

Features

- Lead free device (RoHS compliant*)
- Low profile
- High current capability
- UL 94V-0 classification

Applications

- High frequency switching power supplies
- Inverters
- Free wheeling
- Polarity protection

CD1206-B220~B2100 – Surface Mount Schottky 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 Rectifier Diodes for rectification applications, in compact chip package 1206 size format, which offer PCB real estate savings and are considerably smaller than most competitive parts. The Schottky Rectifier Diodes offer a forward current of 2 A with a repetitive peak reverse voltage of 20 V up to 100 V.

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

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

Parameter	Symbol	CD1206-				Unit
		B220	B240	B260	B2100	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	40	60	100	V
Maximum RMS Voltage	V _{RMS}	14	28	42	70	V
Maximum DC Blocking Voltage	V _{DC}	20	40	60	100	V
Maximum Average Forward Rectified Current ¹	I _(AV)	2				A
DC Reverse Current @ Rated DC Blocking Voltage (@T _J = 25 °C)	I _R	0.5				mA
DC Reverse Current @ Rated DC Blocking Voltage (@T _J = 100 °C)	I _R	20		10		mA
Maximum Instantaneous Forward Voltage @ 2 A ²	V _F	0.5		0.7	0.85	V
Typical Thermal Resistance ³	R _{θJA} R _{θJL}	75 17				°C/W
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	40				A

Notes:

1 See Forward Derating Curve.

2 Pulse test width PW = 300 μs , 1 % duty cycle.

3 Mounted on P.C. board with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas.

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

Parameter	Symbol	CD1206-B220~B2100	Unit
Operating Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

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

Specifications are subject to change without notice.

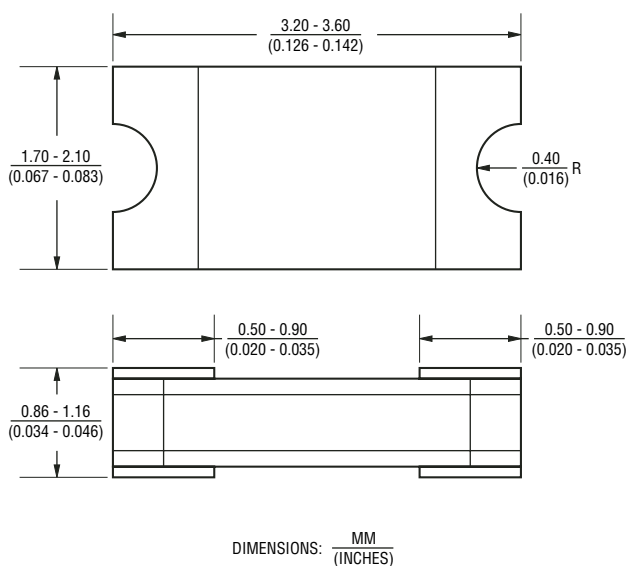
Customers should verify actual device performance in their specific applications.

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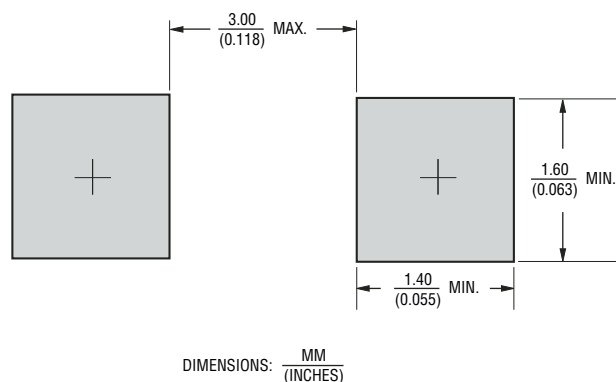
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Product Dimensions

This is a lead free product, packaged with FRP substrate and is epoxy underfilled. The terminals are pure tin plated and are solderable per MIL-STD-750, Method 2026. The package weighs approximately 0.02 g. The package and dimensions are shown below.



Recommended Pad Layout



How To Order

CD 1206 - B 2 20

Common Code _____
 CD = Chip Diode

Package _____
 1206

Model Series _____
 B = Schottky Barrier Diode

Forward Current $I_{(AV)}$ _____
 2 = 2 A

Reverse Voltage _____
 20 = 20 V
 40 = 40 V
 60 = 60 V
 100 = 100 V

Physical Specifications

Case1206 (3216) Molded plastic
 TerminalsSolder plated, solderable per MIL-STD-750,
 Method 2026
 PolarityIndicated by cathode band
 Mounting PositionAny

Typical Part Marking

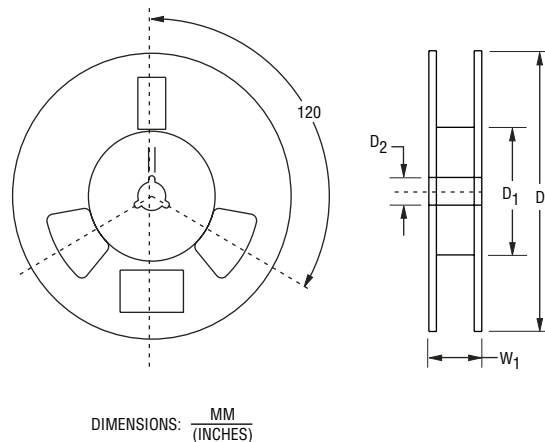
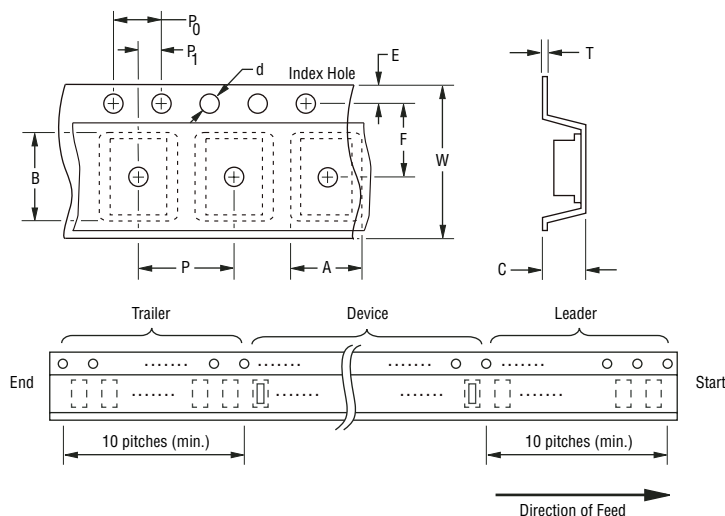
CD1206-B220 **B 220**
 CD1206-B240 **B 240**
 CD1206-B260 **B 260**
 CD1206-B2100 **B 2100**

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Packaging Information

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



Devices are packed in accordance with EIA standard RS-481-A and specifications shown here.

Item	Symbol	1206
Carrier Width	A	$\frac{1.70 \pm 0.10}{(0.067 \pm 0.004)}$
Carrier Length	B	$\frac{3.40 \pm 0.10}{(0.134 \pm 0.004)}$
Carrier Depth	C	$\frac{1.25 \pm 0.10}{(0.049 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{178}{(7.008)}$
Reel Inner Diameter	D ₁	$\frac{60.0}{(2.362)}$ Min.
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{3.50 \pm 0.05}{(0.138 \pm 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Sprocket Hole Pitch	P ₀	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
Overall Tape Thickness	T	$\frac{0.20 \pm 0.05}{(0.008 \pm 0.002)}$
Tape Width	W	$\frac{8.00 \pm 0.20}{(0.315 \pm 0.008)}$
Reel Width	W ₁	$\frac{13.5}{(0.531)}$ Max.
Quantity per Reel	—	3,000

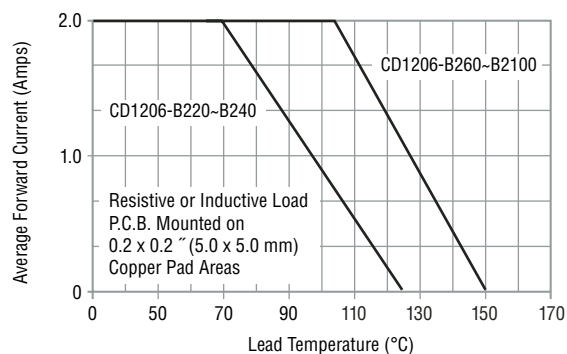
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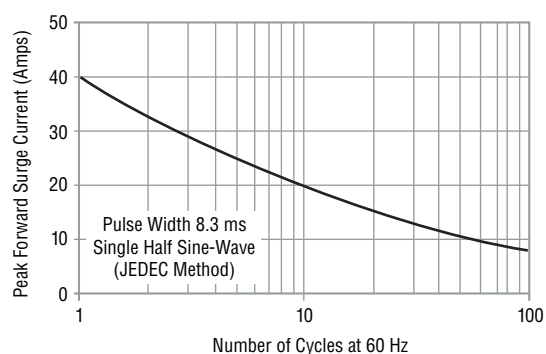
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Performance Graphs

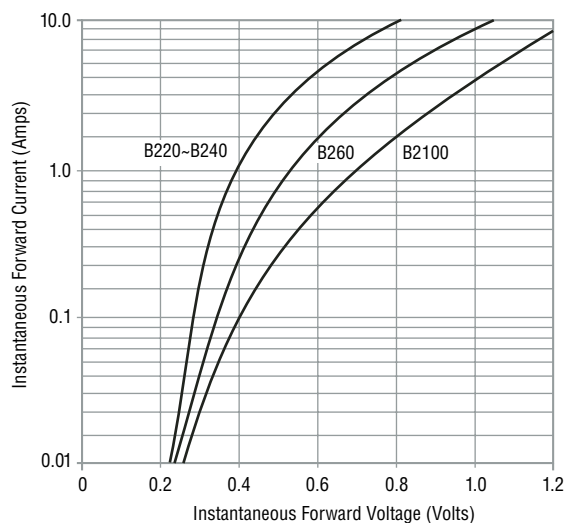
Forward Current Derating Curve



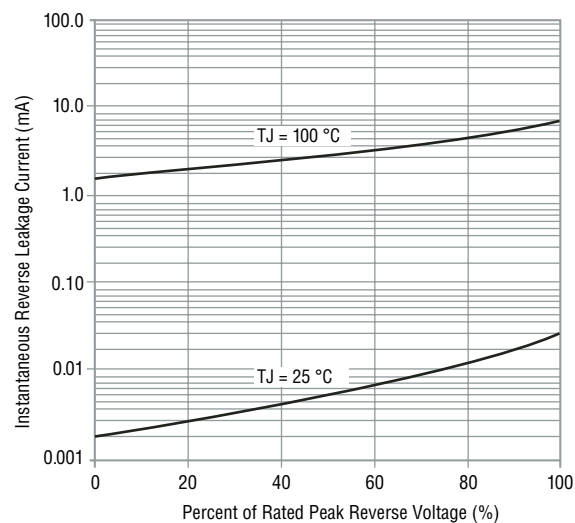
Maximum Non-Repetitive Surge Current



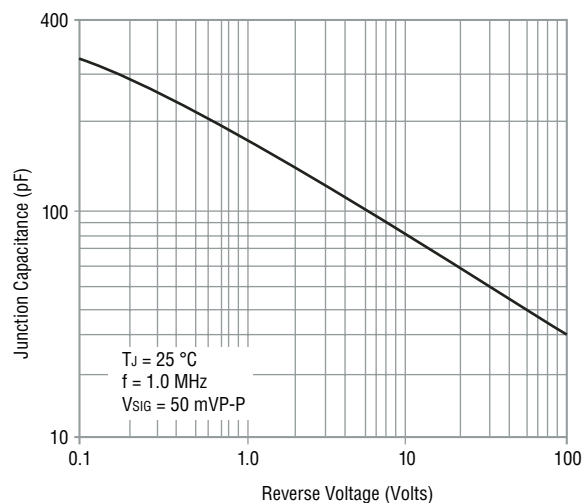
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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