

Coaxial

# Power Splitter/Combiner

## ZFRSC-2050+

2 Way-0° Resistive 50Ω DC to 2000 MHz



Generic photo used for illustration purposes only

### Maximum Ratings

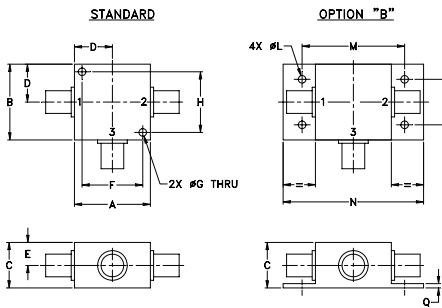
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.75W max.
Internal Dissipation	0.375W max.

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	J	K	L	M	N	P	Q	wt
1.25	1.25	.75	.63	.38	1.00	.125	1.000	--	--	.125	1.688	2.18	.75	.07	grams
31.75	31.75	19.05	16.00	9.65	25.40	3.18	25.40	--	--	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, 0.5 dB typ. above 6dB
- 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	L	M	U
f <sub>c</sub> -f <sub>u</sub>	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

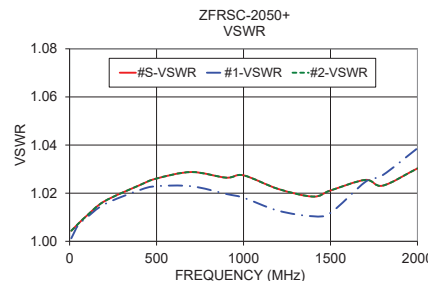
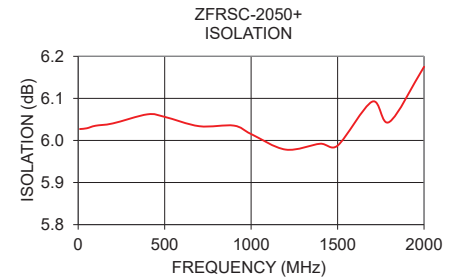
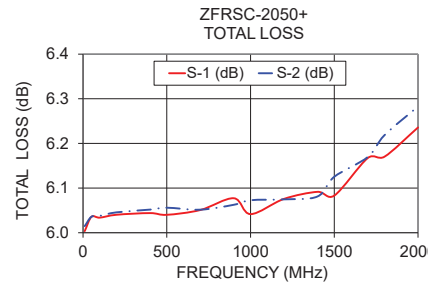
L = low range [DC-100 MHz] M = mid range [100 MHz to f<sub>c</sub>/2] U = upper range [f<sub>c</sub>/2 to f<sub>u</sub>]

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)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
10	6.00	6.01	0.01	6.03	0.05	1.00	1.00	1.00
50	6.04	6.04	0.00	6.03	0.05	1.01	1.01	1.01
100	6.03	6.04	0.00	6.04	0.03	1.01	1.01	1.01
200	6.04	6.05	0.01	6.04	0.10	1.01	1.02	1.02
400	6.04	6.05	0.01	6.06	0.13	1.02	1.02	1.02
500	6.04	6.06	0.02	6.06	0.17	1.03	1.02	1.03
700	6.05	6.05	0.00	6.03	0.24	1.03	1.02	1.03
900	6.08	6.06	0.01	6.04	0.29	1.02	1.02	1.03
1000	6.04	6.07	0.03	6.02	0.33	1.02	1.02	1.03
1200	6.08	6.07	0.00	5.98	0.45	1.02	1.01	1.02
1400	6.09	6.08	0.01	5.99	0.45	1.01	1.01	1.02
1500	6.08	6.13	0.04	5.99	0.69	1.01	1.01	1.02
1700	6.17	6.17	0.00	6.09	0.93	1.01	1.02	1.03
1800	6.17	6.22	0.05	6.04	0.60	1.01	1.03	1.02
2000	6.24	6.28	0.05	6.18	0.86	1.01	1.04	1.03

1. Total Loss = Insertion Loss + 6dB splitter loss.



### electrical schematic





### 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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