Coaxial

Power Splitter/Combiner

ZF3RSC-542-S+

3 Way-0° Resistive 50Ω DC to 5400 MHz

Generic photo used for illustration purposes only

CASE STYLE: J17

Connectors	Model
SMA	ZF3RSC-542-S+
BRACKET (OPTION	

+RoHS Compliant

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

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	0.1W max.
Internal Dissipation	0.386W 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

Ports can be interchanged.

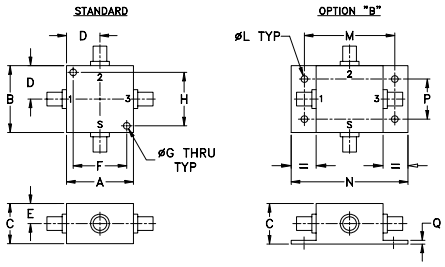
Features

- very wideband, DC to 5400 MHz
- low flatness, 0.38dB typ.
- rugged shielded case
- low cost

Applications

- laboratory
- test set-ups

Outline Drawing

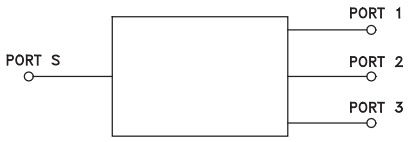


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
1.25	1.25	.75	.63	.38	1.000	.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	75.0

Electrical Schematic



Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		DC		5400	MHz
Insertion Loss Above 18 dB	DC-100	—	1.5	1.8	dB
	100-2800	—	1.6	1.9	
	2800-5400	—	1.6	1.9	
Isolation	DC-100	17	19	—	dB
	100-2800	17	19	—	
	2800-5400	17	18	—	
Phase Unbalance	DC-100	—	0.5	1	Degree
	100-2800	—	11	15	
	2800-5400	—	19	25	
Amplitude Unbalance	DC-100	—	0.03	0.2	dB
	100-2800	—	0.14	0.3	
	2800-5400	—	0.6	0.9	
VSWR (Port S)	DC-100	—	1.1	1.2	:1
	100-2800	—	1.3	1.5	
	2800-5400	—	1.4	1.6	
VSWR (Port 1-3)	DC-100	—	1.1	1.2	:1
	100-2800	—	1.3	1.5	
	2800-5400	—	1.4	1.6	

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
	S-1	S-2	S-3		1-2	1-3	2-3					
10.00	19.47	19.44	19.46	0.03	19.45	19.47	19.44	0.07	1.10	1.10	1.09	1.10
50.00	19.48	19.46	19.47	0.02	19.47	19.48	19.46	0.24	1.10	1.10	1.09	1.10
100.00	19.50	19.47	19.49	0.03	19.48	19.50	19.47	0.46	1.10	1.10	1.10	1.10
400.00	19.56	19.53	19.55	0.03	19.54	19.55	19.54	1.72	1.12	1.12	1.12	1.13
1000.00	19.61	19.60	19.61	0.02	19.60	19.61	19.57	4.13	1.19	1.20	1.19	1.21
1400.00	19.63	19.61	19.63	0.02	19.62	19.63	19.59	5.82	1.24	1.25	1.24	1.26
1800.00	19.62	19.58	19.60	0.05	19.59	19.59	19.58	7.37	1.28	1.28	1.28	1.29
2000.00	19.60	19.55	19.59	0.05	19.58	19.56	19.57	8.01	1.29	1.29	1.30	1.31
2400.00	19.58	19.53	19.59	0.06	19.58	19.52	19.54	9.42	1.30	1.30	1.32	1.32
3000.00	19.52	19.40	19.52	0.12	19.52	19.36	19.49	11.17	1.29	1.28	1.32	1.31
3400.00	19.44	19.24	19.42	0.20	19.42	19.21	19.38	12.36	1.27	1.27	1.29	1.28
4000.00	19.34	19.03	19.29	0.31	19.34	19.00	19.29	13.92	1.23	1.23	1.26	1.22
4400.00	19.21	18.85	19.17	0.36	19.25	18.79	19.13	14.93	1.21	1.21	1.22	1.19
5000.00	19.06	18.52	18.94	0.54	19.03	18.48	18.92	17.29	1.25	1.23	1.20	1.22
5400.00	18.95	18.34	18.83	0.61	18.92	18.31	18.80	18.70	1.38	1.32	1.29	1.35

1. Total Loss = Insertion Loss + 18 dB splitter loss.

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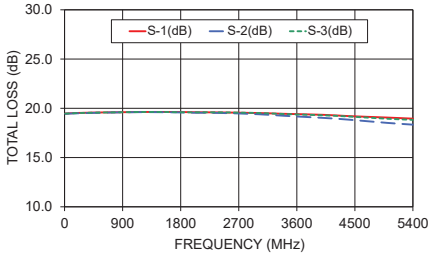
TOTAL LOSS



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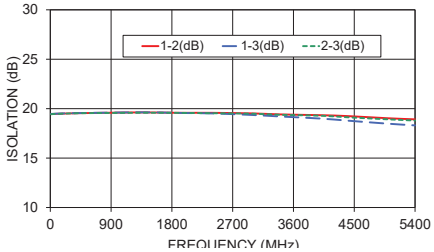
ISOLATION



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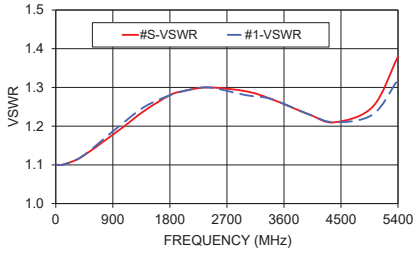
VSWR



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-Circuit's applicable established test performance criteria and measurement instructions.

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