CERAMIC

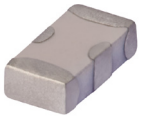
High Pass Filter

HFCN-1810D+

50Ω 1950 to 4750 MHz

THE BIG DEAL

- 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 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	1100	40			dB
		1480	20			
	Freq. Cut-Off	1810		3.0		dB
	VSWR	1100-1480		20		:1
Passband	Insertion Loss	1950-4750		2.0		dB
		2250-3850			1.3	dB
	VSWR	2250-3750		1.5		:1

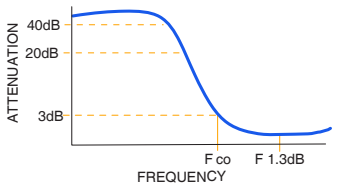
1. DC Resistance to ground is 100 Mohms min.
2. Measured on Mini-Circuits Characterization Test Board TB-HFCN-1810D+.

ABSOLUTE MAXIMUM RATINGS

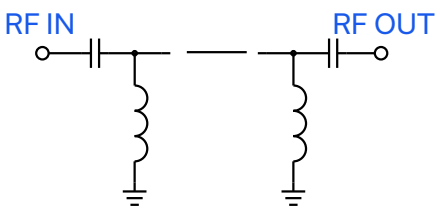
Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input[3]	7 W max.at +25°C
Max. DC Voltage at Pins 1 & 3	+25 VDC

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



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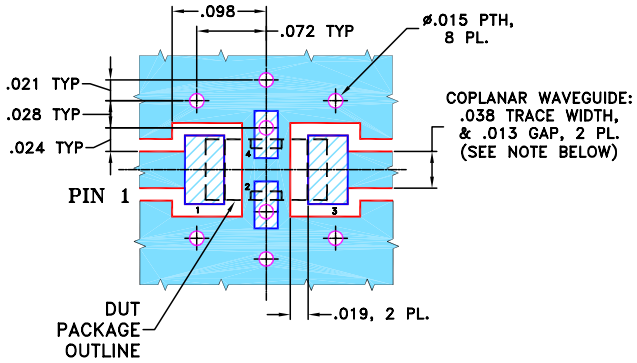
PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: K3

DEMO BOARD MCL P/N: TB-HFCN-1810D+

SUGGESTED PCB LAYOUT (PL-137)



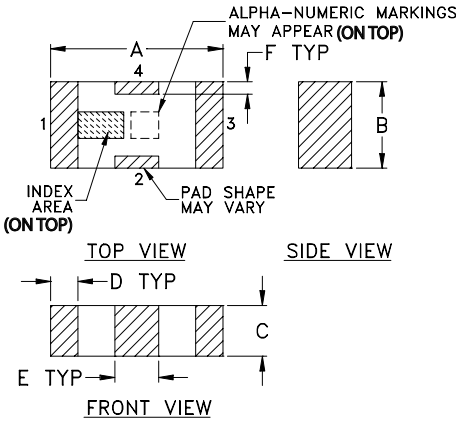
NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

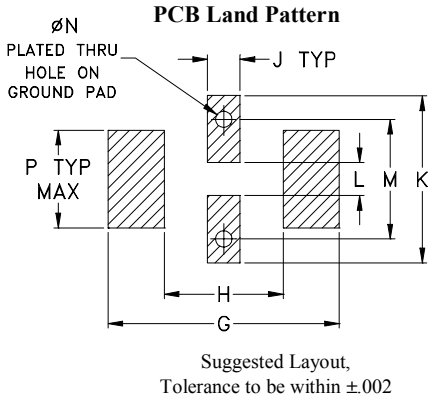
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING





Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches / mm)

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

TAPE & REEL INFORMATION: F71

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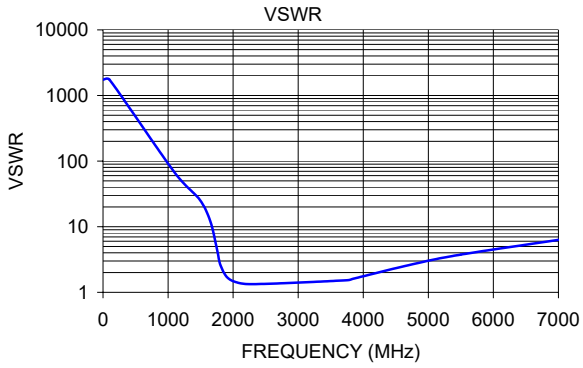
TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR :1
1	94.72	1737.18
100	74.52	1737.18
1100	45.78	66.82
1480	32.05	26.33
1650	14.33	12.01
1750	6.57	4.61
1810	3.63	2.52
1950	1.52	1.57
2250	0.78	1.33
3750	0.69	1.53
3850	0.74	1.61
4750	1.66	2.67
5500	2.71	3.76
7000	4.89	6.30





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