

Features

- ◆ Optimized for LAN protection applications
- ◆ Ideal for ESD protection of data lines in accordance with IEC 1000-4-2(IEC801-2)
- ◆ Ideal for EFT protection of data lines in accordance with IEC 1000-4-4(IEC801-2)
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated junction chip
- ◆ 1500w peak pulse power capability
- ◆ Excellent clamping capability
- ◆ Low incremental surge resistance
- ◆ Fast response time: typically less than 1.0ps from 0v to V_{BR} min
- ◆ High temperature soldering guaranteed:
260°C/10S at terminals

Mechanical Data

Case : Molded plastic body

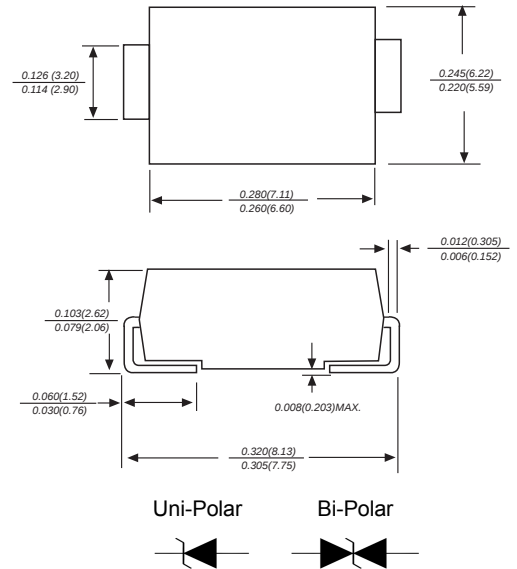
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.008 ounce, 0.225 grams

DO-214AB/SMC



Dimensions in inches and (millimeters)

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,FIG.1)	P _{PPM}	Minimum 1500	Watts
Peak forward surge current (Note 1,2,3)	I _{FSM}	200.0	Amps
Peak pulse current with a 10/1000μs waveform(NOTE 1)	I _{PPM}	See Table 1	Amps
Steady state power dissipation (Note 3)	P _D	6.5	Watts
Maximum instantaneous forward voltage at 50A(Note 3,4) unidirectional only	V _F	3.5/5.0	Volts
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°C per Fig.2

2.Mounted on 5.0mm copper pads to each terminal

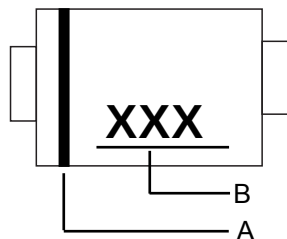
3.Measured on 8.3ms single half sine-wave.For uni-directional devices only.

4.V_F=3.5V on SMC-5.0 thru SMC-220 devices and V_F=5.0V on SMC-250 thru SMC-440 devices

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	Bi-Polar	Uni-Polar	Bi-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
				(W)	(V)	(uA)	Min.	Max.			
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	1500	5	800	6.4	7	10	163.0	9.2
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	1500	6	800	6.67	7.37	10	145.7	10.3
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	1500	6.5	500	7.22	7.98	10	134.0	11.2
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	1500	7	200	7.78	8.6	10	125.0	12.0
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	1500	7.5	100	8.33	9.21	1	116.3	12.9
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	1500	8	50	8.89	9.83	1	110.3	13.6
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	1500	8.5	20	9.44	10.4	1	104.2	14.4
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	1500	9	10	10	11.1	1	97.4	15.4
SMCJ10A	SMCJ10CA	GDX	BDX	1500	10	5	11.1	12.3	1	88.3	17.0
SMCJ11A	SMCJ11CA	GDZ	BDZ	1500	11	1	12.2	13.5	1	82.5	18.2
SMCJ12A	SMCJ12CA	GEE	BEE	1500	12	1	13.3	14.7	1	75.4	19.9
SMCJ13A	SMCJ13CA	GEG	BEG	1500	13	1	14.4	15.9	1	69.8	21.5
SMCJ14A	SMCJ14CA	GEK	BEK	1500	14	1	15.6	17.2	1	64.7	23.2
SMCJ15A	SMCJ15CA	GEM	BEM	1500	15	1	16.7	18.5	1	61.5	24.4
SMCJ16A	SMCJ16CA	GEP	BEP	1500	16	1	17.8	19.7	1	57.7	26.0
SMCJ17A	SMCJ17CA	GER	BER	1500	17	1	18.9	20.9	1	54.4	27.6
SMCJ18A	SMCJ18CA	GET	BET	1500	18	1	20	22.1	1	51.4	29.2
SMCJ20A	SMCJ20CA	GEV	BEV	1500	20	1	22.2	24.5	1	46.3	32.4
SMCJ22A	SMCJ22CA	GEX	BEX	1500	22	1	24.4	26.9	1	42.3	35.5
SMCJ24A	SMCJ24CA	GEZ	BEZ	1500	24	1	26.7	29.5	1	38.6	38.9
SMCJ26A	SMCJ26CA	GFE	BFE	1500	26	1	28.9	31.9	1	35.7	42.1
SMCJ28A	SMCJ28CA	GFG	BFG	1500	28	1	31.1	34.4	1	33.1	45.4
SMCJ30A	SMCJ30CA	GFK	BFK	1500	30	1	33.3	36.8	1	31.0	48.4
SMCJ33A	SMCJ33CA	GFM	BFM	1500	33	1	36.7	40.6	1	28.2	53.3
SMCJ36A	SMCJ36CA	GFP	BFP	1500	36	1	40	44.2	1	25.9	58.1
SMCJ40A	SMCJ40CA	GFR	BFR	1500	40	1	44.4	49.1	1	23.3	64.5
SMCJ43A	SMCJ43CA	GFT	BFT	1500	43	1	47.8	52.8	1	21.7	69.4
SMCJ45A	SMCJ45CA	GFV	BFV	1500	45	1	50	55.3	1	20.6	72.7
SMCJ48A	SMCJ48CA	GFX	BFX	1500	48	1	53.3	58.9	1	19.4	77.4
SMCJ51A	SMCJ51CA	GFZ	BFZ	1500	51	1	56.7	62.7	1	18.2	82.4
SMCJ54A	SMCJ54CA	GGE	BGE	1500	54	1	60	66.3	1	17.3	87.1
SMCJ58A	SMCJ58CA	GGG	BGG	1500	58	1	64.4	71.2	1	16.1	93.6
SMCJ60A	SMCJ60CA	GGK	BGK	1500	60	1	66.7	73.7	1	15.5	96.8
SMCJ64A	SMCJ64CA	GGM	BGM	1500	64	1	71.1	78.6	1	14.6	103
SMCJ70A	SMCJ70CA	GGP	BGP	1500	70	1	77.8	86	1	13.3	113
SMCJ75A	SMCJ75CA	GGR	BGR	1500	75	1	83.3	92.1	1	12.4	121
SMCJ78A	SMCJ78CA	GGT	BGT	1500	78	1	86.7	95.8	1	11.9	126
SMCJ85A	SMCJ85CA	GGV	BGV	1500	85	1	94.4	104	1	11.0	137
SMCJ90A	SMCJ90CA	GGX	BGX	1500	90	1	100	111	1	10.3	146
SMCJ100A	SMCJ100CA	GGZ	BGZ	1500	100	1	111	123	1	9.3	162

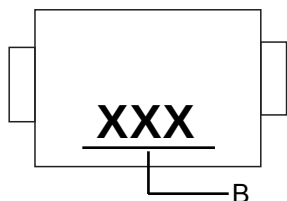
Type		Marking		Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	PPP (W)	V(R) (V)	IR (uA)	V (BR) (V)		IT (mA)	Ipp (A)	Vc (V)
SMCJ110A	SMCJ110CA	GHE	BHE	1500	110	1	122	135	1	8.5	177
SMCJ120A	SMCJ120CA	GHG	BHG	1500	120	1	133	147	1	7.8	193
SMCJ130A	SMCJ130CA	GHK	BHK	1500	130	1	144	159	1	7.2	209
SMCJ150A	SMCJ150CA	GHM	BHM	1500	150	1	167	185	1	6.2	243
SMCJ160A	SMCJ160CA	GHP	BHP	1500	160	1	178	197	1	5.8	259
SMCJ170A	SMCJ170CA	GHR	BHR	1500	170	1	189	209	1	5.5	275
SMCJ180A	SMCJ180CA	GHT	BHT	1500	180	1	201	222	1	5.1	292
SMCJ200A	SMCJ200CA	GHV	BHV	1500	200	1	224	247	1	4.6	324
SMCJ220A	SMCJ220CA	GHX	BHX	1500	220	1	246	272	1	4.2	356
SMCJ250A	SMCJ250CA	GHZ	BHZ	1500	250	1	279	309	1	3.7	405
SMCJ300A	SMCJ300CA	GJE	BJE	1500	300	1	335	371	1	3.1	486
SMCJ350A	SMCJ350CA	GJG	BJG	1500	350	1	391	432	1	2.6	567
SMCJ400A	SMCJ400CA	GJK	BJK	1500	400	1	447	494	1	2.3	648
SMCJ440A	SMCJ440CA	GJM	BJM	1500	440	1	492	543	1	2.1	713

Marking For Uni-Polar



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

Marking For Bi-Polar



Symbol	Explanation
B	Marking Code, as above sheet

Ratings And Characteristic Curves

Fig.1 Peak Pulse Power Rating Curve

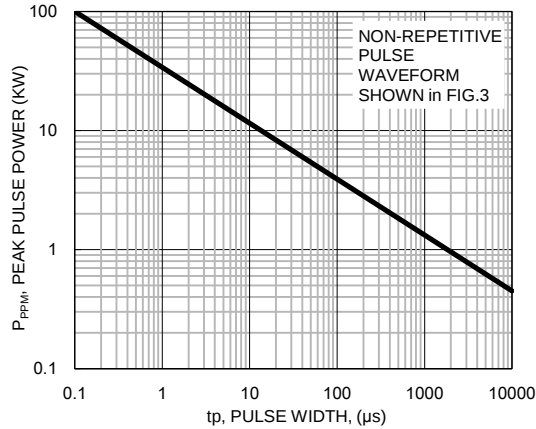


Fig.2 Pulse Derating Curve

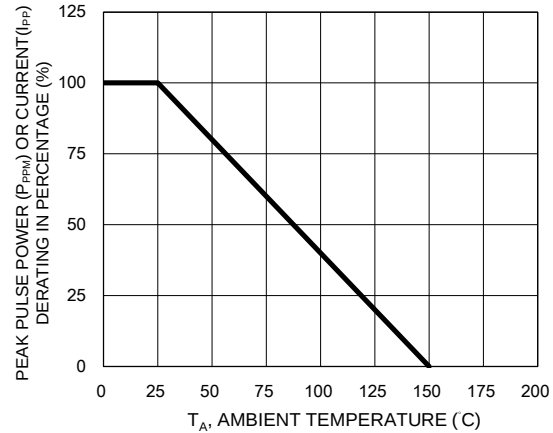


Fig.3 Clamping Power Pulse Waveform

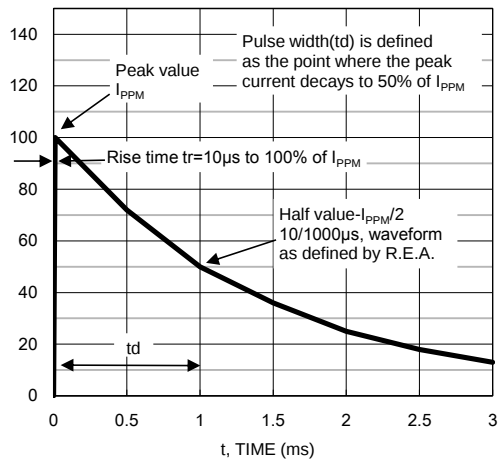


Fig.4 Typical Junction Capacitance

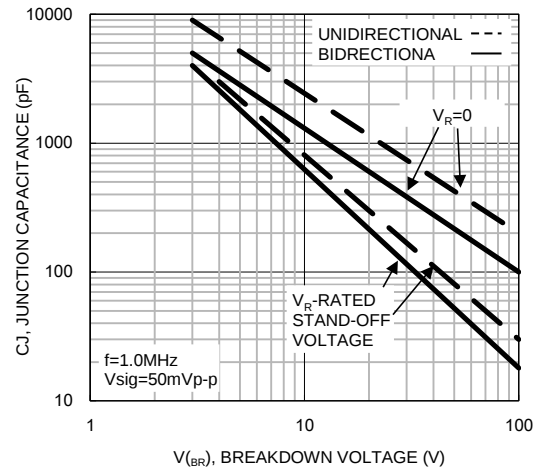
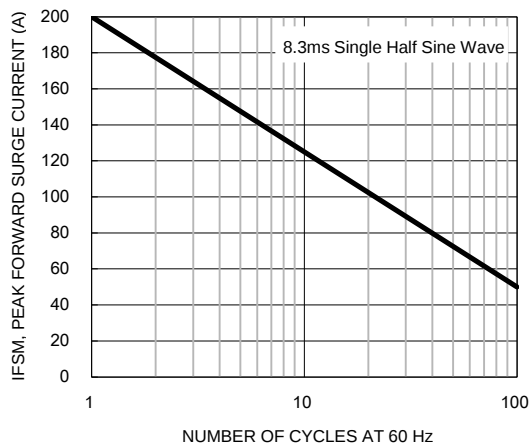
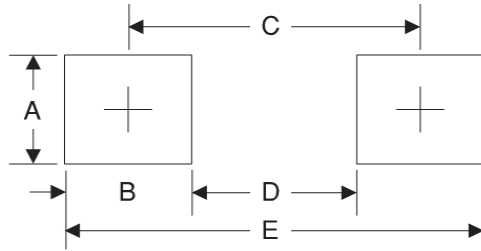


Fig.5 Maximum Non-repetitive Forward Surge Current Unidirectional Only

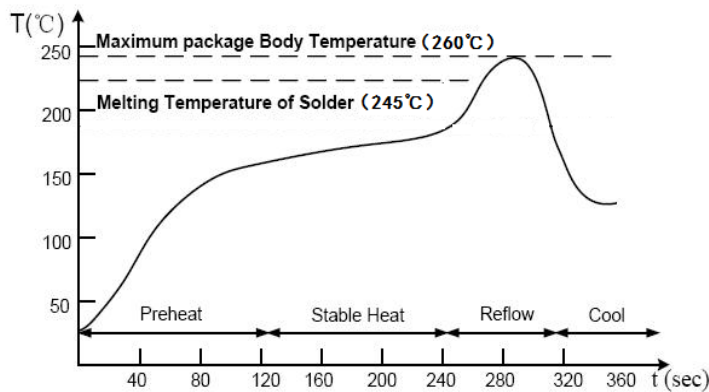


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	3.30	0.130
B	2.50	0.098
C	6.80	0.268
D	4.40	0.173
E	9.40	0.370

Suggested Soldering Temperature Profile

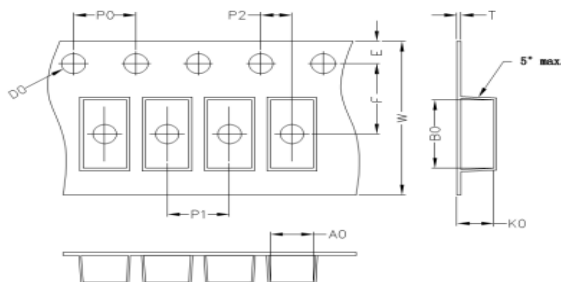


Note

- 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
6.05	8.31	2.54	1.55	1.75	7.50
P0	P1	P2	T	W	Tolerance
4.0	8.0	2.0	0.25	16	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)
SMC	13'	330	3.0	340	6.0	360*360*360	48