DC Pass

Matching Transformer

SFMP-5075+

50/75Ω DC to 2500 MHz



CASE STYLE: FF1891

The Big Deal

- Low Insertion loss, 0.4 dB typical
- 1W Power Handling
- DC Passing up to of 350mA
- SMA-F (50Ω) to F-Type-M (75Ω)

Product Overview

Mini-Circuits' SFMP-5075+ is a coaxial 50/75Ω matching transformer covering the DC to 2500 MHz frequency range, supporting impedance matching in a wide range of systems including CATV, broadband networks, and more. This model is ideal for 50/75Ω impedance matching in systems where minimizing overall signal loss is a priority. The transformer handles RF input power up to 1W and is capable of passing DC current up to 350mA. Measuring only 2.22 (l) x 0.67" (dia.), the transformer comes housed in a rugged, nickel-plated brass case with SMA-F (50Ω) to F-Type-M (75Ω) connectors.

Key Features

Feature	Advantages
Wideband, DC to 2500 MHz	Supports a wide variety of applications including CATV and DOCSIS® 3.1 systems and equipment.
Low insertion loss, 0.4 dB	Enables excellent signal power transmission from input to output, minimizing overall system losses.
1W power handling	Supports a range of system power requirements.
DC Passing up to 350mA	Supports applications where DC passing is needed through the RF line.
Compact size, 2.2 (l) x 0.67" (dia.)	Accommodates tight space requirements for crowded system layouts.
SMA-F (50Ω) to F-Type-M connectors	Supports connections between components with different connector types.

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

Mini-Circuits®
www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

DC Pass

Matching Transformer

SFMP-5075+

50/75Ω DC to 2500 MHz



CASE STYLE: FF1891

Connectors	Model
50Ω S-F	SFMP-5075+
75Ω F-M	

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
DC Current	350mA max.
DC Resistance	0.08Ω max.

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

Features

- Low matching loss of 0.4 dB typical
- Wideband coverage, DC-2500MHz
- Connectorized package

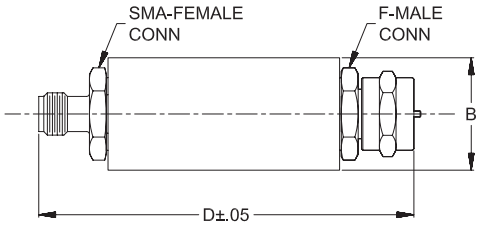
Applications

- Impedance matching
- General Wireless Communications

Coaxial Connections

Input	SMA-Female
Output	F-Male

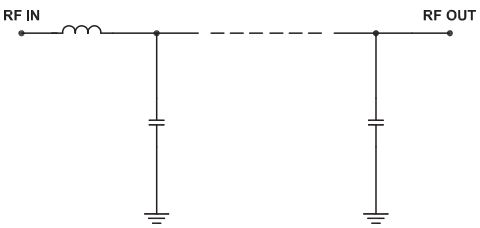
Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	Wt.
--	**.67**	**--**	**2.22**	**--**	grams
--	17.02	--	56.39	--	35

Config. D



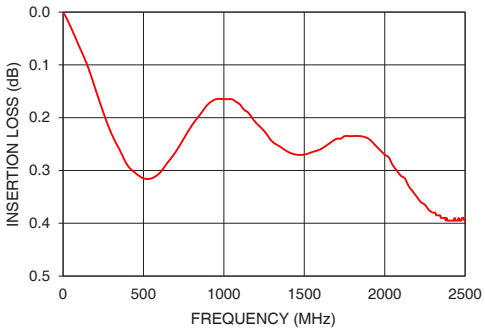
Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range	-	DC	-	2500	MHz
Insertion Loss	10	-	-	1.0	dB
	950-2500	-	0.4	1.2	
VSWR	10	-	-	1.8	:1
	950-2500	-	-	1.7	
Power	DC-2500	-	-	1	W

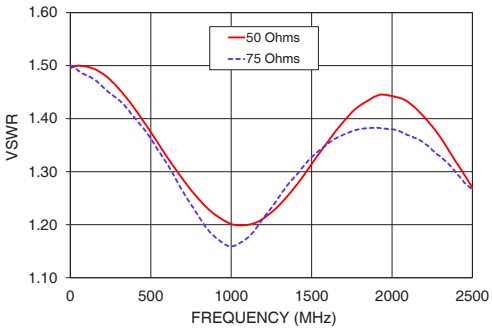
Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	VSWR	
		50 Ω	**75 Ω**
10	0.01	1.50	1.50
50	0.03	1.50	1.49
100	0.07	1.50	1.48
250	0.19	1.47	1.45
500	0.32	1.37	1.36
950	0.17	1.21	1.16
1000	0.17	1.20	1.16
1950	0.26	1.45	1.38
2300	0.38	1.37	1.33
2500	0.40	1.27	1.27

SFMP-5075+
INSERTION LOSS



SFMP-5075+
VSWR



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

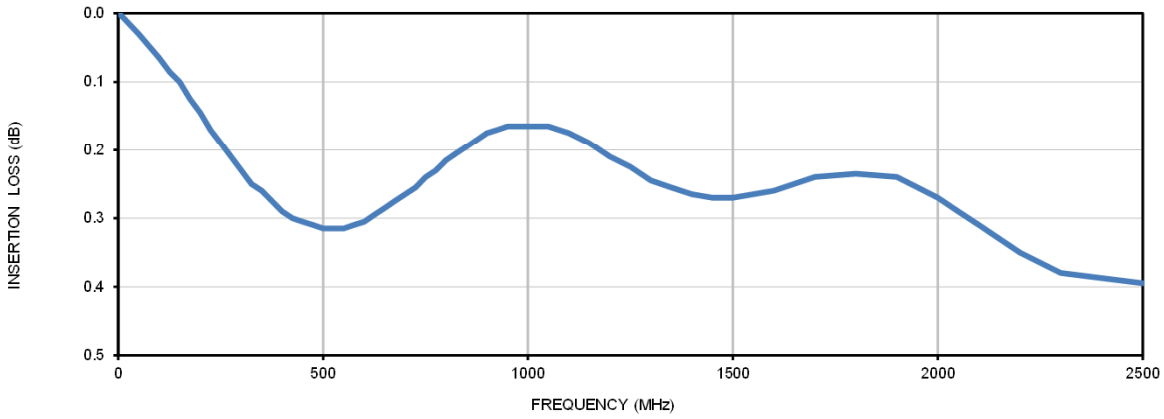
Matching Transformer SFMP-5075+

Typical Performance Data

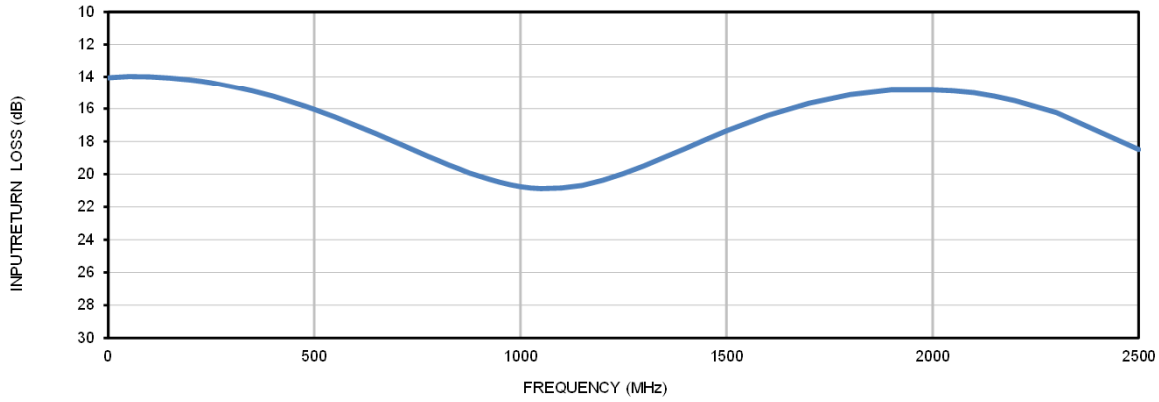
FREQ. (MHz)	INSERTION LOSS (dB)	INPUT RETURN LOSS (50Ω) (dB)	OUTPUT RETURN LOSS (75Ω) (dB)
1.00	0.00	14.05	13.97
10.00	0.01	14.02	14.00
50.00	0.03	13.98	14.12
100.00	0.07	14.00	14.24
125.00	0.09	14.03	14.29
150.00	0.10	14.07	14.36
175.00	0.13	14.13	14.45
200.00	0.15	14.19	14.56
225.00	0.17	14.27	14.66
250.00	0.19	14.37	14.77
300.00	0.23	14.61	14.95
325.00	0.25	14.75	15.06
350.00	0.26	14.90	15.21
400.00	0.29	15.23	15.54
425.00	0.30	15.42	15.71
450.00	0.31	15.62	15.88
475.00	0.31	15.82	16.07
500.00	0.32	16.04	16.29
525.00	0.32	16.27	16.53
550.00	0.32	16.51	16.79
575.00	0.31	16.76	17.04
600.00	0.31	17.02	17.31
625.00	0.30	17.27	17.62
650.00	0.29	17.53	17.97
675.00	0.28	17.80	18.34
700.00	0.27	18.07	18.72
725.00	0.26	18.35	19.09
750.00	0.24	18.62	19.46
775.00	0.23	18.89	19.85
800.00	0.22	19.16	20.27
825.00	0.21	19.42	20.73
850.00	0.20	19.67	21.13
875.00	0.19	19.91	21.50
900.00	0.18	20.12	21.82
925.00	0.17	20.31	22.09
950.00	0.17	20.49	22.36
975.00	0.17	20.65	22.57
1000.00	0.17	20.77	22.65
1025.00	0.17	20.85	22.56
1050.00	0.17	20.88	22.37
1100.00	0.18	20.84	21.89
1150.00	0.19	20.69	21.17
1200.00	0.21	20.38	20.35
1250.00	0.23	19.96	19.67
1300.00	0.25	19.49	18.98
1350.00	0.26	18.96	18.36
1400.00	0.27	18.42	17.89
1450.00	0.27	17.88	17.43
1500.00	0.27	17.34	17.04
1600.00	0.26	16.41	16.49
1700.00	0.24	15.65	16.13
1800.00	0.24	15.13	15.93
1900.00	0.24	14.84	15.88
2000.00	0.27	14.84	15.93
2050.00	0.29	14.90	16.02
2100.00	0.31	15.02	16.16
2150.00	0.33	15.23	16.27
2200.00	0.35	15.51	16.45
2250.00	0.37	15.83	16.74
2300.00	0.38	16.23	17.01

Typical Performance Curves

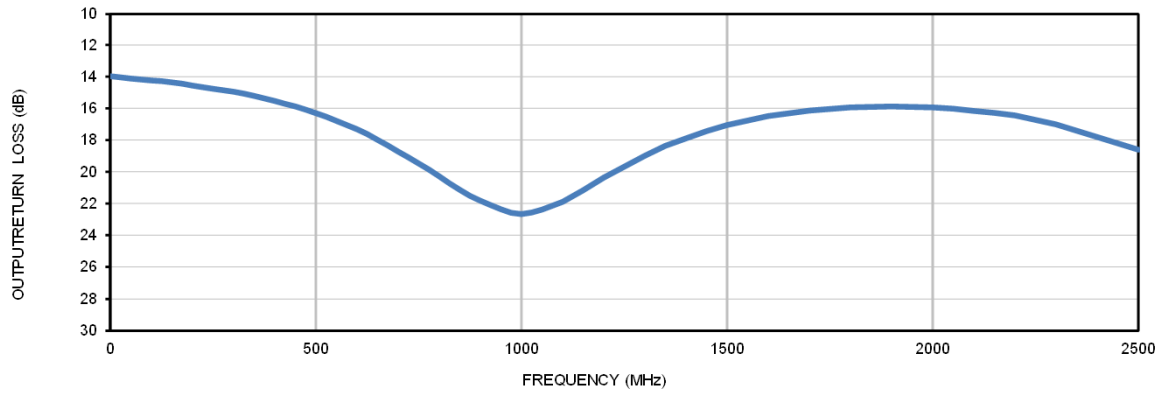
INSERTION LOSS



50Ω RETURN LOSS



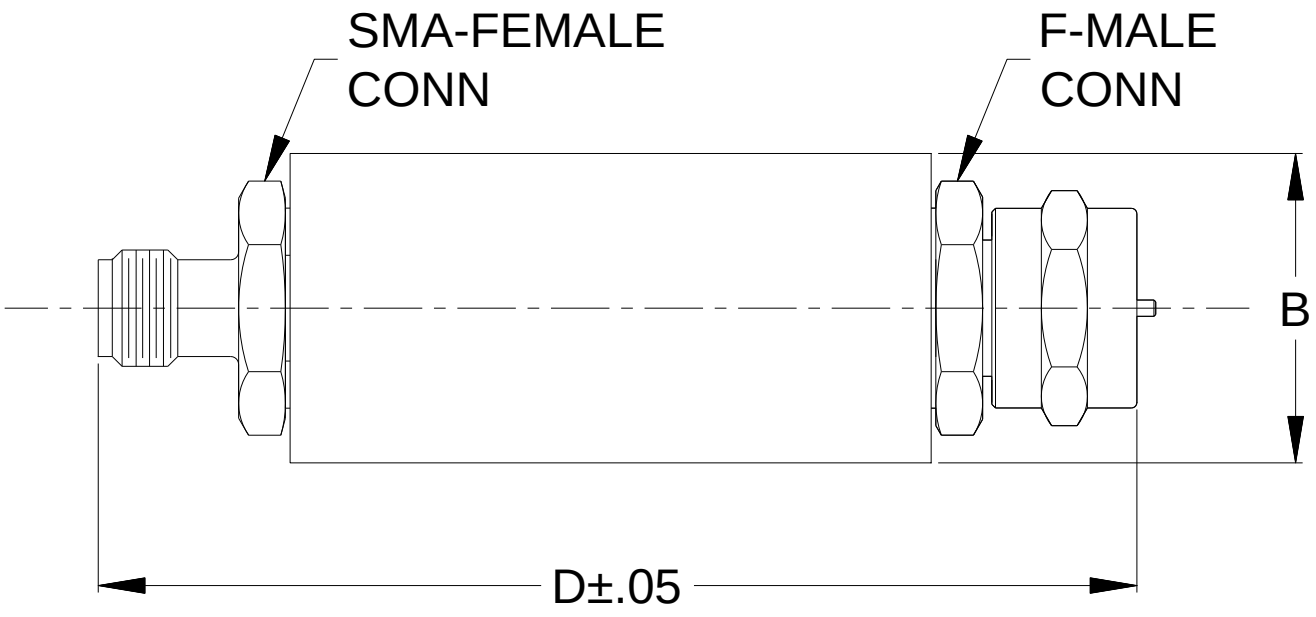
75Ω RETURN LOSS



Case Style FF

Outline Dimensions

FF1891



CASE#	A	B	C	D	E	WT GRAMS
FF1891	-- --	.67 (17.02)	-- --	2.22 (56.39)	-- --	35

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

Notes:

1. Case material: Brass.
2. Case finish: Nickel plate.

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.