LTCC

Bandpass Filter & Balun

BFGE2-552R+

50Ω 4900 to 5875 MHz

Generic photo used for illustration purposes only

CASE STYLE: GE0805C-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

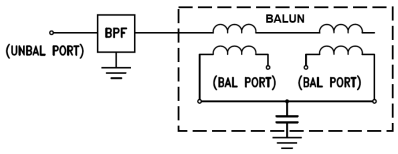
Features

- Low amplitude unbalance 0.6 dB typ.
- Small size (0.079"x0.049"x0.037")
- Temperature stable
- Hermetically sealed

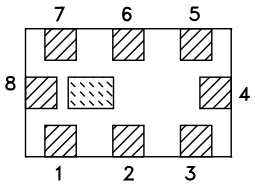
Applications

- ISM Band
- Bluetooth
- Zigbee
- WiFi / WLAN

Pad Connections



Top View



Pad Connections

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

Electrical Specifications at 25°C

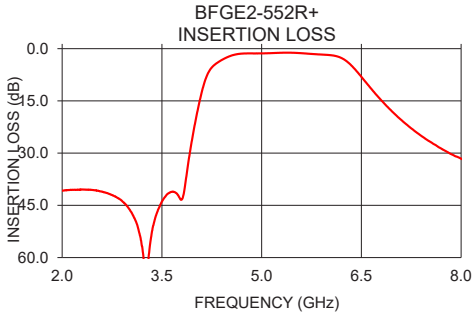
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Impedance Ratio					2		
Pass Band	Insertion Loss[1]	F1-F2	4900 - 5875	—	1.3	2.2	dB
	Return Loss	F1-F2	4900 - 5875	8.5	17	—	dB
Stop Band, Lower	Rejection		3500	30	49	—	dB
Amplitude Unbalance			4900 - 5875	—	1.7	—	dB
Phase Unbalance			4900 - 5875	—	4	—	degree

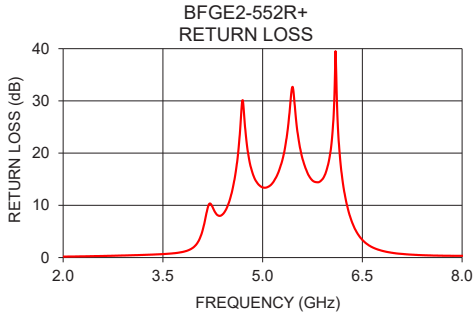
1. Tested on Evaluation Board TB-1034-2552+ .

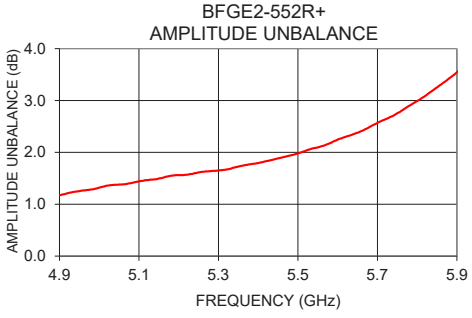
Maximum Ratings

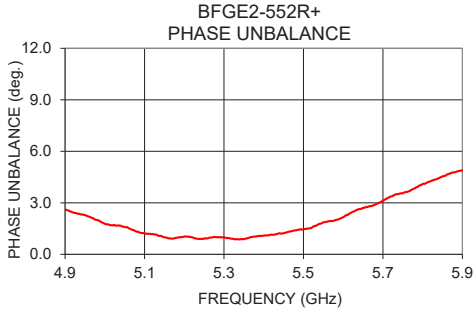
Operating Temperature	-40°C to +85°C
Storage Temperature[1]	-40°C to +85°C
RF Power Input[2]	2W @25°C

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 1W at 85°C.





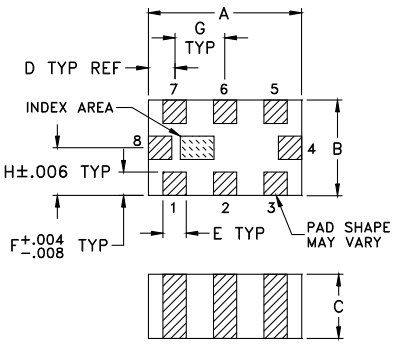




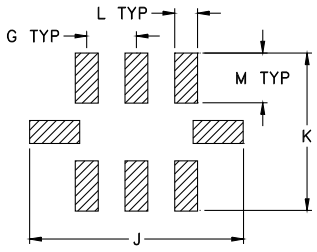
Typical Performance Data

Frequency (GHz)	Insertion Loss (dB)	Return Loss (dB)	Amplitude Unbalance (dB)	Phase Unbalance (Deg,)
0.50	51.50	0.05	3.65	142.87
0.70	48.63	0.06	3.84	152.54
1.00	45.77	0.09	3.88	160.55
1.50	42.50	0.13	3.75	166.92
2.00	40.77	0.18	3.43	170.40
2.50	40.68	0.28	2.75	173.27
3.00	45.82	0.43	1.29	177.15
3.50	43.92	0.66	1.40	176.01
4.00	21.29	2.47	3.24	63.58
4.50	2.32	10.82	0.08	6.72
4.90	1.37	14.65	1.17	2.62
5.40	1.15	27.20	1.79	1.08
5.876	1.67	14.71	3.40	4.77
6.50	8.08	3.39	23.69	27.07
7.00	18.73	0.82	8.50	166.50
8.50	35.32	0.41	1.68	178.29

Outline Drawing

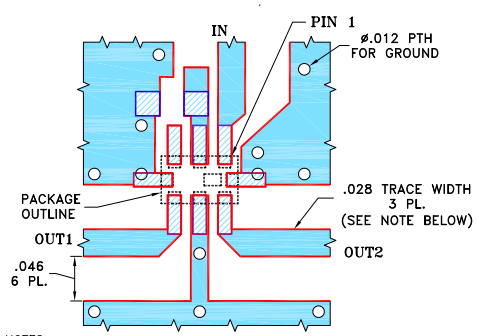


PCB Land Pattern



Suggested Layout,
Tolerance to be within .002

Demo Board MCL P/N: TB-1034-2552+
Suggested PCB Layout (PL-551)



NOTES:

1. TRACE WIDTH IS SHOWN FOR FR4, GRADE IT-180TC (ITEQ CORP.) WITH DIELECTRIC THICKNESS .016±.0015. COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE 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.

Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.079	.049	.037	.014	.012	.012	.026
2.01	1.24	0.94	0.36	0.30	0.30	0.66

H	J	K	L	M		wt
.025	.134	.104	0.014	.039		grams
0.64	3.40	2.64	0.36	0.99		.008

Additional 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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