Coaxial

Matching Pad

UNMP-R5075-33+

50/75Ω DC to 3000 MHz

Generic photo used for illustration purposes only
CASE STYLE: FF779

The Big Deal

- Minimum loss pad
- Wideband coverage, DC to 3000 MHz
- Excellent VSWR

Product Overview

Mini-Circuits' UNMP-R5075-33+ is a coaxial 50/75Ω matching pad covering the DC to 3000 MHz frequency range, supporting impedance matching in a wide range of systems. This model is ideal for 50/75Ω impedance matching in systems where minimizing overall signal loss is a priority. The matching pad housed in a rugged unibody construction with N-Male (50Ω) to N-Female (75Ω) connectors.

Key Features

Feature	Advantages
Wideband, DC to 3000 MHz	Supports a wide variety of applications including CATV and DOCSIS® 3.1 systems and equipment.
Compact size, 0.68" x 2.11" x 0.71"	Accommodates tight space requirements for crowded system layouts.
Connectorized package N-Male (50Ω) to N-Female (75Ω) 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

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Connectors	Model
50ΩM-N	UNMP-R5075-33+
75ΩF-N	

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-45°C to 100°C
Storage Temperature	-55°C to 100°C
Input Power	2W

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

Features

- Minimum loss pad
- Wideband coverage, DC to 3000 MHz
- Excellent VSWR
- Rugged unibody construction

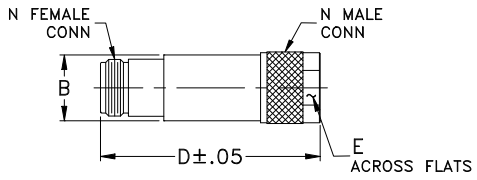
Applications

- Impedance matching

Coaxial Connections

Input	*N-Male*
Output	*N-Female*

Outline Drawing

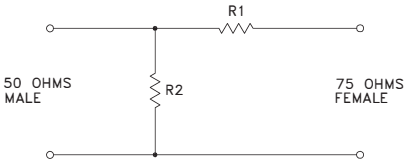


Outline Dimensions (inch / mm)

A	B	C	D	E	Wt.
--	.71	--	2.11	.718	grams
--	18.03	--	53.59	18.24	72.5

Note: Please refer to case style drawing for details

Electical Schematic



Electrical Specifications at 25°C

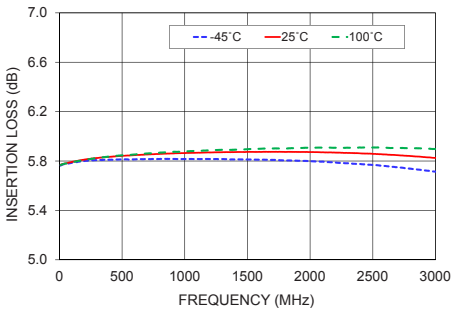
Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range			DC	--	3000	MHz
Attenuation[1]	Nominal	DC-3000	--	5.7	--	dB
	Flatness[2]	DC-3000	--	±0.15	--	
		DC-100	--	--	0.2	
		100-1000	--	--	0.3	
		1000-3000	--	--	0.4	
VSWR		DC-100	--	1.01	1.10	:1
		100-1000	--	1.05	1.10	
		1000-3000	--	1.1	1.20	
Input Power		DC-3000	--	--	2	W

1. Attenuation varies by 0.3 dB max. over temperature
2. Flatnes= variation over band divided by 2

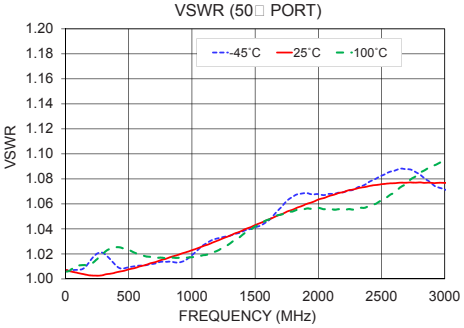
Typical Performance Data 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1) 50 Ω	VSWR (:1) 75 Ω
10	5.77	1.01	1.00
50	5.78	1.01	1.00
100	5.79	1.00	1.00
300	5.82	1.00	1.01
500	5.84	1.01	1.01
800	5.86	1.02	1.02
950	5.86	1.02	1.03
1000	5.86	1.02	1.03
1200	5.87	1.03	1.04
1500	5.87	1.04	1.05
1800	5.87	1.06	1.06
2000	5.87	1.06	1.07
2300	5.87	1.07	1.07
2500	5.86	1.08	1.08
2800	5.84	1.08	1.08
3000	5.82	1.08	1.08

UNMP-R5075-33+
INSERTION LOSS



UNMP-R5075-33+
VSWR (50 PORT)



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Matching Pad 50Ω/75Ω, N-Type UNMP-R5075-33+

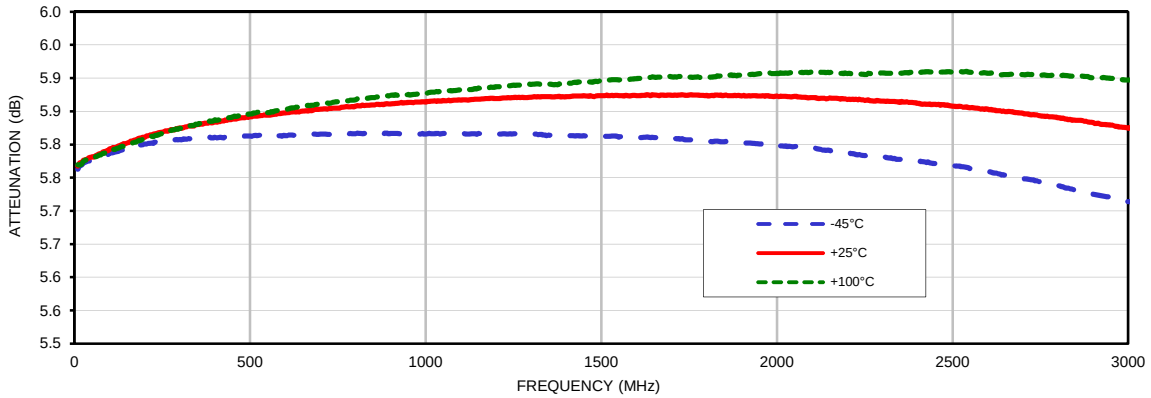
Typical Performance Data

TEST CONDITIONS: INPUT POWER = -10dBm

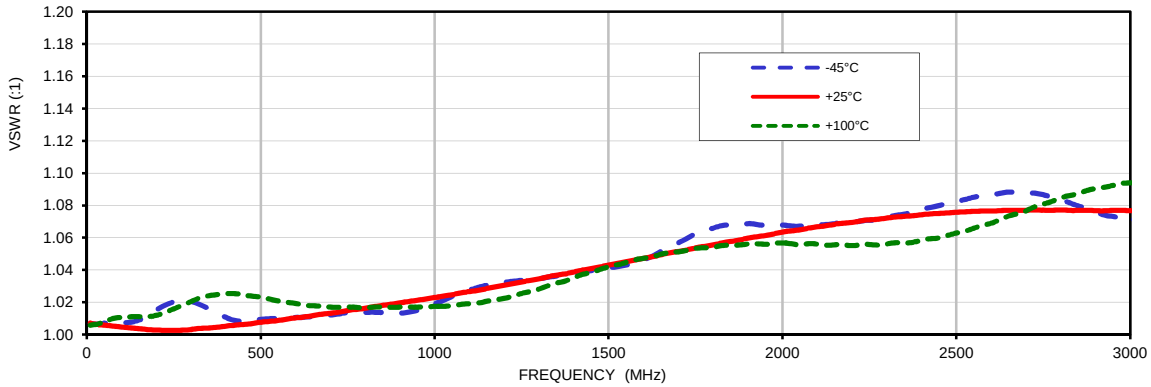
FREQ.	INSERTION LOSS			50Ω VSWR			75Ω VSWR		
(MHz)	(dB)			(:1)			(:1)		
	@-45°C	@+25˚C	@+100˚C	@-45°C	@+25˚C	@+100˚C	@-45°C	@+25˚C	@+100˚C
10	5.76	5.77	5.77	1.01	1.01	1.01	1.00	1.00	1.00
50	5.77	5.78	5.78	1.01	1.01	1.01	1.01	1.00	1.01
100	5.79	5.79	5.79	1.01	1.01	1.01	1.02	1.00	1.01
150	5.79	5.80	5.80	1.01	1.01	1.01	1.02	1.01	1.00
200	5.80	5.81	5.81	1.02	1.02	1.01	1.03	1.01	1.01
250	5.80	5.82	5.82	1.02	1.02	1.02	1.03	1.01	1.02
300	5.81	5.82	5.82	1.02	1.02	1.02	1.02	1.01	1.02
350	5.81	5.83	5.83	1.02	1.02	1.02	1.02	1.01	1.03
400	5.81	5.83	5.84	1.01	1.01	1.03	1.01	1.01	1.03
450	5.81	5.84	5.84	1.01	1.01	1.02	1.01	1.01	1.03
500	5.81	5.84	5.85	1.01	1.01	1.02	1.01	1.01	1.03
550	5.81	5.84	5.85	1.01	1.01	1.02	1.01	1.01	1.03
600	5.81	5.85	5.85	1.01	1.01	1.02	1.01	1.02	1.03
650	5.82	5.85	5.86	1.01	1.01	1.02	1.01	1.02	1.03
700	5.82	5.85	5.86	1.01	1.01	1.02	1.01	1.02	1.03
750	5.82	5.85	5.86	1.01	1.01	1.02	1.01	1.02	1.03
800	5.82	5.86	5.87	1.01	1.01	1.02	1.02	1.02	1.03
850	5.82	5.86	5.87	1.01	1.01	1.02	1.02	1.02	1.03
900	5.82	5.86	5.87	1.01	1.01	1.02	1.02	1.03	1.03
950	5.82	5.86	5.88	1.01	1.01	1.02	1.02	1.03	1.04
1000	5.82	5.86	5.88	1.02	1.02	1.02	1.02	1.03	1.03
1050	5.82	5.87	5.88	1.02	1.02	1.02	1.03	1.03	1.04
1100	5.82	5.87	5.88	1.03	1.03	1.02	1.03	1.03	1.04
1150	5.82	5.87	5.89	1.03	1.03	1.02	1.03	1.03	1.04
1200	5.82	5.87	5.89	1.03	1.03	1.02	1.03	1.04	1.03
1250	5.82	5.87	5.89	1.03	1.03	1.03	1.04	1.04	1.03
1300	5.82	5.87	5.89	1.03	1.03	1.03	1.04	1.04	1.03
1350	5.81	5.87	5.89	1.04	1.04	1.03	1.04	1.04	1.03
1400	5.81	5.87	5.89	1.04	1.04	1.04	1.04	1.04	1.03
1450	5.81	5.87	5.89	1.04	1.04	1.04	1.05	1.05	1.03
1500	5.81	5.87	5.90	1.04	1.04	1.04	1.05	1.05	1.03
1550	5.81	5.87	5.90	1.04	1.04	1.04	1.06	1.05	1.03
1600	5.81	5.87	5.90	1.05	1.05	1.05	1.06	1.05	1.03
1650	5.81	5.87	5.90	1.05	1.05	1.05	1.06	1.05	1.04
1700	5.81	5.87	5.90	1.06	1.06	1.05	1.06	1.06	1.04
1750	5.81	5.87	5.90	1.06	1.06	1.05	1.06	1.06	1.04
1800	5.80	5.87	5.90	1.07	1.07	1.05	1.06	1.06	1.04
1850	5.80	5.87	5.90	1.07	1.07	1.06	1.07	1.06	1.05
1900	5.80	5.87	5.90	1.07	1.07	1.06	1.07	1.06	1.05
1950	5.80	5.87	5.91	1.07	1.07	1.06	1.07	1.06	1.05
2000	5.80	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.06
2050	5.80	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.06
2100	5.80	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.07
2150	5.79	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.07
2200	5.79	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.08
2250	5.78	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.07
2300	5.78	5.87	5.91	1.07	1.07	1.06	1.07	1.07	1.08
2350	5.78	5.86	5.91	1.07	1.07	1.06	1.07	1.08	1.08
2400	5.78	5.86	5.91	1.08	1.08	1.06	1.07	1.08	1.09
2500	5.77	5.86	5.91	1.08	1.08	1.06	1.07	1.08	1.10
2550	5.76	5.86	5.91	1.09	1.09	1.07	1.07	1.08	1.10
2600	5.76	5.85	5.91	1.09	1.09	1.07	1.07	1.08	1.11
2650	5.75	5.85	5.91	1.09	1.09	1.07	1.07	1.08	1.11
2700	5.75	5.85	5.91	1.09	1.09	1.08	1.06	1.08	1.11
2750	5.74	5.84	5.91	1.09	1.09	1.08	1.06	1.08	1.11
2800	5.74	5.84	5.90	1.08	1.08	1.08	1.06	1.08	1.12
2850	5.73	5.84	5.90	1.08	1.08	1.09	1.05	1.08	1.12
2900	5.72	5.83	5.90	1.08	1.08	1.09	1.06	1.08	1.12
2950	5.72	5.83	5.90	1.07	1.07	1.09	1.05	1.08	1.12
3000	5.71	5.82	5.90	1.07	1.07	1.09	1.06	1.08	1.12

Typical Performance Curves

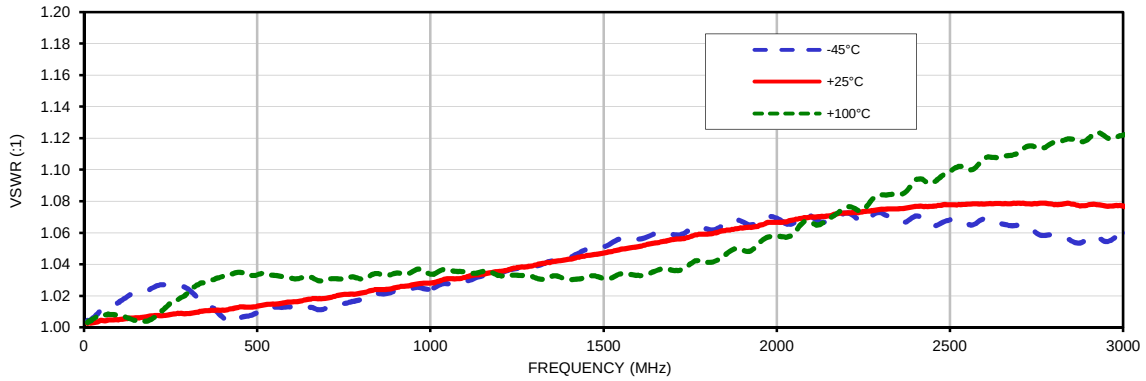
Attenuation Vs. Frequency & Temperature
INPUT POWER = -10 dBm



50-Ohm VSWER Vs. Frequency & Temperature
INPUT POWER = -10 dBm



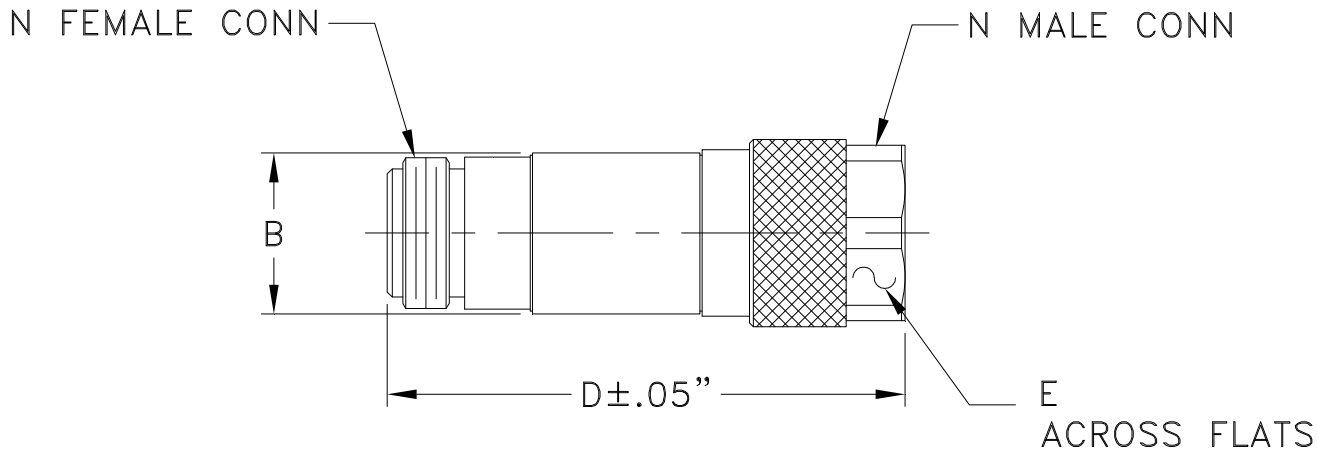
75-Ohm VSWR Vs. Frequency & Temeprature
INPUT POWER = -10 dBm



Case Style FF

Outline Dimensions

FF779



CASE #.	A	B	C	D	E	WT GRAMS
FF779	-- --	.71 (18.03)	-- --	2.11 (53.59)	.718 (18.24)	72.5

Dimensions are in inches (mm). Tolerances: 2Pl. +.05/-.04; 3Pl. ± .030

Notes:

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

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Mini-Circuits

Environmental Specifications ENV28T6

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	-45° 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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