Ceramic

Low Pass Filter

LFCG-42+

50Ω DC[1] to 435 MHz



CASE STYLE: GE0805C-2

Features

- Low loss, 0.9 dB typ.
- Small size 0805 (2.0 x 1.25 mm)
- Temperature stable
- LTCC construction

Applications

- Automatic meter reading
- Harmonic Rejection
- VHF/UHF transmitters / receivers

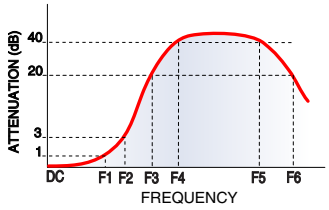
+RoHS Compliant

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

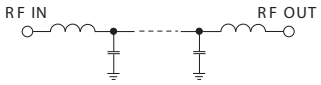
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500,1000, 4000

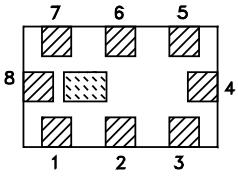
Specification Definition



Functional Schematic



Top View



Pad Connections

Input	8
Output	4
Ground	1,3,5,7
Isolate (Do not ground)	2,6

Electrical Specifications[1,2] at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC - F1	DC - 435		0.9	1.6	dB
	Freq. cut-off	F2	475	—	3.0	—	dB
	VSWR	DC - F1	DC - 435	—	1.5	—	:1
Stop Band	Rejection Loss	F3	625	20	40	—	dB
		F4 - F5	650 - 2700	25	30	—	
		F6	6000	—	30	—	

[1] *In Application where DC voltage is present at either input or output port, coupling capacitors are required.*
[2] *Measured on Mini-Circuits Characterization Test Board TB-800+*

Maximum Ratings

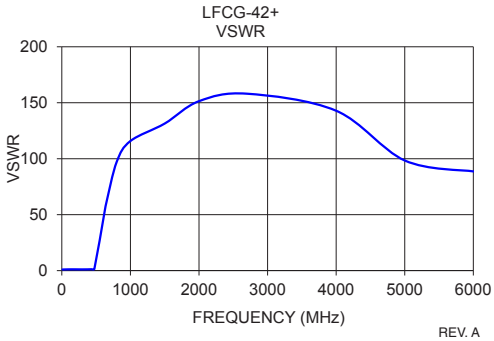
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input*	2W at 25°C

*Passband rating, derate linearly to 1W at 100°C ambient
Permanent damage may occur if any of these limits are exceeded.

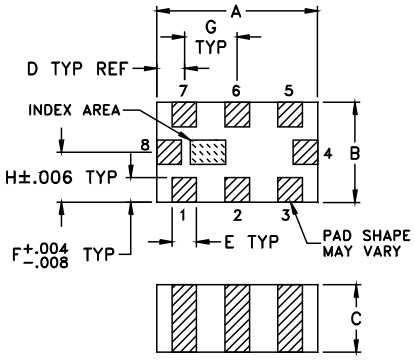
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.21	1.01
20	0.13	1.02
100	0.21	1.14
200	0.31	1.15
300	0.42	1.10
435	0.89	1.25
475	1.68	1.64
625	43.44	53.03
650	34.41	60.85
800	32.18	97.11
1000	44.53	115.78
1500	42.44	131.39
2000	43.76	151.39
2700	55.08	158.07
4000	42.79	142.86
5000	37.13	98.40
6000	33.51	88.66

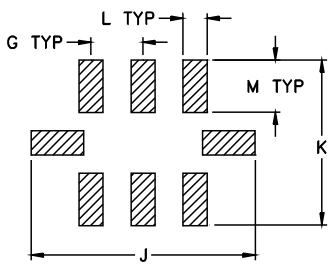




Outline Drawing

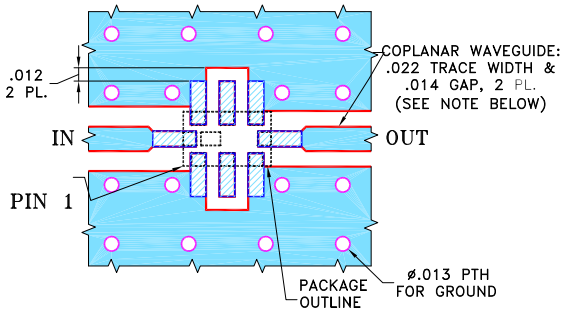


PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

Demo Board MCL P/N: TB-800+
Suggested PCB Layout (PL-427)



NOTES:
1. COPLANAR WAVEGIDE IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010" ± .001". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND 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.

Pad Connections

Input	8
Output	4
Ground	1,3,5,7
Isolate (Do not ground)	2,6

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.079	.049	.037	.014	.012	.012	.026
2.01	1.24	0.94	0.36	0.30	0.30	0.66

H	J	K	L	M	wt
.025	.134	.104	0.014	.039	grams
0.64	3.40	2.64	0.36	0.99	.008

Additional 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