

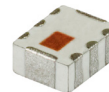
LTCC

Bandpass Filter & Balun

50Ω

2400 to 2500 MHz

BFNL2-252R+



Generic photo used for illustration purposes only

CASE STYLE: NL1008C-2

+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

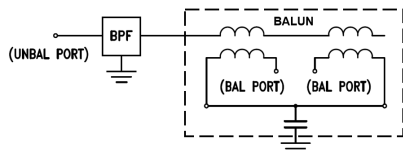
Features

- Low amplitude unbalance 0.6 dB typ.
- Small size (0.098"x0.079"x0.043")
- Temperature stable
- Hermetically sealed

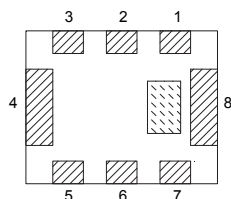
Applications

- ISM Band
- Bluetooth
- Zigbee
- WiFi / WLAN

Simplified Schematic



Top View



Pad Connections

Unbalanced Port	2
Balanced Port	5, 7
GND	4, 8
NC or DC Feed	3
NC	1, 6

Electrical Specifications at 25°C

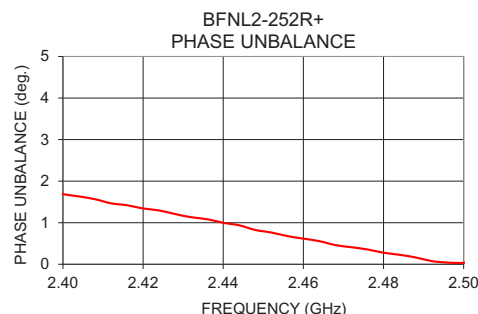
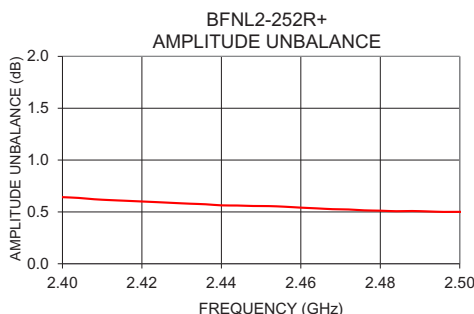
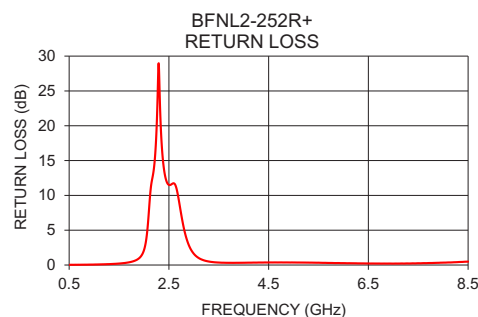
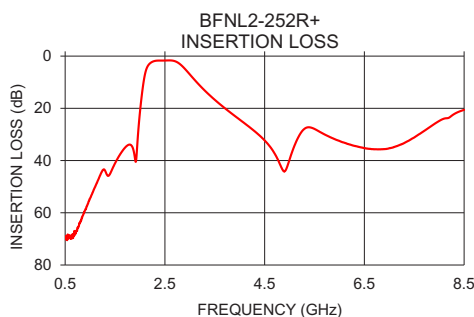
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio				2			
Pass Band	Insertion Loss ¹	F1-F2	2400 - 2500	—	1.7	2.0	dB
	Return Loss	F1-F2	2400 - 2500	9.5	12	—	dB
Stop Band, Lower	Rejection		880 - 960	35	59	—	dB
			1710 - 1910	28	38	—	
Stop Band, Upper	Rejection		4800 - 5000	30	42	—	dB
			7200 - 7500	23	32	—	
Amplitude Unbalance			2400 - 2500	—	0.6	1.0	dB
Phase Unbalance			2400 - 2500	—	1.4	10	degree

1. Tested on Evaluation Board TB-1037+

Maximum Ratings

Operating Temperature	-40°C to +85°C
Storage Temperature ¹	-40°C to +85°C
RF Power Input ²	1W @ 25°C

1. Refer to product storage temperature after installation
Suggestion for T&R unused product storage condition: +5 ~ +35 °C,
Humidity 45~75%RH, 12 month Max
2. Derate linearly to 0.5W at 85°C



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REV. 1
ECO-000041
BFNL2-252R+
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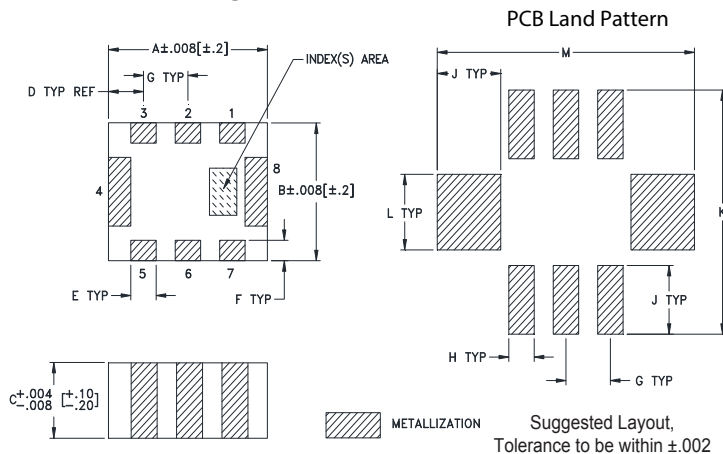
Balance Filter

BFNL2-252R+

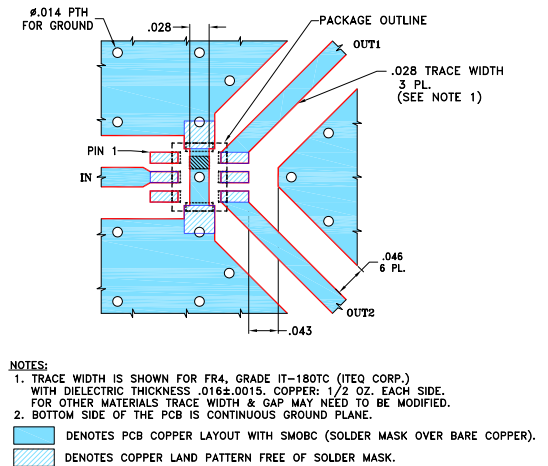
Typical Performance Data

Frequency (GHz)	Insertion Loss (dB)	Return Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (Deg.)
0.50	69.37	0.03	0.65	178.91
0.88	59.98	0.05	0.02	173.06
0.96	56.46	0.06	0.24	170.87
1.50	41.05	0.21	5.90	176.57
1.71	34.90	0.40	11.82	157.03
1.91	40.44	1.04	5.49	149.64
2.40	1.71	13.85	0.64	1.69
2.44	1.71	12.31	0.56	1.00
2.50	1.69	11.51	0.50	0.03
3.20	11.26	0.68	0.46	4.29
4.00	24.32	0.33	10.72	0.61
4.800	41.13	0.37	2.06	173.86
5.00	39.62	0.36	0.87	164.93
6.00	32.50	0.27	3.23	161.43
7.20	34.10	0.21	0.63	162.66
7.50	31.15	0.25	0.04	157.04
8.50	20.58	0.49	3.00	115.97

Outline Drawing



Demo Board MCL P/N: TB-1037+ Suggested PCB Layout (PL-550)



Outline Dimensions (inch mm)

A	B	C	D	E	F	G
.098	.079	.043	.022	.016	.012	.028
2.49	2.01	1.09	0.56	0.41	0.30	0.71
H	J	K	L	M	wt	
.016	.039	.140	.043	.159	grams	
0.41	0.99	3.56	1.09	4.04	.019	

Additional Notes

- 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.
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