

Features

- RoHS compliant*
- Low power loss and high efficiency
- High current capability
- Low profile package



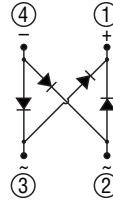
Model CD-HD201L is currently available, but not recommended for new designs. Model CD-HD201 may be a possible replacement; see [Product Obsolescence Memo](#) for details.

CD-HD2x(L) Series Surface Mount Schottky Bridge Rectifier 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 Schottky Bridge Rectifier Diodes for rectification applications in a compact chip package 0.24" x 0.19" size format, which offers PCB real estate savings and are considerably smaller than standard parts. The Schottky Bridge Rectifier Diodes offer a forward current of 2 A with a choice of repetitive peak reverse voltages between 40 V and 100 V.



Additional Information

Click these links for more information:



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

Parameter	Symbol	CD-					Unit
		HD2004	HD2006	HD201	HD2006L	HD201L	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	100	60	100	V
Maximum Average Forward Rectified Current ($T_A = 55^\circ\text{C}$)	$I_{F(AV)}$	2.0					A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50.0				60.0	A
Operating Temperature Range	T_J	-55 to +125					$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125					$^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	CD-HD2x(L)			Unit
			Min.	Typ.	Max.	
Instantaneous Forward Voltage	V_F	$I_F = 2\text{ A}$	CD-HD2004	0.49	0.5	V
			CD-HD2006	0.60	0.70	
			CD-HD201	0.75	0.85	
			CD-HD2006L	0.50	0.55	
			CD-HD201L	0.74	0.80	
Repetitive Peak Reverse Current	I_{RRM}	$V_R = V_{RRM}$ $T_A = +25^\circ\text{C}$	CD-HD2004	0.025	0.20	mA
			CD-HD2006	0.025	0.20	
			CD-HD201	0.025	0.20	
			CD-HD2006L	0.03	0.2	
Junction Capacitance	C_J	$V_R = 4\text{ V}$, $f = 1.0\text{ MHz}$	CD-HD2x(L)x		250	pF
Thermal Resistance, Junction to Air	$R_{th(JA)}$	Junction to Ambient (NOTE 1)	CD-HD2004	110		$^\circ\text{C} / \text{W}$
			CD-HD2006	110		
			CD-HD201	110		
			CD-HD2006L	110		
			CD-HD201L	146		
Thermal Resistance, Junction to Lead	$R_{th(JC)}$	Junction to Lead (NOTE 1)	CD-HD2004	15		$^\circ\text{C} / \text{W}$
			CD-HD2006	15		
			CD-HD201	15		
			CD-HD2006L	15		
			CD-HD201L	30		

NOTE 1: Measured when mounted on PCB with 5.0 mm x 5.0 mm (0.2" x 0.2") copper pad areas.



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

*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

Applications

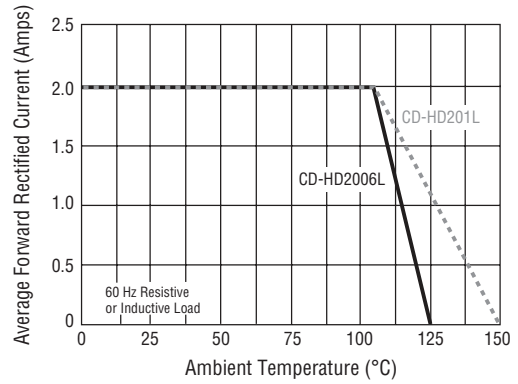
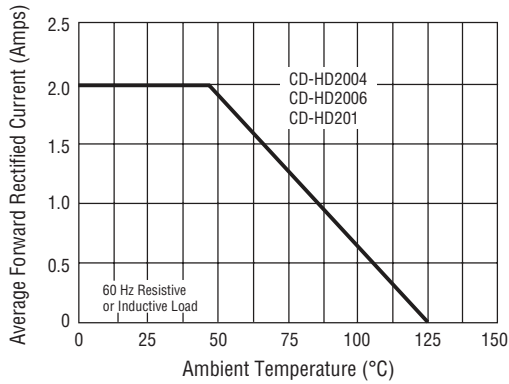
- AC operated products
- Computer monitors
- Set-top boxes
- Cable modems

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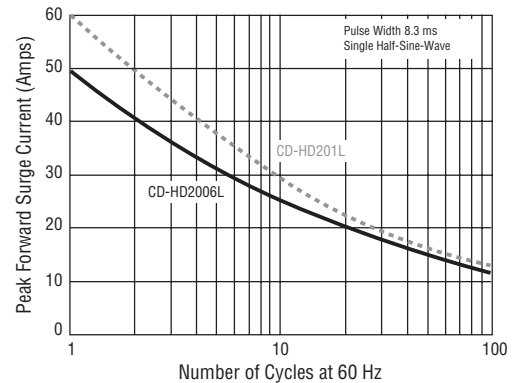
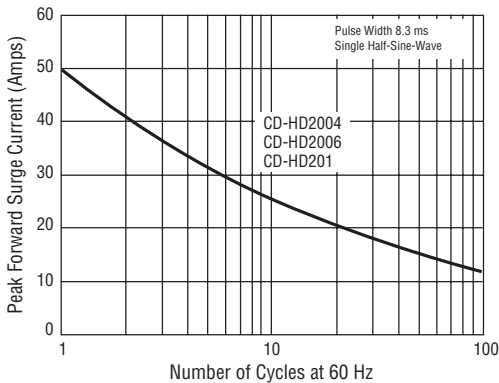
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Rating and Characteristic Curves

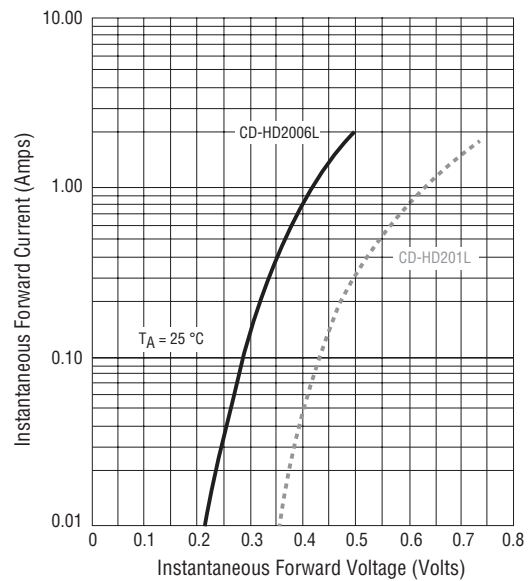
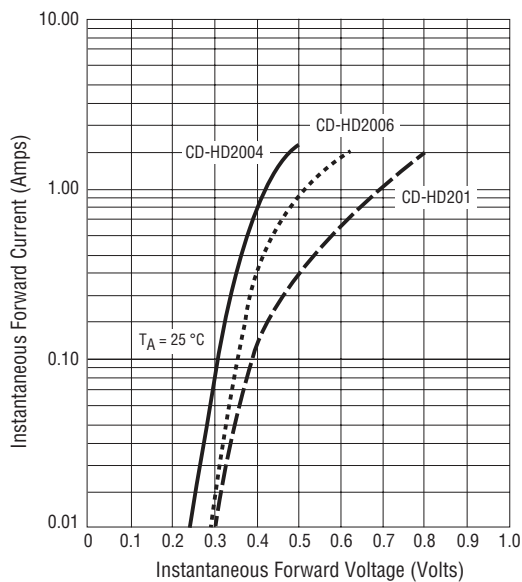
Forward Current Derating Curve



Maximum Non-Repetitive Peak Forward Surge Current



Forward Characteristics



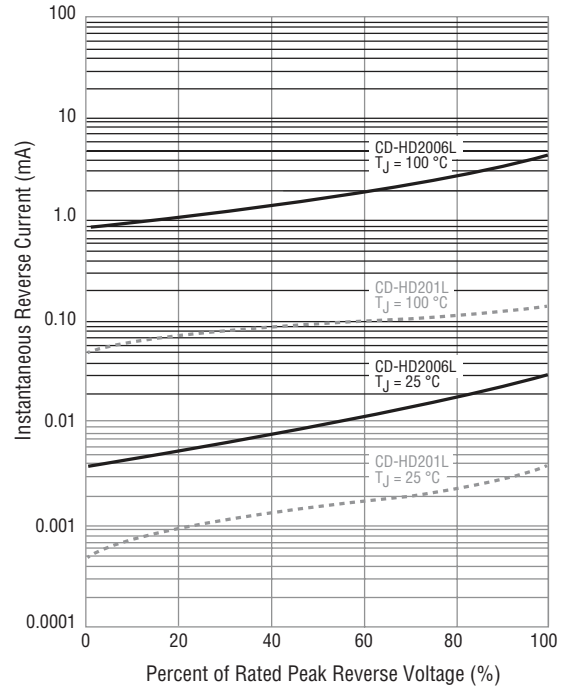
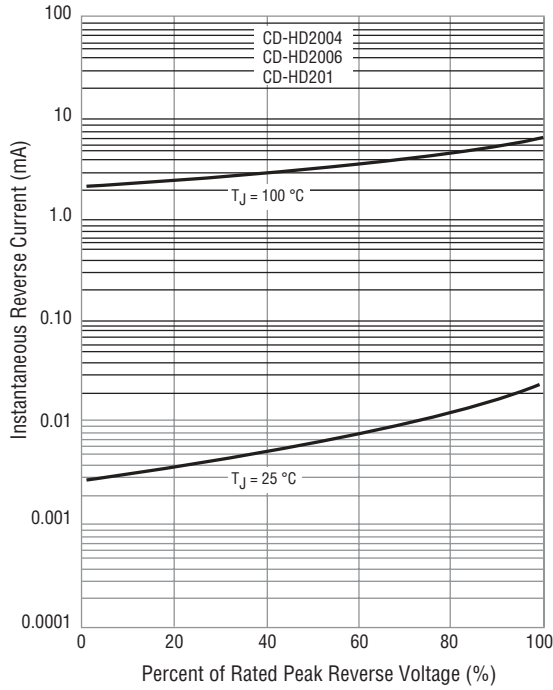
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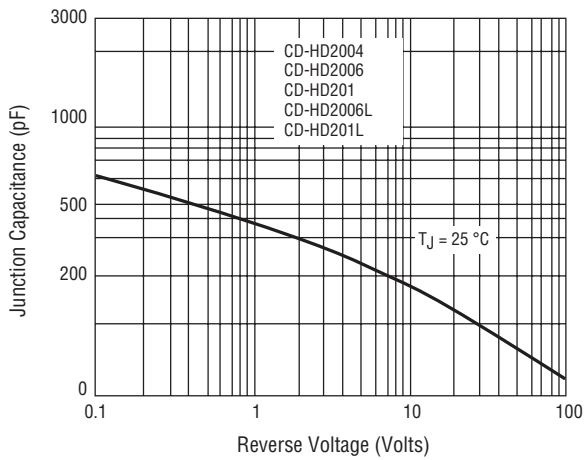
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Rating and Characteristic Curves

Reverse Characteristics



Typical Junction Capacitance

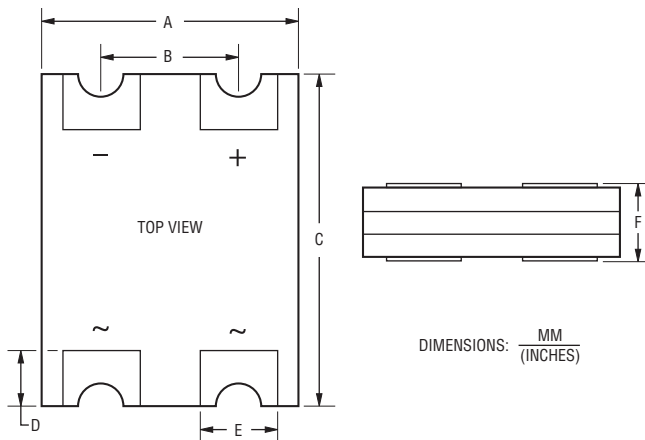


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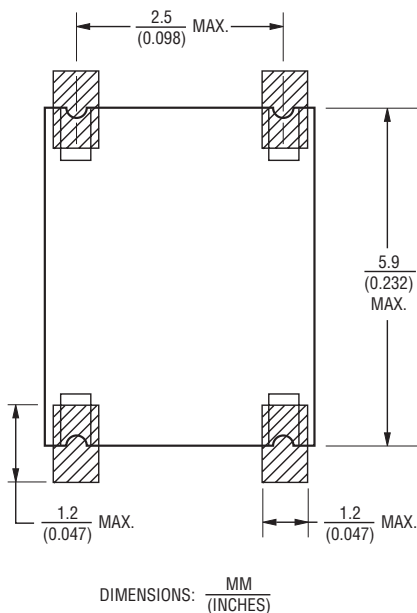
Product Dimensions

This is an RoHS2 compliant product, packaged with FRP substrate and is epoxy underfilled. The terminals are pure tin plated (lead free) and are solderable per MIL-STD-750, Method 2026. The package and dimensions are shown below.

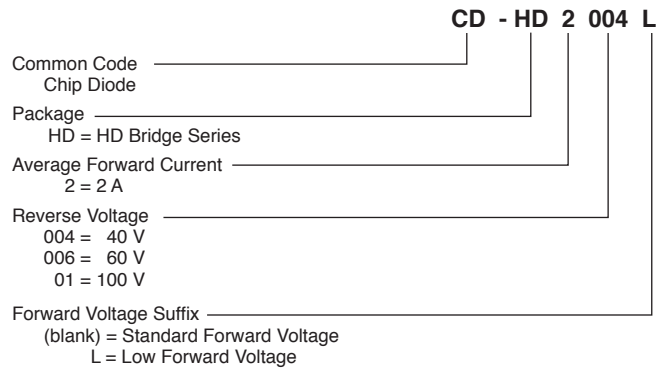


Dimensions	
A	$\frac{4.65 - 4.85}{(0.183 - 0.191)}$
B	$\frac{2.49 - 2.59}{(0.098 - 0.102)}$
C	$\frac{6.05 - 6.25}{(0.238 - 0.246)}$
D	$\frac{1.35 - 1.45}{(0.053 - 0.057)}$
E	$\frac{0.95 - 1.05}{(0.037 - 0.041)}$
F	$\frac{0.92 - 1.22}{(0.036 - 0.048)}$

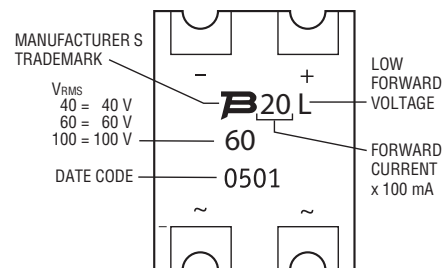
Recommended Footprint



How to Order



Typical Part Marking



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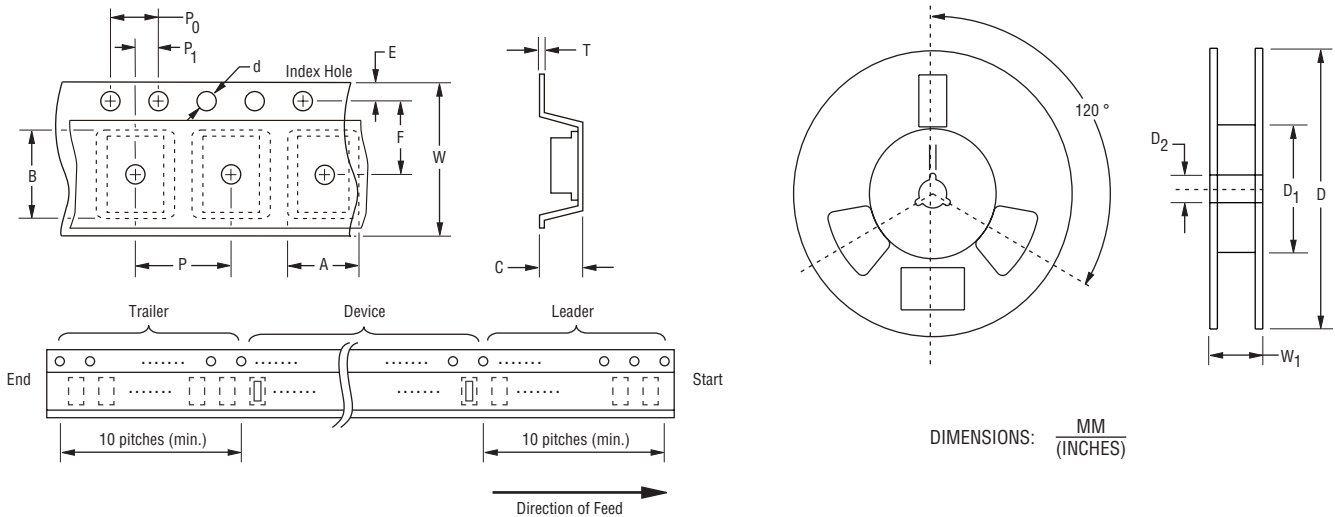
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CD-HD2x(L) Series Surface Mount Schottky Bridge Rectifier Diode

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Packaging Information

The surface mount product is packaged in a 12 mm x 8 mm tape and reel format per EIA-481 standard.



Item	Symbol	CD-HD2x(L)
Carrier Width	A	$\frac{5.20 \pm 0.30}{(0.205 \pm 0.012)}$
Carrier Length	B	$\frac{6.60 \pm 0.30}{(0.260 \pm 0.012)}$
Carrier Depth	C	$\frac{1.65 \pm 0.10}{(0.065 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.50 \pm 0.10}{(0.059 \pm 0.004)}$
Reel Outside Diameter	D	$\frac{330}{(12.992)}$
Reel Inner Diameter	D ₁	$\frac{50.0}{(1.969)}$ MIN.
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.50}{(0.512 \pm 0.02)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{5.50 \pm 0.05}{(0.217 \pm 0.002)}$
Punch Hole Pitch	P	$\frac{8.00 \pm 0.10}{(0.315 \pm 0.004)}$
Sprocket Hole Pitch	P ₀	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.10}{(0.079 \pm 0.004)}$
Overall Tape Thickness	T	$\frac{0.40}{(0.016)}$
Tape Width	W	$\frac{12.00 \pm 0.30}{(0.472 \pm 0.012)}$
Reel Width	W ₁	$\frac{14.4}{(0.567)}$ MAX.
Quantity per Reel	--	5,000

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