COAXIAL

Termination

ANNEF-50K+

50Ω DC to 40 GHz 2.92 mm Female

THE BIG DEAL

- Ultra-Wideband, DC to 40 GHz
- Excellent Return Loss, 26 dB typ. up to 40 GHz
- Input Power Handling up to 1 W
- Mates with 3.5 mm and SMA Connector Types



Generic photo used for illustration purposes only

Model No.	ANNEF-50K+
Case Style	LL2592
Connectors	2.92 mm Female

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

APPLICATIONS

- Test and Measurement Equipment
- Test Labs
- Defense and Aerospace
- Q and V band Communication Links

PRODUCT OVERVIEW

Mini-Circuits' ANNEF-50K+ is an ultra-wideband 50Ω termination capable of absorbing signals up to 1 W from DC to 40 GHz. It provides excellent return loss across its entire operating frequency range, effectively dissipating signal power with minimal reflections. This model has a 2.92 mm-female connector, mechanically compatible with 3.5 mm male and SMA male connectors. The unit features rugged construction for a long life of use and comes in a passivated stainless steel case measuring only 0.61"(l) x 0.31" (dia.).

KEY FEATURES

Features	Advantages
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: 26 dB up to 40 GHz	Good return loss minimizes signal reflections across multiple-decade frequency range.
2.92 mm connector mates with 3.5 mm and SMA connectors	Provides flexible connection options, avoiding the need for extra adapters.
Power Handling up to 1 W	ANNEF-50K+ meets a wide range of system power requirements in a small device size.
Wide Operating Temperature Range, -55 to +125 °C	Withstands tough operating conditions and is suitable for use near high power componentry where heat rise is common.

REV. A
ECO-016342
ANNEF-50K+
MCL NY
260429

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ELECTRICAL SPECIFICATIONS AT 25 °C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	40	GHz
Impedance			50		Ohms
Return Loss	DC - 40	19.1	26	—	dB
Input Power[1]	DC - 40	—	—	1	W

1. At 25 °C, derate linearly to 100 mW at 125 °C.

ABSOLUTE MAXIMUM RATINGS[2]

Parameter	Ratings
Operating Temperature	-55 °C to +125 °C
Storage Temperature	-55 °C to +125 °C

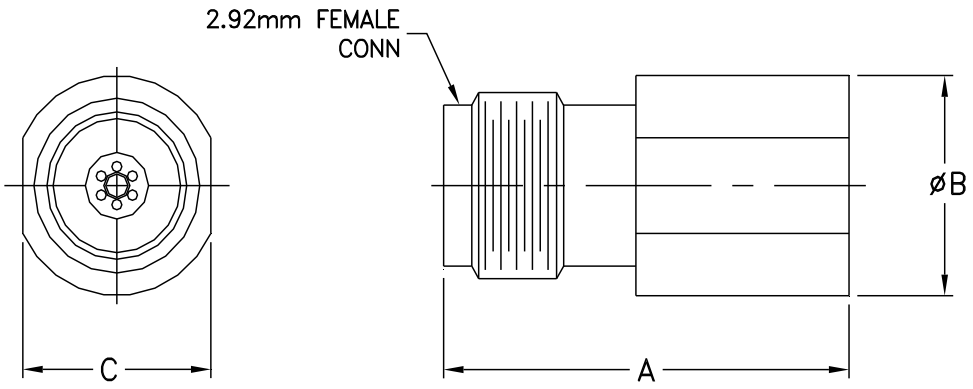
2. Permanent damage may occur if any of these limits are exceeded.

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OUTLINE DRAWING



OUTLINE DIMENSIONS (Inch / mm)

A	B	C	D	E	wt
.605	.312	.281	_	_	grams
15.4	7.9	7.1	_	_	4.2

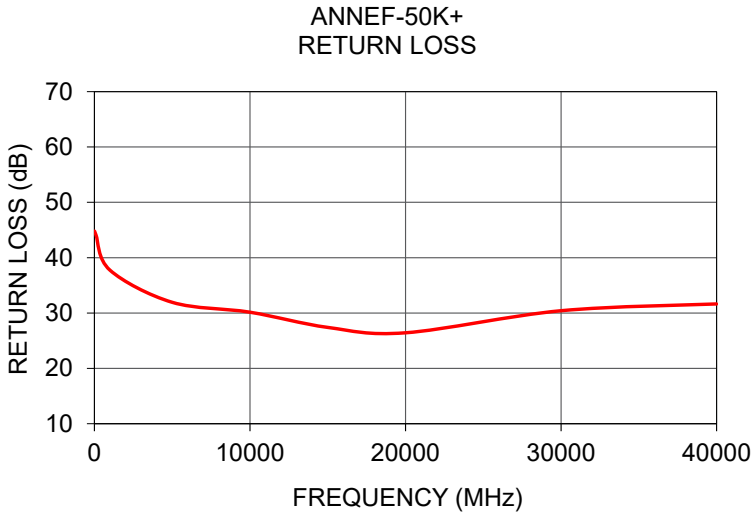
Termination

ANNEF-50K+

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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Return Loss (dB)
10	44.79
100	44.11
1000	37.75
5000	31.94
10000	30.15
15000	27.40
20000	26.43
30000	30.42
40000	31.64



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

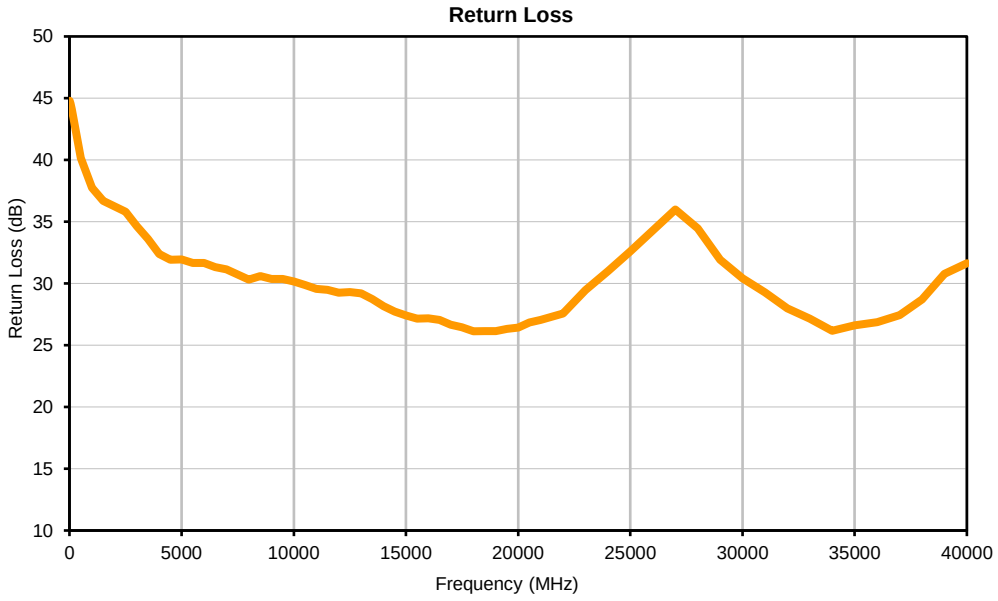
Termination 50Ω, 2.92mm-Female ANNEF-50K+

Typical Performance Data

FREQUENCY (MHz)	RETURN LOSS (dB)
10	44.79
50	44.56
100	44.11
500	40.15
1000	37.75
1500	36.69
2000	36.26
2500	35.80
3000	34.64
3500	33.60
4000	32.38
4500	31.91
5000	31.94
5500	31.67
6000	31.67
6500	31.32
7000	31.16
7500	30.74
8000	30.31
8500	30.60
9000	30.35
9500	30.37
10000	30.15
10500	29.89
11000	29.57
11500	29.49
12000	29.24
12500	29.31
13000	29.19
13500	28.73
14000	28.16
14500	27.72
15000	27.40
15500	27.15
16000	27.18
16500	27.06
17000	26.67
17500	26.44
18000	26.13
18500	26.14
19000	26.14
19500	26.33
20000	26.43
20500	26.84
21000	27.06
22000	27.58
23000	29.47
24000	31.00
25000	32.60
26000	34.29
27000	36.00
28000	34.45
29000	31.93
30000	30.42
31000	29.29
32000	27.98
33000	27.16
34000	26.18
35000	26.62
36000	26.87
37000	27.44
38000	28.71
39000	30.78
40000	31.64

Termination 50Ω, 2.92mm-Female ANNEF-50K+

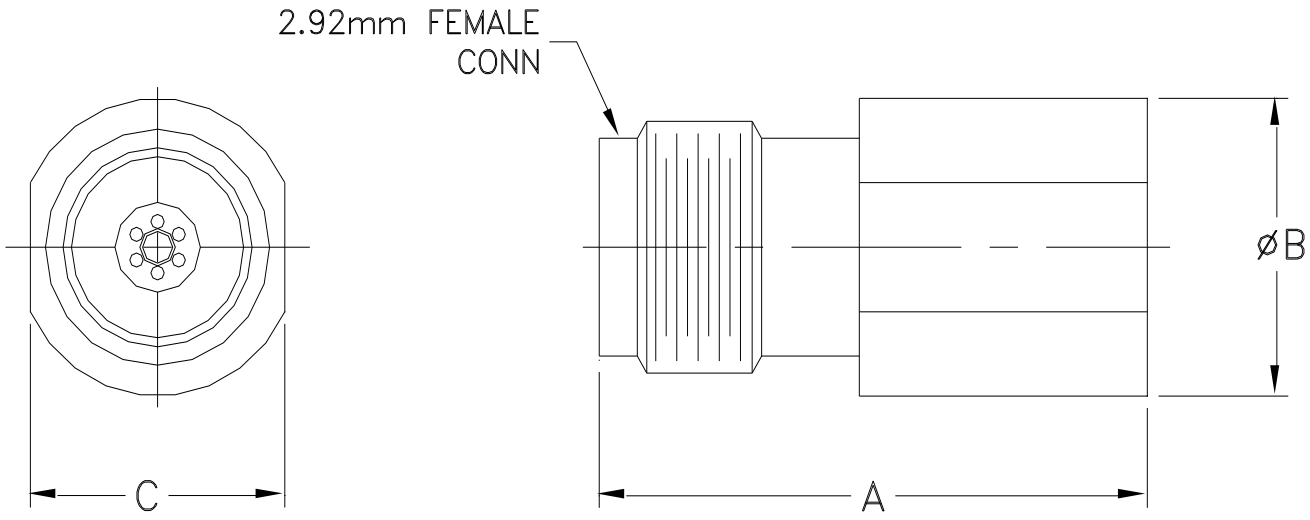
Typical Performance Curves



Case Style LL

Outline Dimensions

LL2592



CASE #	A	B	C	D	E	WT. GRAM
LL2592	.605 (15.4)	.312 (7.9)	.281 (7.1)	-- --	-- --	4.2

Dimensions are in inches (mm). Tolerances: 2Pl. ± .030; 3Pl. ± .015

Notes:

1. Case material: Stainless Steel.
2. Case Finish: Passivated.

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Mini-Circuits

Environmental Specifications ENV28

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

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