Coaxial

Power Splitter/Combiner

ZFSC-24-11-75

24 Way-0° 75Ω 1 to 200 MHz

Generic photo used for illustration purposes only

BNC version shown

CASE STYLE: R31

Connectors	Model
BNC	ZFSC-24-11-75

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 1,2,3,4,.....,24	1,2,3,4,.....,24

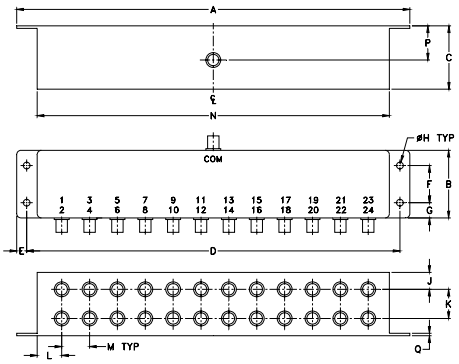
Features

- high isolation, 33 dB typ.
- low insertion loss, 0.8 dB typ.

Applications

- HF/VHF
- instrumentation
- test set-ups

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
9.31	1.60	1.50	8.84	.24	.88	.36	.160
236.47	40.64	38.10	224.54	6.10	22.35	9.14	4.06

J	K	L	M	N	P	Q	wt.
.40	.69	.54	.66	8.34	.81	.06	grams
10.16	17.53	13.72	16.76	211.84	20.57	1.52	490.0

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 13.8 dB						AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U
f_L-f_U	Typ.	Min.	Typ.	Min.	Typ.	Typ.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.
1-200	35	25	33	20	27	20	0.6	1.3	0.8	1.5	1.1	2.0	0.6	0.4	0.6

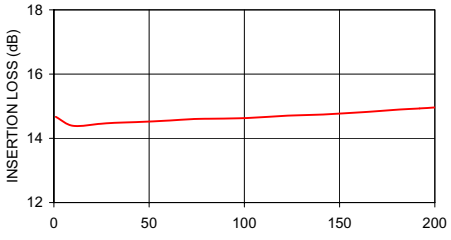
L = low range [f_L to 10 f_L] M = mid range [10 f_L to f_U/2] U= upper range [f_U/2 to f_U]

Typical Performance Data

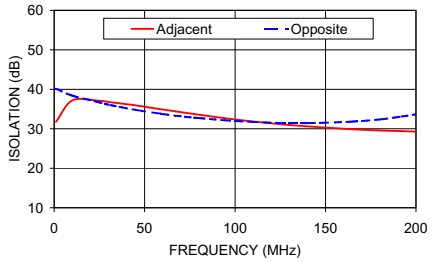
Freq. (MHz)	Insertion Loss (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR OUTPUT
	S-1		Adjacent	Opposite			
1.00	14.67	0.30	31.76	40.16	1.39	1.25	1.15
10.00	14.39	0.20	37.20	38.39	1.14	1.06	1.08
24.00	14.45	0.16	37.13	36.83	2.04	1.13	1.08
31.00	14.48	0.15	36.74	36.01	2.51	1.16	1.08
45.00	14.51	0.16	35.93	34.79	3.27	1.21	1.09
59.00	14.55	0.17	34.96	33.80	3.95	1.24	1.10
73.00	14.60	0.17	34.02	33.01	4.66	1.24	1.11
80.00	14.61	0.17	33.57	32.73	5.16	1.24	1.12
100.00	14.63	0.17	32.35	31.97	6.23	1.22	1.14
124.00	14.71	0.19	31.21	31.49	7.69	1.17	1.17
140.00	14.74	0.20	30.61	31.42	8.64	1.16	1.20
164.00	14.82	0.22	29.90	31.80	9.96	1.18	1.25
180.00	14.89	0.23	29.58	32.37	10.88	1.23	1.28
192.00	14.93	0.25	29.42	33.10	11.63	1.27	1.31
200.00	14.96	0.26	29.27	33.67	12.12	1.30	1.33

1. Total Loss = Insertion Loss + 13.8dB splitter loss.

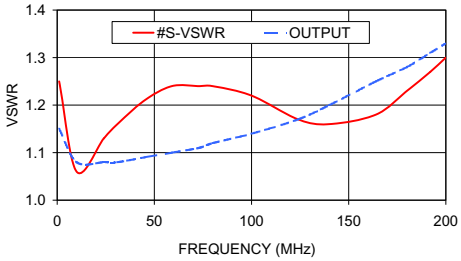
ZFSC-24-11-75
TOTAL LOSS



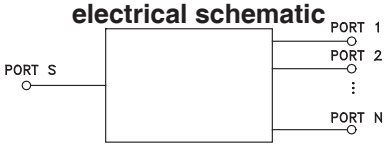
ZFSC-24-11-75
ISOLATION



ZFSC-24-11-75
VSWR



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-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

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M151107
ZFSC-24-11-75
HY/TD/CP/AM
151021

24 Way-0° Power Splitter/Combiner ZFSC-24-11-75

Typical Performance Data

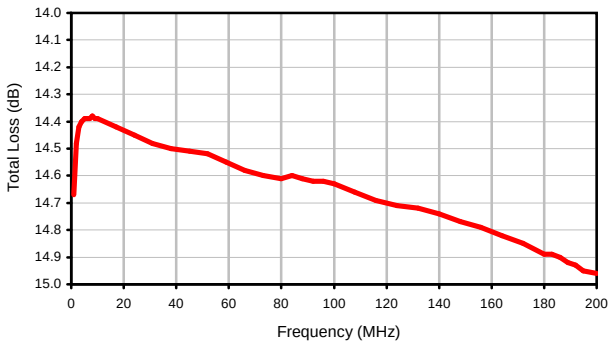
FREQ. (MHz)	TOTAL LOSS[1] (dB)	AMP. UNBAL. (dB)	ISOLATION (dB)		PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)	
			Adjacent	Opposite			S	OUTPUTS
1.0	14.67	0.30	31.76	40.16	1.39	1.0	1.25	1.15
2.0	14.48	0.23	34.09	39.85	1.04	2.0	1.15	1.12
3.0	14.42	0.21	35.31	39.57	0.88	3.0	1.11	1.10
4.0	14.40	0.21	35.99	39.40	0.78	4.0	1.09	1.10
5.0	14.39	0.21	36.39	39.14	0.74	5.0	1.07	1.09
6.0	14.39	0.20	36.70	39.02	0.78	6.0	1.07	1.09
7.0	14.39	0.21	36.90	38.83	0.85	7.0	1.06	1.09
8.0	14.38	0.21	37.03	38.66	0.92	8.0	1.06	1.09
9.0	14.39	0.20	37.13	38.54	1.01	9.0	1.06	1.09
10.0	14.39	0.20	37.20	38.39	1.14	10.0	1.06	1.08
17.0	14.42	0.18	37.28	37.46	1.61	17.0	1.09	1.08
24.0	14.45	0.16	37.13	36.83	2.04	24.0	1.13	1.08
31.0	14.48	0.15	36.74	36.01	2.51	31.0	1.16	1.08
38.0	14.50	0.15	36.37	35.35	2.87	38.0	1.19	1.09
45.0	14.51	0.16	35.93	34.79	3.27	45.0	1.21	1.09
52.0	14.52	0.17	35.39	34.24	3.61	52.0	1.23	1.09
59.0	14.55	0.17	34.96	33.80	3.95	59.0	1.24	1.10
66.0	14.58	0.18	34.43	33.39	4.28	66.0	1.24	1.10
73.0	14.60	0.17	34.02	33.01	4.66	73.0	1.24	1.11
80.0	14.61	0.17	33.57	32.73	5.16	80.0	1.24	1.12
84.0	14.60	0.16	33.31	32.55	5.31	84.0	1.24	1.12
88.0	14.61	0.17	33.03	32.36	5.46	88.0	1.23	1.13
92.0	14.62	0.17	32.79	32.25	5.80	92.0	1.23	1.13
96.0	14.62	0.17	32.56	32.14	5.96	96.0	1.22	1.13
100.0	14.63	0.17	32.35	31.97	6.23	100.0	1.22	1.14
108.0	14.66	0.17	31.94	31.76	6.72	108.0	1.20	1.15
116.0	14.69	0.18	31.56	31.57	7.21	116.0	1.19	1.16
124.0	14.71	0.19	31.21	31.49	7.69	124.0	1.17	1.17
132.0	14.72	0.19	30.92	31.43	8.16	132.0	1.16	1.19
140.0	14.74	0.20	30.61	31.42	8.64	140.0	1.16	1.20
148.0	14.77	0.20	30.31	31.48	9.02	148.0	1.16	1.21
156.0	14.79	0.21	30.09	31.61	9.59	156.0	1.17	1.23
164.0	14.82	0.22	29.90	31.80	9.96	164.0	1.18	1.25
172.0	14.85	0.22	29.74	32.05	10.44	172.0	1.20	1.26
180.0	14.89	0.23	29.58	32.37	10.88	180.0	1.23	1.28
183.0	14.89	0.24	29.54	32.50	11.05	183.0	1.24	1.29
186.0	14.90	0.24	29.50	32.73	11.21	186.0	1.25	1.29
189.0	14.92	0.24	29.45	32.92	11.44	189.0	1.26	1.30
192.0	14.93	0.25	29.42	33.10	11.63	192.0	1.27	1.31
195.0	14.95	0.25	29.35	33.29	11.80	195.0	1.28	1.32
200.0	14.96	0.26	29.27	33.67	12.12	200.0	1.30	1.33

[1] Total Loss = Insertion Loss+ 13.8dB Splitter Loss

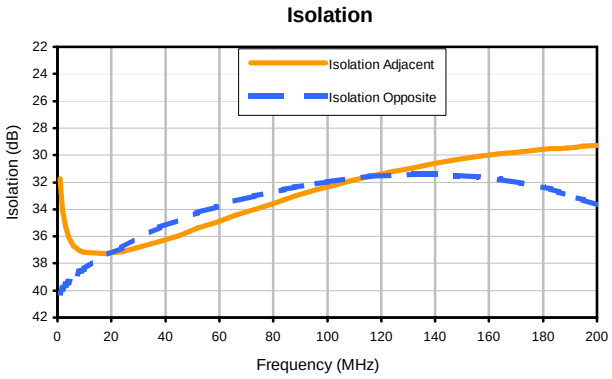
24 Way-0° Power Splitter/Combiner ZFSC-24-11-75

Typical Performance Curves

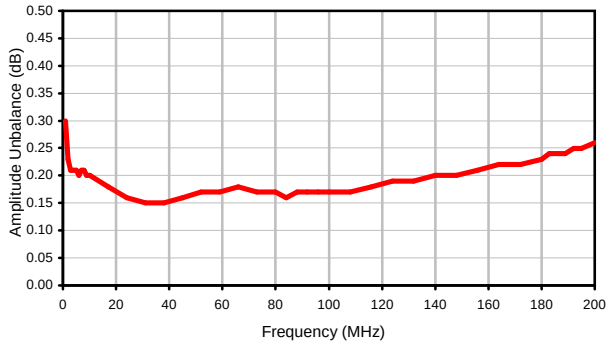
Total Loss



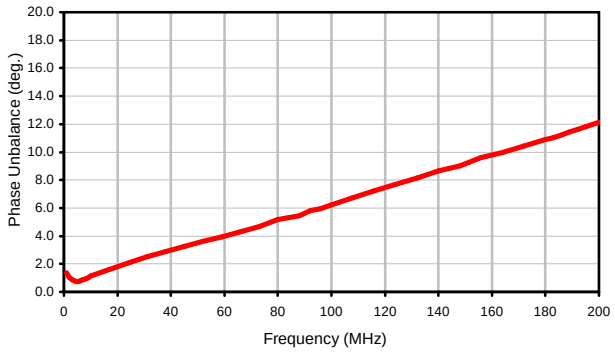
Isolation



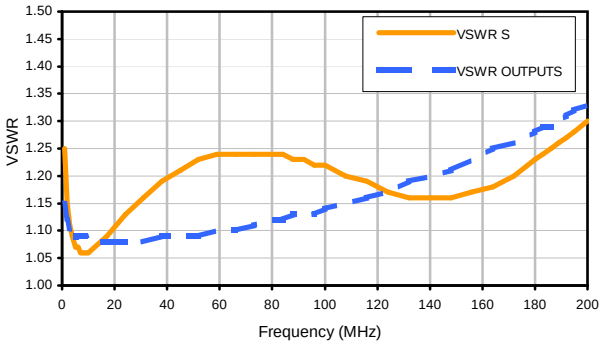
Amplitude Unbalance



Phase Unbalance



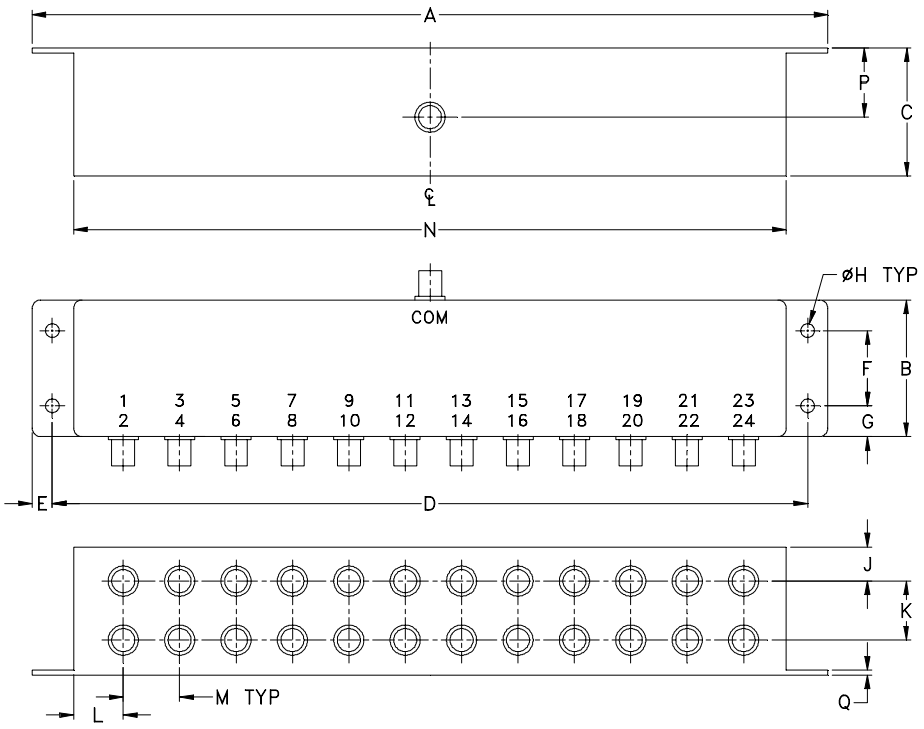
VSWR



Case Style R

R31

Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
R31	9.31 (236.47)	1.60 (40.64)	1.50 (38.10)	8.84 (224.54)	.24 (6.10)	.88 (22.35)	.36 (9.14)	.160 (4.06)	.40 (10.16)	.69 (17.53)	.54 (13.72)	.66 (16.76)	8.34 (211.84)

CASE#	P	Q	WT. GRAMS
R31	.81 (20.57)	.06 (1.53)	490.0

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

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
   For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.

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INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
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Environmental Specifications ENV29

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