CHENMKO ENTERPRISE CO.,LTD

P4SSMJ

CA SERIES

GLASS PASSIVATED JUNCTION TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE-6.8 TO 200 VOLTS

400 WATTS PEAK POWER 1.0 WATT STEADY STATE

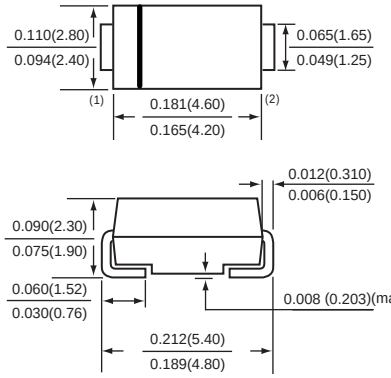
Lead free devices

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



SMA



Dimensions in inches and (millimeters)

SMA

MECHANICAL DATA

Case: JEDEC SMA molded plastic
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Bidirectional
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 RATINGES (At T_A = 25°C unless otherwise noted)

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at T_A = 25°C, Tp = 1ms (Note1)	P_{PK}	Minimum 400	Watts
Steady State Power Dissipation at T_L = 75°C	P_D	1.0	Watts
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Note 2)	I_{FSM}	40	Amps
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175	°C

NOTES : 1. Non-repetitive current pulse, per Fig. 3 and derated above T_A = 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.

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)
P4SSMJ6.8CAPT	6.45	6.8	7.14	10	5.80	2000	40	10.5	0.057
P4SSMJ7.5CAPT	7.13	7.5	7.88	10	6.40	1000	37	11.3	0.061
P4SSMJ8.2CAPT	7.79	8.2	8.61	10	7.02	400	35	12.1	0.065
P4SSMJ9.1CAPT	8.65	9.1	9.55	1.0	7.78	100	31	13.4	0.068
P4SSMJ10CAPT	9.5	10	10.5	1.0	8.55	20	29	14.5	0.073
P4SSMJ11CAPT	10.5	11	11.6	1.0	9.40	10	27	15.6	0.075
P4SSMJ12CAPT	11.4	12	12.6	1.0	10.2	5.0	25	16.7	0.078
P4SSMJ13CAPT	12.4	13	13.7	1.0	11.1	5.0	23	18.2	0.081
P4SSMJ15CAPT	14.3	15	15.8	1.0	12.8	5.0	20	21.2	0.084
P4SSMJ16CAPT	15.2	16	16.8	1.0	13.6	5.0	19	22.5	0.086
P4SSMJ18CAPT	17.1	18	18.9	1.0	15.3	5.0	17	25.2	0.088
P4SSMJ20CAPT	19.0	20	21.0	1.0	17.1	5.0	15	27.7	0.090
P4SSMJ22CAPT	20.9	22	23.1	1.0	18.8	5.0	14	30.6	0.092
P4SSMJ24CAPT	22.8	24	25.2	1.0	20.5	5.0	13	33.2	0.094
P4SSMJ27CAPT	25.7	27	28.4	1.0	23.1	5.0	11.2	37.5	0.096
P4SSMJ30CAPT	28.5	30	31.5	1.0	25.6	5.0	10	41.4	0.097
P4SSMJ33CAPT	31.4	33	34.7	1.0	28.2	5.0	9	45.7	0.098
P4SSMJ36CAPT	34.2	36	37.8	1.0	30.8	5.0	8.4	49.9	0.099
P4SSMJ39CAPT	37.1	39	41.0	1.0	33.3	5.0	7.8	53.9	0.100
P4SSMJ43CAPT	40.9	43	45.2	1.0	36.8	5.0	7.1	59.3	0.101
P4SSMJ47CAPT	44.7	47	49.4	1.0	40.2	5.0	5.0	64.8	0.101
P4SSMJ51CAPT	48.5	51	53.6	1.0	43.6	5.0	6.0	70.1	0.102
P4SSMJ56CAPT	53.2	56	58.8	1.0	47.8	5.0	5.5	77.0	0.103
P4SSMJ62CAPT	58.9	62	65.1	1.0	53.0	5.0	5.0	85.0	0.104
P4SSMJ68CAPT	64.6	68	71.4	1.0	58.0	5.0	4.6	92.0	0.104
P4SSMJ75CAPT	71.3	75	78.8	1.0	64.1	5.0	4.1	103	0.105
P4SSMJ82CAPT	77.9	82	86.1	1.0	70.1	5.0	3.7	113	0.105
P4SSMJ91CAPT	86.5	91	95.5	1.0	77.8	5.0	3.4	125	0.106
P4SSMJ100CAPT	95.0	100	105	1.0	85.5	5.0	3.1	137	0.106
P4SSMJ110CAPT	105	110	116	1.0	94.0	5.0	2.8	152	0.107
P4SSMJ120CAPT	114	120	126	1.0	102	5.0	2.5	165	0.107
P4SSMJ130CAPT	124	130	137	1.0	111	5.0	2.3	179	0.107
P4SSMJ150CAPT	143	150	158	1.0	128	5.0	2.0	207	0.108
P4SSMJ160CAPT	152	160	168	1.0	136	5.0	1.9	219	0.108
P4SSMJ170CAPT	162	170	179	1.0	145	5.0	1.8	234	0.108
P4SSMJ180CAPT	171	180	189	1.0	154	5.0	1.7	246	0.108
P4SSMJ200CAPT	190	200	210	1.0	171	5.0	1.53	274	0.108

RATING CHARACTERISTIC CURVES (P4SSMJ6.8CAPT ~ P4SSMJ200CAPT)

FIG. 1 - PEAK PULSE POWER RATING CURVE

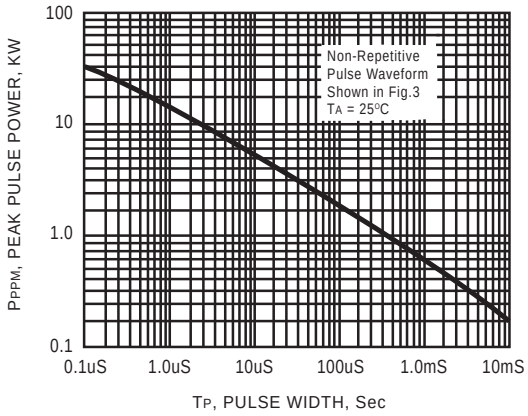


FIG. 2 - PULSE DERATING CURVE

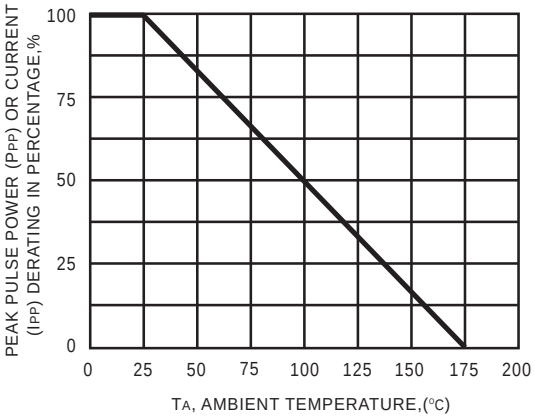


FIG. 3 - PULSE WAVEFORM

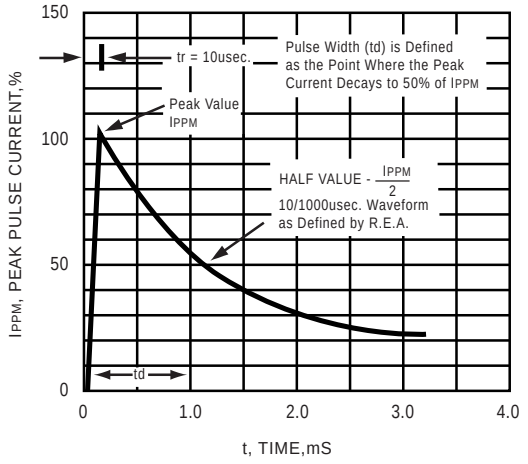
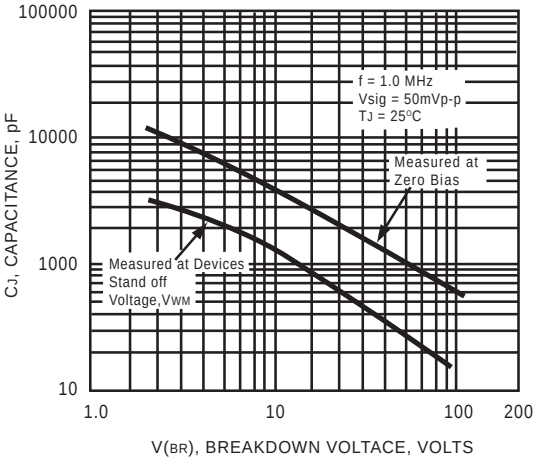


FIG. 4 - TYPICAL JUNCTION CAPACITANCE
UNI-DIRECTIONAL



RATING CHARACTERISTIC CURVES (P4SSMJ6.8CA ~ P4SSMJ200CA)

FIG. 5 - STEADY STATE POWER DERATING CURVE

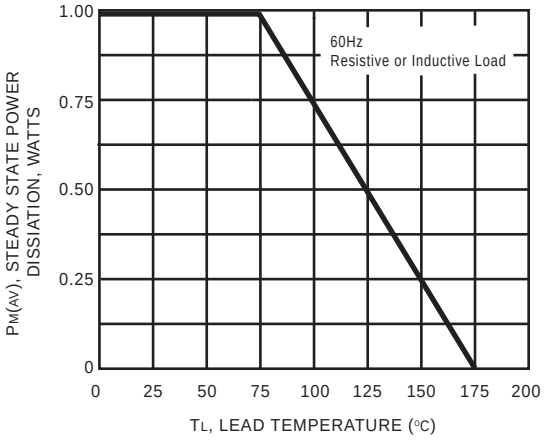


FIG. 6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL

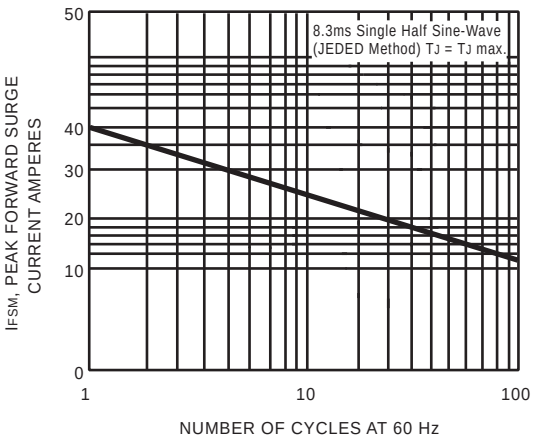


FIG. 7 -TYPICAL REVERSE LEAKAGE CHARACTERISTICS

