

Coaxial

# Power Splitter/Combiner

## ZFRSC-4-842-S+

4 Way-0° Resistive 50Ω DC to 8400 MHz



Generic photo used for illustration purposes only  
CASE STYLE: G15

Connectors Model  
SMA ZFRSC-4-842-S+  
BRACKET (OPTION "B")

**+RoHS Compliant**

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

### Maximum Ratings

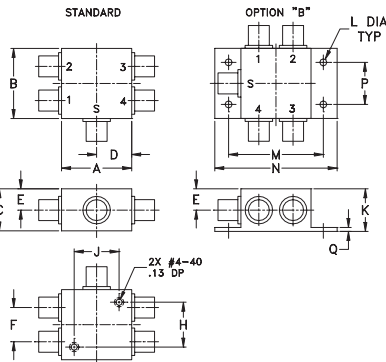
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.16W max.
Internal Dissipation	0.12W max.

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

### Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4

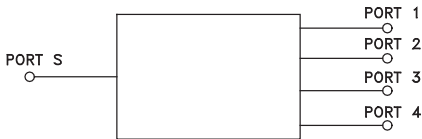
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	.61	—	.80
31.75	31.75	19.05	16.00	9.65	15.49	—	20.32
J	K	L	M	N	P	Q	wt
.80	.76	.125	1.688	2.18	.75	.07	grams
20.32	19.30	3.18	42.88	55.37	19.05	1.78	85.0

### Electrical Schematic



### Features

- wideband, DC to 8400 MHz
- good VSWR, 1.15:1 typ.
- excellent amplitude unbalance, 0.3 dB typ.
- rugged shielded case

### Applications

- laboratory
- test set-ups

### Electrical Specifications at 25°C

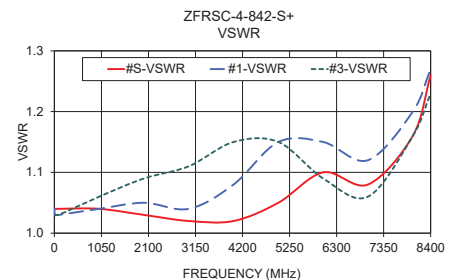
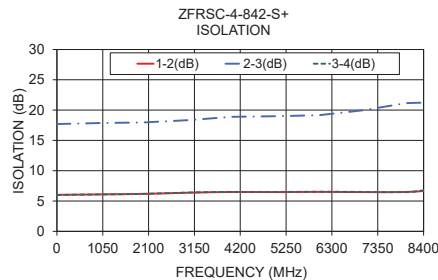
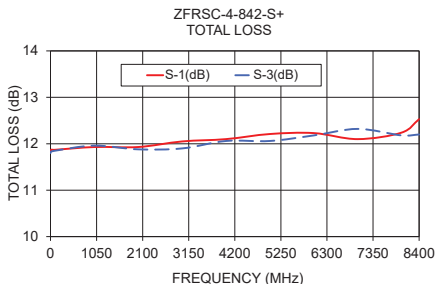
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		DC		8400	MHz
<b>Insertion Loss, above 12dB</b>	DC - 3000	—	0.05	0.4	
	3000 - 6000	—	0.3	0.8	dB
	6000 - 8400	—	0.6	1.0	
	<b>Isolation</b>				
	DC - 3000	—	6.0	—	
	3000 - 6000	—	6.4	—	dB
	6000 - 8400	—	6.4	—	
<b>Phase Unbalance</b>	DC - 3000	—	1.5	5.0	
	3000 - 6000	—	4.0	9.0	Degree
	6000 - 8400	—	5.0	10.0	
<b>Amplitude Unbalance</b>	DC - 3000	—	0.1	0.3	
	3000 - 6000	—	0.3	0.5	dB
	6000 - 8400	—	0.4	0.8	
<b>VSWR (Port S)</b>	DC - 3000	—	1.05	1.12	
	3000 - 6000	—	1.05	1.15	:1
	6000 - 8400	—	1.20	1.35	
<b>VSWR (Port 1-4)</b>	DC - 3000	—	1.08	1.20	
	3000 - 6000	—	1.15	1.25	:1
	6000 - 8400	—	1.25	1.45	

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).

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
0	11.83	11.86	11.80	11.85	0.06	6.00	17.68	5.99	0.39	1.04	1.04	1.04	1.03	1.04
10	11.87	11.88	11.83	11.87	0.04	6.01	17.71	6.00	0.04	1.04	1.03	1.03	1.03	1.03
50	11.87	11.88	11.84	11.87	0.04	6.01	17.70	6.01	0.08	1.04	1.03	1.03	1.03	1.03
100	11.87	11.89	11.85	11.88	0.04	6.02	17.71	6.02	0.16	1.04	1.03	1.03	1.03	1.03
1000	11.93	11.91	11.96	11.91	0.05	6.09	17.87	6.09	1.07	1.04	1.04	1.04	1.06	1.04
2000	11.93	11.88	11.88	11.90	0.05	6.18	17.97	6.18	1.05	1.03	1.05	1.06	1.09	1.05
3000	12.05	12.01	11.90	12.00	0.15	6.37	18.34	6.39	2.23	1.02	1.04	1.08	1.11	1.06
4000	12.10	12.12	12.06	12.01	0.11	6.49	18.89	6.50	2.63	1.02	1.08	1.14	1.15	1.09
5000	12.21	12.25	12.06	12.13	0.19	6.47	18.99	6.49	4.52	1.05	1.15	1.18	1.15	1.12
6000	12.23	12.23	12.18	12.31	0.13	6.51	19.15	6.53	6.33	1.10	1.15	1.14	1.09	1.07
7000	12.10	12.05	12.32	12.33	0.28	6.47	19.96	6.50	6.41	1.08	1.12	1.04	1.06	1.06
8000	12.24	12.05	12.18	12.48	0.43	6.49	21.15	6.46	4.82	1.16	1.20	1.12	1.16	1.23
8400	12.53	12.26	12.20	12.55	0.35	6.66	21.24	6.76	5.48	1.26	1.27	1.17	1.23	1.28

1. Total Loss = Insertion Loss + 12dB splitter loss.



#### 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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