DC PASS, HIGH POWER

Power Splitter/Combiner ZN2PD-4R753+

2 Way-0° 50Ω Up to 30W 450 to 7500 MHz SMA Female

THE BIG DEAL

- Power handling up to 30W
- Wide frequency band, 450 to 7500 MHz
- Low insertion loss, 0.6 dB typ.
- Low amplitude unbalance 0.02 dB typ.
- Low phase unbalance 0.3° typ.
- High isolation, up to 28 dB typ.

Generic photo used for illustration purposes only

Model No.	ZN2PD-4R753+
Case Style	UU2624-7
Connectors	SMA Female

+RoHS Compliant
The +Suffix identifies RoHS Compliance.
See our website for methodologies and qualifications

APPLICATIONS

- LTE & 5G MIMO Infrastructure
- Broadband Telecom
- Satellite Communications
- Test and Measurement Equipment
- Radar, EW, and ECM Defense Systems

PRODUCT OVERVIEW

Mini-Circuits' ZN2PD-4R753+ is a 2-way 0° power splitter/combiner providing 30W power handling as a splitter (1W as a combiner) and low insertion loss across the 450 to 7500 MHz frequency range. It has an outstanding combination of high power handling and low loss, minimizing power dissipation and providing excellent signal fidelity from input to output. The ZN2PD-4R753+ comes housed in a rugged aluminum alloy case measuring 3.25" x 1.46" x 0.55" with a common SMA-Female port on one side and two SMA-Female ports on opposite side of the case.

KEY FEATURES

Feature	Advantages
Wideband, 450 to 7500 MHz	This model supports bandwidth requirements for a wide variety of applications.
High power handling: • 30W as a splitter	The ZN2PD-4R753+ is suitable for a wide range of power requirements.
Low insertion loss, 0.6 dB typ. at 4000 MHz	The combination of 30W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
Low unbalance: • 0.02 dB amplitude unbalance at 4000 MHz • 0.3° phase unbalance at 4000 MHz	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 0.77A (385mA each port) max. as a splitter	Supports applications where DC power is needed through the RF line.

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ELECTRICAL SPECIFICATIONS AT 25°C

Parameter		Frequency (MHz)	Min.	Typ.	Max.	Units
Frequency Range			450		7500	MHz
Insertion Loss (above 3.0 dB)		450-4000	—	0.4	1.3	dB
		4000-7500	—	0.8	1.3	
Isolation		450-550	15	21.2	—	dB
		550-7500	18	28.0	—	
Phase Unbalance (±)		450-7500	—	0.3	6	Degree
Amplitude Unbalance (±)		450-7500	—	0.02	0.4	dB
VSWR (Port S)		450-4000	—	1.11	1.80	:1
		4000-7500	—	1.13	1.80	
VSWR (Port 1-2)		450-4000	—	1.07	1.60	:1
		4000-7500	—	1.20	1.60	
Power Handling	As Splitter[1]	450-7500	—	—	30	W
	As Combiner[2]	450-7500	—	—	1	

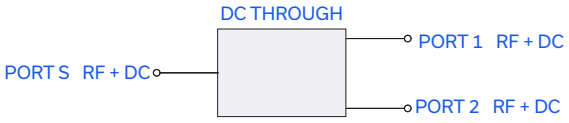
1. All outputs must terminate to 50 ohm (VSWR 1.5:1 or better)
2. As a combiner of non-coherent signals, max. power per port is 0.5 watt

MAXIMUM RATINGS

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
DC Current	0.77A (385mA each) port as a splitter

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

ELECTRICAL SCHEMATIC



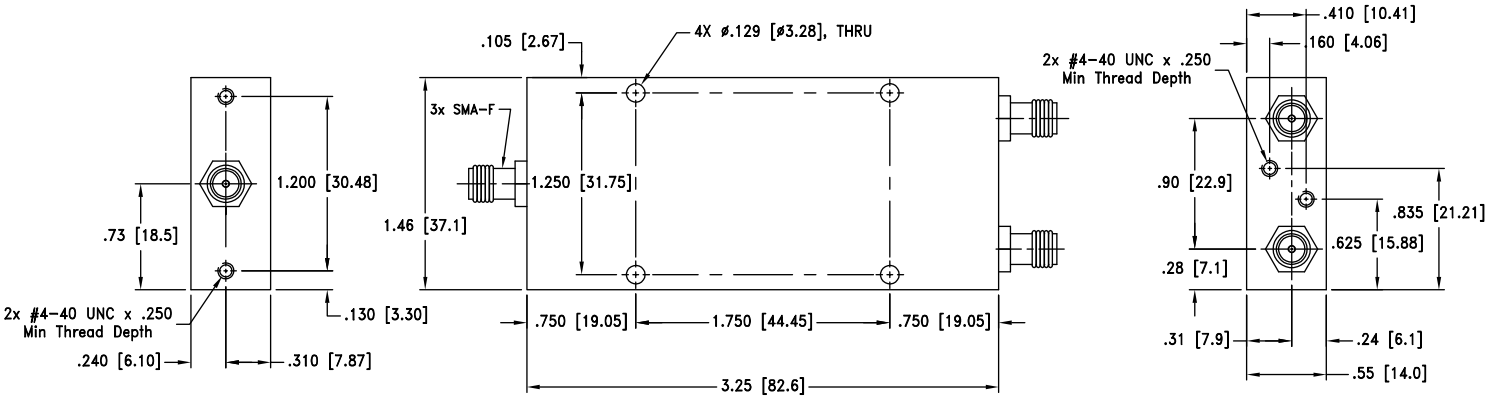
Power Splitter/Combiner ZN2PD-4R753+

2 Way-0° 50Ω Up to 30W 450 to 7500 MHz SMA Female

COAXIAL CONNECTIONS

Port	Marking
Common Port	S
Port 1	1
Port 2	2

OUTLINE DRAWING



Weight: 85 grams.

Dimensions are in inches (mm). Tolerances: 2 Pl.±.03[.76] ; 3 Pl. ±.015[.38]

DC PASS, HIGH POWER

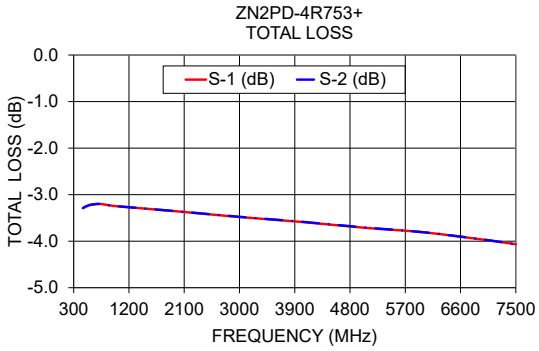
Power Splitter/Combiner ZN2PD-4R753+

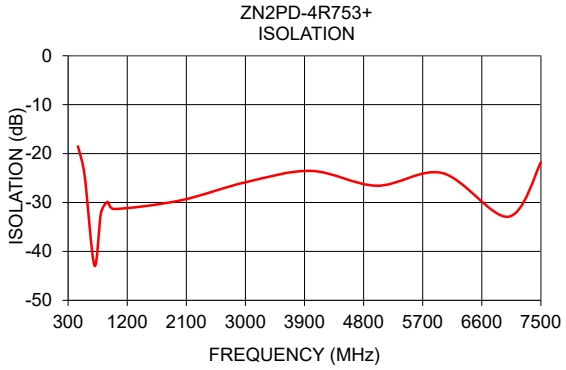
2 Way-0° 50Ω Up to 30W 450 to 7500 MHz SMA Female

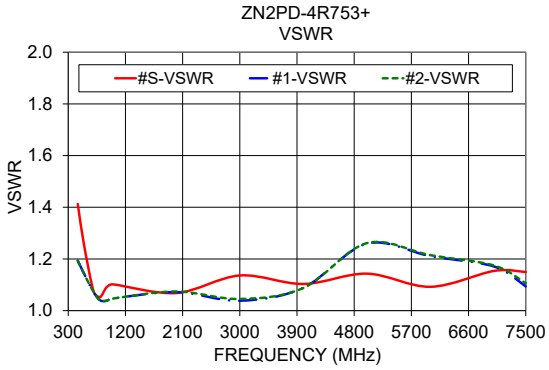
TYPICAL PERFORMANCE DATA

Freq. (MHz)	Total Loss[1] (dB) S-1	Total Loss[1] (dB) S-2	Amp Unbal. (dB)	Isolation (dB)	Phase Unbal. (deg.)	VSWR S	VSWR 1	VSWR 2
450	3.3	3.3	0.01	18.5	0.04	1.41	1.19	1.19
550	3.2	3.2	0.01	24.3	0.04	1.25	1.14	1.14
700	3.2	3.2	0.01	42.9	0.05	1.07	1.07	1.07
800	3.2	3.2	0.01	32.2	0.06	1.05	1.04	1.04
900	3.2	3.2	0.01	29.9	0.07	1.09	1.04	1.04
1000	3.2	3.2	0.01	31.3	0.08	1.10	1.05	1.05
2000	3.4	3.4	0.01	29.6	0.13	1.07	1.07	1.07
3000	3.5	3.5	0.01	25.9	0.21	1.14	1.04	1.05
4000	3.6	3.6	0.02	23.5	0.28	1.10	1.09	1.09
5000	3.7	3.7	0.03	26.6	0.34	1.14	1.26	1.26
6000	3.8	3.8	0.03	24.0	0.40	1.09	1.21	1.21
7000	4.0	4.0	0.03	32.9	0.48	1.15	1.17	1.17
7500	4.1	4.1	0.03	21.8	0.53	1.15	1.09	1.11

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







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/terms/viewterm.html

2 Way-0° Power Splitter/Combiner ZN2PD-4R753+

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS[1] (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (deg.)	VSWR (:1)		
	S-1	S-2		1-2		S	1	2
450	3.3	3.3	0.01	18.5	0.04	1.41	1.19	1.19
800	3.2	3.2	0.01	32.2	0.06	1.05	1.04	1.04
1000	3.2	3.2	0.01	31.3	0.08	1.10	1.05	1.05
1200	3.3	3.3	0.01	44.6	0.09	1.04	1.04	1.04
1400	3.3	3.3	0.01	30.4	0.10	1.10	1.06	1.06
1600	3.3	3.3	0.01	31.3	0.11	1.16	1.09	1.10
1800	3.3	3.3	0.01	48.9	0.12	1.10	1.09	1.09
2000	3.4	3.4	0.01	29.6	0.13	1.07	1.07	1.07
2200	3.4	3.4	0.01	27.9	0.15	1.14	1.08	1.09
2400	3.4	3.4	0.01	32.3	0.17	1.12	1.08	1.08
2600	3.4	3.4	0.01	29.2	0.18	1.07	1.06	1.06
2800	3.5	3.5	0.01	25.4	0.20	1.14	1.05	1.05
3000	3.5	3.5	0.01	25.9	0.21	1.14	1.04	1.05
3200	3.5	3.5	0.01	26.9	0.23	1.10	1.03	1.03
3400	3.5	3.5	0.01	24.9	0.25	1.09	1.03	1.03
3600	3.5	3.5	0.01	24.0	0.26	1.08	1.07	1.07
3800	3.6	3.6	0.02	23.9	0.26	1.10	1.10	1.10
4000	3.6	3.6	0.02	23.5	0.28	1.10	1.09	1.09
4200	3.6	3.6	0.02	24.1	0.30	1.04	1.13	1.13
4400	3.6	3.6	0.02	24.6	0.31	1.10	1.19	1.20
4600	3.7	3.7	0.02	23.1	0.32	1.12	1.16	1.17
4800	3.7	3.7	0.02	23.6	0.33	1.03	1.14	1.14
5000	3.7	3.7	0.03	26.6	0.34	1.14	1.26	1.26
5200	3.7	3.7	0.03	23.7	0.35	1.19	1.29	1.30
5400	3.7	3.7	0.03	21.2	0.35	1.07	1.21	1.22
5600	3.8	3.8	0.03	22.9	0.37	1.11	1.24	1.25
5800	3.8	3.8	0.03	27.0	0.38	1.19	1.30	1.30
6000	3.8	3.8	0.03	24.0	0.40	1.09	1.21	1.21
6200	3.8	3.8	0.03	23.3	0.41	1.12	1.15	1.16
6400	3.9	3.9	0.03	29.5	0.43	1.26	1.24	1.25
6600	3.9	3.9	0.03	35.9	0.45	1.22	1.20	1.21
6800	3.9	3.9	0.03	28.3	0.45	1.06	1.06	1.06
7000	4.0	4.0	0.03	32.9	0.48	1.15	1.17	1.17
7200	4.0	4.0	0.03	27.3	0.51	1.20	1.24	1.24
7500	4.1	4.1	0.03	21.8	0.53	1.15	1.09	1.11

[1]Total Loss = Insertion Loss + 3dB Splitter Loss

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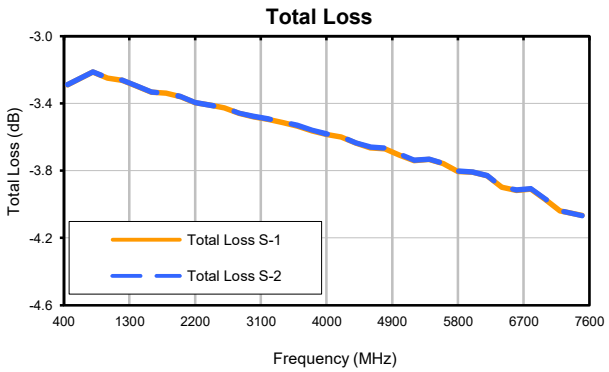
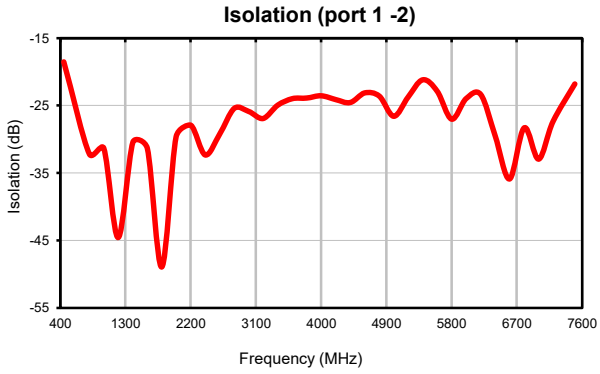
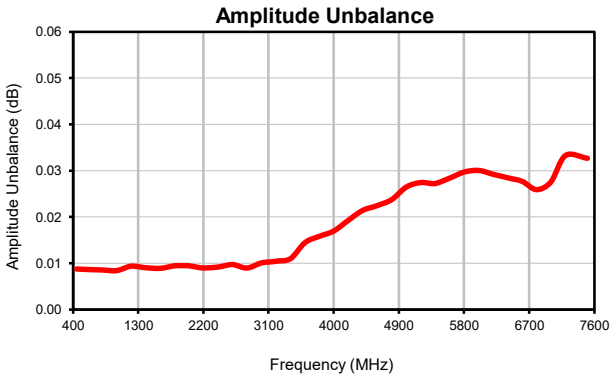
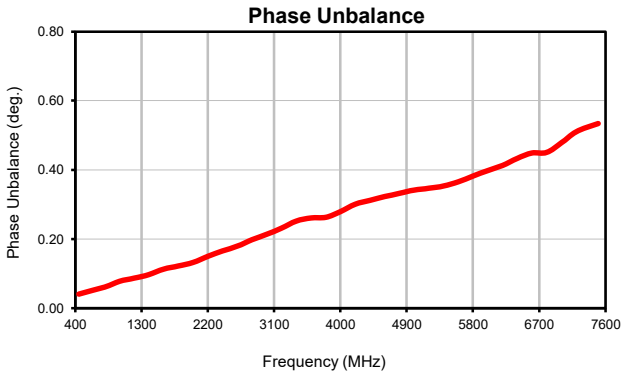
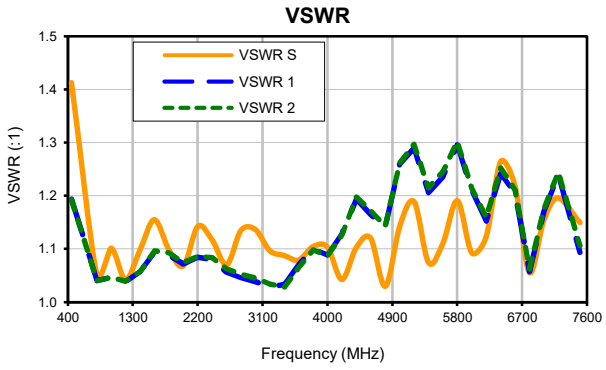
Typical Performance Curves







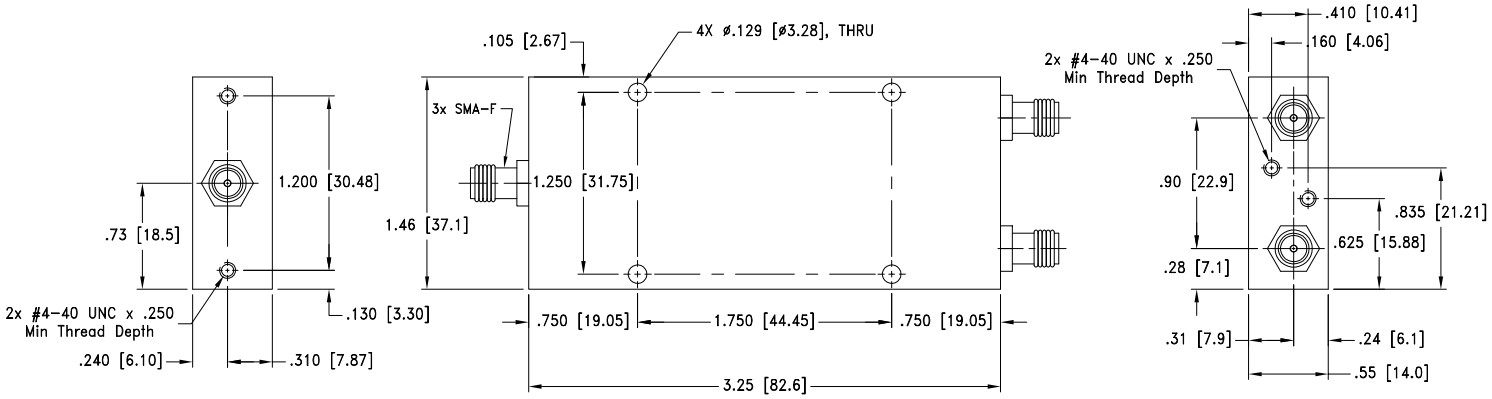




Case Style UU

Outline Dimensions

UU2624-7



Weight: 85 grams.

Dimensions are in inches (mm). Tolerances: 2 Pl.±.03[.76] ; 3 Pl. ±.015[.38]

Notes:

1. Case Material: Aluminum Alloy
2. Case Finish:
   For RoHS Case Styles: Clear Chemical Film.

Mini-Circuits®

INTERNET http://www.minicircuits.com

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

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Mini-Circuits

Environmental Specifications **ENV28T19**

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 85°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 100 cycles	MIL-STD-202, Method 107
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I
Connector Durability	500 mating/unmating cycles	MIL-PRF-39012E, PARAGRAPH 4.6.12

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