



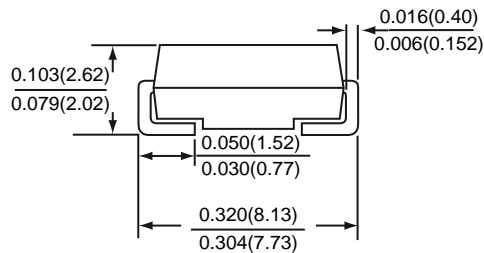
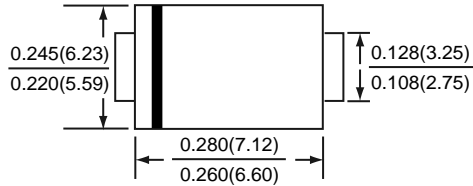
SMCJ SERIES

GLASS PASSIVATED SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Reverse Voltage - 5.0 to 440 Volts

Peak Pulse Power-1500 Watts

SMC / DO-214AB



*Dimensions in inches and (millimeters)



FEATURES

- * Glass passivated chip
- * 1500 W peak pulse power capability with a 10/1000 μ s waveform, repetitive rate (duty cycle) : 0.01%
- * Low leakage
- * Excellent clamping capability
- * Very fast response time

MECHANICAL DATA

Case : JEDEC DO-214AB molded plastic

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

Polarity : Color band denotes positive end (cathode) except for bidirectional types

Weight : 0.007 ounce, 0.21 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

*Ratings at 25 °C ambient temperature unless otherwise specified.
 single phase, half wave, 60Hz resistive or inductive load.
 for capacitive load, derate current by 20%*

RATING	SYMBOL	VALUE	UNITS
Peak power dissipation with a 10/1000 μ s waveform	P_{PPM}	1500	Watts
Peak pulse current with a 10/1000 μ s waveform	I_{PPM}	See next table	Amps
Power dissipation on infinite heatsink at $T_L = 75$	P_D	6.5	Watts
Peak forward surge current, 8.3ms single half sine-wave unidirectional only (note 1)	I_{FSM}	200	Amps
Maximum instantaneous forward voltage at 100A for unidirectional only (note 2)	V_F	3.5 / 5.0	Volts
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	

NOTES : (1) Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

(2) $V_F = 3.5V$ on SMCJ5.0A thru SMCJ90A devices and $V_F = 5.0V$ on SMCJ100A thru SMCJ440A devices.

SMCJ PART NUMBER		Device Marking Code		Working Peak Reverse Voltage V _{RWM} (V)	Breakdown Voltage V _{BR} @I _T			Maximum Clamping Voltage V _c (V) @ I _{PP}	Maximum Reverse Surge Current I _{PP} (A)	Maximum Reverse Leakage I _r (μA) @V _{RWM}
UNI- POLAR	BI-POLAR	UNI	BI		Min. (V)	Max. (V)	I _T (mA)			
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	5.0	6.40	7.00	10	9.2	163.0	800
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	6.0	6.67	7.37	10	10.3	145.6	800
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	6.5	7.22	7.98	10	11.2	133.9	500
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	7.0	7.78	8.60	10	12.0	125.0	200
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	8.0	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	8.5	9.44	10.40	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	9.0	10.00	11.10	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	GDX	BDX	10	11.10	12.30	1	17.0	88.2	5
SMCJ11A	SMCJ11CA	GDZ	BDZ	11	12.20	13.50	1	18.2	82.4	1
SMCJ12A	SMCJ12CA	GEE	BEE	12	13.30	14.70	1	19.9	75.4	1
SMCJ13A	SMCJ13CA	GEG	BEG	13	14.40	15.90	1	21.5	69.8	1
SMCJ14A	SMCJ14CA	GEK	BEK	14	15.60	17.20	1	23.2	64.7	1
SMCJ15A	SMCJ15CA	GEM	BEM	15	16.70	18.50	1	24.4	61.5	1
SMCJ16A	SMCJ16CA	GEP	BEP	16	17.80	19.70	1	26.0	57.7	1
SMCJ17A	SMCJ17CA	GER	BER	17	18.90	20.90	1	27.6	54.3	1
SMCJ18A	SMCJ18CA	GET	BET	18	20.00	22.10	1	29.2	51.4	1
SMCJ19A	SMCJ19CA	GEB	BEB	19	21.10	23.30	1	30.8	48.7	1
SMCJ20A	SMCJ20CA	GEV	BEV	20	22.20	24.50	1	32.4	46.3	1
SMCJ22A	SMCJ22CA	GEX	BEX	22	24.40	26.90	1	35.5	42.3	1
SMCJ24A	SMCJ24CA	GEZ	BEZ	24	26.70	29.50	1	38.9	38.6	1
SMCJ26A	SMCJ26CA	GFE	BFE	26	28.90	31.90	1	42.1	35.6	1
SMCJ28A	SMCJ28CA	GFG	BFG	28	31.10	34.40	1	45.4	33.0	1
SMCJ30A	SMCJ30CA	GFK	BFK	30	33.30	36.80	1	48.4	31.0	1
SMCJ33A	SMCJ33CA	GFM	BFM	33	36.70	40.60	1	53.3	28.1	1
SMCJ36A	SMCJ36CA	GFP	BFP	36	40.00	44.20	1	58.1	25.8	1
SMCJ40A	SMCJ40CA	GFR	BFR	40	44.40	49.10	1	64.5	23.3	1
SMCJ43A	SMCJ43CA	GFT	BFT	43	47.80	52.80	1	69.4	21.6	1
SMCJ45A	SMCJ45CA	GFV	BFV	45	50.00	55.30	1	72.7	20.6	1
SMCJ48A	SMCJ48CA	GFX	BFX	48	53.30	58.90	1	77.4	19.4	1
SMCJ51A	SMCJ51CA	GFZ	BFZ	51	56.70	62.70	1	82.4	18.2	1
SMCJ54A	SMCJ54CA	GGE	BGE	54	60.00	66.30	1	87.1	17.2	1
SMCJ58A	SMCJ58CA	GGG	BGG	58	64.40	71.20	1	93.6	16.0	1
SMCJ60A	SMCJ60CA	GKK	BKK	60	66.70	73.70	1	96.8	15.5	1
SMCJ64A	SMCJ64CA	GGM	BGM	64	71.10	78.60	1	103	14.6	1
SMCJ70A	SMCJ70CA	GGP	BGP	70	77.80	86.00	1	113	13.3	1
SMCJ75A	SMCJ75CA	GGR	BGR	75	83.30	92.10	1	121	12.4	1
SMCJ78A	SMCJ78CA	GGT	BGT	78	86.70	95.80	1	126	11.9	1
SMCJ80A	SMCJ80CA	GGB	BGB	80	88.80	97.60	1	130	11.6	1
SMCJ85A	SMCJ85CA	GGV	BGV	85	94.40	104	1	137	10.9	1
SMCJ90A	SMCJ90CA	GGX	BGX	90	100	111	1	146	10.3	1
SMCJ100A	SMCJ100CA	GGZ	BGZ	100	111	123	1	162	9.3	1
SMCJ110A	SMCJ110CA	GHE	BHE	110	122	135	1	177	8.5	1
SMCJ120A	SMCJ120CA	GHG	BHG	120	133	147	1	193	7.8	1
SMCJ130A	SMCJ130CA	GHK	BHK	130	144	159	1	209	7.2	1
SMCJ140A	SMCJ140CA	GHB	BHB	140	155	171	1	227	6.6	1
SMCJ150A	SMCJ150CA	GHM	BHM	150	167	185	1	243	6.2	1
SMCJ160A	SMCJ160CA	GHP	BHP	160	178	197	1	259	5.8	1
SMCJ170A	SMCJ170CA	GHR	BHR	170	189	209	1	275	5.5	1
SMCJ180A	SMCJ180CA	GHT	BHT	180	200	220	1	291	5.1	1
SMCJ190A	SMCJ190CA	GHV	BHV	190	211	232	1	308	4.9	1
SMCJ200A	SMCJ200CA	GHW	BHW	200	224	247	1	324	4.6	1
SMCJ220A	SMCJ220CA	GHX	BHX	220	246	272	1	356	4.2	1
SMCJ250A	SMCJ250CA	GHZ	BHZ	250	279	309	1	405	3.7	1
SMCJ300A	SMCJ300CA	GJE	BJE	300	335	371	1	486	3.1	1
SMCJ350A	SMCJ350CA	GJG	BJG	350	391	432	1	567	2.6	1
SMCJ400A	SMCJ400CA	GJK	BJK	400	447	494	1	648	2.3	1
SMCJ440A	SMCJ440CA	GJM	BJM	440	492	543	1	713	2.1	1

NOTE : 1. Suffix " A " denotes 5% tolerance device.
 2. Add suffix " CA " after part number to specify Bi-directional devices.
 3. For Bi-Directional devices having V_R of 10 volts and under, the I_r limit is double .

RATINGS AND CHARACTERISTIC CURVES SMCJ SERIES

FIG. 1- PULSE DERATING CURVE

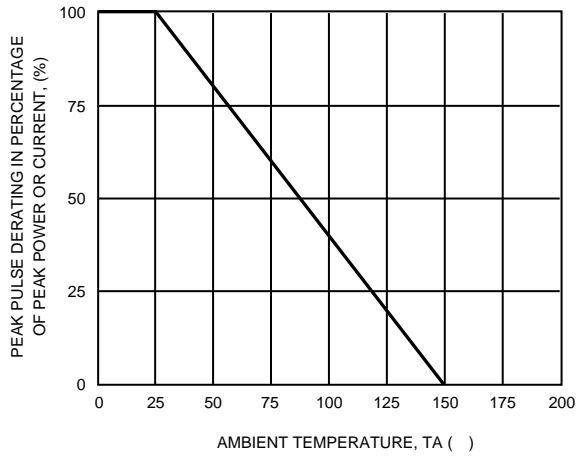


FIG. 2 - MAXIMUM NON-REPETITIVE

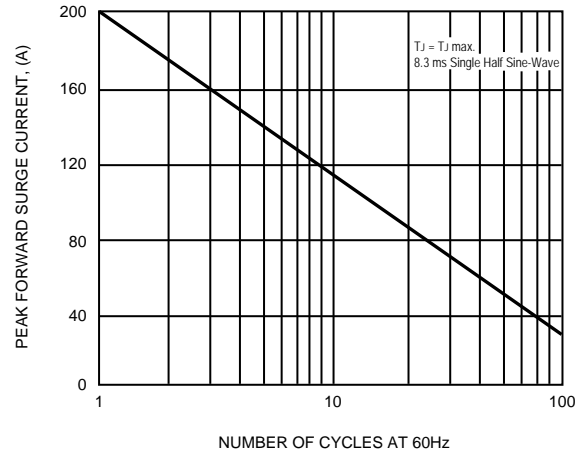


FIG. 3 - STEADY STATE POWER DERATING CURVE

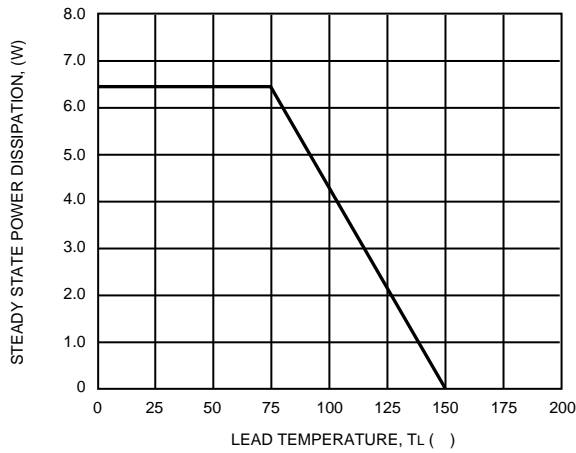


FIG. 4 - PEAK PULSE POWER RATING CURVE

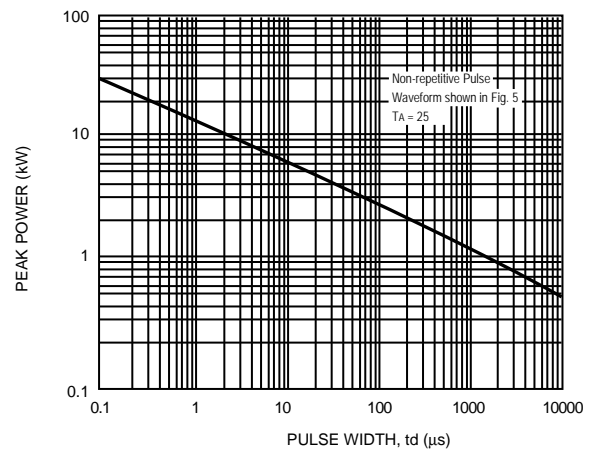


FIG. 5 - PULSE WAVEFORM

