



Mini-Circuits

CERAMIC

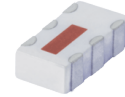
High Pass Filter

50Ω 3400 to 9900 MHz

HFCN-3100D+

THE BIG DEAL

- Small Size
- 5 Sections
- Temperature Stable
- Excellent Power Handling, 7W
- Hermetically Sealed
- LTCC Construction
- Low Cost
- Protected by US Patent 7,760,485



Generic photo used for illustration purposes only

CASE STYLE: FV1206-1

+RoHS Compliant

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

APPLICATIONS

- Sub-harmonic Rejection
- Transmitters/Receivers

ELECTRICAL SPECIFICATIONS^{1,2} AT +25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Stop Band	Rejection Loss	2500	—	30	dB
		2450	20	—	
	Freq. Cut-Off	3100	—	3.0	dB
	VSWR	2450-2500	—	20	
Pass Band	Insertion Loss	3400-9900	—	2.0	dB
		3500-9500	—	1.5	
	VSWR	3100-10500	—	1.5	:1

1. DC Resistance to ground is 100 Mohms min.

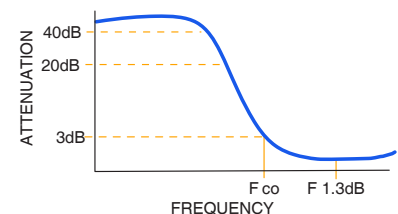
2. Measured on Mini-Circuits Characterization Test Board TB-285.

ABSOLUTE MAXIMUM RATINGS

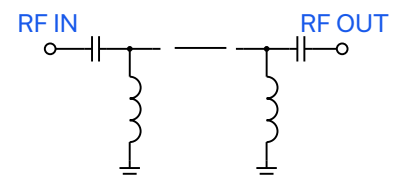
Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input ³	7 W max.at +25°C
Max. DC Voltage at pins 1&3	+25 VDC

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. D
ECO-028231
HFCN-3100D+
MCL NY/RAV
260116





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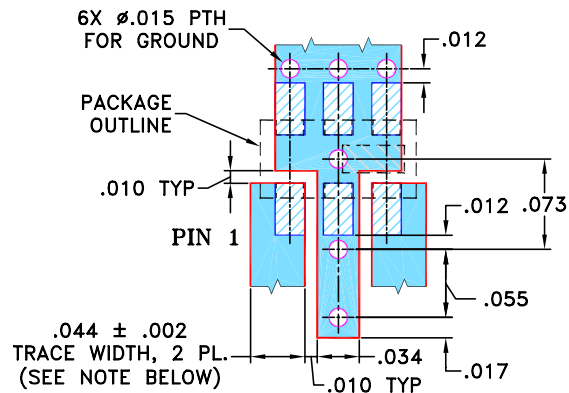
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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4,5,6

PRODUCT MARKING: M1

DEMO BOARD MCL P/N: TB-285
SUGGESTED PCB LAYOUT (PL-158)



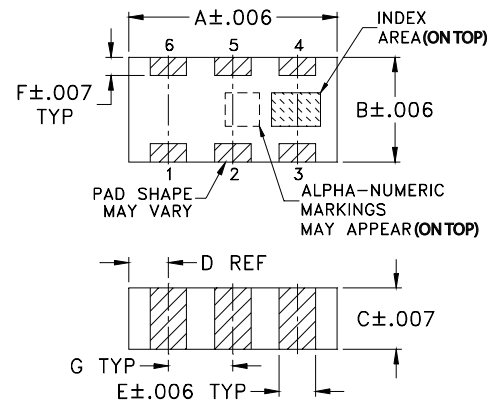
- NOTE:** 1. TRACE WIDTH IS SHOWN FOR ROGERS R04350 WITH DIELECTRIC THICKNESS: $.020 \pm .0015$; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.



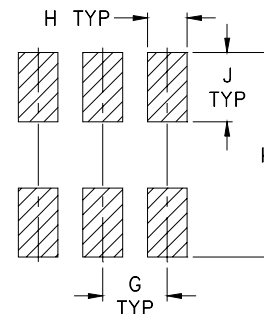
DENOTES PCB COPPER LAYOUT

DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

OUTLINE DIMENSIONS (Inches mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28
G	H	J	K		wt
.039	.024	.042	.123		grams
0.99	0.61	1.07	3.12		.020

TAPE & REEL INFORMATION: F75



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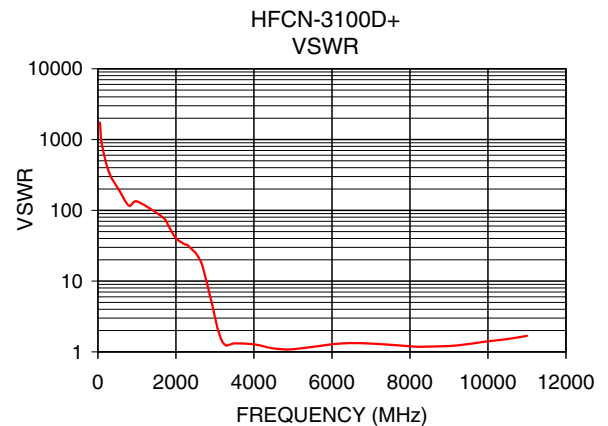
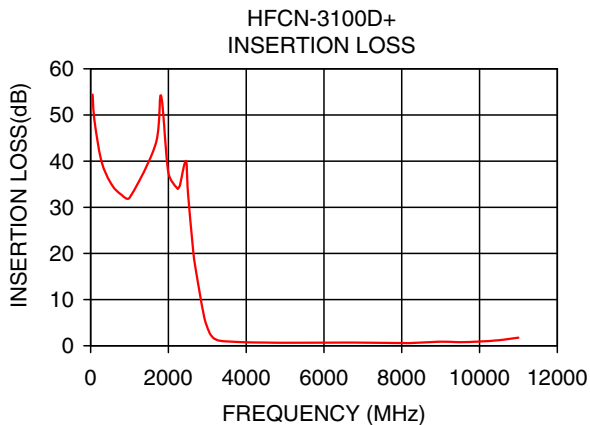
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50Ω 3400 to 9900 MHz

TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50	54.41	1737.18
800	32.66	115.81
1810	54.18	59.91
2450	40.03	26.74
2500	33.38	25.19
2700	16.65	15.00
2920	6.20	4.89
3100	2.22	1.87
3400	1.01	1.27
3500	0.94	1.32
5000	0.66	1.09
7000	0.68	1.31
9000	0.88	1.21
9500	0.78	1.29
9900	0.88	1.39
10500	1.21	1.52
11000	1.76	1.68



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-Circuit's 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/MCLStore/terms.jsp

