# ow Pass Filter

# RLP-40+

#### DC to 40 MHz $50\Omega$

#### **Maximum Ratings**

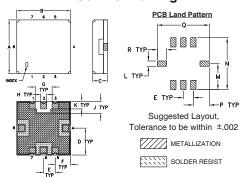
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

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

#### **Pin Connections**

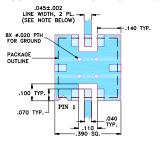
RF IN	2
RF OUT	6
GROUND	1, 3, 4, 5, 7, 8

# **Outline Drawing**



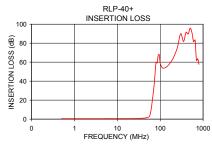
### Outline Dimensions (inch )

#### Demo Board MCL P/N: TB-332 Suggested PCB Layout (PL-176)



#### NOTES:

- 1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .002"; COPPER: 1/2 0Z. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH 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**

- high rejection
- · sharp insertion loss roll off
- excellent VSWR, 1.1:1 typ.@ passband
- aqueous washable

## **Applications**

- · wireless broadband access
- receivers / transmitters

CASE STYLE: GP731

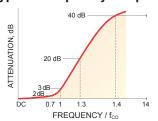
+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



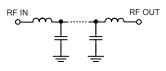
# Low Pass Filter Electrical Specifications (T<sub>AMB</sub>= 25°C)

PASSBAND (MHz)	fco, MHz Nom.	STOPBAND (MHz)		VSWR (:1)	
(Loss < 2dB)	(Loss 3dB)	(Loss > 20dB)	(Loss > 40dB)	Passband Typ.	Stopband Typ.
DC - 40	56	70 - 80	80 - 800	1.1	20

### **Typical Frequency Response**

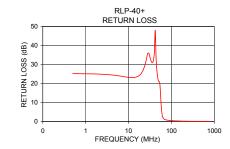


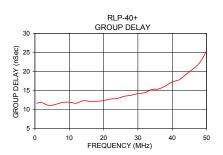
# **Functional Schematic**



# Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nSec)
. ,	x (	σ	` '		
0.5	0.50	0.00	25.19	0.5	10.93
10.0	0.52	0.00	23.23	2.0	11.54
26.0	0.67	0.01	32.63	4.0	11.64
40.0	1.01	0.01	36.25	8.0	11.41
56.0	2.80	0.15	13.58	12.0	12.00
60.0	6.79	0.54	4.42	16.0	12.17
62.0	10.60	0.70	2.66	20.0	12.56
66.0	19.71	0.82	1.43	22.0	12.65
70.0	29.39	0.96	1.05	24.0	12.90
80.0	58.83	0.65	0.71	28.0	13.47
100.0	61.12	1.81	0.46	30.0	13.75
200.0	64.67	1.40	0.17	34.0	15.19
300.0	85.19	3.99	0.10	38.0	16.03
400.0	85.20	6.09	0.08	40.0	16.49
500.0	91.89	3.18	0.08	42.0	17.86
600.0	85.33	6.16	0.07	44.0	19.00
700.0	62.07	0.55	0.08	48.0	21.55
800.0	58.10	0.51	0.10	50.0	25.56





- 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.
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