High Power, DC Pass

Power Splitter/Combiner

ZN2PD2-63-S+

2-Way 0° 50Ω 25 W 350 to 6000 MHz

The Big Deal

- Wideband, 350 to 6000 MHz
- High power, up to 25 W as a splitter
- Low insertion loss, 0.9 dB Typ.
- Low amplitute/phase unbalance, 0.1 dB, 2˚
- High isolation, 20 dB



CASE STYLE: VVV845

Product Overview

Mini-Circuits' ZN2PD2-63-S+ is a 2-way 0˚ high-power splitter/combiner providing up to 25 W power handling as a splitter (1 W as a combiner) and low insertion loss across the entire 350 to 6000 MHz frequency range. Its outstanding combination of high power handling and low loss minimize power dissipation and provide excellent signal power transmission from input to output. The ZN2PD2-63-S+ comes housed in a rugged aluminum alloy case measuring 4.5 × 2.5 × 0.67" with SMA connectors.

Key Features

Feature	Advantages
Wideband, 350 to 6000 MHz	This model supports bandwidth requirements for a wide variety of applications.
High power handling: • 25 W to 3600 MHz • 15 W to 6000 MHz	The ZN2PD2-63-S+ is suitable for systems with a wide range of power requirements.
Low insertion loss, 0.9 dB	The combination of 25 W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
Low unbalance: • 0.1 dB amplitude unbalance • 2˚ phase unbalance	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
High isolation, 20 dB	Minimizes interference between ports.
DC Passing, 600 mA (300 mA each port)	Supports applications where DC power is needed through the RF line.

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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ZN2PD2-63-S+

2-Way 0° 50Ω 25 W 350 to 6000 MHz

Maximum Ratings

Operating Temperature (@<30 W)	-55 °C to +60 °C
Operating Temperature (@<10 W)	-55 °C to +100 °C
Storage Temperature	-55 °C to +100 °C
DC Current	600 mA (300 mA 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

Features

- wideband, 350-6000 MHz
- excellent amplitude unbalance, 0.1 dB typ.
- excellent phase unbalance, 2 deg. typ.
- up to 25 W power input as splitter

Applications

- UHF TV
- cellular/ISM/SMG/GSM
- satellite distribution
- GPS/L BAND (MARSAT)
- PCS/DCS/UMTS
- MMDC
- SATCOM



Generic photo used for illustration purposes only

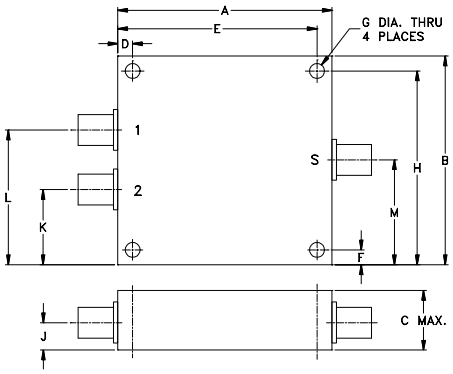
CASE STYLE: VVV845

Connectors	Model
SMA	ZN2PD2-63-S+

+RoHS Compliant

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

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
4.50	2.50	.67	.400	4.100	.125	.125
114.30	63.50	17.02	10.16	104.14	3.18	3.18

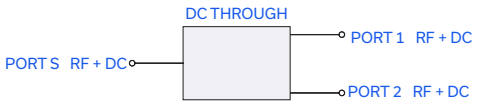
H	J	K	L	M	wt
2.375	.33	.75	1.75	1.25	grams
60.33	8.38	19.05	44.45	31.75	247

Electrical Specifications at +25 °C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency			350		6000	MHz
Insertion Loss (above theoretical 3.0 dB)		350-500	—	0.1	0.6	dB
		500-2700	—	0.5	0.9	
		2700-3600	—	0.7	1.1	
		3600-6000	—	0.9	1.4	
Isolation		350-500	16	20	—	dB
		500-2700	18	22	—	
		2700-3600	15	20	—	
		3600-6000	15	18	—	
Phase Unbalance		350-2700	—	1.0	3	Degree
		2700-3600	—	1.5	4	
		3600-6000	—	3.0	5	
Amplitude Unbalance		350-2700	—	0.15	0.3	dB
		2700-6000	—	0.2	0.5	
VSWR (Port S)		350-6000	—	1.4	—	:1
VSWR (Port 1-2)		350-6000	—	1.4		
Power Handling[3]	As Splitter[1]	350-3600	—	—	25	W
		3600-6000	—	—	15	
	As Combiner[2]	350-6000	—	—	1.0	

1. All outputs must terminate 50 ohm (VSWR 1.5:1 or better)
2. As a combiner of non-coherent signals, max. power per port is 1.0 watt power rating divided by number of ports.
3. Alternative heat sinking and heat removal must be provided by the user to limit maxmum 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.

Electrical Schematic



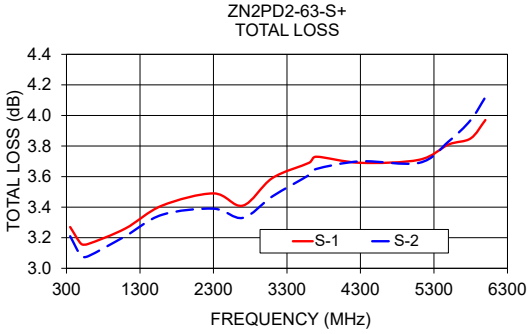
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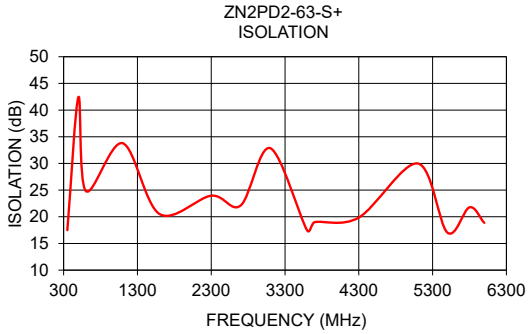
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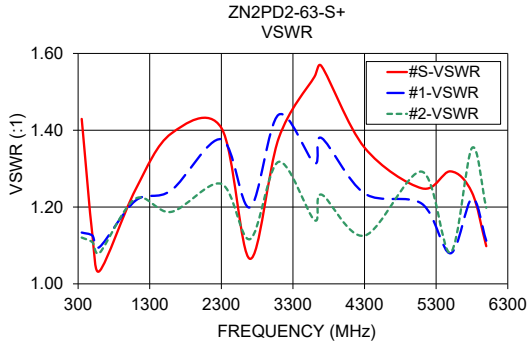
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
350.00	3.27	3.21	0.06	17.49	0.29	1.43	1.13	1.12
500.00	3.16	3.08	0.08	42.43	0.26	1.13	1.13	1.11
600.00	3.16	3.08	0.09	24.83	0.33	1.03	1.10	1.08
1100.00	3.26	3.21	0.05	33.79	0.45	1.25	1.22	1.22
1600.00	3.41	3.35	0.06	20.51	0.81	1.39	1.24	1.19
2300.00	3.49	3.39	0.10	23.95	0.93	1.41	1.38	1.26
2700.00	3.41	3.33	0.09	22.13	1.20	1.07	1.20	1.12
3100.00	3.59	3.47	0.12	32.86	2.09	1.38	1.44	1.32
3600.00	3.69	3.61	0.08	17.45	2.22	1.54	1.31	1.17
3700.00	3.73	3.65	0.08	18.98	2.16	1.57	1.38	1.23
4300.00	3.69	3.70	0.01	19.85	2.22	1.35	1.24	1.13
5100.00	3.71	3.69	0.02	29.99	2.50	1.25	1.21	1.29
5500.00	3.81	3.83	0.02	17.04	2.70	1.29	1.08	1.08
5800.00	3.85	3.97	0.12	21.77	2.53	1.24	1.22	1.35
6000.00	3.97	4.12	0.15	18.87	2.23	1.10	1.11	1.20

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







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