



Features

- RoHS compliant*
 - Reverse voltage from 20 to 60 V
 - Forward current of 2 A
 - High current capability
- For use in low voltage high frequency inverters, free wheeling and polarity protection applications

CD214B-B220 ~ B260 Schottky Barrier Rectifier 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 Schottky Rectifier Diodes for rectification applications, in compact chip package DO-214AA (SMB) size format, which offer PCB real estate savings and are considerably smaller than competitive parts. The Schottky Rectifier Diodes offer a forward current of 2 A with a choice of repetitive peak reverse voltage of 20 V up to 60 V.

Bourns® Chip Diodes conform to JEDEC standards, are easy to handle with 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	CD214B-					Unit
		B220	B230	B240	B250	B260	
Forward Voltage (Max.) ($I_f = 2\text{ A}$)	V_F	0.5	0.5	0.5	0.7	0.7	V
Typical Junction Capacitance*	C_T	200					pF
Reverse Current (Max.) (at Rated V_R)	I_R	0.5	0.5	0.5	0.5	0.5	mA

* Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.

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

Parameter	Symbol	CD214B-					Unit
		B220	B230	B240	B250	B260	
Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	V
Reverse Voltage	V_R	20	30	40	50	60	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	V
Avg. Forward Current	I_O	2					A
Forward Current, Surge Peak (60 Hz, 1 cycle)	I_{surge}	50	50	50	50	50	A
Typical Thermal Resistance**	$R_{\theta JL}$	15	15	15	15	15	$^\circ\text{C/W}$
Storage Temperature	T_{STG}	-55 to +150					$^\circ\text{C}$
Junction Temperature	T_J	-55 to +125					$^\circ\text{C}$

** Thermal resistance junction to lead.

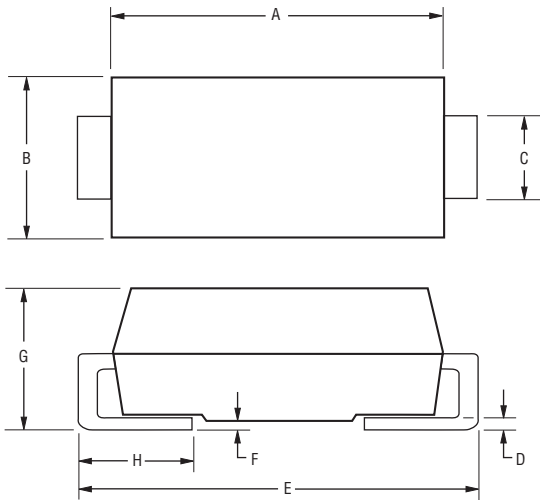
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

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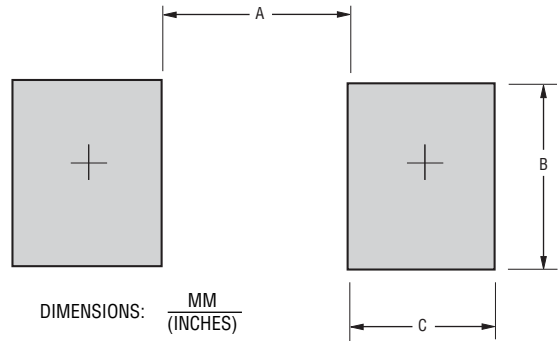
Product Dimensions



Dimension	SMB (DO-214AA)
A	$\frac{4.06 - 4.57}{(0.160 - 0.180)}$
B	$\frac{3.30 - 3.94}{(0.130 - 0.155)}$
C	$\frac{1.96 - 2.21}{(0.078 - 0.087)}$
D	$\frac{0.15 - 0.31}{(0.006 - 0.112)}$
E	$\frac{5.21 - 5.59}{(0.205 - 0.220)}$
F	$\frac{0.05 - 0.20}{(0.002 - 0.008)}$
G	$\frac{2.01 - 2.62}{(0.080 - 0.103)}$
H	$\frac{0.76 - 1.52}{(0.030 - 0.060)}$

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

Recommended Pad Layout



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

Dimension	SMA (DO-214AC)
A	$\frac{2.90}{(0.114)}$
B	$\frac{3.00}{(0.118)}$
C	$\frac{2.30}{(0.091)}$

Physical Specifications

Case Molded plastic
 Polarity Indicated by cathode band
 Weight 0.003 ounces / 0.093 grams

Typical Part Marking

CD214B-B220 **B** 220
 CD214B-B230 **B** 230
 CD214B-B240 **B** 240
 CD214B-B250 **B** 250
 CD214B-B260 **B** 260

How To Order

CD 214B - B 2 30 LF

Common Code _____
 Chip Diode _____
 Package _____
 • 214B = SMB/DO-214AA
 Model _____
 B = Schottky Barrier Series
 Average Forward Current (I_o) Code _____
 2 = 2 A (Code x 1000 mA = Average Forward Current)
 Reverse Voltage (V_r) Code _____
 20 = 20 V
 30 = 30 V
 40 = 40 V
 50 = 50 V
 60 = 60 V
 Terminations _____
 LF = 100 % Sn (RoHS Compliant)

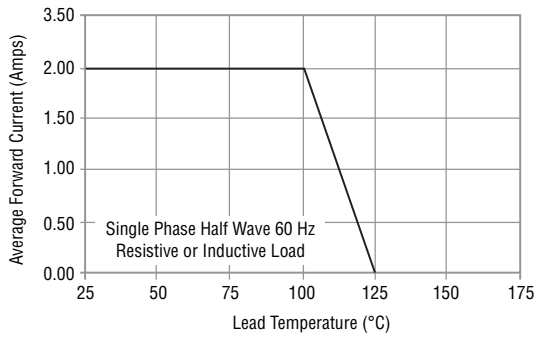
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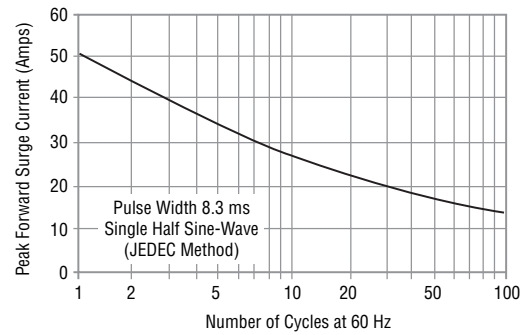


Rating and Characteristic Curves

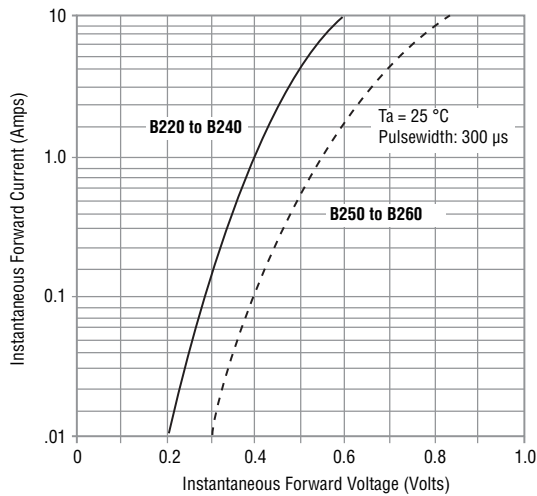
Forward Current Derating Curve



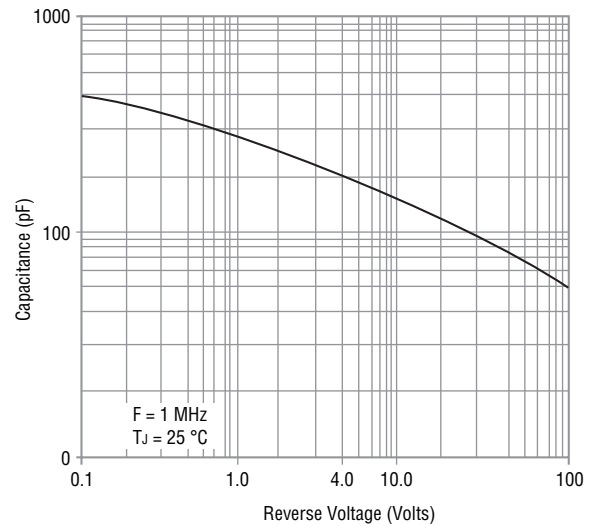
Maximum Non-Repetitive Surge Current



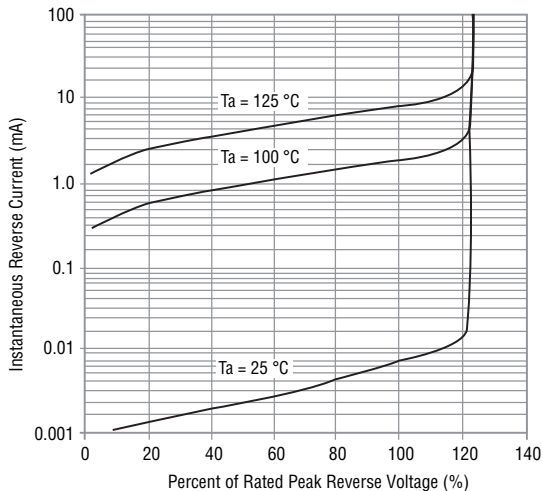
Typical Forward Characteristics



Typical Junction Capacitance



Typical Reverse Characteristics



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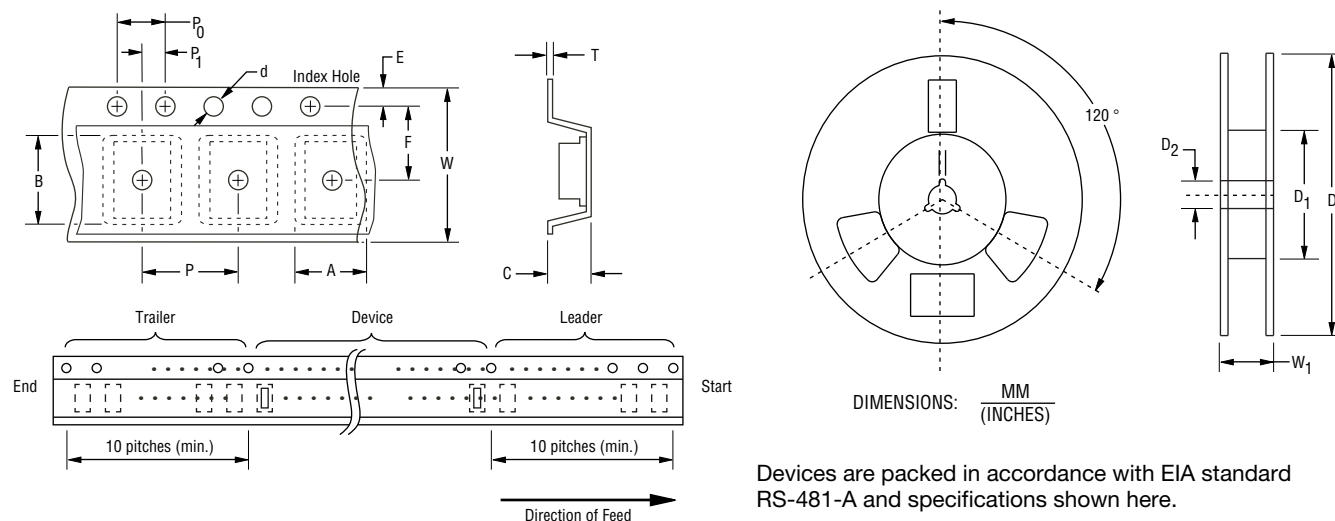
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Packaging Information

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	SMB (DO-214AA)
Carrier Width	A	$\frac{4.94 \pm 0.10}{(0.194 \pm 0.004)}$
Carrier Length	B	$\frac{5.57 \pm 0.10}{(0.219 \pm 0.004)}$
Carrier Depth	C	$\frac{2.36 \pm 0.10}{(0.093 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{330}{(12.992)}$
Reel Inner Diameter	D ₁	$\frac{50.0}{(1.969)}$ MIN.
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{5.50 \pm 0.05}{(0.217 \pm 0.002)}$
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	$\frac{0.30 \pm 0.10}{(0.012 \pm 0.004)}$
Tape Width	W	$\frac{12.00 \pm 0.20}{(0.472 \pm 0.008)}$
Reel Width	W ₁	$\frac{18.4}{(0.724)}$ MAX.
Quantity per Reel	--	3,000

REV. 09/15

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