

Ceramic Diplexer

LDPQ-132-33+

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

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.

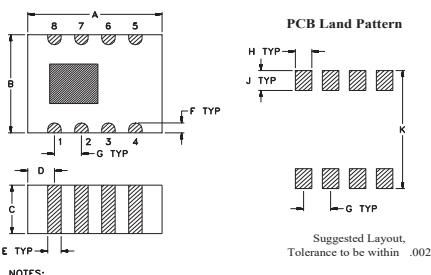
Permanent damage may occur if any of these limits are exceeded.

Pad Connections

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

Outline Drawing

Outline Dimensions



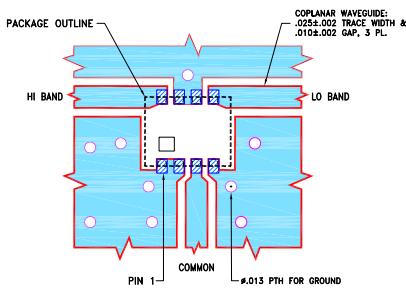
Outline Dimensions (inch mm)

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
0.20	0.12	0.16	0.095	grams

0.51 0.30 0.41 2.41 .019

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



Features

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

Applications

- communication systems
- GSM
- GPS
- IoT



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

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

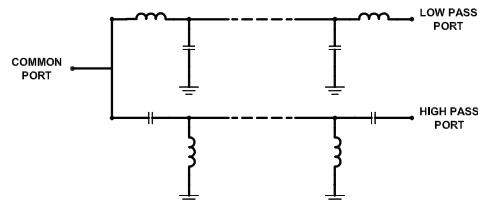
¹ In Application where DC voltage is present at either input or output port, coupling capacitors are required.

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:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR FR4, GRADE IT-180TC (TEQ CORP.) WITH DIELECTRIC THICKNESS .016±.0015, COPPER: 1/2 OZ. EACH SIDE. TOP AND BOTTOM LAYERS OF PCB MAY BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

3. DENOTES PCB COPPER LAYOUT WITH SWOB (SOLDER MASK OVER BARE COPPER).
4. DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK.

Notes

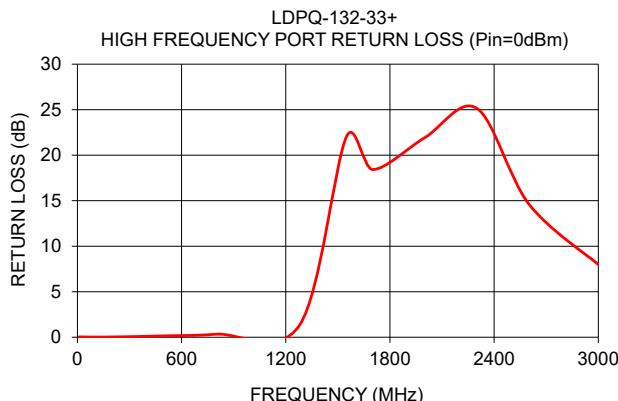
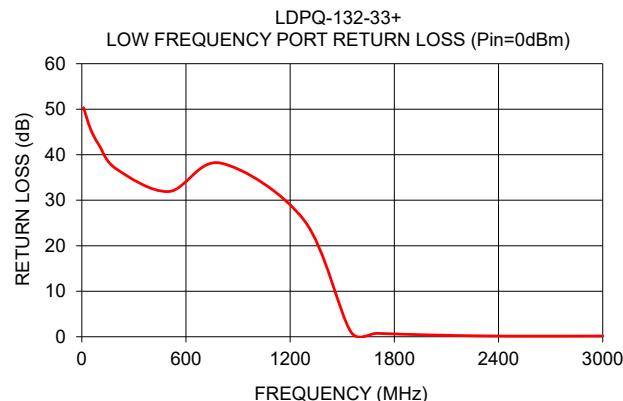
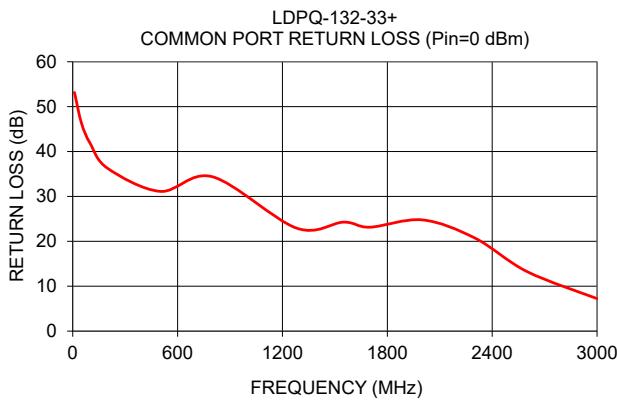
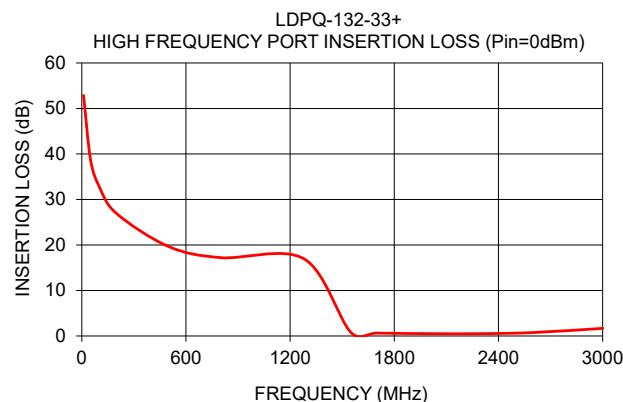
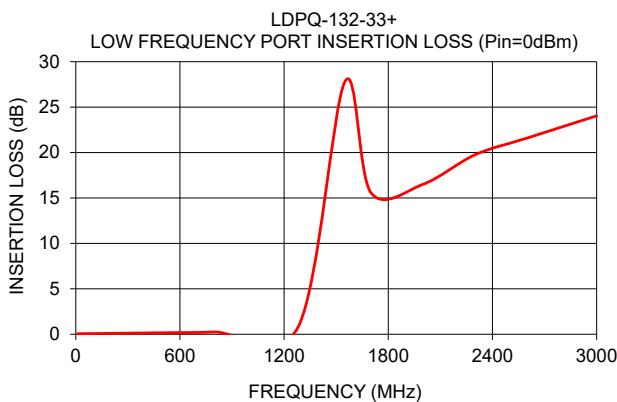
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Performance Charts

LDPQ-132-33+



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