

Ceramic

50Ω

DC⁽¹⁾ to 6700 MHz

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	9W max. at 25°C

* Passband rating, derate linearly to 3W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

RF IN	1
RF OUT	3
GROUND	2,4

Suggested Layout,
Tolerance to be within ± 0.02

A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169
3.20	1.60	0.94	0.51	0.81	0.23	4.29

H	J	K	L	M	N	P	wt
.087	.024	.122	.024	.087	.012	.071	grams
2.21	0.61	3.10	0.61	2.21	0.30	1.80	.020

Figure 1: Dimensions of the DUT package outline. The diagram shows a top-down view of a square package with a central square cavity. The package is labeled "PIN 1" at the bottom-left corner. Various dimensions are specified: a central cavity width of .098, a central cavity height of .072 TYP, a central cavity depth of .015 PTH, 8 PL., a central cavity width of .021 TYP, a central cavity height of .028 TYP, a central cavity depth of .024 TYP, a central cavity width of .038, a central cavity height of .019, 2 PL., and a central cavity width of .013. The package is labeled "DUT PACKAGE OUTLINE" at the bottom-left corner. A note on the right side states: "COPLANAR WAVEGUIDE: .038 TRACE WIDTH, & .013 GAP, 2 PL. (SEE NOTE BELOW)".

NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

 DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

- excellent power handling, 9W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

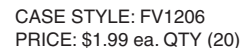
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-6700	—	—	1.2	dB
	Freq. Cut-Off	F2	7600	—	3.0	—	dB
	VSWR	DC-F1	DC-6700	—	1.3	—	:1
Stop Band	Rejection Loss	F3	9300	20	—	—	dB
		F4-F5	9500-11000	—	30	—	dB
		F6	18000	—	20	—	dB
	VSWR	F3-F6	9300-18000	—	20	—	:1

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.

(2) Measured on Mini-Circuits Characterization Test Board TB-270.

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50.00	0.03	1.01
500.00	0.08	1.02
1000.00	0.15	1.01
3500.00	0.25	1.05
5000.00	0.47	1.16
6700.00	0.79	1.32
7600.00	3.12	3.22
8000.00	7.62	7.34
9000.00	26.00	21.20
10000.00	55.95	44.55
12000.00	34.91	108.58
15000.00	26.32	22.58
17000.00	23.79	18.90
18000.00	21.88	40.41
19890.00	22.46	2.30

Graph of Insertion Loss (dB) vs Frequency (MHz) for the 10000-MHz bandpass filter. The loss is 0 dB from 0 to 5000 MHz, rises to a peak of 55 dB at 10000 MHz, and then decreases to about 20 dB at 20000 MHz.

[illegible]

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



Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500, 1000, 3000

Notes:

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
- 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/MC/Store/terms.htm.

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