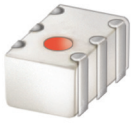
Ceramic

Diplexer

LDPG-272-492+

50Ω DC to 5750 MHz (DC-2700, 4900-5750 MHz)



CASE STYLE: GE0805C-10

+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

Maximum Ratings

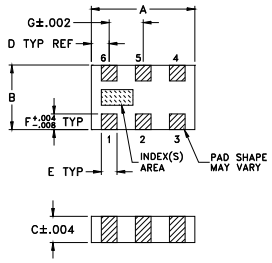
Operating Temperature	-55°C to 100°C
Storage Temperature*	-55°C to 100°C
RF Power Input**	2W at 25°C

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

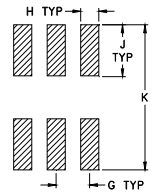
Pad Connections

Low Pass Port	6
High Pass Port	4
Common Port	2
Ground	1,3,5

Outline Drawing



PCB Land Pattern



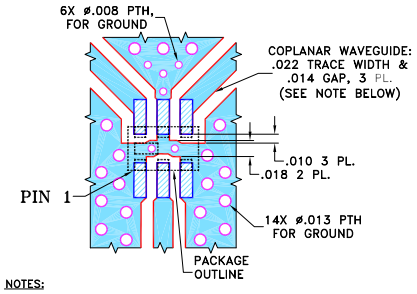
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.079	.049	.020	.014	.012	.012
2.01	1.24	0.51	0.36	0.30	0.30

G	H	J	K		wt
.026	.014	.039	.110		grams
0.66	0.36	1.00	2.80		.005

Demo Board MCL P/N: TB-798+
Suggested PCB Layout (PL-441)



NOTES:
1. COPLANAR WAVEGUIDE 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.

Features

- small size 0805(2.0 x 1.25 mm)
- low insertion loss, 0.7 dB typ.
- high rejection
- temperature stable
- LTCC construction

Applications

- communication systems
- ISM
- WiFi

Electrical Specifications[1,2] at 25°C

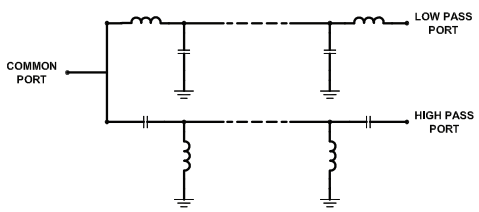
Parameter		Port	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	Low Pass	DC - 2700	—	0.5	0.9	dB
		Band Pass	4900 - 5750	—	0.7	0.9	
	Return Loss	Low Pass	2300 - 2700	10	16	—	dB
		Band Pass	4900 - 5750	10	14	—	
		Common	2300 - 2700	—	16	—	
			4900 - 5750	—	14	—	
Stop Band Isolation		Band Pass	DC - 2700	18	23	—	dB
			9800- 11900	—	17	—	
		Low Pass	4800 - 8000	20	30	—	dB

[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-798+*

Typical Performance Data at 25°C

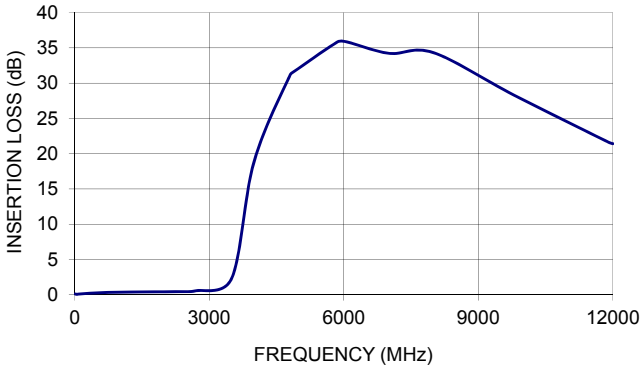
Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)		
	Low Pass Port	High Pass Port	Common Port	Low Pass Port	High Pass Port
10	0.10	58.83	47.75	37.84	0.04
50	0.05	45.92	38.49	34.75	0.03
100	0.10	41.84	33.28	32.98	0.03
800	0.34	25.56	15.37	14.76	0.08
2300	0.43	27.39	17.15	21.24	0.25
2700	0.56	37.44	18.10	19.31	0.33
3500	2.30	8.69	14.46	16.57	3.00
4000	18.88	1.05	11.25	0.80	14.70
4800	31.11	0.54	18.24	0.39	25.61
4900	31.67	0.54	19.56	0.38	26.15
5750	35.40	0.59	18.12	0.33	18.97
6000	35.94	0.72	14.00	0.31	14.49
7000	34.23	1.84	6.46	0.17	7.46
8000	34.32	6.18	2.51	0.07	2.74
9800	28.29	32.63	0.51	0.19	0.31
11900	21.63	20.94	0.43	0.49	0.51
12000	21.41	20.85	0.41	0.51	0.57

Functional Schematic

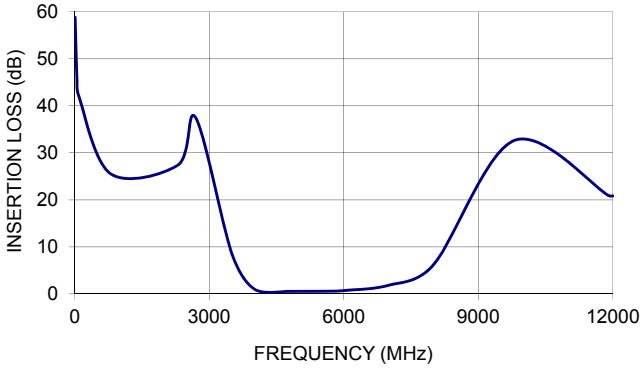


Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

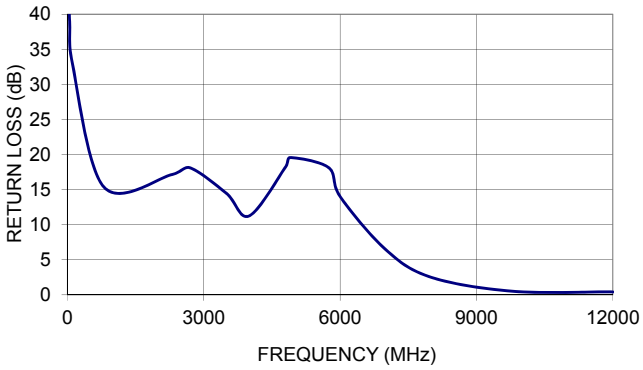
LDPG-272-492+
LOW FREQUENCY PORT INSERTION LOSS (Pin=0dBm)



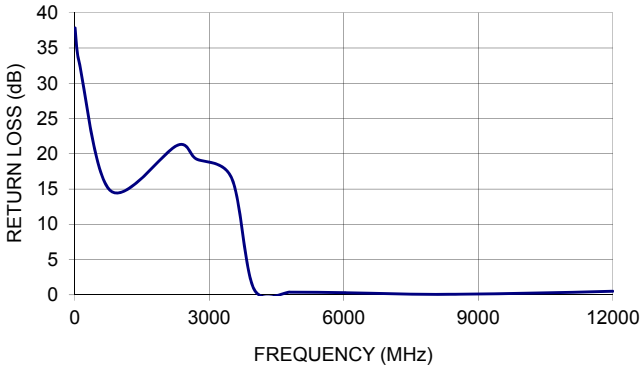
LDPG-272-492+
HIGH FREQUENCY PORT INSERTION LOSS (Pin=0dBm)



LDPG-272-492+
COMMON PORT RETURN LOSS (Pin=0 dBm)



LDPG-272-492+
LOW FREQUENCY PORT RETURN LOSS (Pin=0dBm)



LDPG-272-492+
HIGH FREQUENCY PORT RETURN LOSS (Pin=0dBm)