

Coaxial Power Splitter/Combiner

8 Way-0° 50Ω 10 to 1000 MHz

ZFSC-8-43+



Generic photo used for illustration purposes only

CASE STYLE: R29

Connectors	Model
BNC	ZFSC-8-43+
SMA	ZFSC-8-43-S+

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

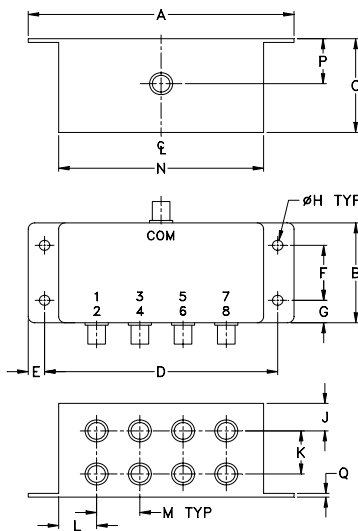
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	1W max.
Internal Dissipation	0.62W max.
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

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

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H
4.06	1.60	1.57	3.56	.24	.88	.36	.160
103.12	40.64	39.88	90.42	6.10	22.35	9.14	4.06
J	K	L	M	N	P	Q	wt.
.43	.69	.58	.66	3.13	.79	.13	grams
10.92	17.53	14.73	16.76	79.50	20.07	3.30	200

Features

- wideband, 10 to 1000 MHz
- good isolation, 25 dB typ.
- rugged shielded case

Applications

- VHF/UHF
- cellular
- signal processing
- communication systems

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)						INSERTION LOSS (dB) ABOVE 9.0 dB						PHASE UNBALANCE (Degrees)			AMPLITUDE UNBALANCE (dB)		
	L		M		U		L		M		U		L		M		U	
	f_L	f_U	Typ.	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Max.	Max.	Max.	Max.	Max.	Max.
10-1000	23	20	25	20	26	20	1.0	1.6	1.4	2.1	2.1	2.9	5	10	20	0.4	0.4	0.7

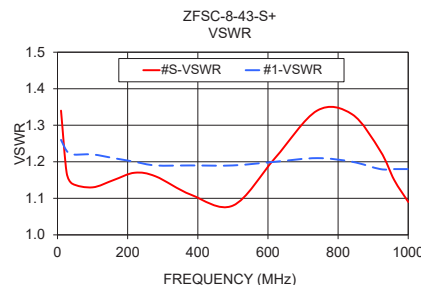
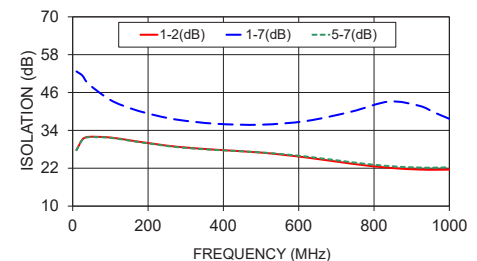
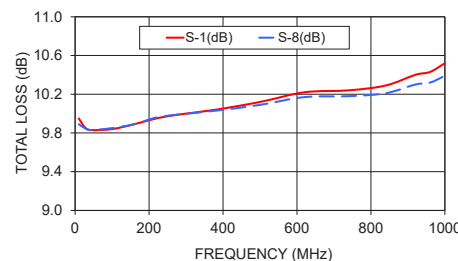
L = low range [f_L to 10 f_L] M = mid range [10 f_L to $f_U/2$] U = upper range [$f_U/2$ to f_U]

Typical Performance Data

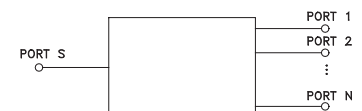
Freq. (MHz)	Total Loss ¹ (dB)						Amp. Unbal. (dB)	Isolation (dB)				Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	5-7				
10.00	9.95	9.94	9.95	9.94	9.89	9.89	0.07	27.78	52.68	27.78	27.70	0.12	1.34	1.26	1.25
26.00	9.86	9.86	9.86	9.86	9.85	9.85	0.02	31.14	51.33	31.16	31.08	0.21	1.17	1.23	1.23
42.00	9.83	9.84	9.84	9.83	9.83	9.83	0.01	31.95	48.73	31.96	31.83	0.18	1.14	1.22	1.22
100.00	9.84	9.84	9.84	9.85	9.85	9.85	0.02	31.74	43.64	31.80	31.64	0.34	1.13	1.22	1.21
160.00	9.89	9.89	9.89	9.89	9.89	9.89	0.02	30.68	40.72	30.81	30.56	0.54	1.15	1.21	1.20
220.00	9.95	9.95	9.96	9.96	9.96	9.96	0.03	29.66	38.76	29.83	29.55	0.78	1.17	1.20	1.19
280.00	9.99	10.00	10.00	10.00	10.00	9.99	0.04	28.77	37.34	28.96	28.65	0.98	1.16	1.19	1.18
380.00	10.04	10.03	10.05	10.05	10.04	10.03	0.06	27.86	36.10	28.11	27.79	1.37	1.11	1.19	1.17
500.00	10.12	10.11	10.16	10.12	10.12	10.09	0.12	26.96	35.80	27.27	27.02	1.77	1.08	1.19	1.16
620.00	10.22	10.21	10.27	10.24	10.24	10.17	0.17	25.42	36.97	25.78	25.71	2.16	1.21	1.20	1.17
740.00	10.24	10.23	10.33	10.27	10.27	10.18	0.25	23.45	39.94	23.83	23.91	2.68	1.34	1.21	1.17
840.00	10.29	10.28	10.40	10.37	10.35	10.21	0.31	22.13	43.13	22.49	22.67	3.18	1.33	1.20	1.17
920.00	10.40	10.37	10.53	10.48	10.45	10.30	0.39	21.60	41.79	21.97	22.23	3.68	1.23	1.18	1.16
960.00	10.43	10.40	10.58	10.52	10.49	10.32	0.43	21.52	39.68	21.88	22.19	4.09	1.15	1.18	1.16
1000.00	10.52	10.46	10.67	10.60	10.56	10.39	0.48	21.57	37.66	21.93	22.30	4.41	1.09	1.18	1.16

ZFSC-8-43-S+ 1. Total Loss = Insertion Loss + 9dB splitter loss.

ZFSC-8-43-S+ ISOLATION



electrical schematic



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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8 Way-0° Power Splitter/Combiner

ZFSC-8-43+

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		1-2	1-7	3-4	7-8			S	1	8
10	9.95	9.94	9.95	9.94	9.89	9.89	0.07	27.78	52.68	27.78	27.70	0.12	10	1.34	1.26	1.25
18	9.90	9.90	9.90	9.90	9.87	9.88	0.03	30.04	52.84	30.06	30.02	0.21	18	1.22	1.24	1.23
26	9.86	9.86	9.86	9.86	9.85	9.85	0.02	31.14	51.33	31.16	31.08	0.21	26	1.17	1.23	1.23
34	9.83	9.84	9.84	9.83	9.83	9.83	0.01	31.72	49.92	31.71	31.59	0.19	34	1.15	1.23	1.22
42	9.83	9.84	9.84	9.83	9.83	9.83	0.01	31.95	48.73	31.96	31.83	0.18	42	1.14	1.22	1.22
50	9.84	9.84	9.83	9.83	9.83	9.84	0.01	32.07	47.61	32.10	31.97	0.28	50	1.13	1.22	1.22
60	9.85	9.85	9.84	9.85	9.85	9.85	0.01	32.15	46.72	32.18	32.05	0.24	60	1.13	1.22	1.22
70	9.83	9.84	9.83	9.84	9.85	9.84	0.02	32.14	45.83	32.20	32.03	0.26	70	1.13	1.22	1.22
80	9.82	9.81	9.81	9.82	9.82	9.82	0.01	32.04	45.03	32.11	31.94	0.31	80	1.13	1.22	1.21
90	9.81	9.81	9.82	9.82	9.82	9.82	0.02	31.88	44.32	31.95	31.78	0.28	90	1.13	1.22	1.21
100	9.84	9.84	9.84	9.85	9.85	9.85	0.02	31.74	43.64	31.80	31.64	0.34	100	1.13	1.22	1.21
120	9.88	9.89	9.89	9.89	9.89	9.89	0.01	31.47	42.58	31.55	31.33	0.48	120	1.14	1.21	1.21
140	9.89	9.89	9.89	9.90	9.89	9.89	0.01	31.06	41.54	31.21	30.98	0.53	140	1.15	1.21	1.21
160	9.89	9.89	9.89	9.89	9.89	9.89	0.02	30.68	40.72	30.81	30.56	0.54	160	1.15	1.21	1.20
180	9.88	9.87	9.88	9.88	9.88	9.89	0.02	30.24	39.93	30.41	30.14	0.72	180	1.16	1.21	1.20
200	9.97	9.96	9.97	9.97	9.97	9.97	0.02	29.92	39.26	30.09	29.82	0.70	200	1.16	1.20	1.20
220	9.95	9.95	9.96	9.96	9.96	9.96	0.03	29.66	38.76	29.83	29.55	0.78	220	1.17	1.20	1.19
240	9.96	9.95	9.97	9.96	9.96	9.96	0.03	29.37	38.29	29.57	29.25	0.79	240	1.17	1.20	1.19
260	9.94	9.93	9.95	9.94	9.94	9.94	0.04	29.00	37.73	29.19	28.89	0.89	260	1.17	1.20	1.19
280	9.99	10.00	10.00	10.00	10.00	9.99	0.04	28.77	37.34	28.96	28.65	0.98	280	1.16	1.19	1.18
300	10.02	10.02	10.03	10.02	10.02	10.02	0.03	28.58	37.03	28.79	28.49	1.06	300	1.16	1.19	1.18
340	10.02	10.02	10.04	10.02	10.03	10.01	0.06	28.23	36.46	28.45	28.13	1.15	340	1.14	1.19	1.17
380	10.04	10.03	10.05	10.05	10.04	10.03	0.06	27.86	36.10	28.11	27.79	1.37	380	1.11	1.19	1.17
420	10.08	10.06	10.10	10.07	10.08	10.06	0.08	27.64	35.86	27.89	27.58	1.42	420	1.09	1.18	1.16
460	10.08	10.07	10.10	10.09	10.09	10.05	0.09	27.25	35.71	27.54	27.27	1.55	460	1.07	1.18	1.16
500	10.12	10.11	10.16	10.12	10.12	10.09	0.12	26.96	35.80	27.27	27.02	1.77	500	1.08	1.19	1.16
530	10.11	10.11	10.16	10.14	10.14	10.10	0.12	26.63	35.92	26.94	26.76	1.74	530	1.10	1.19	1.16
560	10.14	10.14	10.19	10.15	10.16	10.11	0.14	26.26	36.17	26.60	26.44	1.98	560	1.14	1.19	1.16
590	10.19	10.17	10.24	10.21	10.20	10.15	0.17	25.87	36.53	26.22	26.10	2.01	590	1.17	1.20	1.16
620	10.22	10.21	10.27	10.24	10.24	10.17	0.17	25.42	36.97	25.78	25.71	2.16	620	1.21	1.20	1.17
650	10.20	10.19	10.27	10.22	10.23	10.15	0.20	24.91	37.50	25.28	25.25	2.21	650	1.25	1.20	1.17
680	10.27	10.25	10.33	10.30	10.29	10.21	0.21	24.44	38.21	24.80	24.81	2.38	680	1.29	1.21	1.17
710	10.34	10.32	10.40	10.37	10.36	10.28	0.22	23.96	39.03	24.33	24.38	2.45	710	1.32	1.21	1.17
740	10.24	10.23	10.33	10.27	10.27	10.18	0.25	23.45	39.94	23.83	23.91	2.68	740	1.34	1.21	1.17
770	10.39	10.37	10.48	10.43	10.42	10.32	0.27	23.04	41.05	23.40	23.51	2.88	770	1.35	1.21	1.17
800	10.36	10.35	10.47	10.42	10.40	10.30	0.31	22.65	42.13	23.01	23.13	3.04	800	1.35	1.20	1.17
840	10.29	10.28	10.40	10.37	10.35	10.21	0.31	22.13	43.13	22.49	22.67	3.18	840	1.33	1.20	1.17
880	10.42	10.40	10.56	10.50	10.48	10.34	0.37	21.86	43.29	22.24	22.44	3.53	880	1.29	1.19	1.16
920	10.40	10.37	10.53	10.48	10.45	10.30	0.39	21.60	41.79	21.97	22.23	3.68	920	1.23	1.18	1.16
960	10.43	10.40	10.58	10.52	10.49	10.32	0.43	21.52	39.68	21.88	22.19	4.09	960	1.15	1.18	1.16
1000	10.52	10.46	10.67	10.60	10.56	10.39	0.48	21.57	37.66	21.93	22.30	4.41	1000	1.09	1.18	1.16

¹ Total Loss = Insertion Loss + 9dB Splitter Loss

REV. X2
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Page 1 of 1



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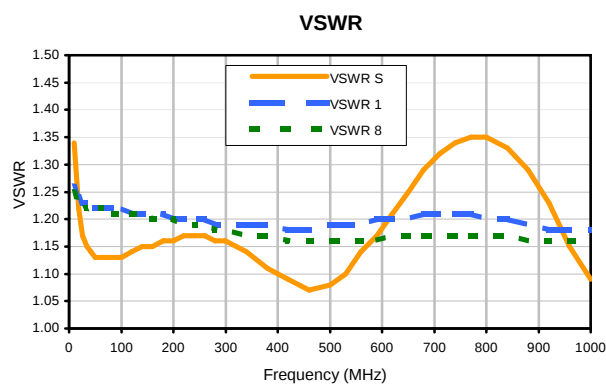
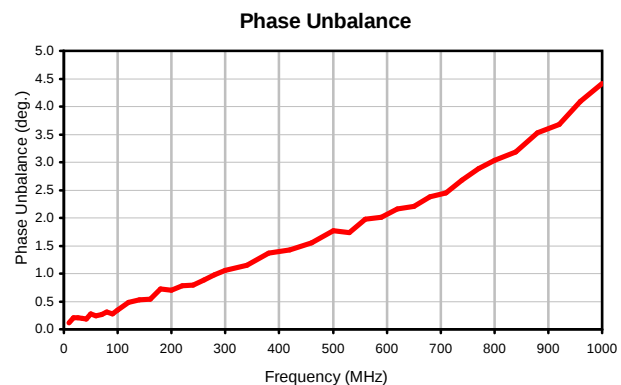
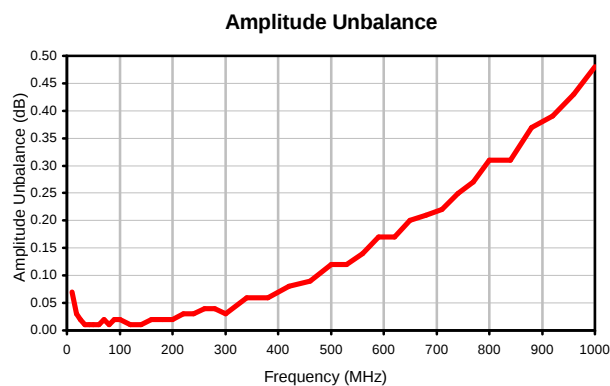
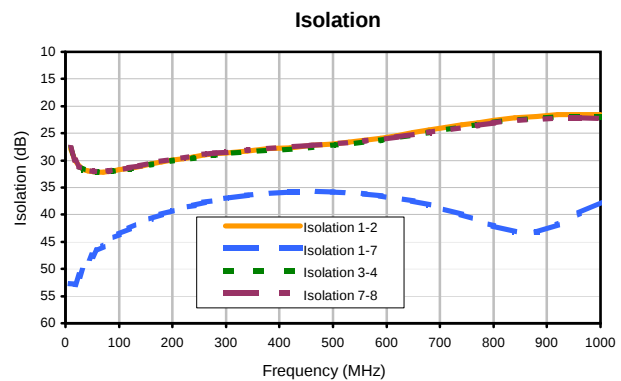
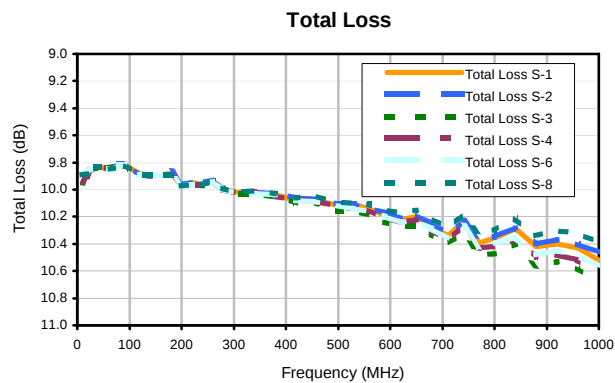
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ZFSC-8-43+

Typical Performance Curves



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100721
Page 1 of 1



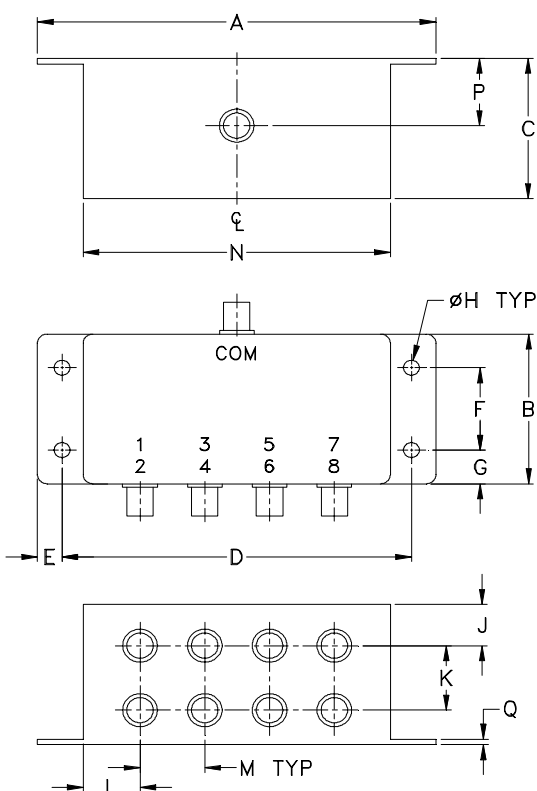
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Outline Dimensions



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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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