

Coaxial

Power Splitter/Combiner

ZFSC-24-1

24 Way-0° 50Ω 0.2 to 100 MHz

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.

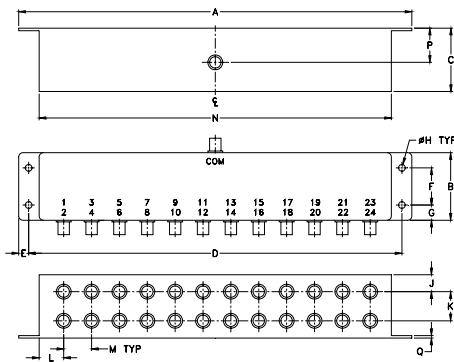
Permanent damage may occur if any of these limits are

Coaxial Connections

SUM PORT S (COM)

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

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

Features

- good isolation, 25 dB typ.
- low insertion loss, 1.0 dB typ.

Applications

- HF/VHF
- instrumentation
- test set-ups



Generic photo used for illustration purposes only

BNC version shown

CASE STYLE: R31

Connectors Model

BNC ZFSC-24-1

SMA ZFSC-24-1-S

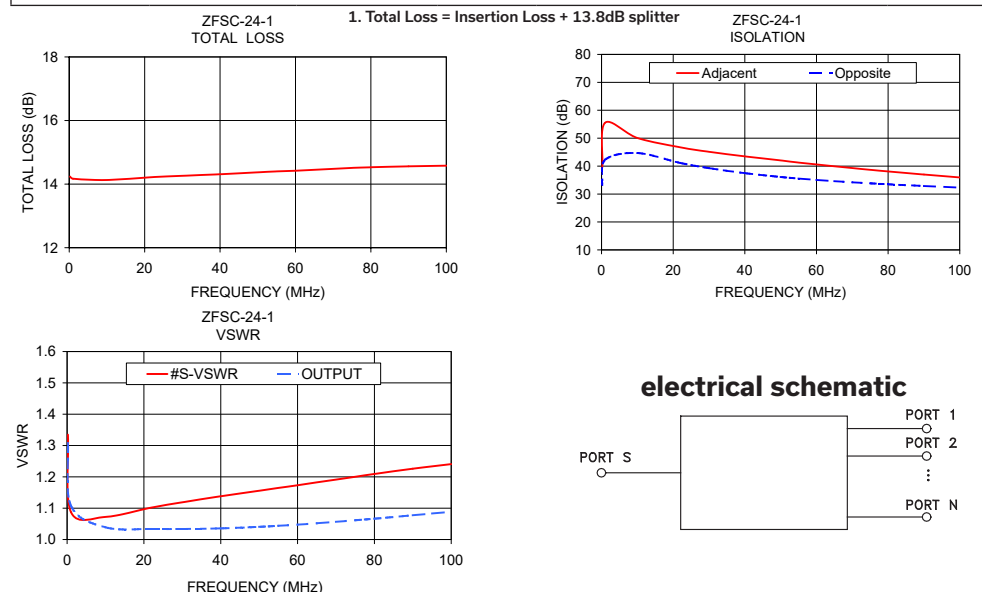
Electrical Specifications

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.
0.2-100	25	20	25	20	25	20	1.0	2.0	1.0	2.0	1.0	2.0	0.6	0.4	0.5

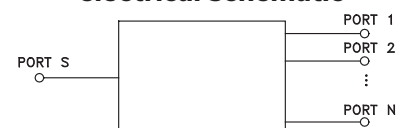
L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range

Typical Performance Data

Freq. (MHz)	Insertion Loss (dB)	Amplitude Unbalance (dB)	Isolation (dB)		VSWR S	VSWR OUTPUT
			Adjacent	Opposite		
	S-1					
0.20	14.24	0.04	39.41	33.21	1.33	1.31
1.00	14.17	0.02	55.54	42.27	1.09	1.11
10.00	14.13	0.02	50.08	44.68	1.07	1.04
22.00	14.22	0.01	46.72	41.12	1.10	1.03
30.00	14.26	0.02	45.13	39.29	1.12	1.03
40.00	14.31	0.02	43.49	37.48	1.14	1.04
50.00	14.37	0.03	42.03	36.11	1.16	1.04
55.00	14.40	0.03	41.27	35.55	1.16	1.04
60.00	14.42	0.04	40.59	35.07	1.17	1.05
65.00	14.45	0.04	39.94	34.61	1.18	1.05
70.00	14.48	0.04	39.30	34.22	1.19	1.06
75.00	14.51	0.05	38.67	33.85	1.20	1.06
80.00	14.53	0.05	38.09	33.49	1.21	1.07
90.00	14.56	0.06	36.99	32.88	1.23	1.08
100.00	14.58	0.07	35.94	32.31	1.24	1.09



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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24 Way-0° Power Splitter/Combiner

ZFSC-24-1

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)	AMP. UNBAL. (dB)	ISOLATION (dB)		FREQ. (MHz)	VSWR (:1)	
			Adjacent	Opposite		S	OUTPUTS
0.2	14.24	0.04	39.41	33.21	0.2	1.33	1.31
0.4	14.21	0.03	45.16	38.60	0.4	1.16	1.18
0.6	14.21	0.02	49.14	40.72	0.6	1.12	1.14
0.8	14.19	0.02	52.53	41.73	0.8	1.10	1.12
1.0	14.17	0.02	55.54	42.27	1.0	1.09	1.11
2.0	14.11	0.02	56.83	44.04	2.0	1.07	1.07
4.0	14.09	0.02	53.77	45.38	4.0	1.06	1.05
6.0	14.10	0.01	52.43	45.49	6.0	1.06	1.05
8.0	14.12	0.01	51.04	45.17	8.0	1.07	1.04
10.0	14.13	0.02	50.08	44.68	10.0	1.07	1.04
14.0	14.16	0.01	48.76	43.41	14.0	1.08	1.04
18.0	14.19	0.01	47.65	42.17	18.0	1.09	1.03
22.0	14.22	0.01	46.72	41.12	22.0	1.10	1.03
26.0	14.24	0.02	45.81	40.11	26.0	1.11	1.03
30.0	14.26	0.02	45.13	39.29	30.0	1.12	1.03
32.0	14.27	0.02	44.79	38.86	32.0	1.12	1.03
34.0	14.28	0.02	44.42	38.48	34.0	1.13	1.03
36.0	14.29	0.02	44.13	38.11	36.0	1.13	1.03
38.0	14.30	0.02	43.86	37.77	38.0	1.13	1.03
40.0	14.31	0.02	43.49	37.48	40.0	1.14	1.04
42.0	14.33	0.02	43.15	37.15	42.0	1.14	1.04
44.0	14.33	0.02	42.86	36.90	44.0	1.15	1.04
46.0	14.35	0.03	42.60	36.61	46.0	1.15	1.04
48.0	14.36	0.03	42.31	36.34	48.0	1.15	1.04
50.0	14.37	0.03	42.03	36.11	50.0	1.16	1.04
55.0	14.40	0.03	41.27	35.55	55.0	1.16	1.04
60.0	14.42	0.04	40.59	35.07	60.0	1.17	1.05
65.0	14.45	0.04	39.94	34.61	65.0	1.18	1.05
70.0	14.48	0.04	39.30	34.22	70.0	1.19	1.06
75.0	14.51	0.05	38.67	33.85	75.0	1.20	1.06
80.0	14.53	0.05	38.09	33.49	80.0	1.21	1.07
82.0	14.54	0.05	37.85	33.37	82.0	1.21	1.07
84.0	14.55	0.06	37.60	33.24	84.0	1.22	1.07
86.0	14.55	0.05	37.43	33.13	86.0	1.22	1.07
88.0	14.56	0.06	37.16	32.99	88.0	1.22	1.08
90.0	14.56	0.06	36.99	32.88	90.0	1.23	1.08
92.0	14.56	0.06	36.74	32.75	92.0	1.23	1.08
94.0	14.57	0.06	36.51	32.65	94.0	1.23	1.08
96.0	14.57	0.06	36.32	32.55	96.0	1.24	1.08
98.0	14.58	0.07	36.15	32.43	98.0	1.24	1.09
100.0	14.58	0.07	35.94	32.31	100.0	1.24	1.09

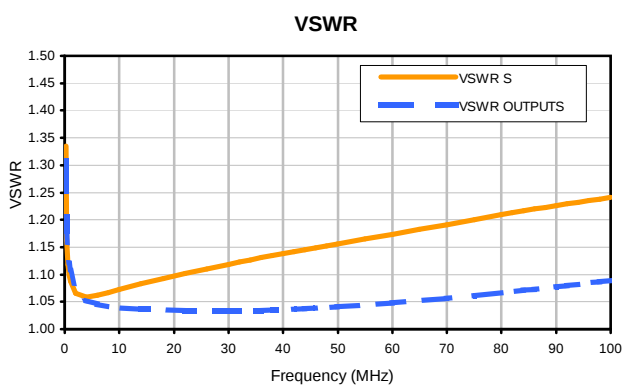
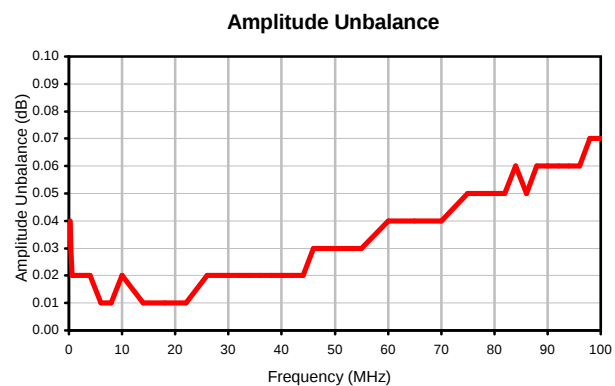
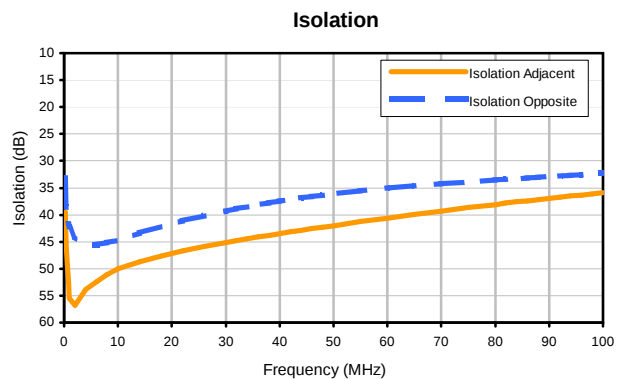
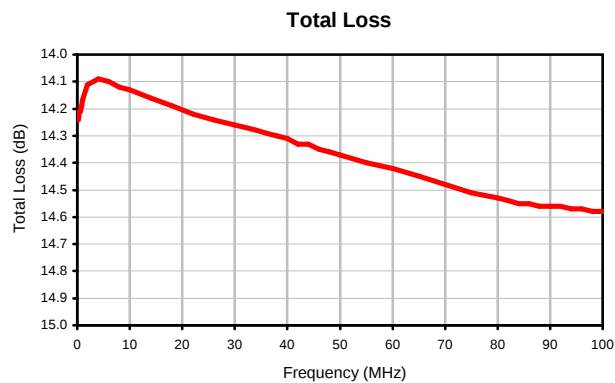
¹ Total Loss = Insertion Loss+ 13.8dB Splitter Loss

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24 Way-0° Power Splitter/Combiner

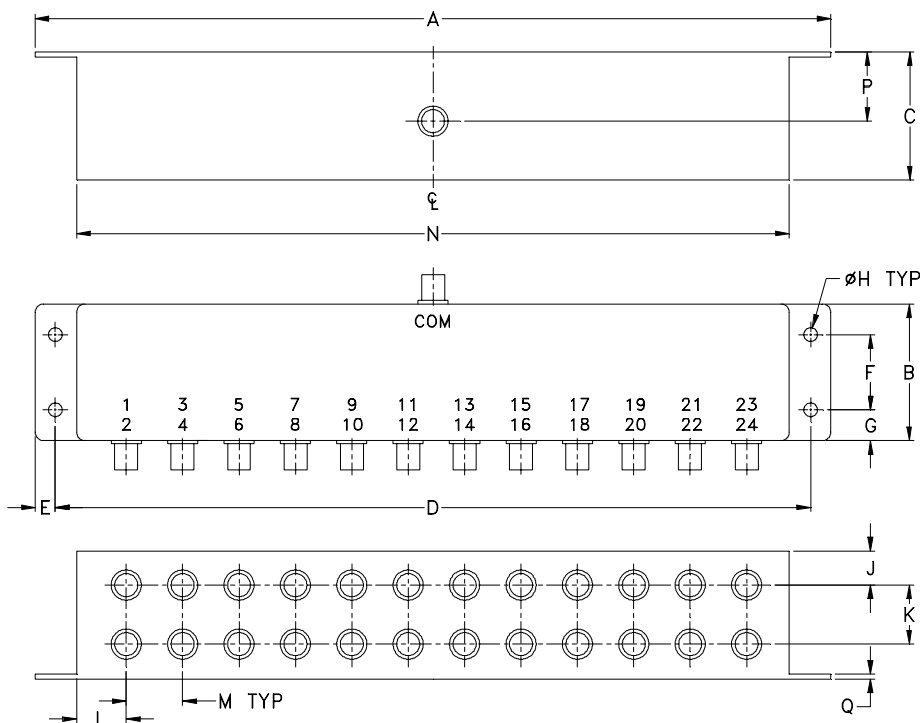
ZFSC-24-1

Typical Performance Curves



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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. $\pm .03$; 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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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