COAXIAL

Termination

SMPF-TERM50+

50Ω DC to 18000 MHz SMP-Female

FEATURES

- SMP-Female Connector
- Excellent Return Loss, 26 dB up to 8 GHz; 20 dB up to 18 GHz
- Input Power Handling up to 1W

Generic photo used for illustration purposes only

Model No.	SMPF-TERM50+
Case Style	LL2145
Connectors	SMP-Female

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

APPLICATIONS

- Cellular Communications
- Test Setup
- Instrumentation
- Defense & Radar

PRODUCT OVERVIEW

Mini-Circuits' SMPF-TERM50+ is a wideband 50Ω termination capable of absorbing signals up to 1W from DC to 18 GHz. This model provides excellent return loss across its entire operating frequency range, effectively dissipating power with minimal signal reflection. The unit features and SMP-F connector with rugged construction for a long life of use and comes in a gold-plated beryllium copper case measuring only 0.5 (l) x 0.19" (dia.).

KEY FEATURES

Feature	Advantages
Wideband, DC to 18 GHz	Wide frequency range provides application flexibility and makes this model ideal for broadband and multi-band use.
Good Return Loss: • 26 dB up to 8 GHz • 20 dB up to 18 GHz	Good return loss minimizes signal reflections across multiple-decade frequency range.
SMP-Female Connector	Provides termination for assemblies using SMP connector types without the need for additional adapters.
Power Handling up to 1W	SMPF-TERM50+ 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. B
ECO-016503
SMPF-TERM50+
MCL NY
230118

Termination

SMPF-TERM50+

50Ω DC to 18000 MHz SMP-Female

ELECTRICAL SPECIFICATIONS AT 25°C

Parameter	Condition (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC	—	18000	MHz
Impedance			50		Ohms
Return Loss	DC - 4000	26	32	—	dB
	4000 - 8000	17	26	—	
	8000 - 18000	16	20	—	
Input Power[1]	DC - 18000	—	—	1.0	W

1. At 50°C, derate linearly to 350mW at 100°C.

ABSOLUTE MAXIMUM RATINGS[1]

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.

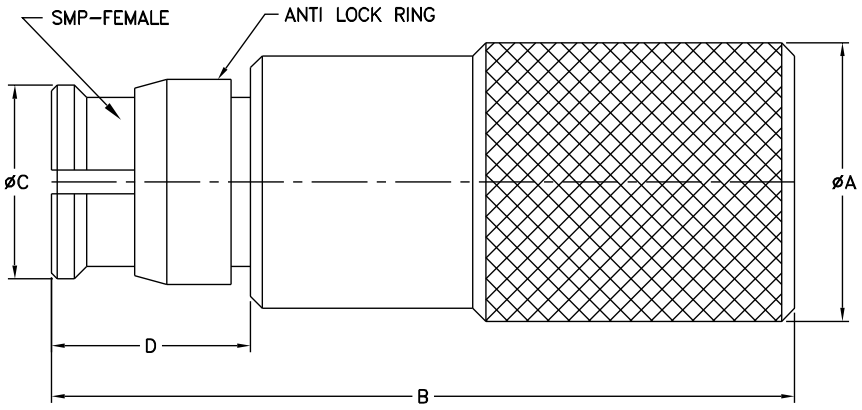
COAXIAL

Termination

SMPF-TERM50+

50Ω DC to 18000 MHz SMP-Female

OUTLINE DRAWING

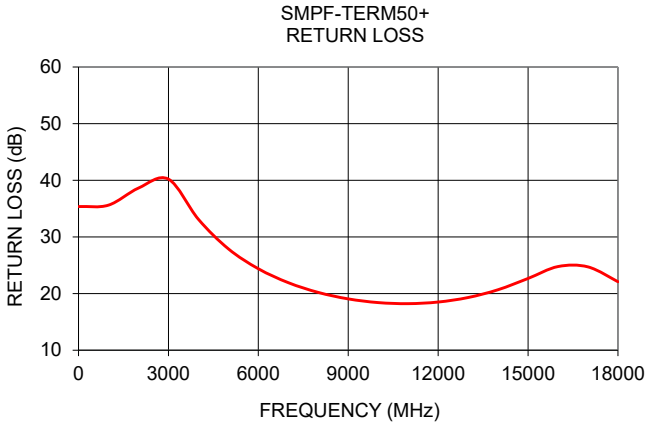


OUTLINE DIMENSIONS (Inch / mm)

A	B	C	D	E	wt
.189	.500	.130	.134	_	grams
4.8	12.7	3.3	3.4	_	0.8

TYPICAL PERFORMANCE DATA

Frequency (MHz)	Return Loss (dB)
10	35.36
1000	35.61
2000	38.63
3000	40.21
4000	33.12
5000	27.90
6000	24.39
7000	21.93
8000	20.21
9000	19.06
10000	18.41
11000	18.22
12000	18.51
13000	19.31
14000	20.68
15000	22.67
16000	24.77
17000	24.71
18000	22.09



NOTES

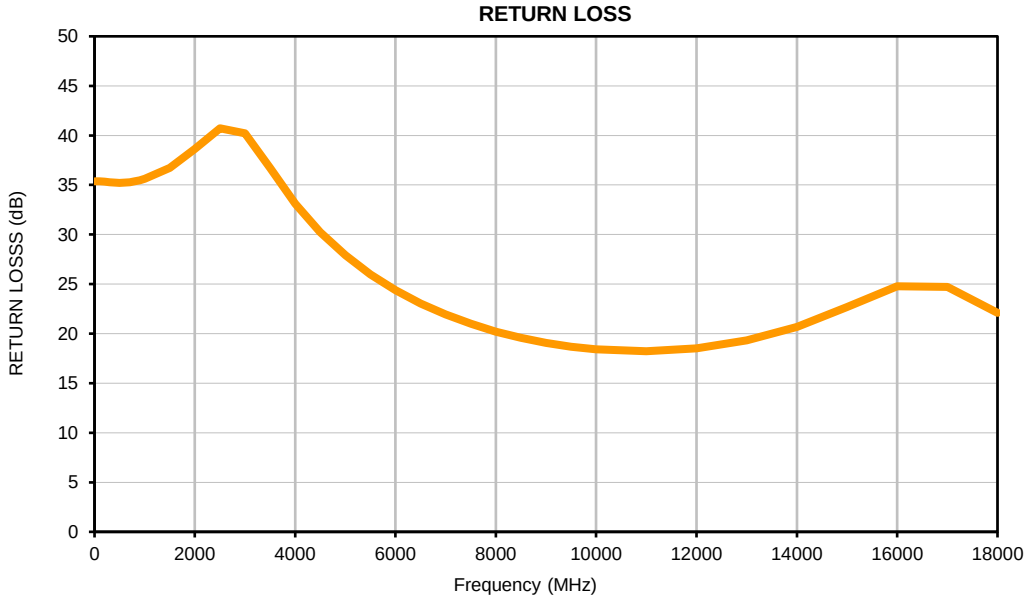
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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/MCLStore/terms.jsp

Termination 50Ω, SMP SMPF-TERM50+

Typical Performance Data

FREQUENCY (MHz)	RETURN LOSS (dB)
10	35.36
100	35.36
200	35.32
300	35.27
400	35.24
500	35.22
600	35.24
700	35.29
800	35.37
900	35.47
1000	35.61
1500	36.73
2000	38.63
2500	40.72
3000	40.21
3500	36.68
4000	33.12
4500	30.24
5000	27.90
5500	25.98
6000	24.39
6500	23.05
7000	21.93
7500	20.99
8000	20.21
8500	19.57
9000	19.06
9500	18.68
10000	18.41
11000	18.22
12000	18.51
13000	19.31
14000	20.68
15000	22.67
16000	24.77
17000	24.71
18000	22.09

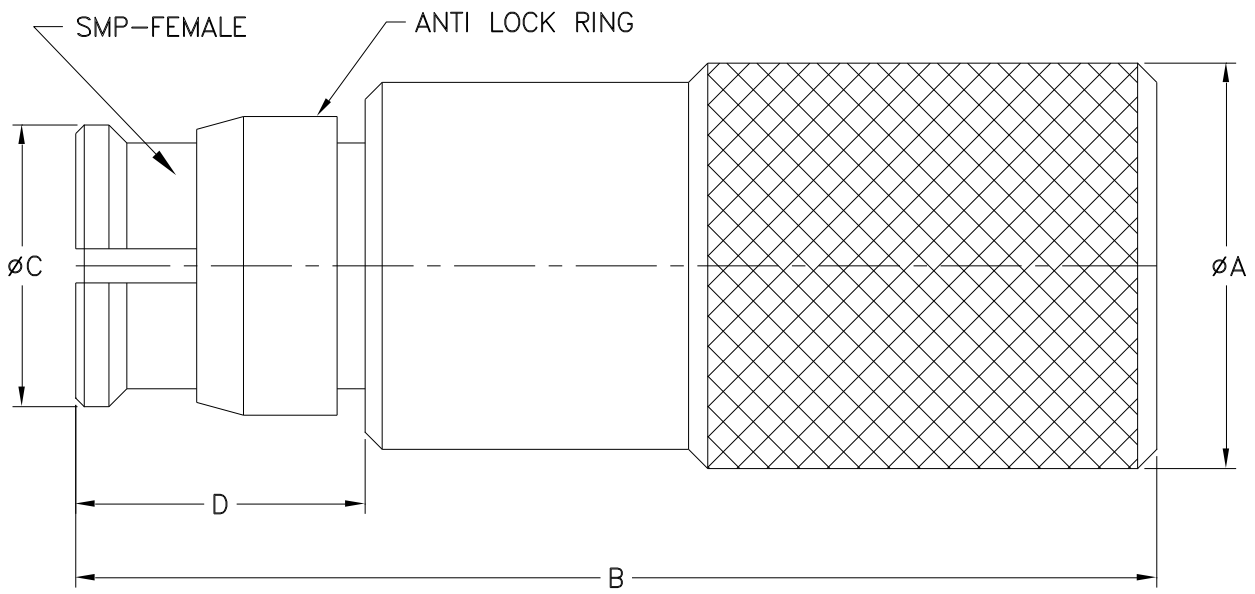
Typical Performance Curves



Case Style LL

Outline Dimensions

LL2145



CASE #	A	B	C	D	E	WT. GRAM
LL2145	.189 (4.8)	.500 (12.7)	.130 (3.3)	.134 (3.4)	– –	0.8

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

Notes:

1. Case material: Beryllium Copper.
2. Finish: Gold plating.

This document and its contents are the property of Mini-Circuits.

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

This document and its contents are the property of Mini-Circuits.