

Power Splitter/Combiner

ZFSC-48-1

48 Way-0° 50Ω 10 to 300 MHz

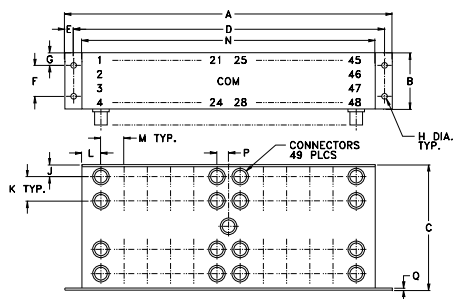
Maximum Ratings

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 exceeded.	

Coaxial Connections

SUM PORT	S (COM)
PORT 1,2,3,4.....,48	1,2,3,4.....,48

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
9.31	1.60	3.57	8.84	.25	.88	.36	.160
236.47	40.64	90.68	224.54	6.35	22.35	9.14	4.06

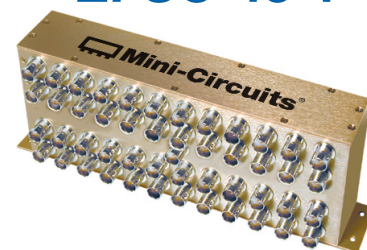
J	K	L	M	N	P	Q	wt
.34	.69	.54	.66	8.34	.33	.06	grams
8.64	17.53	13.72	16.76	211.84	8.38	1.52	1090.0

Features

- good isolation, 28 dB typ.
- rugged shielded case

Applications

- HF/VHF
- instrumentation
- test set-ups



BNC version shown

CASE STYLE: HH68

Connectors	Model
BNC	ZFSC-48-1
SMA	ZFSC-48-1-S

Electrical Specifications

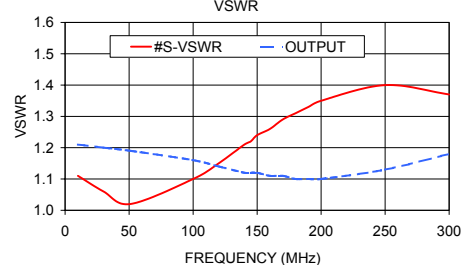
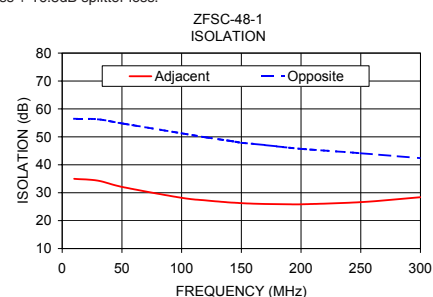
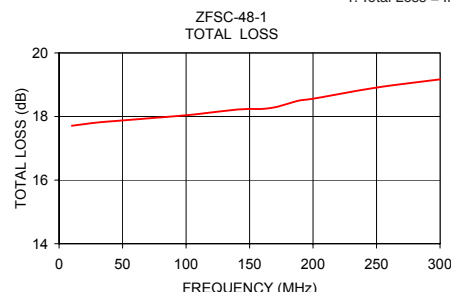
FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 16.8 dB						AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L	M	U
f_L - f_U	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.
10-300	30	25	28	20	23	20	1.2	2.0	2.1	2.5	2.8	4.0	0.8	0.9	1.2

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)	Total Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)		VSWR S	VSWR OUTPUT
			Adjacent	Opposite		
10.00	17.71	0.27	34.97	56.49	1.11	1.21
30.00	17.81	0.25	34.32	56.28	1.06	1.20
51.00	17.88	0.31	31.99	54.74	1.02	1.19
100.00	18.04	0.47	28.18	51.27	1.10	1.16
120.00	18.13	0.54	27.25	49.83	1.15	1.14
140.00	18.22	0.57	26.52	48.59	1.21	1.12
145.00	18.23	0.58	26.40	48.27	1.22	1.12
150.00	18.24	0.58	26.28	47.89	1.24	1.12
160.00	18.24	0.57	26.08	47.49	1.26	1.11
170.00	18.29	0.56	25.95	47.06	1.29	1.11
180.00	18.40	0.53	25.90	46.59	1.31	1.10
190.00	18.51	0.50	25.86	46.13	1.33	1.10
200.00	18.56	0.47	25.86	45.71	1.35	1.10
250.00	18.91	0.50	26.62	44.13	1.40	1.13
300.00	19.17	0.82	28.40	42.37	1.37	1.18

1. Total Loss = Insertion Loss + 16.8dB 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-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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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)	AMP. UNBAL. (dB)	ISOLATION (dB)		FREQ. (MHz)	VSWR (:1)	
			Adjacent	Opposite		S	OUTPUTS
10.0	17.71	0.27	34.97	56.49	10.0	1.11	1.21
14.0	17.71	0.25	35.33	56.47	14.0	1.10	1.21
18.0	17.73	0.24	35.31	56.38	18.0	1.09	1.21
22.0	17.76	0.24	35.13	56.16	22.0	1.08	1.20
26.0	17.78	0.25	34.72	55.88	26.0	1.07	1.20
30.0	17.81	0.25	34.32	56.28	30.0	1.06	1.20
37.0	17.83	0.26	33.53	55.57	37.0	1.05	1.20
44.0	17.87	0.28	32.75	55.04	44.0	1.04	1.20
51.0	17.88	0.31	31.99	54.74	51.0	1.02	1.19
58.0	17.90	0.33	31.30	54.32	58.0	1.01	1.19
65.0	17.92	0.35	30.66	53.79	65.0	1.01	1.18
72.0	17.95	0.38	30.06	53.29	72.0	1.03	1.18
79.0	17.99	0.40	29.52	52.70	79.0	1.04	1.17
86.0	18.02	0.43	29.04	51.99	86.0	1.06	1.17
93.0	18.03	0.46	28.58	51.59	93.0	1.08	1.16
100.0	18.04	0.47	28.18	51.27	100.0	1.10	1.16
105.0	18.06	0.50	27.93	50.83	105.0	1.11	1.16
110.0	18.09	0.50	27.68	50.44	110.0	1.12	1.15
115.0	18.11	0.52	27.46	50.12	115.0	1.14	1.15
120.0	18.13	0.54	27.25	49.83	120.0	1.15	1.14
125.0	18.16	0.55	27.04	49.48	125.0	1.17	1.14
130.0	18.18	0.56	26.84	49.41	130.0	1.18	1.13
135.0	18.20	0.57	26.69	48.97	135.0	1.20	1.13
140.0	18.22	0.57	26.52	48.59	140.0	1.21	1.12
145.0	18.23	0.58	26.40	48.27	145.0	1.22	1.12
150.0	18.24	0.58	26.28	47.89	150.0	1.24	1.12
160.0	18.24	0.57	26.08	47.49	160.0	1.26	1.11
170.0	18.29	0.56	25.95	47.06	170.0	1.29	1.11
180.0	18.40	0.53	25.90	46.59	180.0	1.31	1.10
190.0	18.51	0.50	25.86	46.13	190.0	1.33	1.10
200.0	18.56	0.47	25.86	45.71	200.0	1.35	1.10
210.0	18.56	0.44	25.91	45.31	210.0	1.37	1.11
220.0	18.55	0.41	25.99	44.94	220.0	1.38	1.11
230.0	18.59	0.45	26.10	44.69	230.0	1.39	1.11
240.0	18.74	0.47	26.31	44.32	240.0	1.40	1.12
250.0	18.91	0.50	26.62	44.13	250.0	1.40	1.13
260.0	19.00	0.55	26.92	43.85	260.0	1.41	1.14
270.0	18.97	0.63	27.23	43.46	270.0	1.40	1.15
280.0	18.99	0.71	27.58	43.17	280.0	1.40	1.16
290.0	19.06	0.77	27.95	42.75	290.0	1.38	1.17
300.0	19.17	0.82	28.40	42.37	300.0	1.37	1.18

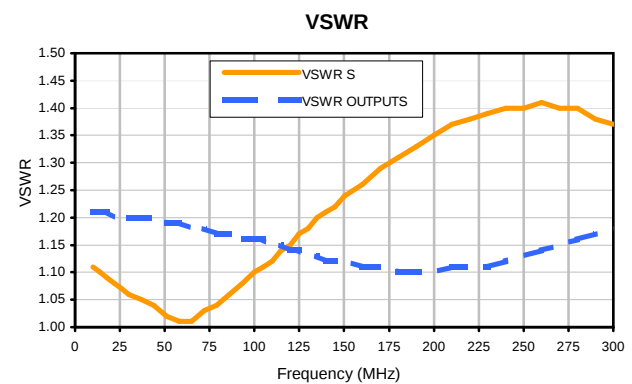
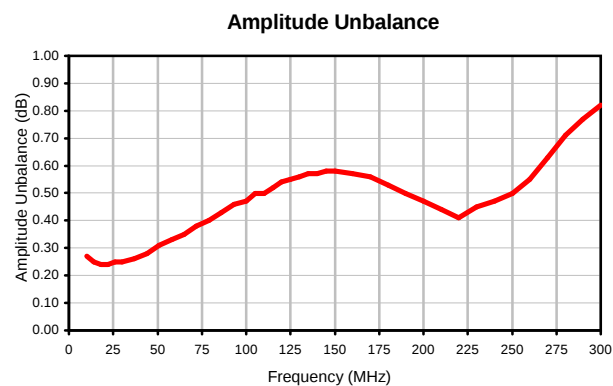
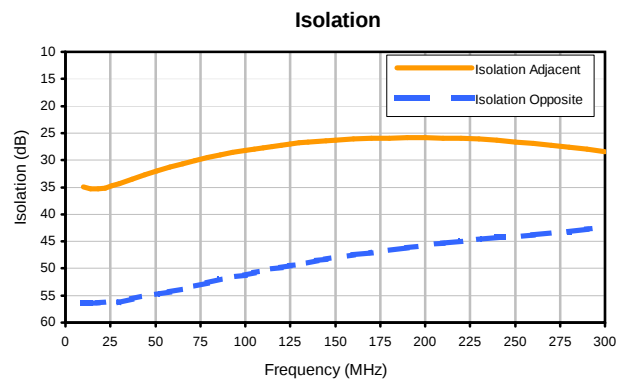
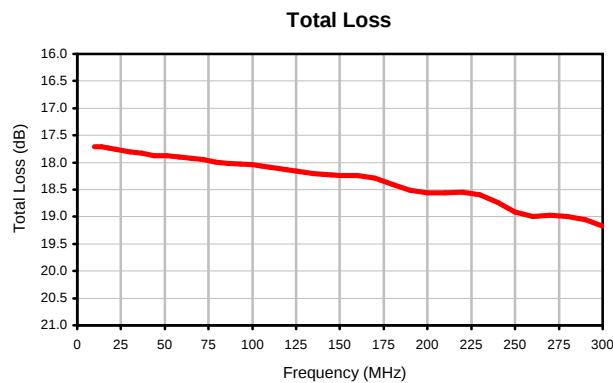
¹ Total Loss = Insertion Loss+ 16.8dB Splitter Loss

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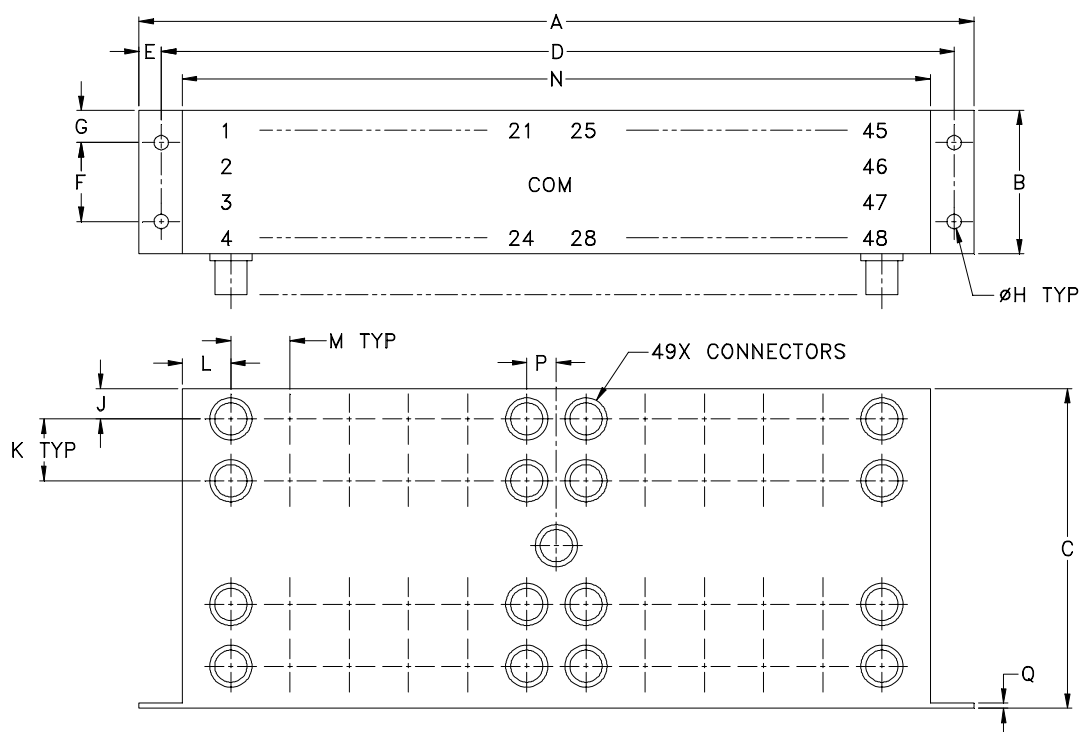
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Typical Performance Curves



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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
HH68	9.31 (236.47)	1.60 (40.64)	3.57 (90.68)	8.84 (224.54)	.25 (6.35)	.88 (22.35)	.36 (9.14)	.160 (4.06)	.34 (8.64)	.69 (17.53)	.54 (13.72)	.66 (16.76)	8.34 (211.84)

CASE#	P	Q	WT. GRAMS
HH68	.33 (8.38)	.06 (1.52)	1090

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