Ceramic

Low Pass Filter

LFCG-3400+

50Ω DC to 3400 MHz

Generic photo used for illustration purposes only
CASE STYLE: GE0805C-2

The Big Deal

- Good rejection, 40 dB typical
- Rugged, ceramic construction
- Tiny size, 0.079" x 0.049" x 0.037" (0805)
- Excellent power handling, 4.5W

Product Overview

Mini-Circuits' LFCG-3400+ is an LTCC low pass filter with a passband from DC to 3400 MHz, supporting a variety of applications. This model provides 1.3 dB typical passband insertion loss and provides a very good stopband rejection due to strategically constructed layout with minimal interaction between components. It handles up to 4.5W RF input power and provides a wide operating temperature range from -55 to +125°C. Housed in a tiny 0805 ceramic form factor with wraparound terminations, the filter is ideal for dense PCB layouts and with minimal performance variation due to parasitics.

Key Features

Feature	Advantages
Good stopband rejection, 40 dB typical	The LTCC lowpass filter provides a good stopband rejection suitable for high end applications.
LTCC Construction	Provides repeatable performance in a rugged, ceramic package well suited for tough environments such as high humidity and temperature extremes.
Tiny size (0.079" x 0.049" x 0.037")	Saves space in dense circuit board layouts and minimizes the effects of parasitics.
Excellent power handling, 4.5W	Supports a wide range of system power requirements.
Wrap-around terminations	Provides excellent solderability and easy visual inspection

Ceramic

Low Pass Filter

LFCG-3400+

50Ω DC to 3400 MHz

Generic photo used for illustration purposes only

CASE STYLE: GE0805C-2

+RoHS Compliant

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

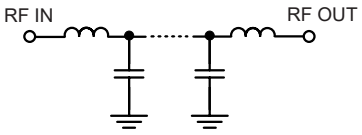
Features

- Low loss, 1.3 dB typical
- High rejection 40 dB typical
- Excellent power handling, 4.5W
- Extremely small size 0805 (0.079" x 0.049" x 0.037")
- Temperature stable
- LTCC construction

Applications

- Military radar applications
- Test and measurement
- Telecommunications & broadband wireless applications

Functional Schematic



Electrical Specifications[1,2] at 25°C

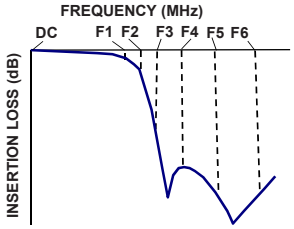
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC - 3400	—	1.3	2.1	dB
	Freq. Cut-Off	F2	3800	—	3.0	—	dB
	Return Loss	DC-F1	DC - 3400	—	16	—	dB
Stop Band	Rejection Loss	F3-F4	4700 - 5000	20	35	—	dB
		F4-F5	5000 - 8500	32	40	—	dB
		F5-F6	8500 - 15000	—	25	—	dB

1 DC de-coupling capacitors are required in Applications where DC voltage and/or current is present at either input or output ports. Please contact Mini-Circuits for alternatives if DC pass from IN-OUT is required.
2 Measured on Mini-Circuits Characterization Test Board TB-799+

Maximum Ratings	
Operating Temperature	-55°C to 125°C
Storage Temperature	-55°C to 125°C
RF Power Input*	4.5 W max.@25°C

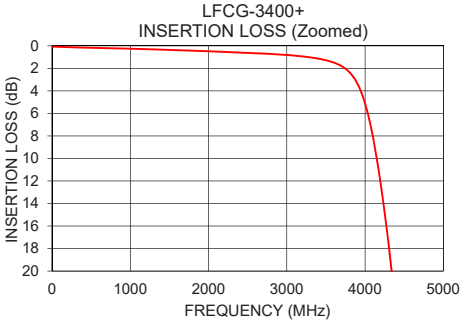
*Passband rating, derate linearly to 1W at 125°C ambient
Permanent damage may occur if any of these limits are exceeded.

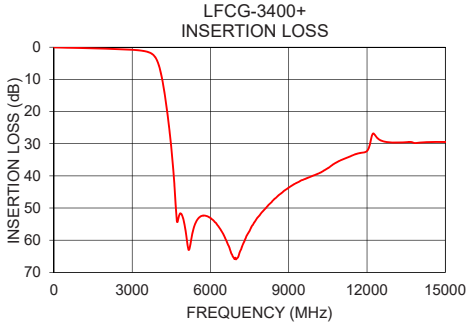
Typical Frequency Response

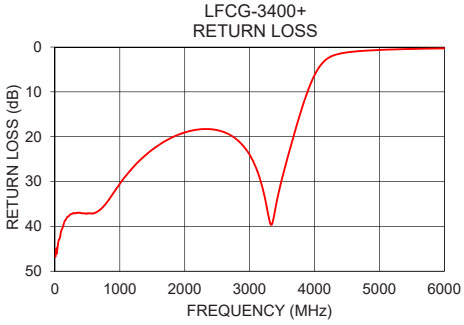


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
10	0.08	46.77
100	0.09	40.91
1000	0.25	30.52
2000	0.48	19.05
2500	0.62	18.53
2800	0.72	20.60
3000	0.81	24.03
3400	1.13	35.74
3800	2.34	13.87
3900	3.32	9.63
4200	12.27	2.56
4400	23.88	1.44
4500	31.35	1.19
4700	53.18	0.90
5000	54.91	0.65
6000	53.11	0.30
6500	58.25	0.24
8500	46.91	0.30
10000	39.75	0.50
15000	29.47	0.38







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/MCLStore/terms.jsp