

# Engineering Development Model

## Power Splitter/Combiner      ZB4PD-ED5336A/1

### 4 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 : UU188**

ELECTRICAL SPECIFICATIONS 50Ω @ +25°C				
Parameter	Min.	Typ.	Max.	Units
Frequency	4400		7500	MHz
Isolation		28		dB
Insertion Loss Above 6.0 dB		0.65		dB
Phase Unbalance		1.30		deg.
Amplitude Unbalance		0.15		dB
VSWR	SUM Port		1.15	(:1)
	OUT Ports		1.15	(:1)

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

#### Functional Diagram



COAXIAL CONNECTIONS	
SUM PORT	S
PORT 1	1
PORT 2	2
PORT 3	3
PORT 4	4



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RF/MICROWAVE COMPONENTS



REV. X1

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## Typical Performance Data

FREQ. (MHz)	TOTAL LOSS <sup>1</sup> (dB)				AMP UNBAL. (dB)	ISOLATION (dB)			PHASE UNBAL. (Deg)	FREQ. (MHz)	VSWR (:1)				
	S1	S2	S3	S4		1-2	2-3	3-4			S	1	2	3	4
4400.0	6.40	6.40	6.45	6.37	0.08	17.48	22.18	17.18	1.39	4400.0	1.11	1.30	1.30	1.29	1.30
4700.0	6.43	6.42	6.44	6.38	0.06	21.59	23.18	21.02	1.22	4700.0	1.09	1.22	1.23	1.21	1.20
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
7050.0	6.95	6.79	6.80	6.85	0.15	22.53	33.24	22.46	1.61	7050.0	1.28	1.12	1.16	1.15	1.16
7100.0	7.00	6.86	6.86	6.92	0.14	21.93	33.61	21.90	1.65	7100.0	1.33	1.13	1.17	1.16	1.18
7300.0	7.13	6.97	7.00	7.06	0.16	20.23	35.50	20.17	1.76	7300.0	1.49	1.19	1.23	1.22	1.24
7500.0	7.06	6.89	6.94	6.96	0.18	20.15	36.74	20.21	1.89	7500.0	1.50	1.19	1.23	1.21	1.23

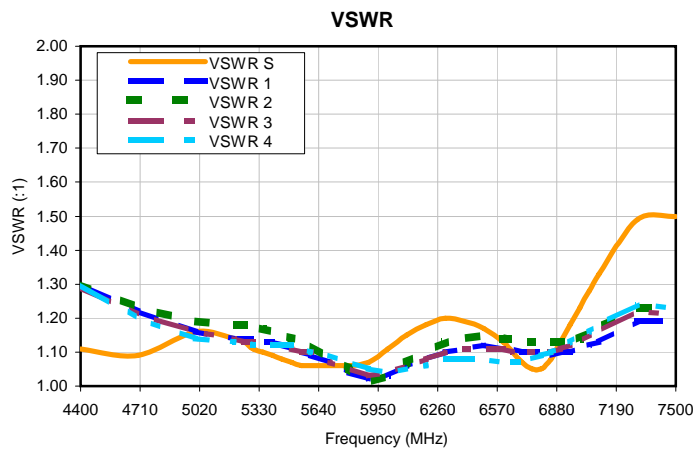
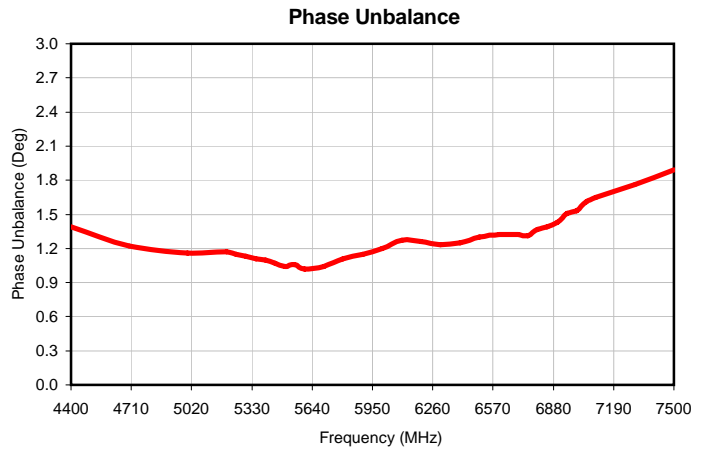
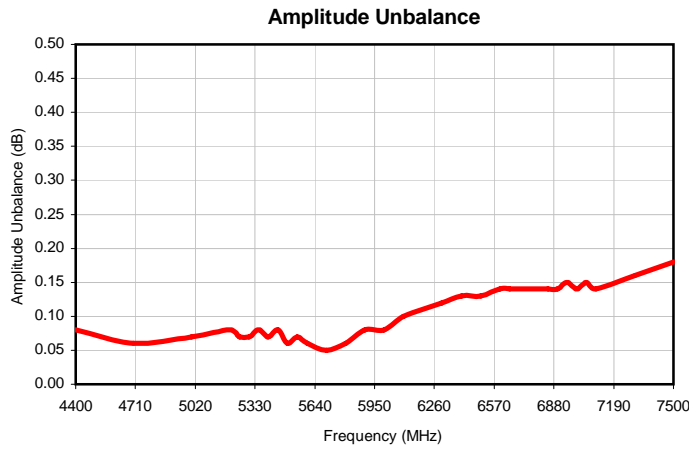
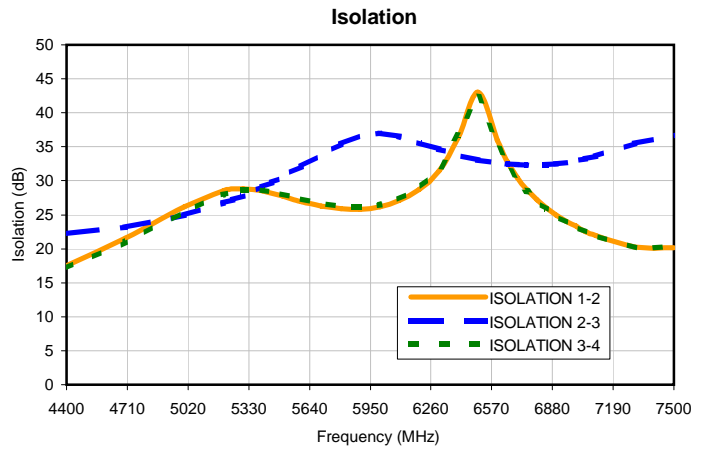
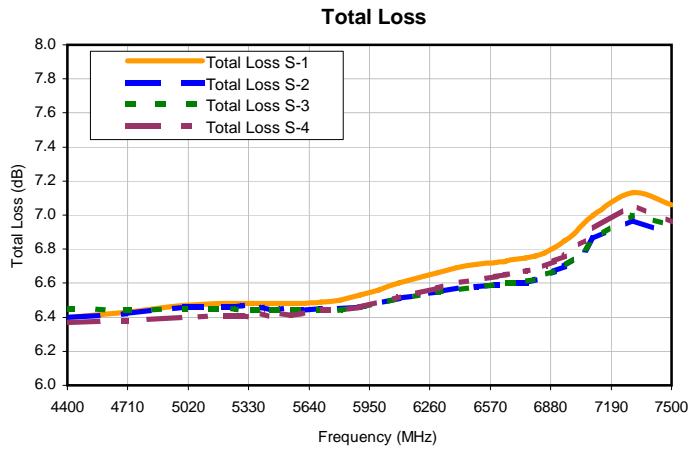
<sup>1</sup>Total Loss = Insertion Loss + 6dB Splitter Loss



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## Typical Performance Curves



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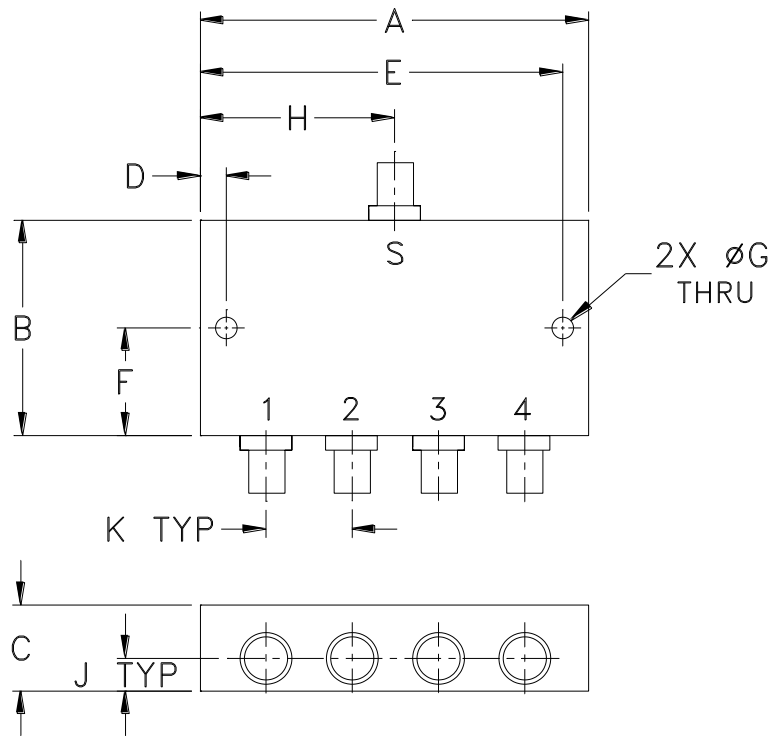


IF/RF MICROWAVE COMPONENTS

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## 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.



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RF/IF MICROWAVE COMPONENTS



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.

<b>Specification</b>	<b>Test/Inspection Condition</b>	<b>Reference/Spec</b>
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