

Non-Catalog Model

Power Splitter/Combiner

ZFSC-8-6

8 Way-0°

Important Note

This is a non-catalog model and can be manufactured on specific request.
Pricing and delivery information can be supplied upon request.



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CASE STYLE : R29

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		0.01		10	MHz
Isolation	0.01 - 0.1 MHz	20	35		dB
	0.1 - 5 MHz	25	40		dB
	5 - 10 MHz	25	35		dB
Insertion Loss Above 9.0 dB	0.01 - 0.1 MHz		0.30	1.00	dB
	0.1 - 5 MHz		0.20	0.60	dB
	5 - 10 MHz		0.30	0.70	dB
Phase Unbalance	0.01 - 0.1 MHz		0.034	4.000	deg.
	0.1 - 5 MHz		0.098	2.000	deg.
	5 - 10 MHz		0.251	3.000	deg.
Amplitude Unbalance	0.01 - 0.1 MHz		0.001	0.400	dB
	0.1 - 5 MHz		0.001	0.200	dB
	5 - 10 MHz		0.006	0.300	dB
VSWR	SUM Port		1.17		(:1)
	OUT Ports		1.06		(:1)

Notes: Matched power rating: 1 Watt.

Internal load dissipation: 0.62 Watt.

Below 0.1 MHz power handling decrease as to typically 15 dBm at 0.01 MHz,
23 dBm at 0.025 MHz, and 29 dBm at 0.05 MHz.

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

PIN CONNECTIONS	
SUM PORT	S(COM)
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4
PORT 5	5
PORT 6	6
PORT 7	7
PORT 8	8

Functional Diagram



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Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹ (dB)						AMP. UNBAL. (dB)	ISOLATION (dB)				PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR (:1)		
	S-1	S-2	S-3	S-4	S-6	S-8		1-3	1-8	2-4	6-8			S	1	8
0.010	9.30	9.30	9.30	9.29	9.30	9.30	0.01	36.48	42.26	38.75	39.78	0.10	0.010	1.21	1.22	1.23
0.018	9.25	9.25	9.25	9.25	9.25	9.25	0.00	38.62	45.71	39.54	39.95	0.05	0.018	1.17	1.14	1.14
0.026	9.24	9.24	9.24	9.24	9.24	9.24	0.00	39.38	47.48	39.80	39.94	0.04	0.026	1.16	1.10	1.10
0.034	9.23	9.23	9.23	9.23	9.23	9.23	0.00	39.71	48.51	39.90	39.88	0.03	0.034	1.15	1.09	1.09
0.042	9.23	9.23	9.23	9.23	9.23	9.23	0.00	39.87	49.14	39.95	39.83	0.03	0.042	1.15	1.08	1.08
0.050	9.23	9.23	9.23	9.23	9.23	9.23	0.00	39.96	49.57	39.97	39.79	0.02	0.050	1.15	1.07	1.07
0.060	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.02	49.92	39.98	39.76	0.02	0.060	1.15	1.07	1.07
0.070	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.07	50.17	39.99	39.74	0.02	0.070	1.15	1.06	1.06
0.080	9.23	9.23	9.23	9.23	9.23	9.22	0.00	40.11	50.33	40.00	39.74	0.02	0.080	1.15	1.06	1.06
0.090	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.14	50.48	40.02	39.74	0.02	0.090	1.15	1.06	1.06
0.100	9.23	9.23	9.23	9.23	9.22	9.23	0.00	40.17	50.57	40.04	39.75	0.02	0.100	1.15	1.06	1.06
0.280	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.36	51.03	40.19	39.81	0.03	0.280	1.15	1.05	1.05
0.460	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.38	51.02	40.19	39.81	0.04	0.460	1.15	1.05	1.05
0.640	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.35	51.00	40.16	39.76	0.05	0.640	1.15	1.05	1.05
0.820	9.23	9.23	9.23	9.23	9.23	9.23	0.00	40.27	50.95	40.09	39.68	0.05	0.820	1.15	1.05	1.05
1.000	9.24	9.24	9.24	9.24	9.24	9.24	0.00	40.16	50.92	40.00	39.59	0.06	1.000	1.15	1.05	1.05
1.400	9.24	9.24	9.24	9.24	9.24	9.24	0.00	39.87	50.87	39.76	39.32	0.07	1.400	1.16	1.05	1.05
1.800	9.25	9.25	9.25	9.25	9.25	9.26	0.00	39.55	50.83	39.47	39.01	0.09	1.800	1.16	1.05	1.05
2.200	9.27	9.27	9.27	9.26	9.27	9.27	0.00	39.21	50.77	39.17	38.70	0.11	2.200	1.16	1.05	1.05
2.600	9.28	9.28	9.28	9.28	9.28	9.28	0.00	38.89	50.68	38.86	38.39	0.12	2.600	1.17	1.05	1.05
3.000	9.29	9.29	9.29	9.29	9.29	9.29	0.00	38.58	50.58	38.56	38.10	0.12	3.000	1.17	1.05	1.05
3.400	9.30	9.30	9.30	9.30	9.30	9.30	0.00	38.28	50.46	38.27	37.82	0.14	3.400	1.17	1.05	1.04
3.800	9.31	9.31	9.31	9.31	9.31	9.32	0.00	38.00	50.32	38.00	37.56	0.15	3.800	1.18	1.04	1.04
4.200	9.33	9.33	9.33	9.32	9.33	9.33	0.00	37.74	50.16	37.73	37.30	0.16	4.200	1.18	1.04	1.04
4.600	9.34	9.34	9.34	9.34	9.34	9.34	0.00	37.49	50.01	37.49	37.06	0.17	4.600	1.18	1.04	1.04
5.000	9.35	9.35	9.35	9.35	9.35	9.35	0.00	37.24	49.82	37.23	36.83	0.19	5.000	1.18	1.04	1.04
5.300	9.36	9.36	9.36	9.36	9.36	9.36	0.00	37.06	49.70	37.05	36.66	0.19	5.300	1.18	1.04	1.04
5.600	9.37	9.37	9.37	9.36	9.37	9.37	0.01	36.90	49.55	36.89	36.50	0.21	5.600	1.19	1.04	1.04
5.900	9.37	9.37	9.37	9.37	9.37	9.38	0.00	36.73	49.40	36.72	36.34	0.21	5.900	1.19	1.04	1.04
6.200	9.38	9.38	9.38	9.38	9.38	9.38	0.00	36.57	49.27	36.55	36.18	0.22	6.200	1.19	1.04	1.04
6.500	9.39	9.39	9.39	9.39	9.39	9.39	0.00	36.41	49.13	36.39	36.03	0.23	6.500	1.19	1.04	1.04
6.800	9.40	9.40	9.40	9.39	9.40	9.40	0.01	36.26	48.97	36.23	35.88	0.24	6.800	1.19	1.04	1.04
7.100	9.40	9.40	9.40	9.40	9.41	9.41	0.01	36.10	48.84	36.08	35.73	0.24	7.100	1.19	1.04	1.04
7.400	9.41	9.41	9.41	9.41	9.41	9.41	0.01	35.95	48.68	35.92	35.58	0.25	7.400	1.19	1.04	1.04
7.700	9.42	9.42	9.42	9.42	9.42	9.42	0.01	35.81	48.55	35.77	35.44	0.26	7.700	1.19	1.04	1.04
8.000	9.43	9.43	9.43	9.42	9.43	9.43	0.00	35.66	48.40	35.62	35.30	0.27	8.000	1.20	1.04	1.04
8.400	9.43	9.43	9.44	9.43	9.44	9.44	0.01	35.48	48.22	35.43	35.12	0.28	8.400	1.20	1.04	1.04
8.800	9.44	9.44	9.44	9.44	9.45	9.45	0.01	35.29	48.02	35.24	34.94	0.29	8.800	1.20	1.04	1.04
9.200	9.45	9.45	9.45	9.45	9.45	9.46	0.01	35.11	47.85	35.05	34.76	0.30	9.200	1.20	1.04	1.05
9.600	9.46	9.46	9.46	9.46	9.46	9.47	0.01	34.93	47.65	34.86	34.59	0.31	9.600	1.20	1.05	1.05
10.000	9.47	9.47	9.47	9.47	9.47	9.47	0.01	34.76	47.47	34.68	34.41	0.33	10.000	1.20	1.05	1.05

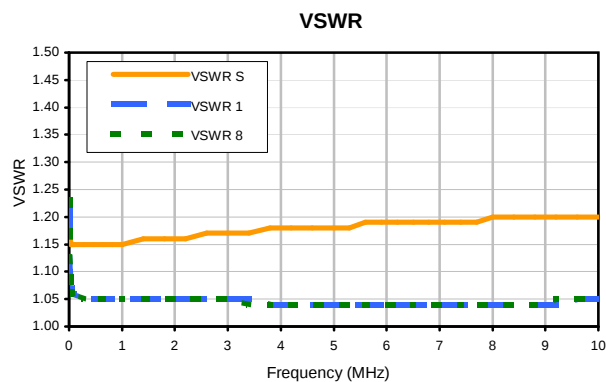
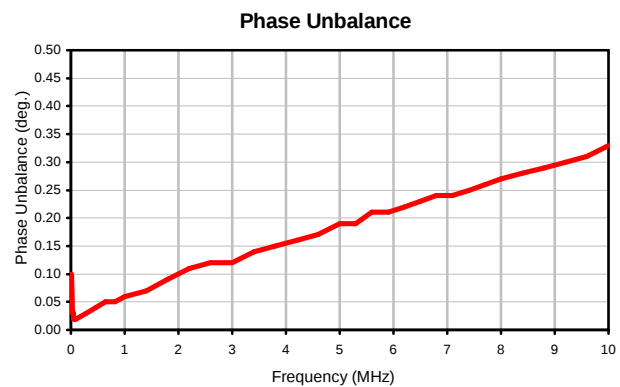
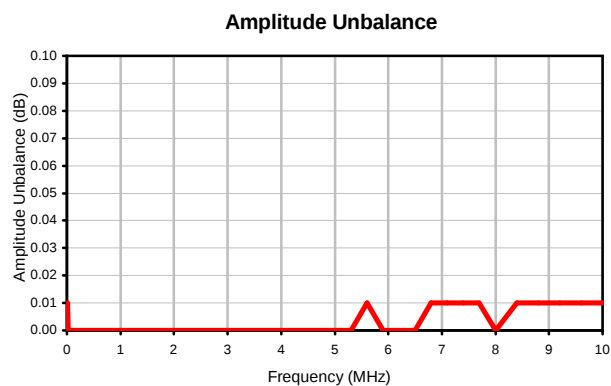
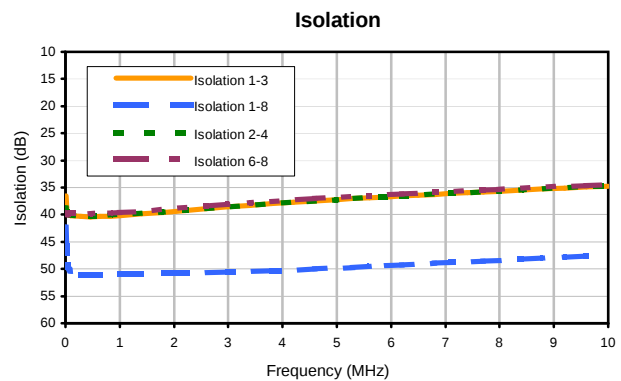
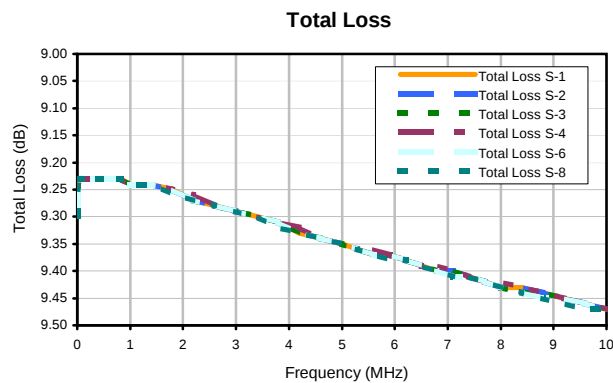
¹ Total Loss = Insertion Loss+ 9dB Splitter Loss

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Typical Performance Curves



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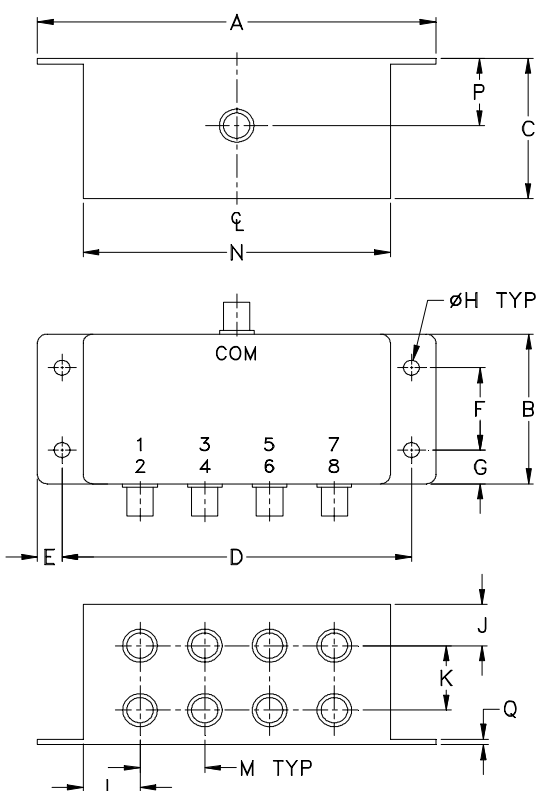
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Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
R29	4.06 (103.12)	1.60 (40.64)	1.57 (39.88)	3.56 (90.42)	.24 (6.10)	.88 (22.35)	.36 (9.14)	.160 (4.06)	.43 (10.92)	.69 (17.53)	.58 (14.73)	.66 (16.76)	3.13 (79.50)

CASE#	P	Q	WT. GRAMS
R29	.79 (20.07)	.13 (3.18)	200.0

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 85°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