

Power Splitter/Combiner

ZB8PD-6.4-S

8 Way-0° 50Ω 5600 to 6800 MHz

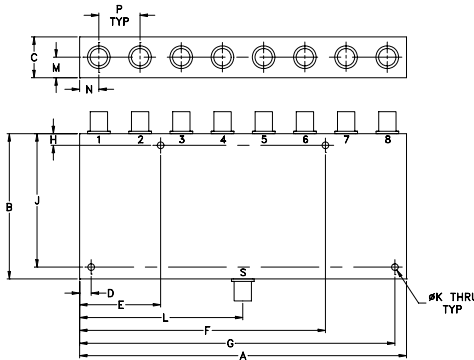
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.875W max.
DC Current	1.2A(150mA for each port)
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

SUM PORT	S
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
7.06	3.13	.88	.250	1.750	5.310	6.810	.250
179.32	79.50	22.35	6.35	44.45	134.87	172.97	6.35

J	K	L	M	N	P	wt
2.875	.144	3.53	.44	.415	.89	grams
73.03	3.66	89.66	11.18	10.54	22.61	800

Features

- wideband, 5600 to 6800 MHz
- low insertion loss 0.8 dB typ.
- good isolation, 23 dB typ.
- up to 10 power input
- rugged shielded case

Applications

- SHF
- defense communication
- cable TV relay
- instrumentation

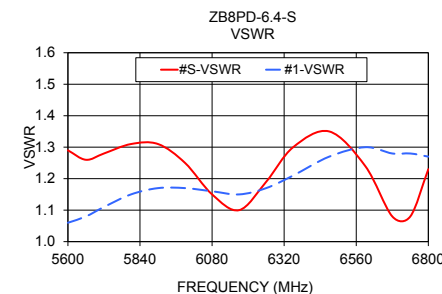
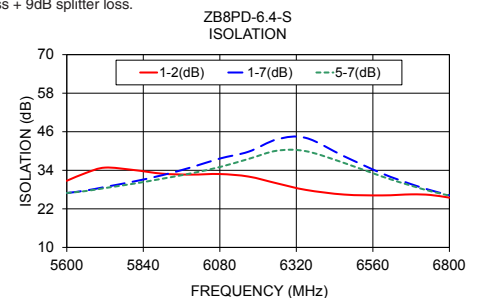
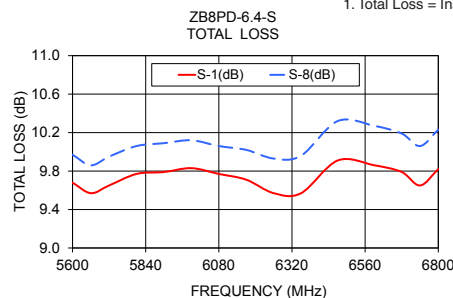
Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 9.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
$f_c - f_u$	Typ.	Min.	Typ.	Max.	Max.	Max.
5600-6800	23	18	0.8	1.7	15	0.7

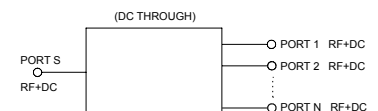
Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)						Amplitude Unbalance (dB)				Isolation (dB)				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	1-2	1-7	3-4	5-7			
5600.00	9.68	9.81	9.83	9.79	9.84	9.97	0.29	30.74	26.92	31.08	26.94	1.29	1.06	1.07			
5660.00	9.57	9.70	9.72	9.70	9.72	9.86	0.29	33.18	27.70	33.96	27.55	1.26	1.08	1.10			
5720.00	9.65	9.75	9.79	9.78	9.77	9.95	0.30	34.84	28.81	36.63	28.48	1.28	1.11	1.12			
5810.00	9.77	9.85	9.85	9.89	9.86	10.06	0.29	34.09	30.51	36.68	29.84	1.31	1.15	1.15			
5900.00	9.79	9.88	9.85	9.93	9.86	10.09	0.30	32.95	32.49	34.69	31.39	1.31	1.17	1.16			
5990.00	9.83	9.93	9.87	10.00	9.88	10.12	0.30	32.66	34.91	33.36	33.05	1.25	1.17	1.15			
6080.00	9.77	9.89	9.84	9.96	9.79	10.06	0.29	32.84	37.66	32.30	35.02	1.15	1.16	1.14			
6170.00	9.71	9.87	9.80	9.92	9.73	10.02	0.31	32.05	39.79	30.84	37.54	1.10	1.15	1.13			
6260.00	9.57	9.69	9.65	9.80	9.59	9.93	0.36	29.92	43.65	28.77	40.11	1.19	1.17	1.14			
6350.00	9.57	9.66	9.64	9.80	9.59	9.96	0.39	27.90	44.08	27.26	39.95	1.30	1.21	1.18			
6470.00	9.91	9.98	9.97	10.14	9.90	10.32	0.42	26.45	38.35	26.27	36.28	1.35	1.27	1.24			
6590.00	9.86	9.92	9.91	10.04	9.86	10.27	0.42	26.19	32.97	26.42	32.02	1.24	1.30	1.27			
6680.00	9.79	9.83	9.80	9.92	9.77	10.19	0.41	26.51	29.69	26.91	29.22	1.08	1.28	1.26			
6740.00	9.65	9.74	9.68	9.80	9.65	10.06	0.41	26.33	27.82	26.64	27.52	1.08	1.28	1.26			
6800.00	9.82	9.87	9.81	9.90	9.80	10.23	0.43	25.49	26.22	25.51	26.12	1.23	1.27	1.25			

1. Total Loss = Insertion Loss + 9dB splitter loss.



electrical schematic



Notes

- A. 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.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
 C. The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp



8 Way-0° Power Splitter/Combiner

ZB8PD-6.4

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS ¹						AMP. UNBAL. (dB)	ISOLATION				PHASE UNBAL. (deg.)	FREQ. (MHz)	VSWR		
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	2-3	3-4	6-7			S	1	8
5600.0	9.68	9.81	9.83	9.79	9.84	9.97	0.29	30.74	26.92	31.08	26.94	4.37	5600.0	1.29	1.06	1.07
5630.0	9.65	9.77	9.82	9.78	9.81	9.95	0.30	32.05	27.32	32.52	27.27	4.34	5630.0	1.27	1.07	1.09
5660.0	9.57	9.70	9.72	9.70	9.72	9.86	0.29	33.18	27.70	33.96	27.55	4.26	5660.0	1.26	1.08	1.10
5690.0	9.73	9.83	9.83	9.84	9.85	10.02	0.29	34.26	28.30	35.46	28.03	4.23	5690.0	1.27	1.10	1.11
5720.0	9.65	9.75	9.79	9.78	9.77	9.95	0.30	34.84	28.81	36.63	28.48	4.20	5720.0	1.28	1.11	1.12
5750.0	9.41	9.53	9.51	9.52	9.54	9.71	0.30	34.61	29.09	36.81	28.66	4.14	5750.0	1.29	1.13	1.13
5780.0	9.74	9.85	9.82	9.86	9.86	10.04	0.30	34.57	29.92	37.01	29.35	4.16	5780.0	1.30	1.14	1.14
5810.0	9.77	9.85	9.85	9.89	9.86	10.06	0.29	34.09	30.51	36.68	29.84	4.20	5810.0	1.31	1.15	1.15
5840.0	9.59	9.68	9.68	9.72	9.69	9.88	0.29	33.38	31.03	35.73	30.21	4.13	5840.0	1.32	1.16	1.15
5870.0	9.71	9.81	9.76	9.84	9.80	10.00	0.29	33.15	31.74	35.24	30.80	4.28	5870.0	1.32	1.17	1.16
5900.0	9.79	9.88	9.85	9.93	9.86	10.09	0.30	32.95	32.49	34.69	31.39	4.17	5900.0	1.31	1.17	1.16
5930.0	9.61	9.69	9.70	9.77	9.71	9.91	0.29	32.53	33.13	34.02	31.82	4.16	5930.0	1.29	1.17	1.16
5960.0	9.58	9.70	9.64	9.76	9.68	9.89	0.30	32.43	33.81	33.53	32.40	4.29	5960.0	1.27	1.17	1.16
5990.0	9.83	9.93	9.87	10.00	9.88	10.12	0.30	32.66	34.91	33.36	33.05	4.29	5990.0	1.25	1.17	1.15
6020.0	9.72	9.80	9.78	9.88	9.78	10.00	0.29	32.58	35.71	32.95	33.62	4.18	6020.0	1.21	1.17	1.15
6050.0	9.55	9.67	9.62	9.74	9.62	9.84	0.29	32.48	36.53	32.44	34.12	4.45	6050.0	1.18	1.16	1.14
6080.0	9.77	9.89	9.84	9.96	9.79	10.06	0.29	32.84	37.66	32.30	35.02	4.36	6080.0	1.15	1.16	1.14
6110.0	9.76	9.87	9.86	9.92	9.77	10.05	0.29	32.66	38.40	31.94	35.87	4.16	6110.0	1.12	1.15	1.13
6140.0	9.55	9.72	9.66	9.75	9.61	9.86	0.31	32.33	38.93	31.24	36.59	4.43	6140.0	1.10	1.15	1.13
6170.0	9.71	9.87	9.80	9.92	9.73	10.02	0.31	32.05	39.79	30.84	37.54	4.27	6170.0	1.10	1.15	1.13
6200.0	9.78	9.89	9.86	9.97	9.77	10.10	0.33	31.53	40.96	30.24	38.53	4.24	6200.0	1.12	1.16	1.13
6230.0	9.68	9.80	9.80	9.89	9.74	10.03	0.35	30.71	42.36	29.49	39.41	4.46	6230.0	1.15	1.16	1.13
6260.0	9.57	9.69	9.65	9.80	9.59	9.93	0.36	29.92	43.65	28.77	40.11	4.50	6260.0	1.19	1.17	1.14
6290.0	9.87	9.94	9.93	10.06	9.84	10.21	0.37	29.44	44.81	28.51	40.83	4.24	6290.0	1.23	1.18	1.15
6320.0	9.82	9.88	9.90	10.02	9.84	10.21	0.39	28.70	45.09	27.94	40.84	4.50	6320.0	1.27	1.19	1.17
6350.0	9.57	9.66	9.64	9.80	9.59	9.96	0.39	27.90	44.08	27.26	39.95	4.66	6350.0	1.30	1.21	1.18
6380.0	9.94	9.97	9.98	10.15	9.91	10.32	0.41	27.61	43.19	27.12	39.49	4.39	6380.0	1.33	1.23	1.20
6410.0	9.90	9.95	9.96	10.11	9.91	10.30	0.40	27.14	41.57	26.75	38.57	4.54	6410.0	1.35	1.24	1.21
6440.0	9.44	9.53	9.51	9.69	9.47	9.86	0.42	26.36	39.60	26.09	37.20	4.96	6440.0	1.35	1.26	1.23
6470.0	9.91	9.98	9.97	10.14	9.90	10.32	0.42	26.45	38.35	26.27	36.28	4.58	6470.0	1.35	1.27	1.24
6500.0	9.95	9.99	10.00	10.13	9.94	10.35	0.41	26.26	36.87	26.25	35.23	4.60	6500.0	1.34	1.28	1.25
6530.0	9.59	9.67	9.67	9.81	9.63	10.03	0.44	25.90	35.18	25.96	33.85	5.03	6530.0	1.32	1.28	1.26
6560.0	9.74	9.83	9.80	9.96	9.74	10.16	0.42	25.94	33.97	26.11	32.79	4.94	6560.0	1.28	1.29	1.27
6590.0	9.86	9.92	9.91	10.04	9.86	10.27	0.42	26.19	32.97	26.42	32.02	4.89	6590.0	1.24	1.30	1.27
6620.0	9.60	9.69	9.67	9.80	9.64	10.04	0.43	26.06	31.57	26.39	30.82	5.30	6620.0	1.19	1.29	1.27
6650.0	9.73	9.81	9.78	9.91	9.74	10.15	0.42	26.29	30.61	26.67	29.97	5.11	6650.0	1.13	1.29	1.27
6680.0	9.79	9.83	9.80	9.92	9.77	10.19	0.41	26.51	29.69	26.91	29.22	5.10	6680.0	1.08	1.28	1.26
6710.0	9.67	9.73	9.69	9.80	9.69	10.08	0.42	26.31	28.56	26.74	28.20	5.34	6710.0	1.04	1.28	1.26
6740.0	9.65	9.74	9.68	9.80	9.65	10.06	0.41	26.33	27.82	26.64	27.52	5.54	6740.0	1.08	1.28	1.26
6770.0	9.85	9.90	9.83	9.93	9.83	10.24	0.41	26.20	27.15	26.36	26.99	5.42	6770.0	1.15	1.27	1.25
6800.0	9.82	9.87	9.81	9.90	9.80	10.23	0.43	25.49	26.22	25.51	26.12	5.71	6800.0	1.23	1.27	1.25

¹ Total Loss = Insertion Loss+ 9dB Splitter Loss



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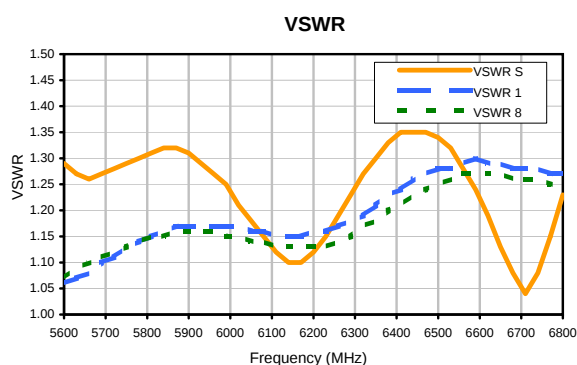
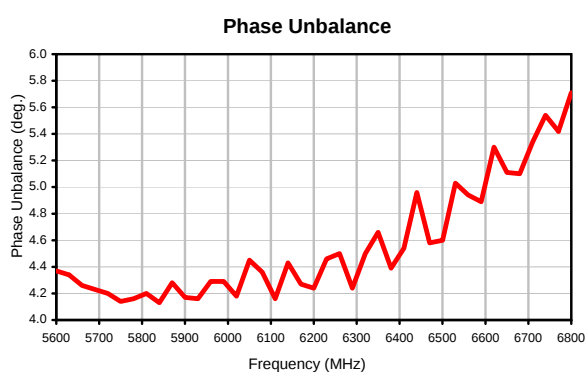
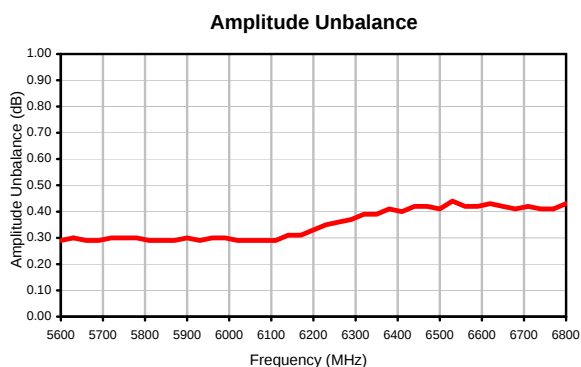
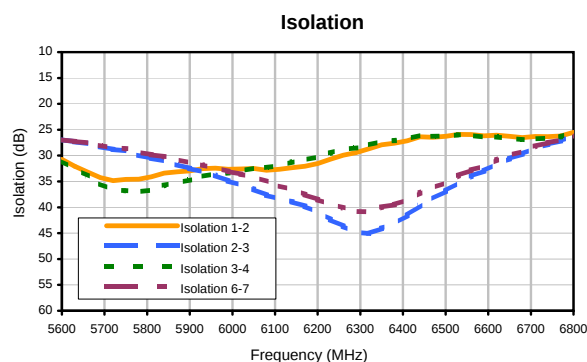
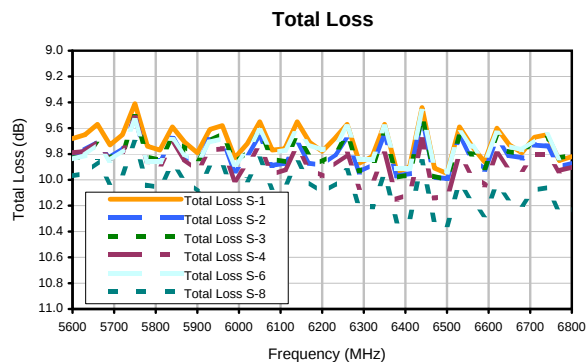
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8 Way-0° Power Splitter/Combiner

ZB8PD-6.4

Typical Performance Curves



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ZB8PD-6.4
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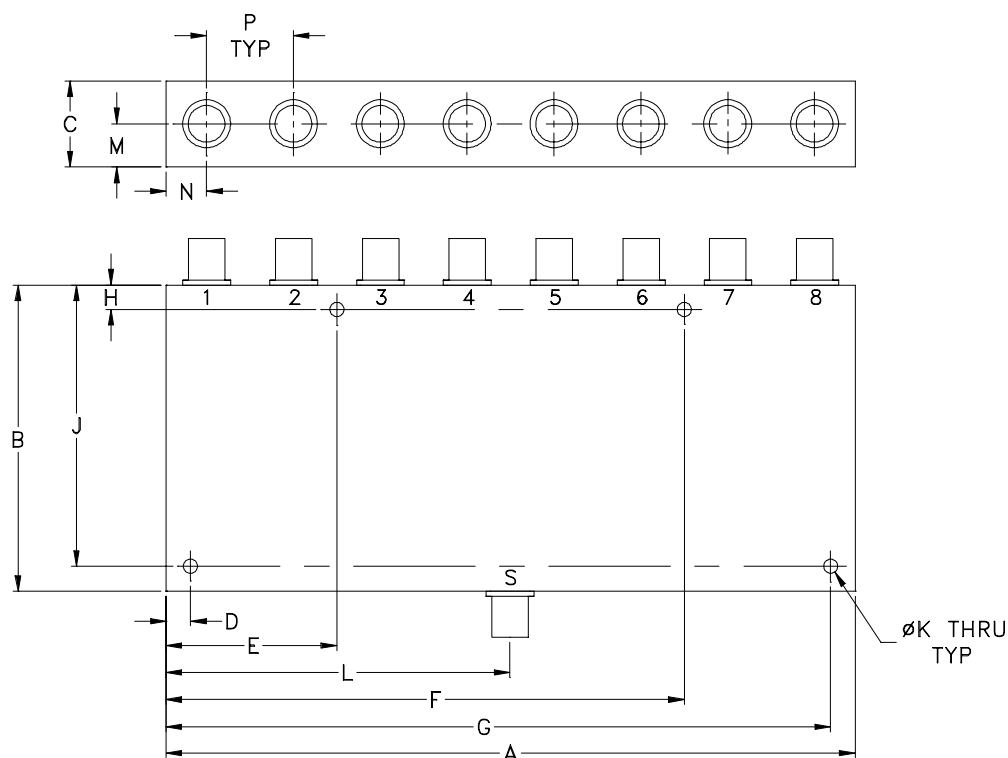
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Outline Dimensions



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