

Power Splitter/Combiner

ZN4PD1-63LW-S+

4 Way-0° 50Ω 30W 500 to 6000 MHz

Maximum Ratings

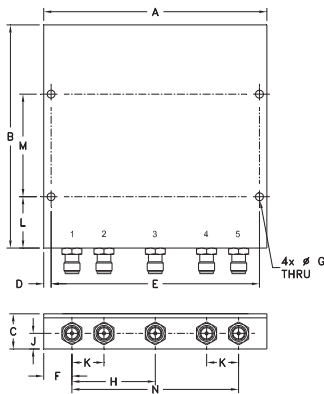
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
DC Current	1.0 A (250mA for each port)

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
3.48	3.48	.55	.115	3.250	.44	.125
88.39	88.39	13.97	2.92	82.55	11.18	3.18
H	J	K	L	M	N	wt
1.30	.24	.500	.80	1.0	2.6	grams
33.02	6.10	12.70	20.32	25.40	66.04	190

Features

- power handling up to 30 W
- wide frequency band, 500 to 6000 MHz
- very low insertion loss, 0.6 dB typ.
- low amplitude unbalance 0.15 dB typ.
- low phase unbalance 2 deg. typ.

Applications

- ISM
- test and measurement
- lab
- LTE
- WiFi
- bluetooth

Electrical Specifications

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency		500		6000	MHz
Insertion Loss (above theoretical 6.0 dB)	500-3000	—	0.4	0.9	dB
	3000-6000	—	0.6	1.2	dB
Isolation	500-600	16	19	—	dB
	600-6000	18	23	—	dB
Phase Unbalance	500-6000	—	2	6	Degree
Amplitude Unbalance	500-6000	—	0.15	0.4	dB
VSWR (Port S)	500-600	—	1.3	1.5	:1
	600-6000	—	1.25	1.4	:1
VSWR (Port 1-4)	500-6000	—	1.15	1.25	:1
Power Handling³	As Splitter¹	500-6000	—	30	W
	As Combiner²	500-6000	—	0.5	W

1. All outputs must terminate 50 ohm (VSWR 1.2:1 or better)

2. As a combiner of non-coherent signals, max. power is 0.5Watt per port.

3. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 60°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 10°C/W.



Generic photo used for illustration purposes only

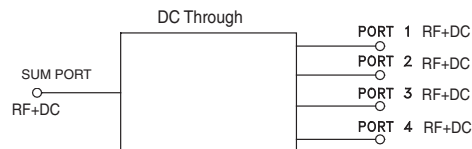
CASE STYLE: UU846-5

Connectors Model
SMA ZN4PD1-63LW-S+

+RoHS Compliant

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

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.

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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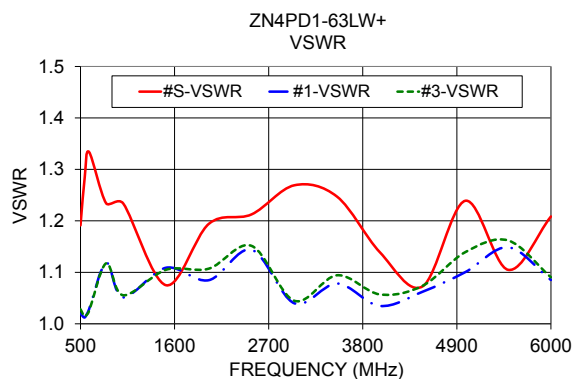
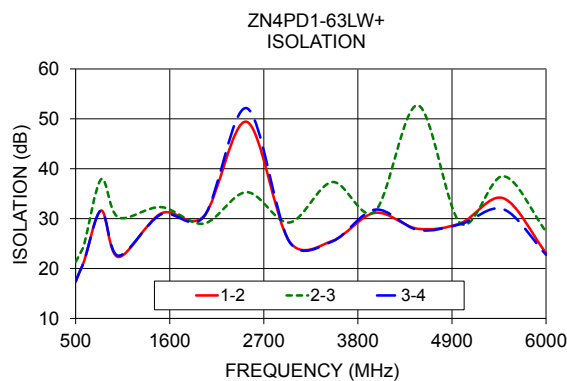
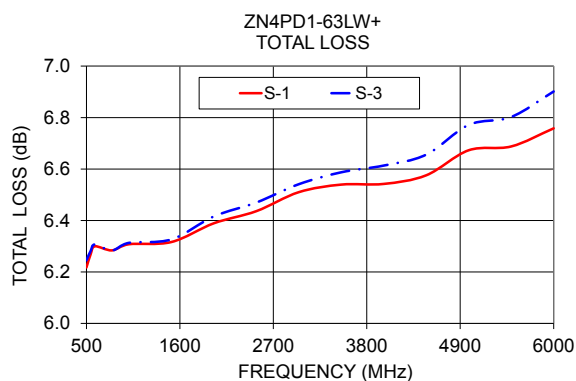
REV. A
M171494
ED-18090201
ZN4PD1-63LW-S+
ZL/CP/AM
190114

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Typical Performance Data

Freq. (MHz)	Total Loss ¹ (dB)				Amp. Unbal. (dB)	Isolation (dB)			Phase Unbal. (deg.)	VSWR	VSWR	VSWR	VSWR	VSWR
	S-1	S-2	S-3	S-4		1-2	2-3	3-4		S	1	2	3	4
500.0	6.22	6.23	6.25	6.25	0.03	17.36	21.33	17.41	0.14	1.19	1.02	1.02	1.03	1.03
550.0	6.27	6.28	6.28	6.30	0.03	19.48	22.94	19.50	0.22	1.29	1.01	1.01	1.01	1.01
600.0	6.30	6.31	6.31	6.34	0.04	21.51	24.86	21.47	0.22	1.33	1.03	1.02	1.02	1.02
800.0	6.28	6.30	6.28	6.33	0.04	31.63	37.91	31.69	0.34	1.23	1.12	1.12	1.12	1.13
1000.0	6.31	6.33	6.31	6.36	0.06	22.32	30.26	22.57	0.35	1.23	1.05	1.05	1.06	1.06
1500.0	6.32	6.34	6.33	6.38	0.06	31.06	32.32	30.86	0.47	1.07	1.11	1.12	1.10	1.12
2000.0	6.39	6.43	6.42	6.46	0.07	30.53	29.01	30.41	0.57	1.19	1.08	1.10	1.11	1.11
2500.0	6.44	6.48	6.47	6.52	0.08	49.40	35.30	52.13	0.70	1.21	1.14	1.15	1.15	1.17
3000.0	6.51	6.57	6.54	6.60	0.09	25.39	29.23	25.34	0.80	1.27	1.04	1.05	1.04	1.05
3500.0	6.54	6.61	6.59	6.64	0.10	25.53	37.33	25.43	0.85	1.25	1.08	1.09	1.09	1.08
4000.0	6.54	6.63	6.61	6.66	0.12	31.16	31.47	31.80	0.95	1.14	1.03	1.05	1.06	1.05
4500.0	6.58	6.68	6.66	6.70	0.12	27.97	52.70	27.74	1.02	1.07	1.06	1.07	1.07	1.07
5000.0	6.67	6.79	6.77	6.81	0.13	29.09	29.05	28.89	1.10	1.24	1.10	1.13	1.14	1.12
5500.0	6.69	6.82	6.80	6.84	0.16	34.09	38.51	31.89	1.12	1.10	1.15	1.16	1.16	1.17
6000.0	6.76	6.91	6.90	6.93	0.17	23.10	27.42	22.77	1.24	1.21	1.09	1.09	1.09	1.11

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



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