Surface Mount

Diplexer

LDP-1050-252+

50Ω 1 to 2500 MHz (1-1050, 1650-2500 MHz)



CASE STYLE: FV1206-1

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature*	-55°C to 100°C
RF Power Input**	2W at 25°C

* 12 months max.

** passband rating, derate linearly to 0.5W at 85°C ambient.

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

Pin Connections

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

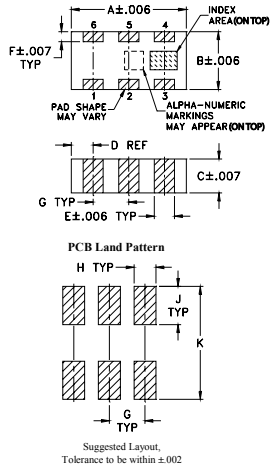
Features

- low insertion loss
- high rejection
- temperature stable
- miniature package

Applications

- satellite systems
- communication systems
- multiband systems
- cellular
- GPS
- WCDMA

Outline Drawing

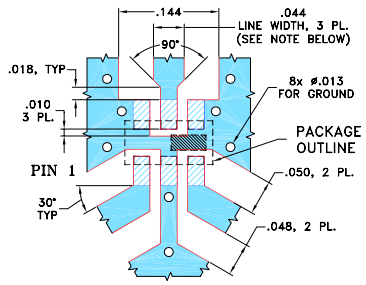


Outline Dimensions (inch / mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28

G	H	J	K	wt
.039	.024	.042	.123	grams
0.99	0.61	1.07	3.12	.020

Demo Board MCL P/N: TB-706
Suggested PCB Layout (PL-398)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .020" ± .0015". COPPER: 1/2 OZ. 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

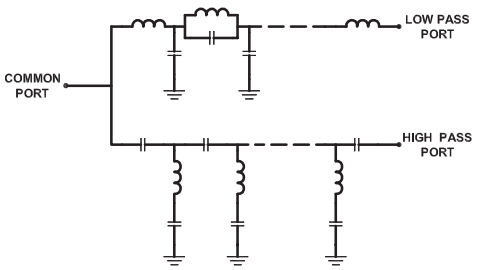
Electrical Specifications at 25°C

Parameter		Port	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	Low Pass	1 - 1050	—	0.6	1.5	dB
		High Pass	1650 - 2150	—	1.0	1.8	
			2150 - 2500	—	2.0	2.9	
	Return Loss	Low Pass	1 - 1050	10	15	—	dB
		High Pass	1650 - 2150	6	12	—	
			2150 - 2500	—	8	—	
		Common	1 - 1050	11	14	—	
			1650 - 2150	6	17	—	
			2150 - 2500	—	8		
Stop Band Isolation		High Pass	1 - 200	20	32	—	dB
			200 - 800	18	21	—	
			800 - 1050	20	25	—	
		Low Pass	1650 - 2500	18	31	—	dB

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
100.0	0.11	30.80	24.17	24.26	0.02
300.0	0.35	22.54	15.04	15.29	0.12
400.0	0.49	21.14	13.10	13.47	0.17
600.0	0.72	20.78	11.37	12.00	0.26
700.0	0.78	21.60	11.43	12.26	0.30
900.0	0.78	27.30	14.35	17.03	0.35
1200.0	2.68	10.37	8.55	7.12	1.62
1350.0	7.27	4.66	6.02	4.30	6.21
1500.0	13.90	2.23	8.55	7.48	14.17
1650.0	27.00	0.86	16.26	1.70	17.27
1940.0	26.39	0.71	13.48	0.65	13.49
2150.0	30.06	1.19	8.22	0.51	8.31
2220.0	31.38	1.39	7.26	0.48	7.34
2360.0	32.90	1.81	5.87	0.45	5.95
2500.0	32.48	2.23	4.90	0.44	4.98

Functional Schematic



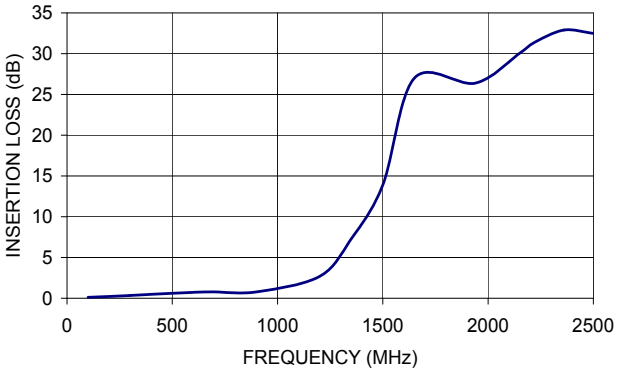
Notes

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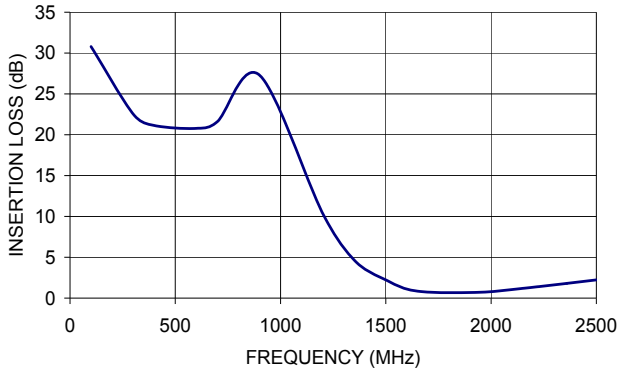
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

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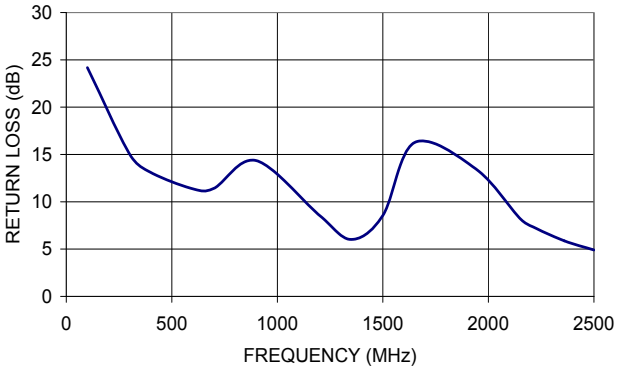
LDP-1050-252+
LOW FREQUENCY PORT INSERTION LOSS (Pin=0dBm)



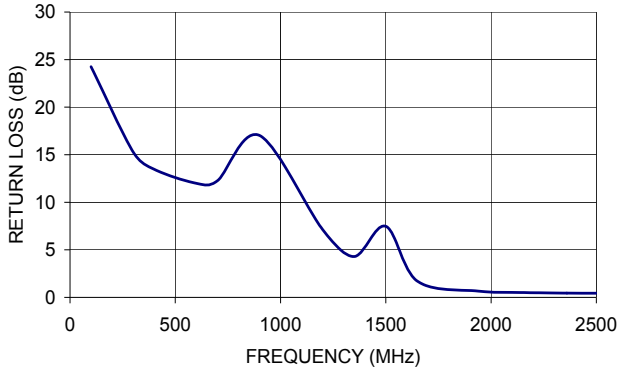
LDP-1050-252+
HIGH FREQUENCY PORT INSERTION LOSS (Pin=0dBm)



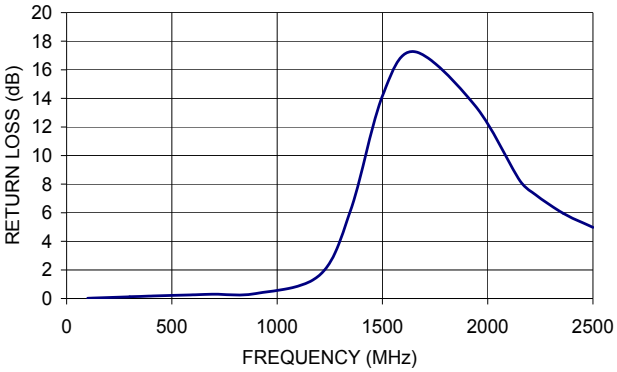
LDP-1050-252+
COMMON PORT RETURN LOSS (Pin=0 dBm)



LDP-1050-252+
LOW FREQUENCY PORT RETURN LOSS (Pin=0dBm)



LDP-1050-252+
HIGH FREQUENCY PORT RETURN LOSS (Pin=0dBm)



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