

Transient Voltage Suppressors 400W DO-214AC

P4SMA Series

MERITEK

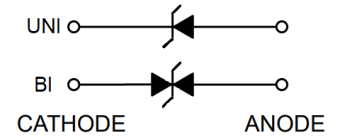
FEATURE

- 400W Peak Pulse Power (10/1000 μ s), Repetitive rate :0.01%
- 6.8V to 600V Breakdown Voltage
- Excellent Clamping Capability
- Glass Passivated Chip
- Low Leakage
- UL Flammability Classification Rating: 94V-0



MECHANICAL DATA

- Case: Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-202, Method 208
- Polarity: Color Band Denotes Cathode End Except Bipolar



MAXIMUM RATINGS

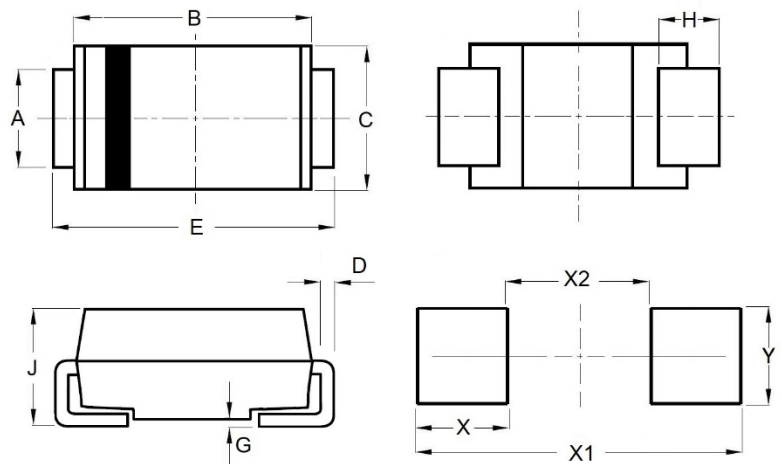
Parameter	Symbol	Value	Unit
Peak Power Dissipation With A 10/1000 μ s Waveform	P_{PPM}	400	W
Peak Pulse Current With A 10/1000 μ s Waveform	I_{PPM}	see next table	A
Power Dissipation On Infinite Heatsink At $T_L = 75^\circ\text{C}$	P_D	1.0	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	40	A
Maximum Instantaneous Forward Voltage at 25A, For Unidirectional Only	V_F	3.5/5.0	V
Operating Junction And Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Note:

1. $T_A = 25^\circ\text{C}$ Ambient temperature unless otherwise specified.
2. Non-repetitive current pulse per Fig.5 and derated above $T_A = 25^\circ\text{C}$.
3. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
4. $V_F < 3.5\text{V}$ for devices of $V_{BR} < 200\text{V}$ and $V_F < 5.0\text{V}$ for devices of $V_{BR} > 201\text{V}$

DIMENSIONS - DO-214(SMA)

Item	Min (mm)	Max (mm)
A	1.23	1.63
B	4.10	4.55
C	2.51	2.76
D	0.15	0.30
E	4.87	5.22
G	0.02	0.20
H	0.75	1.51
J	1.96	2.26
X	2.07	
X1	5.80	
X2	1.66	
Y	2.06	



ELECTRICAL CHARACTERISTICS

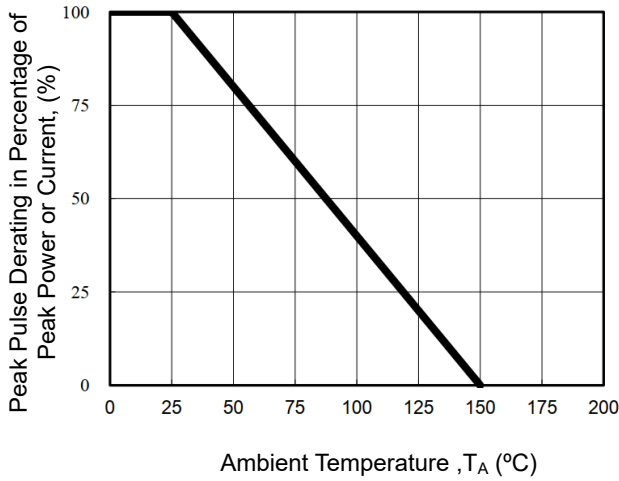
Part Number		Working Reverse Voltage	Reverse Breakdown Voltage		Test Current	Max Reverse Leakage Current	Max Clamping Voltage	Reverse Surge Current
Uni-Polar	Bi-Polar	V_{RWM} (V)	$V_{BR}Min(V)$	$V_{BR}Max(V)$	$I_T(mA)$	I_R (uA) @ V_{RWM}	V_C (V) @ I_{PP}	$I_{PP}(A)$ Max
P4SMA6.8A	P4SMA6.8CA	5.8	6.46	7.14	10	1000	10.5	38.10
P4SMA7.5A	P4SMA7.5CA	6.4	7.13	7.88	10	500	11.3	35.40
P4SMA8.2A	P4SMA8.2CA	7.0	7.79	8.61	10	200	12.1	33.06
P4SMA9.1A	P4SMA9.1CA	7.8	8.65	9.56	1	50	13.4	29.85
P4SMA10A	P4SMA10CA	8.6	9.50	10.50	1	10	14.5	27.59
P4SMA11A	P4SMA11CA	9.4	10.45	11.55	1	5	15.6	25.64
P4SMA12A	P4SMA12CA	10.2	11.40	12.60	1	5	16.7	23.95
P4SMA13A	P4SMA13CA	11.1	12.35	13.65	1	1	18.2	21.98
P4SMA15A	P4SMA15CA	12.8	14.25	15.75	1	1	21.2	18.87
P4SMA16A	P4SMA16CA	13.6	15.20	16.80	1	1	22.5	17.78
P4SMA18A	P4SMA18CA	15.3	17.10	18.90	1	1	25.2	15.87
P4SMA20A	P4SMA20CA	17.1	19.00	21.00	1	1	27.7	14.44
P4SMA22A	P4SMA22CA	18.8	20.90	23.10	1	1	30.6	13.07
P4SMA24A	P4SMA24CA	20.5	22.80	25.20	1	1	33.2	12.05
P4SMA27A	P4SMA27CA	23.1	25.65	28.35	1	1	37.5	10.67
P4SMA30A	P4SMA30CA	25.6	28.50	31.50	1	1	41.4	9.66
P4SMA33A	P4SMA33CA	28.2	31.35	34.65	1	1	45.7	8.75
P4SMA36A	P4SMA36CA	30.8	34.20	37.80	1	1	49.9	8.02
P4SMA39A	P4SMA39CA	33.3	37.05	40.95	1	1	53.9	7.42
P4SMA43A	P4SMA43CA	36.8	40.85	45.15	1	1	59.3	6.75
P4SMA47A	P4SMA47CA	40.2	44.65	49.35	1	1	64.8	6.17
P4SMA51A	P4SMA51CA	43.6	48.45	53.55	1	1	70.1	5.71
P4SMA56A	P4SMA56CA	47.8	53.20	58.80	1	1	77.0	5.19
P4SMA62A	P4SMA62CA	53.0	58.90	65.10	1	1	85.0	4.71
P4SMA68A	P4SMA68CA	58.1	64.60	71.40	1	1	92.0	4.35
P4SMA75A	P4SMA75CA	64.1	71.25	78.75	1	1	103.0	3.88
P4SMA82A	P4SMA82CA	70.1	77.90	86.10	1	1	113.0	3.54
P4SMA91A	P4SMA91CA	77.8	86.45	95.55	1	1	125.0	3.20
P4SMA100A	P4SMA100CA	85.5	95.00	105.00	1	1	137.0	2.92
P4SMA110A	P4SMA110CA	94.0	104.50	115.50	1	1	152.0	2.63
P4SMA120A	P4SMA120CA	102.0	114.00	126.00	1	1	165.0	2.42
P4SMA130A	P4SMA130CA	111.0	123.50	136.50	1	1	179.0	2.23
P4SMA150A	P4SMA150CA	128.0	142.50	157.50	1	1	207.0	1.93
P4SMA160A	P4SMA160CA	136.0	152.00	168.00	1	1	219.0	1.83
P4SMA170A	P4SMA170CA	145.0	161.50	178.50	1	1	234.0	1.71
P4SMA180A	P4SMA180CA	154.0	171.00	189.00	1	1	246.0	1.63
P4SMA200A	P4SMA200CA	171.0	190.00	210.00	1	1	274.0	1.46
P4SMA220A	P4SMA220CA	185.0	209.00	231.00	1	1	328.0	1.22
P4SMA250A	P4SMA250CA	214.0	237.50	262.50	1	1	344.0	1.16
P4SMA300A	P4SMA300CA	256.0	285.00	315.00	1	1	414.0	0.97
P4SMA350A	P4SMA350CA	299.3	332.50	367.50	1	1	482.0	0.83
P4SMA380A	P4SMA380CA	324.9	361.00	399.00	1	1	524.4	0.76
P4SMA400A	P4SMA400CA	342.0	380.00	420.00	1	1	552.0	0.72
P4SMA440A	P4SMA440CA	376.2	418.00	462.00	1	1	607.2	0.66
P4SMA500A	P4SMA500CA	427.5	475.00	525.00	1	1	690.0	0.58
P4SMA520A	P4SMA520CA	444.6	494.00	546.00	1	1	717.6	0.56
P4SMA550A	P4SMA550CA	470.3	522.50	577.50	1	1	759.0	0.53
P4SMA600A	P4SMA600CA	513.0	570.00	630.00	1	1	828.0	0.48

Note:

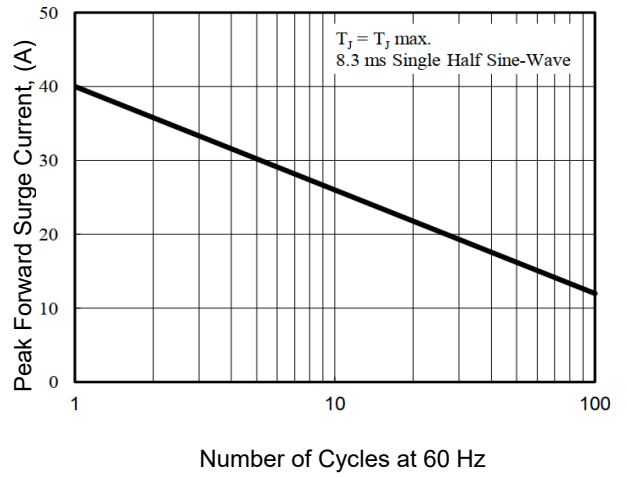
1. $T_A = 25^\circ\text{C}$ ambient temperature unless otherwise specified.
2. The available parts are "A" type only, the parts without A (V_{BR} is $\pm 10\%$) is not available
3. Add suffix 'C' or 'CA' after part number to specify Bi-directional devices.
4. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double.

CHARACTERISTIC CURVES

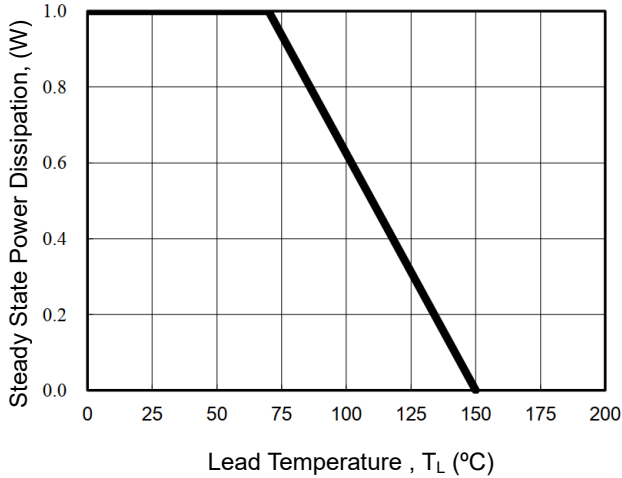
Pulse Derating Curve



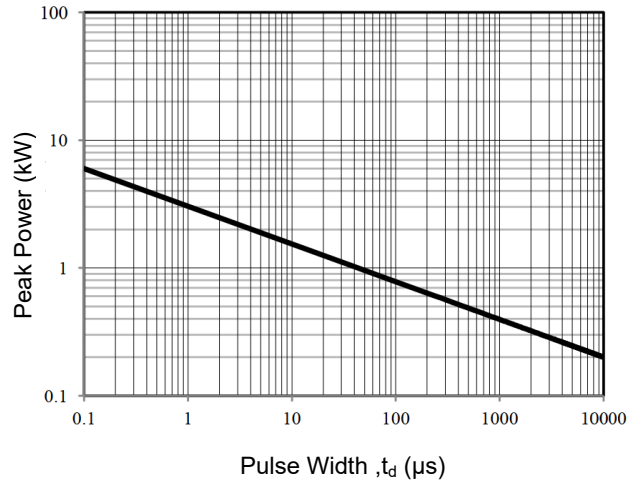
Maximum Non-Repetitive Surge Current



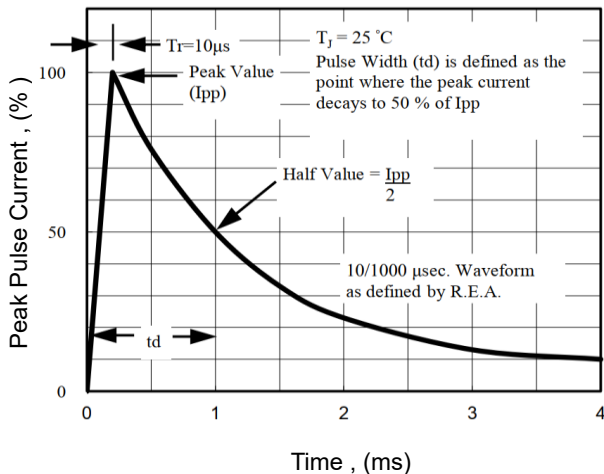
Steady State Power Derating Curve



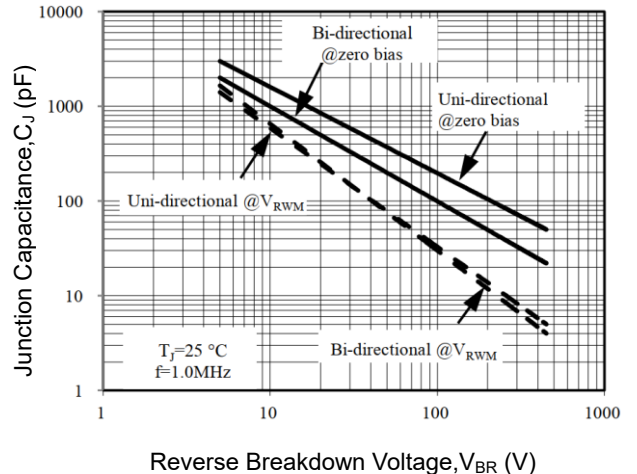
Peak Pulse Power Rating Curve



Pulse Waveform



Typical Junction Capacitance



*Specifications subject to change without notice.