Features

- RoHS compliant*
- Small SMT package
- High reliability with superior moisture resistance
- Applicable to automatic insertion

Applications

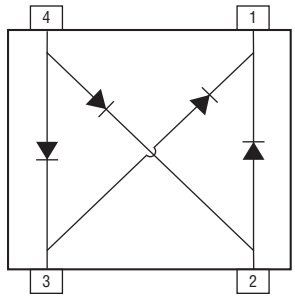
- Switching power supply
- Home appliances, office equipment
- Telecommunication, factory automation

CDNBS04-B08200~B08800 Surface Mount Rectifier

General Information

The CDNBS04-B08200~B08800 device provides Bridge Rectification with high reliability with superior moisture resistance for home appliances, office equipment and telecommunications.

The device provide 0.8 A rectification with a choice of repetitive peak reverse voltages from 200 V to 800 V. The device measures 5 mm x 7 mm and is available in a four lead SMT package intended to be mounted directly onto an FR4 printed circuit board.



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

Parameter	Symbol	CDNBS04-				Unit
		B08200	B08400	B08600	B08800	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	200	400	600	800	V
Maximum RMS Voltage	V_{RMS}	140	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	200	400	600	800	V
Maximum Average Forward Rectified Current @ TA = 40 °C[1]	$I_{(AV)}$	0.8				A
Maximum DC Reverse Current @ T_J = 25 °C	I_R	5				µA
Maximum DC Reverse Current @ T_J = 100 °C	I_R	100				µA
Maximum Forward Voltage @ 0.4 A DC	V_F	1.15				V
I^2t Rating for Fusing (T < 8 ms)	I^2t	3.7				A^2S
Maximum Recovery Time	T_{RR}	150		200	500	ns
Typical Thermal Resistance[2]	$R_{\theta JA}$	50				°C/W
Typical Junction Capacitance per element[3]	C_J	13				pF
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30				A

Notes:
1 Mounted on PC Board. See Forward Derating Curve.
2 Thermal Resistance from Junction to Ambient.
3 Measured at 1 MHz and applied Reverse Voltage of 4.0 VDC.

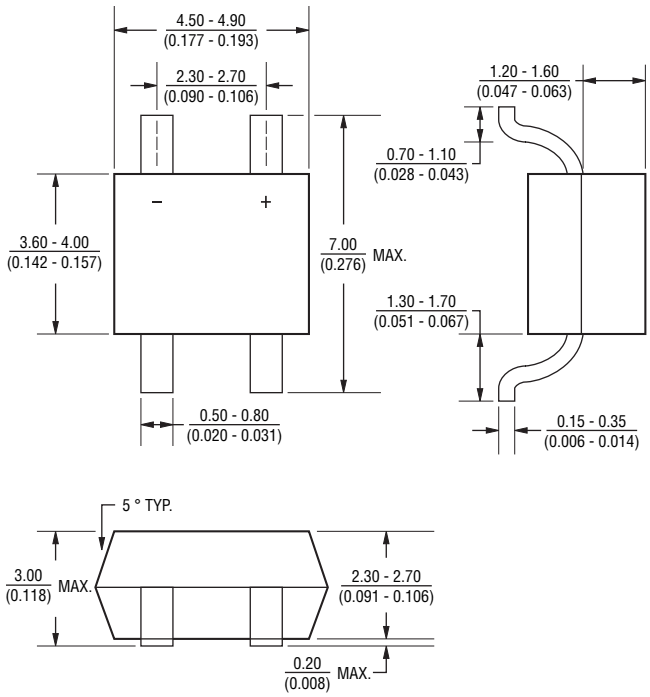
Thermal Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CDNBS04-B08200~B08800	Unit
Operating Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°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.

Product Dimensions

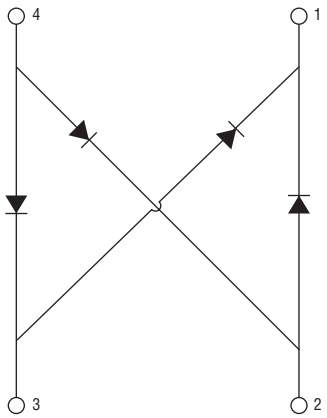
This is a molded package weighs approximately 0.125 g and can be mounted in any position. The dimensions for the packaged device are shown below.



DIMENSIONS: MM / (INCHES)

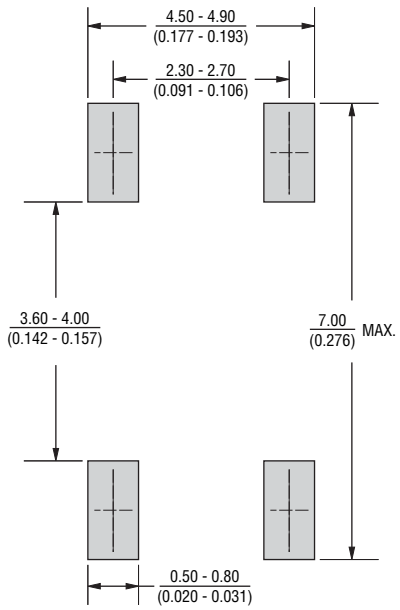
Block Diagram

The block diagram below includes the pin names and basic electrical connections associated with each channel.



Recommended Footprint

The device will mount onto existing JEDEC SOD-106 footprint.



DIMENSIONS: MM / (INCHES)

How To Order

CD NBS04 - B 08 800

Common Code
CD = Chip Diode

Package
NBS04

Model Series
B = Bridge Rectifier

Maximum Rectified Current
08 = 100 mA

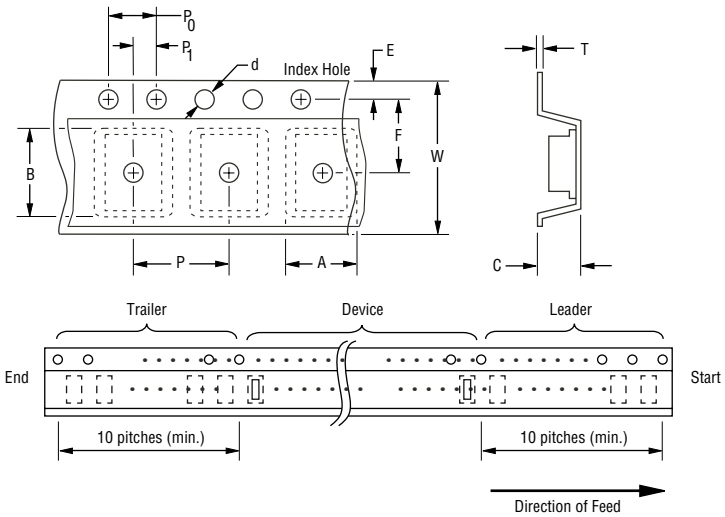
Working Peak Reverse Voltage
200 = 200 V_{RWM}
400 = 400 V_{RWM}
600 = 600 V_{RWM}
800 = 800 V_{RWM}

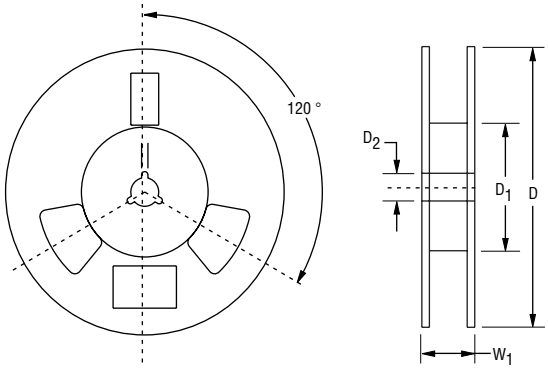
Typical Part Marking

CDNBS04-B08200	B 8 200
CDNBS04-B08400	B 8 400
CDNBS04-B08600	B 8 600
CDNBS04-B08800	B 8 800

Packaging Specifications

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





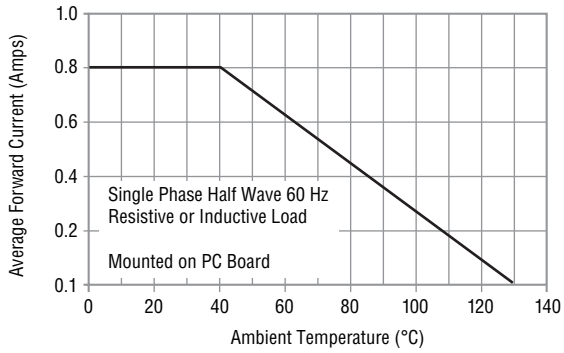
DIMENSIONS: MM / (INCHES)

Devices are packed in accordance with EIA standard RS-481-A.

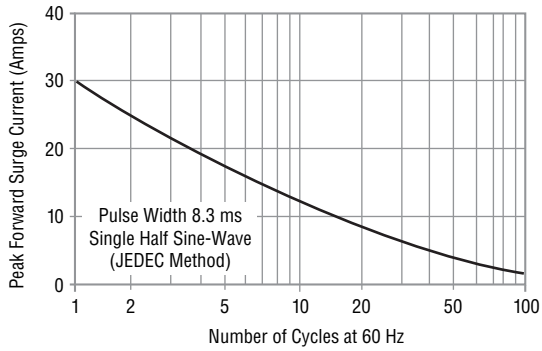
Item	Symbol	NSOIC 4L
Carrier Width	A	6.7 ± 0.10 (0.264 ± 0.004)
Carrier Length	B	5.5 ± 0.10 0.217 ± 0.004
Carrier Depth	C	2.10 ± 0.10 0.083 ± 0.004
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	330 (12.992)
Reel Inner Diameter	D_1	80.0 (3.1500) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.20 (0.512 ± 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	3.50 ± 0.05 (0.138 ± 0.002)
Punch Hole Pitch	P	8.00 ± 0.10 (0.315 ± 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	0.20 ± 0.10 (0.008 ± 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	-	2500

Performance Graphs

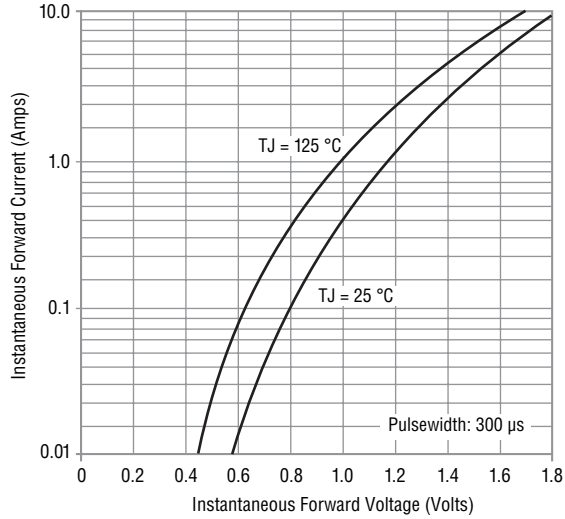
Forward Current Derating Curve



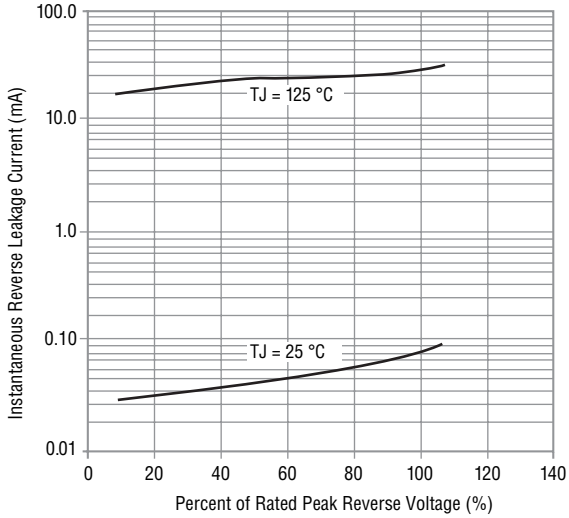
Maximum Non-Repetitive Surge Current



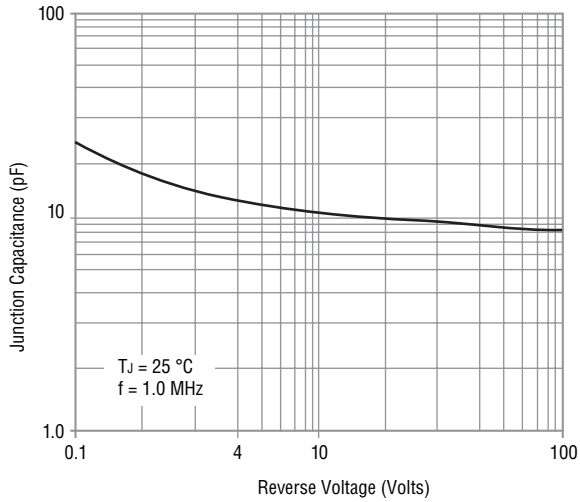
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



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