



COAXIAL

# Termination

## BTRM-50CN+

50Ω DC to 4 GHz BNC-Male

### THE BIG DEAL

- BNC-Male Connector
- Excellent Return Loss, 26 dB typ.
- Built-in chain to attach to equipment rack



Generic photo used for illustration purposes only

Model No.	BTRM-50CN+
Case Style	LL1188
Connectors	BNC-Male

### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our website for methodologies and qualifications

### APPLICATIONS

- Cellular Communications
- Satellite Communications
- Test set-up

### PRODUCT OVERVIEW

Mini-Circuits' BTRM-50CN+ is a wideband 50Ω termination capable of absorbing signals up to 0.5W from DC to 4 GHz. This model provides excellent return loss across its entire operating frequency range, effectively dissipating power with minimal signal reflection. The unit features a BNC-Male connector with rugged construction for a long life of use and comes in a Tri-metal plated case measuring only 1.46 (l) x 0.58" (dia.)

### KEY FEATURES

Features	Advantages
Wideband, DC to 4 GHz	Wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.
Good Return Loss, 26 dB typ.	Good return loss minimizes signal reflections across multiple-decade frequency range.
BNC-Male Connector	Provides termination for assemblies using BNC connector types without the need for additional adapters.
Power Handling up to 0.5W	BTRM-50CN+ meets a wide range of system power requirements in a small device size.
Wide Operating Temperature range, -55 to +100 °C	Withstands tough operating conditions and is suitable for use near high power componentry where heat rise is common.

REV. A  
ECO-016435  
BTRM-50CN+  
MCL NY  
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Mini-Circuits

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### ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	–	4	GHz
Impedance		50			Ohms
Return Loss	DC - 0.5	40	43	–	dB
	0.5 - 1	35	41	–	
	1 - 2	30	37	–	
	2 - 4	20	26	–	
Input Power <sup>1</sup>	DC - 4	–	0.5	–	W

1. At 70°C, derate linearly at 5mW/°C to 350mW at 100°C

### ABSOLUTE MAXIMUM RATINGS<sup>1</sup>

Parameter	Ratings
Operating Temperature	-55 °C to +100 °C
Storage Temperature	-55 °C to +100 °C

1. Permanent damage may occur if any of these limits are exceeded.



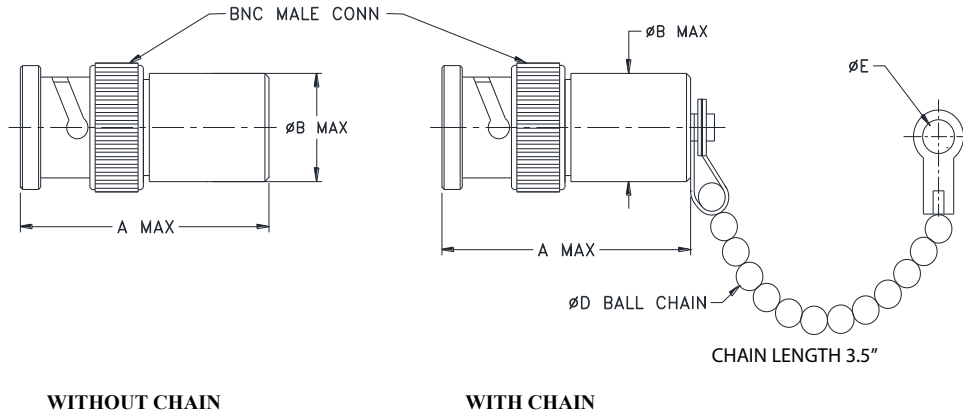
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### OUTLINE DRAWING



### OUTLINE DIMENSIONS (Inch/mm)

A	B	D	E	wt grams.	
1.46	.58	0.126	.15	17.4	20.2
37.08	14.73	3.20	3.8	<i>with chain</i>	



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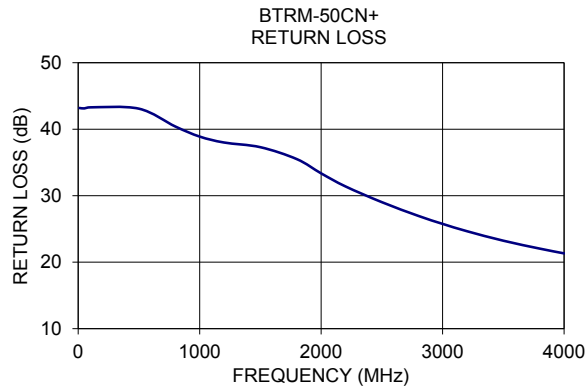
# Termination

**BTRM-50CN+**

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## TYPICAL PERFORMANCE DATA

Frequency (MHz)	Return Loss (dB)
10	43.19
100	43.29
500	43.09
800	40.40
1000	38.89
1500	37.29
1800	35.50
2000	33.36
2500	29.03
2800	26.96
3000	25.76
3500	23.23
4000	21.32



### NOTES

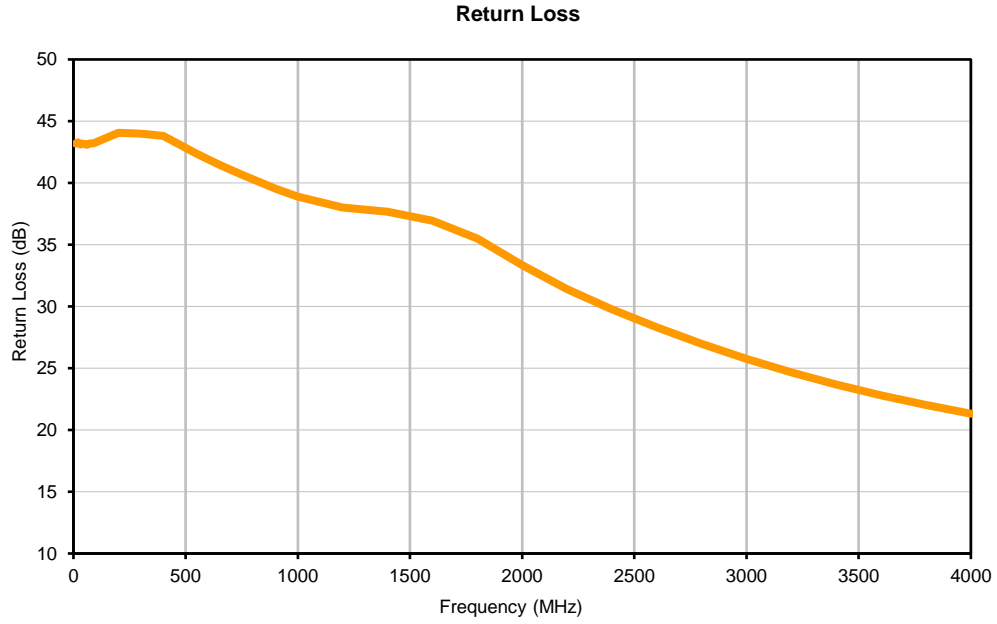
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/terms/viewterm.html](http://www.minicircuits.com/terms/viewterm.html)



## Typical Performance Data

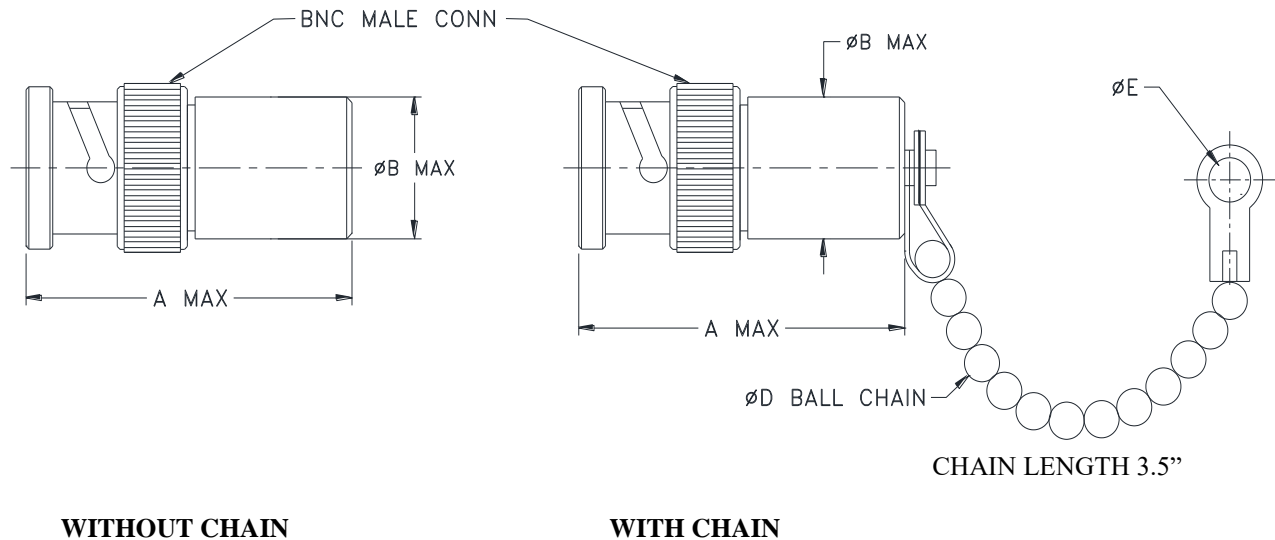
FREQUENCY (MHz)	RETURN LOSS (dB)
10	43.19
20	43.29
30	43.11
40	43.20
50	43.13
60	43.08
70	43.20
90	43.22
100	43.29
200	44.06
300	43.99
400	43.80
550	42.37
650	41.48
750	40.68
900	39.54
1000	38.89
1200	38.00
1400	37.68
1600	36.95
1800	35.50
2000	33.36
2200	31.40
2400	29.76
2600	28.31
2800	26.96
3000	25.76
3200	24.66
3400	23.69
3600	22.81
3800	22.04
4000	21.32

## Typical Performance Curves



## Outline Dimensions

LL1188



WITHOUT CHAIN

WITH CHAIN

CASE #.	A	B	D	E	WT, GRAMS	WT WITH CHAIN, GRAMS
LL1188	1.46 (37.08)	.58 (14.73)	.126 (3.20)	.15 (3.80)	17.4	20.2

Dimensions are in inches (mm). Tolerances: 2Pl. ± .03; 3Pl. ± .015

### Notes:

1. Case material: Brass.
2. Finish: Trimetal plated.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

<b>Specification</b>	<b>Test/Inspection Condition</b>	<b>Reference/Spec</b>
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I