COAXIAL

Termination

ANNEF-50V+

50Ω DC to 50 GHz 2.4 mm Female

THE BIG DEAL

- Ultra-Wideband, DC to 50 GHz
- Excellent Return Loss, 20 dB typ. up to 50 GHz
- Input Power Handling up to 1 W
- Mates with 1.85 mm, 3.5 mm, 2.92 mm and SMA Connectors Types



Generic photo used for illustration purposes only

Model No.	ANNEF-50V+
Case Style	LL2592-1
Connectors	2.4 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
- 5G Applications
- Q and V band Communication Links

PRODUCT OVERVIEW

Mini-Circuits' ANNEF-50V+ is an ultra-wideband 50Ω termination capable of absorbing signals up to 1 W from DC to 50 GHz. It provides excellent return loss across its entire operating frequency range, effectively dissipating signal power with minimal reflections. This model has a 2.4 mm-female connector, mechanically compatible with 1.85 mm, 3.5 mm, 2.92 mm and SMA 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 50 GHz	Extremely wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.
Good Return Loss, 20 dB up to 50 GHz	Good return loss minimizes signal reflections across multiple-decade frequency range.
2.4 mm connector mates with 1.85 mm, 3.5 mm, 2.92 mm and SMA connectors	Provides flexible connection options, avoiding the need for extra adapters.
Power Handling up to 1 W	ANNEF-50V+ 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-016342
ANNEF-50V+
MCL NY
260429

ELECTRICAL SPECIFICATIONS AT 25 °C

Parameter	Condition (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	50	GHz
Impedance			50		Ohms
Return Loss	DC - 18	23	41	—	dB
	18 - 35	17	30	—	
	35 - 50	14.8	23	—	
Input Power[1]	DC - 50	—	—	1	W

1. At 25 °C, derate linearly to 325 mW at 100 °C.

ABSOLUTE MAXIMUM RATINGS[2]

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

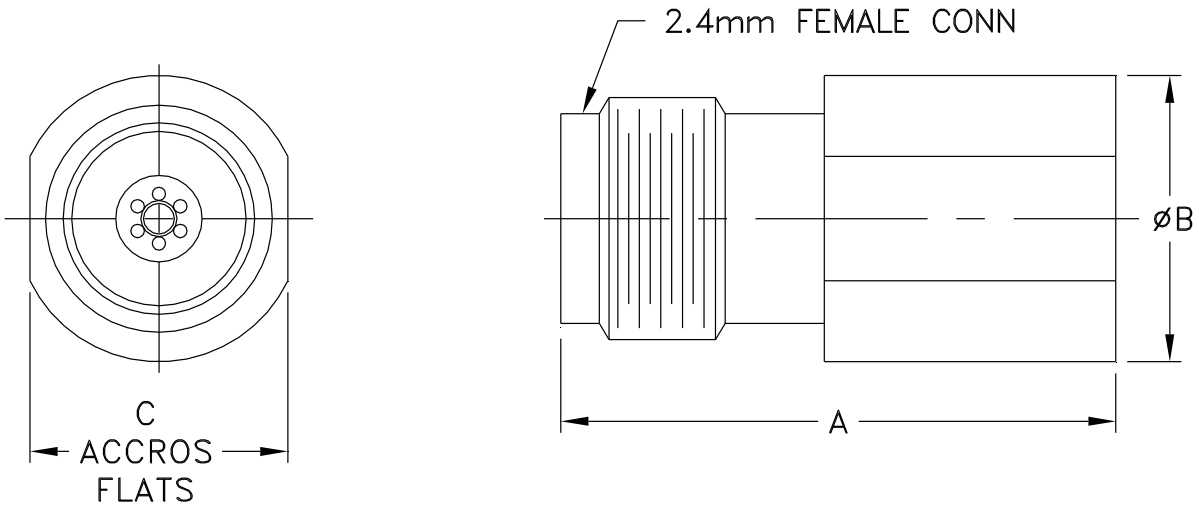
2. Permanent damage may occur if any of these limits are exceeded.

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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	_	_	4.5

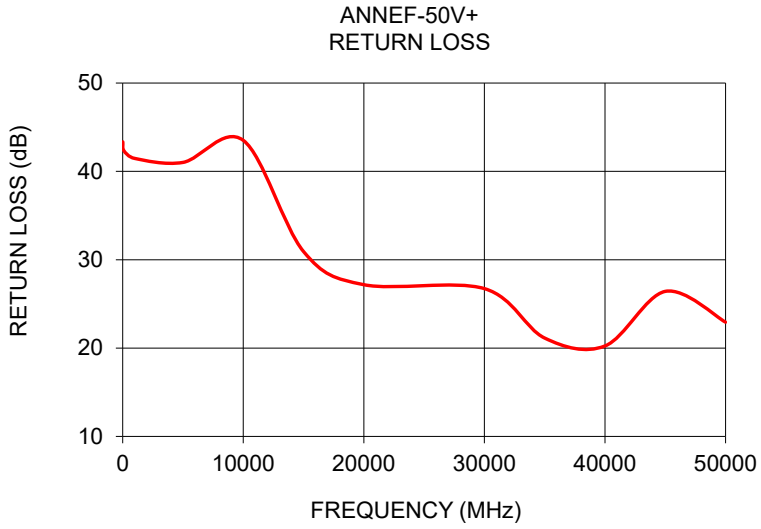
Termination

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TYPICAL PERFORMANCE DATA

Frequency (MHz)	Return Loss (dB)
10	43.3
100	42.3
1000	41.5
5000	41.0
10000	43.5
15000	30.9
20000	27.2
30000	26.7
35000	21.1
40000	20.2
45000	26.4
50000	22.9



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-Circuits' 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

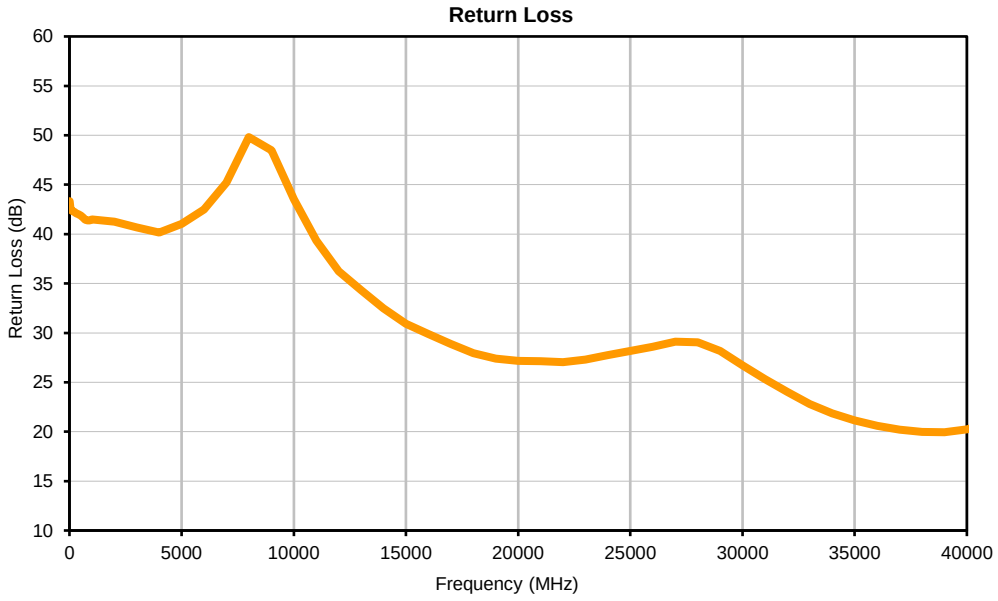
Termination 50Ω, 2.4mm-Female ANNEF-50V+

Typical Performance Data

FREQUENCY (MHz)	RETURN LOSS (dB)
10	43.34
50	42.51
100	42.34
200	42.25
300	42.08
400	42.00
500	41.88
600	41.67
700	41.46
800	41.38
900	41.39
1000	41.47
2000	41.26
3000	40.68
4000	40.17
5000	41.02
6000	42.48
7000	45.20
8000	49.81
9000	48.48
10000	43.51
11000	39.34
12000	36.24
13000	34.31
14000	32.48
15000	30.92
16000	29.88
17000	28.88
18000	27.96
19000	27.41
20000	27.17
21000	27.13
22000	27.03
23000	27.31
24000	27.75
25000	28.17
26000	28.60
27000	29.10
28000	29.03
29000	28.16
30000	26.73
31000	25.32
32000	24.02
33000	22.81
34000	21.87
35000	21.13
36000	20.60
37000	20.21
38000	19.96
39000	19.95
40000	20.24
41000	20.86
42000	21.71
43000	22.99
44000	24.66
45000	26.42
46000	28.03
47000	28.19
48000	27.09
49000	24.74
50000	22.93

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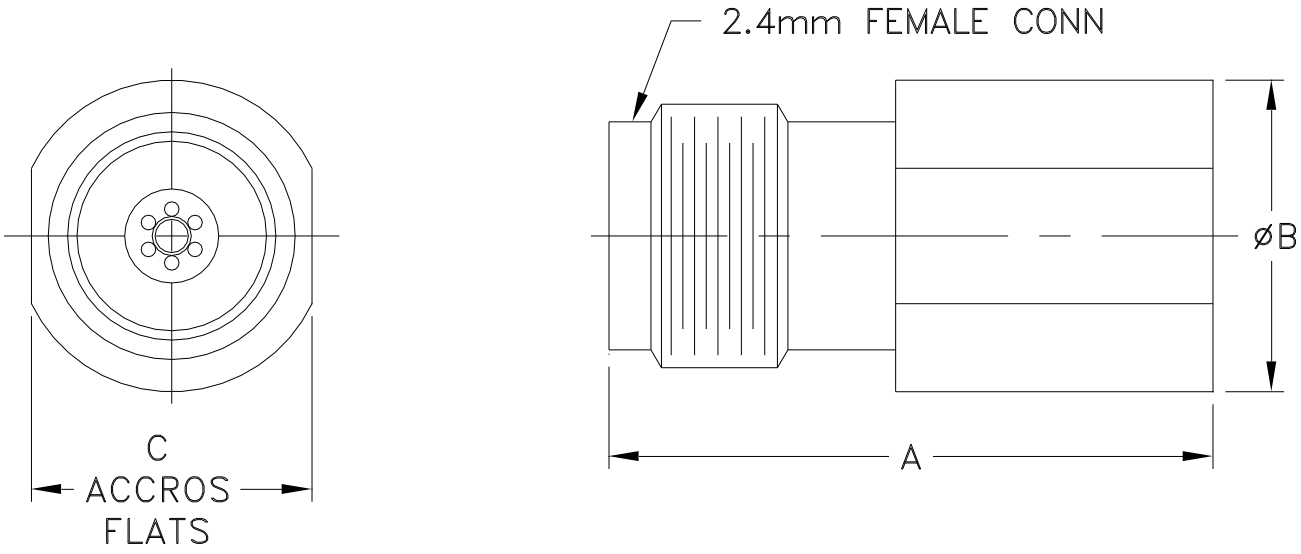
Typical Performance Curves



Case Style LL

Outline Dimensions

LL2592-1



CASE #	A	B	C	D	E	WT. GRAM
LL2592-1	.605 (15.4)	.312 (7.9)	.281 (7.1)	-- --	-- --	4.5

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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