

Power Splitter/Combiner

8 Way-0° 50Ω 2000 to 4200 MHz

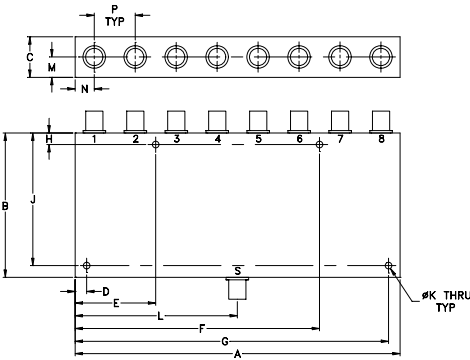
Maximum Ratings

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, 2000 to 4200 MHz
- low insertion loss 0.8 dB typ.
- good isolation, 23 dB typ.
- rugged shielded case

Applications

- UHF/SHF
- ISM
- MMDS
- terrestrial radio

ZB8PD-4+
ZB8PD-4



Generic photo used for illustration purposes only

SMA version shown

CASE STYLE: Z41

Connectors	Model
SMA	ZB8PD-4-S+
N-TYPE	ZB8PD-4-N(+)

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

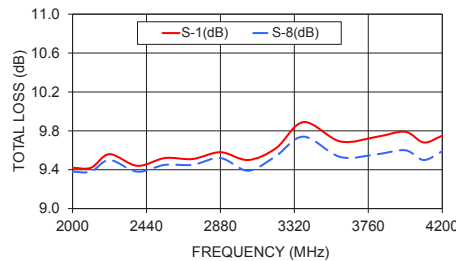
Electrical Specifications

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.
2000-4200	23	16	0.8	1.8	10	1.2

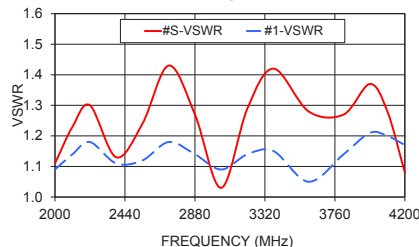
Typical Performance Data

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			
2000.00	9.42	9.43	9.46	9.46	9.42	9.38	0.09	23.18	46.51	23.53	31.46	1.11	1.09	1.07
2110.00	9.42	9.46	9.51	9.54	9.47	9.38	0.16	24.74	45.55	25.33	30.44	1.23	1.14	1.13
2220.00	9.56	9.63	9.60	9.60	9.58	9.50	0.13	28.18	45.22	28.06	29.20	1.30	1.18	1.17
2385.00	9.44	9.51	9.53	9.49	9.48	9.38	0.14	29.15	42.87	29.43	27.71	1.13	1.11	1.10
2550.00	9.52	9.58	9.61	9.57	9.55	9.45	0.17	23.71	42.08	24.24	28.68	1.24	1.12	1.10
2715.00	9.51	9.56	9.61	9.53	9.58	9.45	0.16	24.27	41.71	24.57	32.76	1.43	1.18	1.15
2880.00	9.58	9.67	9.67	9.62	9.65	9.52	0.15	30.34	45.43	30.61	45.63	1.27	1.14	1.13
3045.00	9.50	9.59	9.63	9.56	9.59	9.39	0.25	33.87	48.09	34.38	36.67	1.03	1.09	1.08
3210.00	9.62	9.75	9.83	9.74	9.77	9.54	0.29	30.45	47.51	29.42	32.25	1.29	1.14	1.11
3375.00	9.89	10.01	10.05	9.89	9.99	9.74	0.31	31.40	42.95	29.02	30.79	1.42	1.15	1.14
3595.00	9.69	9.79	9.89	9.76	9.79	9.53	0.36	24.83	49.26	25.60	30.44	1.28	1.05	1.05
3815.00	9.74	9.81	9.90	9.77	9.84	9.56	0.35	25.18	55.65	26.99	29.84	1.27	1.14	1.11
3980.00	9.79	9.89	9.96	9.85	9.88	9.60	0.36	39.55	50.61	50.31	28.62	1.37	1.21	1.20
4090.00	9.68	9.79	9.85	9.72	9.75	9.50	0.35	33.25	44.11	33.20	28.82	1.28	1.20	1.17
4200.00	9.75	9.88	9.93	9.81	9.85	9.59	0.34	28.72	39.55	30.49	30.38	1.08	1.17	1.14

ZB8PD-4-S+
TOTAL LOSS

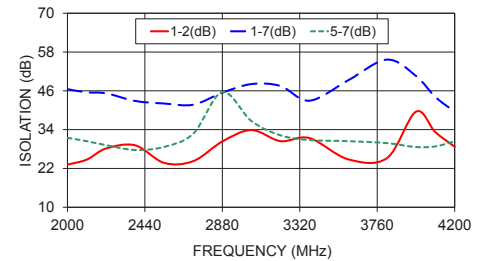


ZB8PD-4-S+
VSWR

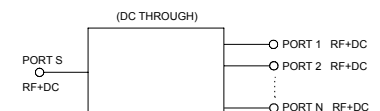


1. Total Loss = Insertion Loss + 9dB splitter loss.

ZB8PD-4-S+
ISOLATION



electrical schematic



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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-4+

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
2000.0	9.42	9.43	9.46	9.46	9.42	9.38	0.09	23.18	46.51	23.53	31.46	2.54	2000.0	1.11	1.09	1.07
2055.0	9.39	9.42	9.48	9.47	9.41	9.34	0.13	23.86	45.96	24.39	31.06	2.55	2055.0	1.15	1.11	1.08
2110.0	9.42	9.46	9.51	9.54	9.47	9.38	0.16	24.74	45.55	25.33	30.44	2.82	2110.0	1.23	1.14	1.13
2165.0	9.55	9.61	9.63	9.65	9.57	9.50	0.15	26.11	45.63	26.54	29.75	2.91	2165.0	1.28	1.17	1.17
2220.0	9.56	9.63	9.60	9.60	9.58	9.50	0.13	28.18	45.22	28.06	29.20	3.09	2220.0	1.30	1.18	1.17
2275.0	9.50	9.56	9.56	9.54	9.52	9.45	0.11	30.11	44.20	29.64	28.56	2.74	2275.0	1.26	1.17	1.16
2330.0	9.56	9.61	9.62	9.58	9.58	9.49	0.12	30.94	43.40	30.62	28.15	2.66	2330.0	1.21	1.15	1.14
2385.0	9.44	9.51	9.53	9.49	9.48	9.38	0.14	29.15	42.87	29.43	27.71	2.61	2385.0	1.13	1.11	1.10
2440.0	9.47	9.52	9.54	9.53	9.53	9.41	0.14	26.77	42.68	27.26	27.73	2.60	2440.0	1.07	1.09	1.08
2495.0	9.46	9.53	9.54	9.50	9.50	9.41	0.13	24.79	42.42	25.32	27.93	2.66	2495.0	1.14	1.10	1.09
2550.0	9.52	9.58	9.61	9.57	9.55	9.45	0.17	23.71	42.08	24.24	28.68	2.54	2550.0	1.24	1.12	1.10
2605.0	9.47	9.53	9.57	9.50	9.52	9.41	0.16	23.17	41.46	23.65	29.72	2.63	2605.0	1.34	1.16	1.15
2660.0	9.74	9.80	9.84	9.76	9.77	9.69	0.14	23.65	41.12	24.04	31.45	2.51	2660.0	1.46	1.17	1.17
2715.0	9.51	9.56	9.61	9.53	9.58	9.45	0.16	24.27	41.71	24.57	32.76	2.73	2715.0	1.43	1.18	1.15
2770.0	9.66	9.72	9.75	9.70	9.73	9.62	0.13	25.42	43.53	25.63	34.75	2.74	2770.0	1.44	1.17	1.17
2825.0	9.56	9.64	9.66	9.58	9.63	9.50	0.16	27.27	44.85	27.45	38.37	3.01	2825.0	1.35	1.17	1.15
2880.0	9.58	9.67	9.67	9.62	9.65	9.52	0.15	30.34	45.43	30.61	45.63	3.08	2880.0	1.27	1.14	1.13
2935.0	9.47	9.57	9.57	9.51	9.56	9.40	0.18	34.24	46.01	35.03	48.65	3.16	2935.0	1.15	1.11	1.10
2990.0	9.50	9.61	9.61	9.56	9.58	9.43	0.18	36.12	47.11	37.60	40.60	3.33	2990.0	1.03	1.09	1.07
3045.0	9.50	9.59	9.63	9.56	9.59	9.39	0.25	33.87	48.09	34.38	36.67	3.32	3045.0	1.03	1.09	1.08
3100.0	9.57	9.64	9.71	9.65	9.66	9.47	0.24	31.78	49.46	31.63	34.44	3.33	3100.0	1.16	1.10	1.09
3155.0	9.61	9.71	9.78	9.69	9.73	9.50	0.28	30.72	49.54	30.09	33.08	3.53	3155.0	1.22	1.12	1.11
3210.0	9.62	9.75	9.83	9.74	9.77	9.54	0.29	30.45	47.51	29.42	32.25	3.43	3210.0	1.29	1.14	1.11
3265.0	9.74	9.91	9.99	9.84	9.96	9.64	0.34	31.11	44.09	29.39	31.98	3.59	3265.0	1.36	1.15	1.13
3320.0	10.02	10.22	10.27	10.03	10.22	9.89	0.38	32.16	41.63	29.51	31.72	3.75	3320.0	1.44	1.15	1.15
3375.0	9.89	10.01	10.05	9.89	9.99	9.74	0.31	31.40	42.95	29.02	30.79	3.67	3375.0	1.42	1.15	1.14
3430.0	9.72	9.84	9.90	9.76	9.84	9.60	0.29	29.80	44.85	28.39	30.42	3.60	3430.0	1.36	1.15	1.13
3485.0	9.82	9.93	9.99	9.91	9.92	9.68	0.32	28.00	46.30	27.57	30.41	3.71	3485.0	1.37	1.12	1.13
3540.0	9.71	9.83	9.90	9.77	9.83	9.57	0.33	26.21	47.65	26.48	30.36	3.73	3540.0	1.32	1.10	1.10
3595.0	9.69	9.79	9.89	9.76	9.79	9.53	0.36	24.83	49.26	25.60	30.44	3.70	3595.0	1.28	1.05	1.05
3650.0	9.70	9.81	9.90	9.77	9.82	9.57	0.33	23.97	50.89	25.03	30.42	4.02	3650.0	1.25	1.02	1.03
3705.0	9.67	9.75	9.88	9.74	9.79	9.52	0.35	23.67	52.79	24.92	30.35	3.67	3705.0	1.23	1.04	1.02
3760.0	9.68	9.78	9.88	9.74	9.78	9.52	0.36	24.05	54.82	25.51	30.14	4.03	3760.0	1.25	1.08	1.05
3815.0	9.74	9.81	9.90	9.77	9.84	9.56	0.35	25.18	55.65	26.99	29.84	4.16	3815.0	1.27	1.14	1.11
3870.0	9.76	9.86	9.93	9.81	9.88	9.61	0.33	27.31	55.85	29.96	29.31	4.01	3870.0	1.30	1.17	1.15
3925.0	9.72	9.82	9.92	9.77	9.84	9.54	0.38	31.45	54.73	36.44	29.05	4.07	3925.0	1.38	1.20	1.15
3980.0	9.79	9.89	9.96	9.85	9.88	9.60	0.36	39.55	50.61	50.31	28.62	4.17	3980.0	1.37	1.21	1.20
4035.0	9.74	9.83	9.93	9.79	9.84	9.56	0.36	41.85	47.41	38.82	28.54	4.27	4035.0	1.33	1.21	1.19
4090.0	9.68	9.79	9.85	9.72	9.75	9.50	0.35	33.25	44.11	33.20	28.82	4.15	4090.0	1.28	1.20	1.17
4145.0	9.71	9.83	9.89	9.73	9.79	9.54	0.35	29.89	41.39	30.79	29.38	4.30	4145.0	1.18	1.16	1.15
4200.0	9.75	9.88	9.93	9.81	9.85	9.59	0.34	28.72	39.55	30.49	30.38	4.49	4200.0	1.08	1.17	1.14

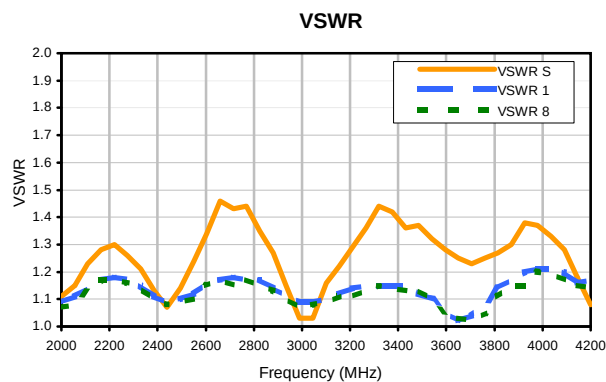
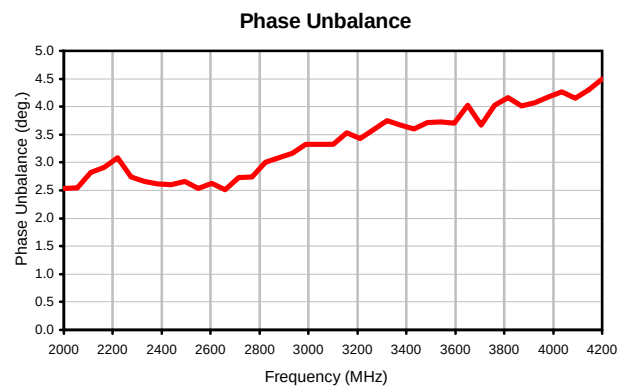
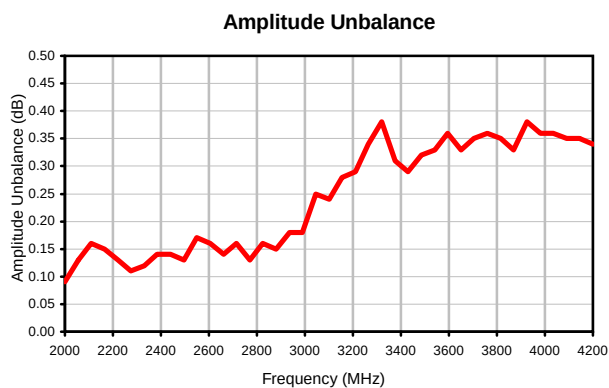
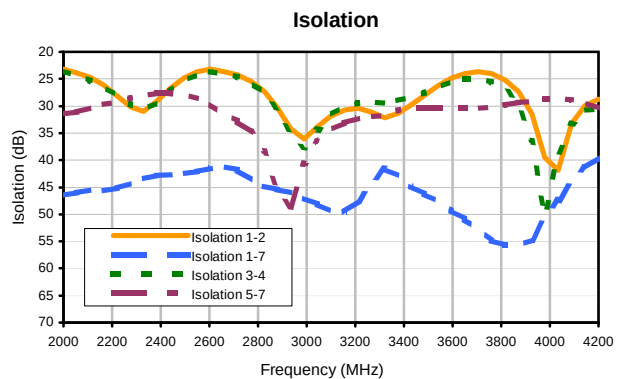
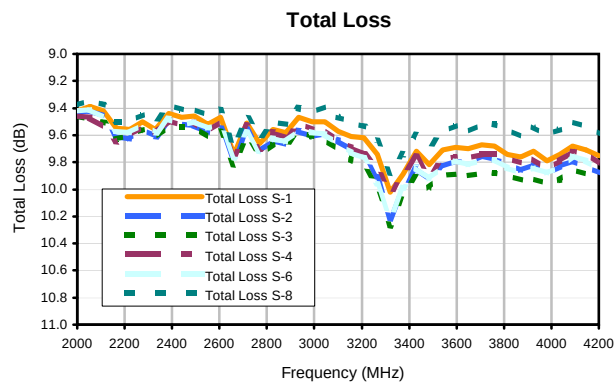
¹ Total Loss = Insertion Loss+ 9dB Splitter Loss

REV. X2
ZB8PD-4+
100627
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8 Way-0° Power Splitter/Combiner

ZB8PD-4+

Typical Performance Curves



REV. X2
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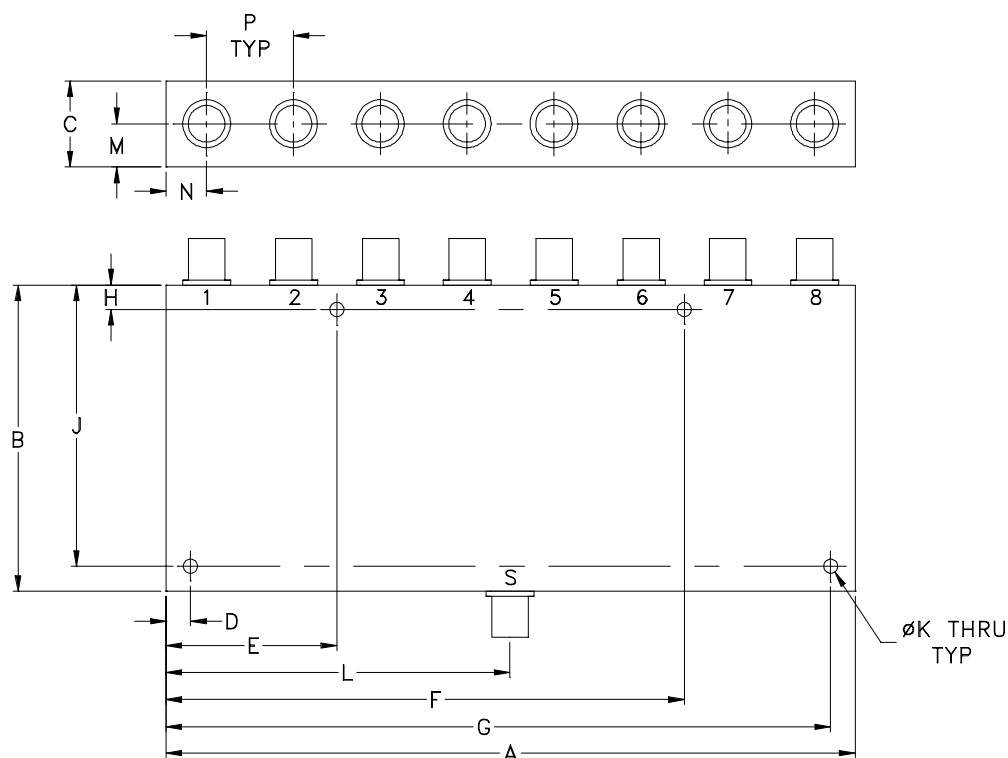
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Outline Dimensions



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