

**THE BIG DEAL**

- Ultra-Wideband, DC to 40 GHz
- Excellent Return Loss, 25 dB typ. up to 40 GHz
- Quick-Turn, 1 Turn
- Mates with SMA, K, and 3.5 mm Connector Types

*Generic photo used for illustration purposes only*

Model No.	ANNEQ-50K+
Case Style	LL2699-2
Connectors	2.92 mm-Male Quick-Turn

+RoHS Compliant

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

APPLICATIONS

- Test and Measurement Equipment
- Test Labs

PRODUCT OVERVIEW

Mini-Circuits' ANNEQ-50K+ is an ultra-wideband 50Ω quick turn termination that enables quick connect and disconnect in test system which saves time. It provides excellent return loss across its entire operating frequency range, effectively dissipating signal power with minimal reflections.

KEY FEATURES

Features	Advantages
Quick Turn: 1 turn	Ideal for test application Quick connect/disconnect reduces test time and cost.
Ultra-Wideband, DC to 40 GHz	Extremely wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.
Good Return Loss: <ul style="list-style-type: none">• 27 dB typ up to 18 GHz• 27 dB typ up to 40 GHz	Good return loss minimizes signal reflections across multiple-decade frequency range.
Power Handling up to 1W at 25°C	ANNEQ-50K+ 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.



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Termination

ANNEQ-50K+

50Ω DC to 40 GHz 2.92 mm-Male Quick Turn

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	40	GHz
Impedance		50			Ohms
Return Loss	DC - 4	19	36	—	dB
	4 - 18	19	27	—	
	18 - 30	19	24	—	
	30 - 40	19	27	—	
Input Power ¹	DC - 40	—	—	1	W

1. To 100°C, derate linearly to 325 mW at 100°C.

ABSOLUTE MAXIMUM RATINGS¹

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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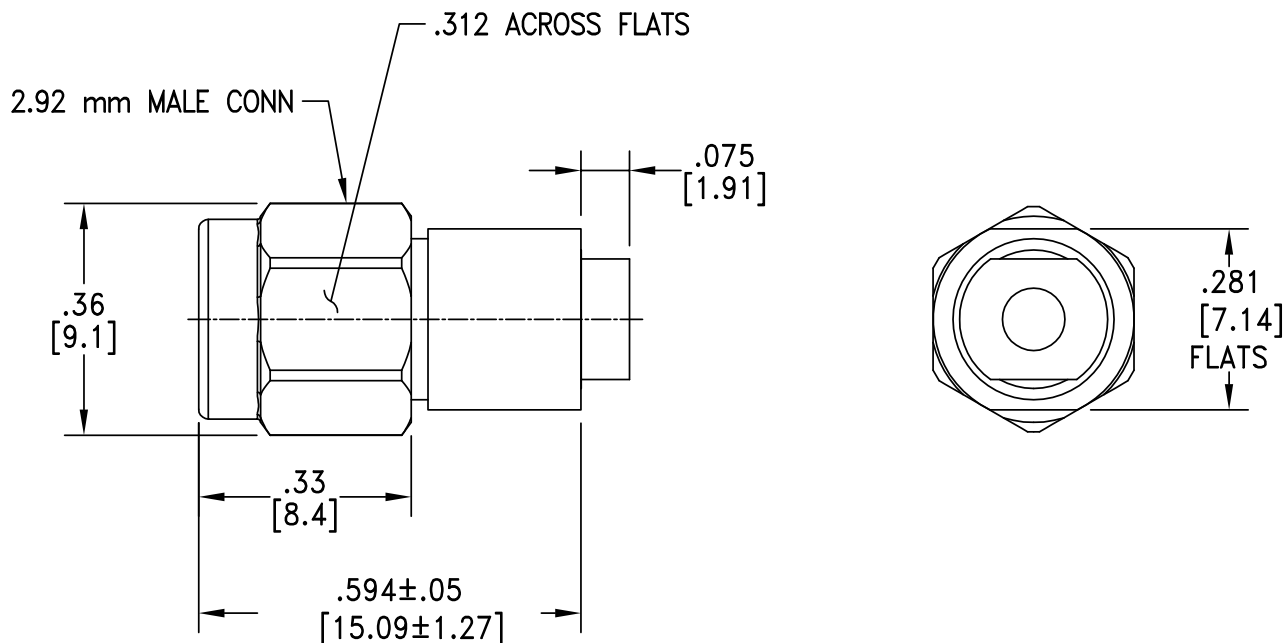
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ANNEQ-50K+

50Ω DC to 40 GHz 2.92 mm-Male Quick Turn

OUTLINE DRAWING



Weight: 4.5 grams

Dimensions are in inches [mm]



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Termination

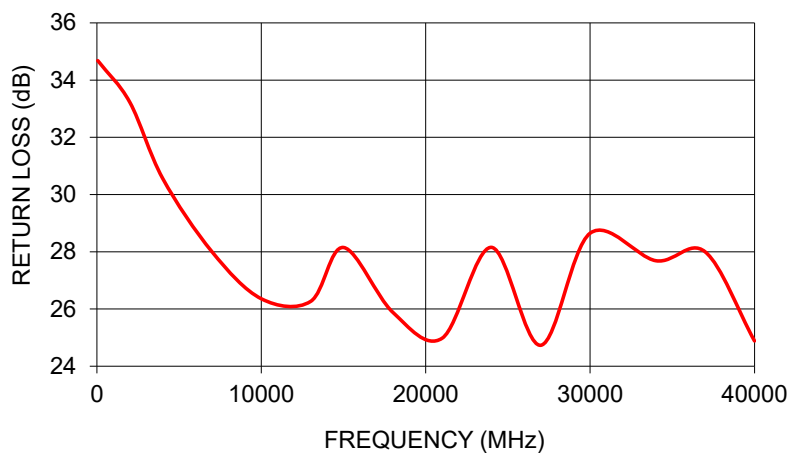
ANNEQ-50K+

50Ω DC to 40 GHz 2.92 mm-Male Quick Turn

TYPICAL PERFORMANCE DATA

Frequency (MHz)	Return Loss (dB)
50	34.68
2000	33.22
4000	30.56
7000	28.00
10000	26.36
13000	26.27
15000	28.15
18000	25.88
21000	24.98
24000	28.15
27000	24.73
30000	28.65
34000	27.69
37000	28.00
40000	24.88

ANNEQ-50K+
RETURN LOSS



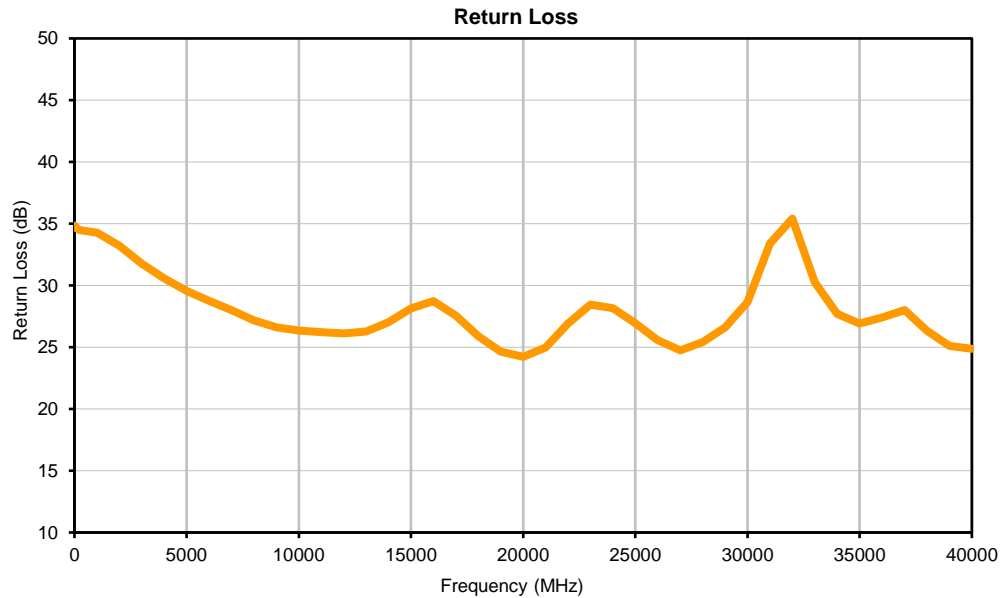
NOTES

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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



Typical Performance Data

FREQUENCY (MHz)	RETURN LOSS (dB)
10	34.84
50	34.68
100	34.65
200	34.48
1000	34.29
2000	33.22
3000	31.76
4000	30.56
5000	29.57
6000	28.77
7000	28.00
8000	27.18
9000	26.62
10000	26.36
11000	26.21
12000	26.11
13000	26.27
14000	27.03
15000	28.15
16000	28.73
17000	27.56
18000	25.88
19000	24.65
20000	24.22
21000	24.98
22000	26.93
23000	28.44
24000	28.15
25000	26.94
26000	25.56
27000	24.73
28000	25.43
29000	26.61
30000	28.65
31000	33.41
32000	35.42
33000	30.27
34000	27.69
35000	26.92
36000	27.43
37000	28.00
38000	26.34
39000	25.10
40000	24.88

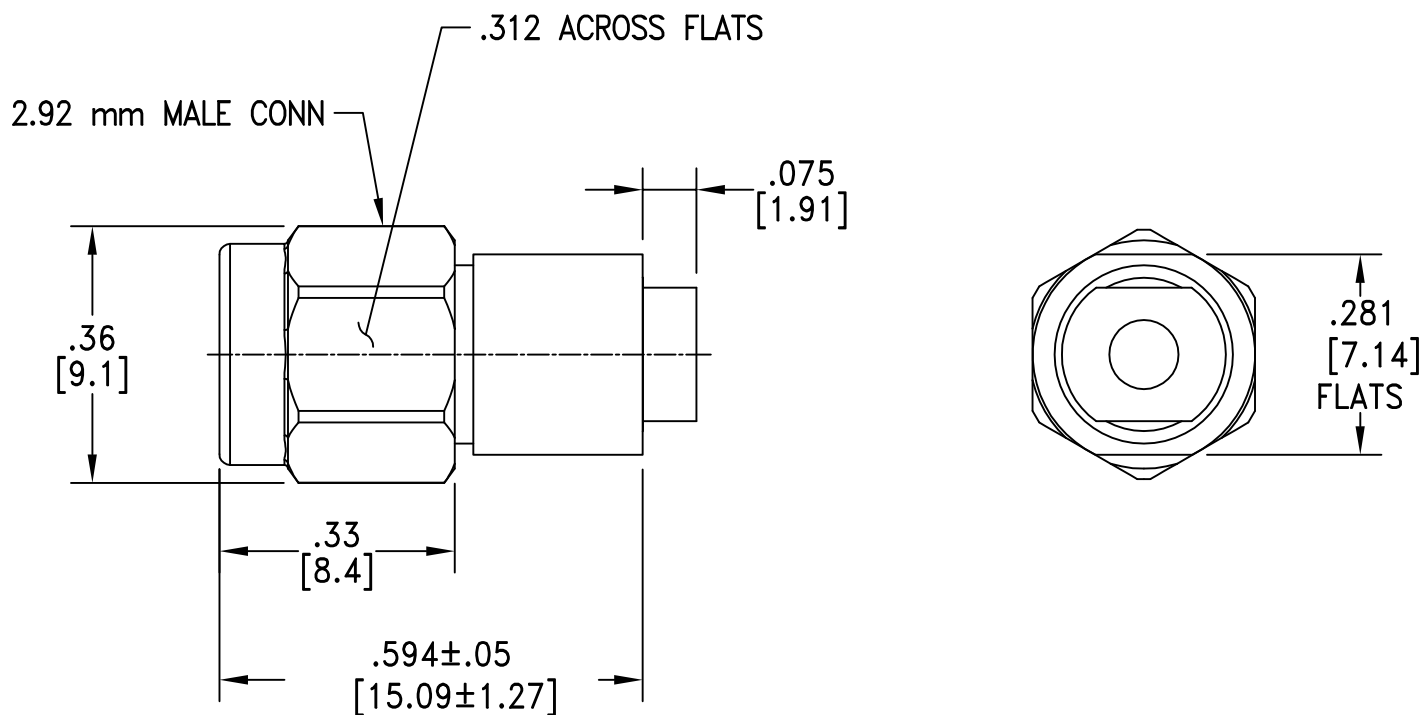
Typical Performance Curves

Case Style

Outline Dimensions

LL

LL2699-2



Weight: 4.5 grams.

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

Notes:

1. Case material: Stainless Steel..
2. Finish: Passivation.
3. For polarity of connector refer individual model data sheet.

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ISO 9001 ISO 14001 CERTIFIED

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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 or -55° to 85° C or -45° to 100° C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition B except over - 55° to 100°C
Connector Durability	500 mating/unmating cycles	MIL-PRF-39012E, PARAGRAPH 4.6.12
Drop Test	1 meter height, 5 times	