

Power Splitter/Combiner

ZB8PD-6.4-S

8 Way-0° 50Ω 5600 to 6800 MHz

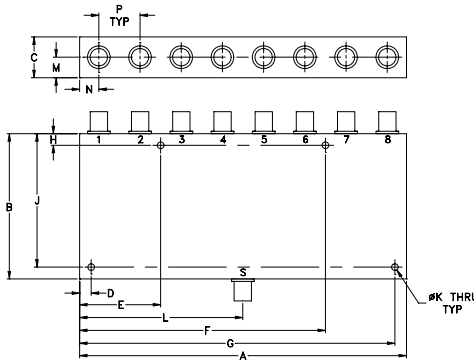
Maximum Ratings

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

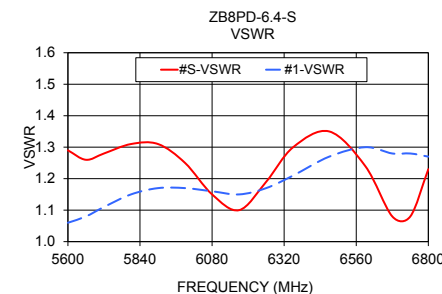
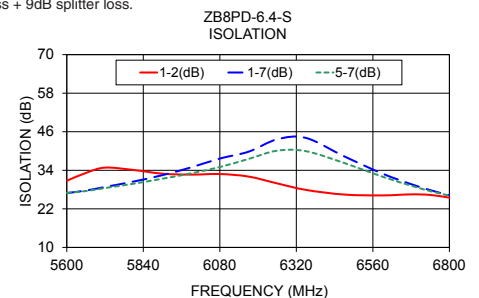
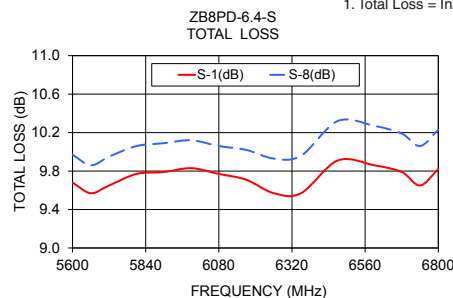
Electrical Specifications

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

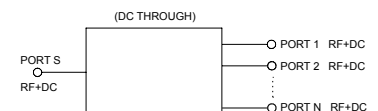
Typical Performance Data

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 (:1)		
	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

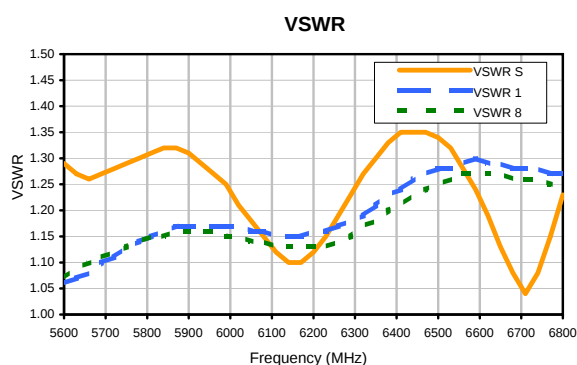
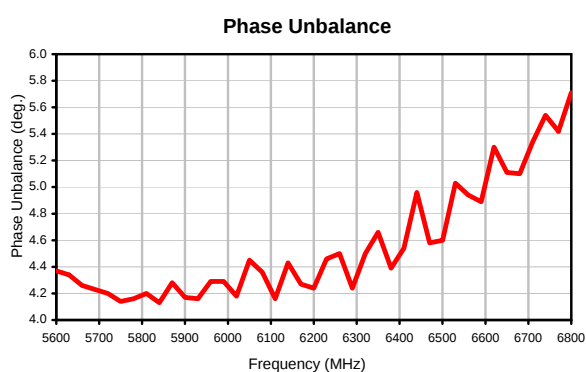
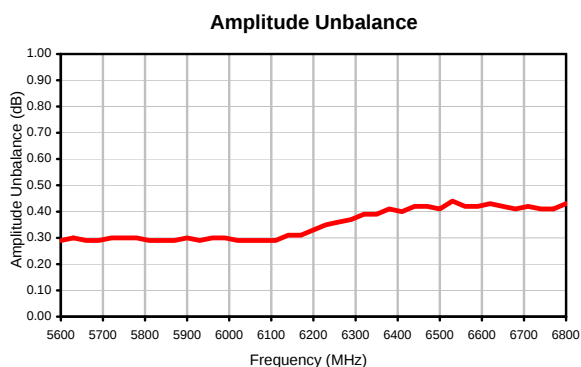
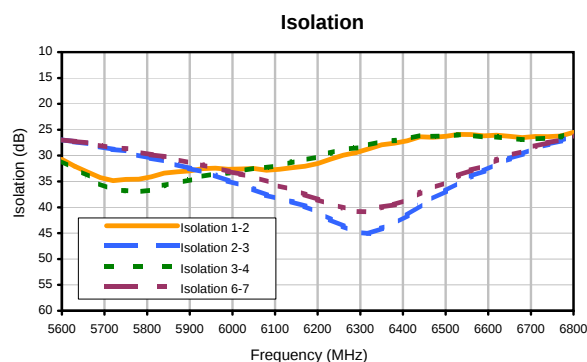
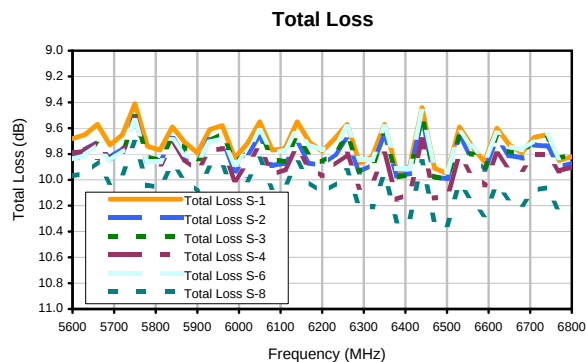
¹ Total Loss = Insertion Loss+ 9dB Splitter Loss



8 Way-0° Power Splitter/Combiner

ZB8PD-6.4

Typical Performance Curves



REV. X2
ZB8PD-6.4
100627
Page 1 of 1



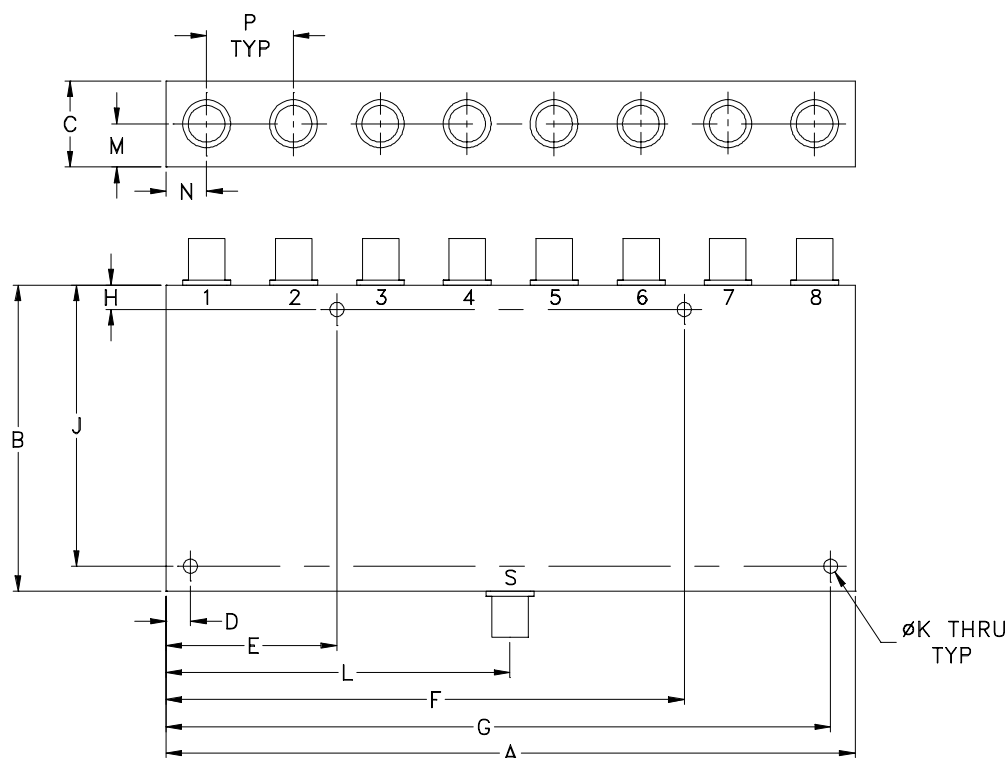
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Outline Dimensions



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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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