

## 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 <sub>PP</sub> (A)	V <sub>DRM</sub> (V)	V <sub>S</sub> (V)	V <sub>T</sub> (V)	I <sub>DRM</sub> (μA)	I <sub>S</sub> (mA)	I <sub>T</sub> (A)	I <sub>H</sub> (mA)	C <sub>O</sub> (pF)
FVC2300	4	190	260	3	5	400	1	150	6
FVC3100	4	275	350	3	5	400	1	150	6

I<sub>PP</sub> (peak pulse current) - maximum rated peak impulse current with 1.2/50 μs waveform

V<sub>DRM</sub> (peak off-state voltage) - maximum voltage that can be applied while maintaining off state measured at I<sub>DRM</sub>

V<sub>S</sub> (switching voltage) - maximum voltage prior to switching to on-state measured at 100 V/μs

V<sub>T</sub> (on-state voltage) - maximum voltage measured at rated on-state current

I<sub>DRM</sub> (leakage current) - maximum peak off-state current measured at V<sub>DRM</sub>

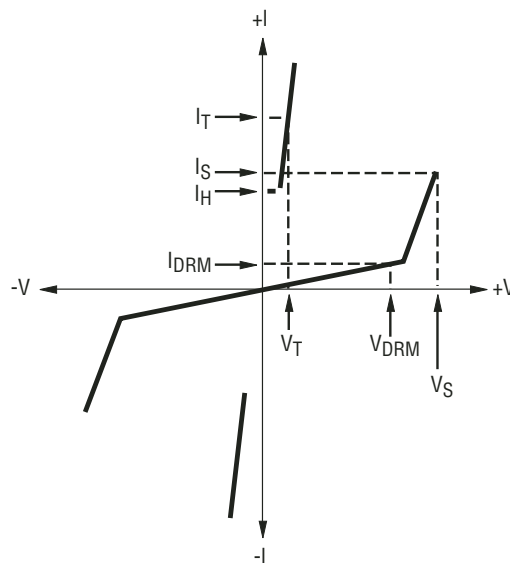
I<sub>S</sub> (switching current) - maximum current required to switch to on state

I<sub>T</sub> (on-state current) - maximum rated continuous on-state current

I<sub>H</sub> (holding current) - minimum current required to maintain on state

C<sub>O</sub> (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<sub>PP</sub> applies to -40 °C through +85 °C.
- I<sub>PP</sub> 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<sub>S</sub> and V<sub>DRM</sub>) and holding current (I<sub>H</sub>) requirements are available upon request.

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

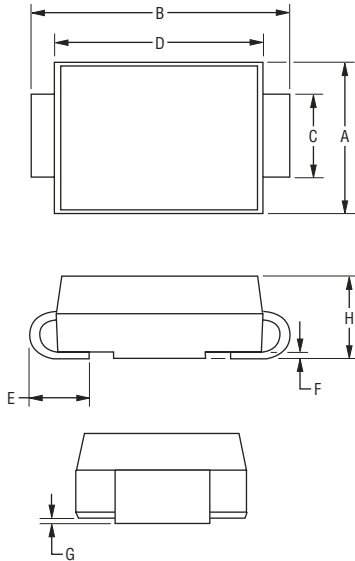
Specifications are subject to change without notice.

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**

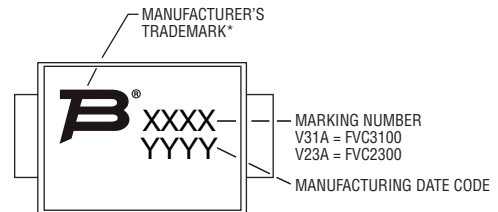
Part Number

- FVC2300
- FVC3100

Packaging Indicator

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

## Typical Part Marking

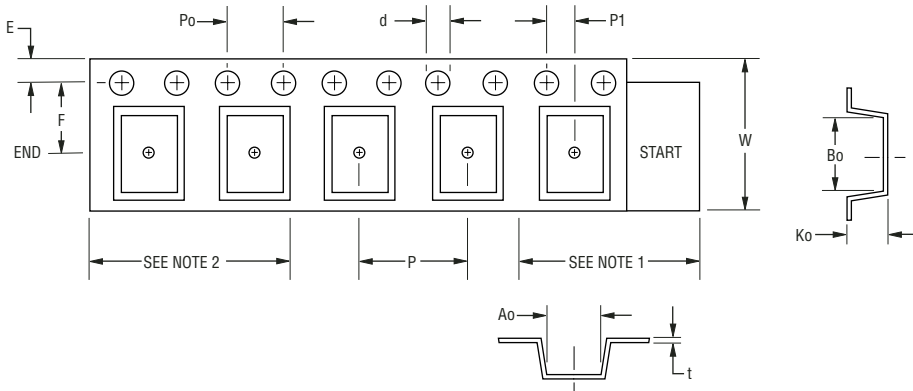
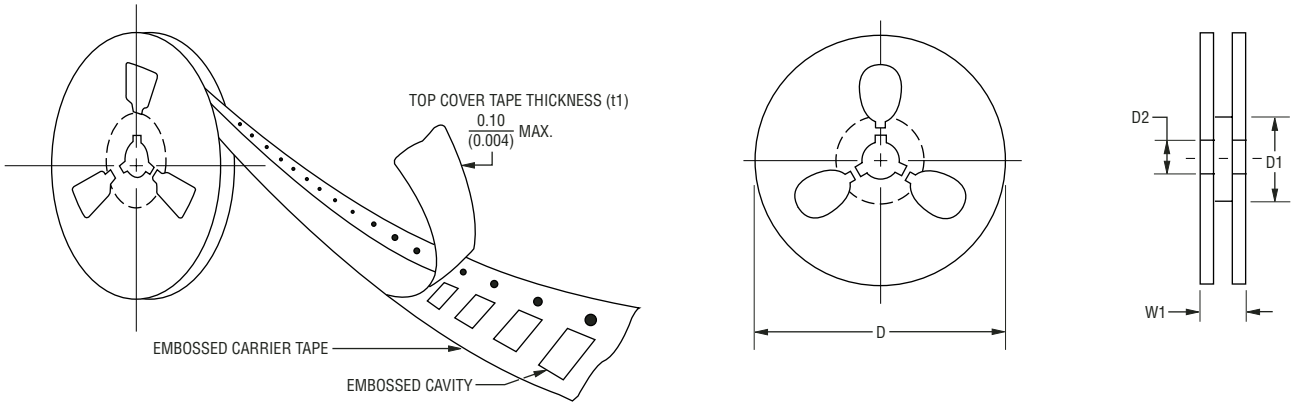


\* TRANSITION FROM FULTEC TRADEMARK TO BOURNS TRADEMARK IN 2009.

# 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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