

Coaxial

Power Splitter/Combiner

12 Way-0° 75Ω 10 to 200 MHz

ZFSC-12-1-75+

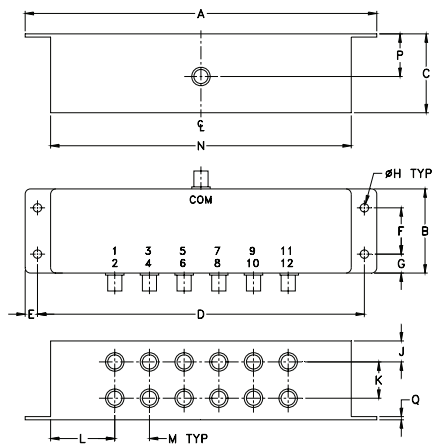
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.87W max.
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

SUM PORT	S(COM)
PORT 1,2,3,.....,12	1,2,3,.....,12

Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H
6.69	1.60	1.50	6.22	.24	.88	.36	.160
169.93	40.64	38.10	157.99	6.10	22.35	9.14	4.06
J	K	L	M	N	P	Q	wt.
.40	.69	1.22	.66	5.72	.81	.06	grams
10.16	17.53	30.99	16.76	145.29	20.57	1.52	310.0

Features

- high isolation, 30 dB typ.
- rugged shielded case

Applications

- VHF
- communication systems
- instrumentation



Generic photo used for illustration purposes only

CASE STYLE: R67

Connectors	Model
BNC	ZFSC-12-1-75+

+RoHS Compliant

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

Electrical Specifications

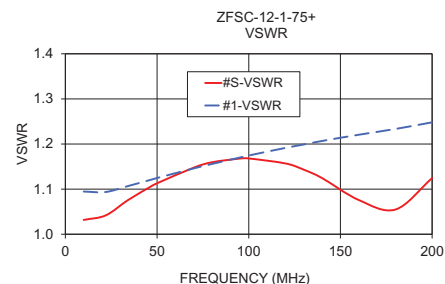
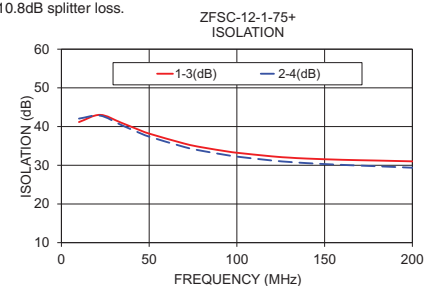
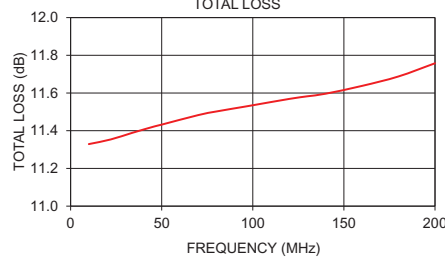
FREQ. RANGE (MHz)	ISOLATION (dB)				INSERTION LOSS (dB) ABOVE 10.8 dB				PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)	
	L		U		L		U		L	U	L	U
	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.
10-200	35	27	27	20	0.5	0.8	0.8	1.3	—	—	0.25	0.4

L = low range [f_L to $10 f_L$]U = upper range [$f_U/2$ to f_U]

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 12
			1-3	2-4			
10.00	11.33	0.02	41.16	42.05	0.57	1.03	1.09
22.00	11.35	0.02	43.02	42.83	1.00	1.04	1.09
34.00	11.39	0.02	41.01	40.42	1.54	1.08	1.11
46.00	11.42	0.02	38.82	38.07	1.66	1.10	1.12
50.00	11.43	0.02	38.18	37.40	1.67	1.11	1.12
70.00	11.48	0.02	35.61	34.72	1.58	1.15	1.15
80.00	11.50	0.02	34.65	33.73	1.70	1.16	1.16
95.00	11.53	0.03	33.53	32.56	1.89	1.17	1.17
100.00	11.54	0.03	33.23	32.24	1.90	1.17	1.17
120.00	11.57	0.04	32.30	31.23	1.98	1.16	1.19
130.00	11.58	0.05	31.97	30.85	2.06	1.14	1.20
140.00	11.60	0.06	31.73	30.55	2.10	1.12	1.21
160.00	11.64	0.09	31.41	30.10	2.24	1.08	1.22
180.00	11.69	0.12	31.22	29.74	2.39	1.05	1.23
200.00	11.76	0.15	31.01	29.36	2.65	1.12	1.25

ZFSC-12-1-75+ 1. Total Loss = Insertion Loss + 10.8dB splitter loss.



electrical schematic



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.
 C. The parts covered by this specification document are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp


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 REV. D
 M151107
 ZFSC-12-1-75+
 HY/TD/CP/AM
 170525

12 Way-0° Power Splitter/Combiner

ZFSC-12-1-75+

Typical Performance Data

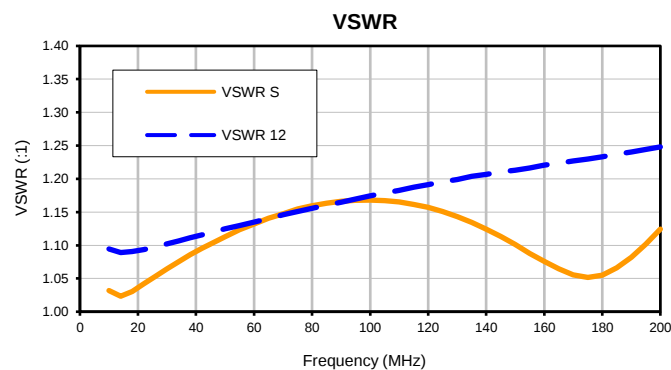
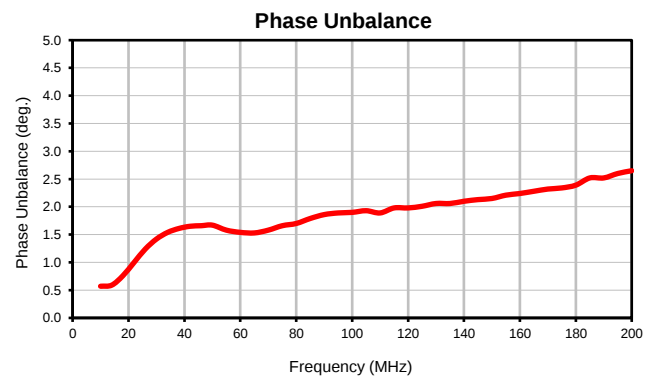
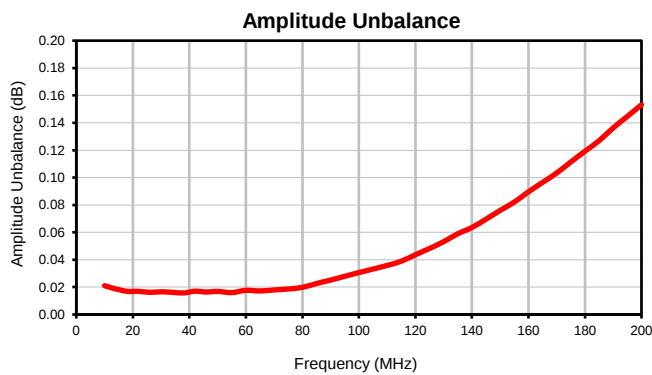
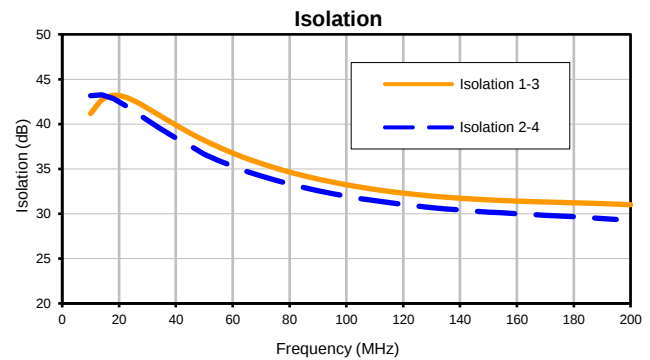
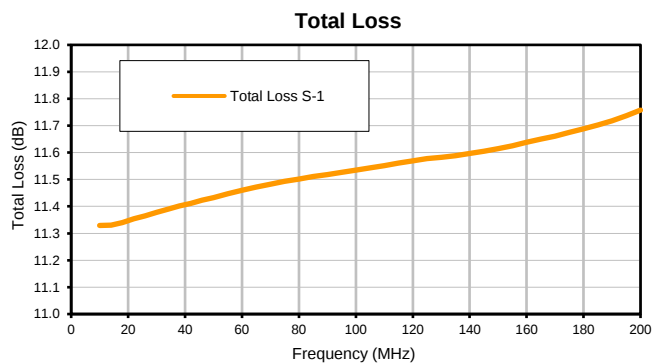
FREQ. (MHz)	TOTAL LOSS ¹ (dB) S-1	AMP. UNBAL. (dB)	ISOLATION (dB)		PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)	
			1-3	2-4			S	12
10	11.33	0.02	41.16	42.05	0.57	10	1.03	1.09
14	11.33	0.02	42.70	43.15	0.59	14	1.02	1.09
18	11.34	0.02	43.20	43.25	0.76	18	1.03	1.09
22	11.35	0.02	43.02	42.83	1.00	22	1.04	1.09
26	11.37	0.02	42.49	42.10	1.24	26	1.05	1.10
30	11.38	0.02	41.77	41.28	1.42	30	1.06	1.10
34	11.39	0.02	41.01	40.42	1.54	34	1.08	1.11
38	11.40	0.02	40.26	39.60	1.61	38	1.09	1.11
42	11.41	0.02	39.53	38.80	1.65	42	1.10	1.12
46	11.42	0.02	38.82	38.07	1.66	46	1.10	1.12
50	11.43	0.02	38.18	37.40	1.67	50	1.11	1.12
55	11.45	0.02	37.45	36.63	1.58	55	1.12	1.13
60	11.46	0.02	36.76	35.93	1.54	60	1.13	1.13
65	11.47	0.02	36.15	35.30	1.53	65	1.14	1.14
70	11.48	0.02	35.61	34.72	1.58	70	1.15	1.15
75	11.49	0.02	35.10	34.20	1.66	75	1.15	1.15
80	11.50	0.02	34.65	33.73	1.70	80	1.16	1.16
85	11.51	0.02	34.24	33.31	1.79	85	1.16	1.16
90	11.52	0.03	33.87	32.92	1.86	90	1.17	1.16
95	11.53	0.03	33.53	32.56	1.89	95	1.17	1.17
100	11.54	0.03	33.23	32.24	1.90	100	1.17	1.17
105	11.54	0.03	32.96	31.95	1.93	105	1.17	1.18
110	11.55	0.04	32.71	31.68	1.89	110	1.17	1.18
115	11.56	0.04	32.50	31.44	1.98	115	1.16	1.19
120	11.57	0.04	32.30	31.23	1.98	120	1.16	1.19
125	11.58	0.05	32.13	31.03	2.01	125	1.15	1.20
130	11.58	0.05	31.97	30.85	2.06	130	1.14	1.20
135	11.59	0.06	31.85	30.69	2.06	135	1.13	1.20
140	11.60	0.06	31.73	30.55	2.10	140	1.12	1.21
145	11.61	0.07	31.63	30.41	2.13	145	1.11	1.21
150	11.61	0.08	31.54	30.30	2.15	150	1.10	1.21
155	11.63	0.08	31.47	30.19	2.21	155	1.09	1.22
160	11.64	0.09	31.41	30.10	2.24	160	1.08	1.22
165	11.65	0.10	31.35	30.00	2.28	165	1.06	1.22
170	11.66	0.10	31.31	29.92	2.32	170	1.06	1.23
175	11.68	0.11	31.27	29.83	2.34	175	1.05	1.23
180	11.69	0.12	31.22	29.74	2.39	180	1.05	1.23
185	11.70	0.13	31.18	29.66	2.52	185	1.07	1.24
190	11.72	0.14	31.13	29.57	2.52	190	1.08	1.24
195	11.74	0.14	31.07	29.47	2.60	195	1.10	1.24
200	11.76	0.15	31.01	29.36	2.65	200	1.12	1.25

¹Total Loss = Insertion Loss + 10.8dB Splitter Loss

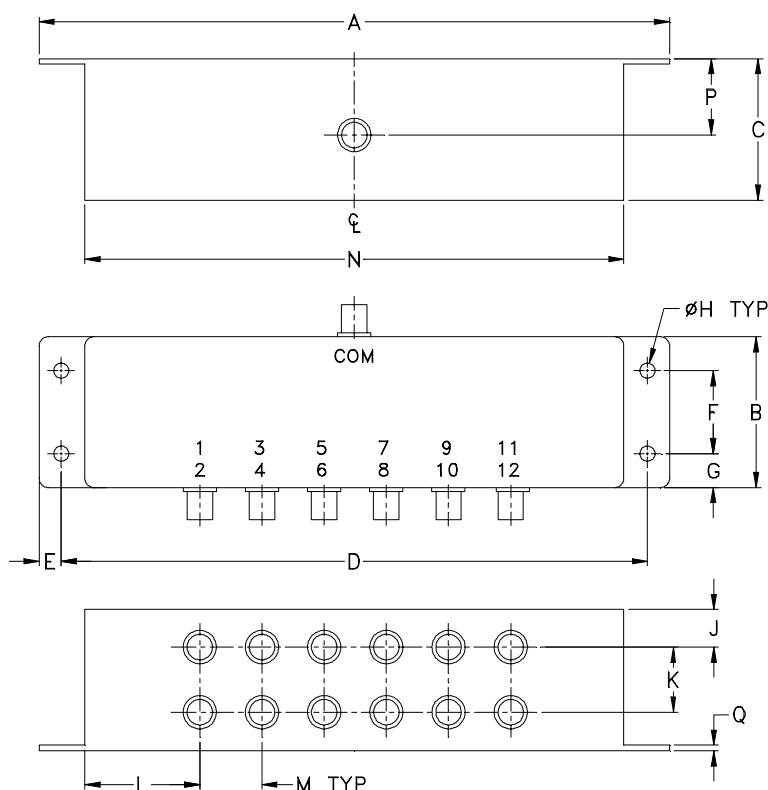
12 Way-0° Power Splitter/Combiner

ZFSC-12-1-75+

Typical Performance Curves



Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
R67	6.69 (169.93)	1.60 (40.64)	1.50 (38.10)	6.22 (157.99)	.24 (6.10)	.88 (22.35)	.36 (9.14)	.160 (4.06)	.40 (10.16)	.69 (17.53)	1.22 (30.99)	.66 (16.76)	5.72 (145.29)

CASE#	P	Q	WT. GRAMS
R67	.81 (20.57)	.06 (1.53)	310.0

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:

For RoHS Case Styles:

Clear chemical conversion coating, non-chrome or trivalent chrome based.



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Mini-Circuits ISO 9001 & ISO 14001 Certified



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I