High Power, DC Pass

Power Splitter/Combiner ZN2PD2-63A-S+

2 Way-0° 50Ω 25W 350 to 6000 MHz

The Big Deal

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



CASE STYLE: F1908-3

Product Overview

Mini-Circuits' ZN2PD2-63A-S+ is a 2-way 0˚ high-power splitter/combiner providing up to 25W power handling as a splitter (1.0W 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 ZN2PD2-63A-S+ comes with N-Type and SMA version in a rugged aluminum alloy case measuring 4.0 x 3.25 x 0.875" with N-type or 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: • 25W to 3600 MHz • 15W to 6000 MHz	The ZN2PD2-63A-S+ is suitable for systems with a wide range of power requirements.
Low insertion loss, 0.9 dB	The combination of 25W 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, 600mA (300mA each port)	Supports applications where DC power is needed through the RF line.

Notes
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High Power, DC Pass

Power Splitter/Combiner

ZN2PD2-63A-S+

2 Way-0° 50Ω 25W 350 to 6000 MHz



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Connectors	Model
SMA	ZN2PD2-63A-S+
N-Type	ZN2PD2-63A-N+

+RoHS Compliant

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

Maximum Ratings

Operating Temperature(@<25W)	-55°C to 60°C
Operating Temperature(@<10W)	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	600 mA (300mA for each port)

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

Coaxial Connections

SUMPORT	S
PORT 1	1
PORT 2	2

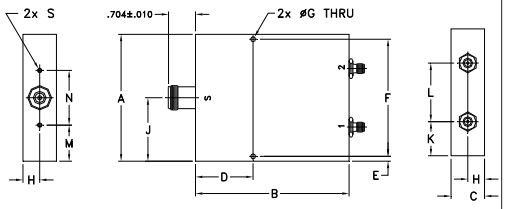
Features

- wideband, 350-6000 MHz
- excellent amplitude unbalance, 0.1 dB typ.
- good isolation, 20 dB typ.
- excellent phase unbalance, 2 deg. typ.
- up to 25W power input as splitter

Applications

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

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H
3.25	4.00	.88	1.50	1.13	3.000	.125	.38
82.55	101.60	22.35	38.10	28.70	76.20	3.18	9.65

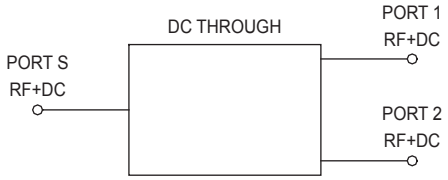
J	K	L	M	N	S	wt
1.63	.88	1.500	.93	1.400	#2-56,	grams
41.40	22.35	38.10	23.62	35.56	.156 DP	300.0

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	—	0.3	0.6	dB
		500-2700	—	0.5	0.9	
		2700-5200	—	0.8	1.1	
		5200-6000	—	0.9	1.4	
Isolation		350-500	16	20	—	dB
		500-2700	18	22	—	
		2700-5200	17	20	—	
		5200-6000	15	18	—	
Phase Unbalance		350-2700	—	0.5	2	Degree
		2700-3600	—	1.0	3	
		3600-6000	—	1.0	4	
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	—	1.3		
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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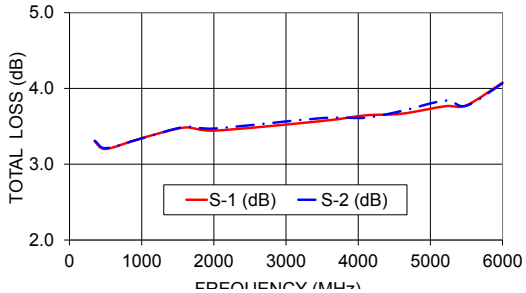
Typical Performance Data

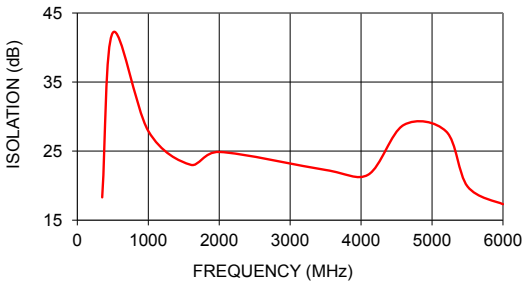
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
350	3.30	3.31	0.01	18.30	0.01	1.44	1.16	1.16
500	3.20	3.21	0.01	42.15	0.04	1.15	1.15	1.15
1000	3.34	3.34	0.00	27.92	0.08	1.31	1.24	1.23
1600	3.48	3.49	0.01	23.01	0.09	1.46	1.38	1.36
2000	3.44	3.47	0.03	24.88	0.20	1.26	1.28	1.27
3500	3.57	3.61	0.04	22.27	0.10	1.20	1.27	1.25
4100	3.64	3.61	0.03	21.58	0.20	1.05	1.24	1.24
4600	3.67	3.70	0.04	28.78	0.27	1.20	1.30	1.29
5200	3.76	3.84	0.07	27.84	0.10	1.28	1.34	1.36
5500	3.78	3.77	0.01	19.88	0.04	1.03	1.23	1.21
6000	4.08	4.07	0.01	17.31	0.49	1.46	1.25	1.22

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

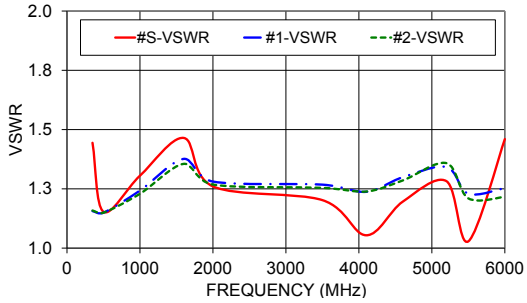
ZN2PD2-63A-S+
TOTAL LOSS



ZN2PD2-63A-S+
ISOLATION



ZN2PD2-63A-S+
VSWR



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