



# Termination

**KARN-50-18+**

50Ω DC to 18 GHz N-Type-Male

**FEATURES**

- Wideband Coverage, DC to 18 GHz
- 2 Watt Rating
- Rugged Construction
- Brass Body with Trimetal Finish

**APPLICATIONS**

- Cellular Communications
- Satellite Communications
- Defense communications
- Test Set-up

*Generic photo used for illustration purposes only*

Model No.	KARN-50-18+
Case Style	LL718
Connectors	N-Type-Male

**+RoHS Compliant**

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

**PRODUCT OVERVIEW**

Mini-Circuits' KARN-50-18+ is a wideband 50Ω termination capable of absorbing signals up to 2W from DC to 18000 MHz. This model provides excellent return loss across its entire operating frequency range, effectively dissipating power with minimal signal reflection. The unit features and N-Male connector with rugged construction for a long life of use and comes in a Cu-Sn-Zn plated brass case.

**KEY FEATURES**

Features	Advantages
Wideband, DC to 18 GHz	Extremely wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.
Good Return Loss, 18 dB min. up to 18 GHz	Good return loss minimizes signal reflections across multiple-decade frequency range
Power handling	KARN-50-18+ meets a wide range of system power requirements
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



## ELECTRICAL SPECIFICATIONS

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	18	GHz
Impedance		50			Ohm
Return Loss	DC - 0.5	33	—	—	dB
	DC - 1	33	—	—	
	DC - 2	30	—	—	
	DC - 4	30	—	—	
	DC - 8	26	—	—	
	DC - 12	20	—	—	
	DC - 18	18	—	—	
Power Rating <sup>1</sup>	DC - 18	—	—	2	W

1. At 70°C, derate linearly at 0.025W/°C.

## ABSOLUTE MAXIMUM RATINGS

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

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



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# Termination

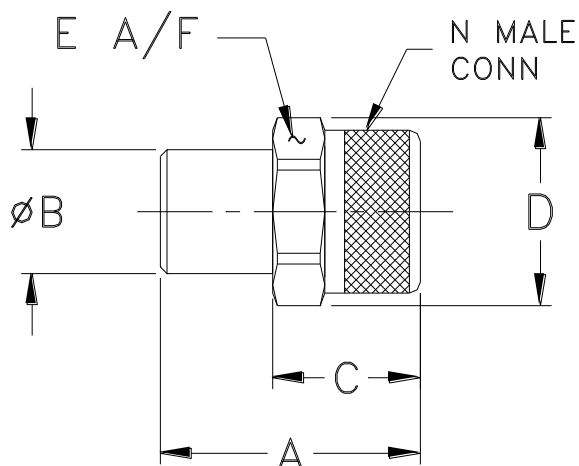
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## COAXIAL CONNECTIONS

Connectors	N-Type-Male
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## OUTLINE DRAWING



## OUTLINE DIMENSIONS (Inch mm)

A	B	C	D	E	wt
1.18	0.56	0.67	0.85	0.787	grams
29.97	14.22	17.02	21.59	19.99	30.0



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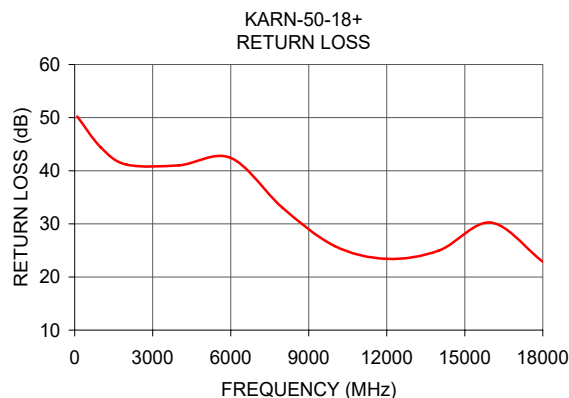
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## TYPICAL PERFORMANCE DATA AND CHARTS

Frequency (MHz)	Return Loss (dB)
100	50.21
1000	44.44
2000	41.16
4000	41.02
6000	42.43
8000	32.99
10000	25.82
12000	23.41
14000	24.96
16000	30.24
18000	22.88



### NOTES

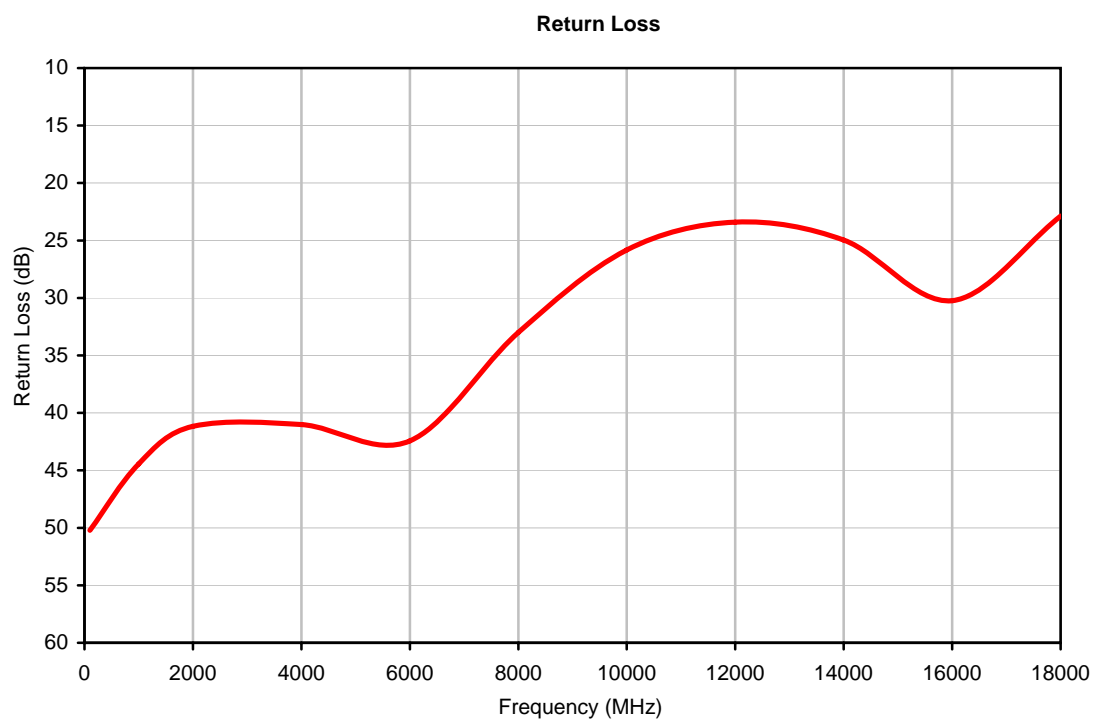
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
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## *Typical Performance Data*

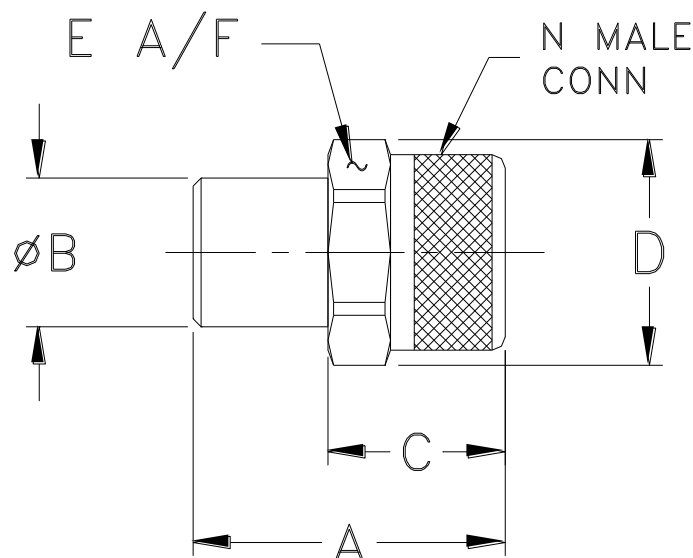
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## Typical Performance Curves



## Outline Dimensions

LL718



CASE #.	A	B	C	D	E	WT GRAMS
LL718	1.18 (30.00)	.56 (14.22)	.67 (17.02)	.85 (21.59)	.787 (20.00)	30.0

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

### Notes:

1. Case Material: Brass.
2. Case Finish: Tri-metal (Cu-Sn-Zn) plate.



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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.

Specification	Test/Inspection Condition	Reference/Spec
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