Engineering Development Model

Power Splitter/Combiner ZFSC-ED12423/1

24 Way-0°

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability.
At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.

CASE STYLE : R31

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		16		480	MHz
Isolation	**16 - 160 MHz**		28		dB
	160 - 240 MHz		30		dB
	240-480 MHz		31		dB
Total Loss Above 13.8 dB	**16 - 160 MHz**		0.90		dB
	160 - 240 MHz		1.00		dB
	240-480 MHz		1.50		dB
Phase Unbalance	**16 - 160 MHz**		0.058		deg.
	160 - 240 MHz		0.083		deg.
	240-480 MHz		0.159		deg.
Amplitude Unbalance	**16 - 160 MHz**		0.100		dB
	160 - 240 MHz		0.150		dB
	240-480 MHz		0.200		dB
VSWR	**SUM Port**		1.23		(:1)
	OUT Ports		1.11		(:1)

MAXIMUM RATINGS	
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C

Functional Diagram

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)		PHASE UNBAL. (deg.)
			Adjacent	Opposite	
10.0	15.47	0.06	29.00	18.56	0.06
12.0	15.23	0.05	29.25	19.61	0.05
14.0	15.06	0.05	29.43	20.46	0.05
16.0	14.93	0.05	29.56	21.18	0.04
18.0	14.84	0.05	29.67	21.81	0.04
20.0	14.78	0.05	29.76	22.36	0.04
40.0	14.56	0.05	30.28	25.58	0.04
60.0	14.54	0.05	30.59	26.93	0.05
80.0	14.55	0.06	30.86	27.49	0.06
100.0	14.57	0.07	31.13	27.65	0.06
120.0	14.60	0.08	31.42	27.61	0.07
138.0	14.62	0.09	31.73	27.46	0.07
140.0	14.63	0.09	31.77	27.44	0.07
150.0	14.64	0.09	31.97	27.32	0.08
160.0	14.66	0.10	32.17	27.21	0.08
170.0	14.68	0.10	32.39	27.08	0.08
180.0	14.70	0.11	32.61	26.97	0.08
190.0	14.72	0.11	32.85	26.85	0.08
200.0	14.73	0.12	33.10	26.73	0.08
210.0	14.75	0.12	33.35	26.63	0.08
220.0	14.78	0.13	33.59	26.55	0.09
230.0	14.80	0.13	33.84	26.49	0.09
240.0	14.82	0.14	34.08	26.44	0.09
250.0	14.85	0.14	34.30	26.41	0.09
260.0	14.88	0.14	34.53	26.43	0.10
270.0	14.90	0.15	34.71	26.48	0.10
280.0	14.93	0.15	34.87	26.56	0.11
290.0	14.96	0.15	34.99	26.68	0.11
300.0	14.99	0.16	35.09	26.86	0.11
310.0	15.03	0.16	35.14	27.10	0.12
320.0	15.06	0.17	35.18	27.39	0.13
330.0	15.10	0.18	35.15	27.75	0.13
340.0	15.14	0.18	35.08	28.21	0.13
350.0	15.18	0.19	35.01	28.77	0.14
360.0	15.22	0.20	34.90	29.46	0.14
370.0	15.26	0.20	34.77	30.31	0.15
380.0	15.31	0.21	34.62	31.37	0.16
390.0	15.36	0.22	34.46	32.71	0.17
400.0	15.41	0.22	34.30	34.48	0.18
410.0	15.47	0.23	34.12	36.86	0.18
420.0	15.53	0.24	33.97	40.30	0.19
430.00	15.59	0.24	33.80	44.70	0.20
440.00	15.66	0.25	33.64	43.74	0.22
450.00	15.73	0.26	33.49	38.69	0.23
460.00	15.81	0.26	33.34	34.80	0.24
470.00	15.89	0.27	33.20	31.85	0.26
480.00	15.98	0.28	33.09	29.50	0.29
490.00	16.07	0.28	32.98	27.54	0.31
500.00	16.17	0.29	32.88	25.85	0.34
550.00	16.74	0.32	32.74	19.70	0.43
600.00	17.44	0.35	33.48	15.57	0.46
650.00	18.38	0.39	35.60	12.56	0.42
690.00	19.49	0.45	38.58	10.68	0.27
700.00	19.86	0.48	39.53	10.26	0.26

FREQ. (MHz)	VSWR (:1)	
	S	OUTPUTS
10.0	2.50	1.46
12.0	2.20	1.40
14.0	2.01	1.36
16.0	1.87	1.32
18.0	1.77	1.30
20.0	1.69	1.28
40.0	1.36	1.18
60.0	1.25	1.14
80.0	1.17	1.11
100.0	1.12	1.09
120.0	1.07	1.08
138.0	1.05	1.07
140.0	1.05	1.07
150.0	1.05	1.06
160.0	1.06	1.06
170.0	1.07	1.05
180.0	1.08	1.05
190.0	1.09	1.04
200.0	1.11	1.04
210.0	1.12	1.03
220.0	1.13	1.03
230.0	1.14	1.02
240.0	1.14	1.02
250.0	1.15	1.01
260.0	1.15	1.01
270.0	1.16	1.01
280.0	1.16	1.01
290.0	1.16	1.02
300.0	1.16	1.03
310.0	1.16	1.04
320.0	1.16	1.05
330.0	1.16	1.06
340.0	1.16	1.07
350.0	1.17	1.08
360.0	1.17	1.09
370.0	1.18	1.10
380.0	1.19	1.11
390.0	1.21	1.13
400.0	1.23	1.14
410.0	1.25	1.15
420.0	1.28	1.17
430.00	1.31	1.18
440.00	1.35	1.20
450.00	1.40	1.22
460.00	1.45	1.24
470.00	1.50	1.25
480.00	1.56	1.27
490.00	1.62	1.29
500.00	1.68	1.31
550.00	1.94	1.43
600.00	1.98	1.56
650.00	1.86	1.69
690.00	2.14	1.79
700.00	2.33	1.82

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

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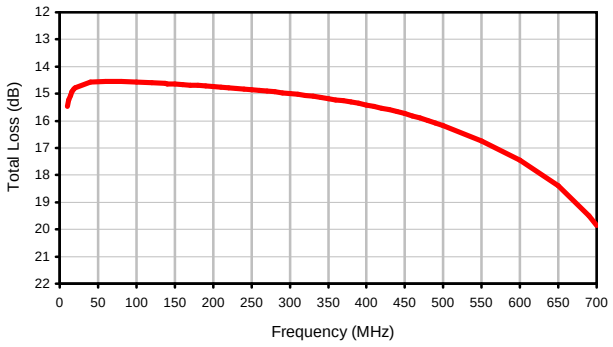
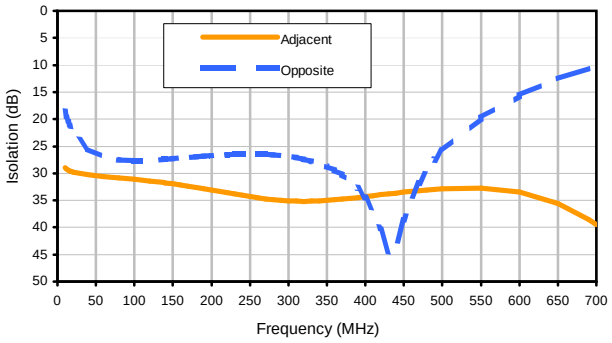
Typical Performance Curves

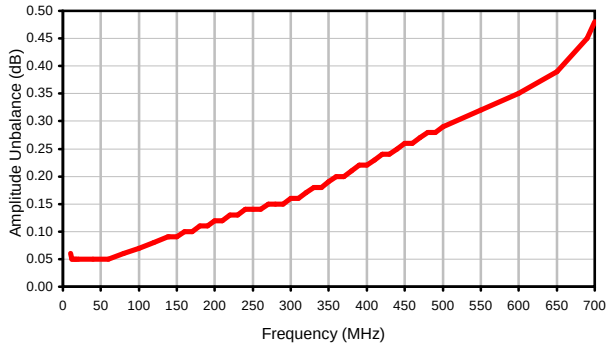
Total Loss



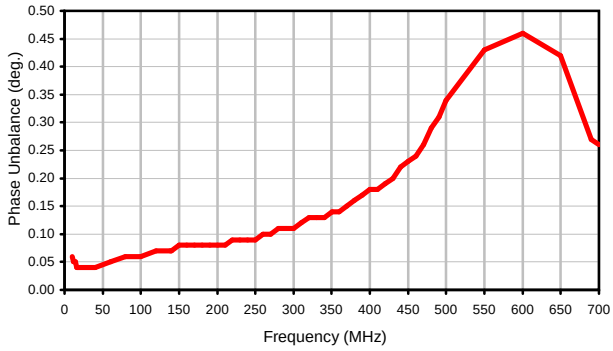
Isolation



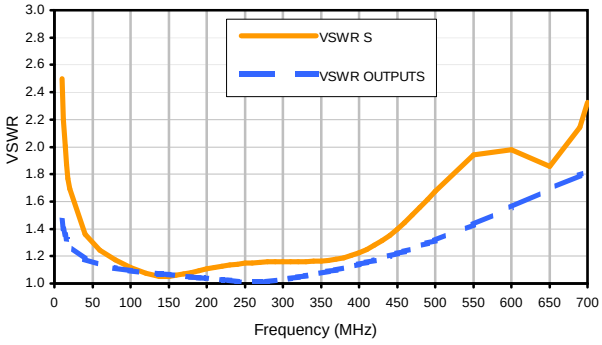
Amplitude Unbalance



Phase Unbalance



VSWR



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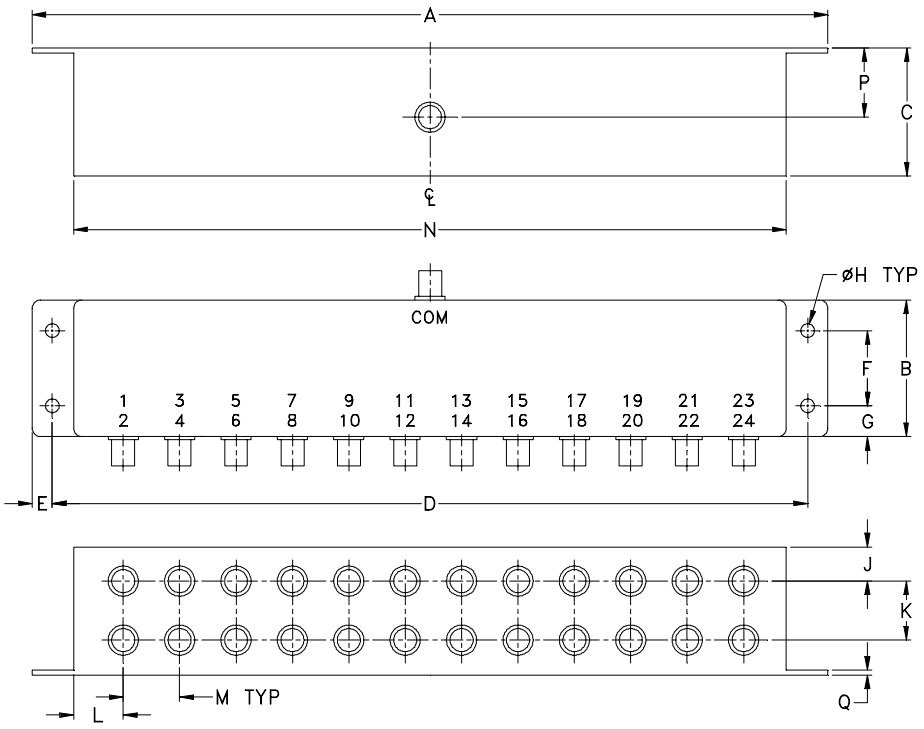
Case Style R

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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Environmental Specifications ENV28

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

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