

Power Splitter/Combiner

ZB8PD-242-75-F+

8 Way-0° 75Ω 600 to 2450 MHz

Maximum Ratings

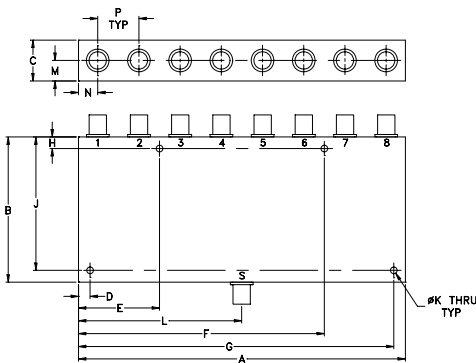
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.875W max.
DC Current	1.0 A(125mA for each port)

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

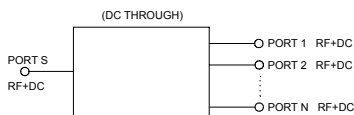
Outline Drawing



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 Schematic



Features

- wideband, 600 to 2450 MHz
- low insertion loss, 0.7 dB typ.
- good isolation, 25 dB typ.
- good amplitude unbalance, 0.3 dB typ.
- rugged shielded case

Applications

- WiMax
- CATV
- PCS/DCS
- Cellular Infrastructure
- UMTS
- L-Band



Generic photo used for illustration purposes only

CASE STYLE: Z41

Connectors	Model
F-Type	ZB8PD-242-75-F+

+RoHS Compliant

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

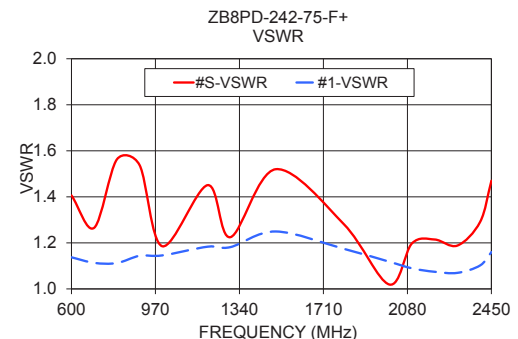
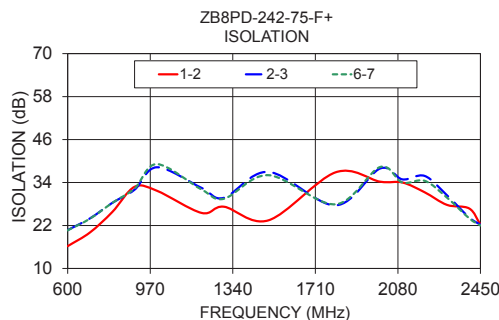
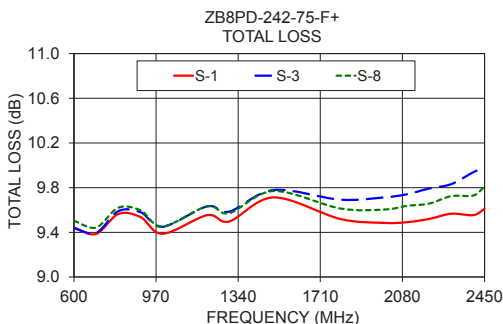
Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		600		2450	MHz
Insertion Loss (Above 9.0 dB)	600 - 2450	—	0.7	1.5	dB
Isolation	600 - 800	14	20	—	dB
	800 - 2450	19	27	—	dB
Phase Unbalance	600 - 2450	—	3	8	Degree
Amplitude Unbalance	600 - 2450	—	0.3	0.7	dB
VSWR (Port S)	600 - 2450	—	1.35	1.9	:1
VSWR (Port 1-8)	600 - 2450	—	1.15	1.35	:1

Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)						Amp. Unb. (dB)	Isolation (dB)			Phase Unb. (deg.)	VSWR S	VSWR 1	VSWR 8	
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	2-3	3-4					6-7
600.00	9.44	9.46	9.44	9.47	9.47	9.50	0.07	16.23	20.72	25.09	20.65	0.90	1.41	1.14	1.13
700.00	9.39	9.40	9.40	9.43	9.43	9.44	0.06	20.06	23.98	27.85	23.91	1.04	1.27	1.11	1.10
800.00	9.56	9.58	9.59	9.62	9.61	9.62	0.06	25.77	28.32	30.76	28.32	1.30	1.56	1.11	1.10
900.00	9.54	9.56	9.58	9.61	9.60	9.60	0.07	32.82	32.01	33.83	32.33	1.48	1.54	1.14	1.13
1000.00	9.39	9.42	9.45	9.47	9.46	9.45	0.08	31.70	38.27	36.31	39.15	1.59	1.19	1.15	1.14
1200.00	9.55	9.60	9.63	9.65	9.66	9.63	0.10	25.51	32.50	37.84	32.05	1.84	1.45	1.18	1.16
1300.00	9.50	9.55	9.59	9.59	9.57	9.57	0.09	27.25	29.72	35.30	29.46	1.95	1.22	1.18	1.15
1500.00	9.71	9.77	9.78	9.81	9.78	9.77	0.09	23.45	36.97	32.37	36.05	2.09	1.52	1.25	1.21
1800.00	9.52	9.61	9.69	9.74	9.72	9.61	0.22	36.84	27.62	34.06	27.91	2.60	1.28	1.17	1.17
1900.00	9.50	9.64	9.71	9.73	9.75	9.64	0.25	45.38	31.17	35.43	31.71	2.64	1.25	1.15	1.15
2000.00	9.48	9.61	9.71	9.73	9.73	9.60	0.25	34.24	37.91	39.41	38.33	2.83	1.02	1.12	1.11
2100.00	9.49	9.64	9.74	9.76	9.80	9.64	0.31	34.01	34.88	36.19	34.00	3.06	1.20	1.09	1.07
2200.00	9.52	9.64	9.79	9.78	9.82	9.66	0.30	31.28	35.84	33.33	34.48	3.09	1.21	1.07	1.07
2300.00	9.57	9.70	9.83	9.79	9.87	9.72	0.30	27.76	30.44	30.32	29.79	3.75	1.19	1.07	1.07
2400.00	9.55	9.70	9.94	9.95	9.98	9.73	0.42	26.74	24.22	29.60	23.99	4.41	1.29	1.10	1.10
2450.00	9.61	9.80	9.98	10.03	10.11	9.81	0.50	22.36	22.22	27.50	22.04	4.18	1.47	1.16	1.15

1. Total Loss = Insertion Loss + 9.0 dB splitter theoretical loss.



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-Circuits' applicable established test performance criteria and measurement instructions.
- 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/WCLStore/terms.jsp



8 Way-0° Power Splitter/Combiner

ZB8PD-242-75-F+

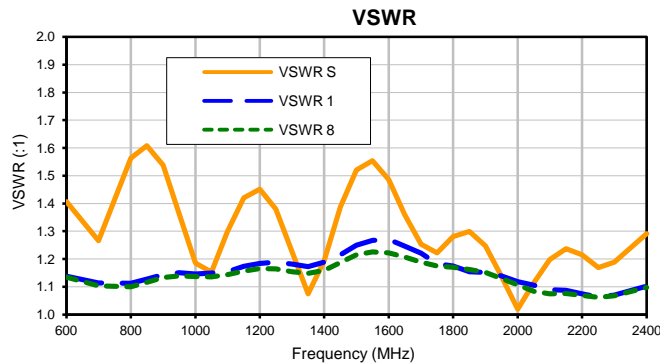
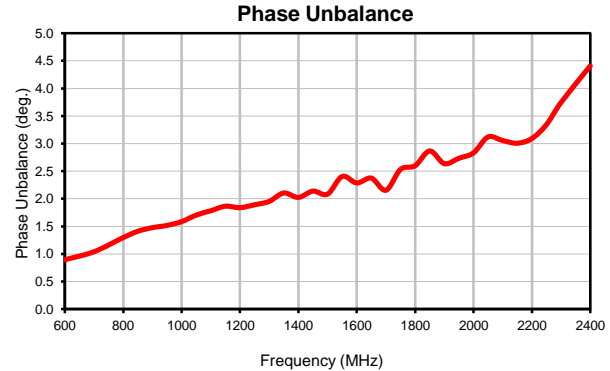
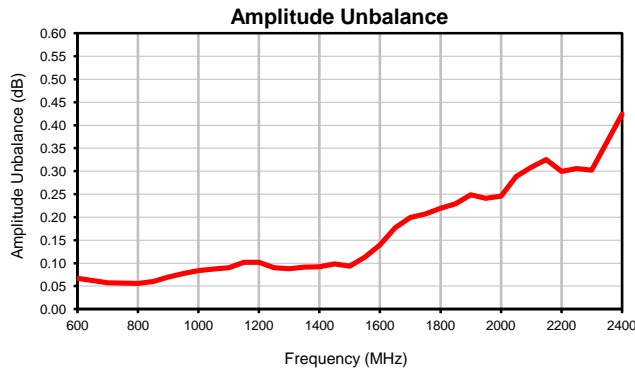
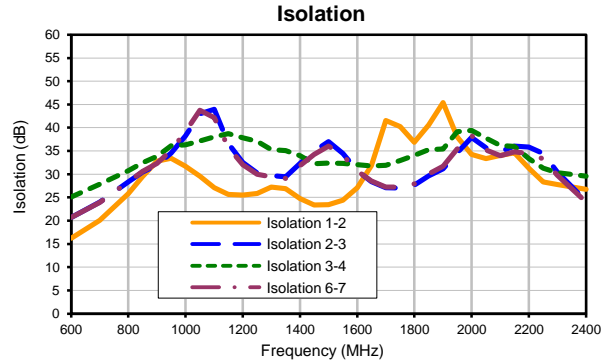
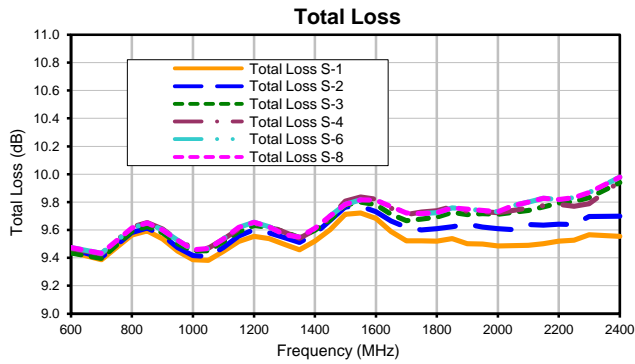
Typical Performance Data

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	2-3	3-4	6-7			S	1	8
600.0	9.44	9.46	9.44	9.47	9.47	9.50	0.07	16.23	20.72	25.09	20.65	0.90	600.0	1.41	1.14	1.13
700.0	9.39	9.40	9.40	9.43	9.43	9.44	0.06	20.06	23.98	27.85	23.91	1.04	700.0	1.27	1.11	1.10
800.0	9.56	9.58	9.59	9.62	9.61	9.62	0.06	25.77	28.32	30.76	28.32	1.30	800.0	1.56	1.11	1.10
850.0	9.59	9.61	9.62	9.65	9.65	9.65	0.06	29.48	30.46	32.49	30.58	1.41	850.0	1.61	1.13	1.12
900.0	9.54	9.56	9.58	9.61	9.60	9.60	0.07	32.82	32.01	33.83	32.33	1.48	900.0	1.54	1.14	1.13
950.0	9.45	9.47	9.50	9.53	9.53	9.51	0.08	33.44	34.54	36.12	35.18	1.52	950.0	1.36	1.15	1.14
1000.0	9.39	9.42	9.45	9.47	9.46	9.45	0.08	31.70	38.27	36.31	39.15	1.59	1000.0	1.19	1.15	1.14
1050.0	9.38	9.41	9.45	9.47	9.47	9.45	0.09	29.56	43.02	37.13	43.72	1.71	1050.0	1.15	1.15	1.14
1100.0	9.45	9.47	9.52	9.53	9.54	9.51	0.09	27.08	43.98	38.06	42.14	1.78	1100.0	1.30	1.15	1.14
1150.0	9.52	9.56	9.59	9.61	9.62	9.59	0.10	25.63	36.58	38.70	35.79	1.87	1150.0	1.42	1.17	1.16
1200.0	9.55	9.60	9.63	9.65	9.66	9.63	0.10	25.51	32.50	37.84	32.05	1.84	1200.0	1.45	1.18	1.16
1250.0	9.54	9.58	9.62	9.63	9.62	9.61	0.09	25.87	30.27	37.06	29.95	1.89	1250.0	1.38	1.19	1.16
1300.0	9.50	9.55	9.59	9.59	9.57	9.57	0.09	27.25	29.72	35.30	29.46	1.95	1300.0	1.22	1.18	1.15
1350.0	9.46	9.51	9.54	9.54	9.55	9.53	0.09	26.88	29.40	35.11	29.11	2.11	1350.0	1.07	1.17	1.15
1400.0	9.52	9.57	9.60	9.60	9.61	9.59	0.09	24.75	32.31	34.01	31.85	2.03	1400.0	1.19	1.19	1.16
1450.0	9.60	9.67	9.67	9.69	9.70	9.68	0.10	23.38	34.92	32.27	34.22	2.14	1450.0	1.39	1.21	1.19
1500.0	9.71	9.77	9.78	9.81	9.78	9.77	0.09	23.45	36.97	32.37	36.05	2.09	1500.0	1.52	1.25	1.21
1550.0	9.72	9.77	9.80	9.84	9.82	9.77	0.11	24.37	34.48	32.32	34.07	2.41	1550.0	1.55	1.27	1.23
1600.0	9.68	9.73	9.78	9.82	9.81	9.74	0.14	27.08	30.75	32.02	30.69	2.29	1600.0	1.49	1.27	1.22
1650.0	9.59	9.66	9.71	9.76	9.77	9.68	0.18	31.82	28.42	31.77	28.51	2.38	1650.0	1.36	1.25	1.21
1700.0	9.52	9.62	9.67	9.71	9.72	9.63	0.20	41.57	27.11	31.90	27.26	2.16	1700.0	1.25	1.22	1.19
1750.0	9.52	9.60	9.68	9.73	9.72	9.61	0.21	40.25	27.00	32.91	27.22	2.53	1750.0	1.22	1.18	1.18
1800.0	9.52	9.61	9.69	9.74	9.72	9.61	0.22	36.84	27.62	34.06	27.91	2.60	1800.0	1.28	1.17	1.17
1850.0	9.54	9.62	9.73	9.77	9.76	9.62	0.23	40.60	29.66	35.25	30.08	2.87	1850.0	1.30	1.15	1.16
1900.0	9.50	9.64	9.71	9.73	9.75	9.64	0.25	45.38	31.17	35.43	31.71	2.64	1900.0	1.25	1.15	1.15
1950.0	9.50	9.62	9.72	9.73	9.74	9.61	0.24	38.07	34.62	39.16	35.40	2.74	1950.0	1.14	1.14	1.13
2000.0	9.48	9.61	9.71	9.73	9.73	9.60	0.25	34.24	37.91	39.41	38.33	2.83	2000.0	1.02	1.12	1.11
2050.0	9.49	9.60	9.73	9.74	9.78	9.60	0.29	33.38	35.73	37.77	35.20	3.12	2050.0	1.11	1.11	1.08
2100.0	9.49	9.64	9.74	9.76	9.80	9.64	0.31	34.01	34.88	36.19	34.00	3.06	2100.0	1.20	1.09	1.07
2150.0	9.50	9.63	9.77	9.77	9.83	9.64	0.33	34.60	36.04	35.95	34.81	3.01	2150.0	1.24	1.09	1.08
2200.0	9.52	9.64	9.79	9.78	9.82	9.66	0.30	31.28	35.84	33.33	34.48	3.09	2200.0	1.21	1.07	1.07
2250.0	9.53	9.64	9.80	9.77	9.83	9.66	0.31	28.34	34.45	31.32	33.28	3.35	2250.0	1.17	1.06	1.06
2300.0	9.57	9.70	9.83	9.79	9.87	9.72	0.30	27.76	30.44	30.32	29.79	3.75	2300.0	1.19	1.07	1.07
2400.0	9.55	9.70	9.94	9.95	9.98	9.73	0.42	26.74	24.22	29.60	23.99	4.41	2400.0	1.29	1.10	1.10

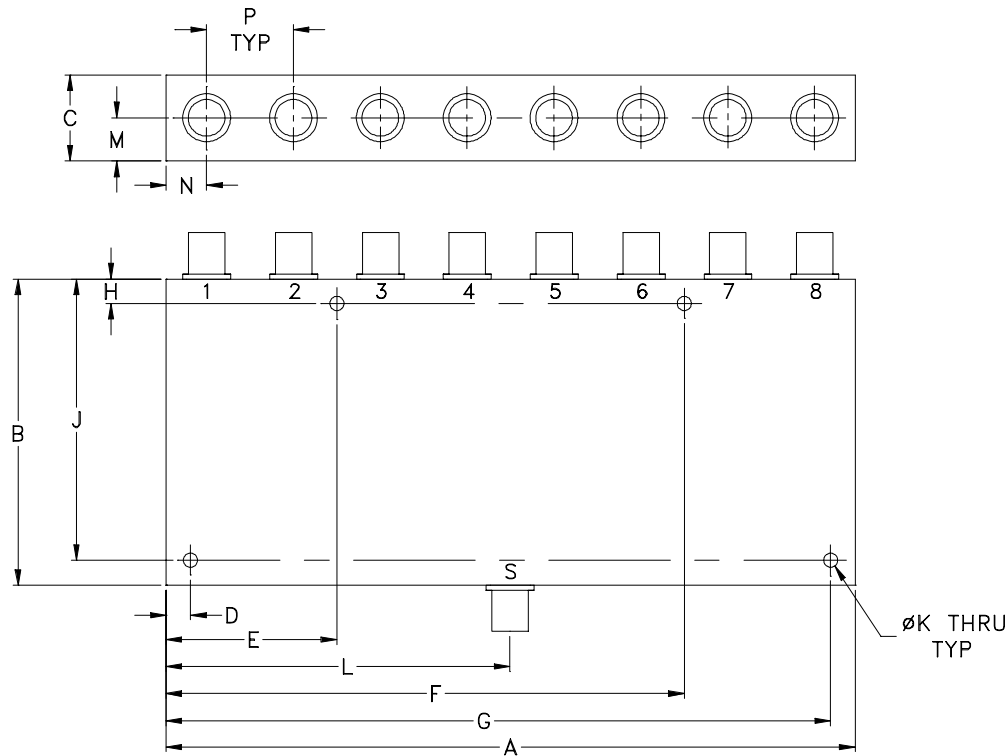
¹Total Loss = Insertion Loss + 9dB Splitter Loss



Typical Performance Curves



Outline Dimensions



CASE#	A	B	C	D	E	F	G	H	J	K	L	M	N
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.

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