

# Coaxial High Power Combiner

## ZB4PD-52-20W+

4 Way-0° 50Ω 10 to 500 MHz



BNC version shown  
CASE STYLE: Z54

Connectors	Model
BNC	ZB4PD-52-20W+
SMA	ZB4PD-52-20W-S+
N-TYPE	ZB4PD-52-20W-N+

**+RoHS Compliant**

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

### Maximum Ratings

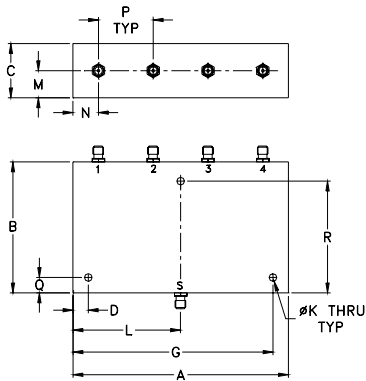
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	20W
Internal Dissipation	3W

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	G	K
3.50	2.13	.88	.250	3.250	.125
88.90	54.10	22.35	6.35	82.55	3.18
L	M	N	P	Q	R
1.750	.44	.415	.89	.250	1.813
44.45	11.18	10.54	22.61	6.35	46.05
					wt
					250

### Electrical Schematic



### Features

- high input power, 20W as splitter
- wideband, 10 to 500 MHz
- high isolation, 32 dB typ.
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 1 deg. typ.
- excellent matching VSWR, 1.1:1 typ.
- rugged, shielded case

### Applications

- VHF/UHF
- receivers/transmitters

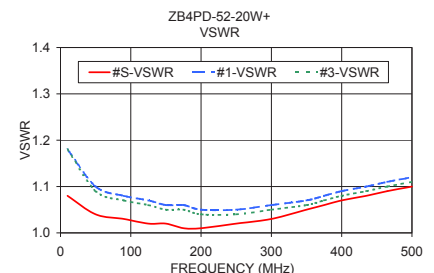
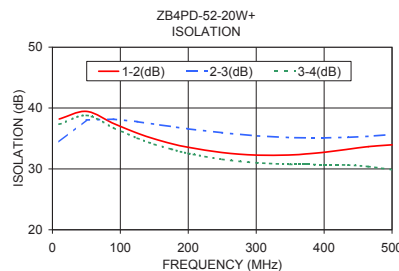
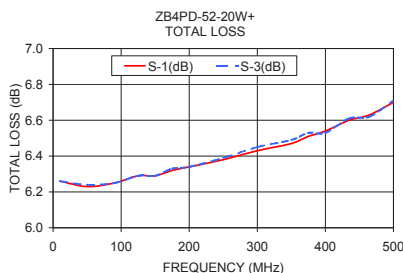
### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
<b>Frequency Range</b>		10		500	MHz
<b>Insertion Loss</b> (above theoretical 6.0 dB)	10 - 100 100 - 250 250 - 500	—	0.3 0.4 0.8	0.6 0.7 1.2	dB
<b>Isolation</b>	10 - 100 100 - 250 250 - 500	24 24 20	34 29 26	—	dB
<b>Phase Unbalance</b>	10 - 100 100 - 250 250 - 500	—	1 2 3	3 4 6	Degree
<b>Amplitude Unbalance</b>	10 - 100 100 - 250 250 - 500	—	0.05 0.1 0.3	0.2 0.3 0.6	dB
<b>VSWR (Port S)</b>	10 - 100 100 - 250 250 - 500	—	1.1 1.1 1.2	1.3 1.2 1.4	:1
<b>VSWR (Port 1-4)</b>	10 - 100 100 - 250 250 - 500	—	1.2 1.1 1.1	1.4 1.3 1.4	:1

### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)				Amp. Unb. (dB)	Isolation (dB)			Phase Unb. (deg.)	VSWR S	VSWR 1	VSWR 2	VSWR 3	VSWR 4
	S-1	S-2	S-3	S-4		1-2	2-3	3-4						
10.00	6.26	6.26	6.26	6.25	0.01	38.20	34.47	37.34	0.04	1.08	1.18	1.18	1.18	1.18
50.00	6.23	6.24	6.24	6.23	0.01	39.45	38.03	38.79	0.11	1.04	1.10	1.10	1.09	1.10
90.00	6.25	6.26	6.25	6.24	0.01	37.45	38.16	36.73	0.22	1.03	1.08	1.08	1.07	1.08
125.00	6.29	6.30	6.29	6.28	0.02	35.87	37.76	35.05	0.28	1.02	1.07	1.07	1.06	1.07
150.00	6.29	6.31	6.29	6.28	0.02	34.93	37.34	34.04	0.40	1.02	1.06	1.06	1.05	1.06
175.00	6.32	6.33	6.33	6.31	0.02	34.16	36.96	33.24	0.41	1.01	1.06	1.06	1.05	1.06
200.00	6.34	6.36	6.34	6.32	0.04	33.55	36.58	32.55	0.47	1.01	1.05	1.05	1.04	1.05
250.00	6.38	6.41	6.39	6.36	0.05	32.68	35.94	31.57	0.58	1.02	1.05	1.04	1.04	1.04
300.00	6.43	6.46	6.45	6.39	0.07	32.27	35.43	31.01	0.70	1.03	1.06	1.05	1.05	1.05
350.00	6.47	6.52	6.49	6.42	0.10	32.29	35.14	30.75	0.84	1.05	1.07	1.06	1.06	1.06
375.00	6.51	6.56	6.53	6.45	0.11	32.48	35.10	30.73	0.83	1.06	1.08	1.07	1.07	1.06
400.00	6.54	6.60	6.53	6.46	0.14	32.73	35.09	30.68	0.93	1.07	1.09	1.08	1.08	1.07
435.00	6.60	6.66	6.61	6.50	0.16	33.23	35.18	30.63	0.93	1.08	1.10	1.09	1.09	1.08
465.00	6.63	6.71	6.62	6.51	0.20	33.66	35.35	30.38	1.06	1.09	1.11	1.10	1.10	1.09
500.00	6.70	6.78	6.71	6.56	0.22	33.96	35.66	29.87	1.02	1.10	1.12	1.11	1.11	1.09

1. Total Loss = Insertion Loss + 6.0 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.
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