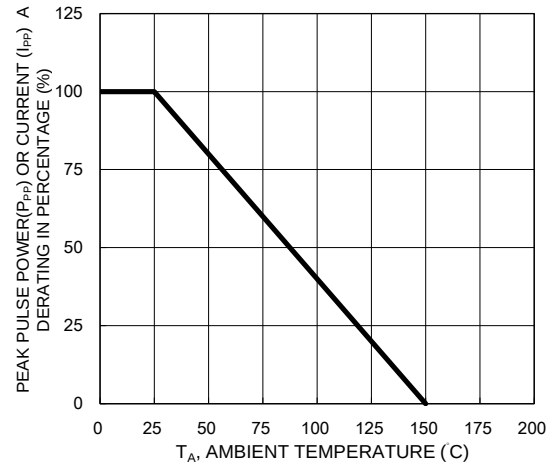


Fig.3 Claming Power Pulse Waveform

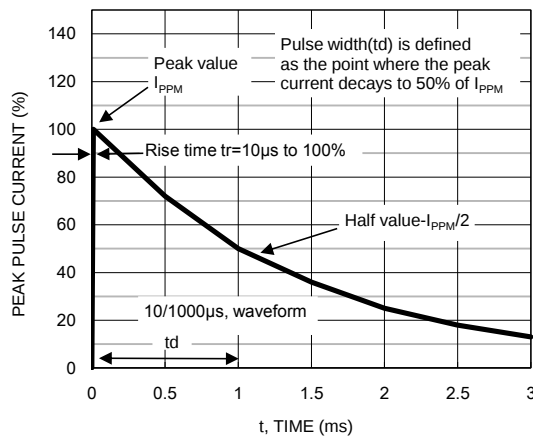


Fig.4 Maximum Non-repetitive Forward Surge Current

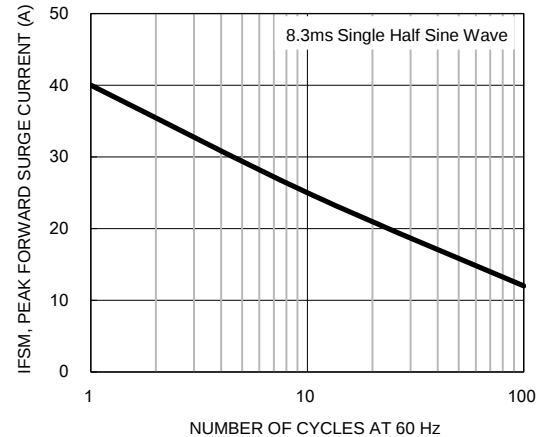
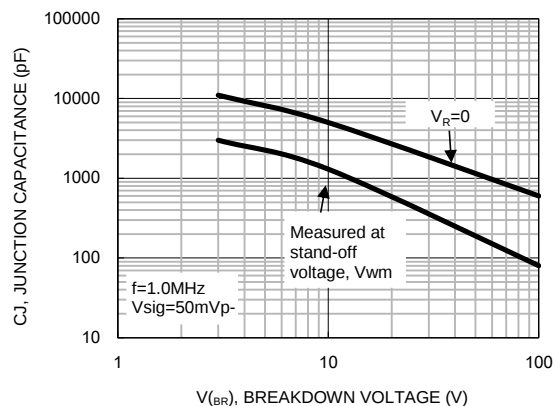
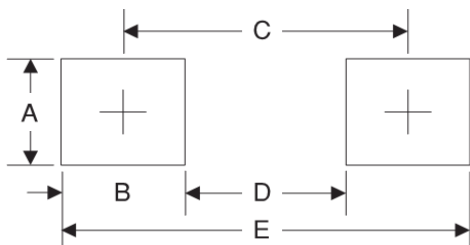


Fig.5 Typical Junction Capacitance

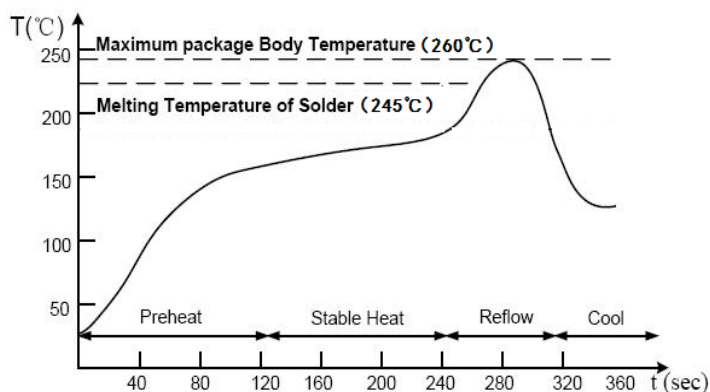


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.68	0.066
B	1.52	0.060
C	3.90	0.154
D	2.41	0.095
E	5.45	0.215

Suggested Soldering Temperature Profile

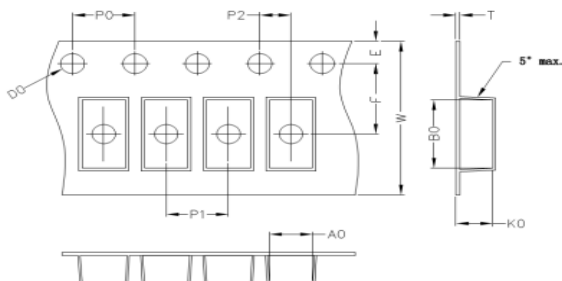


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 260°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
2.80	5.30	2.36	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	4.0	2.0	0.25	12	0.1

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
SMA	11'	278	5	285	10	355*310*310	80

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