

Power Splitter/Combiner

ZB4PD-6.4A+

4 Way-0° 50Ω 5400 to 6800 MHz

Maximum Ratings

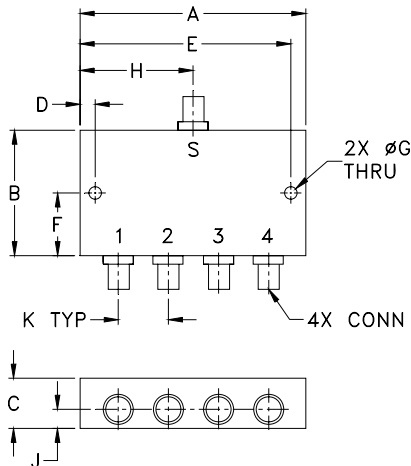
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.375W max.
DC Current	1.2 A (300mA for each port)

Permanent damage may occur if any of these limits are exceeded.

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F
3.50	2.13	.88	.150	3.350	1.06
88.90	54.10	22.35	3.81	85.09	26.92
G	H	J	K	wt	
.125	1.75	.44	.89	grams	
3.18	44.45	11.18	22.61	260	

Features

- wideband, 5400 to 6800 MHz
- good isolation, 25 dB typ.
- rugged, shielded case

Applications

- satellite communications
- receivers/transmitters



CASE STYLE: UU188

Connectors	Model
N-Type	ZB4PD-6.4A-N+

+RoHS Compliant

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

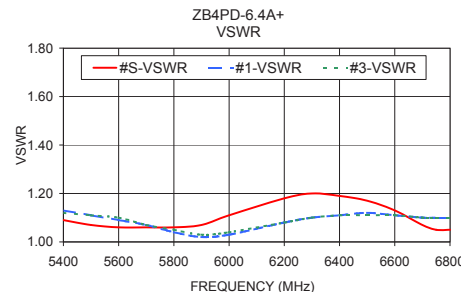
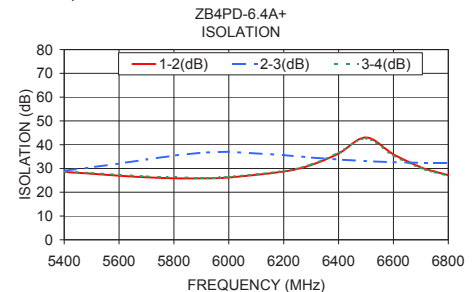
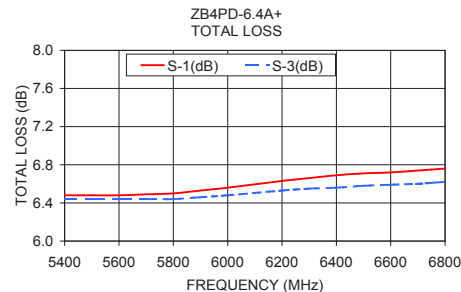
Electrical Specifications

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		5400	—	6800	MHz
Insertion Loss Above 6.0 dB	5400-6800	—	0.6	1.2	dB
Isolation	5400-6800	18	25	—	dB
Phase Unbalance	5400-6800	—	—	9.0	Degree
Amplitude Unbalance	5400-6800	—	—	0.9	dB
VSWR Input	5400-6800	—	1.30	1.50	:1
VSWR Output	5400-6800	—	1.30	1.50	:1

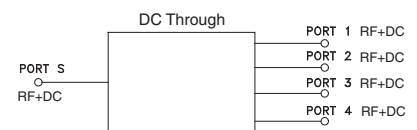
Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4					
5400.00	6.48	6.46	6.44	6.42	0.07	28.53	29.05	28.62	1.09	1.13	1.16	1.12	1.12
5500.00	6.48	6.45	6.44	6.42	0.06	27.79	30.48	28.08	1.07	1.11	1.14	1.11	1.12
5600.00	6.48	6.44	6.44	6.42	0.06	26.95	32.07	27.32	1.06	1.09	1.12	1.10	1.10
5700.00	6.49	6.45	6.44	6.44	0.05	26.28	33.78	26.66	1.06	1.07	1.08	1.07	1.09
5800.00	6.50	6.45	6.44	6.44	0.06	25.87	35.42	26.19	1.06	1.04	1.05	1.05	1.07
5900.00	6.53	6.46	6.46	6.46	0.08	25.84	36.67	26.13	1.07	1.02	1.01	1.03	1.05
6000.00	6.56	6.48	6.48	6.49	0.08	26.21	37.04	26.44	1.11	1.03	1.03	1.04	1.04
6200.00	6.63	6.53	6.53	6.54	0.11	28.71	35.60	28.91	1.18	1.08	1.10	1.08	1.06
6300.00	6.66	6.55	6.55	6.57	0.12	31.45	34.61	31.66	1.20	1.10	1.13	1.10	1.08
6400.00	6.69	6.57	6.56	6.60	0.13	36.30	33.76	36.63	1.19	1.11	1.14	1.11	1.08
6500.00	6.71	6.58	6.58	6.62	0.13	43.03	33.09	42.66	1.17	1.12	1.15	1.11	1.08
6600.00	6.72	6.59	6.59	6.64	0.14	35.93	32.62	35.45	1.13	1.11	1.14	1.11	1.07
6700.00	6.74	6.60	6.60	6.66	0.14	30.49	32.36	30.19	1.07	1.10	1.13	1.10	1.07
6750.00	6.75	6.60	6.61	6.67	0.14	28.71	32.31	28.45	1.05	1.10	1.13	1.10	1.08
6800.00	6.76	6.62	6.62	6.68	0.14	27.19	32.31	26.97	1.05	1.10	1.13	1.10	1.09

1. Total Loss = Insertion Loss + 6dB splitter loss.



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



4 Way-0° Power Splitter/Combiner

ZB4PD-6.4A+

Typical Performance Data

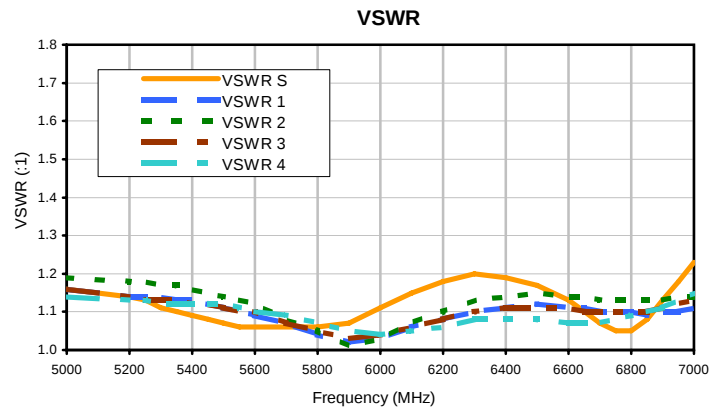
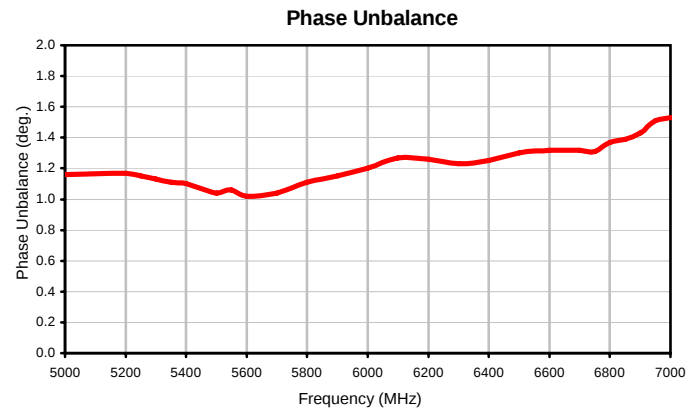
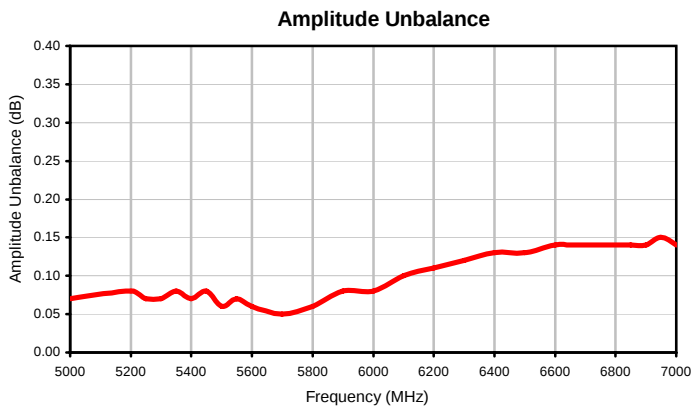
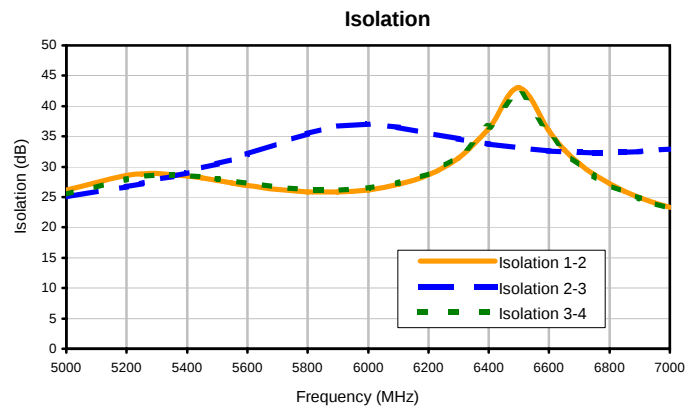
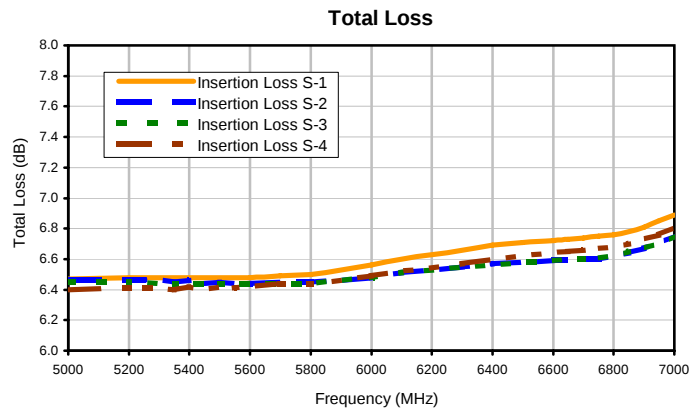
FREQ.	TOTAL LOSS ¹				AMP. UNBAL.	ISOLATION			PHASE UNBAL.	FREQ.	VSWR				
(MHz)	(dB)				(dB)	(dB)			(deg.)	(MHz)	(:1)				
	S-1	S-2	S-3	S-4		1-2	2-3	3-4			S	1	2	3	4
5000.0	6.47	6.46	6.45	6.40	0.07	26.21	24.96	25.41	1.16	5000.0	1.16	1.16	1.19	1.16	1.14
5200.0	6.48	6.46	6.45	6.41	0.08	28.54	26.72	27.98	1.17	5200.0	1.14	1.14	1.18	1.14	1.13
5250.0	6.48	6.46	6.45	6.41	0.07	28.78	27.25	28.34	1.15	5250.0	1.13	1.14	1.18	1.13	1.13
5300.0	6.48	6.47	6.44	6.41	0.07	28.86	27.82	28.63	1.13	5300.0	1.11	1.14	1.17	1.13	1.12
5350.0	6.48	6.45	6.44	6.40	0.08	28.74	28.41	28.66	1.11	5350.0	1.10	1.13	1.17	1.13	1.12
5400.0	6.48	6.46	6.44	6.42	0.07	28.53	29.05	28.62	1.10	5400.0	1.09	1.13	1.16	1.12	1.12
5450.0	6.48	6.44	6.44	6.40	0.08	28.13	29.75	28.32	1.07	5450.0	1.08	1.12	1.15	1.12	1.12
5500.0	6.48	6.45	6.44	6.42	0.06	27.79	30.48	28.08	1.04	5500.0	1.07	1.11	1.14	1.11	1.12
5550.0	6.48	6.44	6.44	6.41	0.07	27.29	31.27	27.63	1.06	5550.0	1.06	1.10	1.13	1.10	1.11
5600.0	6.48	6.44	6.44	6.42	0.06	26.95	32.07	27.32	1.02	5600.0	1.06	1.09	1.12	1.10	1.10
5700.0	6.49	6.45	6.44	6.44	0.05	26.28	33.78	26.66	1.04	5700.0	1.06	1.07	1.08	1.07	1.09
5800.0	6.50	6.45	6.44	6.44	0.06	25.87	35.42	26.19	1.11	5800.0	1.06	1.04	1.05	1.05	1.07
5900.0	6.53	6.46	6.46	6.46	0.08	25.84	36.67	26.13	1.15	5900.0	1.07	1.02	1.01	1.03	1.05
6000.0	6.56	6.48	6.48	6.49	0.08	26.21	37.04	26.44	1.20	6000.0	1.11	1.03	1.03	1.04	1.04
6100.0	6.60	6.51	6.51	6.52	0.10	27.13	36.54	27.34	1.27	6100.0	1.15	1.06	1.07	1.06	1.05
6200.0	6.63	6.53	6.53	6.54	0.11	28.71	35.60	28.91	1.26	6200.0	1.18	1.08	1.10	1.08	1.06
6300.0	6.66	6.55	6.55	6.57	0.12	31.45	34.61	31.66	1.23	6300.0	1.20	1.10	1.13	1.10	1.08
6400.0	6.69	6.57	6.56	6.60	0.13	36.30	33.76	36.63	1.25	6400.0	1.19	1.11	1.14	1.11	1.08
6500.0	6.71	6.58	6.58	6.62	0.13	43.03	33.09	42.66	1.30	6500.0	1.17	1.12	1.15	1.11	1.08
6600.0	6.72	6.59	6.59	6.64	0.14	35.93	32.62	35.45	1.32	6600.0	1.13	1.11	1.14	1.11	1.07
6650.0	6.73	6.59	6.60	6.65	0.14	32.81	32.46	32.45	1.32	6650.0	1.10	1.11	1.14	1.10	1.07
6700.0	6.74	6.60	6.60	6.66	0.14	30.49	32.36	30.19	1.32	6700.0	1.07	1.10	1.13	1.10	1.07
6750.0	6.75	6.60	6.61	6.67	0.14	28.71	32.31	28.45	1.31	6750.0	1.05	1.10	1.13	1.10	1.08
6800.0	6.76	6.62	6.62	6.68	0.14	27.19	32.31	26.97	1.37	6800.0	1.05	1.10	1.13	1.10	1.09
6850.0	6.78	6.64	6.65	6.70	0.14	25.95	32.39	25.77	1.39	6850.0	1.08	1.09	1.13	1.10	1.10
6900.0	6.81	6.67	6.67	6.73	0.14	24.93	32.50	24.77	1.43	6900.0	1.13	1.10	1.13	1.11	1.11
6950.0	6.85	6.70	6.70	6.76	0.15	24.04	32.69	23.90	1.51	6950.0	1.18	1.10	1.14	1.12	1.13
7000.0	6.89	6.75	6.75	6.81	0.14	23.31	32.93	23.21	1.53	7000.0	1.23	1.11	1.14	1.13	1.15

¹Total Loss = Insertion Loss + 6dB splitter loss.

4 Way-0° Power Splitter/Combiner

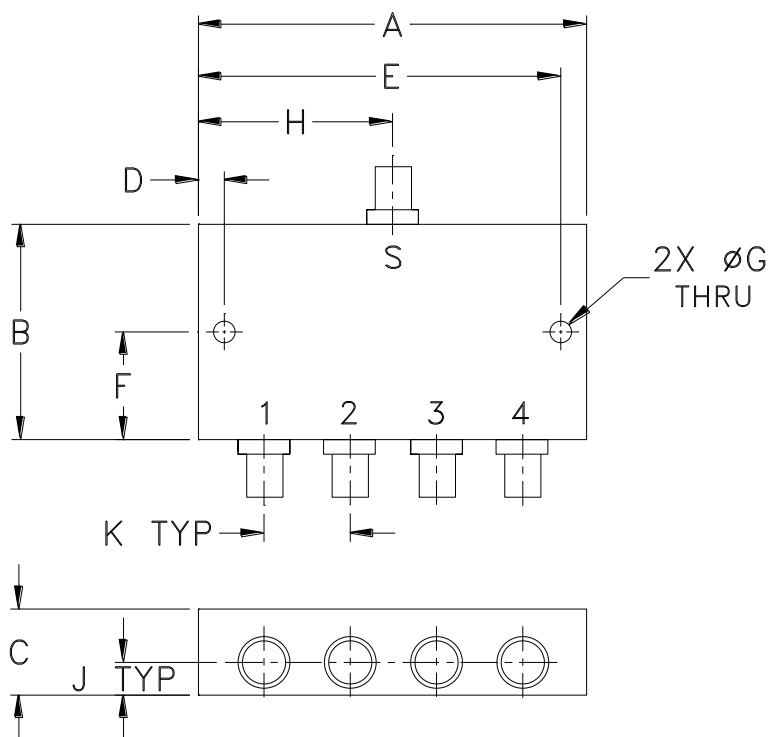
ZB4PD-6.4A+

Typical Performance Curves



Outline Dimensions

UU188



CASE#	A	B	C	D	E	F	G	H	J	K	WT. GRAMS
UU188	3.50 (88.90)	2.13 (54.10)	.88 (22.35)	.150 (3.81)	3.350 (85.09)	1.06 (26.92)	.125 (3.18)	1.75 (44.45)	.44 (11.18)	.89 (22.61)	260

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.
- Refer to the individual model data sheet for the type of connectors available.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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RF/IF MICROWAVE COMPONENTS

UU188 Rev.: AZ (02/25/19) M172688 File: UU188

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Sheet 1 of 1



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