

Power Splitter/Combiner

ZFRSC-4-842+

4 Way-0° Resistive 50Ω DC to 8400 MHz



Maximum Ratings

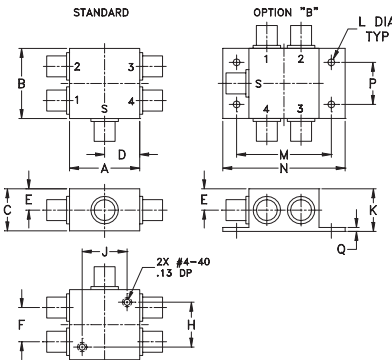
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.16W max.
Internal Dissipation	0.08W max.

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

CASE STYLE: G15

Connectors	Model	Price	Qty.
SMA	ZFRSC-4-842-S+	\$169.95	(1-9)
BRACKET (OPTION "B")		\$5.00	(1+)

+RoHS Compliant

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

Electrical Specifications at 25°C

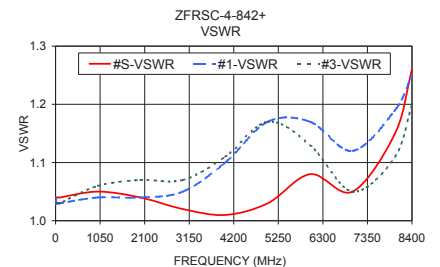
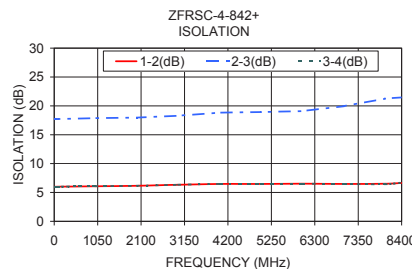
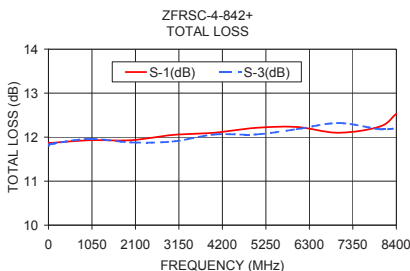
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		8400	MHz
Insertion Loss	DC - 3000	11.6	12.0	12.4	dB
	3000 - 6000	11.6	12.3	12.8	
	6000 - 8400	11.8	12.6	13.0	
Isolation	DC - 3000	—	6.0	—	dB
	3000 - 6000	—	6.4	—	
	6000 - 8400	—	6.4	—	
Phase Unbalance	DC - 3000	—	1.5	5.0	Degree
	3000 - 6000	—	4.0	9.0	
	6000 - 8400	—	5.0	10.0	
Amplitude Unbalance	DC - 3000	—	0.1	0.3	dB
	3000 - 6000	—	0.3	0.5	
	6000 - 8400	—	0.4	0.8	
VSWR (Port S)	DC - 3000	—	1.05	1.12	:1
	3000 - 6000	—	1.05	1.15	
	6000 - 8400	—	1.20	1.35	
VSWR (Port 1-4)	DC - 3000	—	1.08	1.20	:1
	3000 - 6000	—	1.15	1.25	
	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 ¹ (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						
0.30	11.83	11.86	11.80	11.85	0.04	5.99	17.69	5.99	0.39	1.04	1.04	1.04	1.03	1.04
10.00	11.87	11.88	11.83	11.87	0.03	5.99	17.71	5.99	0.04	1.04	1.03	1.03	1.03	1.03
50.00	11.87	11.88	11.84	11.87	0.02	5.99	17.71	5.99	0.08	1.04	1.03	1.03	1.03	1.03
100.00	11.87	11.89	11.85	11.88	0.02	6.00	17.72	6.00	0.16	1.04	1.03	1.03	1.03	1.03
1000.00	11.93	11.91	11.96	11.91	0.05	6.07	17.88	6.08	1.07	1.05	1.04	1.05	1.06	1.05
2000.00	11.93	11.88	11.88	11.90	0.08	6.16	17.96	6.16	1.05	1.04	1.04	1.06	1.07	1.06
3000.00	12.05	12.01	11.90	12.00	0.20	6.34	18.30	6.34	2.23	1.02	1.05	1.08	1.07	1.06
4000.00	12.10	12.12	12.06	12.01	0.05	6.47	18.83	6.47	2.63	1.01	1.10	1.13	1.11	1.08
5000.00	12.21	12.25	12.06	12.13	0.13	6.48	18.93	6.48	4.52	1.03	1.17	1.18	1.17	1.13
6000.00	12.23	12.23	12.18	12.31	0.09	6.52	19.10	6.51	6.33	1.08	1.17	1.15	1.13	1.09
7000.00	12.10	12.05	12.32	12.33	0.30	6.48	19.95	6.47	6.41	1.05	1.12	1.07	1.05	1.06
8000.00	12.24	12.05	12.18	12.48	0.38	6.51	21.27	6.43	4.82	1.15	1.19	1.11	1.11	1.23
8400.00	12.53	12.26	12.20	12.55	0.28	6.64	21.47	6.70	5.48	1.26	1.25	1.15	1.20	1.28

1. Total Loss = Insertion Loss + 6dB 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.
- 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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