Engineering Development Model

Power Splitter/Combiner ZFSC-ED7933/1

4 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 : G15

ELECTRICAL SPECIFICATIONS 75Ω @ +25°C					
Parameter		**Min.**	**Typ.**	**Max.**	**Units**
Frequency		1		1000	MHz
Isolation	**1 - 10 MHz**		32		dB
	10 - 500 MHz		37		dB
	500 - 1000 MHz		29		dB
Insertion Loss Above 6.0 dB	**1 - 10 MHz**		0.53		dB
	10 - 500 MHz		0.58		dB
	500 - 1000 MHz		0.94		dB
Phase Unbalance	**1 - 10 MHz**		0.114		deg.
	10 - 500 MHz		0.253		deg.
	500 - 1000 MHz		0.990		deg.
Amplitude Unbalance	**1 - 10 MHz**		0.017		dB
	10 - 500 MHz		0.020		dB
	500 - 1000 MHz		0.072		dB
VSWR	**SUM Port**		1.12		(:1)
	OUT Ports		1.34		(:1)

Note: Denotes 75 Ohm model, for coax connector models 75 Ohm BNC connectors are standard.

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

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

Functional Diagram

4 Way-0° Power Splitter/Combiner ZFSC-ED7933/1

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS[1] (dB)				AMP. UNBAL. (dB)	ISOLATION (dB)			PHASE UNBAL. (deg.)
	S-1	S-2	S-3	S-4		1-2	2-3	3-4	
1.0	6.68	6.68	6.67	6.66	0.02	21.56	29.01	20.93	0.29
2.0	6.61	6.62	6.60	6.61	0.02	25.41	31.57	24.79	0.20
3.0	6.56	6.55	6.55	6.54	0.01	27.88	33.08	27.22	0.14
4.0	6.52	6.53	6.52	6.52	0.01	29.79	34.26	29.17	0.11
5.0	6.51	6.52	6.51	6.50	0.02	31.43	35.13	30.83	0.04
6.0	6.50	6.50	6.49	6.51	0.02	32.86	35.74	32.32	0.06
7.0	6.48	6.50	6.49	6.50	0.02	34.11	36.19	33.68	0.02
8.0	6.49	6.49	6.48	6.49	0.01	35.30	36.52	34.93	0.10
9.0	6.48	6.48	6.47	6.49	0.02	36.36	36.76	36.10	0.04
10.0	6.47	6.49	6.47	6.49	0.02	37.32	36.91	37.17	0.14
28.0	6.49	6.49	6.48	6.49	0.01	44.00	37.37	46.80	0.06
46.0	6.52	6.51	6.50	6.50	0.02	43.09	37.03	45.27	0.12
64.0	6.51	6.52	6.52	6.52	0.01	41.90	36.73	43.22	0.13
82.0	6.54	6.54	6.53	6.53	0.01	40.88	36.46	41.86	0.06
100.0	6.55	6.55	6.54	6.53	0.01	39.91	36.28	40.76	0.11
180.0	6.61	6.59	6.59	6.59	0.02	36.77	35.99	37.55	0.28
260.0	6.63	6.63	6.62	6.62	0.02	34.47	36.18	35.14	0.34
340.0	6.69	6.67	6.67	6.67	0.02	32.51	36.43	32.95	0.38
420.0	6.74	6.72	6.71	6.72	0.03	30.79	36.58	30.93	0.49
500.0	6.78	6.73	6.73	6.73	0.05	29.29	36.13	29.12	0.67
600.0	6.85	6.80	6.77	6.77	0.08	27.79	34.68	27.34	0.73
700.0	6.90	6.86	6.86	6.83	0.07	26.91	32.68	26.20	0.79
800.0	7.00	6.95	6.94	6.92	0.08	26.80	30.81	25.72	0.90
900.0	7.11	7.07	7.08	7.03	0.08	27.54	29.31	25.85	1.19
1000.0	7.26	7.23	7.23	7.19	0.07	29.32	28.38	26.28	1.66

FREQ. (MHz)	VSWR (:1)				
	S	1	2	3	4
1.0	1.20	1.85	1.85	1.86	1.86
2.0	1.12	1.56	1.55	1.57	1.57
3.0	1.09	1.44	1.44	1.45	1.45
4.0	1.07	1.38	1.37	1.39	1.39
5.0	1.05	1.33	1.33	1.34	1.34
6.0	1.04	1.31	1.31	1.32	1.32
7.0	1.04	1.29	1.29	1.30	1.30
8.0	1.03	1.28	1.28	1.29	1.29
9.0	1.03	1.27	1.27	1.28	1.28
10.0	1.02	1.26	1.26	1.27	1.27
28.0	1.01	1.25	1.25	1.26	1.26
46.0	1.03	1.26	1.26	1.27	1.27
64.0	1.05	1.27	1.27	1.28	1.28
82.0	1.07	1.28	1.28	1.28	1.28
100.0	1.09	1.28	1.28	1.29	1.29
180.0	1.16	1.29	1.29	1.29	1.30
260.0	1.22	1.29	1.28	1.29	1.29
340.0	1.27	1.29	1.28	1.29	1.30
420.0	1.30	1.29	1.27	1.30	1.30
500.0	1.31	1.30	1.27	1.30	1.31
600.0	1.27	1.30	1.27	1.30	1.30
700.0	1.19	1.30	1.26	1.29	1.30
800.0	1.11	1.32	1.28	1.30	1.31
900.0	1.11	1.36	1.32	1.33	1.34
1000.0	1.21	1.43	1.38	1.38	1.38

[1] Total Loss = Insertion Loss + 6dB Splitter Loss

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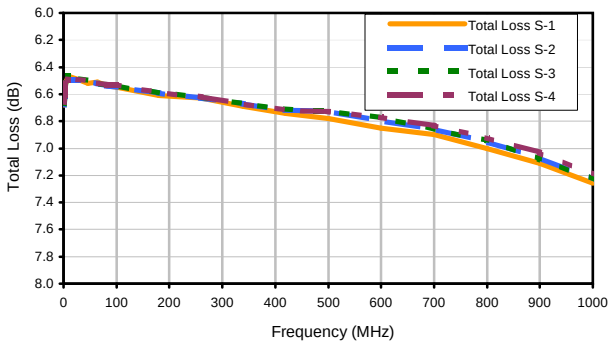
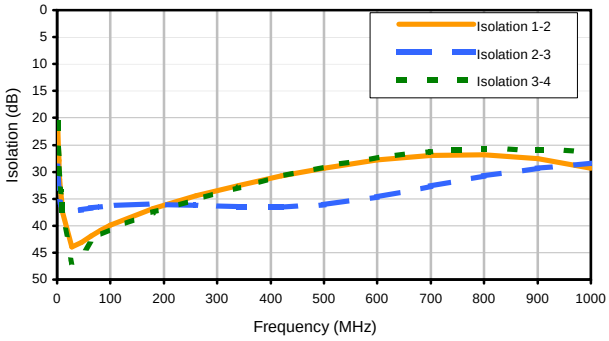
Typical Performance Curves

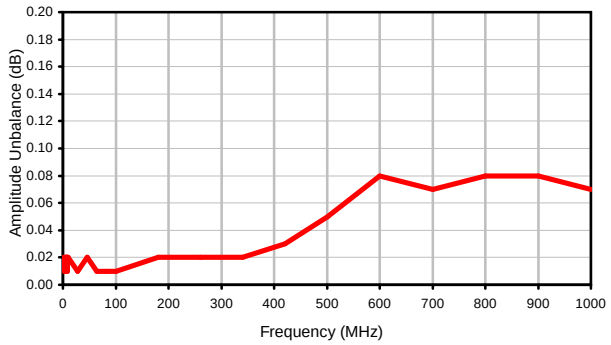
Total Loss



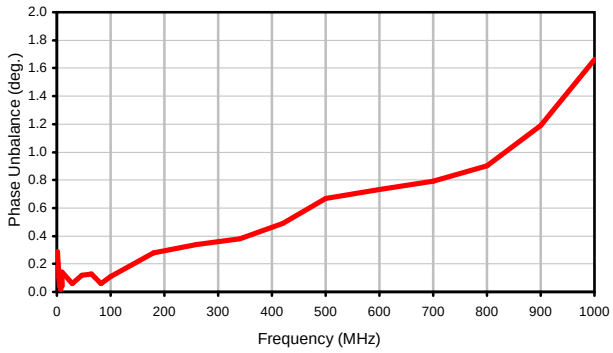
Isolation



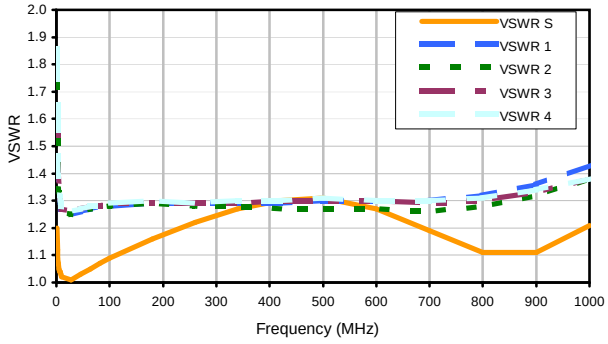
Amplitude Unbalance



Phase Unbalance



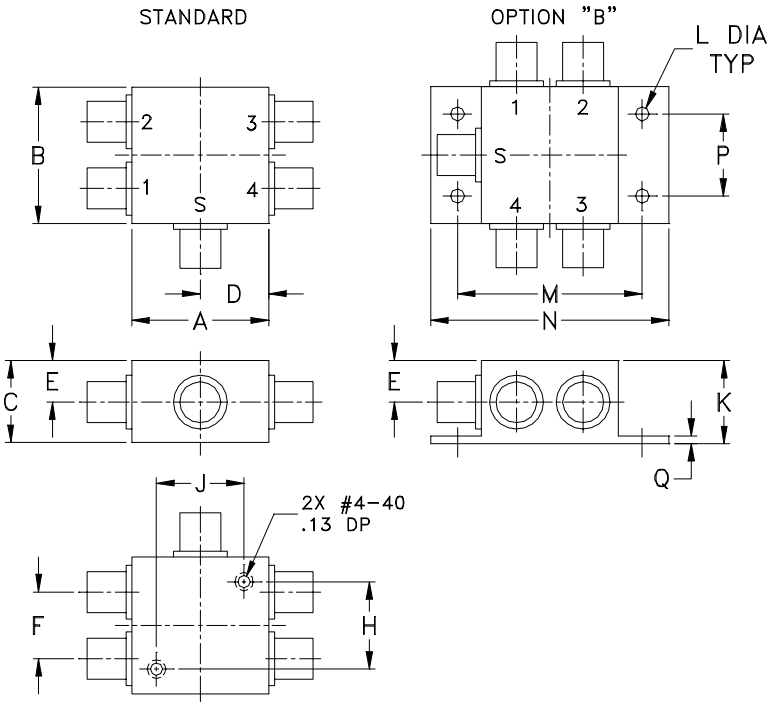
VSWR



Case Style G

G15

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. ± .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.
3. Mounting bracket available on request. Add suffix B to part number.
4. For Bracket version, option "B" dimension "K" changes from .76 to .90 inches when connectors are type TNC.

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INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010
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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