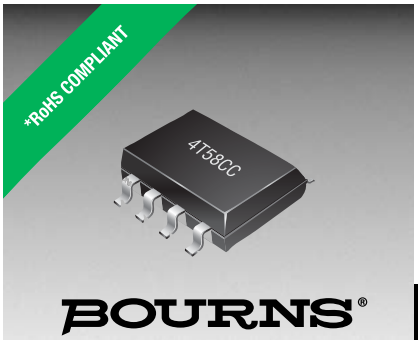


Features

- Protects four lines
- Unidirectional
- 24 A peak surge current
- RoHS compliant*

Applications

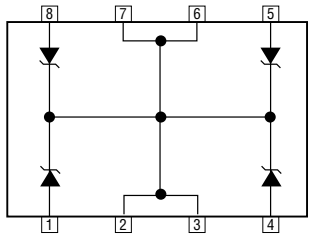
- PoE power protection
- DC power supply protection

CDNBS08-T58CC - Common Cathode TVS Diode

General Information

The Model CDNBS08-T58CC is designed to protect the power section in Power over Ethernet (PoE) applications. The device is packaged in an eight lead narrow body SOIC package. Bourns® Chip Diodes are available in surface mount packages and are easy to handle using standard pick and place equipment.

In addition to surge protection, the device provides Level 4 ESD protection per IEC 61000-4-2.



Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

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

Parameter	Symbol	Value	Unit
Peak Pulse Current (8/20 μs)	I_{PP}	24	A
Peak Pulse Power (8/20 μs)	P_{PP}	2700	W
Working Peak Reverse Voltage	V_{WM}	58	V
IEC 61000-4-2 Contact Discharge	ESD	30	kV
Junction Temperature	T_J	-55 to +150	°C
Storage Temperature	T_{STG}	-65 to +150	°C

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

Parameter	Symbol	Test Condition		Min.	Typ.	Max.	Unit
Breakdown Voltage @ 1 mA	V_{BR}	I_{BR} = 1 mA		64.4	68	71.2	V
V_{BR} Temperature Coefficient	V_{BR}	I_{BR} = 1 mA			0.1		%/°C
Leakage Current	I_R	$V_R = V_{WM}$	T_A = 25 °C			200	nA
			T_A = 85 °C			1	μA
Capacitance	C	V_R = -44 V, f = 1 MHz, 30 mV rms			55		pF
Clamping Voltage	V_C	I_{PP} = 24 A (8/20 μs)				100	V
Forward Voltage	V_F	I_F = 1 A, T_W = 100 μs			1		V

Device Pinout

Pin	Function
1	ANODE 1
2	GND
3	GND
4	ANODE 2
5	ANODE 3
6	GND
7	GND
8	ANODE 4

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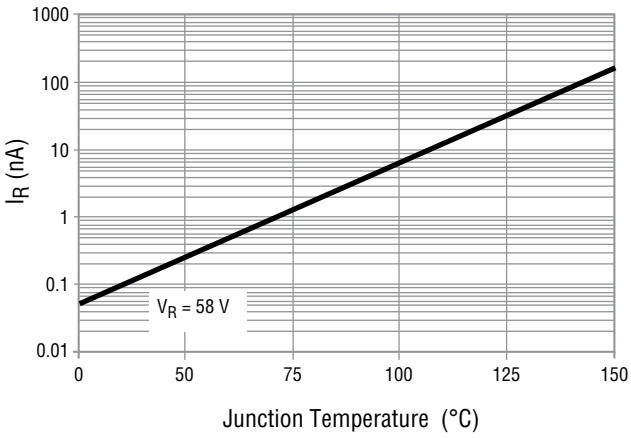
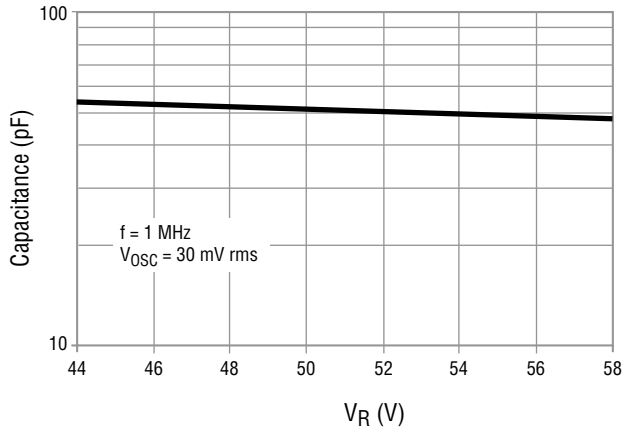
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*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.

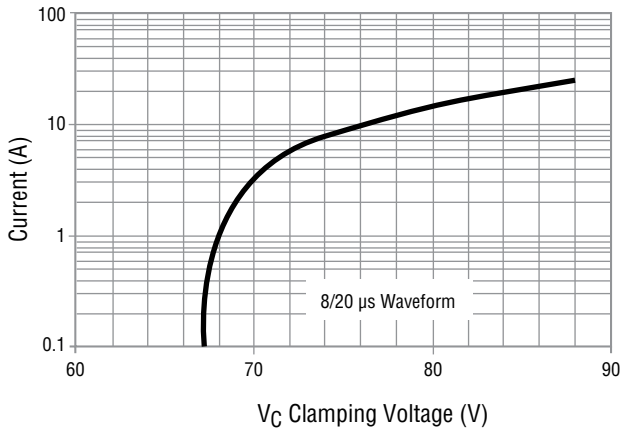
Typical Leakage vs. Junction Temperature



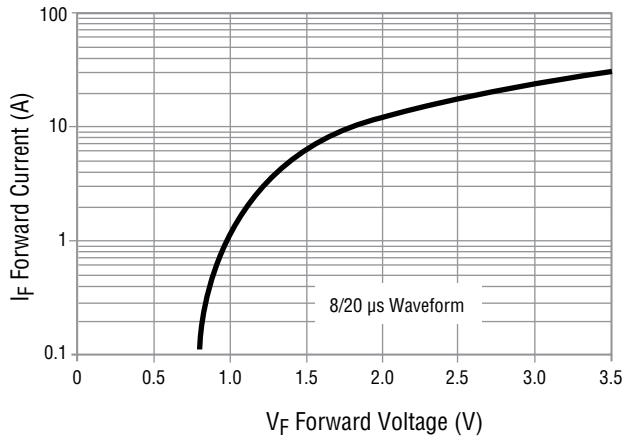
Typical Capacitance vs. Reverse Voltage



Typical Clamping Voltage vs. Current



Typical Forward Voltage vs. Forward Current

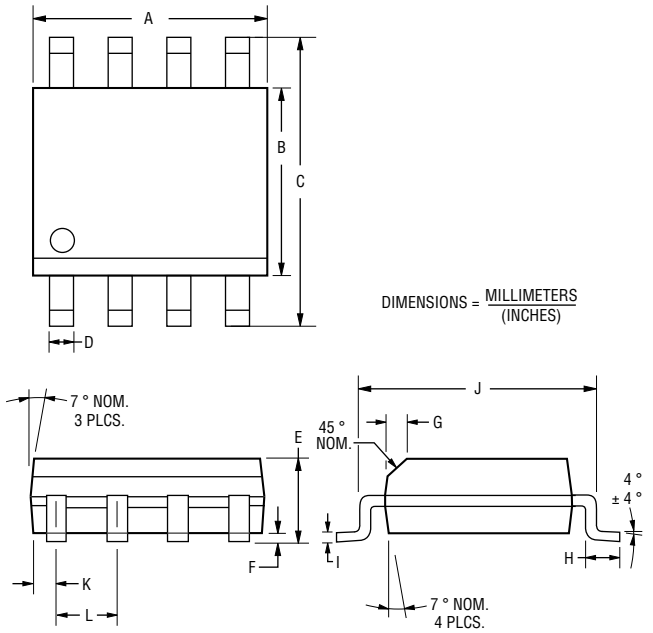


CDNBS08-T58CC - Common Cathode TVS Diode

BOURNS®

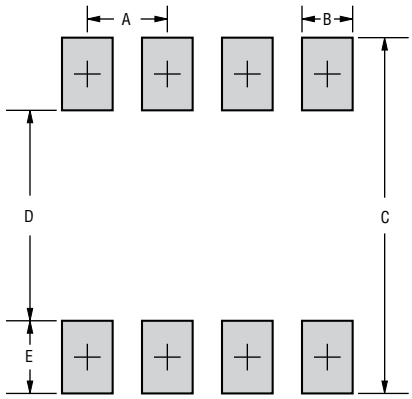
Product Dimensions

This is an RoHS compliant molded JEDEC narrow body SO-8 package with 100 % Sn plating on the lead frame. It weighs approximately 15 mg and has a flammability rating of UL 94V-0.



Dimensions	
A	4.80 - 5.00 / (0.189 - 0.197)
B	3.81 - 4.00 / (0.150 - 0.157)
C	5.80 - 6.20 / (0.228 ± 0.244)
D	0.36 - 0.51 / (0.014 - 0.020)
E	1.35 - 1.75 / (0.053 - 0.069)
F	0.102 - 0.203 / (0.004 - 0.008)
G	0.25 - 0.50 / (0.010 - 0.020)
H	0.51 - 1.12 / (0.020 - 0.044)
I	0.190 - 0.229 / (0.0075 - 0.0090)
J	4.60 - 5.21 / (0.181 - 0.205)
K	0.28 - 0.79 / (0.011 - 0.031)
L	1.27 / (0.050)

Recommended Footprint



Dimensions	
A	1.27 / (0.050)
B	0.51 / (0.020)
C	6.80 / (0.268)
D	4.20 / (0.165)
E	1.30 / (0.051)

DIMENSIONS: MM / (INCHES)

Typical Part Marking

CDNBS08-T58CC 4T58CC

How to Order

CD NBS08 - T 58 CC

Common Code
Chip Diode

Package
NBS08 = Narrow Body SOIC8 Package

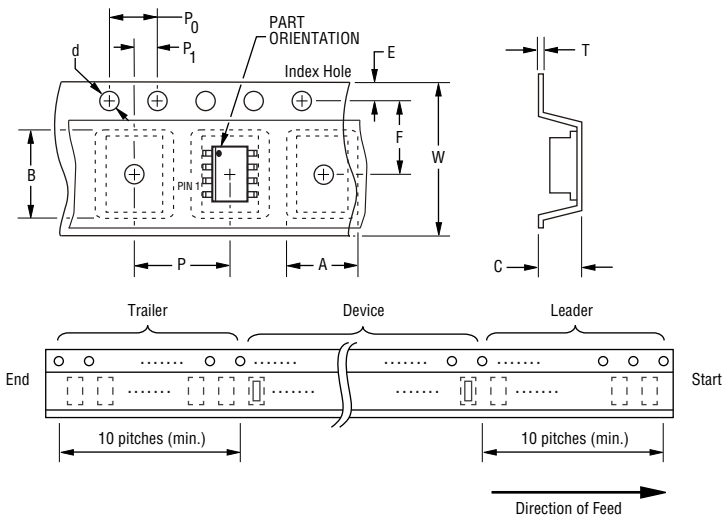
Model
T = Transient Voltage Suppressor

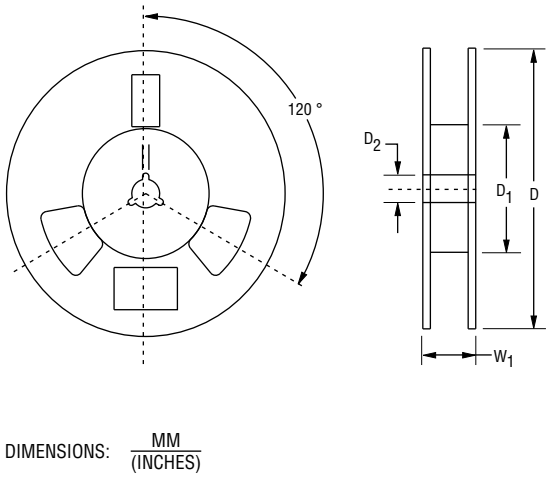
Working Peak Reverse Voltage
58 = 58 VDC

Suffix
CC = Common Cathode Configuration

Packaging Information

The product is packaged in tape and reel format per EIA-481 standard.





DIMENSIONS: MM / (INCHES)

Item	Symbol	NSOIC 8L
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

REV. 08/19

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