

Engineering Development Model

Power Splitter/Combiner

ZN8PD1-ED15061102/1

8 Way-0°

Important Note

This model has been designed, built and tested in our engineering department. Performance data represents model capability. At present it is a non-catalog model. On request, we can supply a final specification sheet, part number and price/delivery information.

Please click "Back", and then click "Contact Us" for Applications support.



CASE STYLE : JN1359

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	300		6200	MHz
Isolation	300-6200 MHz	23.00		dB
Insertion Loss Above 9.0 dB	300-6200 MHz	1.50		dB
Phase Unbalance	300-6200 MHz	5.00		Deg.
Amplitude Unbalance	300-6200 MHz	0.50		dB
VSWR	SUM Port	1.45		(:1)
	OUT Ports	1.30		(:1)
DC Pass			1.6	A

MAXIMUM RATINGS	
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C

COAXIAL CONNECTIONS	
SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4
PORT 5	5
PORT 6	6
PORT 7	7
PORT 8	8

Functional Diagram



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The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: www.minicircuits.com

IF/RF MICROWAVE COMPONENTS



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8 Way-0° Power Splitter/Combiner

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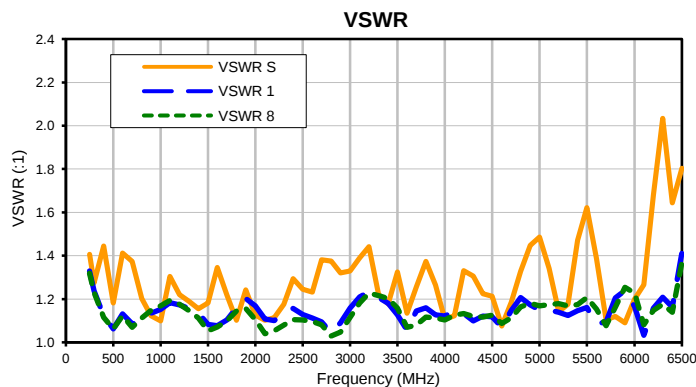
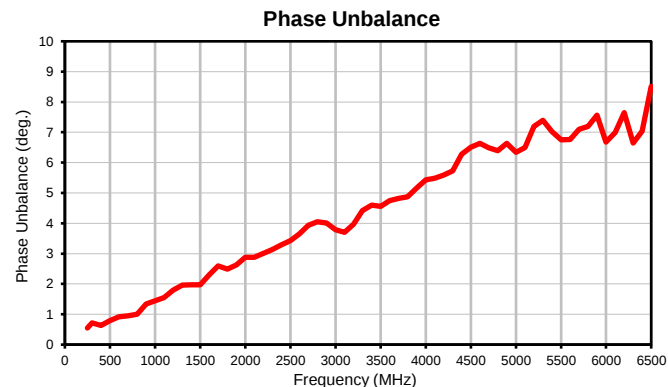
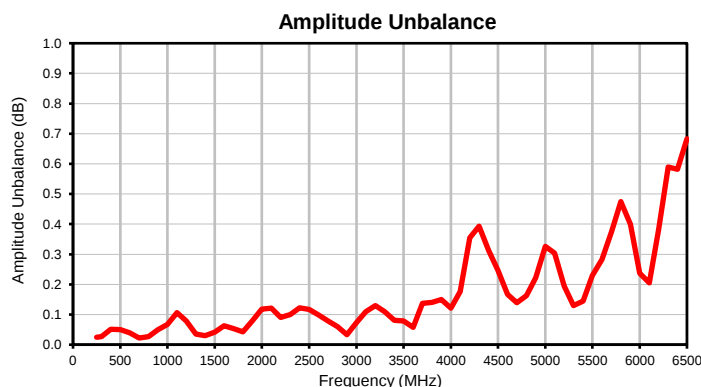
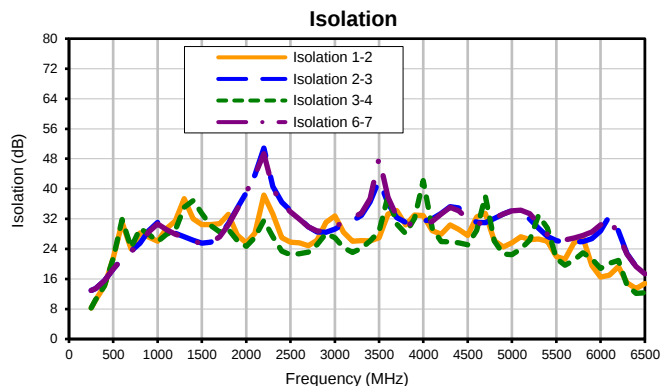
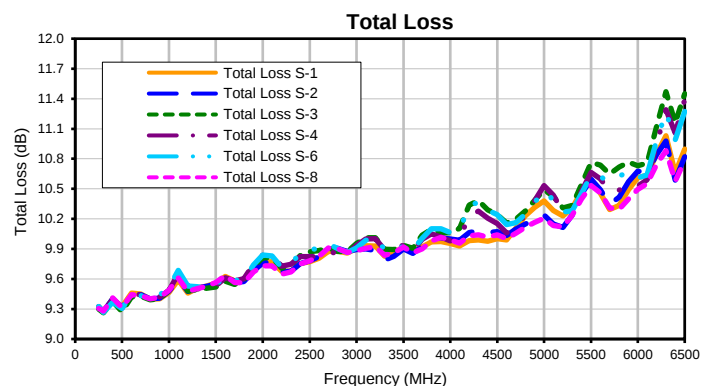
Typical Performance Data

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
250	9.31	9.30	9.30	9.32	9.33	9.31	0.02	8.26	12.94	8.27	12.93	0.55	250	1.41	1.33	1.32
300	9.27	9.27	9.26	9.27	9.27	9.28	0.03	10.39	13.47	10.42	13.46	0.72	300	1.27	1.24	1.23
400	9.40	9.40	9.38	9.39	9.36	9.41	0.05	14.21	15.59	14.23	15.57	0.64	400	1.44	1.12	1.11
500	9.32	9.31	9.27	9.31	9.31	9.32	0.05	21.51	18.62	21.48	18.60	0.79	500	1.18	1.06	1.06
600	9.46	9.45	9.42	9.44	9.44	9.44	0.04	31.11	21.44	31.85	21.40	0.92	600	1.41	1.13	1.12
700	9.45	9.44	9.43	9.44	9.43	9.43	0.02	23.98	23.37	24.31	23.28	0.95	700	1.37	1.09	1.07
800	9.40	9.40	9.39	9.40	9.41	9.40	0.03	28.25	25.52	29.47	25.36	1.00	800	1.20	1.10	1.11
900	9.40	9.41	9.40	9.42	9.44	9.42	0.05	27.16	28.86	27.95	28.54	1.33	900	1.12	1.14	1.15
1000	9.47	9.48	9.49	9.48	9.52	9.49	0.07	26.06	31.09	25.97	30.63	1.45	1000	1.10	1.15	1.17
1100	9.59	9.60	9.64	9.65	9.69	9.61	0.11	29.45	29.42	27.92	29.14	1.55	1100	1.30	1.18	1.19
1200	9.46	9.48	9.48	9.50	9.53	9.47	0.08	31.40	28.16	28.97	27.94	1.79	1200	1.22	1.17	1.18
1300	9.51	9.51	9.50	9.50	9.52	9.50	0.04	37.41	27.27	35.07	27.10	1.96	1300	1.19	1.16	1.15
1400	9.53	9.53	9.51	9.50	9.51	9.52	0.03	31.98	26.29	36.88	26.12	1.98	1400	1.16	1.14	1.11
1500	9.56	9.55	9.52	9.53	9.54	9.56	0.04	30.50	25.53	33.50	25.34	1.97	1500	1.18	1.08	1.05
1600	9.62	9.61	9.58	9.61	9.63	9.64	0.06	30.50	25.82	30.19	25.59	2.30	1600	1.35	1.08	1.07
1700	9.58	9.57	9.54	9.58	9.59	9.57	0.05	30.73	27.55	28.50	27.24	2.60	1700	1.22	1.10	1.10
1800	9.59	9.58	9.59	9.60	9.59	9.56	0.04	33.22	30.72	29.18	30.41	2.49	1800	1.10	1.16	1.15
1900	9.70	9.68	9.73	9.75	9.74	9.67	0.08	27.67	34.89	26.20	34.69	2.63	1900	1.24	1.20	1.16
2000	9.77	9.76	9.81	9.84	9.84	9.73	0.12	25.59	38.98	24.69	39.11	2.88	2000	1.13	1.17	1.11
2100	9.77	9.77	9.81	9.84	9.83	9.73	0.12	28.21	43.69	27.04	43.67	2.88	2100	1.10	1.11	1.04
2200	9.68	9.67	9.71	9.73	9.72	9.65	0.09	38.34	50.87	31.62	49.37	3.01	2200	1.11	1.10	1.05
2300	9.68	9.68	9.74	9.75	9.75	9.67	0.10	33.29	40.64	27.21	40.13	3.13	2300	1.18	1.14	1.08
2400	9.75	9.75	9.83	9.82	9.86	9.75	0.12	27.00	36.42	23.40	36.05	3.29	2400	1.29	1.16	1.11
2500	9.77	9.78	9.87	9.82	9.89	9.78	0.12	25.80	34.24	22.47	33.91	3.43	2500	1.25	1.13	1.10
2600	9.81	9.82	9.89	9.83	9.91	9.83	0.10	25.60	32.07	22.76	31.96	3.65	2600	1.23	1.11	1.10
2700	9.88	9.91	9.91	9.87	9.95	9.91	0.08	24.84	29.88	23.18	29.92	3.93	2700	1.38	1.09	1.08
2800	9.88	9.91	9.88	9.86	9.90	9.90	0.06	26.34	28.54	25.12	28.78	4.05	2800	1.38	1.05	1.03
2900	9.86	9.87	9.87	9.85	9.86	9.87	0.03	31.12	28.43	28.10	28.72	4.01	2900	1.32	1.09	1.05
3000	9.90	9.89	9.95	9.93	9.91	9.88	0.07	32.81	29.32	27.02	29.76	3.79	3000	1.33	1.16	1.12
3100	9.93	9.90	10.01	10.00	9.99	9.91	0.11	28.40	30.60	24.32	31.21	3.70	3100	1.39	1.21	1.18
3200	9.93	9.88	10.01	10.00	10.01	9.92	0.13	26.07	31.50	23.08	32.25	3.96	3200	1.44	1.23	1.23
3300	9.83	9.79	9.90	9.89	9.89	9.84	0.11	26.19	32.92	24.17	33.59	4.42	3300	1.22	1.21	1.22
3400	9.86	9.83	9.89	9.90	9.88	9.86	0.08	26.14	36.51	26.13	37.37	4.60	3400	1.18	1.18	1.20
3500	9.92	9.90	9.94	9.94	9.93	9.92	0.08	27.00	42.32	28.68	48.20	4.56	3500	1.32	1.13	1.16
3600	9.87	9.85	9.91	9.88	9.89	9.86	0.06	33.30	36.15	38.16	37.72	4.75	3600	1.14	1.06	1.07
3700	9.92	9.92	10.04	9.99	10.01	9.90	0.14	34.27	32.34	30.66	32.67	4.82	3700	1.26	1.14	1.08
3800	9.97	10.00	10.09	10.05	10.10	9.98	0.14	30.42	31.09	28.13	30.84	4.87	3800	1.37	1.16	1.12
3900	9.98	10.01	10.06	10.02	10.10	10.02	0.15	33.03	31.09	32.22	30.37	5.15	3900	1.26	1.13	1.11
4000	9.95	10.00	10.06	9.98	10.06	9.99	0.12	32.88	31.32	42.21	30.45	5.43	4000	1.11	1.12	1.10
4100	9.93	9.99	10.10	10.01	10.09	9.96	0.18	28.84	31.97	29.54	31.34	5.49	4100	1.12	1.15	1.13
4200	9.98	10.06	10.34	10.23	10.32	10.03	0.35	27.95	33.50	25.94	33.26	5.59	4200	1.33	1.13	1.13
4300	9.99	10.08	10.38	10.28	10.37	10.04	0.39	30.35	35.29	25.90	35.10	5.73	4300	1.31	1.10	1.12
4400	9.98	10.06	10.29	10.21	10.29	10.02	0.31	29.17	34.92	25.60	34.16	6.28	4400	1.23	1.12	1.12
4500	10.00	10.07	10.24	10.15	10.24	10.04	0.25	27.55	32.75	25.07	31.99	6.51	4500	1.21	1.12	1.13
4600	9.99	10.03	10.16	10.06	10.14	10.00	0.17	32.54	31.06	28.95	30.72	6.64	4600	1.08	1.07	1.09
4700	10.11	10.10	10.20	10.12	10.16	10.06	0.14	33.44	30.99	38.09	30.99	6.48	4700	1.19	1.15	1.11
4800	10.23	10.15	10.28	10.25	10.25	10.12	0.16	26.24	32.14	26.15	32.19	6.40	4800	1.33	1.21	1.16
4900	10.32	10.20	10.39	10.38	10.37	10.17	0.22	24.54	33.26	22.64	33.28	6.64	4900	1.45	1.17	1.18
5000	10.38	10.24	10.49	10.53	10.48	10.21	0.33	25.60	34.27	22.44	34.17	6.34	5000	1.49	1.15	1.17
5100	10.28	10.15	10.42	10.44	10.39	10.13	0.30	27.21	33.76	24.04	34.28	6.50	5100	1.34	1.15	1.17
5200	10.23	10.12	10.31	10.27	10.27	10.12	0.19	26.45	31.97	26.42	33.36	7.19	5200	1.14	1.14	1.18
5300	10.31	10.24	10.34	10.27	10.28	10.24	0.13	26.62	29.53	32.97	30.70	7.40	5300	1.18	1.12	1.17
5400	10.48	10.45	10.54	10.47	10.45	10.40	0.14	26.06	27.36	29.53	27.81	7.03	5400	1.47	1.15	1.17
5500	10.59	10.60	10.76	10.66	10.64	10.53	0.23	21.98	26.22	21.46	26.55	6.75	5500	1.62	1.16	1.21
5600	10.46	10.49	10.74	10.60	10.62	10.46	0.28	21.28	25.72	19.67	26.38	6.77	5600	1.39	1.08	1.15
5700	10.29	10.35	10.65	10.48	10.57	10.31	0.38	25.63	25.76	21.03	26.93	7.10	5700	1.11	1.10	1.08
5800	10.33	10.42	10.72	10.49	10.63	10.30	0.47	26.97	25.94	22.96	27.55	7.19	5800	1.12	1.21	1.16
5900	10.49	10.57	10.77	10.53	10.67	10.40	0.40	19.57	26.74	21.39	28.56	7.56	5900	1.09	1.24	1.25
6000	10.61	10.68	10.73	10.53	10.61	10.49	0.24	16.48	28.78	18.84	30.40	6.67	6000	1.20	1.17	1.23
6100	10.64	10.66	10.76	10.59	10.64	10.55	0.21	17.05	32.79	20.19	32.17	6.99	6100	1.27	1.03	1.08
6200	10.85	10.84	11.13	10.95	10.99	10.74	0.38	19.33	28.75	20.97	27.55	7.64	6200	1.68	1.16	1.15
6300	11.03	10.98	11.47	11.29	11.26	10.88	0.59	14.97	22.74	14.28	22.53	6.65	6300	2.03	1.21	1.18
6400	10.66	10.59	11.16	11.06	10.99	10.58	0.58	13.42	19.28	12.17	19.35	7.04	6400	1.64	1.16	1.14
6500	10.90	10.82	11.45	11.39	11.27	10.78	0.68	14.77	17.23	12.32	17.35	8.51	6500	1.80	1.41	1.37

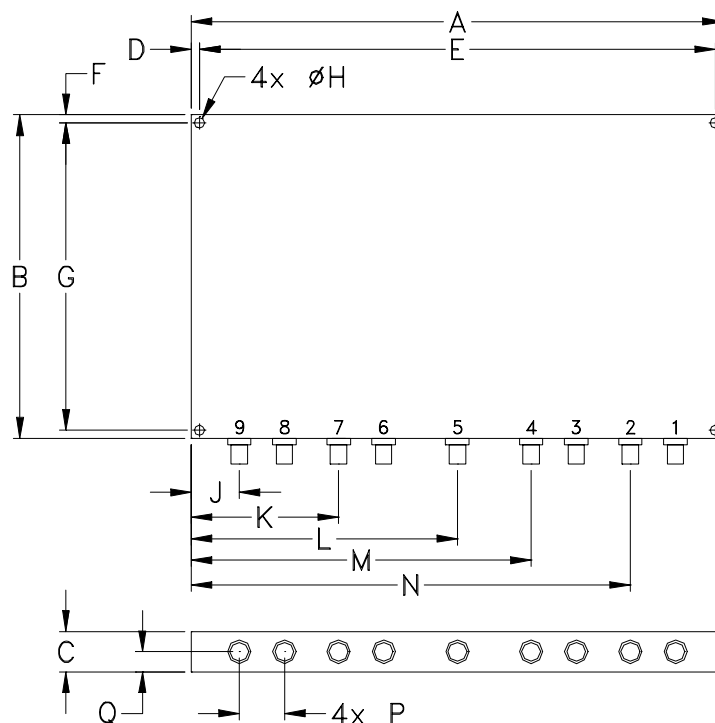
¹Total Loss = Insertion Loss + 9dB Splitter Loss



Typical Performance Curves



Outline Dimensions



CASE #.	A	B	C	D	E	F	G	H	J	K	L	M	N
JN1359	8.25 (209.55)	5.00 (127.00)	.63 (16.00)	.13 (3.30)	8.000 (203.20)	.13 (3.30)	4.750 (120.65)	.156 (3.96)	.74 (18.80)	2.28 (57.91)	4.13 (104.90)	5.27 (133.86)	6.81 (172.97)

CASE #.	P	Q	WT, GRAM
JN1359	.70 (17.78)	.31 (7.87)	720

Dimensions are in inches (mm). Tolerances: 2Pl. $\pm .03$; 3Pl. $\pm .015$

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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Mini-Circuits ISO 9001 & ISO 14001 Certified



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
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I