

P4SMA SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

VOLTAGE - 6.8 TO 170 Volts

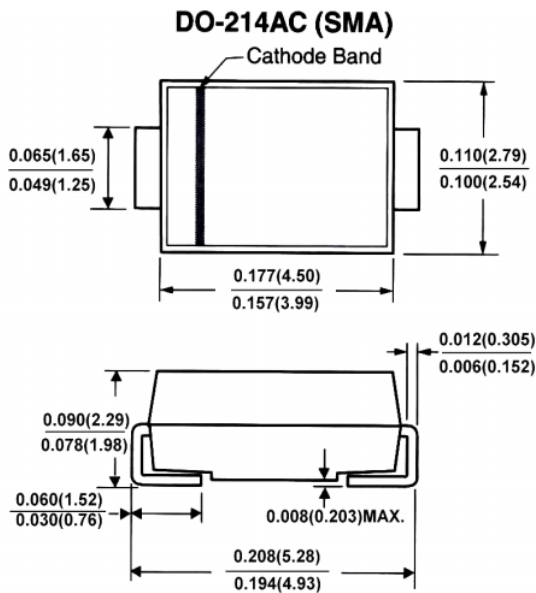
400Watts Peak Pulse Power

P4SMA PART NUMBER	MARKING CODE		REVERSE STAND- OFF VOLTAGE V _{RWM} (V)	BREAKDOWN VOLTAGE V _{BR} (V) MIN.@I _T	BREAKDOWN VOLTAGE V _{BR} (V) MAX.@I _T	TEST CURRENT I _T (mA)	MAXIMUM CLAMPING VOLTAGE @I _{pp} V _c (V)	PEAK PULSE CURRENT I _{pp} (A)	REVERSE LEAKAGE @ VRWM IR(A)
	UNI- POLAR	BI- POLAR							
P4SMA 6.8A	6V8A	6V8C	5.80	6.45	7.14	10	10.5	38.1	1000
P4SMA 7.5A	7V5A	7V5C	6.40	7.13	7.88	10	11.3	35.4	500
P4SMA 8.2A	8V2A	8V2C	7.02	7.79	8.61	10	12.1	33.1	200
P4SMA 9.1A	9V1A	9V1C	7.78	8.65	9.55	1	13.4	29.9	50
P4SMA 10A	10A	10C	8.55	9.50	10.50	1	14.5	27.6	10
P4SMA 11A	11A	11C	9.40	10.50	11.60	1	15.6	25.6	5
P4SMA 12A	12A	12C	10.20	11.40	12.60	1	16.7	24.0	5
P4SMA 13A	13A	13C	11.10	12.40	13.70	1	18.2	22.0	5
P4SMA 15A	15A	15C	12.80	14.30	15.80	1	21.2	18.9	5
P4SMA 16A	16A	16C	13.60	15.20	16.80	1	22.5	17.8	5
P4SMA 18A	18A	18C	15.30	17.10	18.90	1	25.5	15.9	5
P4SMA 20A	20A	20C	17.10	19.00	21.00	1	27.7	14.4	5
P4SMA 22A	22A	22C	18.80	20.90	23.10	1	30.6	13.1	5
P4SMA 24A	24A	24C	20.50	22.80	25.20	1	33.2	12.0	5
P4SMA 27A	27A	27C	23.10	25.70	28.40	1	37.5	10.7	5
P4SMA 30A	30A	30C	25.60	28.50	31.50	1	41.4	9.7	5
P4SMA 33A	33A	33C	28.20	31.40	34.70	1	45.7	8.8	5
P4SMA 36A	36A	36C	30.80	34.20	37.80	1	49.9	8.0	5
P4SMA 39A	39A	39C	33.30	37.10	41.00	1	53.9	7.4	5
P4SMA 43A	43A	43C	36.80	40.90	45.20	1	59.3	6.7	5
P4SMA 47A	47A	47C	40.20	44.70	49.40	1	64.8	6.2	5
P4SMA 51A	51A	51C	43.60	48.50	53.60	1	70.1	5.7	5
P4SMA 56A	56A	56C	47.80	53.20	58.80	1	77.0	5.2	5
P4SMA 62A	62A	62C	53.00	58.90	65.10	1	85.0	4.7	5
P4SMA 68A	68A	68C	58.10	64.60	71.40	1	92.0	4.3	5
P4SMA 75A	75A	75C	64.10	71.30	78.80	1	103.0	3.9	5
P4SMA 82A	82A	82C	70.10	77.90	86.10	1	113.0	3.5	5
P4SMA 91A	91A	91C	77.80	86.50	95.50	1	125.0	3.2	5
P4SMA 100A	100A	100C	85.50	95.00	105.00	1	137.0	2.2	5
P4SMA 110A	110A	110C	94.00	105.00	116.00	1	152.0	2.0	5
P4SMA 120A	120A	120C	102.00	114.00	126.00	1	165.0	1.8	5
P4SMA 130A	130A	130C	111.00	124.00	137.00	1	179.0	1.7	5
P4SMA 150A	150A	150C	128.00	143.00	158.00	1	207.0	1.4	5
P4SMA 160A	160A	160C	136.00	152.00	168.00	1	219.0	1.4	5
P4SMA 170A	170A	170C	145.00	162.00	179.00	1	234.0	1.3	5

For bidirectional type having Vrwm of 10 volts and less, the IR limit is double.

P4SMA SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR VOLTAGE-6.8 TO 170 Volts 400 Watt Peak Pulse Power



Dimensions in inches and (millimeters)

FEATURES

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- Typical IR less than 1mA above 10V
- High temperature soldering: 250°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO214AC. Molded plastic over glass passivated junction
Terminal: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denoted positive end (cathode) except Bidirectional
Standard Packaging: 12mm tape (EIA STD RS-481)
Weight: 0.002 ounce, 0.061 gram

DEVICES FOR BIPOLAR APPLICATION

For Bidirectional use Suffix CA for types P4SMB6.8CA thru types P4SMB170CA
Electrical characteristics apply in both directions

MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 s waveform (Note 1.2 ,FIG.1)	P _{PPM}	Minimum 400	Watts
Peak Pulse Current of on 10/1000 s waveform (Note 1,FIG.3)	I _{PPM}	SEE TABLE 1	Amps
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load,(JEDEC Method) (Note2, 3)	I _{FSM}	40	Amps
Operating junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150	

Notes : 1.Non-repetitive current pulse , per Fig. 3 and derated above T_A = 25 °C per Fig. 2 .
2.Mounted on 5.0mm² (0.03mm thick) Copper Pads to each terminal
3.8.3ms single half sine-wave , or equivalent square wave, Duty cycle = 4 pulses per minutes maximum.

P4SMA SERIES

RATINGS AND CHARACTERISTIC CURVES

Ratings and

Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating

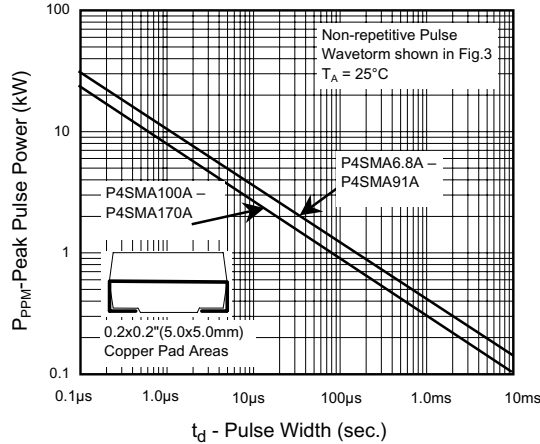


Fig.2 - Pulse Derating Curve

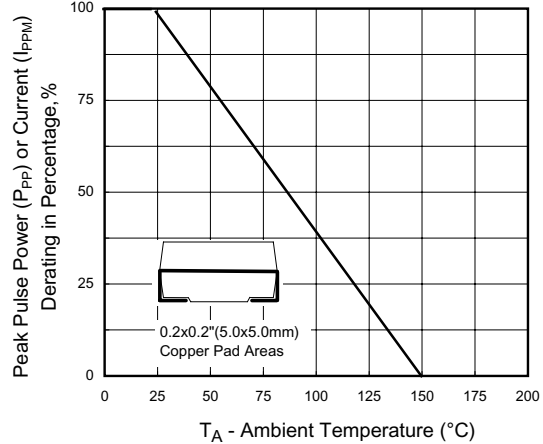


Fig.3 - Pulse Waveform

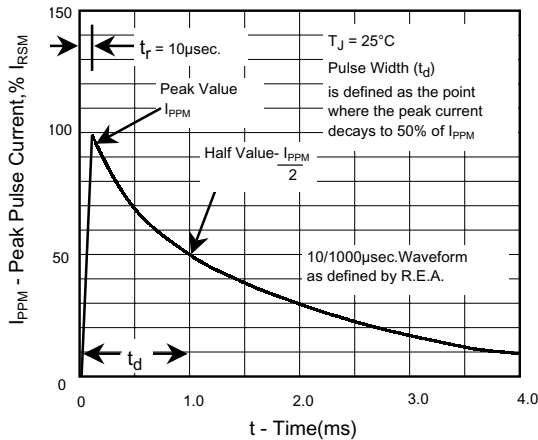


Fig.4 - Typical Junction Capacitance

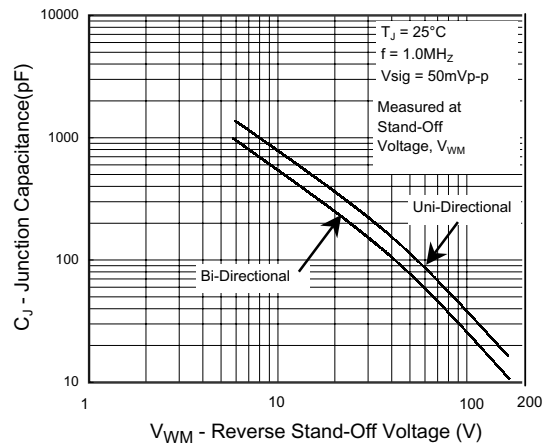


Fig. 5 - Typ. Transient Thermal Impedance

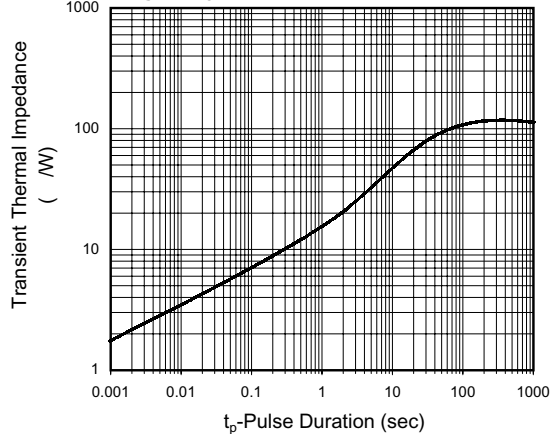


Fig.6 - Maximum Non-Repetitive Peak Forward Surge Current Uni-Directional Only

