COAXIAL

50Ω

Power Splitter/Combiner zc4PD-E18673+

Mini-Circuits

4 Way-0° 18 to 67 GHz 12W

2W 1.85mm Female

THE BIG DEAL

- Wideband, 18 to 67 GHz
- Low Insertion Loss, 2dB typ.
- 12W Power Handling
- High Isolation, 32dB typ.
- Low Amplitude Unbalance, 0.2dB typ.
- Stripline Design

APPLICATIONS

- 5G MIMO and Back Haul Radio Systems
- LTE & 5G MIMO Infrastructure
- Satellite Communications
- Test & Measurement Equipment
- Radar, EW, and ECM Defense Systems



Generic photo used for illustration purposes only

Model No.	ZC4PD-E18673+
Case Style	UU2413-5
Connectors	1.85mm Female

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

PRODUCT OVERVIEW

Mini-Circuits' ZC4PD-E18673+ is a wideband 4-way 0° power splitter/combiner. It provides coverage from 18 to 67 GHz, (Ka band & V band) supporting a wide range of spplications including 5G, Defense, Instrumentation and many more. This model provides 12W power handling as a splitter and very low insertion loss across the entire operating frequency range, minimizing power dissipation and delivering excellent signal power transmission from input to output. The ZC4PD-E18673+ comes housed in a case measuring 1.00 x 2.04 x 0.5" with 1.85mm female connectors.

KEY FEATURES

Features	Advantages
Wideband, 18 to 67 GHz	Extremely wide frequency range supports many broadband applications in a single model.
Low insertion loss, 2 dB typ.	The combination of 12W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
High isolation, 32 dB typ	Minimizes interference between ports
High power handling: • 12W as a splitter at 25°C • 1.2W as a combiner at 25°C	The ZC4PD-E18673+ is suitable for systems with a wide range of power requirements
Low amplitude unbalance, 0.2 dB	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 350mA as a splitter	Supports applications where DC power is needed through the RF line.
DC Passing, 350mA 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 (GHz)	Min.	Тур.	Max.	Units
Frequency Range			18		67	GHz
		18 - 40		1.4	2.4	
Insertion Loss (above theoretical 6.0dB per port)	l 6.0dB per port)	40 - 50		2.0	2.9	dB
		50 - 67		2.7	3.8	
		18 - 40	16	30		
Isolation		40 - 50	16	33		dB
		50 - 67	16	33		
		18 - 40		3		
Phase Unbalance (±)1		40 - 50		5		Degree
		50 - 67		6		
		18 - 40		0.1	0.5	
Amplitude Unbalance (±) ¹		40 - 50		0.2	0.7	dB
		50 - 67		0.2	0.9	
		18 - 40		1.20	1.7	
VSWR (Port S)	40 - 50		1.17	1.8	:1	
		50 - 67		1.17	1.9	
		18 - 40		1.18	1.7	
VSWR (Port 1-4)	40 - 50		1.15	1.8	:1	
	50 - 67		1.11	1.9		
As Splitter ¹	Splitter ¹				12	W
Power Handling As	Combiner ²				1.2	vv

1. All outputs must be terminated with 50 ohm (VSWR 1.5:1 or better) 2. As a combiner of non-coherent signals, max. power per port is 0.3 watt

MAXIMUM RATINGS

Parameter	Ratings
Operating Case Temperature	-50 °C to +100 °C
Storage Temperature	-50 °C to +100 °C

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

FUNCTIONAL DIAGRAM

	PORT1 RF+DC
PORT S	PORT 2 RF+DC
O RE+DC	PORT 3 RF+DC
RF+DC	PORT 4 RF+DC

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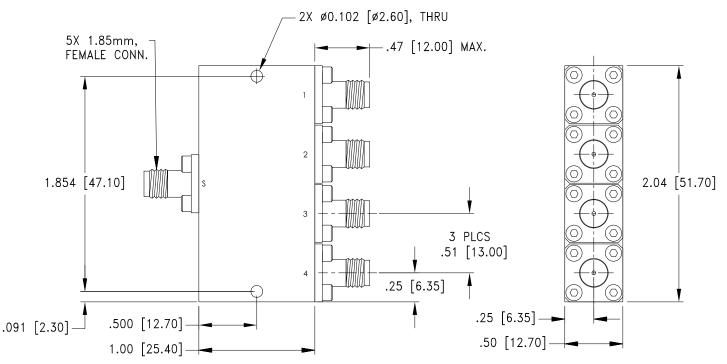
Mini-Circuits 50 Ω 4 Way-0° 18 to 67 GHz 12W 1.85mm Female

COAXIAL CONNECTIONS

Input / Output ¹	S
Output / Input ¹	1-4

Note1: Unit is bi-directional design

OUTLINE DRAWING



Dimensions are in inches (mm). Tolerances: 2 Pl. + .03; 3 Pl. + .015 Weight: 70 grams



TYPICAL PERFORMANCE CURVES

- - - 2-3

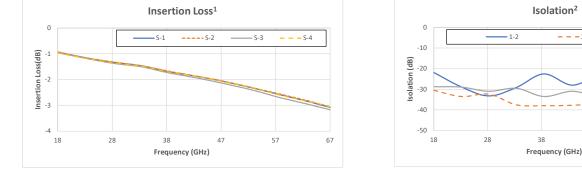
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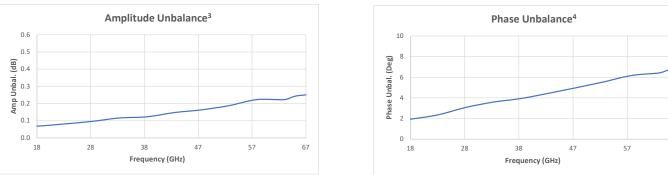
3-4

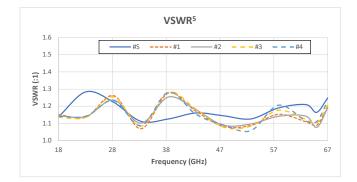
57

67

67







Note:

- 1. Insertion loss is loss above theoretical loss (6dB)
- 2. Isolations are representative of all combination of ports
- 3. Amplitude unbalance is average unbalance between any ports
- 4. Phase unbalance is average unbalance between any ports
- 5. VSWR is typical representation of all ports

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.
- В. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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 C. 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

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