DC Pass

Power Splitter/Combiner

ZB8PD-22-75+

8 Way 75Ω 950 to 2200 MHz

Generic photo used for illustration purposes only

CASE STYLE: Z41

Connectors	Model
BNC	ZB8PD-22-75+

+RoHS Compliant

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

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	1.0A(125mA 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

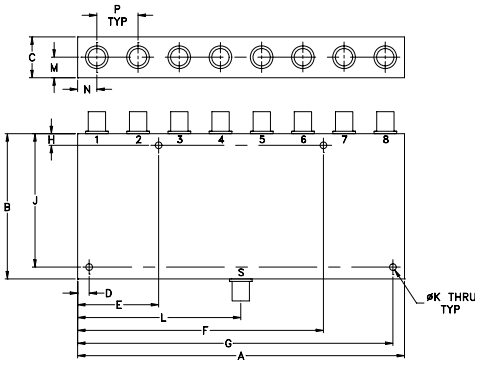
Features

- wideband, 950 to 2200 MHz
- low insertion loss 0.7 dB typ.
- good isolation, 24 dB typ.
- up to 10W power input as splitter
- rugged shielded case

Applications

- cellular
- CATV
- PCS/DCS
- instrumentation
- UMTS

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

Electrical Specifications

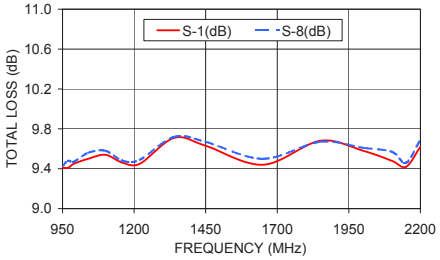
FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 9.0 dB		AMPLITUDE UNBALANCE (dB)
f_L-f_U	Typ.	Min.	Typ.	Max.	Max.
950-2200	24	16	0.7	1.6	0.7

Typical Performance Data

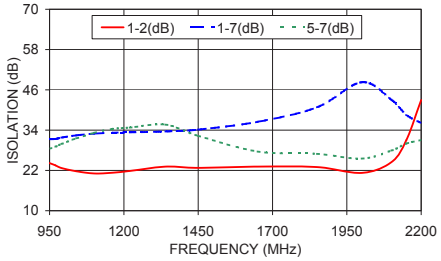
Frequency (MHz)	Total Loss[1] (dB)						Amplitude Unbalance (dB)	Isolation (dB)				VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	5-7			
950.00	9.41	9.44	9.50	9.44	9.51	9.43	0.10	24.17	31.28	24.18	28.46	1.35	1.14	1.10
970.00	9.41	9.46	9.51	9.50	9.52	9.48	0.12	23.51	31.37	23.67	29.07	1.38	1.11	1.07
990.00	9.45	9.49	9.56	9.47	9.54	9.47	0.15	22.72	31.78	23.24	29.87	1.43	1.10	1.06
1040.00	9.50	9.60	9.54	9.51	9.64	9.56	0.14	21.74	32.45	22.90	31.55	1.50	1.08	1.04
1100.00	9.54	9.57	9.54	9.52	9.56	9.58	0.14	21.10	32.95	23.49	33.17	1.39	1.12	1.06
1160.00	9.46	9.50	9.44	9.45	9.47	9.48	0.14	21.30	33.24	24.40	34.35	1.12	1.14	1.07
1220.00	9.45	9.46	9.49	9.46	9.47	9.49	0.10	21.84	33.32	24.96	34.76	1.17	1.12	1.08
1340.00	9.71	9.70	9.73	9.75	9.75	9.72	0.11	23.14	33.60	24.61	35.64	1.60	1.07	1.09
1450.00	9.63	9.67	9.74	9.76	9.73	9.67	0.17	22.76	34.17	24.78	32.32	1.54	1.06	1.10
1650.00	9.44	9.48	9.63	9.61	9.59	9.50	0.20	23.13	36.49	27.46	27.64	1.23	1.06	1.11
1850.00	9.68	9.74	9.97	9.97	9.99	9.67	0.31	22.99	40.80	28.80	26.93	1.58	1.27	1.20
2000.00	9.58	9.61	9.99	9.87	9.98	9.61	0.41	21.25	48.26	38.46	25.51	1.29	1.31	1.36
2100.00	9.48	9.53	9.81	9.80	9.86	9.57	0.37	24.48	43.03	24.02	27.90	1.14	1.21	1.29
2150.00	9.42	9.48	9.82	9.75	9.76	9.46	0.40	31.02	38.54	21.69	30.02	1.20	1.18	1.26
2200.00	9.62	9.64	10.02	9.94	9.92	9.69	0.40	42.97	36.12	20.98	31.06	1.33	1.22	1.32

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

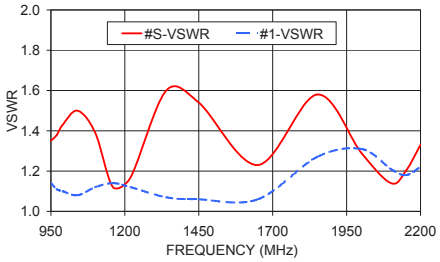
ZB8PD-22-75+
TOTAL LOSS



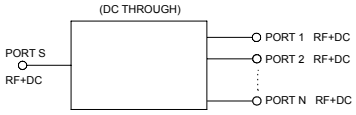
ZB8PD-22-75+
ISOLATION



ZB8PD-22-75+
VSWR



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-Circuits 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

8 Way Power Splitter/Combiner ZB8PD-22-75+

Typical Performance Data

FREQ. (MHz)	TOTAL LOSS[1] (dB)						AMP. UNBAL. (dB)	ISOLATION (dB)				PHASE UNBAL. (deg.)
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	1-7	3-4	5-7	
950.0	9.41	9.44	9.50	9.44	9.51	9.43	0.10	24.17	31.28	24.18	28.46	51.01
960.0	9.44	9.43	9.49	9.46	9.50	9.44	0.07	23.76	31.21	23.96	28.66	51.42
970.0	9.41	9.46	9.51	9.50	9.52	9.48	0.12	23.51	31.37	23.67	29.07	51.73
980.0	9.42	9.48	9.55	9.51	9.54	9.46	0.16	23.07	31.57	23.46	29.47	52.03
990.0	9.45	9.49	9.56	9.47	9.54	9.47	0.15	22.72	31.78	23.24	29.87	52.67
1000.0	9.45	9.55	9.58	9.53	9.54	9.53	0.15	22.39	32.05	23.05	30.52	52.86
1020.0	9.49	9.61	9.57	9.52	9.57	9.55	0.13	22.05	32.13	23.00	30.73	53.78
1040.0	9.50	9.60	9.54	9.51	9.64	9.56	0.14	21.74	32.45	22.90	31.55	55.09
1060.0	9.52	9.62	9.61	9.54	9.58	9.60	0.16	21.49	32.68	22.97	32.17	56.06
1080.0	9.55	9.63	9.59	9.57	9.64	9.60	0.15	21.33	32.83	23.18	32.75	57.08
1100.0	9.54	9.57	9.54	9.52	9.56	9.58	0.14	21.10	32.95	23.49	33.17	58.30
1120.0	9.48	9.57	9.50	9.49	9.50	9.53	0.15	21.22	33.01	23.81	33.56	59.50
1140.0	9.51	9.57	9.52	9.49	9.52	9.55	0.09	21.11	33.13	24.10	34.04	60.60
1160.0	9.46	9.50	9.44	9.45	9.47	9.48	0.14	21.30	33.24	24.40	34.35	61.59
1180.0	9.44	9.43	9.45	9.45	9.42	9.45	0.08	21.54	33.32	24.64	34.51	62.47
1200.0	9.43	9.50	9.48	9.48	9.43	9.47	0.14	21.69	33.29	24.83	34.51	63.36
1220.0	9.45	9.46	9.49	9.46	9.47	9.49	0.10	21.84	33.32	24.96	34.76	64.70
1240.0	9.48	9.51	9.50	9.52	9.47	9.50	0.12	21.97	33.38	25.04	35.00	66.12
1260.0	9.54	9.54	9.53	9.55	9.51	9.56	0.08	22.14	33.27	25.04	35.25	66.83
1280.0	9.56	9.60	9.58	9.62	9.62	9.61	0.12	22.47	33.17	24.96	35.40	68.16
1300.0	9.59	9.63	9.67	9.66	9.68	9.66	0.11	22.61	33.17	24.84	35.53	69.11
1320.0	9.65	9.68	9.69	9.71	9.73	9.68	0.10	22.92	33.37	24.75	35.84	70.38
1340.0	9.71	9.70	9.73	9.75	9.75	9.72	0.11	23.14	33.60	24.61	35.64	71.21
1360.0	9.68	9.67	9.74	9.77	9.73	9.70	0.11	23.22	33.72	24.44	34.67	71.99
1400.0	9.72	9.71	9.80	9.84	9.77	9.72	0.13	23.08	33.67	24.47	34.08	74.31
1450.0	9.63	9.67	9.74	9.76	9.73	9.67	0.17	22.76	34.17	24.78	32.32	76.91
1500.0	9.64	9.61	9.74	9.75	9.65	9.64	0.14	22.29	34.67	25.61	30.59	79.38
1550.0	9.53	9.57	9.67	9.68	9.63	9.61	0.16	22.10	35.20	26.60	29.12	82.22
1600.0	9.54	9.52	9.65	9.64	9.63	9.57	0.13	22.69	35.74	27.32	28.12	85.21
1650.0	9.44	9.48	9.63	9.61	9.59	9.50	0.20	23.13	36.49	27.46	27.64	88.27
1700.0	9.56	9.57	9.70	9.68	9.71	9.59	0.17	23.62	37.17	27.40	27.51	91.38
1750.0	9.58	9.64	9.78	9.75	9.76	9.60	0.26	23.97	38.01	27.46	27.65	94.21
1800.0	9.68	9.75	9.90	9.92	9.92	9.71	0.29	23.75	39.20	27.71	27.54	97.60
1850.0	9.68	9.74	9.97	9.97	9.99	9.67	0.31	22.99	40.80	28.80	26.93	101.04
1900.0	9.73	9.75	10.08	10.02	10.01	9.76	0.35	22.09	42.62	31.68	26.17	103.97
1950.0	9.62	9.65	10.04	10.01	10.03	9.66	0.42	21.42	45.26	38.86	25.62	106.61
2000.0	9.58	9.61	9.99	9.87	9.98	9.61	0.41	21.25	48.26	38.46	25.51	109.33
2050.0	9.48	9.51	9.90	9.76	9.83	9.52	0.41	22.08	47.28	29.73	26.18	112.02
2100.0	9.48	9.53	9.81	9.80	9.86	9.57	0.37	24.48	43.03	24.02	27.90	115.03
2150.0	9.42	9.48	9.82	9.75	9.76	9.46	0.40	31.02	38.54	21.69	30.02	117.43
2200.0	9.62	9.64	10.02	9.94	9.92	9.69	0.40	42.97	36.12	20.98	31.06	119.99

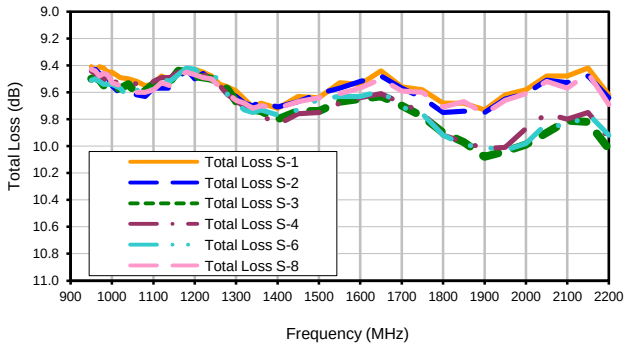
FREQ. (MHz)	VSWR (:1)		
	S	1	8
950.0	1.35	1.14	1.10
960.0	1.36	1.13	1.09
970.0	1.38	1.11	1.07
980.0	1.40	1.11	1.07
990.0	1.43	1.10	1.06
1000.0	1.46	1.10	1.06
1020.0	1.49	1.09	1.04
1040.0	1.50	1.08	1.04
1060.0	1.49	1.09	1.04
1080.0	1.46	1.11	1.05
1100.0	1.39	1.12	1.06
1120.0	1.31	1.13	1.07
1140.0	1.21	1.13	1.07
1160.0	1.12	1.14	1.07
1180.0	1.04	1.14	1.07
1200.0	1.07	1.13	1.08
1220.0	1.17	1.12	1.08
1240.0	1.27	1.12	1.09
1260.0	1.36	1.11	1.09
1280.0	1.44	1.09	1.09
1300.0	1.51	1.09	1.09
1320.0	1.57	1.08	1.09
1340.0	1.60	1.07	1.09
1360.0	1.62	1.06	1.09
1400.0	1.61	1.05	1.09
1450.0	1.54	1.06	1.10
1500.0	1.43	1.06	1.11
1550.0	1.33	1.05	1.13
1600.0	1.24	1.05	1.13
1650.0	1.23	1.06	1.11
1700.0	1.34	1.10	1.11
1750.0	1.48	1.14	1.09
1800.0	1.56	1.21	1.13
1850.0	1.58	1.27	1.20
1900.0	1.51	1.31	1.27
1950.0	1.39	1.33	1.34
2000.0	1.29	1.31	1.36
2050.0	1.19	1.27	1.35
2100.0	1.14	1.21	1.29
2150.0	1.20	1.18	1.26
2200.0	1.33	1.22	1.32

[1]Total Loss = Insertion Loss + 9dB Splitter Loss

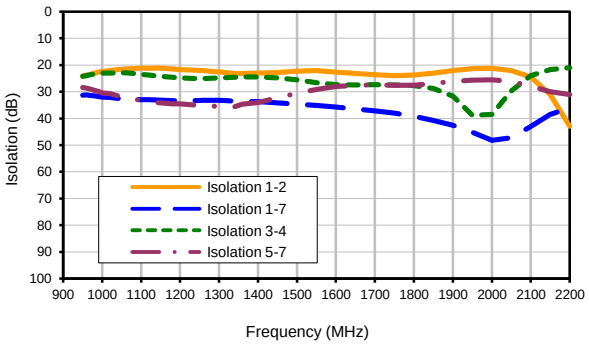
8 Way Power Splitter/Combiner ZB8PD-22-75+

Typical Performance Curves

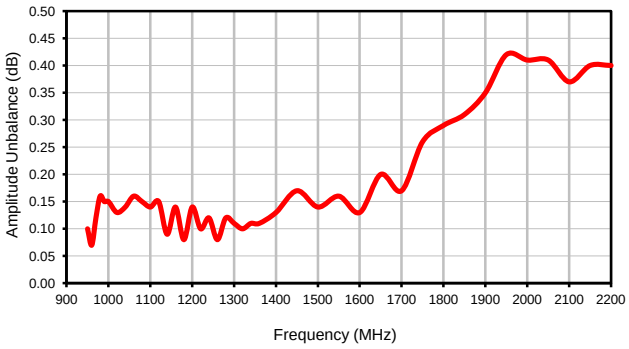
Total Loss



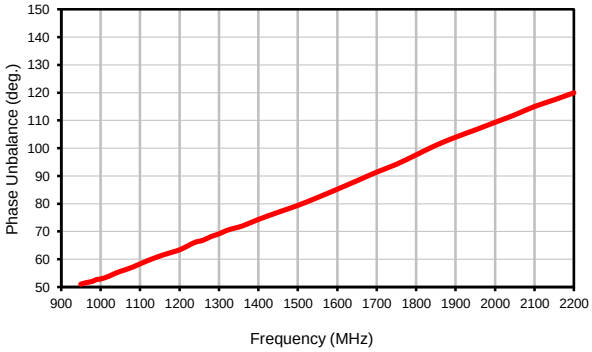
Isolation



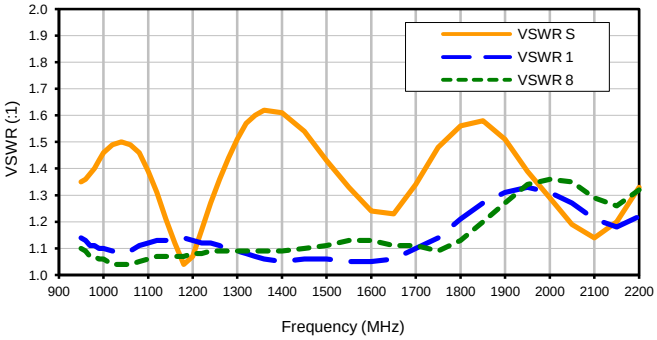
Amplitude Unbalance



Phase Unbalance



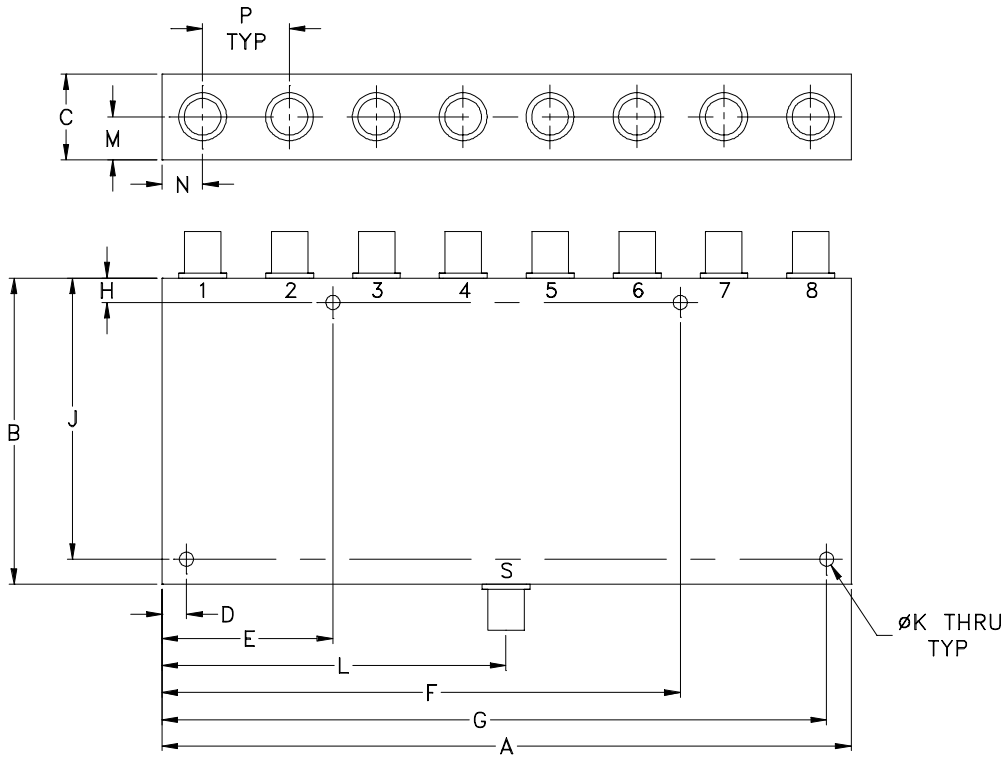
VSWR



Case Style Z

Z41

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. ± .03; 3 Pl. ± .015

Notes:

1. Case material: Aluminum alloy.
2. Case finish:
   For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.

Mini-Circuits®
INTERNET http://www.minicircuits.com
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661
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Environmental Specifications ENV29

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