

## Features

- RoHS compliant\*
- Leadless
- High speed

## Applications

- Cellular phones
- PDAs
- Desktop PCs and notebooks
- Digital cameras
- MP3 players

# CD1206-S01575 Switching Chip Diode

## General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers small-signal high-speed Switching Diodes for switching digital signal applications, in compact chip package 1206 size format, which offers PCB real estate savings and are considerably smaller than competitive parts. The Switching Diodes offer a forward current of 150 mA and a reverse voltage of 75 V. The diodes are RoHS compliant and are compatible with lead-free manufacturing processes, conforming to many industry and government regulations on lead-free components.

Bourns® Chip Diodes conform to JEDEC standards, easy to handle on standard pick and place equipment and their flat configuration minimizes roll away.

## Electrical Characteristics (@ $T_A = 25 \text{ }^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD1206-S01575	Unit
Forward Voltage (Max.)	$V_F$	1.00 ( $I_f = 50 \text{ mA}$ )	V
Capacitance Between Terminals (Max.)	$C_T$	3 ( $f = 100 \text{ MHz}, V_r = 0 \text{ V DC}$ )	pF
Reverse Recovery Time (Max.)	$t_{rr}$	4 ( $V_r = 6 \text{ V}, I_f = 10 \text{ mA}, R_L = 100 \text{ } \Omega$ )	nS
Reverse Current (Max.)	$I_R$	2.5 ( $V_r = 75 \text{ V}$ )	$\mu\text{A}$

## Absolute Ratings (@ $T_A = 25 \text{ }^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD1206-S01575	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Forward Current	$I_o$	150	mA
Forward Current, Surge	$I_{surge}$	4	A
Power Dissipation	PD	400	mW
Storage Temperature	$T_{STG}$	-55 to +125	$^\circ\text{C}$
Junction Temperature	$T_J$	-55 to +125	$^\circ\text{C}$

# BOURNS®

### Asia-Pacific:

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## How To Order

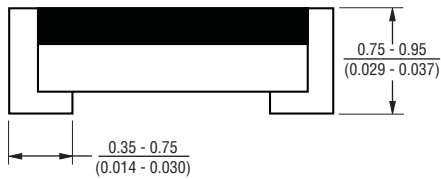
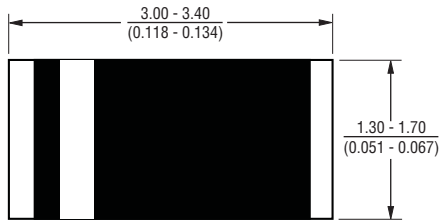
Common Code	_____	<b>CD 1206 - S 015 75</b>
Chip Diode	_____	
Package	_____	
• 1206	_____	
Model	_____	
S = High Speed Switching	_____	
Average Forward Current ( $I_o$ ) Code	_____	
015 = 150 mA	_____	
(Code x 1000 mA = Average Forward Current)	_____	
Reverse Voltage ( $V_R$ ) Code	_____	
75 = 75 V	_____	

\*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.

# CD1206-S01575 Switching Chip Diode

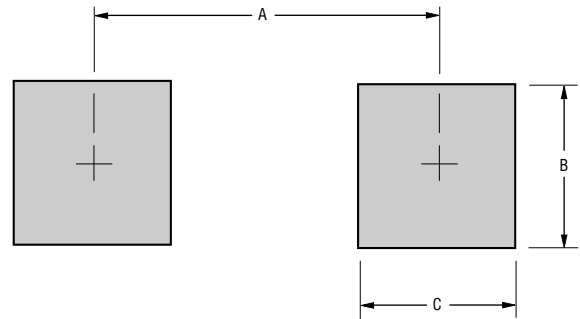
**BOURNS®**

## Product Dimensions



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

## Recommended Pad Layout



Dimension	1206
A (Max.)	$\frac{3.00}{(0.118)}$
B (Min.)	$\frac{1.60}{(0.063)}$
C (Min.)	$\frac{1.40}{(0.055)}$

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

## Physical Specifications

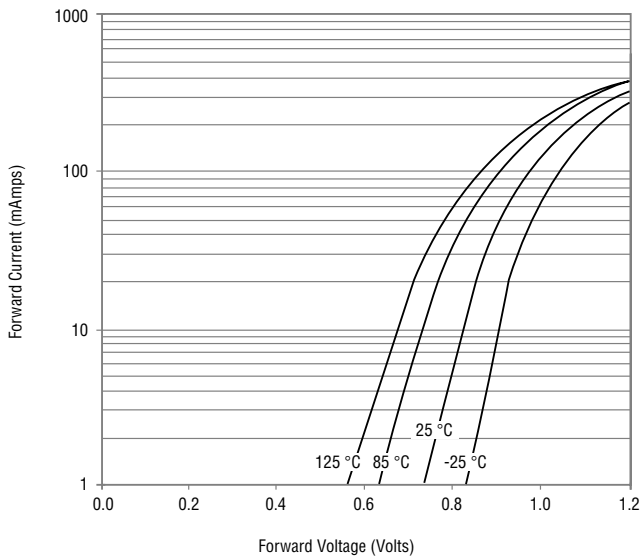
Case .....1206 (3216) Molded plastic  
 Terminals .....Solder plated, solderable per MIL-STD-750,  
 Method 2026  
 Polarity .....Indicated by cathode band  
 Mounting Position .....Any

# CD1206-S01575 Switching Chip Diode

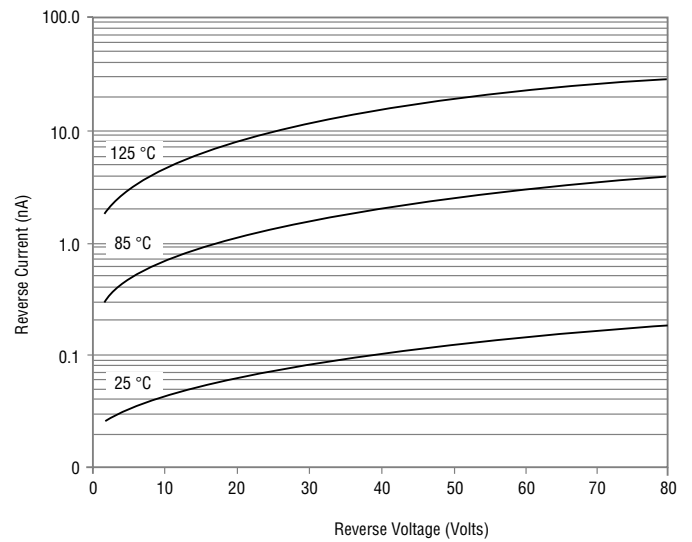
**BOURNS®**

## Rating and Characteristic Curves: CD1206-S01575

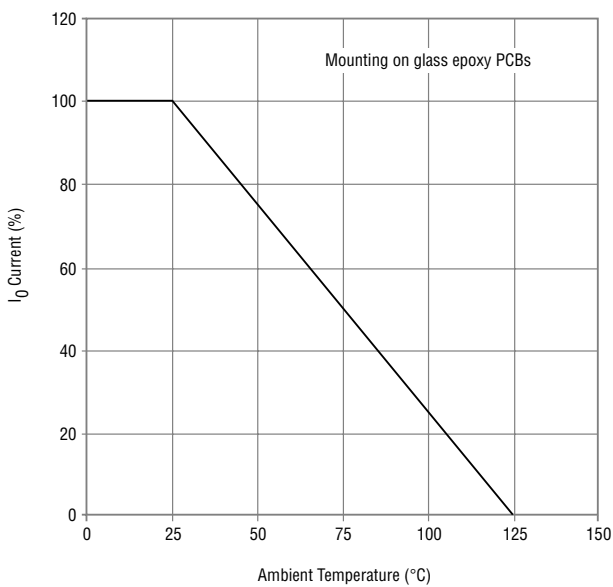
### Forward Characteristics



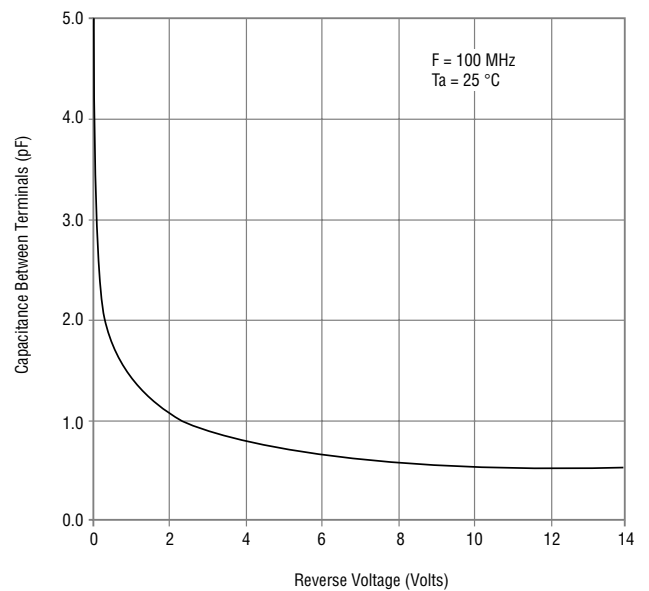
### Reverse Characteristics



### Derating Curve



### Capacitance Between Terminals

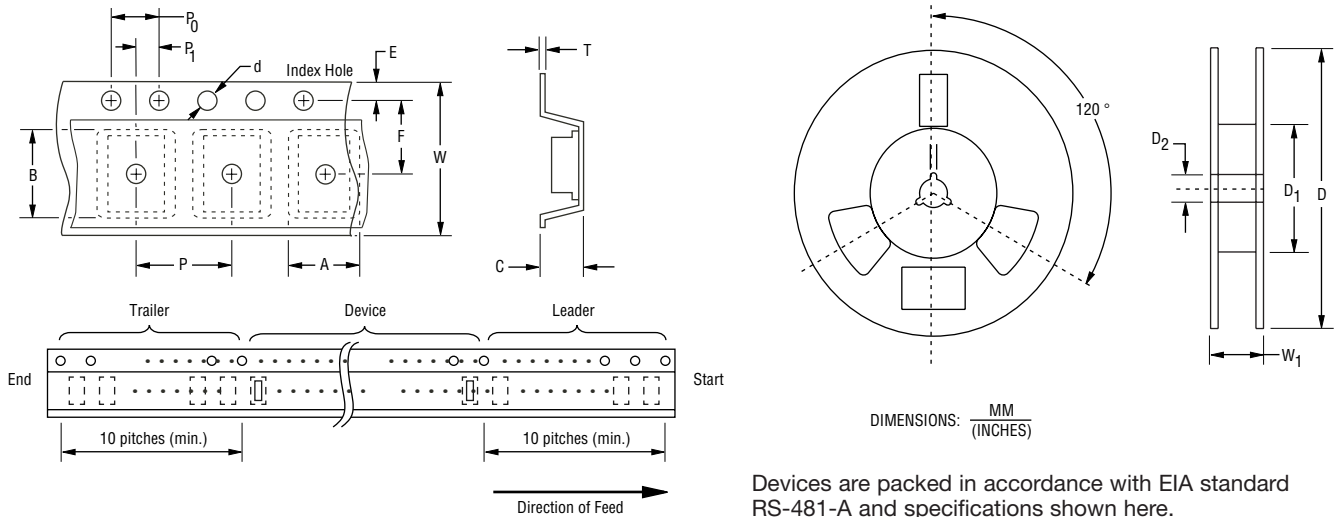


# CD1206-S01575 Switching Chip Diode

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## Packaging Information

The product will be dispensed in Tape and Reel format (see diagram below).



Item	Symbol	1206
Carrier Width	A	$\frac{1.70 \pm 0.10}{(0.067 - 0.004)}$
Carrier Length	B	$\frac{3.40 \pm 0.10}{(0.134 - 0.004)}$
Carrier Depth	C	$\frac{1.25 \pm 0.10}{(0.049 - 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.10}{(0.061 - 0.004)}$
Reel Outside Diameter	D	$\frac{178}{(7.008)}$
Reel Inner Diameter	D <sub>1</sub>	$\frac{60.0}{(2.362)}$ MIN.
Feed Hole Diameter	D <sub>2</sub>	$\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 - 0.004)}$
Punch Hole Position	F	$\frac{3.50 \pm 0.05}{(0.138 - 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Sprocket Hole Pitch	P <sub>0</sub>	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Embossment Center	P <sub>1</sub>	$\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$
Overall Tape Thickness	T	$\frac{0.20 \pm 0.05}{(0.008 - 0.002)}$
Tape Width	W	$\frac{8.00 \pm 0.20}{(0.315 - 0.008)}$
Reel Width	W <sub>1</sub>	$\frac{13.5}{(0.531)}$ MAX.
Quantity per Reel	--	5,000