



# CHENMKO ENTERPRISE CO.,LTD

**GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR**  
**VOLTAGE-6.8 TO 200 VOLTS**  
**1500 WATTS PEAK POWER 6.5 WATTS STEADY STATE**

**1.5SCMJ**  
**SERIES**

*Halogens free devices*

## FEATURES

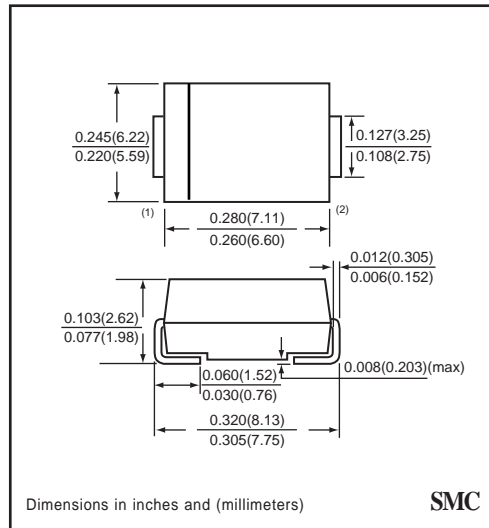
- \* Plastic package
- \* 1500W surge capability at 1ms
- \* Glass passivated chip junction in SMC Package
- \* Excellent clamping capability
- \* Low Zener Impedance
- \* Fast response time: typically less than 1.0ps from 0 volts to BV min.
- \* Typical IR less than 1 uA above 10V
- \* High temperature soldering guaranteed : 260°C/10 seconds at terminals

## MECHANICAL DATA

**Case:** JEDEC SMC molded plastic  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.007 ounce 0.25 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



## DEVICES FOR BIDIRECTIONAL APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5SCMJ6.8A thru types 1.5SCMJ200A  
 Electrical characteristics apply in both directions.

## MAXIMUM RATINGS ( At TA = 25°C unless otherwise noted )

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at TA = 25°C, Tp = 1ms ( Note1 )	PPK	Minimum 1500	Watts
Steady State Power Dissipation at TL = 75°C	PD	6.5	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load ( Note 2 )	IFSM	200	Amps
Operating and Storage Temperature Range	TJ, TSTG	-65 to +175	°C

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above TA = 25°C per Fig. 2.  
 2. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.  
 3. P.C.B. mounted 0.31 x 0.31" ( 8 x 8mm) copper pad areas

2003-01

PRODUCT NO.	Breakdown Voltage				Working Peak Reverse Voltage	Maximum Reverse Leakage at Vrwm	Maximum Reverse Current ( NOTE 2 )	Maximum Reverse Voltage at Irsm ( clamping )	Maximum Temperature Coefficient of Vbr
	VBR Volts ( NOTE 1 )			@ IT ( mA )					
	MIN.	NOM.	MAX.		Vrwm ( V )	Ir ( uA )	Irsm ( A )	Vrsm ( V )	( %C )
1.5SCMJ6.8AGP	6.45	6.8	7.14	10	5.80	1000	143	10.5	0.057
1.5SCMJ7.5AGP	7.13	7.5	7.88	10	6.40	500	132	11.3	0.061
1.5SCMJ8.2AGP	7.79	8.2	8.61	10	7.02	200	124	12.1	0.065
1.5SCMJ9.1AGP	8.65	9.1	9.55	1.0	7.78	50	112	13.4	0.068
1.5SCMJ10AGP	9.5	10	10.5	1.0	8.55	10	103	14.5	0.073
1.5SCMJ11AGP	10.5	11	11.6	1.0	9.40	5.0	96.0	15.6	0.075
1.5SCMJ12AGP	11.4	12	12.6	1.0	10.2	5.0	90.0	16.7	0.078
1.5SCMJ13AGP	12.4	13	13.7	1.0	11.1	5.0	82.0	18.2	0.081
1.5SCMJ15AGP	14.3	15	15.8	1.0	12.8	5.0	71.0	21.2	0.084
1.5SCMJ16AGP	15.2	16	16.8	1.0	13.6	5.0	67.0	22.5	0.086
1.5SCMJ18AGP	17.1	18	18.9	1.0	15.3	5.0	59.5	25.2	0.088
1.5SCMJ20AGP	19.0	20	21.0	1.0	17.1	5.0	54.0	27.7	0.090
1.5SCMJ22AGP	20.9	22	23.1	1.0	18.8	5.0	49.0	30.6	0.092
1.5SCMJ24AGP	22.8	24	25.2	1.0	20.5	5.0	45.0	33.2	0.094
1.5SCMJ27AGP	25.7	27	28.4	1.0	23.1	5.0	40.0	37.5	0.096
1.5SCMJ30AGP	28.5	30	31.5	1.0	25.6	5.0	36.0	41.4	0.097
1.5SCMJ33AGP	31.4	33	34.7	1.0	28.2	5.0	33.0	45.7	0.098
1.5SCMJ36AGP	34.2	36	37.8	1.0	30.8	5.0	30.0	49.9	0.099
1.5SCMJ39AGP	37.1	39	41.0	1.0	33.3	5.0	28.0	53.9	0.100
1.5SCMJ43AGP	40.9	43	45.2	1.0	36.8	5.0	25.3	59.3	0.101
1.5SCMJ47AGP	44.7	47	49.4	1.0	40.2	5.0	23.2	64.8	0.101
1.5SCMJ51AGP	48.5	51	53.6	1.0	43.6	5.0	21.4	70.1	0.102
1.5SCMJ56AGP	53.2	56	58.8	1.0	47.8	5.0	19.5	77.0	0.103
1.5SCMJ62AGP	58.9	62	65.1	1.0	53.0	5.0	17.7	85.0	0.104
1.5SCMJ68AGP	64.6	68	71.4	1.0	58.0	5.0	16.3	92.0	0.104
1.5SCMJ75AGP	71.3	75	78.8	1.0	64.1	5.0	14.6	103	0.105
1.5SCMJ82AGP	77.9	82	86.1	1.0	70.1	5.0	13.3	113	0.105
1.5SCMJ91AGP	86.5	91	95.5	1.0	77.8	5.0	12.0	125	0.106
1.5SCMJ100AGP	95.0	100	105	1.0	85.5	5.0	11.0	137	0.106
1.5SCMJ110AGP	105	110	116	1.0	94.0	5.0	9.9	152	0.107
1.5SCMJ120AGP	114	120	126	1.0	102	5.0	9.1	165	0.107
1.5SCMJ130AGP	124	130	137	1.0	111	5.0	8.4	179	0.107
1.5SCMJ150AGP	143	150	158	1.0	128	5.0	7.2	207	0.108
1.5SCMJ160AGP	152	160	168	1.0	136	5.0	6.8	219	0.108
1.5SCMJ170AGP	162	170	179	1.0	145	5.0	6.4	234	0.108
1.5SCMJ180AGP	171	180	189	1.0	154	5.0	6.1	246	0.108
1.5SCMJ200AGP	190	200	210	1.0	171	5.0	5.5	274	0.108

# RATING CHARACTERISTIC CURVES ( 1.5SCMJ6.8AGP ~ 1.5SCMJ200AGP )

FIG. 1 - PULSE POWER RATING CURVE

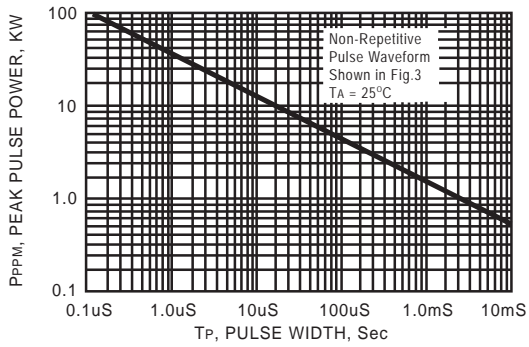


FIG. 2 - PULSE DERATING CURVE

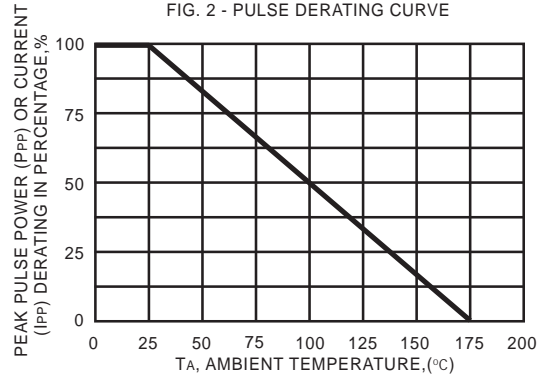


FIG. 3 - PULSE WAVEFORM

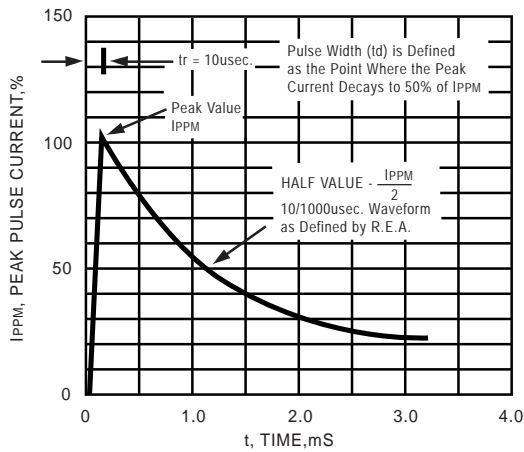


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

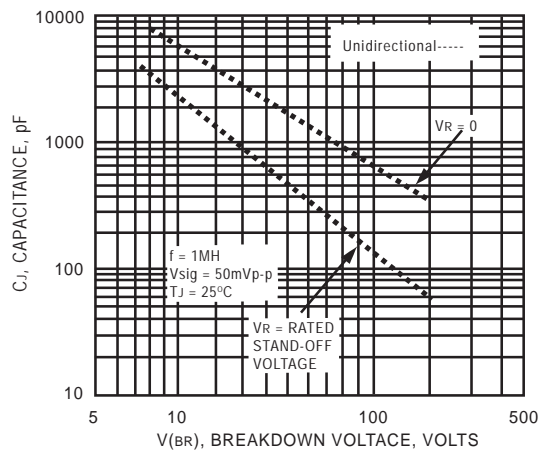


FIG. 5 - STEADY STATE POWER DERATING CURVE

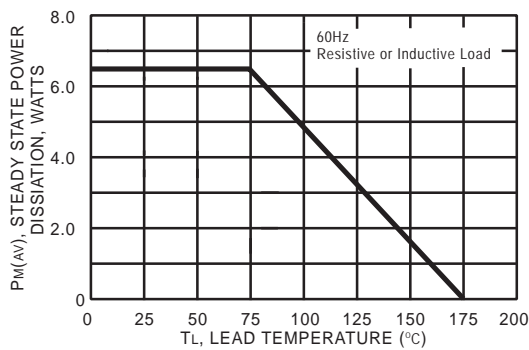
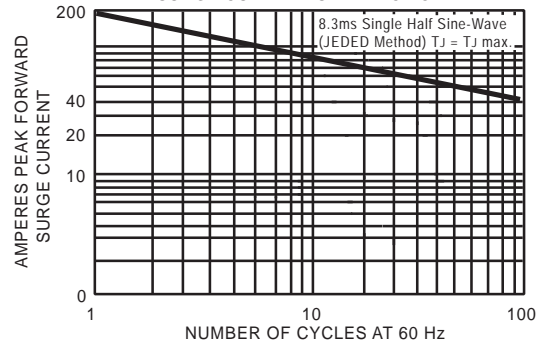


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL



# RATING CHARACTERISTIC CURVES (1.5SCMJ6.8AGP ~ 1.5SCMJ200AGP)

