

Power Splitter/Combiner

ZN4PD1-63W+

4 Way-0° 50Ω 250 to 6000 MHz

The Big Deal

- Wideband performance
- Low amplitude and phase unbalance
- Good insertion loss



CASE STYLE: UU846

Product Overview

This four-way, in-phase splitter and combiner covers a wide frequency range between 250-6000MHz, making this splitter now suitable for GPS, GSM, DCS and PCS frequency bands, in addition to WiFi, Bluetooth and 802.11a uses. This model also features good insertion loss and amplitude and phase unbalance, and is packaged in a 3.5"x 4.5" enclosure with built-in SMA connectors for ease of use.

Feature	Advantages
Operating over a very wide bandwidth from 250MHz to 6000MHz	The very wide bandwidth performance of the ZN4PD1-63W+ enables this splitter/combiner to be used in a wide range of applications including broadband systems such as test, measurement and defense/aerospace. However this model covers a variety of narrow band applications including GSM, GPS, DCS and PCS applications, in addition to WiFi, Bluetooth, 802.11a, U-NII and ISM applications.
Good insertion loss	With typical insertion loss of only 1.0dB above the splitter loss up to 4GHz, this splitter supports medium power signal distribution applications where loss is critical.
Good amplitude and phase performance	Typical amplitude unbalance of 0.2dB and phase unbalance of 2° make this splitter ideal for parallel path/multichannel systems.



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine  Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

For detailed performance specs
& shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

Coaxial

Power Splitter/Combiner

4 Way-0° 50Ω 250 to 6000 MHz

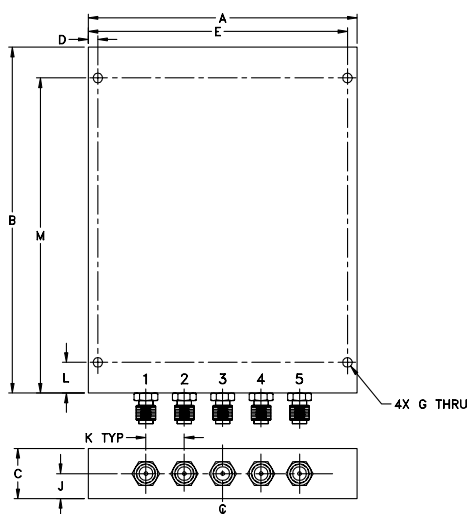
Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	3W max.
Permanent damage may occur if any of these limits are exceeded.	

Coaxial Connections

SUM PORT	3
PORT 1	1
PORT 2	2
PORT 3	4
PORT 4	5

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
3.50	4.50	.65	.125	3.375	--	.125
88.90	114.30	16.51	3.18	85.73	--	3.18
H	J	K	L	M		wt
--	.33	.50	.400	4.100		grams
--	8.38	12.70	10.16	104.14		288

Features

- wide frequency band, 250 to 6000 MHz
- low insertion loss, 1.0 dB typ.
- low amplitude unbalance 0.2 dB typ.
- low phase unbalance 2 deg. typ.

Applications

- high band PCS
- UNII
- ISM 802.11A
- WiFi
- Bluetooth

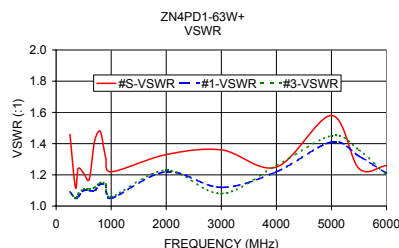
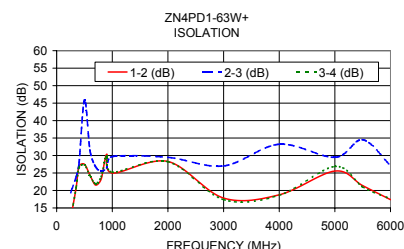
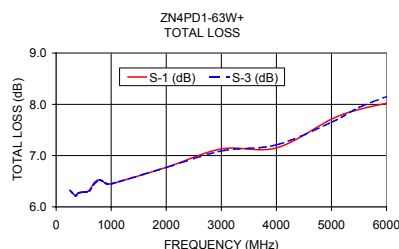
Electrical Specifications

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		250		6000	MHz
Insertion Loss Above 6.0 dB	250-350 350-6000	— —	0.3 1.2	0.8 3.0	dB
Isolation	250-350 350-5500 5500-6000	8 14 12	14 20 20	— — —	dB
Phase Unbalance	250-350 350-6000	— —	— —	3 6	Degree
Amplitude Unbalance	250-350 350-6000	— —	— —	0.3 0.6	dB
VSWR Input	250-350 350-6000	— —	1.2 1.3	— —	:1
VSWR Output	250-350 350-6000	— —	1.1 1.3	— —	:1

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	2-3	3-4						
250.00	6.32	6.31	6.32	6.33	0.02	11.87	19.38	11.99	0.27	1.46	1.09	1.09	1.09	1.10
350.00	6.22	6.21	6.22	6.22	0.02	20.88	23.90	20.88	0.30	1.12	1.05	1.05	1.05	1.05
400.00	6.27	6.26	6.27	6.28	0.02	26.84	27.53	26.56	0.30	1.24	1.06	1.07	1.08	1.07
500.00	6.29	6.28	6.29	6.31	0.03	27.50	45.87	27.33	0.38	1.21	1.10	1.10	1.11	1.10
600.00	6.32	6.30	6.31	6.34	0.04	24.35	31.29	24.14	0.50	1.17	1.10	1.11	1.11	1.10
700.00	6.48	6.45	6.46	6.49	0.04	21.55	26.77	21.98	0.60	1.42	1.10	1.11	1.12	1.10
800.00	6.53	6.51	6.52	6.54	0.02	23.25	25.64	23.96	0.66	1.48	1.14	1.15	1.15	1.14
900.00	6.46	6.45	6.46	6.47	0.02	30.37	26.45	29.80	0.69	1.31	1.13	1.15	1.14	1.13
1000.00	6.45	6.44	6.45	6.46	0.02	25.00	29.71	25.26	0.70	1.22	1.05	1.06	1.06	1.06
2000.00	6.77	6.78	6.77	6.79	0.02	28.30	29.48	28.24	1.45	1.33	1.22	1.24	1.23	1.23
3000.00	7.13	7.20	7.09	7.15	0.10	17.84	27.02	17.39	1.70	1.36	1.12	1.11	1.08	1.12
4000.00	7.15	7.31	7.21	7.22	0.17	18.76	33.24	18.64	2.48	1.25	1.22	1.27	1.26	1.24
5000.00	7.71	7.79	7.65	7.82	0.17	25.57	29.50	26.88	3.27	1.58	1.41	1.44	1.45	1.42
5500.00	7.90	8.09	7.94	8.07	0.20	21.38	34.53	21.02	3.47	1.24	1.32	1.37	1.36	1.37
6000.00	8.02	8.27	8.15	8.27	0.25	17.38	27.14	17.61	4.04	1.26	1.21	1.22	1.20	1.24

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



Electrical Schematic



Mini-Circuits®

ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine [minicircuits.com](http://www.minicircuits.com) Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

For detailed performance specs & shipping online see web site

REV. OR
M128089
ZN4PD1-63W+
ED-12591/1
KL/AD/CP/AM
100712
Page 2

ZN4PD1-63W+



Connectors	Model	Price	Qty.
SMA	ZN4PD1-63W-S+	\$119.95	(1-9)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.