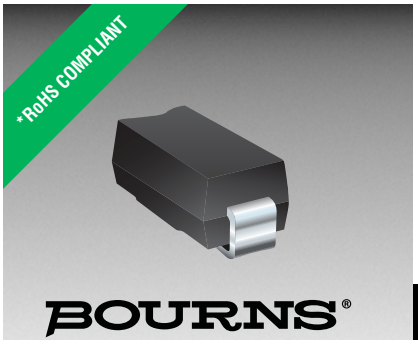

Features

- RoHS compliant*
- SMA package
- Surface mount
- Very low forward voltage drop

CD214A-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-214AC (SMA) 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 on standard pick and place equipment and their flat configuration minimizes roll away.

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD214A-						Unit
		B220	B230	B240	B240L	B250	B260	
Forward Voltage (Max.) (I_f = 2 A)	V_F	0.5	0.5	0.5	0.43	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	2.0	0.5	0.5	mA

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

Absolute Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD214A-						Unit
		B220	B230	B240	B240L	B250	B260	
Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	40	50	60	V
Reverse Voltage	V_R	20	30	40	40	50	60	V
Maximum RMS Voltage	V_{RMS}	14	21	28	28	35	42	V
Avg. Forward Current	I_O	2						A
Forward Current, Surge Peak (60 Hz, 1 cycle)	I_{surge}	50	50	50	25	50	50	A
Typical Thermal Resistance***	$R_{\Theta JL}$	15	15	15	18	15	15	°C/W
Storage Temperature	T_{STG}	-55 to +150						°C
Junction Temperature	T_J	-55 to +125						°C

*** Thermal resistance junction to lead.

How to Order

CD 214A - B 2 40 L LF

Common Code
Chip Diode

Package
214A = SMA/DO-214AC

Model
B = Schottky Barrier Series

Average Forward Current (I_O) Code
2 = 2 A (Code x 1000 mA = Average Forward Current)

Reverse Voltage (VR) Code
30 = 30 V
40 = 40 V
60 = 60 V

Forward Voltage Suffix (Applies to -B240L only)
L = Low Forward Voltage V_f (-B240L only)
No Space in P/N = Not Low Forward Voltage

Terminations
LF = 100 % Sn (RoHS Compliant*)

BOURNS®

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www.bourns.com

CD214A-B220 ~ B260 Schottky Barrier Rectifier Chip Diode

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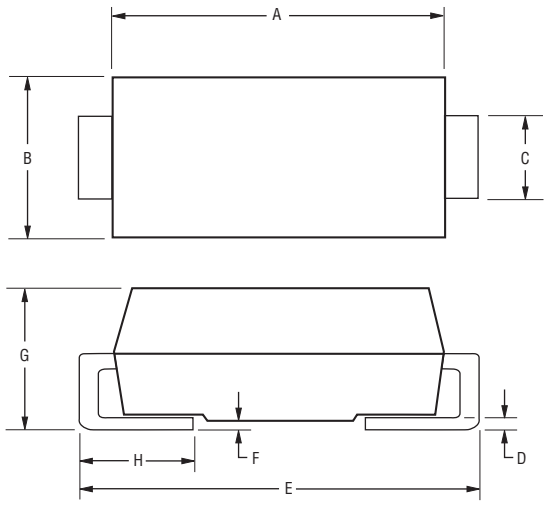
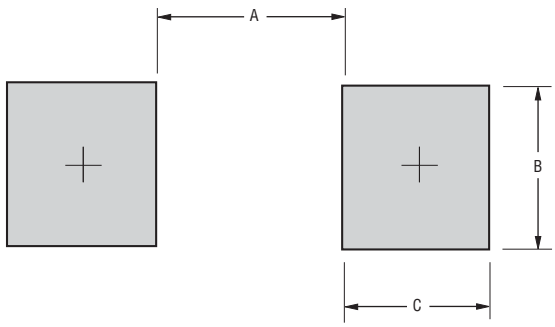
Product Dimensions



Dimension	SMA (DO-214AC)
A	4.06 - 4.57 (0.160 - 0.180)
B	2.29 - 2.92 (0.090 - 0.115)
C	1.27 - 1.63 (0.050 - 0.064)
D	0.15 - 0.31 (0.006 - 0.110)
E	4.83 - 5.59 (0.190 - 0.220)
F	0.05 - 0.20 (0.002 - 0.008)
G	2.01 - 2.62 (0.080 - 0.103)
H	0.76 - 1.52 (0.030 - 0.060)

DIMENSIONS: MM / (INCHES)

Recommended Pad Layout



Dimension	SMA (DO-214AC)
A	2.90 (0.114)
B	2.40 (0.094)
C	2.30 (0.091)

DIMENSIONS: MM / (INCHES)

Physical Specifications

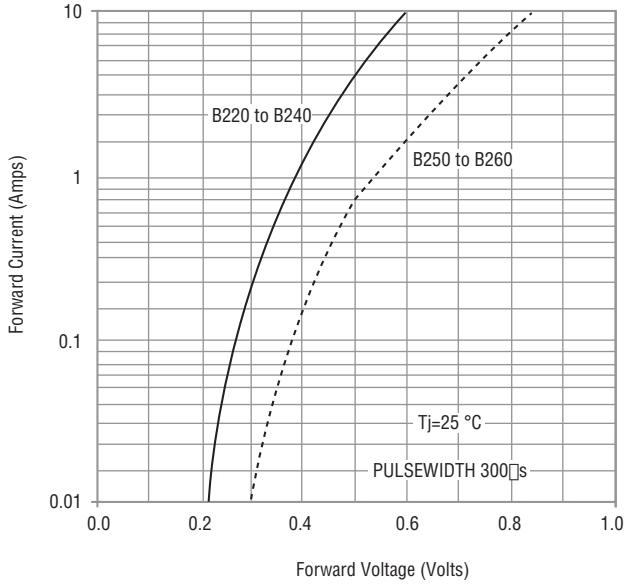
Case ..... Molded plastic
Polarity ..... Indicated by cathode band
Weight ..... 0.002 ounces / 0.064 grams

Typical Part Marking

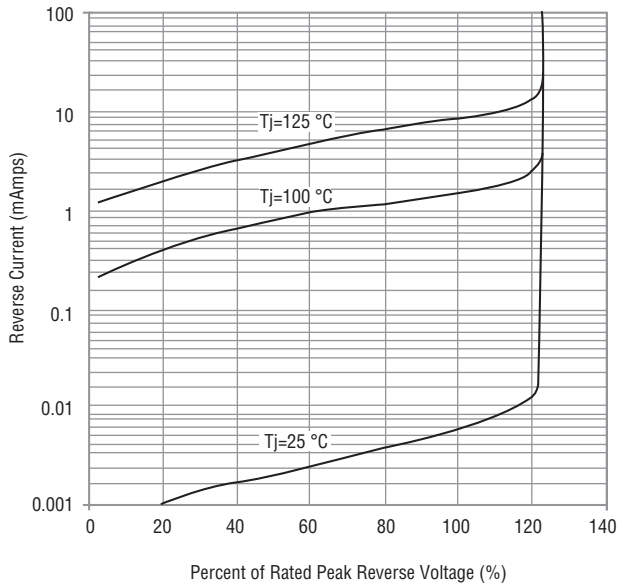
CD214A-B220 ..... B 220A
CD214A-B230 ..... B 230A
CD214A-B240 ..... B 240A
CD214A-B240L ..... B 240LA
CD214A-B250 ..... B 250A
CD214A-B260 ..... B 260A

Rating and Characteristic Curves: CD214A-B220, CD214A-B230, CD214A-B240, CD214A-B250 & CD214A-B260

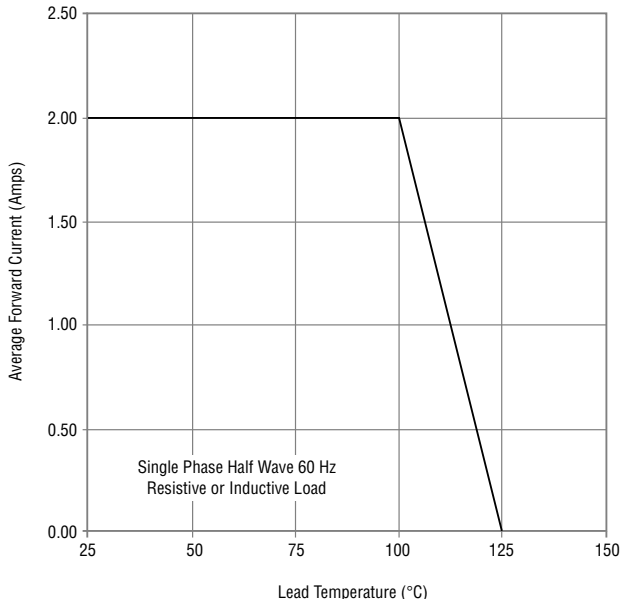
Forward Characteristics



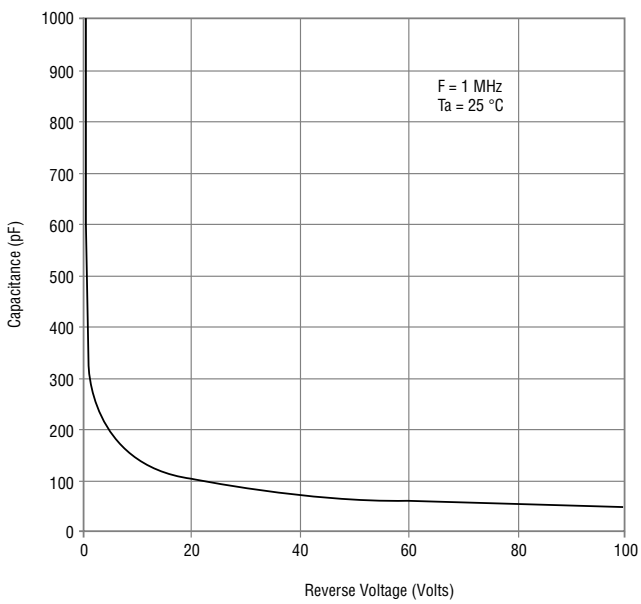
Reverse Characteristics



Derating Curve

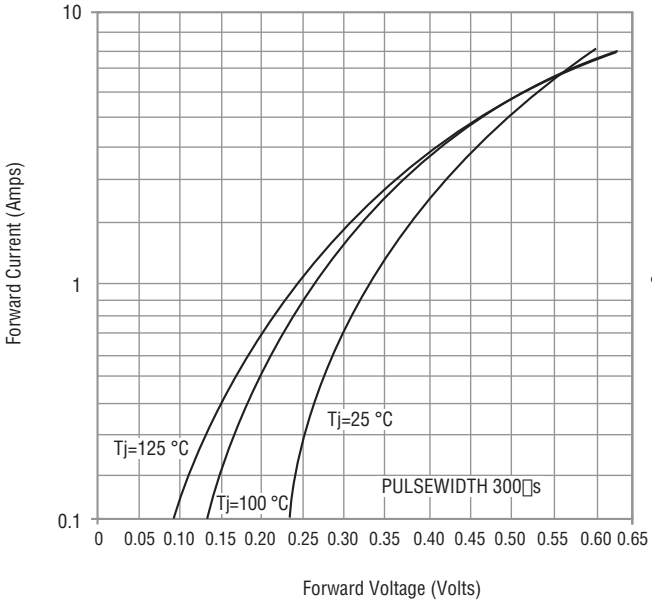


Capacitance Between Terminals

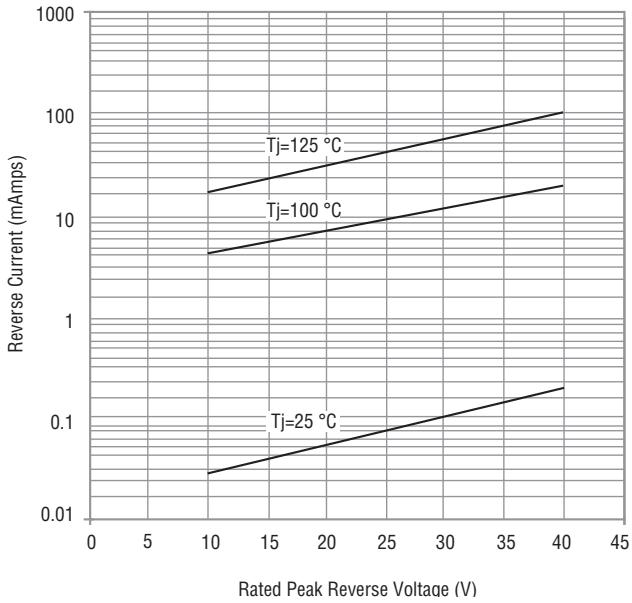


Rating and Characteristic Curves: CD214A-B240L

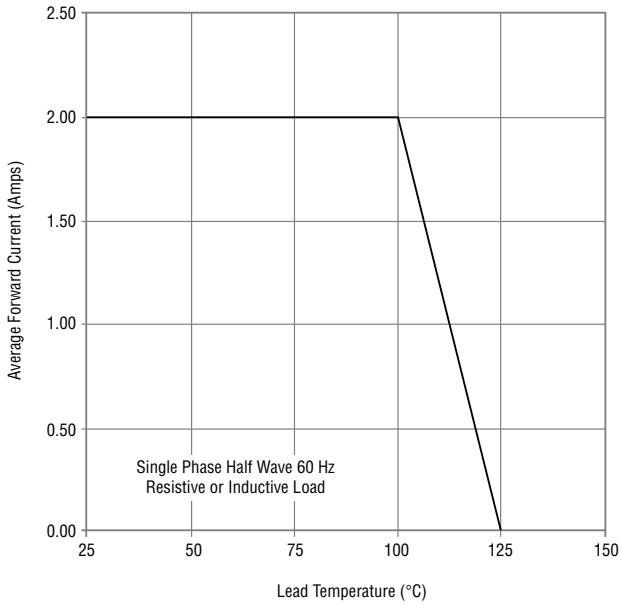
Forward Characteristics



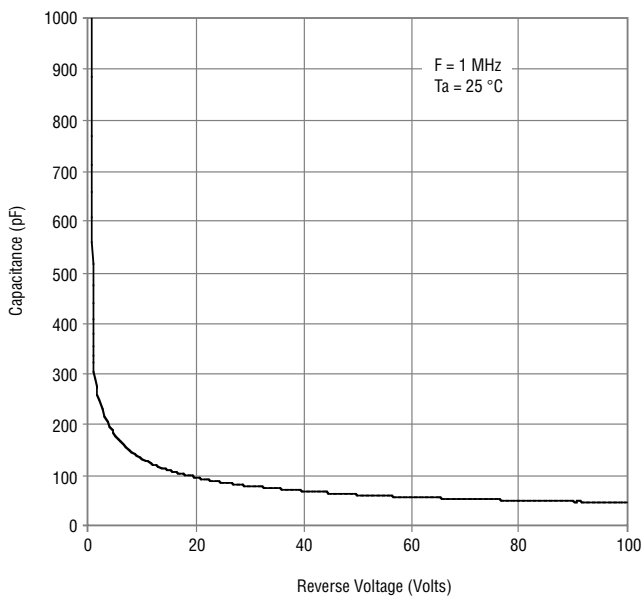
Reverse Characteristics



Derating Curve

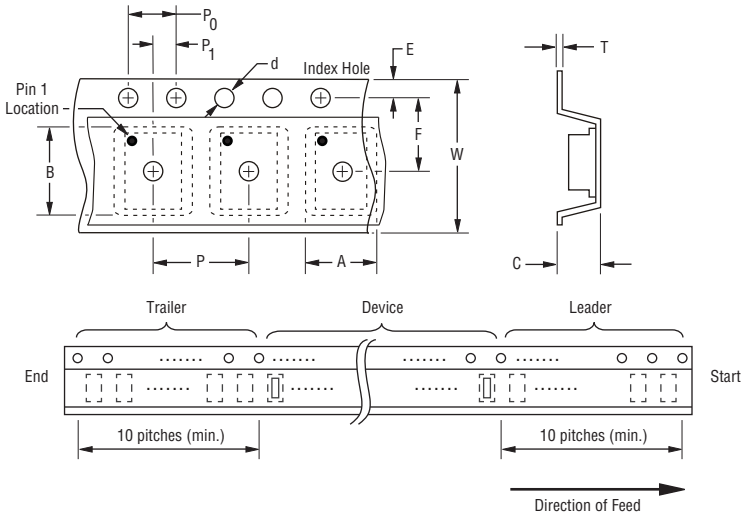


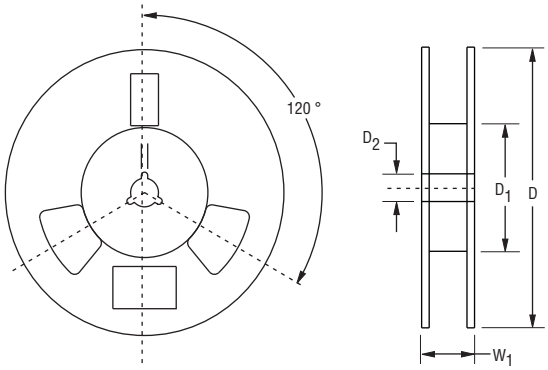
Capacitance Between Terminals



Packaging Information

The product is dispensed in tape and reel format (see diagram below).





DIMENSIONS: MM / (INCHES)

Item	Symbol	SMA (DO-214AC)
Carrier Width	A	2.90 ± 0.10 (0.114 ± 0.004)
Carrier Length	B	5.59 ± 0.10 (0.220 ± 0.004)
Carrier Depth	C	2.36 ± 0.10 (0.093 ± 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	3.30 (12.992)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.20 (0.512 ± 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.05 (0.079 ± 0.002)
Overall Tape Thickness	T	0.30 ± 0.10 (0.012 ± 0.004)
Tape Width	W	12.00 ± 0.20 (0.472 ± 0.008)
Reel Width	W_1	18.4 (0.724) MAX.
Quantity per Reel	--	5,000

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