Ceramic

Diplexer

LDPQ-132-33+

50Ω DC to 3000 MHz (DC-1280, 1550-3000 MHz)



Generic photo used for illustration purposes only

CASE STYLE: NL1008C-4

+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 105°C
Storage Temperature*	-55°C to 105°C
RF Power Input**	2W at 25°C

* passband rating, derate linearly to 1W at 105°C ambient.
Permanent damage may occur if any of these limits are exceeded.

Pad Connections

Low Pass Port	5
High Pass Port	8
Common Port	3
Ground	1,2,4,6,7

Features

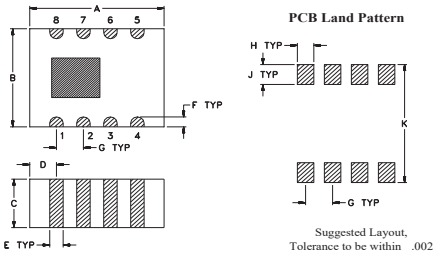
- small size 1008(2.5 x 2.0 mm)
- temperature stable
- LTCC construction

Applications

- communication systems
- GSM
- GPS
- IoT

Outline Drawing

Outline Dimensions



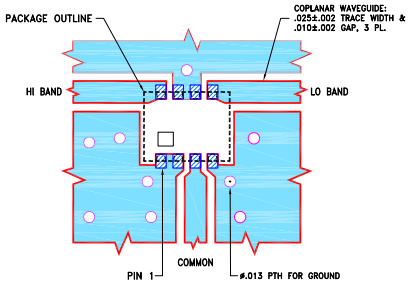
NOTES:
1. PIN NUMBERS DO NOT APPEAR ON UNIT. FOR REFERENCE ONLY.
2. METALLIZATION
3. PAD TOLERANCE IS NON-CUMULATIVE.

Outline Dimensions (inch / mm)

A	B	C	D	E	F
.098	.079	.039	.020	.010	.008
2.49	2.01	0.99	0.51	0.25	0.20

G	H	J	K		wt
.020	.012	.016	.095		grams
0.51	0.30	0.41	2.41		.019

Demo Board MCL P/N: TB-985+
Suggested PCB Layout (PL-646)



NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR FR4, GRADE IT-180TC (ITEQ CORP.) WITH DIELECTRIC THICKNESS .016±.0015, COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS LINE WIDTH & 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.

Electrical Specifications[1,2] at 25°C

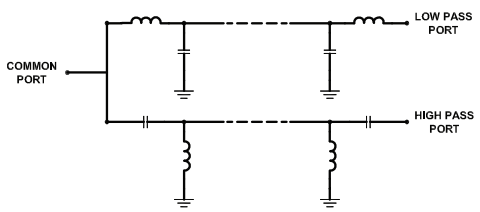
Parameter		Port	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	Low Pass	DC - 1280	—	1	2.2	dB
		High Pass	1550 - 3000	—	1.5	2.2	
	Return Loss	Common	DC - 3000	—	15	—	dB
Stop Band Isolation		High Pass	DC - 1240	10	15	—	dB
		Low Pass	1620 - 3000	11	15	—	dB

[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-985+ with auto port extension*

Typical Performance Data at 25°C

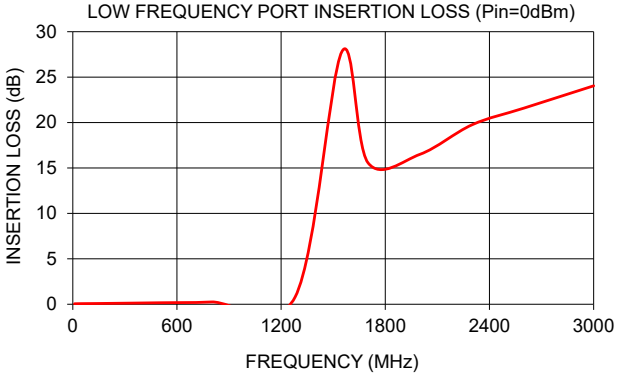
Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)		
	Low Pass Port	High Pass Port	Common Port	Low Pass Port	High Pass Port
10	0.05	52.87	53.16	50.32	0.04
50	0.07	38.81	46.33	45.68	0.03
100	0.08	32.86	41.80	42.06	0.02
200	0.09	26.91	36.25	36.84	0.03
500	0.17	19.66	31.13	31.91	0.15
800	0.25	17.21	34.38	38.16	0.34
1280	0.78	16.95	22.95	25.61	1.35
1550	27.81	0.77	24.28	1.06	22.06
1700	15.58	0.63	23.15	0.74	18.42
2000	16.51	0.51	24.78	0.40	21.92
2300	19.76	0.51	20.75	0.19	25.15
2600	21.60	0.75	13.25	0.13	14.63
3000	24.04	1.67	7.24	0.16	7.99

Functional Schematic

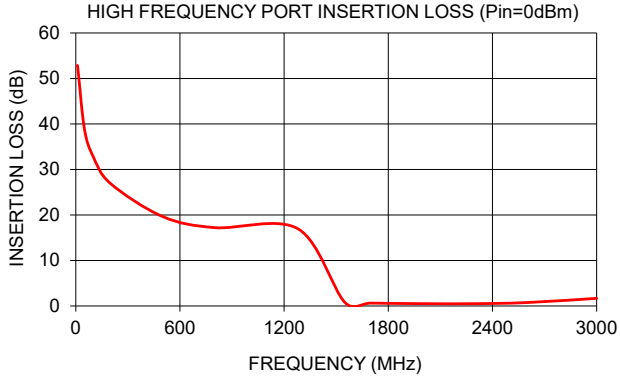


Notes
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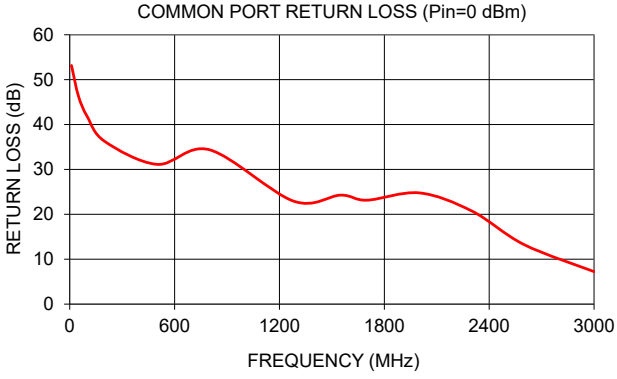
LDPQ-132-33+
LOW FREQUENCY PORT INSERTION LOSS (Pin=0dBm)



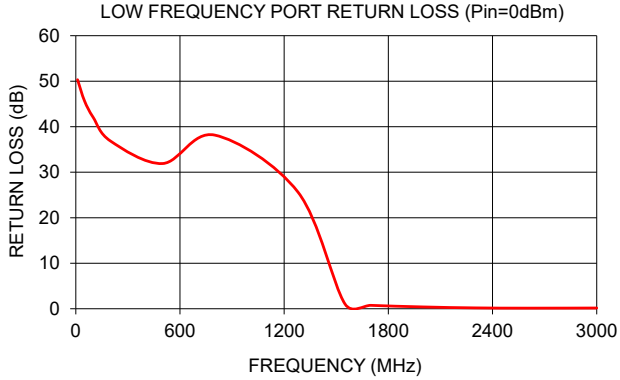
LDPQ-132-33+
HIGH FREQUENCY PORT INSERTION LOSS (Pin=0dBm)



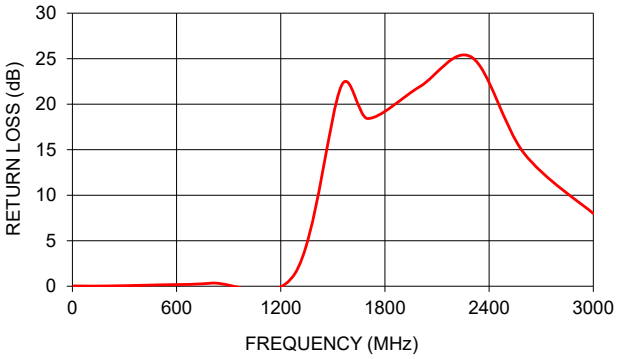
LDPQ-132-33+
COMMON PORT RETURN LOSS (Pin=0 dBm)



LDPQ-132-33+
LOW FREQUENCY PORT RETURN LOSS (Pin=0dBm)



LDPQ-132-33+
HIGH FREQUENCY PORT RETURN LOSS (Pin=0dBm)



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