

# Coaxial Power Splitter/Combiner

## ZFRSC-2050+ ZFRSC-2050

2 Way-0° Resistive 50Ω DC to 2000 MHz



BNC version shown  
CASE STYLE: K18

Connectors	Model	Price	Qty.
BNC	ZFRSC-2050(+)	\$59.95	(1-9)
N-TYPE	ZFRSC-2050-N(+)	\$64.95	(1-9)
BRACKET (OPTION "B")		\$2.50	(1+)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Maximum Ratings

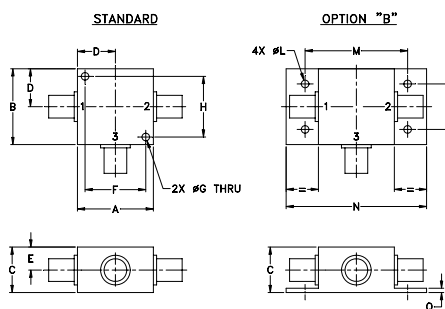
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.75W max.
Internal Dissipation	0.375W max.

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

### Coaxial Connections

SUM PORT	3
PORT 1	1
PORT 2	2

### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.00	.125	1.000
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40
J	K	L	M	N	P	Q	wt
--	--	.125	1.688	2.18	.75	.07	grams
--	--	3.18	42.88	55.37	19.05	1.78	70.0

For option B with N-type connectors, dimension "C" increases to 0.94 inches.

### Features

- wideband, DC to 2000 MHz
- low insertion loss, 6.5 dB typ.
- excellent amplitude unbalance, 0.02 dB typ.
- rugged shielded case

### Applications

- laboratory
- test set-ups

### Electrical Specifications

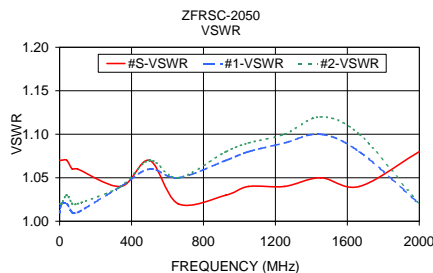
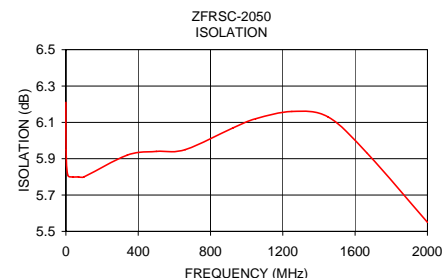
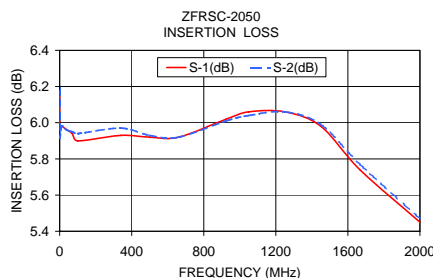
FREQ. RANGE (MHz)	ISOLATION (dB)			INSERTION LOSS (dB) ABOVE 6.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L	M	U	L		M		U		L	M	U	L	M	U
	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
DC-2000	6.2	6.6	7.0	0.1	0.2	0.3	0.6	0.5	1.4	1	2	5	0.1	0.2	0.5

L = low range [DC-100 MHz] M = mid range [100 MHz to  $f_c/2$ ] U = upper range [ $f_c/2$  to  $f_u$ ]

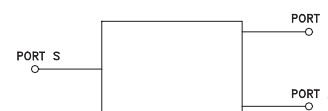
This is a resistive power divider to enable frequency coverage from dc to the highest rated frequency. Since resistive power divider do not provide a high degree of isolation (basically isolation equals the insertion loss between ports), an amplifier such as Mini-Circuits' ZFL series is recommended when high isolation is required. Matched power rating 0.75W, internal load dissipation 0.375W.

### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
0.03	6.18	6.19	0.01	6.21	0.07	1.07	1.02	1.02
1.00	5.96	5.92	0.04	5.95	0.06	1.07	1.01	1.02
10.00	5.98	5.98	0.00	5.81	0.12	1.07	1.02	1.02
40.00	5.96	5.96	0.00	5.80	0.15	1.07	1.02	1.03
70.00	5.94	5.95	0.01	5.80	0.21	1.06	1.01	1.02
100.00	5.90	5.94	0.04	5.80	0.17	1.06	1.01	1.02
340.00	5.93	5.97	0.04	5.92	0.00	1.04	1.04	1.04
500.00	5.92	5.93	0.01	5.94	0.01	1.07	1.06	1.07
660.00	5.92	5.92	0.00	5.95	0.13	1.02	1.05	1.05
925.00	6.02	6.01	0.01	6.07	0.48	1.03	1.07	1.08
1050.00	6.06	6.04	0.02	6.12	0.57	1.04	1.08	1.09
1250.00	6.06	6.06	0.00	6.16	0.94	1.04	1.09	1.10
1450.00	5.98	5.99	0.01	6.13	1.12	1.05	1.10	1.12
1666.67	5.74	5.77	0.03	5.93	1.11	1.04	1.08	1.10
2000.00	5.45	5.47	0.02	5.55	1.34	1.08	1.02	1.02



### electrical schematic



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp).

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