



CHENMKO ENTERPRISE CO.,LTD

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR
VOLTAGE-6.8 TO 200 VOLTS
400 WATTS PEAK POWER 1.0 WATT STEADY STATE

**P4SSMJ
SERIES**

Lead free devices

FEATURES

- * Plastic package
- * 400W surge capability at 1ms
- * Glass passivated chip junction in SMA 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 SMA molded plastic

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.002 ounce, 0.064 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 P4SSMJ6.8A thru types P4SSMJ200A
Electrical characteristics apply in both directions.

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

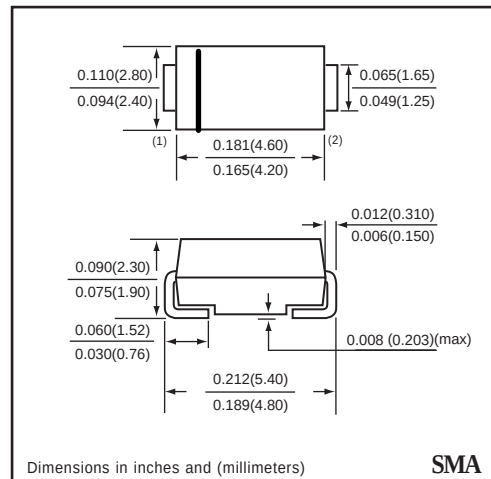
RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at TA = 25°C, Tp = 1ms (Note1)	PPK	Minimum 400	Watts
Steady State Power Dissipation at TL = 75°C	PD	1.0	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Note 2)	IFSM	40	Amps
Operating and Storage Temperature Range	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. PC Board Mounted on 0.2 X 0.2" (5 X 5mm) copper pad area

2003-01



SMA



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)
P4SSMJ6.8APT	6.45	6.8	7.14	10	5.80	1000	40	10.5	0.057
P4SSMJ7.5APT	7.13	7.5	7.88	10	6.40	500	37	11.3	0.061
P4SSMJ8.2APT	7.79	8.2	8.61	10	7.02	200	35	12.1	0.065
P4SSMJ9.1APT	8.65	9.1	9.55	1.0	7.78	50	31	13.4	0.068
P4SSMJ10APT	9.5	10	10.5	1.0	8.55	10	29	14.5	0.073
P4SSMJ11APT	10.5	11	11.6	1.0	9.40	5.0	27	15.6	0.075
P4SSMJ12APT	11.4	12	12.6	1.0	10.2	5.0	25	16.7	0.078
P4SSMJ13APT	12.4	13	13.7	1.0	11.1	5.0	23	18.2	0.081
P4SSMJ15APT	14.3	15	15.8	1.0	12.8	5.0	20	21.2	0.084
P4SSMJ16APT	15.2	16	16.8	1.0	13.6	5.0	19	22.5	0.086
P4SSMJ18APT	17.1	18	18.9	1.0	15.3	5.0	17	25.2	0.088
P4SSMJ20APT	19.0	20	21.0	1.0	17.1	5.0	15	27.7	0.090
P4SSMJ22APT	20.9	22	23.1	1.0	18.8	5.0	14	30.6	0.092
P4SSMJ24APT	22.8	24	25.2	1.0	20.5	5.0	13	33.2	0.094
P4SSMJ27APT	25.7	27	28.4	1.0	23.1	5.0	11.2	37.5	0.096
P4SSMJ30APT	28.5	30	31.5	1.0	25.6	5.0	10	41.4	0.097
P4SSMJ33APT	31.4	33	34.7	1.0	28.2	5.0	9	45.7	0.098
P4SSMJ36APT	34.2	36	37.8	1.0	30.8	5.0	8.4	49.9	0.099
P4SSMJ39APT	37.1	39	41.0	1.0	33.3	5.0	7.8	53.9	0.100
P4SSMJ43APT	40.9	43	45.2	1.0	36.8	5.0	7.1	59.3	0.101
P4SSMJ47APT	44.7	47	49.4	1.0	40.2	5.0	5.0	64.8	0.101
P4SSMJ51APT	48.5	51	53.6	1.0	43.6	5.0	6.0	70.1	0.102
P4SSMJ56APT	53.2	56	58.8	1.0	47.8	5.0	5.5	77.0	0.103
P4SSMJ62APT	58.9	62	65.1	1.0	53.0	5.0	5.0	85.0	0.104
P4SSMJ68APT	64.6	68	71.4	1.0	58.0	5.0	4.6	92.0	0.104
P4SSMJ75APT	71.3	75	78.8	1.0	64.1	5.0	4.1	103	0.105
P4SSMJ82APT	77.9	82	86.1	1.0	70.1	5.0	3.7	113	0.105
P4SSMJ91APT	86.5	91	95.5	1.0	77.8	5.0	3.4	125	0.106
P4SSMJ100APT	95.0	100	105	1.0	85.5	5.0	3.1	137	0.106
P4SSMJ110APT	105	110	116	1.0	94.0	5.0	2.8	152	0.107
P4SSMJ120APT	114	120	126	1.0	102	5.0	2.5	165	0.107
P4SSMJ130APT	124	130	137	1.0	111	5.0	2.3	179	0.107
P4SSMJ150APT	143	150	158	1.0	128	5.0	2.0	207	0.108
P4SSMJ160APT	152	160	168	1.0	136	5.0	1.9	219	0.108
P4SSMJ170APT	162	170	179	1.0	145	5.0	1.8	234	0.108
P4SSMJ180APT	171	180	189	1.0	154	5.0	1.7	246	0.108
P4SSMJ200APT	190	200	210	1.0	171	5.0	1.53	274	0.108

RATING CHARACTERISTIC CURVES (P4SSMJ6.8APT ~ P4SSMJ200APT)

FIG. 1 - PEAK PULSE POWER RATING CURVE

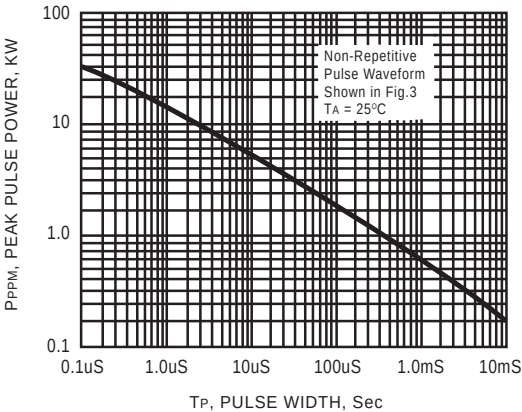


FIG. 2 - PULSE DERATING CURVE

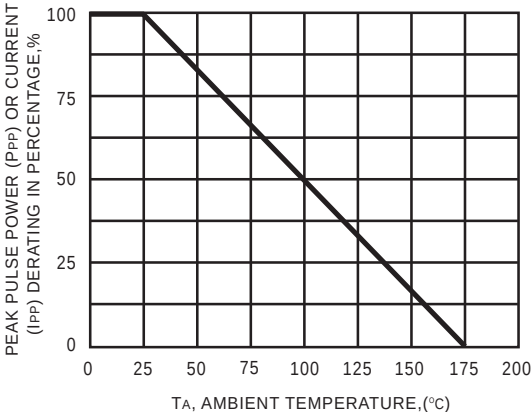


FIG. 3 - PULSE WAVEFORM

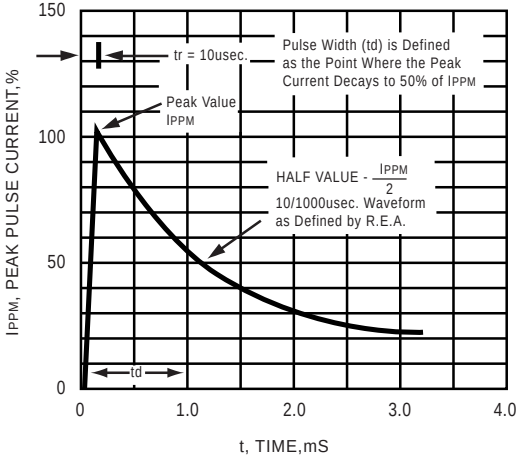
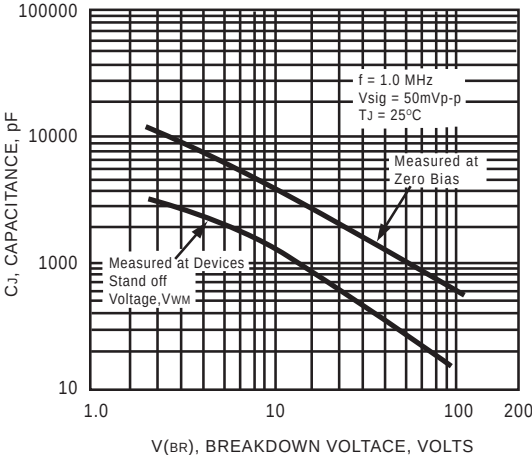


FIG. 4 - TYPICAL JUNCTION CAPACITANCE UNI-DIRECTIONAL



RATING CHARACTERISTIC CURVES (P4SSMJ6.8A ~ P4SSMJ200A)

FIG. 5 - STEADY STATE POWER DERATING CURVE

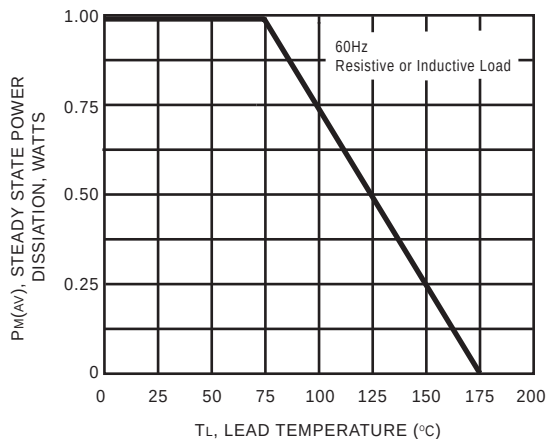


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL

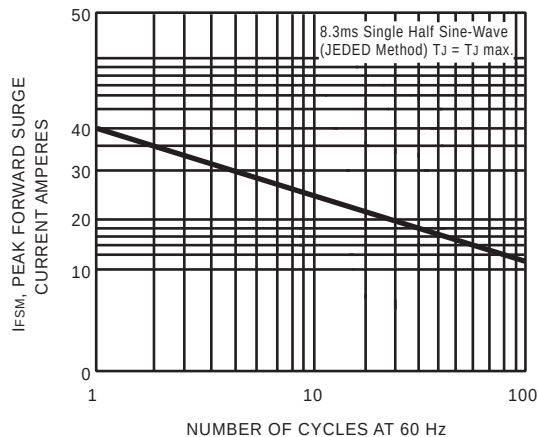


FIG. 7 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

