

Engineering Development Model

Resistive Power Splitter/Combiner 4 Way-0°

ZFRSC-ED14980/1

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 : G15

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C					
Parameter		Min.	Typ.	Max.	Units
Frequency		DC		8500	MHz
Isolation	DC-3000 MHz		6.0		dB
	3000-6000 MHz		6.6		dB
	6000-8500 MHz		6.6		dB
Insertion Loss Above 12.0 dB	DC-3000 MHz		0.2		dB
	3000-6000 MHz		0.4		dB
	6000-8500 MHz		0.5		dB
Phase Unbalance	DC-3000 MHz		1.0		deg.
	3000-6000 MHz		3.0		deg.
	6000-8500 MHz		4.0		deg.
Amplitude Unbalance	DC-3000 MHz		0.1		dB
	3000-6000 MHz		0.3		dB
	6000-8500 MHz		0.4		dB
VSWR	SUM Port		1.08		(:1)
	OUT Ports		1.13		(:1)

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

COAXIAL CONNECTIONS	
SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4

Functional Diagram



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4 Way-0° Resistive Power Splitter/Combiner

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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		1-2	2-3	3-4			S	1	2	3	4
0.3	11.89	11.89	11.90	11.88	0.01	6.00	17.74	6.01	0.39	0.3	1.04	1.04	1.04	1.04	1.03
0.5	11.88	11.88	11.89	11.88	0.01	5.99	17.72	6.00	0.24	0.5	1.04	1.04	1.04	1.04	1.03
1.0	11.89	11.88	11.88	11.89	0.02	5.98	17.73	6.00	0.12	1.0	1.04	1.04	1.04	1.04	1.03
5.0	11.90	11.89	11.89	11.90	0.01	5.99	17.75	6.00	0.03	5.0	1.04	1.04	1.04	1.04	1.03
10.0	11.90	11.89	11.89	11.90	0.01	5.98	17.75	6.00	0.02	10.0	1.04	1.04	1.04	1.04	1.03
30.0	11.90	11.89	11.89	11.90	0.01	5.99	17.75	6.01	0.04	30.0	1.04	1.04	1.04	1.04	1.03
50.0	11.90	11.90	11.90	11.90	0.00	5.99	17.75	6.01	0.05	50.0	1.04	1.04	1.04	1.04	1.03
70.0	11.90	11.89	11.90	11.90	0.01	6.00	17.75	6.01	0.07	70.0	1.04	1.04	1.04	1.04	1.03
100.0	11.91	11.90	11.90	11.90	0.00	6.00	17.75	6.02	0.09	100.0	1.04	1.04	1.03	1.04	1.03
200.0	11.91	11.91	11.91	11.91	0.00	6.02	17.76	6.04	0.22	200.0	1.04	1.03	1.04	1.04	1.03
300.0	11.93	11.93	11.92	11.93	0.00	6.04	17.77	6.05	0.27	300.0	1.04	1.03	1.04	1.04	1.04
400.0	11.93	11.93	11.93	11.93	0.00	6.05	17.76	6.06	0.37	400.0	1.04	1.04	1.04	1.04	1.04
500.0	11.93	11.94	11.93	11.94	0.00	6.05	17.77	6.07	0.47	500.0	1.05	1.04	1.04	1.04	1.04
600.0	11.94	11.94	11.94	11.94	0.01	6.06	17.77	6.08	0.55	600.0	1.05	1.04	1.04	1.05	1.04
700.0	11.95	11.94	11.94	11.95	0.01	6.07	17.77	6.09	0.67	700.0	1.05	1.04	1.04	1.05	1.05
800.0	11.95	11.93	11.94	11.94	0.01	6.08	17.78	6.10	0.79	800.0	1.05	1.05	1.05	1.05	1.05
900.0	11.95	11.93	11.94	11.94	0.02	6.09	17.79	6.11	0.89	900.0	1.06	1.05	1.05	1.06	1.05
1000.0	11.95	11.93	11.94	11.95	0.03	6.10	17.79	6.12	1.00	1000.0	1.06	1.05	1.05	1.06	1.06
1100.0	11.95	11.93	11.94	11.94	0.02	6.11	17.80	6.13	1.08	1100.0	1.06	1.05	1.06	1.06	1.06
1200.0	11.95	11.93	11.93	11.95	0.02	6.12	17.81	6.14	1.15	1200.0	1.06	1.05	1.06	1.07	1.06
1400.0	11.96	11.93	11.93	11.96	0.03	6.15	17.83	6.17	1.34	1400.0	1.06	1.06	1.06	1.07	1.07
1600.0	11.97	11.93	11.91	11.96	0.05	6.18	17.84	6.19	1.53	1600.0	1.06	1.06	1.07	1.07	1.07
1800.0	11.97	11.93	11.90	11.97	0.07	6.21	17.85	6.22	1.68	1800.0	1.06	1.06	1.07	1.07	1.07
2000.0	11.98	11.93	11.89	11.98	0.09	6.24	17.87	6.25	1.85	2000.0	1.06	1.06	1.07	1.07	1.07
2200.0	12.00	11.95	11.89	12.00	0.11	6.27	17.91	6.28	1.98	2200.0	1.06	1.06	1.08	1.07	1.08
2400.0	12.03	11.97	11.89	12.04	0.15	6.31	17.98	6.33	2.10	2400.0	1.06	1.06	1.08	1.07	1.08
2600.0	12.06	12.00	11.90	12.07	0.17	6.35	18.06	6.37	2.20	2600.0	1.06	1.07	1.09	1.07	1.07
2800.0	12.09	12.03	11.93	12.11	0.18	6.39	18.13	6.42	2.32	2800.0	1.06	1.06	1.09	1.07	1.07
3000.0	12.12	12.05	11.95	12.13	0.18	6.42	18.21	6.44	2.45	3000.0	1.06	1.06	1.09	1.07	1.07
3200.0	12.13	12.06	11.98	12.15	0.17	6.44	18.31	6.46	2.54	3200.0	1.05	1.05	1.09	1.07	1.06
3400.0	12.14	12.07	12.02	12.17	0.16	6.46	18.43	6.48	2.68	3400.0	1.04	1.05	1.09	1.07	1.06
3600.0	12.17	12.10	12.05	12.20	0.14	6.48	18.58	6.50	2.83	3600.0	1.03	1.05	1.10	1.08	1.06
3800.0	12.17	12.13	12.10	12.23	0.12	6.52	18.72	6.53	2.83	3800.0	1.03	1.04	1.11	1.08	1.06
4000.0	12.18	12.14	12.16	12.24	0.10	6.55	18.81	6.55	2.86	4000.0	1.02	1.05	1.11	1.09	1.06
4100.0	12.19	12.15	12.18	12.24	0.09	6.56	18.86	6.57	2.91	4100.0	1.02	1.05	1.10	1.10	1.07
4200.0	12.20	12.15	12.20	12.24	0.09	6.57	18.90	6.58	2.93	4200.0	1.02	1.06	1.10	1.10	1.07
4300.0	12.21	12.16	12.22	12.25	0.09	6.58	18.95	6.59	2.94	4300.0	1.02	1.06	1.10	1.11	1.08
4400.0	12.22	12.16	12.23	12.25	0.09	6.59	18.99	6.60	3.01	4400.0	1.02	1.07	1.11	1.12	1.09
4500.0	12.24	12.17	12.24	12.26	0.09	6.59	19.04	6.60	3.03	4500.0	1.03	1.07	1.12	1.13	1.10
4600.0	12.23	12.18	12.24	12.28	0.10	6.60	19.07	6.60	3.04	4600.0	1.03	1.08	1.12	1.13	1.10
4700.0	12.23	12.20	12.25	12.30	0.10	6.60	19.10	6.60	2.99	4700.0	1.03	1.08	1.12	1.14	1.11
4800.0	12.24	12.21	12.26	12.31	0.10	6.60	19.13	6.60	3.06	4800.0	1.03	1.09	1.12	1.15	1.11
4900.0	12.26	12.22	12.26	12.32	0.10	6.60	19.12	6.60	3.11	4900.0	1.04	1.09	1.12	1.15	1.12
5000.0	12.29	12.23	12.26	12.33	0.09	6.60	19.12	6.61	3.18	5000.0	1.04	1.10	1.12	1.16	1.13
5200.0	12.33	12.27	12.28	12.34	0.07	6.61	19.09	6.62	3.32	5200.0	1.05	1.11	1.12	1.17	1.14
5300.0	12.36	12.29	12.29	12.34	0.07	6.61	19.09	6.62	3.37	5300.0	1.06	1.11	1.12	1.17	1.14
5400.0	12.39	12.30	12.30	12.36	0.09	6.61	19.08	6.63	3.57	5400.0	1.06	1.11	1.12	1.17	1.14
5500.0	12.41	12.33	12.31	12.38	0.10	6.61	19.10	6.64	3.74	5500.0	1.06	1.11	1.12	1.17	1.16
5600.0	12.43	12.35	12.32	12.40	0.11	6.61	19.11	6.65	3.90	5600.0	1.07	1.10	1.12	1.17	1.15
5700.0	12.45	12.37	12.32	12.42	0.13	6.61	19.13	6.65	4.00	5700.0	1.08	1.10	1.11	1.17	1.15
5800.0	12.48	12.40	12.32	12.43	0.15	6.61	19.15	6.65	4.09	5800.0	1.08	1.10	1.10	1.17	1.15
5900.0	12.51	12.43	12.32	12.45	0.19	6.61	19.16	6.64	4.04	5900.0	1.09	1.10	1.09	1.17	1.15
6000.0	12.53	12.46	12.32	12.45	0.21	6.61	19.18	6.64	3.95	6000.0	1.09	1.10	1.10	1.17	1.15
6200.0	12.55	12.49	12.33	12.45	0.22	6.62	19.19	6.65	4.03	6200.0	1.10	1.09	1.10	1.16	1.14
6300.0	12.56	12.50	12.33	12.45	0.23	6.61	19.21	6.64	4.09	6300.0	1.10	1.09	1.09	1.15	1.14
6400.0	12.57	12.51	12.33	12.43	0.24	6.61	19.21	6.63	4.10	6400.0	1.10	1.09	1.07	1.15	1.14
6600.0	12.60	12.52	12.35	12.42	0.25	6.62	19.30	6.64	4.01	6600.0	1.09	1.09	1.05	1.14	1.13
6800.0	12.60	12.53	12.36	12.42	0.24	6.61	19.44	6.62	4.15	6800.0	1.09	1.08	1.05	1.12	1.13
7000.0	12.63	12.55	12.36	12.42	0.27	6.60	19.61	6.61	4.12	7000.0	1.08	1.09	1.05	1.11	1.12
7200.0	12.65	12.55	12.35	12.42	0.30	6.60	19.75	6.58	3.84	7200.0	1.07	1.11	1.04	1.10	1.11
7400.0	12.61	12.53	12.31	12.38	0.30	6.59	19.91	6.55	3.56	7400.0	1.08	1.12	1.04	1.09	1.12
7600.0	12.59	12.47	12.28	12.34	0.31	6.62	20.10	6.56	3.44	7600.0	1.08	1.13	1.07	1.08	1.12
7800.0	12.59	12.42	12.23	12.33	0.36	6.62	20.36	6.54	3.49	7800.0	1.10	1.16	1.10	1.07	1.14
8000.0	12.60	12.38	12.20	12.35	0.40	6.70	20.64	6.59	3.70	8000.0	1.12	1.19	1.13	1.08	1.15
8200.0	12.52	12.34	12.15	12.33	0.37	6.73	20.80	6.62	3.97	8200.0	1.15	1.21	1.16	1.10	1.17
8400.0	12.50	12.28	12.13	12.32	0.37	6.77	20.85	6.67	4.33	8400.0	1.19	1.23	1.18	1.12	1.19
8500.0	12.48	12.27	12.13	12.29	0.36	6.85	20.79	6.74	4.67	8500.0	1.21	1.24	1.20	1.13	1.19



REV. X1

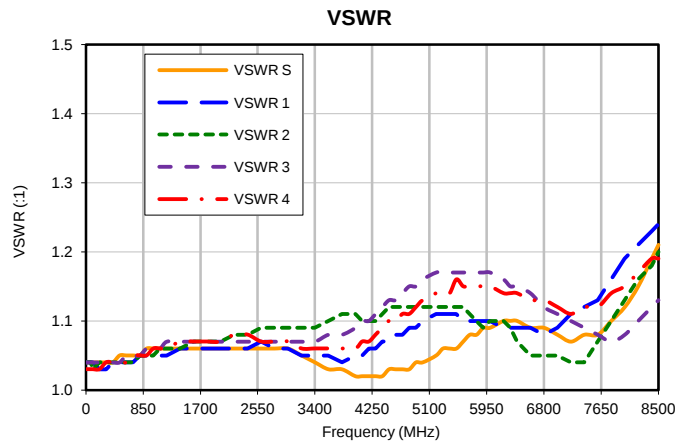
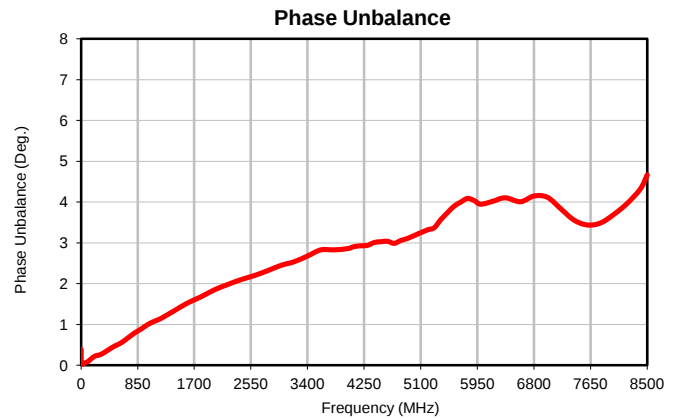
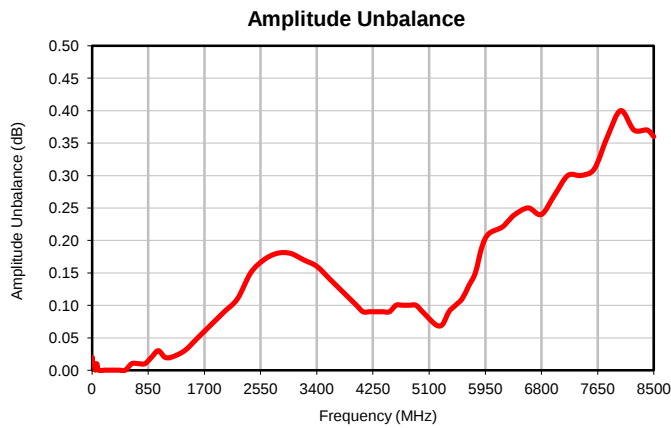
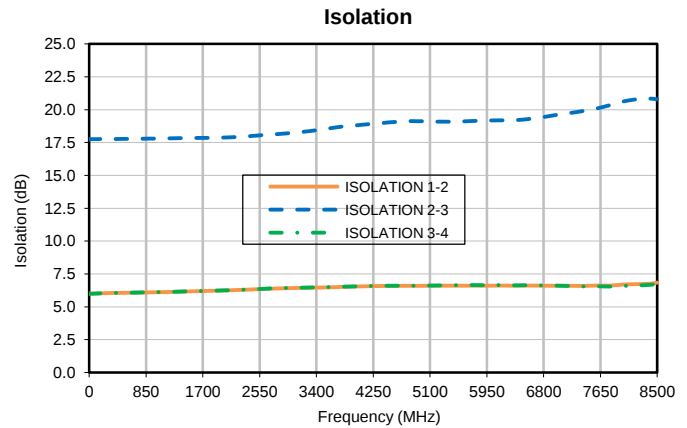
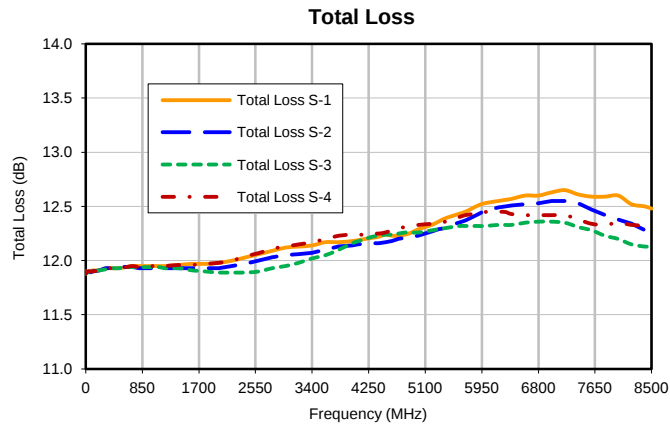
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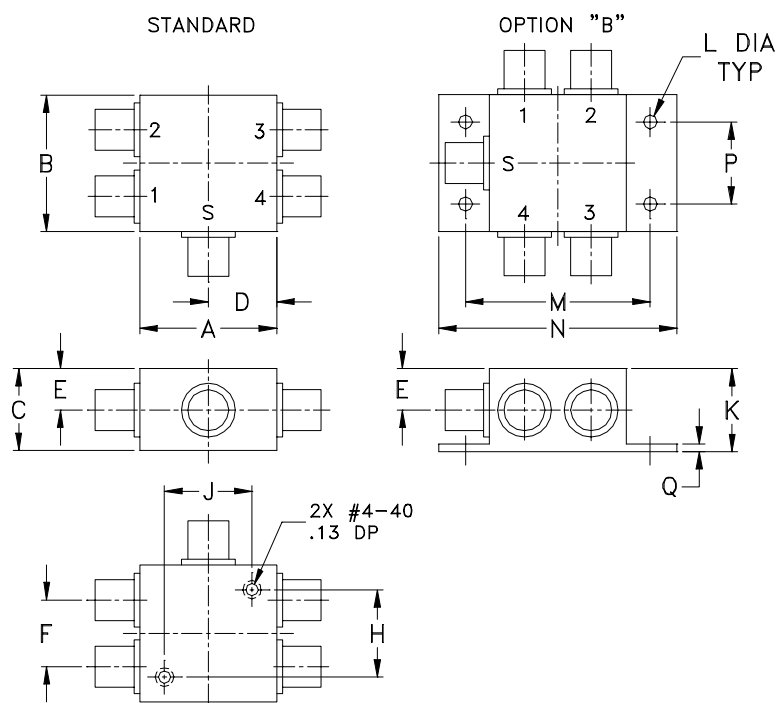
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Typical Performance Curves



Outline Dimensions



CASE #	A	B	C	D	E	F	G	H	J	K	L
G15	1.25 (31.75)	1.25 (31.75)	.75 (19.05)	.63 (16.00)	.38 (9.65)	.61 (15.49)	--	.80 (20.32)	.80 (20.32)	.76 (19.30)	.125 (3.18)

CASE #	M	N	P	Q	WT. GRAM
G15	1.688 (42.88)	2.18 (55.37)	.75 (19.05)	.07 (1.78)	85.0

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 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.
- Mounting bracket available on request. Add suffix B to part number.
- For Bracket version, option "B" dimension "K" changes from .76 to .90 inches when connectors are type TNC.



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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 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