

High Power Combiner

4 Way-0° 50Ω 600 to 2300 MHz

ZB4PD-232-50W+

Maximum Ratings

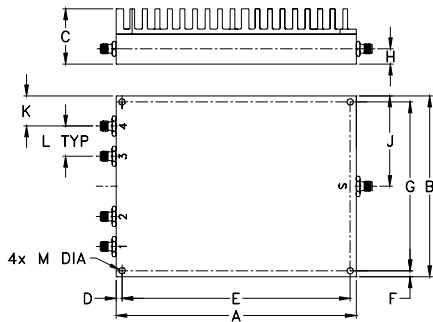
Operating Temperature	-55°C to 90°C
Storage Temperature	-55°C to 100°C
DC Current	600 A (150mA for each port)

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	G
6.00	4.50	1.38	.15	5.700	.15	4.200
152.40	114.30	35.05	3.81	144.78	3.81	106.68

H	J	K	L	M	wt
.38	2.25	.75	.75	.156	grams
9.65	57.15	19.05	19.05	3.96	960

Features

- high isolation, 28 dB typ.
- good input matching VSWR, 1.20 typ.
- high power, 100W (as splitter), 50W (as combiner)
- good output matching VSWR, 1.10:1 typ.

Applications

- cellular
- ISM
- WCDMA
- PCS
- DCS

Electrical Specifications

FREQ. RANGE (MHz)	ISOLATION (dB)		INSERTION LOSS (dB) ABOVE 6.0 dB		PHASE UNBALANCE (Degrees)		AMPLITUDE UNBALANCE (dB)		POWER INPUT ¹ (W)	
	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.	Max.	as combiner ² Max.	as splitter Max.
600-2300	19	16	1.1	2.0	0.9	10.0	0.05	0.70	50	100
800-1000	28	22	0.5	0.8	1.2	4.0	0.05	0.30	50	100
1800-2000	28	20	0.9	1.4	2.5	6.0	0.15	0.50	50	100
2000-2300	28	16	1.2	2.0	4.0	10.0	0.25	0.70	50	100

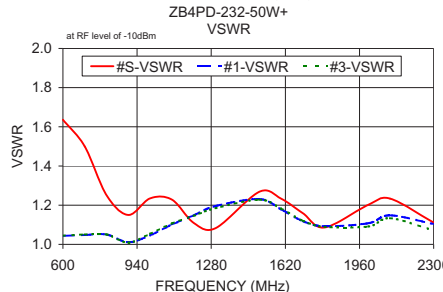
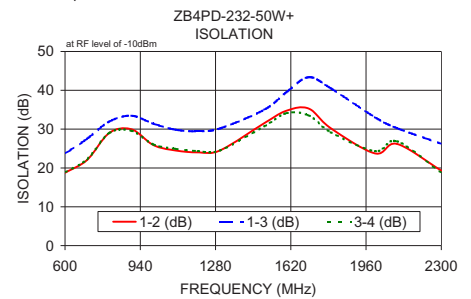
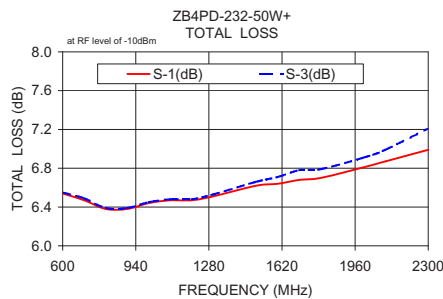
1. Over -55°C to +55°C. Derate linearly to 20% of rating at 90°C

2. As a combiner of non-coherent signals, max. power per port is power rating divided by number of ports.

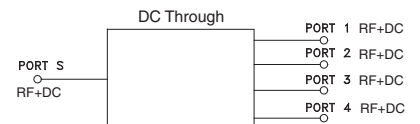
Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	1-3	3-4						
600.00	6.54	6.56	6.55	6.57	0.03	18.75	23.68	18.88	0.83	1.64	1.04	1.04	1.04	1.04
700.00	6.47	6.49	6.49	6.50	0.03	22.07	27.52	22.25	0.97	1.50	1.05	1.04	1.05	1.04
800.00	6.38	6.39	6.39	6.40	0.02	29.02	31.94	29.02	1.12	1.25	1.05	1.05	1.05	1.05
900.00	6.38	6.39	6.39	6.40	0.03	29.96	33.46	29.57	1.26	1.15	1.01	1.02	1.01	1.02
1000.00	6.44	6.45	6.45	6.46	0.02	25.87	31.39	26.04	1.39	1.23	1.05	1.04	1.05	1.04
1100.00	6.47	6.47	6.48	6.49	0.03	24.50	29.84	24.93	1.56	1.23	1.10	1.09	1.11	1.09
1200.00	6.47	6.48	6.48	6.50	0.03	24.01	29.45	24.35	1.76	1.11	1.15	1.14	1.15	1.13
1300.00	6.51	6.52	6.53	6.54	0.03	24.49	30.17	24.51	1.99	1.08	1.20	1.19	1.18	1.18
1500.00	6.62	6.63	6.66	6.68	0.05	31.54	35.00	30.74	2.50	1.27	1.23	1.24	1.23	1.24
1600.00	6.64	6.65	6.71	6.70	0.07	34.73	39.50	34.09	2.74	1.23	1.18	1.19	1.18	1.20
1700.00	6.68	6.71	6.78	6.76	0.10	35.32	43.37	33.57	2.74	1.16	1.12	1.12	1.12	1.14
1800.00	6.70	6.70	6.79	6.79	0.09	30.26	40.54	29.21	2.91	1.09	1.09	1.09	1.09	1.11
2000.00	6.81	6.80	6.91	6.91	0.11	23.76	33.07	24.33	3.44	1.20	1.11	1.08	1.09	1.07
2100.00	6.87	6.86	6.99	6.98	0.13	26.18	30.25	26.88	3.79	1.23	1.15	1.12	1.13	1.11
2300.00	6.99	6.99	7.21	7.18	0.22	19.30	26.23	18.78	4.83	1.11	1.10	1.12	1.07	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.
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