

Features

- Formerly **FulTec** brand
- Extremely low capacitance
- Very high bandwidth
- Small package, minimal PCB area
- RoHS compliant*

Applications

- GR-1089
- ITU K.20 and K.21
- ADSL2+ and VDSL2 linecards
- LAN, WAN equipment

FVC Series Voltage Control Devices

Voltage Control

Bourns® voltage control devices are used with high-speed series protectors to protect sensitive circuits from electrical disturbances caused by lightning-induced surges, inductive-coupled spikes, and AC power cross conditions. The unique structure and characteristics of the device are used to create an overvoltage protection device with precise and repeatable turn-on characteristics with low voltage overshoot and high surge current capabilities.

Specifications

Part Number	Surge Rating		Electrical Characteristics						
	I _{PP} (A)	V _{DRM} (V)	V _S (V)	V _T (V)	I _{DRM} (μA)	I _S (mA)	I _T (A)	I _H (mA)	C _O (pF)
FVC2300	4	190	260	3	5	400	1	150	6
FVC3100	4	275	350	3	5	400	1	150	6

I_{PP} (peak pulse current) - maximum rated peak impulse current with 1.2/50 μs waveform

V_{DRM} (peak off-state voltage) - maximum voltage that can be applied while maintaining off state measured at I_{DRM}

V_S (switching voltage) - maximum voltage prior to switching to on-state measured at 100 V/μs

V_T (on-state voltage) - maximum voltage measured at rated on-state current

I_{DRM} (leakage current) - maximum peak off-state current measured at V_{DRM}

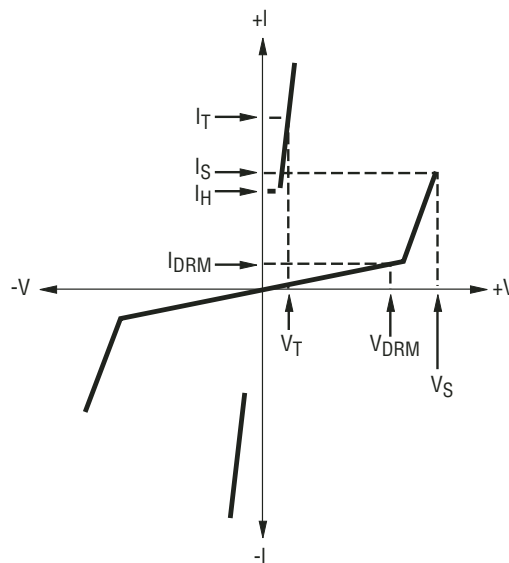
I_S (switching current) - maximum current required to switch to on state

I_T (on-state current) - maximum rated continuous on-state current

I_H (holding current) - minimum current required to maintain on state

C_O (off-state capacitance) - typical off-state capacitance measured at 1 MHz with a 2 V bias

Typical Performance Characteristics



General Notes:

- All measurements are at an ambient temperature of 25 °C. I_{PP} applies to -40 °C through +85 °C.
- I_{PP} is a repetitive surge rating and is designed to be maintained for the life of the product.
- The devices are bidirectional. All electrical parameters and surge ratings apply to forward and reverse polarities.
- Special voltage (V_S and V_{DRM}) and holding current (I_H) requirements are available upon request.

*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.

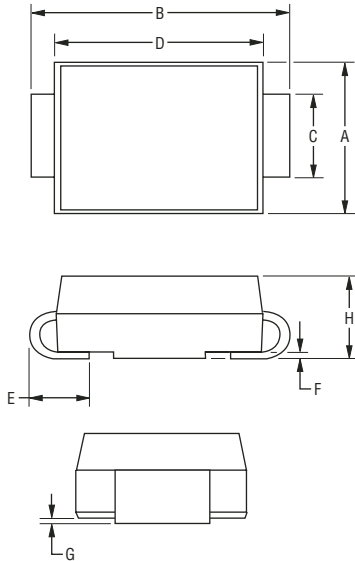
Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications

FVC Series Voltage Control Devices

BOURNS®

Product Dimensions



Dim.	Minimum	Maximum
A	$\frac{2.29}{(0.090)}$	$\frac{3.00}{(0.118)}$
B	$\frac{4.50}{(0.177)}$	$\frac{5.40}{(0.213)}$
C	$\frac{1.25}{(0.050)}$	$\frac{1.65}{(0.065)}$
D	$\frac{3.90}{(0.154)}$	$\frac{4.65}{(0.183)}$
E	$\frac{0.76}{(0.030)}$	$\frac{1.52}{(0.060)}$
F	$\frac{0.15}{(0.006)}$	$\frac{0.30}{(0.012)}$
G	—	$\frac{0.20}{(0.008)}$
H	$\frac{1.95}{(0.077)}$	$\frac{2.24}{(0.088)}$

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

How to Order

FVC3100 - BK

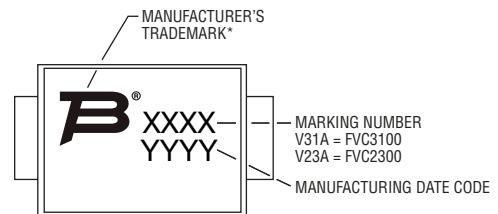
Part Number

- FVC2300
- FVC3100

Packaging Indicator

BK = Packaged in tape and reel (1500 pieces per reel)

Typical Part Marking



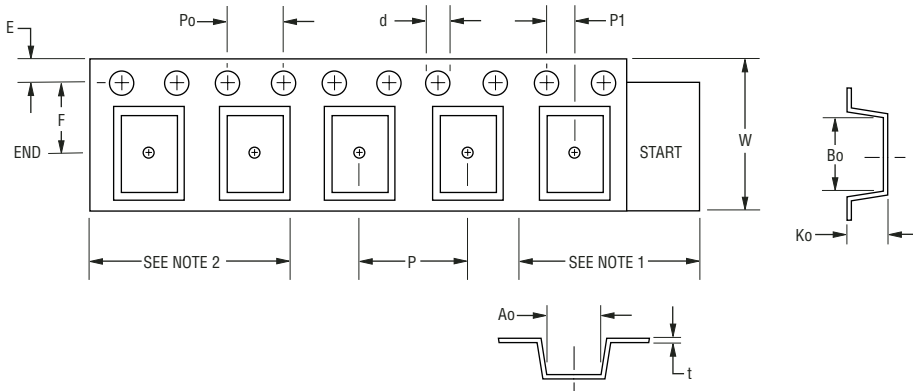
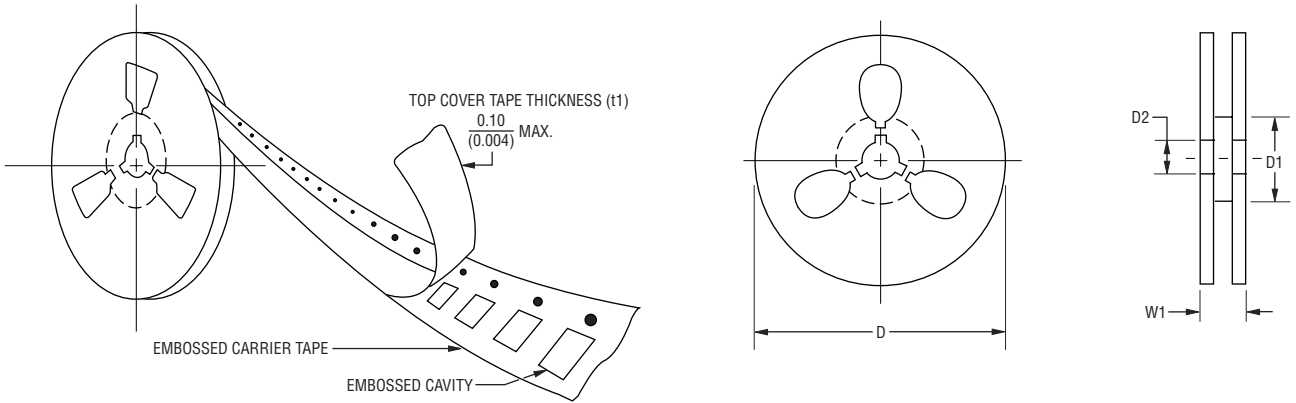
* TRANSITION FROM FULTEC TRADEMARK TO BOURNS TRADEMARK IN 2009.

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FVC Series Voltage Control Devices

BOURNS®

Packaging Specifications



Symbol	Dim.
A0	$\frac{2.72 \pm 0.10}{(0.109 \pm 0.004)}$
B0	$\frac{5.25 \pm 0.10}{(0.210 \pm 0.004)}$
d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
D	$\frac{330.0}{(13.0)}$
D1	$\frac{50.0}{(1.969)}$ MIN.
D2	$\frac{13.50 \pm 1.0}{(0.531 \pm 0.039)}$
E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
F	$\frac{5.50 \pm 0.05}{(0.217 \pm 0.002)}$
K0	$\frac{2.66}{(0.105)}$ MAX.
P	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
P0	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
P1	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
t	$\frac{0.60}{(0.024)}$ MAX.
W	$\frac{12.00 \pm 0.30}{(0.472 \pm 0.012)}$
W1	$\frac{18.4}{(0.724)}$ MAX.

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



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