

Features

- Low profile (height 0.9 mm)
- Unidirectional / bidirectional configuration
- Power dissipation: 400 watts
- RoHS compliant*and halogen-free**

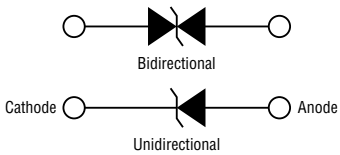
Applications

- Protection of power buses
- Overvoltage transient protection
- Telecom, computer, industrial, and consumer electronics

SMF4C Series Transient Voltage Suppressor Diodes

General Information

The Bourns® SMF4CxxAH TVS Diode Series is designed to provide protection against voltage transients induced by inductive load switching in consumer, computer, industrial and telecommunication applications.



The devices offer 400 watts peak pulse power dissipation capability in a very compact, low-profile DFN3419 package. The package footprint is compliant with most SOD-123 and SOD-123F footprints. Both unidirectional and bidirectional options are available with a range of breakdown voltages.

Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Absolute Maximum Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Value	Unit
Maximum Peak Pulse Power Dissipation (10/1000 µs)	P_{PPM}	400	W
Power Dissipation with Infinite Heat Sink at 75 °C; Lead Temperature (T_L = 75 °C)	P_D	3.3	W
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

Unidirectional Device		Bidirectional Device		Working Peak Reverse Voltage	Breakdown Voltage V_{BR} (Volts)			Maximum Reverse Leakage @ V_{RWM}	Maximum Clamping Voltage V_C	Maximum Reverse Surge Current @ 10/1000 µs
Part Number	Part Marking	Part Number	Part Marking	V_{RWM} (V)	Min.	Max.	@ I_T (mA)	I_R (µA)	@ I_{PP}	I_{PP} (A)
—	—	SMF4C12CAH	H4B 12	12	13.3	14.7	1	5	19.9	20.1
SMF4C16AH	H4U 16	—	—	16	17.8	19.7	1	5	26.0	15.4
SMF4C20AH	H4U 20	—	—	20	22.2	24.5	1	1	32.4	12.4
SMF4C28AH	H4U 28	—	—	28	31.1	34.4	1	1	45.4	8.8
SMF4C30AH	H4U 30	—	—	30	33.3	36.8	1	1	48.4	8.3

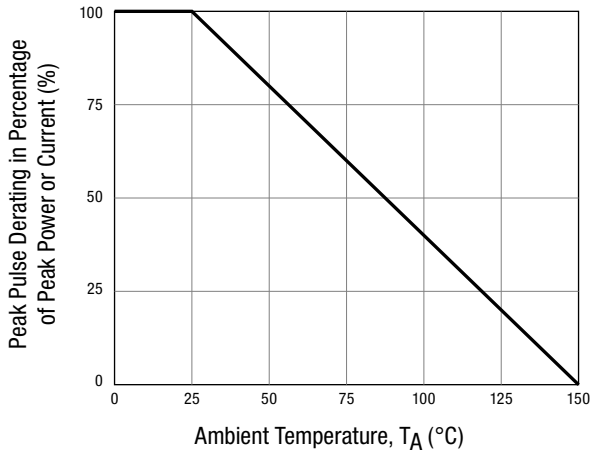
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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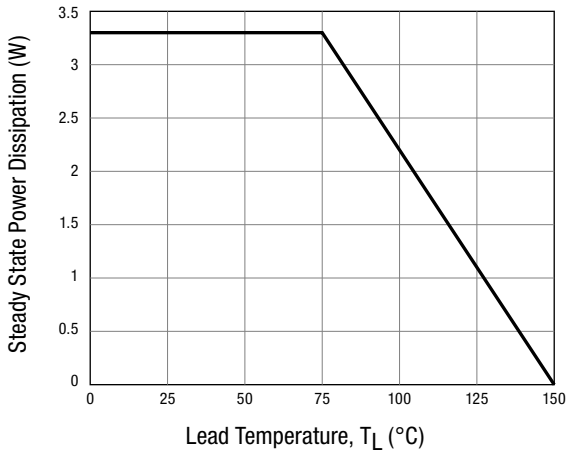
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Performance Graphs

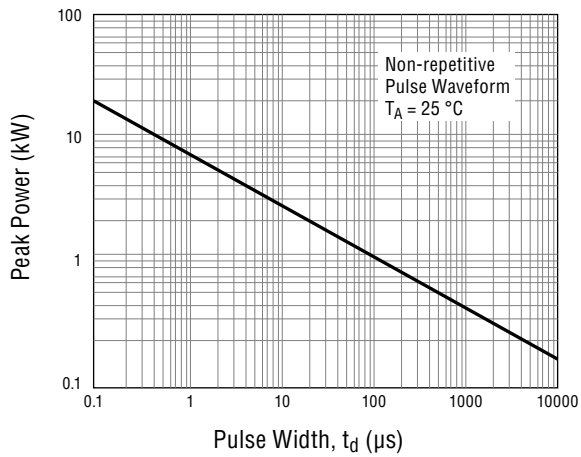
Pulse Derating Curve



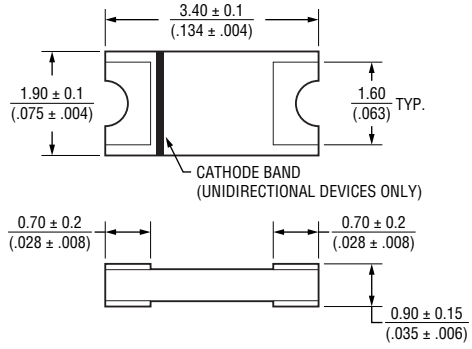
Steady State Power Derating Curve



Peak Pulse Power Rating Curve

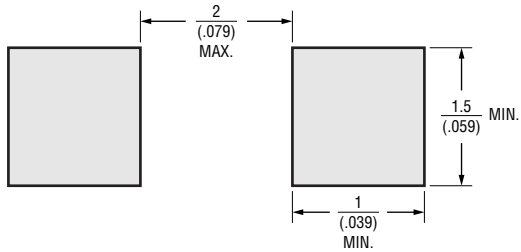


Product Dimensions



DIMENSIONS: MM / (INCHES)

Recommended Footprint



DIMENSIONS: MM / (INCHES)

How to Order

SMF4C 12 CAH

Package
SMF4C = 400 W TVS in SOD-123 Equivalent Package

Working Peak Reverse Voltage
12 = 12 V_{RWM} (Volts)

Configuration
AH = Unidirectional
CAH = Bidirectional

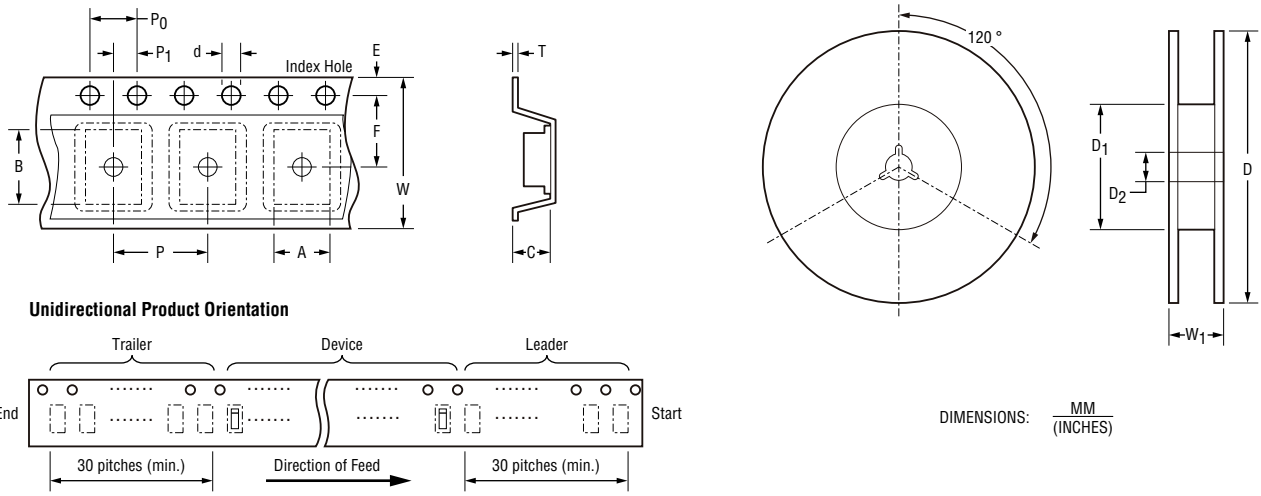
Environmental Specifications

Moisture Sensitivity Level 1
ESD Classification (HBM) 3B

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Packaging Information



Item	Symbol	SMF4C Series
Carrier Width	A	2.2 ± 0.1 (.087 ± .004)
Carrier Length	B	3.65 ± 0.1 (.144 ± .004)
Carrier Depth	C	1.28 ± 0.1 (.05 ± .004)
Sprocket Hole	d	1.50 ± 0.1 (.059 ± .004)
Reel Outside Diameter	D	178 ± 2 (7.008 ±.079)
Reel Inner Diameter	D_1	50 (1.969) MIN.
Feed Hole Diameter	D_2	13 ± 0.50 (.512 ± .02)
Sprocket Hole Position	E	1.75 ± 0.1 (.069 ±.004)
Punch Hole Position	F	5.5 ± 0.05 (.217 ± .002)
Punch Hole Pitch	P	4 ± 0.1 (.157 ±.004)
Sprocket Hole Pitch	P_0	4 ± 0.1 (.157 ±.004)
Embossment Center	P_1	2 ± 0.1 (.079 ±.004)
Overall Tape Thickness	T	0.4 (.016) MAX.
Tape Width	W	12 ± 0.3 (.472 ±.012)
Reel Width	W_1	18.7 (.736) MAX.
Quantity per Reel	--	3000 pcs.

BOURNS®

Americas: Tel: +1 951-781-5500 • Email: americus@bourns.com
Mexico: Tel: +52-614-478-0400 • Email: mexicus@bourns.com
Asia: Tel: +886-2-2562-4117 • Email: asiacus@bourns.com
EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com
www.bourns.com

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