



CERAMIC

High Pass Filter

HFCN-740+

Mini-Circuits

50Ω 780 to 2800 MHz

FEATURES

- Low Cost
- Small Size
- 7 Sections
- Temperature Stable
- LTCC Construction
- Excellent Power Handling, 7 W
- Hermetically Sealed
- Patent Pending



Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS Compliant

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

APPLICATIONS

- Sub-Harmonic Rejection
- Transmitters/Receivers
- Lab Use

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

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Units
Stopband	Rejection Loss	430	40		dB
		550	20		
	Freq. Cut-Off	740	3.0		dB
	VSWR	430-550	20		:1
Passband	Insertion Loss	780-2800	2.0		dB
		900-2200		1.3	dB
	VSWR	780-1900	1.5		:1

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

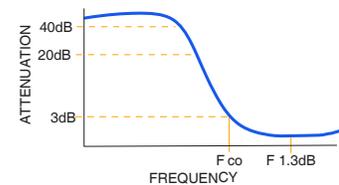
2. Measured on Mini-Circuits Characterization Test Board TB-HFCN-740+.

ABSOLUTE MAXIMUM RATINGS

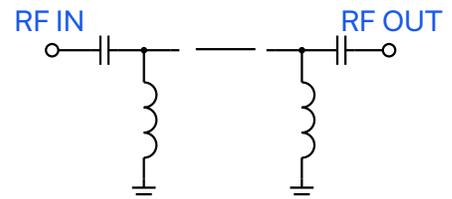
Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input ³	7 W max. at +25°C

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



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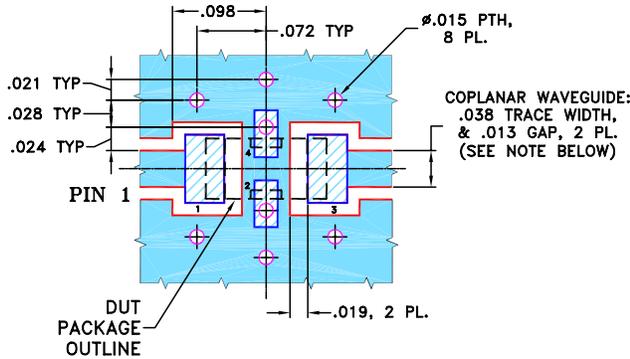
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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: F7

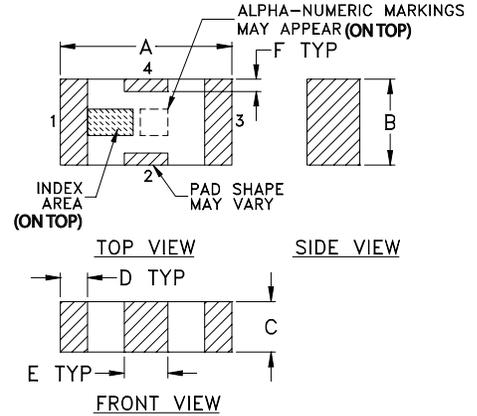
DEMO BOARD MCL P/N: TB-HFCN-740+
SUGGESTED PCB LAYOUT (PL-137)



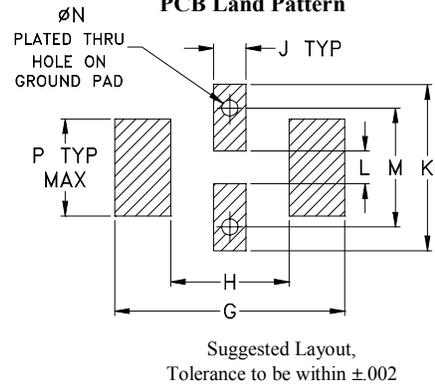
- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



OUTLINE DIMENSIONS (Inches mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
.126	.063	.037	.020	.032	.009	.169	.087	.024	.122	.024	.087	.012	.071	grams
3.20	1.60	0.94	0.51	0.81	0.23	4.29	2.21	0.61	3.10	0.61	2.21	0.30	1.80	.020

TAPE & REEL INFORMATION: F71



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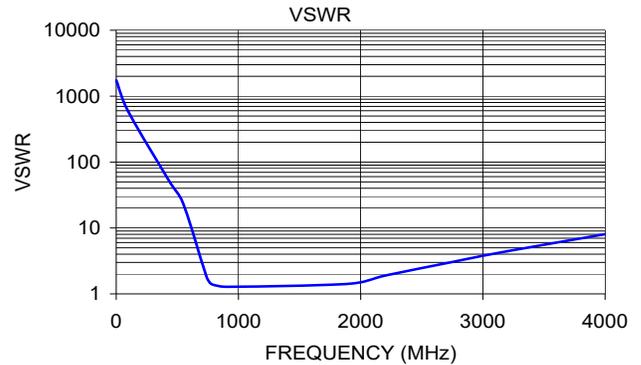
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TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR :1
1	94.42	1737.18
100	64.99	579.06
430	48.94	52.65
550	23.85	22.87
740	2.10	1.81
780	1.40	1.40
900	0.88	1.28
1900	0.48	1.42
2200	0.79	1.89
2800	1.81	3.19
3200	2.81	4.44
4000	4.94	8.05



- 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/terms/viewterm.html

