

Power Splitter/Combiner

8 Way-0° 50Ω 1000 to 2000 MHz

ZB8PD-2+



Generic photo used for illustration purposes only
CASE STYLE: Z41



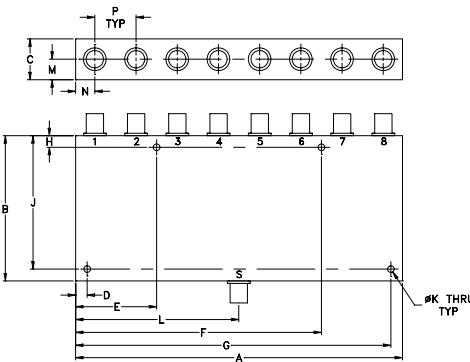
Maximum Ratings

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, 1000 to 2000 MHz
- low insertion loss, 0.8 dB typ.
- good isolation, 24 dB typ.
- up to 10W power input as splitter

Applications

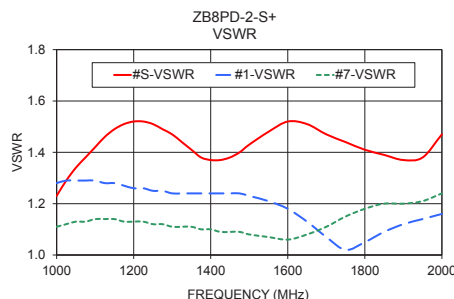
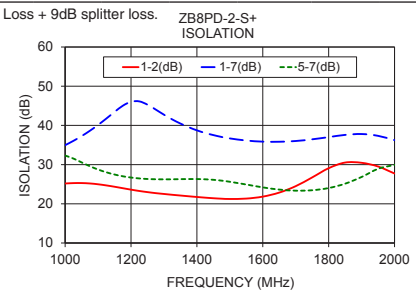
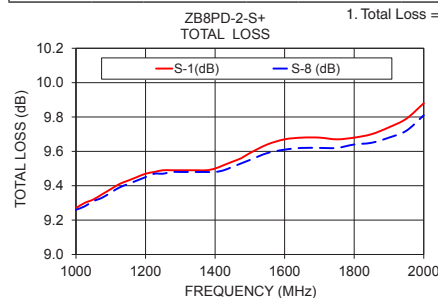
- GPS
- PCS/DCS
- communication systems
- instrumentation

Electrical Specifications

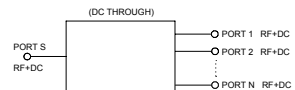
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 9.0 dB		PHASE UNBALANCE (Degrees)	AMPLITUDE UNBALANCE (dB)
f_L - f_U	Typ.	Min	Typ.	Max.	Max.	Max.
1000-2000	24	17	0.8	1.3	18	0.8

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)						Amp. Unb. (dB)	Isolation (dB)				Phase Unb. (deg.)	VSWR S	VSWR 1	VSWR 7
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	5-7				
1000.00	9.27	9.44	9.41	9.22	9.42	9.26	0.21	25.18	34.96	24.73	32.31	3.71	1.23	1.28	1.11
1050.00	9.32	9.48	9.45	9.27	9.47	9.31	0.20	25.29	37.28	24.99	30.56	3.95	1.34	1.29	1.13
1100.00	9.38	9.52	9.49	9.33	9.52	9.36	0.19	24.98	40.13	24.89	28.74	4.22	1.42	1.29	1.14
1200.00	9.47	9.58	9.56	9.43	9.57	9.45	0.15	23.61	46.04	23.80	26.70	4.72	1.52	1.26	1.13
1250.00	9.49	9.58	9.56	9.46	9.57	9.47	0.12	22.98	45.29	23.18	26.33	4.96	1.51	1.25	1.12
1300.00	9.49	9.56	9.54	9.46	9.55	9.48	0.09	22.51	42.73	22.68	26.24	5.18	1.47	1.24	1.11
1400.00	9.50	9.51	9.51	9.48	9.50	9.48	0.03	21.74	38.74	21.81	26.31	5.59	1.37	1.24	1.10
1500.00	9.59	9.54	9.52	9.57	9.52	9.55	0.09	21.23	36.68	21.24	25.62	5.87	1.43	1.23	1.08
1600.00	9.67	9.55	9.53	9.66	9.54	9.61	0.19	21.83	35.86	21.81	24.19	6.07	1.52	1.18	1.06
1700.00	9.68	9.49	9.48	9.70	9.51	9.62	0.28	24.50	36.02	24.45	23.35	6.27	1.47	1.07	1.11
1750.00	9.67	9.46	9.46	9.72	9.48	9.62	0.32	26.73	36.45	26.75	23.46	6.38	1.44	1.02	1.15
1800.00	9.68	9.44	9.45	9.75	9.47	9.64	0.36	29.08	37.01	29.40	24.02	6.45	1.41	1.05	1.18
1900.00	9.74	9.44	9.45	9.81	9.46	9.68	0.41	30.46	37.80	31.63	26.84	6.42	1.37	1.12	1.20
1950.00	9.79	9.46	9.47	9.85	9.47	9.72	0.43	29.52	37.34	30.46	28.92	6.35	1.38	1.14	1.21
2000.00	9.88	9.54	9.54	9.93	9.54	9.81	0.45	27.73	36.24	28.25	29.93	6.42	1.47	1.16	1.24



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.
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8 Way-0° Power Splitter/Combiner

ZB8PD-2+

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-6	S-8		1-2	1-7	3-4	5-7			S	1	8
1000.0	9.27	9.46	9.44	9.18	9.45	9.13	0.33	25.90	35.39	24.95	30.81	3.56	1000.0	1.20	1.31	1.24
1025.0	9.37	9.54	9.51	9.30	9.52	9.24	0.30	26.09	36.71	25.06	30.12	3.88	1025.0	1.25	1.32	1.25
1050.0	9.39	9.54	9.54	9.33	9.54	9.26	0.28	26.19	38.19	25.10	29.28	3.50	1050.0	1.27	1.32	1.25
1075.0	9.30	9.50	9.48	9.20	9.49	9.16	0.34	26.07	39.77	25.02	28.40	3.95	1075.0	1.31	1.30	1.24
1100.0	9.34	9.49	9.50	9.27	9.49	9.21	0.29	26.01	41.70	24.98	27.80	4.24	1100.0	1.36	1.29	1.23
1125.0	9.48	9.60	9.58	9.42	9.57	9.35	0.25	25.83	44.14	24.89	27.36	4.13	1125.0	1.40	1.28	1.23
1150.0	9.41	9.59	9.58	9.35	9.57	9.29	0.30	25.36	46.83	24.55	26.76	3.96	1150.0	1.41	1.28	1.24
1175.0	9.44	9.61	9.60	9.39	9.58	9.34	0.27	25.03	49.81	24.29	26.50	4.69	1175.0	1.44	1.25	1.23
1200.0	9.37	9.48	9.47	9.32	9.47	9.27	0.21	24.71	51.26	24.05	26.34	4.58	1200.0	1.48	1.23	1.22
1225.0	9.45	9.58	9.56	9.43	9.57	9.35	0.23	24.37	49.73	23.83	26.22	4.54	1225.0	1.47	1.24	1.24
1250.0	9.50	9.65	9.64	9.46	9.63	9.40	0.25	23.97	47.24	23.46	26.07	4.75	1250.0	1.45	1.23	1.25
1275.0	9.46	9.54	9.54	9.43	9.55	9.37	0.18	23.78	45.36	23.24	26.12	4.89	1275.0	1.47	1.21	1.24
1300.0	9.38	9.44	9.45	9.36	9.48	9.30	0.18	23.50	43.71	23.05	26.12	4.88	1300.0	1.45	1.22	1.25
1325.0	9.53	9.57	9.60	9.51	9.60	9.43	0.20	23.24	42.23	22.78	26.12	5.03	1325.0	1.41	1.24	1.28
1350.0	9.52	9.57	9.57	9.53	9.60	9.44	0.19	23.00	41.19	22.52	26.11	5.08	1350.0	1.40	1.22	1.28
1375.0	9.46	9.50	9.51	9.48	9.52	9.36	0.19	22.81	40.40	22.33	26.07	5.27	1375.0	1.40	1.23	1.29
1400.0	9.54	9.57	9.60	9.56	9.61	9.46	0.21	22.56	39.63	22.11	25.91	5.37	1400.0	1.38	1.25	1.32
1425.0	9.61	9.59	9.63	9.63	9.66	9.51	0.24	22.34	39.04	21.84	25.73	5.49	1425.0	1.38	1.25	1.32
1450.0	9.55	9.58	9.60	9.58	9.60	9.45	0.24	22.12	38.61	21.65	25.42	5.55	1450.0	1.42	1.25	1.32
1475.0	9.70	9.66	9.69	9.75	9.70	9.59	0.25	22.02	38.30	21.54	25.14	5.64	1475.0	1.45	1.26	1.33
1500.0	9.69	9.63	9.67	9.74	9.68	9.58	0.26	21.90	37.95	21.39	24.76	5.64	1500.0	1.47	1.25	1.32
1525.0	9.64	9.63	9.65	9.70	9.65	9.51	0.26	21.82	37.67	21.36	24.33	5.61	1525.0	1.51	1.24	1.30
1550.0	9.76	9.71	9.76	9.81	9.71	9.59	0.30	21.94	37.62	21.47	24.03	5.91	1550.0	1.55	1.24	1.29
1575.0	9.75	9.66	9.69	9.84	9.67	9.62	0.40	22.15	37.55	21.59	23.70	5.48	1575.0	1.56	1.22	1.26
1600.0	9.65	9.58	9.62	9.72	9.60	9.49	0.31	22.36	37.42	21.83	23.32	5.77	1600.0	1.54	1.19	1.23
1625.0	9.69	9.64	9.67	9.74	9.60	9.50	0.30	22.81	37.50	22.28	23.11	5.93	1625.0	1.54	1.17	1.20
1650.0	9.75	9.64	9.66	9.78	9.59	9.56	0.37	23.47	37.51	22.87	23.05	6.05	1650.0	1.53	1.14	1.17
1675.0	9.72	9.54	9.58	9.78	9.54	9.54	0.45	24.22	37.69	23.51	22.92	5.38	1675.0	1.49	1.11	1.14
1700.0	9.61	9.52	9.53	9.67	9.49	9.43	0.37	25.04	37.67	24.38	22.85	5.41	1700.0	1.43	1.07	1.11
1725.0	9.65	9.53	9.56	9.69	9.51	9.45	0.38	26.21	37.94	25.48	23.07	5.79	1725.0	1.43	1.06	1.11
1750.0	9.68	9.50	9.53	9.74	9.48	9.52	0.44	27.39	38.09	26.67	23.27	6.26	1750.0	1.41	1.05	1.11
1775.0	9.73	9.50	9.53	9.77	9.53	9.59	0.49	28.60	38.11	27.97	23.55	5.78	1775.0	1.35	1.04	1.11
1800.0	9.62	9.43	9.46	9.65	9.45	9.50	0.43	29.70	38.29	29.32	23.96	5.38	1800.0	1.37	1.07	1.15
1825.0	9.63	9.46	9.46	9.66	9.47	9.50	0.47	30.65	38.35	30.63	24.59	5.67	1825.0	1.38	1.08	1.15
1850.0	9.73	9.52	9.53	9.77	9.57	9.59	0.49	31.12	38.12	31.73	25.24	5.90	1850.0	1.33	1.09	1.16
1875.0	9.74	9.47	9.50	9.78	9.52	9.63	0.55	31.32	37.96	32.33	26.02	5.78	1875.0	1.33	1.12	1.19
1900.0	9.67	9.41	9.43	9.68	9.46	9.56	0.53	31.29	37.48	32.57	26.93	5.48	1900.0	1.34	1.12	1.18
1925.0	9.76	9.53	9.55	9.78	9.58	9.63	0.52	31.10	37.02	32.35	27.84	5.55	1925.0	1.34	1.13	1.19
1950.0	9.81	9.61	9.62	9.85	9.66	9.67	0.52	30.65	36.41	31.63	28.66	5.65	1950.0	1.33	1.15	1.21
1975.0	9.84	9.55	9.56	9.88	9.58	9.70	0.57	29.99	35.64	30.43	29.15	5.76	1975.0	1.37	1.16	1.22
2000.0	9.94	9.65	9.68	9.99	9.69	9.80	0.59	28.97	35.04	28.95	29.20	5.20	2000.0	1.45	1.18	1.24

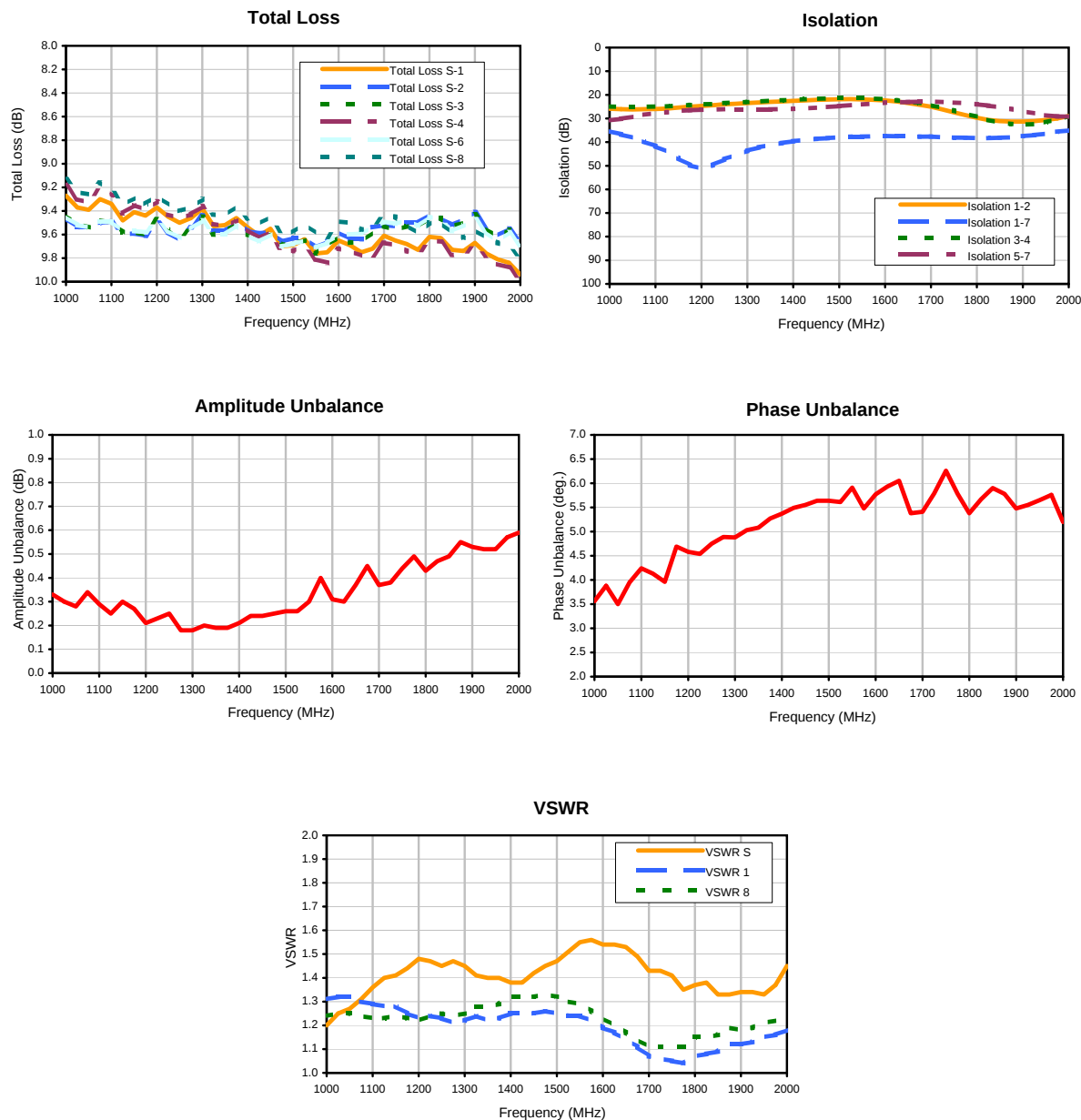
¹ Total Loss = Insertion Loss+ 9dB Splitter Loss

REV. X2
ZB8PD-2+
100627
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8 Way-0° Power Splitter/Combiner

ZB8PD-2+

Typical Performance Curves



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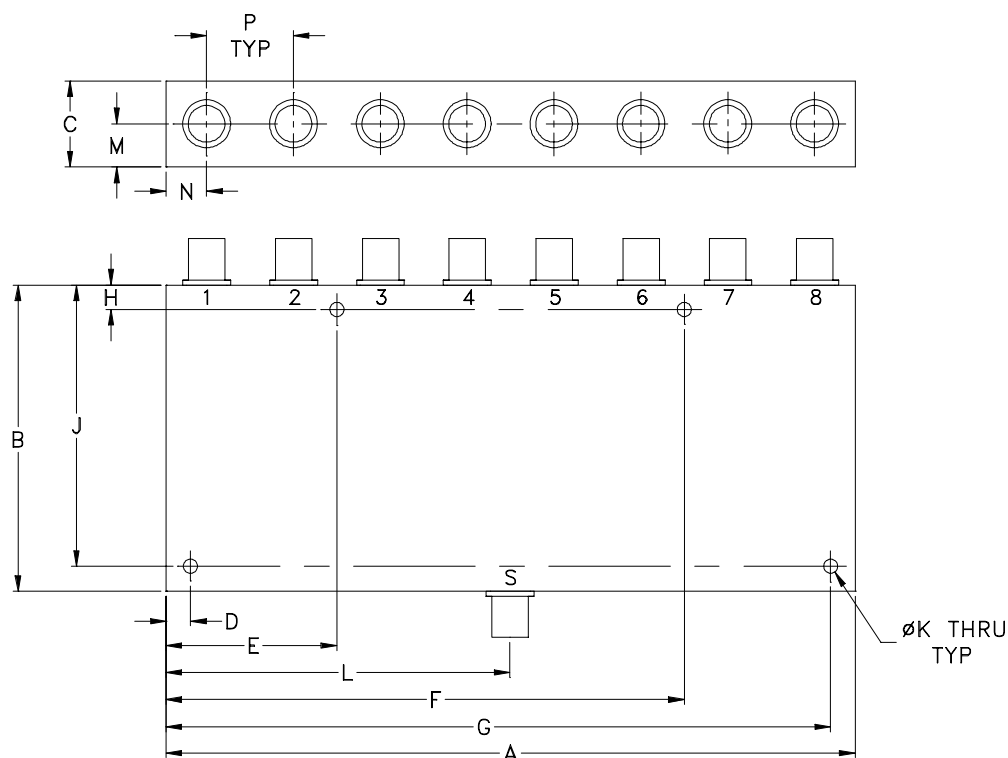
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Outline Dimensions



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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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