

High Power

Power Splitter/Combiner

ZB2PD-62-50W+

2 Way-0° 50Ω Up to 50W 30 to 610 MHz

The Big Deal

- High power, up to 50W as a splitter and 100W as a Combiner
- Low insertion loss, 0.5 dB
- Good isolation, 22 dB
- Excellent VSWR 1.15:1 typ.



CASE STYLE: BV278-2

Product Overview

Mini-Circuits' ZB2PD-62-50W+ is a 2-way 0° splitter/combiner providing very high power handling and low insertion loss across 30 to 610 MHz, covering the communications bands for receiver and transmitter as well as VHF and UHF. Its outstanding combination of high power and low loss, provide excellent signal fidelity from input to output or output to input. This model also provides high port-to-port isolation and very low amplitude and phase unbalance. It comes housed in a rugged aluminum alloy case with your choice N-Type connectors and an heat sink.

Key Features

Feature	Advantages
Wideband, 30 to 610 MHz	This unit covers many military bands, making it suitable for a wide variety of applications.
High power handling: <ul style="list-style-type: none">• 50W as a splitter• 100W as a combiner	Suitable for many high power applications.
Low insertion loss, 0.5 dB	Very low insertion loss minimizes intrinsic losses, making this model a suitable candidate for high power signal distribution applications where low loss is a requirement.
Low unbalance: <ul style="list-style-type: none">• 0.15 dB amplitude unbalance• 1° phase unbalance	Produces nearly equal output signals, ideal for parallel path / multichannel systems.

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



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Maximum Ratings

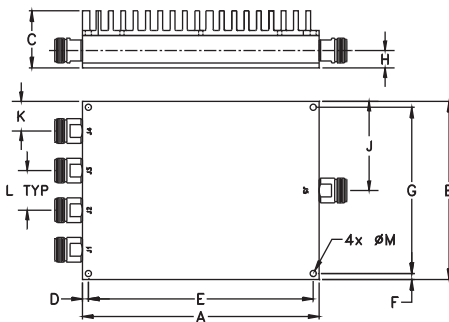
Operating Temperature	0°C to 50°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	50W max.
Internal Dissipation	50W max.

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

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	4
NOT USED	2,3

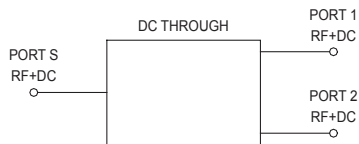
Outline Drawing



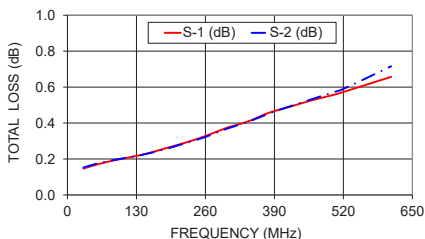
Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
6.00	4.50	1.45	.15	5.700	.15	4.200
152.40	114.30	36.83	3.81	144.78	3.81	106.68
H	J	K	L	M	N	wt
.44	2.25	.75	1	.156	0.82	grams
11.18	57.15	19.05	25.40	3.96	20.83	1100

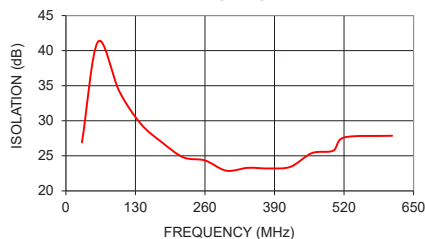
Electrical Schematic



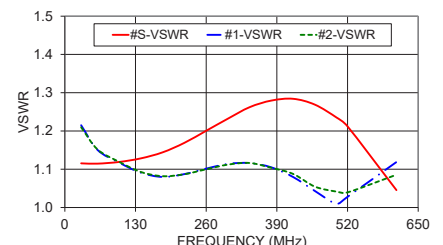
ZB2PD-62-50W+ TOTAL LOSS



ZB2PD-62-50W+ ISOLATION



ZB2PD-62-50W+ VSWR



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Features

- usable, 30 to 610 MHz
- low insertion loss, 0.5 dB typ.
- low amplitude unbalance, 0.3 dB typ.
- excellent output VSWR, 1.15:1 typ.

Applications

- VHF / UHF
- communication receiver and transmission
- military mobile



CASE STYLE: BV278-2

Connectors	Model
N-TYPE	ZB2PD-62-50W+

+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		30		610	MHz
Insertion Loss Above 3.0 dB	30-520		0.5	0.8	dB
	520-610		0.7	1.0	
Isolation	30-520	17	20		dB
	520-610	15	19		
Phase Unbalance	30-610		1.0	3.0	Degree
Amplitude Unbalance	30-610		0.15	0.4	dB
VSWR (Port S)	30-610		1.25	1.5	:1
VSWR (Port 1-2)	30-610		1.15	1.4	:1
Power Input	as splitter	30-520		50	W
		520-610		35	
	as combiner ^{1,2}	30-520		100	
		520-610		70	

1. As a combiner of non-coherent signals, max. power per port is power rating divided by two ports (50W/max for each port at 30-520 MHz)
2. As a combiner of coherent signals, max. power per port is de-rated to 35 w/max at 30-520 mhz.

Typical Performance Data

Frequency (MHz)	Total Loss ¹ (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
30	0.15	0.15	0.01	26.91	0.06	1.12	1.22	1.21
60	0.17	0.18	0.00	41.26	0.07	1.11	1.15	1.15
100	0.20	0.20	0.00	34.18	0.11	1.12	1.12	1.12
140	0.22	0.22	0.00	29.57	0.12	1.13	1.09	1.09
180	0.26	0.25	0.00	26.90	0.17	1.14	1.08	1.08
220	0.29	0.29	0.00	24.77	0.18	1.17	1.09	1.09
260	0.33	0.32	0.01	24.34	0.22	1.20	1.10	1.10
300	0.37	0.37	0.01	22.88	0.24	1.23	1.11	1.11
340	0.41	0.41	0.00	23.28	0.25	1.26	1.12	1.12
380	0.46	0.45	0.00	23.20	0.32	1.28	1.10	1.10
420	0.49	0.49	0.00	23.43	0.28	1.28	1.08	1.09
460	0.53	0.53	0.01	25.39	0.34	1.27	1.04	1.05
500	0.56	0.57	0.01	25.74	0.33	1.23	1.01	1.04
520	0.57	0.59	0.02	27.61	0.31	1.21	1.03	1.04
610	0.66	0.72	0.06	27.86	0.24	1.05	1.12	1.09

1. Total Loss = Insertion Loss + 3dB splitter theoretical loss.

