

### 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<sub>BR</sub> min
- ◆ High temperature soldering guaranteed: 260°C/10S at terminals

### Mechanical Data

**Case :** Molded plastic body

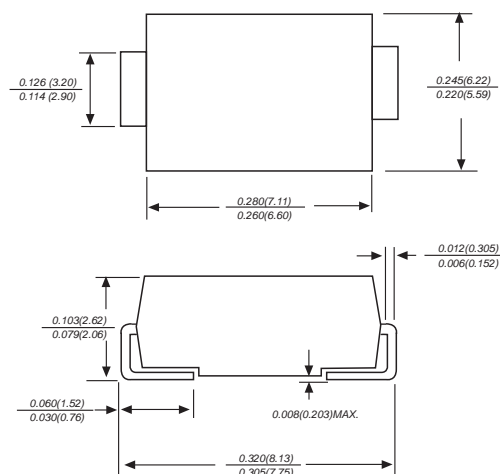
**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Polarity symbol marking on body

**Mounting Position :** Any

**Weight :** 0.008 ounce, 0.225 grams

DO-214AB/SMC



Uni-Polar

Bi-Polar



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 <sub>PPM</sub>	Minimum 1500	Watts
Peak forward surge current (Note 1,2,3)	I <sub>FSM</sub>	200.0	Amps
Peak pulse current with a 10/1000μs waveform(NOTE 1)	I <sub>PPM</sub>	See Table 1	Amps
Steady state power dissipation (Note 3)	P <sub>d</sub>	6.5	Watts
Maximum instantaneous forward voltage at 50A(Note 3,4) unidirectional only	V <sub>F</sub>	3.5/5.0	Volts
Operating junction and storage temperature range	T <sub>STG</sub> , T <sub>J</sub>	-55 to + 150	°C

**Notes:**1.Non-repetitive current pulse,per Fig.3 and derated above T<sub>A</sub>=25°C per Fig.2

2.Mounted on 5.0mm copper pads to each terminal

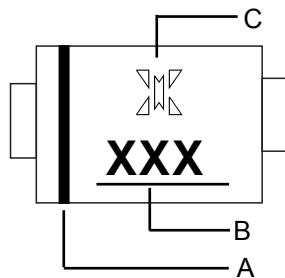
3.Measured on 8.3ms single half sine-wine.For uni-directional devices only.

4.V<sub>F</sub>=3.5V on SMC-5.0 thru SMC-220 devices and V<sub>F</sub>=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				V (BR)	(V)			
				PPP (W)	V(R) (V)	IR (uA)	Min.	Max.	(mA)	(A)	(V)
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

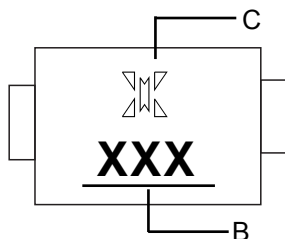
Type		Marking		Peak Pulse Power	Stand-off Voltage	Maximum Reverse Current at VR	Breakdown Voltage at IT		Test Current	Maximum Peak Pulse Current	Maximum Clamping Voltage at Ipp
Uni-Polar	Bi-Polar	Uni-Polar	Bi-Polar	PPP	V(R)	IR	V (BR) (V)		IT	Ipp	Vc
				(W)	(V)		Min.	Max.			
SMCJ110A	SMCJ110CA	GHE	BHE	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
C	Logo

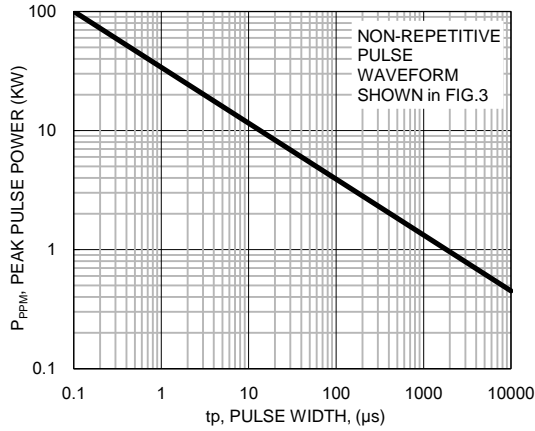
### Marking For Bi-Polar



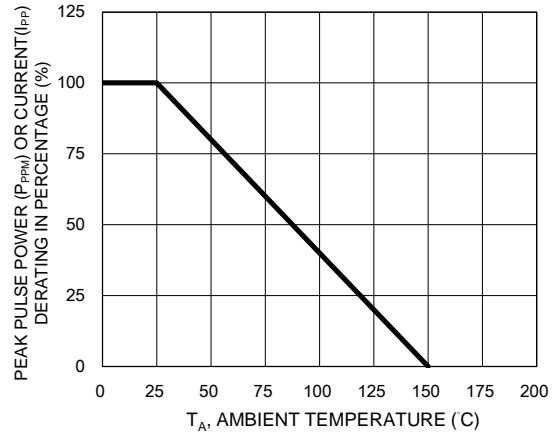
Symbol	Explanation
B	Marking Code, as above sheet
C	Logo

**Ratings And Characteristic Curves**

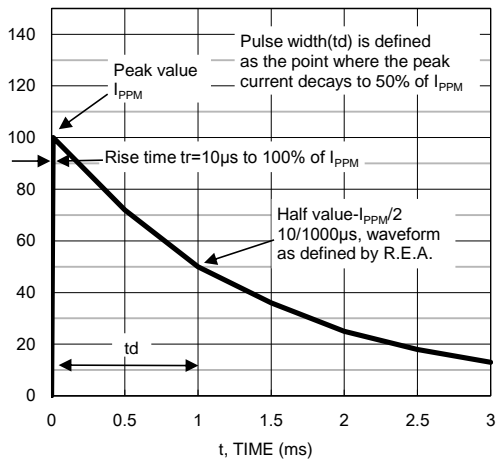
**Fig.1 Peak Pulse Power Rating Curve**



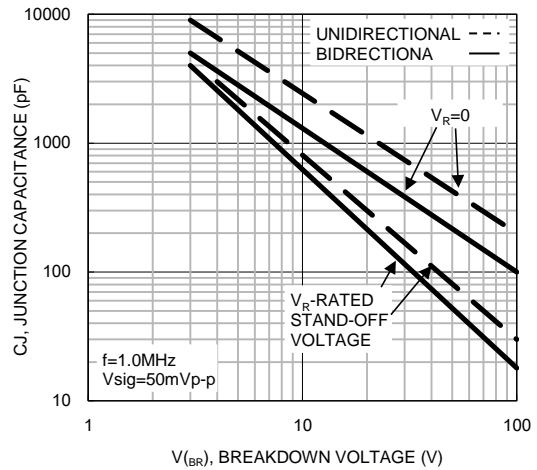
**Fig.2 Pulse Derating Curve**



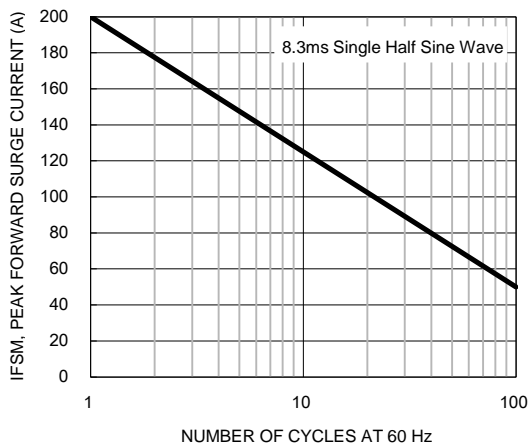
**Fig.3 Clamping Power Pulse Waveform**



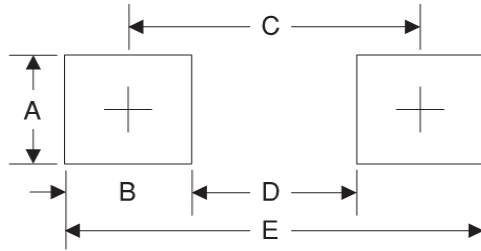
**Fig.4 Typical Junction Capacitance**



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

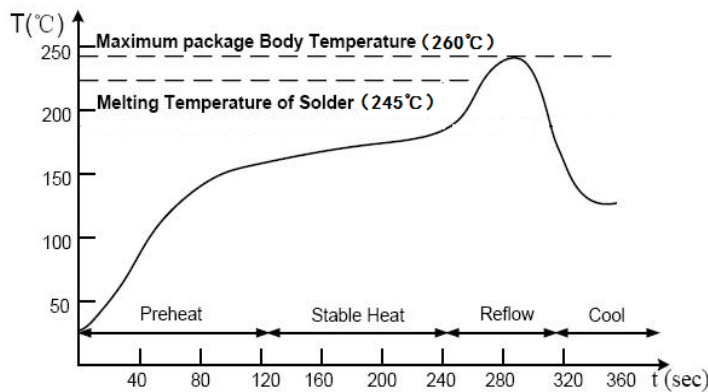


### Suggested Pad Layout



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

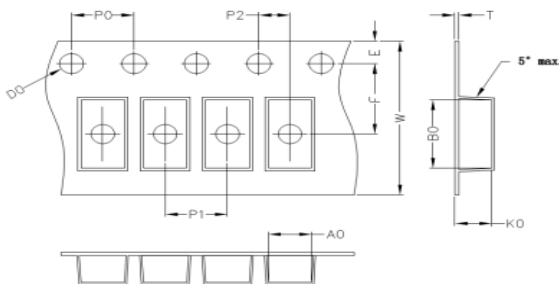


#### Note

- 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