

# Coaxial Matching Pad

## SFQFM-5075+

50/75Ω DC to 3000 MHz



Generic photo used for illustration purposes only  
CASE STYLE: FF2586

### The Big Deal

- Minimum loss pad
- Wideband coverage, DC to 3000 MHz
- Quick connect / disconnect mating on F-Male side
- Excellent VSWR

### Product Overview

Mini-Circuits' SFQFM-5075+ 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 SMA-Female (50Ω) to F-Male (75Ω) connectors.

**CAUTION NOTE:** Due to variability of female 'F' connector, make sure that the threads start no more than 0.030" (0.76) from the edge of the connector to mate with the matching pad.

### 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, 0.39" x 1.56" x 0.43"	Accommodates tight space requirements for crowded system layouts.
Connectorized package SMA Female (50Ω) to F-Male (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.  
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# Coaxial Matching Pad

50/75Ω

DC to 3000 MHz

SFQFM-5075+



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CASE STYLE: FF2586  
Connectors Model  
50Ω-F-SMA SFQFM-5075+  
75Ω-M-F

**+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	0.5 W

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

## Features

- Quick connect / disconnect mating on F-Male side
- Minimum loss pad
- Wideband coverage, DC to 3000 MHz
- Excellent VSWR
- Rugged unibody construction

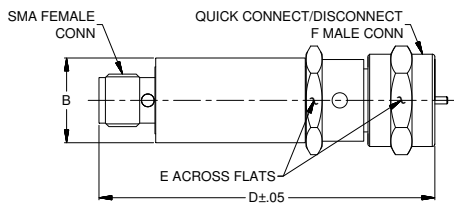
## Applications

- Impedance matching
- Lab use for testing

## Coaxial Connections

Input	SMA-Female
Output	F-Male

## Outline Drawing



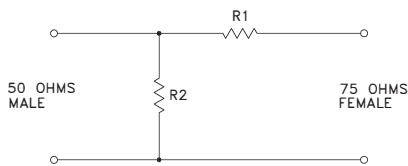
**CAUTION NOTE:** Due to variability of female 'F' connector, make sure that the threads start no more than 0.030" (0.76) from the edge of the connector to mate with the matching pad.

## Outline Dimensions (inch/mm)

	A	B	C	D	E	Wt.
	--	.39	--	1.56	.437	grams
	--	10.00	--	39.62	11.11	15

Note: Please refer to case style drawing for details

## Electrical Schematic



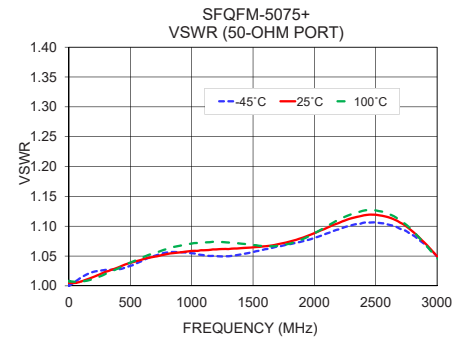
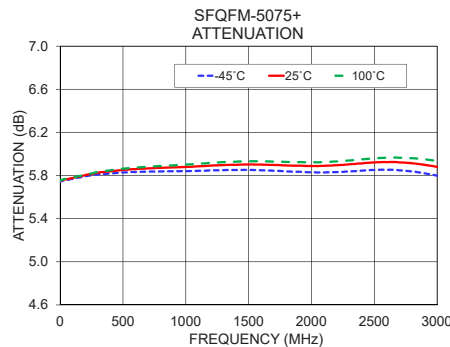
## Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Frequency Range		DC	--	3000	MHz	
Attenuation <sup>1</sup>	Nominal	DC-3000	--	5.7	--	
		DC-100	--	±0.20	--	
	Flatness <sup>2</sup>	100-2000	--	0.05	0.20	dB
		2000-3000	--	0.15	0.30	
VSWR	DC-100	--	1.02	1.10		
	100-2000	--	1.10	1.25	:1	
	2000-3000	--	1.20	--		
Input Power	DC-3000	--	--	0.5	W	

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

## Typical Performance Data at 25°C

Frequency (MHz)	Attenuation (dB)	VSWR (:1)	
		50 Ω	75 Ω
10	5.75	1.01	1.00
50	5.77	1.00	1.01
100	5.78	1.01	1.01
300	5.83	1.02	1.05
500	5.85	1.04	1.08
800	5.87	1.05	1.10
950	5.88	1.06	1.10
1000	5.88	1.06	1.10
1200	5.89	1.06	1.08
1500	5.90	1.06	1.05
1800	5.89	1.07	1.06
2000	5.89	1.09	1.10
2300	5.90	1.11	1.16
2500	5.92	1.12	1.19
2800	5.91	1.09	1.20
3000	5.88	1.05	1.19



## Notes

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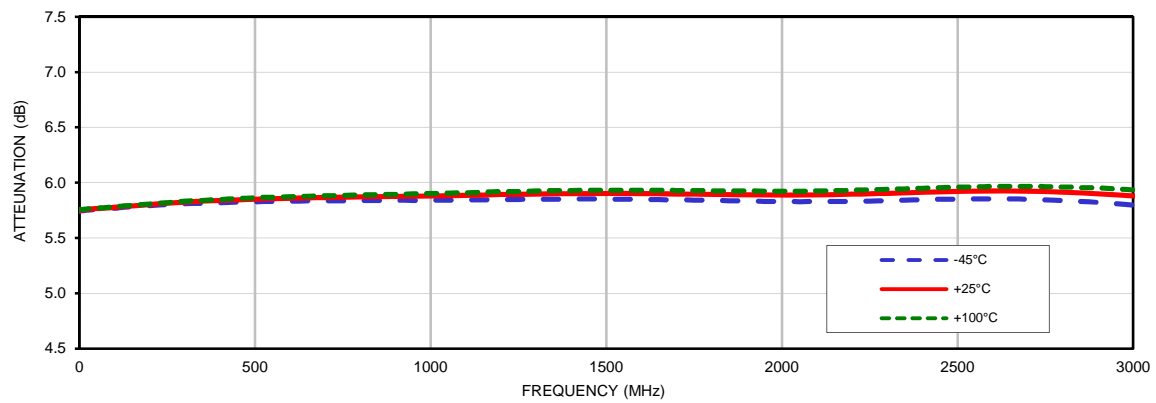
*Typical Performance Data*

TEST CONDITIONS: INPUT POWER = -10dBm

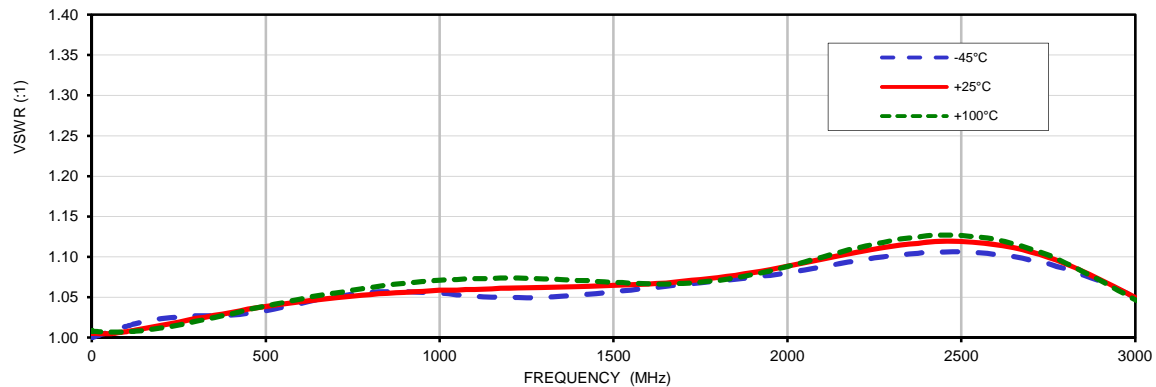
FREQ.  (MHz)	ATTENUATION			50Ω VSWR			75Ω VSWR		
	(dB)			(:1)			(:1)		
	@-45°C	@+25°C	@+100°C	@-45°C	@+25°C	@+100°C	@-45°C	@+25°C	@+100°C
10	5.75	5.75	5.76	1.00	1.00	1.01	1.00	1.00	1.01
50	5.76	5.77	5.77	1.01	1.01	1.01	1.01	1.01	1.01
100	5.77	5.78	5.78	1.01	1.01	1.01	1.02	1.01	1.02
150	5.78	5.79	5.79	1.02	1.02	1.01	1.02	1.02	1.02
200	5.79	5.80	5.81	1.02	1.02	1.01	1.03	1.03	1.03
250	5.80	5.81	5.82	1.03	1.03	1.02	1.03	1.04	1.04
300	5.81	5.83	5.83	1.03	1.03	1.02	1.04	1.05	1.05
350	5.81	5.83	5.84	1.03	1.03	1.02	1.05	1.06	1.06
400	5.82	5.84	5.85	1.03	1.03	1.03	1.06	1.06	1.07
450	5.82	5.85	5.86	1.03	1.03	1.03	1.07	1.07	1.07
500	5.83	5.85	5.86	1.03	1.03	1.04	1.08	1.08	1.08
550	5.83	5.86	5.87	1.04	1.04	1.04	1.09	1.08	1.08
600	5.83	5.86	5.87	1.04	1.04	1.05	1.10	1.09	1.09
650	5.83	5.86	5.88	1.05	1.05	1.05	1.11	1.09	1.10
700	5.84	5.87	5.88	1.05	1.05	1.06	1.11	1.10	1.09
750	5.84	5.87	5.88	1.05	1.05	1.06	1.11	1.10	1.10
800	5.84	5.87	5.89	1.06	1.06	1.06	1.11	1.10	1.10
850	5.84	5.87	5.89	1.06	1.06	1.07	1.10	1.10	1.10
900	5.84	5.88	5.89	1.06	1.06	1.07	1.10	1.10	1.10
950	5.84	5.88	5.90	1.06	1.06	1.07	1.09	1.10	1.11
1000	5.84	5.88	5.90	1.05	1.05	1.07	1.08	1.10	1.10
1050	5.84	5.88	5.91	1.05	1.05	1.07	1.08	1.10	1.10
1100	5.84	5.89	5.91	1.05	1.05	1.07	1.07	1.09	1.10
1150	5.84	5.89	5.91	1.05	1.05	1.07	1.07	1.09	1.09
1200	5.85	5.89	5.92	1.05	1.05	1.07	1.07	1.08	1.09
1250	5.85	5.89	5.92	1.05	1.05	1.07	1.07	1.08	1.08
1300	5.85	5.90	5.92	1.05	1.05	1.07	1.07	1.07	1.08
1350	5.85	5.90	5.93	1.05	1.05	1.07	1.07	1.07	1.07
1400	5.85	5.90	5.93	1.05	1.05	1.07	1.07	1.06	1.06
1450	5.85	5.90	5.93	1.05	1.05	1.07	1.06	1.05	1.05
1500	5.85	5.90	5.93	1.06	1.06	1.07	1.05	1.05	1.05
1550	5.85	5.90	5.93	1.06	1.06	1.07	1.05	1.05	1.05
1600	5.85	5.90	5.93	1.06	1.06	1.07	1.04	1.05	1.05
1650	5.85	5.90	5.93	1.06	1.06	1.07	1.03	1.05	1.05
1700	5.84	5.90	5.93	1.07	1.07	1.07	1.04	1.05	1.05
1750	5.84	5.90	5.93	1.07	1.07	1.07	1.04	1.06	1.06
1800	5.84	5.89	5.93	1.07	1.07	1.07	1.05	1.06	1.07
1850	5.84	5.89	5.92	1.07	1.07	1.07	1.07	1.07	1.08
1900	5.84	5.89	5.92	1.07	1.07	1.08	1.08	1.08	1.09
1950	5.83	5.89	5.92	1.08	1.08	1.08	1.09	1.09	1.10
2000	5.83	5.89	5.92	1.08	1.08	1.09	1.10	1.10	1.11
2050	5.83	5.89	5.92	1.08	1.08	1.09	1.11	1.11	1.12
2100	5.83	5.89	5.92	1.09	1.09	1.10	1.13	1.12	1.13
2150	5.83	5.89	5.93	1.09	1.09	1.11	1.14	1.13	1.13
2200	5.83	5.90	5.93	1.09	1.09	1.11	1.14	1.14	1.14
2250	5.83	5.90	5.93	1.10	1.10	1.12	1.15	1.15	1.15
2300	5.84	5.90	5.94	1.10	1.10	1.12	1.16	1.16	1.15
2350	5.84	5.91	5.94	1.10	1.10	1.12	1.16	1.17	1.16
2400	5.84	5.91	5.95	1.11	1.11	1.13	1.17	1.18	1.18
2500	5.85	5.92	5.96	1.11	1.11	1.13	1.18	1.19	1.18
2550	5.85	5.92	5.96	1.10	1.10	1.12	1.18	1.19	1.19
2600	5.85	5.92	5.96	1.10	1.10	1.12	1.18	1.20	1.19
2650	5.85	5.93	5.97	1.10	1.10	1.12	1.18	1.20	1.20
2700	5.85	5.92	5.97	1.10	1.10	1.11	1.19	1.20	1.21
2750	5.84	5.92	5.96	1.09	1.09	1.10	1.19	1.20	1.20
2800	5.84	5.91	5.96	1.09	1.09	1.09	1.19	1.20	1.21
2850	5.83	5.91	5.96	1.08	1.08	1.08	1.20	1.20	1.21
2900	5.82	5.90	5.95	1.07	1.07	1.07	1.20	1.20	1.20
2950	5.81	5.89	5.94	1.06	1.06	1.06	1.21	1.20	1.20
3000	5.80	5.88	5.93	1.05	1.05	1.05	1.21	1.19	1.19

## Typical Performance Curves

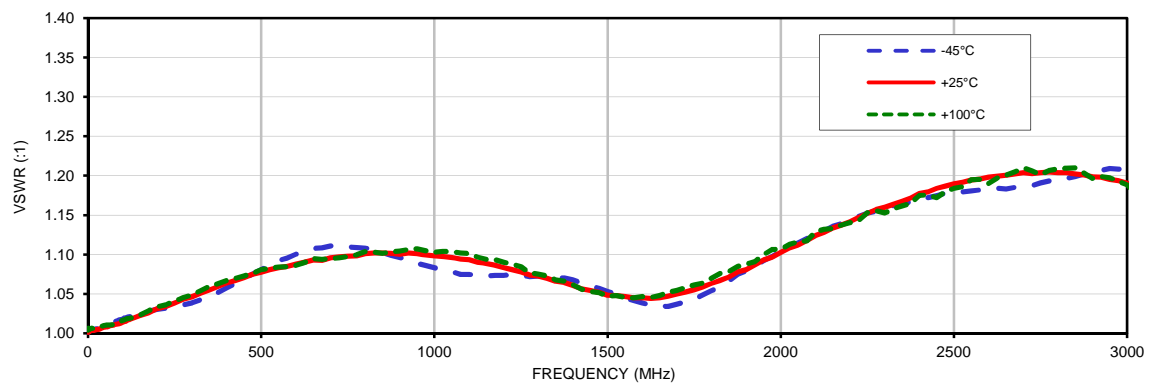
**Attenuation Vs. Frequency & Temperature**  
INPUT POWER = -10 dBm



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



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

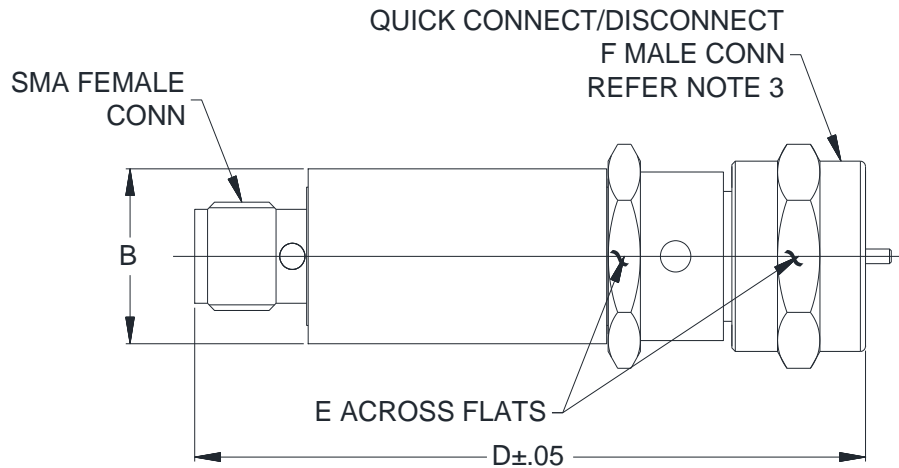


# Case Style

# FF

## Outline Dimensions

## FF2586



CASE#	A	B	C	D	E	WT GRAMS
FF2586	--	.39 (10.00)	--	1.56 (39.62)	.437 (11.11)	15

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

### Notes:

1. Material:  
Case, Sleeve & Coupling nut: Brass.
2. Finish:  
Case: Gold plate.  
Sleeve & Coupling nut: Nickel plate.
3. CAUTION:  
Due to variability of female 'F' connector, make sure that the threads start no more than .030" (0.76) from the edge of the connector to mate with the matching pad.

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RF/IF MICROWAVE COMPONENTS



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