

Engineering Development Model

Power Splitter/Combiner ZB8PD1-ED10613/1

8 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.



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CASE STYLE : Z41

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter		Min.	Typ.	Max. Units
Frequency		5000		8000 MHz
Isolation	5000-8000 MHz		30.25	dB
Insertion Loss Above 9.0 dB	5000-8000 MHz		1.25	dB
Phase Unbalance	5000-8000 MHz		2.50	deg.
Amplitude Unbalance	5000-8000 MHz		0.30	dB
VSWR	SUM Port		1.23	(:1)
	OUT Ports		1.16	(: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
PORT 5	5
PORT 6	6
PORT 7	7
PORT 8	8

Functional Diagram



8 Way-0° 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	S-5	S-6	S-8		1-2	1-8	3-4	6-7			S	1	8
4500.0	10.37	10.49	10.44	10.27	10.44	10.44	10.36	0.21	21.98	30.79	20.93	23.57	2.29	4500.0	1.63	1.31	1.28
4600.0	10.34	10.41	10.44	10.23	10.41	10.48	10.30	0.25	23.44	31.08	22.41	23.29	2.09	4600.0	1.57	1.32	1.26
4700.0	10.23	10.26	10.32	10.14	10.30	10.38	10.14	0.25	24.20	31.44	23.11	23.42	1.77	4700.0	1.47	1.31	1.24
4800.0	10.11	10.13	10.16	10.00	10.12	10.19	9.96	0.23	24.62	32.01	23.66	24.01	1.64	4800.0	1.32	1.28	1.20
4900.0	10.05	10.10	10.08	9.89	9.99	10.10	9.89	0.21	24.94	32.78	24.54	24.83	1.68	4900.0	1.16	1.24	1.19
5000.0	10.05	10.15	10.13	9.84	9.93	10.13	9.90	0.32	25.40	33.61	25.77	25.66	2.23	5000.0	1.10	1.23	1.18
5100.0	10.02	10.14	10.16	9.82	9.92	10.15	9.89	0.34	26.25	34.53	26.80	26.65	2.36	5100.0	1.16	1.22	1.17
5200.0	9.97	10.09	10.14	9.80	9.92	10.13	9.88	0.34	26.86	35.49	26.84	27.74	2.30	5200.0	1.19	1.20	1.15
5300.0	9.93	10.05	10.09	9.78	9.93	10.11	9.88	0.33	26.79	36.31	26.00	28.33	2.25	5300.0	1.16	1.16	1.13
5400.0	9.92	10.03	10.07	9.78	9.94	10.09	9.90	0.31	26.71	36.85	25.53	28.19	2.18	5400.0	1.11	1.13	1.09
5500.0	9.93	10.05	10.06	9.80	9.98	10.09	9.94	0.29	27.39	37.36	26.20	27.75	2.18	5500.0	1.10	1.11	1.06
5600.0	9.98	10.09	10.08	9.85	10.03	10.10	10.00	0.25	28.79	38.29	27.98	27.40	2.19	5600.0	1.17	1.09	1.04
5700.0	10.04	10.14	10.10	9.92	10.10	10.12	10.06	0.22	31.31	39.59	31.14	27.30	2.24	5700.0	1.25	1.07	1.04
5800.0	10.10	10.17	10.10	9.97	10.16	10.12	10.11	0.19	34.62	41.24	35.85	27.45	2.32	5800.0	1.29	1.08	1.06
5900.0	10.15	10.17	10.08	10.03	10.22	10.11	10.15	0.22	33.58	43.19	35.53	27.89	2.44	5900.0	1.28	1.08	1.06
6000.0	10.19	10.17	10.05	10.09	10.29	10.12	10.19	0.25	29.55	44.46	30.74	28.62	2.51	6000.0	1.23	1.06	1.04
6100.0	10.23	10.16	10.03	10.13	10.34	10.13	10.23	0.31	26.53	44.09	27.16	29.84	2.43	6100.0	1.21	1.01	1.04
6200.0	10.25	10.16	10.01	10.15	10.36	10.14	10.24	0.35	24.54	43.18	24.91	31.80	2.23	6200.0	1.25	1.04	1.07
6300.0	10.27	10.17	10.01	10.19	10.37	10.13	10.23	0.36	23.50	41.80	23.73	34.83	1.91	6300.0	1.31	1.09	1.12
6400.0	10.29	10.20	10.03	10.24	10.38	10.12	10.21	0.36	23.25	40.23	23.31	39.67	1.77	6400.0	1.36	1.14	1.17
6500.0	10.32	10.25	10.06	10.29	10.38	10.10	10.19	0.32	23.70	38.89	23.54	44.09	1.79	6500.0	1.38	1.19	1.20
6600.0	10.32	10.26	10.08	10.29	10.35	10.09	10.15	0.26	24.75	37.74	24.45	38.46	2.12	6600.0	1.35	1.22	1.21
6700.0	10.31	10.27	10.11	10.27	10.33	10.10	10.14	0.23	26.28	36.66	26.10	33.88	2.65	6700.0	1.31	1.23	1.21
6800.0	10.30	10.28	10.15	10.26	10.36	10.15	10.18	0.22	27.82	35.85	28.16	31.09	3.17	6800.0	1.27	1.23	1.19
6900.0	10.29	10.30	10.18	10.28	10.44	10.23	10.26	0.26	28.04	35.30	29.43	29.42	3.33	6900.0	1.25	1.23	1.20
7000.0	10.35	10.37	10.24	10.35	10.56	10.33	10.37	0.32	26.95	35.11	28.84	28.66	3.07	7000.0	1.26	1.24	1.22
7100.0	10.48	10.41	10.27	10.42	10.64	10.43	10.45	0.38	26.34	34.84	27.75	28.63	2.49	7100.0	1.28	1.26	1.25
7200.0	10.54	10.42	10.25	10.40	10.65	10.45	10.54	0.40	26.64	34.14	27.20	29.21	2.19	7200.0	1.30	1.30	1.28
7300.0	10.53	10.44	10.28	10.35	10.54	10.42	10.61	0.33	27.69	33.24	26.85	30.45	1.35	7300.0	1.30	1.30	1.28
7400.0	10.56	10.47	10.31	10.26	10.40	10.37	10.61	0.35	29.03	32.32	26.31	32.87	1.33	7400.0	1.28	1.29	1.26
7500.0	10.55	10.49	10.33	10.23	10.31	10.31	10.54	0.32	28.81	31.73	24.95	37.47	1.72	7500.0	1.23	1.26	1.21
7600.0	10.51	10.47	10.33	10.28	10.28	10.23	10.44	0.28	26.13	31.64	22.98	45.10	2.42	7600.0	1.17	1.22	1.16
7700.0	10.48	10.45	10.35	10.36	10.28	10.20	10.37	0.28	23.29	31.86	21.22	38.85	3.30	7700.0	1.12	1.17	1.12
7800.0	10.44	10.41	10.39	10.45	10.31	10.26	10.33	0.19	21.32	32.26	19.94	33.09	4.37	7800.0	1.13	1.13	1.11
7900.0	10.36	10.27	10.35	10.48	10.45	10.39	10.34	0.20	20.27	32.54	19.11	29.77	4.49	7900.0	1.16	1.11	1.12
8000.0	10.29	10.19	10.29	10.46	10.59	10.48	10.39	0.40	19.88	32.76	18.79	27.39	3.04	8000.0	1.18	1.09	1.11
8100.0	10.31	10.20	10.24	10.44	10.62	10.45	10.42	0.42	20.23	33.12	19.10	25.55	1.56	8100.0	1.15	1.08	1.09
8200.0	10.38	10.26	10.26	10.42	10.56	10.37	10.44	0.31	21.07	33.33	19.83	24.02	2.34	8200.0	1.11	1.07	1.06
8300.0	10.51	10.38	10.40	10.49	10.55	10.37	10.47	0.18	21.45	33.30	20.24	22.92	2.89	8300.0	1.14	1.11	1.09
8400.0	10.69	10.56	10.62	10.61	10.61	10.47	10.55	0.23	20.40	33.10	19.57	22.45	2.82	8400.0	1.22	1.17	1.14
8500.0	10.84	10.71	10.81	10.68	10.69	10.61	10.66	0.32	18.72	32.61	18.26	22.52	2.79	8500.0	1.28	1.21	1.18

¹Total Loss = Insertion Loss + 9dB Splitter Loss

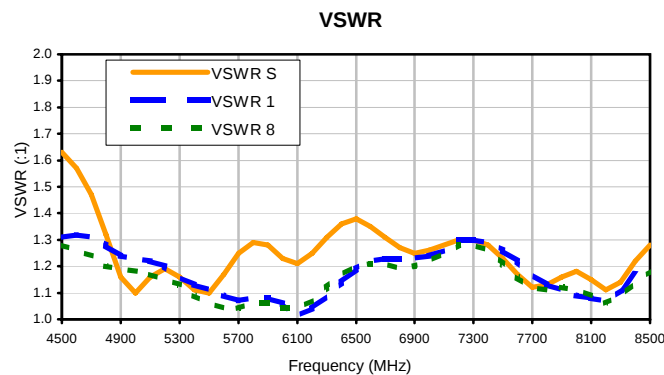
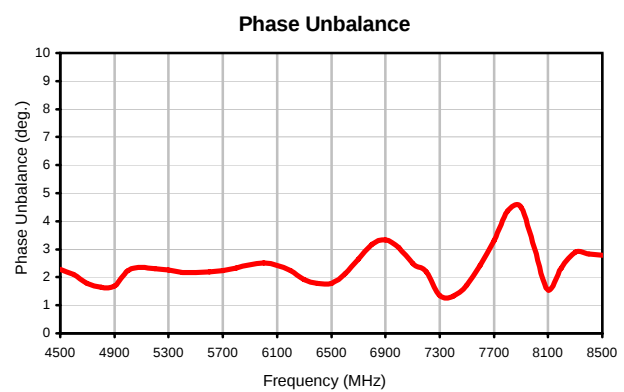
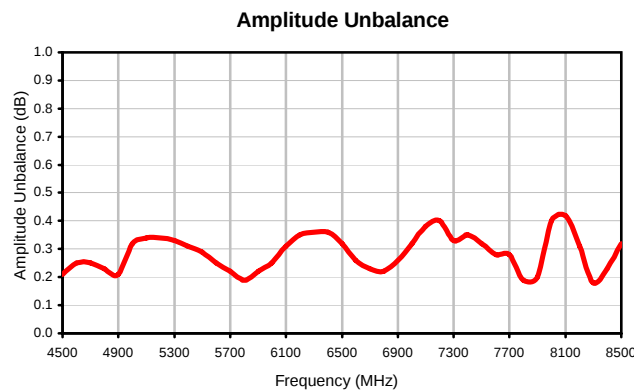
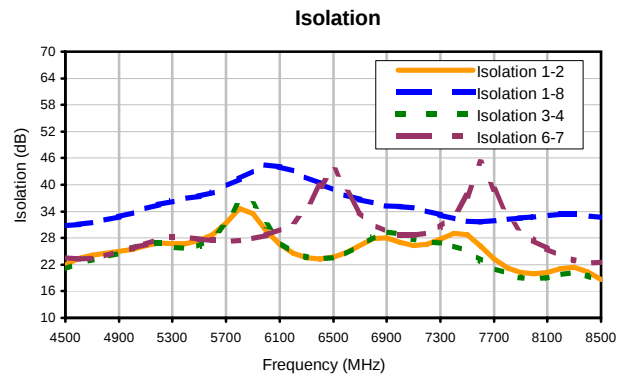
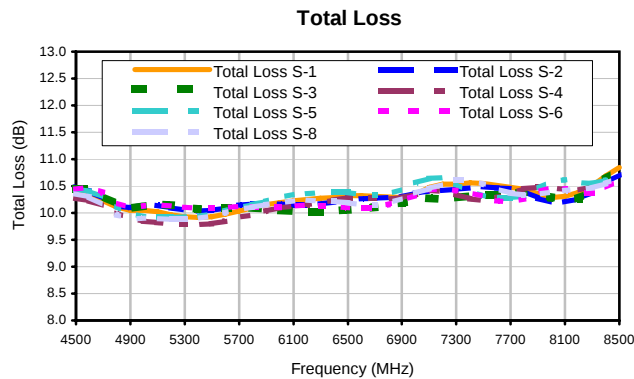


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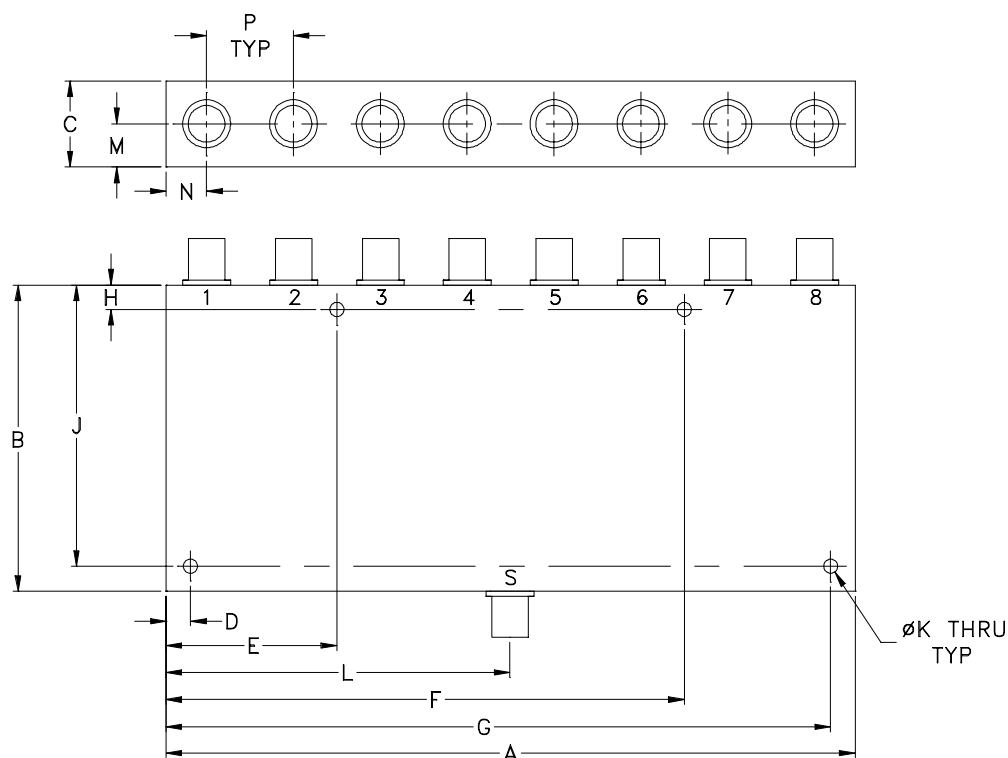
IF/RF MICROWAVE COMPONENTS

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Typical Performance Curves



Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
Z41	7.06 (179.32)	3.13 (79.50)	.88 (22.35)	.250 (6.35)	1.750 (44.45)	5.310 (134.87)	6.810 (172.97)	.250 (6.35)	2.875 (73.03)	.144 (3.66)	3.53 (89.66)	.44 (11.18)	.415 (10.54)

CASE#	P	WT.GRAMS
Z41	.89 (22.61)	800

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