

Ultra-Small Ceramic Power Splitter/Combiner

SCG-3-162+

3 Way-0° 50Ω 900 to 1600 MHz

Features

- Isolation resistor, external 150 ohms
- Low insertion loss, 1.2 dB typ.
- Excellent amplitude unbalance, 0.2 dB typ.
- Excellent phase unbalance, 5 deg. typ.
- High isolation, 18 dB typ.
- ESD non-sensitive
- Temperature stable LTCC technology
- Wrap around terminations for excellent solderability
- Low cost



Generic photo used for illustration purposes only

CASE STYLE: GE0805C-1

+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, 2000

Applications

- ISM
- GPS

Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		900		1600	MHz
Insertion Loss, above 4.8 dB	900 - 1600	—	1.2	1.8	dB
Isolation	900 - 1600	11.5	18	—	dB
Phase Unbalance	900 - 1600	—	5.0	8.5	Degree
Amplitude Unbalance	900 - 1600	—	0.2	0.8	dB
Return Loss (Input)	900 - 1600	—	12	—	dB
Return Loss (Output)	900 - 1600	—	20	—	dB

Maximum Ratings

Parameter	Ratings
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	2W* max.

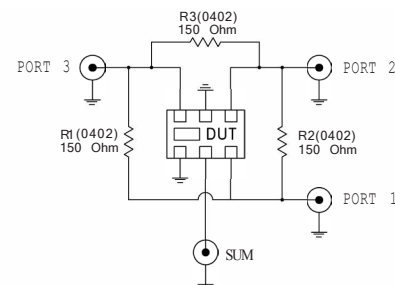
* Derate linearly to 0.7W at 100°C ambient, power input as combiner is limited by rating of external resistor 150Ω resistor.

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

Pad Connections

Function	Pad Number
SUM PORT	2
PORT 1	6
PORT 2	4
PORT 3	3
GROUND	1,5
PORT 1-2, 2-3, 1-3	resistor external 150 ohms

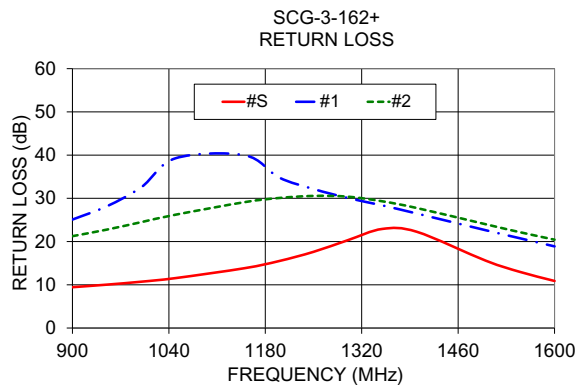
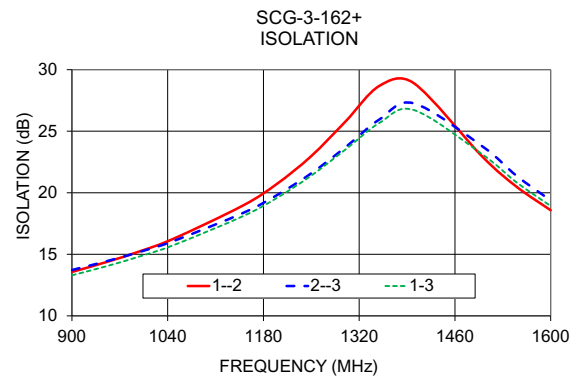
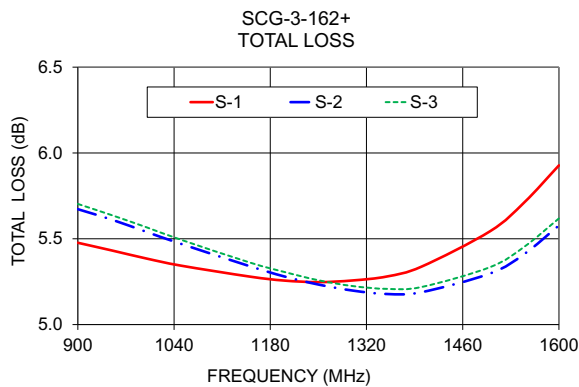
Electrical Schematic



Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)			Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	Return Loss (dB)		
	S-1	S-2	S-3		1-2	1-3	2-3		S	1	2
900	5.48	5.67	5.70	0.23	13.57	13.29	13.72	0.56	9.44	25.09	21.25
950	5.43	5.61	5.64	0.21	14.36	14.03	14.43	0.81	10.04	28.16	22.77
1000	5.38	5.54	5.57	0.18	15.26	14.84	15.21	1.05	10.72	32.58	24.50
1050	5.34	5.47	5.49	0.15	16.30	15.77	16.11	1.27	11.56	39.29	26.23
1150	5.28	5.34	5.36	0.08	18.96	18.10	18.35	1.77	13.84	39.97	29.12
1200	5.26	5.28	5.31	0.05	20.73	19.59	19.82	2.04	15.49	34.82	30.08
1250	5.25	5.23	5.26	0.02	22.98	21.40	21.58	2.28	17.62	32.16	30.56
1300	5.26	5.20	5.22	0.06	25.79	23.52	23.70	2.54	20.33	30.07	30.38
1350	5.28	5.18	5.21	0.10	28.70	25.69	25.97	2.85	22.93	28.36	29.31
1400	5.34	5.19	5.22	0.15	28.90	26.72	27.26	3.14	22.27	26.49	27.76
1500	5.54	5.30	5.34	0.25	22.94	23.13	23.78	3.74	15.59	22.63	24.01
1550	5.71	5.41	5.45	0.30	20.50	20.85	21.38	4.05	12.97	20.75	22.16
1600	5.93	5.58	5.62	0.35	18.58	18.93	19.38	4.42	10.89	18.89	20.44

1. Total Loss = Insertion Loss + 4.8dB splitter loss.



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-Circuits' applicable established test performance criteria and measurement instructions.
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