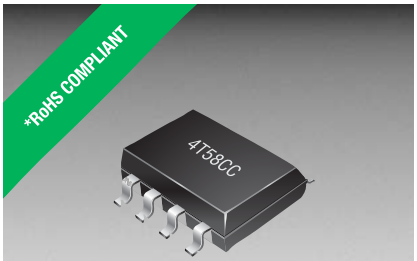


Features

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

Applications

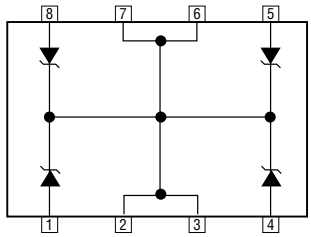
- PoE power protection
- DC power supply protection

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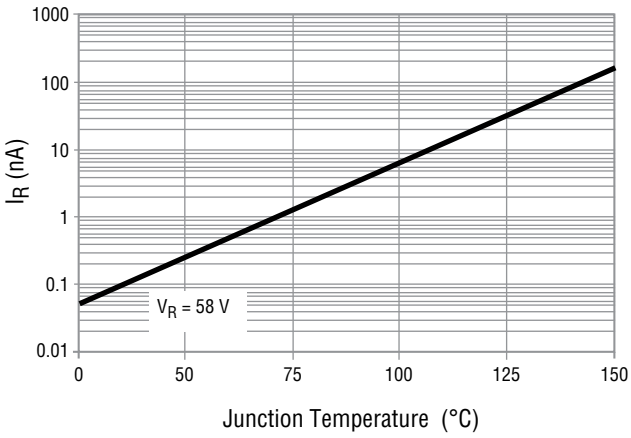
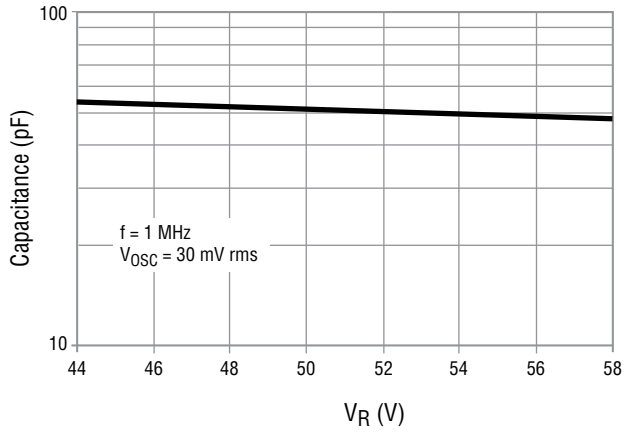
WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

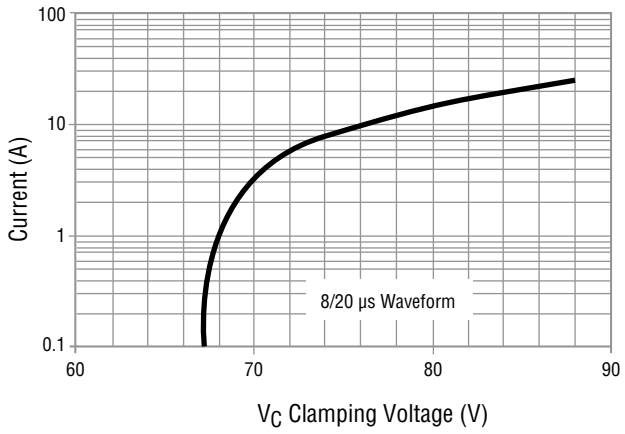
Typical Leakage vs. Junction Temperature



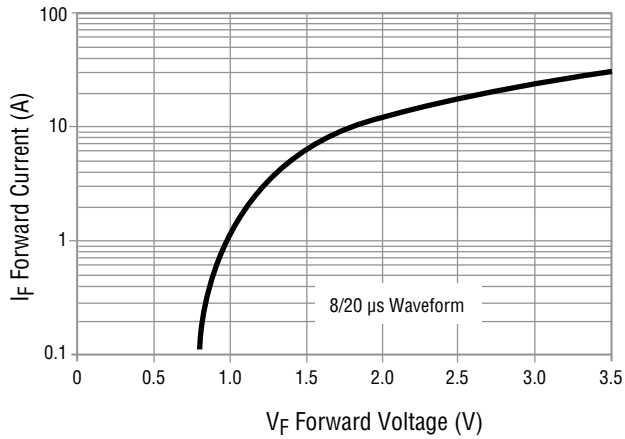
Typical Capacitance vs. Reverse Voltage



Typical Clamping Voltage vs. Current



Typical Forward Voltage vs. Forward Current

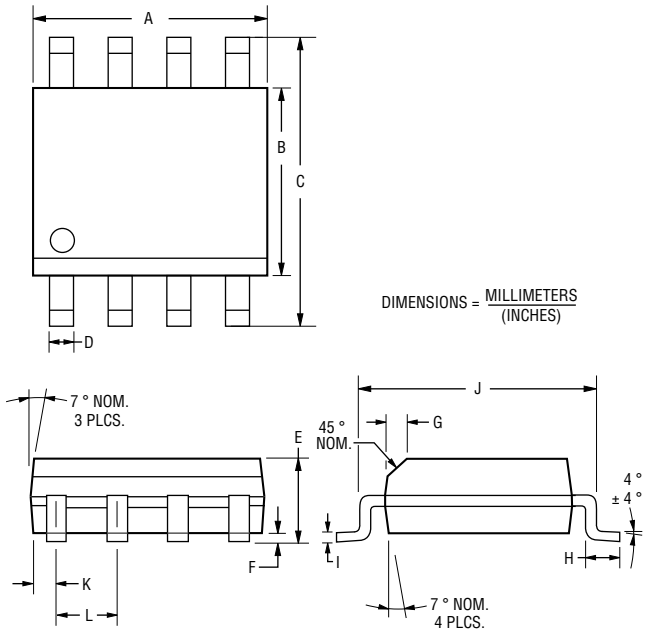


CDNBS08-T58CC - Common Cathode TVS Diode

BOURNS®

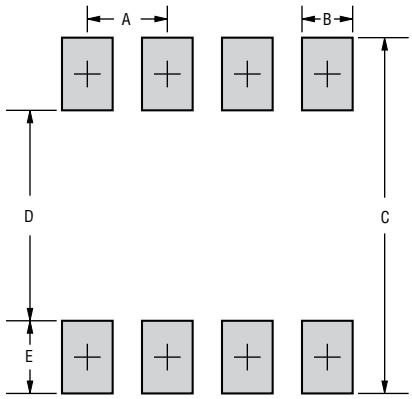
Product Dimensions

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

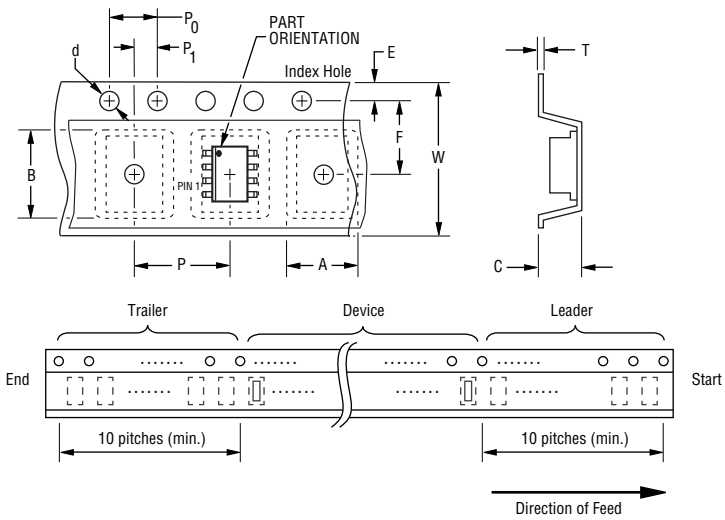
Model
T = Transient Voltage Suppressor

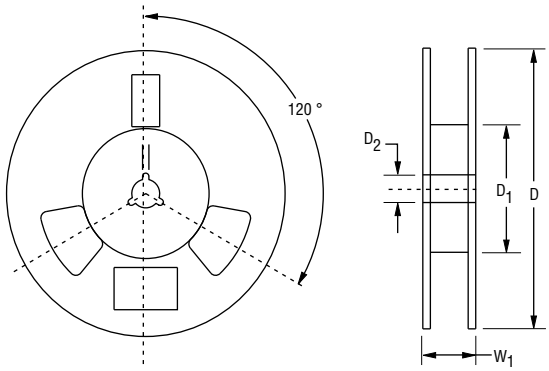
Working Peak Reverse Voltage
58 = 58 VDC

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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