



Mini-Circuits®

CERAMIC

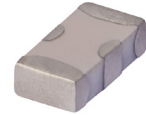
High Pass Filter

HFCN-740D+

50Ω 780 to 2800 MHz

FEATURES

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



Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS CompliantThe +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. DC Resistance to ground is 100 Mohms min.

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

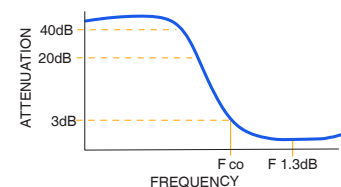
ABSOLUTE MAXIMUM RATINGS

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

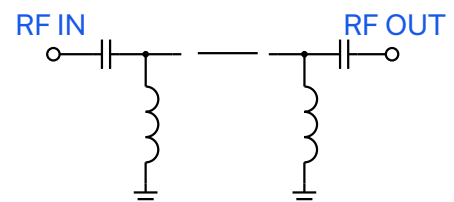
3. Derate linearly to 3 W at +100°C ambient.

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



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REV. D
ECO-023332
HFCN-740D+
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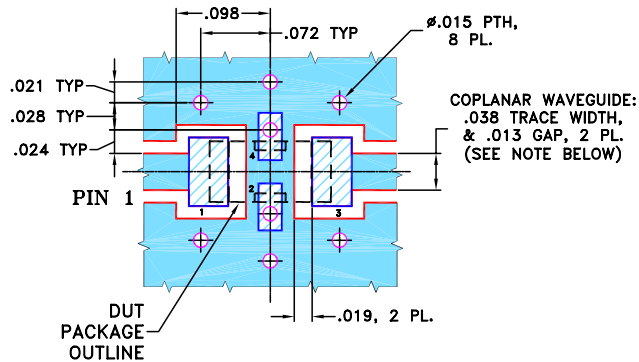
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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: F7

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

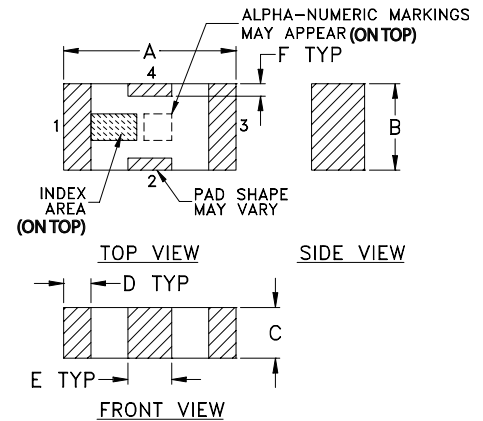


NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

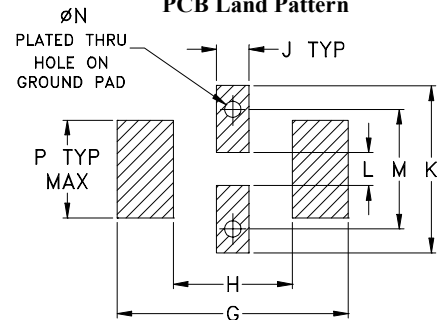
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

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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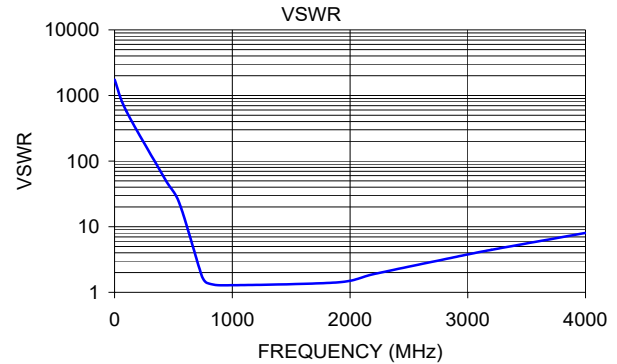
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50Ω 780 to 2800 MHz

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

- 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/terms/viewterm.html

