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P4SMA-Q Transient Voltage Suppressor Diode Series

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Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Unidirectional Device		Bidirectional Device		Breakdown Voltage V _{BR} (Volts)			Working Peak Reverse Voltage	Maximum Reverse Leakage @ V _{RWM}	Maximum Reverse Voltage @ I _{RSM}	Maximum Reverse Surge Current
Part No.	Marking	Part No.	Marking	Min.	Max.	@ I _T (mA)	V _{RWM} (V)	I _R (μA)	V _{RSM} (V)	I _{RSM} (A)
P4SMA15A-Q	15AQ	P4SMA15CA-Q	15CQ	14.3	15.8	1	12.8	1	21.2	19.3
P4SMA16A-Q	16AQ	P4SMA16CA-Q	16CQ	15.2	16.8	1	13.6	1	22.5	18.2
P4SMA18A-Q	18AQ	P4SMA18CA-Q	18CQ	17.1	18.9	1	15.3	1	25.5	16.1
P4SMA20A-Q	20AQ	P4SMA20CA-Q	20CQ	19	21	1	17.1	1	27.7	14.8
P4SMA22A-Q	22AQ	P4SMA22CA-Q	22CQ	20.9	23.1	1	18.8	1	30.6	13.4
P4SMA24A-Q	24AQ	P4SMA24CA-Q	24CQ	22.8	25.2	1	20.5	1	33.2	12.3
P4SMA27A-Q	27AQ	P4SMA27CA-Q	27CQ	25.7	28.4	1	23.1	1	37.5	10.9
P4SMA30A-Q	30AQ	P4SMA30CA-Q	30CQ	28.5	31.5	1	25.6	1	41.4	9.9
P4SMA33A-Q	33AQ	P4SMA33CA-Q	33CQ	31.4	34.7	1	28.2	1	45.7	9
P4SMA36A-Q	36AQ	P4SMA36CA-Q	36CQ	34.2	37.8	1	30.8	1	49.9	8.2
P4SMA39A-Q	39AQ	P4SMA39CA-Q	39CQ	37.1	41	1	33.3	1	53.9	7.6
P4SMA43A-Q	43AQ	P4SMA43CA-Q	43CQ	40.9	45.2	1	36.8	1	59.3	6.9
P4SMA47A-Q	47AQ	P4SMA47CA-Q	47CQ	44.7	49.4	1	40.2	1	64.8	6.3
P4SMA51A-Q	51AQ	P4SMA51CA-Q	51CQ	48.5	53.6	1	43.6	1	70.1	5.8
P4SMA56A-Q	56AQ	P4SMA56CA-Q	56CQ	53.2	58.8	1	47.8	1	77	5.3
P4SMA62A-Q	62AQ	P4SMA62CA-Q	62CQ	58.9	65.1	1	53	1	85	4.8
P4SMA68A-Q	68AQ	P4SMA68CA-Q	68CQ	64.6	71.4	1	58.1	1	92	4.5

Notes: 1. Suffix 'A' denotes a 5 % tolerance unidirectional device.
2. Suffix 'CA' denotes a 5 % tolerance bidirectional device.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

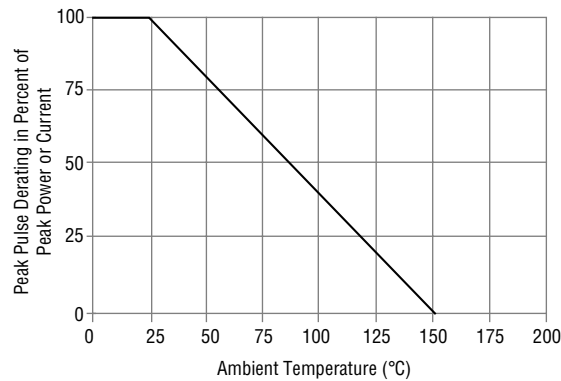
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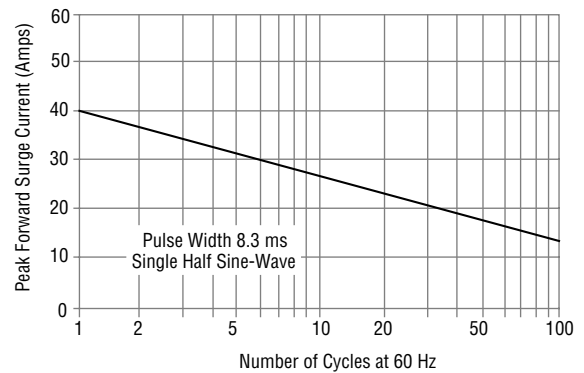
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Rating & Characteristic Curves

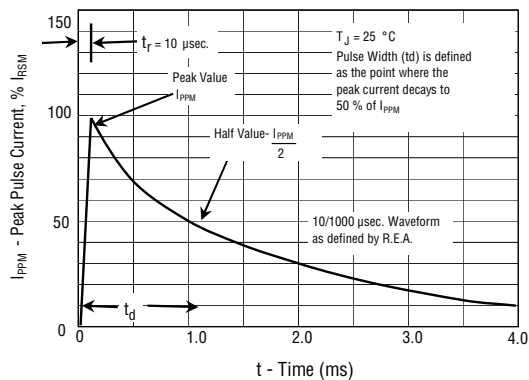
Pulse Derating Curve



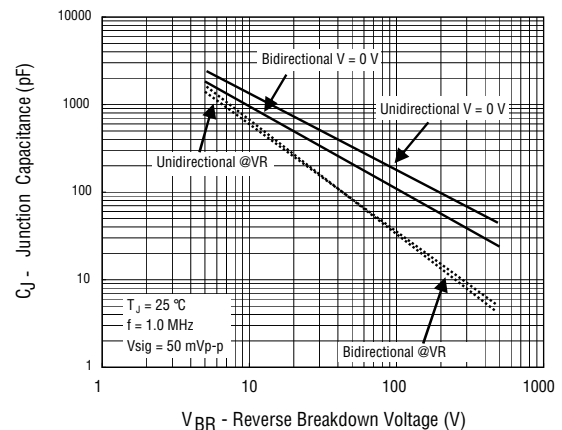
Maximum Non-Repetitive Surge Current



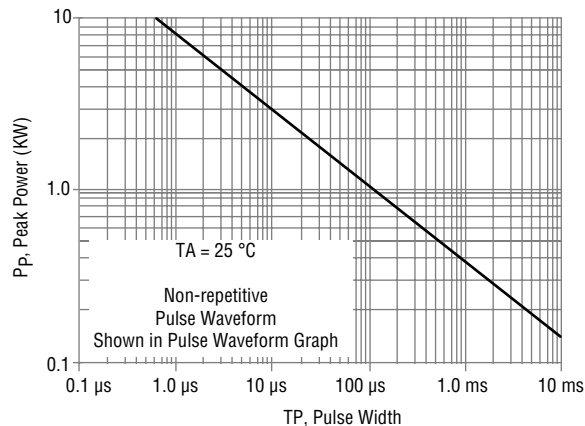
Pulse Waveform



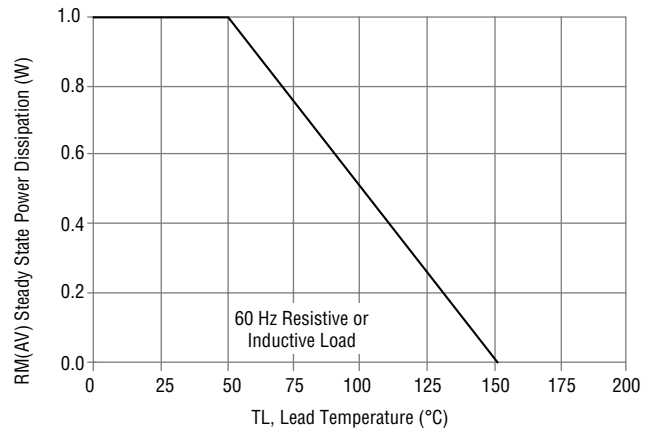
Typical Junction Capacitance



Pulse Rating Curve



Steady State Power Derating Curve



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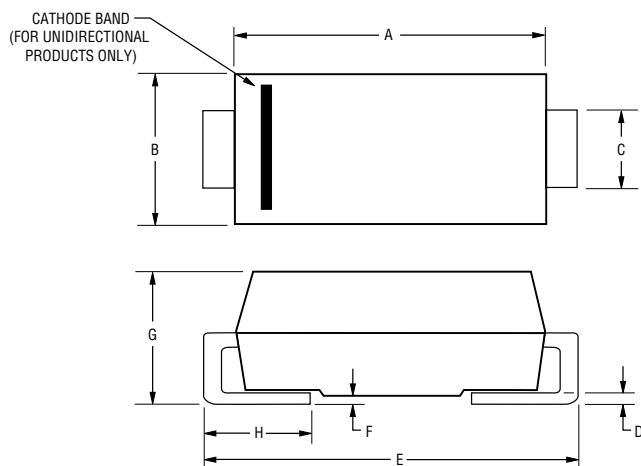
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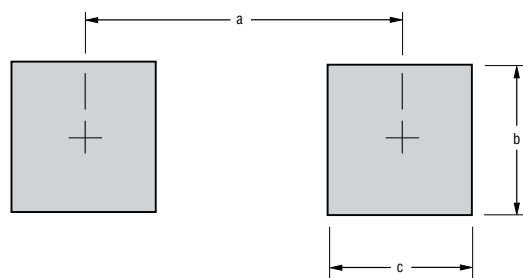
Product Dimensions



Dimension	SMA (DO-214AC)
A	$\frac{3.99 - 4.50}{(0.157 - 0.177)}$
B	$\frac{2.54 - 2.79}{(0.100 - 0.110)}$
C	$\frac{1.25 - 1.65}{(0.049 - 0.065)}$
D	$\frac{0.15 - 0.31}{(0.006 - 0.012)}$
E	$\frac{4.93 - 5.28}{(0.194 - 0.208)}$
F	$\frac{0.203}{(0.008)}$ MAX.
G	$\frac{1.98 - 2.29}{(0.078 - 0.090)}$
H	$\frac{0.76 - 1.52}{(0.030 - 0.060)}$

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Recommended Footprint



Dimension	SMA (DO-214AC)
a (Max.)	$\frac{2.70}{(0.106)}$
b (Min.)	$\frac{2.10}{(0.083)}$
c (Min.)	$\frac{1.27}{(0.050)}$

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

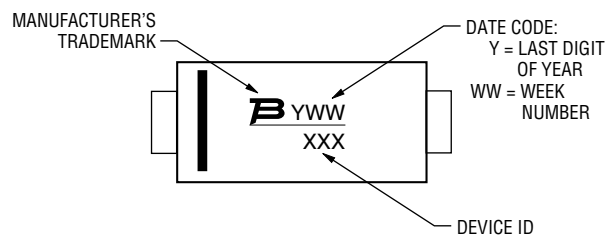
Physical Specifications

CaseMolded plastic per UL Class 94V-0
Polarity..... Cathode band indicates unidirectional device
No cathode band indicates bidirectional device

Environmental Specifications

Moisture Sensitivity Level1
ESD Classification (HBM).....3B

Typical Part Marking



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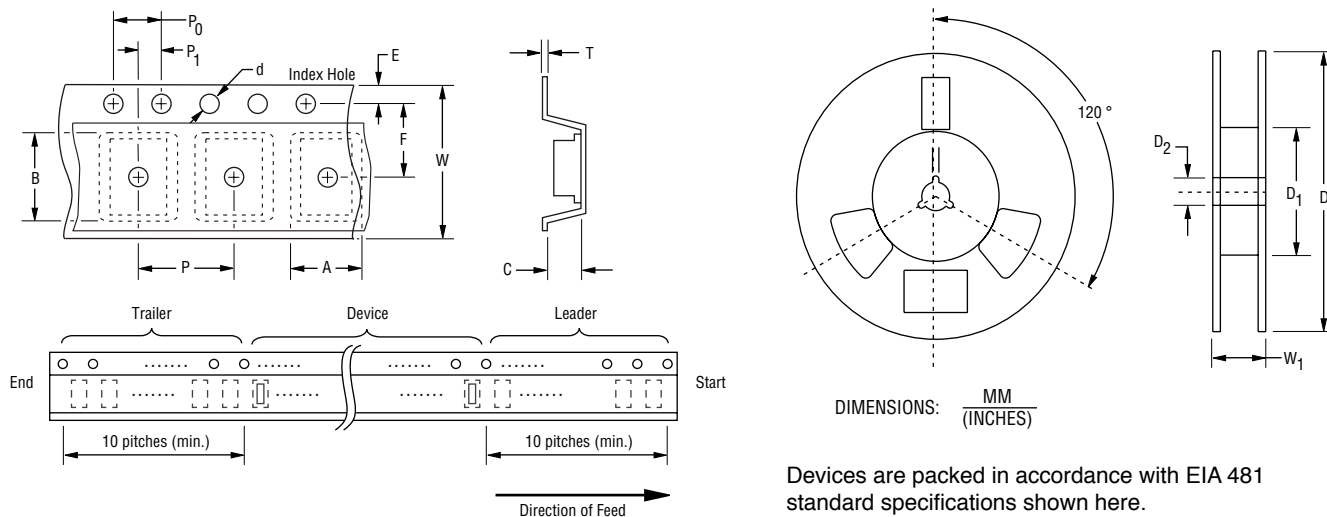
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Packaging Information

The product will be dispensed in tape and reel format (see diagram below).



Item	Symbol	SMA (DO-214AC)
		13-Inch Reel
Carrier Width	A	2.90 ± 0.20 (0.114 ± 0.008)
Carrier Length	B	5.50 ± 0.20 (0.217 ± 0.008)
Carrier Depth	C	2.26 ± 0.20 (0.089 ± 0.008)
Sprocket Hole	d	1.50 ± 0.10 (0.061 ± 0.004)
Reel Outside Diameter	D	330 (12.992)
Reel Inner Diameter	D ₁	50.0 (1.969) MIN.
Feed Hole Diameter	D ₂	13.0 ± 0.20 (0.512 ± 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 ± 0.004)
Sprocket Hole Pitch	P ₀	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P ₁	2.00 ± 0.05 (0.079 ± 0.002)
Overall Tape Thickness	T	0.30 ± 0.10 (0.012 ± 0.004)
Tape Width	W	12.00 ± 0.30 (0.472 ± 0.012)
Reel Width	W ₁	18.4 (0.724) MAX.
Quantity per Reel	--	5000

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