DC Pass, High Power

Power Splitter/Combiner ZC2PD-V18443+

2 Way-0 50Ω 18000 to 44000 MHz

The Big Deal

- Ultra wideband, 18 to 44 GHz
- Low insertion loss, 0.7 dB typ.
- High Isolation, 29 dB typ.
- 20W power handling
- Low amplitude unbalance, 0.04 dB typ.

CASE STYLE: UU2624-6

Product Overview

Mini-Circuits' ZC2PD-V18443+ is an ultra wideband 2-way 0˚ splitter/combiner providing coverage from 18 to 44 GHz, supporting a wide range of applications including 5G, Ku, Ka, V and K-Band, instrumentation and many more. This model provides 20W 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 ZC2PD-V18443+ comes housed in a case measuring 1.06 x 0.85 x 0.5".

Key Features

Feature	Advantages
Ultra-wideband, 18 to 44 GHz	Extremely wide frequency range supports many broadband applications in a single model. Ideal for use in widebnad instrumentation
Low insertion loss, 0.7 dB typ. at 26.5 GHz	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, 33 dB typ. at 26.5 GHz	Minimizes interference between ports.
High power handling: • 20W as a splitter at 25°C	The ZC2PD-V18443+ is suitable for systems with a wide range of power requirements.
Low amplitude unbalance, 0.04 dB at 26.5 GHz	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 384mA	Supports applications where DC power is needed to pass through the RF line.

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ZC2PD-V18443+

2 Way-0° 50Ω 18000 to 44000 MHz

Generic photo used for illustration purposes only

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Connectors	Model
2.4mm-Fem	ZC2PD-V18443+

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

Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	20W* max.
Internal Dissipation	0.3W max.
DC Current	384mA

Permanent damage may occur if any of these limits are exceeded.
* Derate linearly to 7.7W at 100°C

Coaxial Connections

Sum Port	S
Port 1	1
Port 2	2

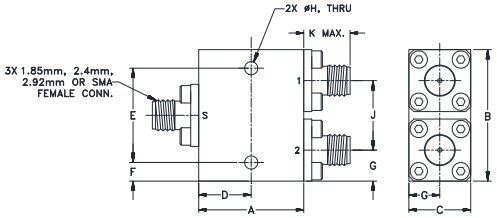
Features

- Ultra wideband, 18000 - 44000 MHz
- Low insertion loss, 0.7 dB typ.
- Low amplitude unbalance, 0.04 dB typ.
- Excellent VSWR, 1.18:1 typ.
- High isolation, 29 dB typ.

Applications

- 5G
- Fixed satellite
- Space research
- Mobile

Outline Drawing

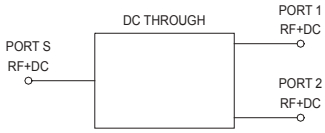


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
.85	1.06	.50	.425	.760	.150	.25
21.59	26.92	12.70	10.80	19.30	3.81	6.35

H	J	K	wt
.106	.56	.43	grams
2.7	14.22	11	45

Electrical Schematic



Electrical Specifications at 25°C

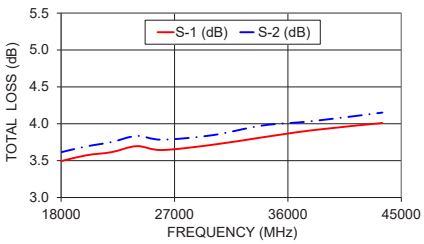
Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		18000		44000	MHz
Insertion Loss Above 3.0 dB	18000-26500		0.7	1.2	dB
	26500-44000		0.9	1.6	
Isolation	18000-26500	18	29		dB
	26500-44000	18	29		
Phase Unbalance	18000-26500		0.9	4.0	Degree
	26500-44000		1.5	5.0	
Amplitude Unbalance	18000-26500		0.04	0.3	dB
	26500-44000		0.05	0.4	
VSWR (Port S)	18000-26500		1.18	1.6	:1
	26500-44000		1.18	1.7	
VSWR (Port 1-2)	18000-26500		1.18	1.6	:1
	26500-44000		1.18	1.7	

Typical Performance Data

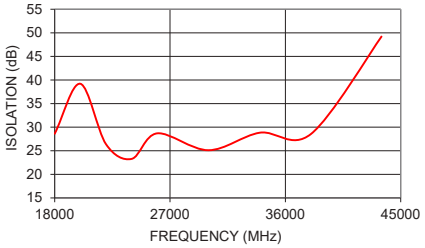
Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
18000	3.49	3.61	0.12	28.61	0.15	1.08	1.05	1.03
20000	3.57	3.69	0.12	39.20	0.17	1.18	1.20	1.19
22000	3.61	3.75	0.14	26.40	0.11	1.21	1.36	1.35
24000	3.70	3.83	0.14	23.27	0.21	1.32	1.22	1.22
26000	3.64	3.78	0.14	28.69	0.22	1.17	1.07	1.08
30000	3.71	3.84	0.13	25.11	0.18	1.07	1.27	1.24
34000	3.82	3.98	0.16	28.83	0.06	1.24	1.15	1.13
38000	3.91	4.04	0.12	28.56	0.03	1.20	1.29	1.21
44000	4.01	4.15	0.14	49.21	0.19	1.15	1.21	1.15

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

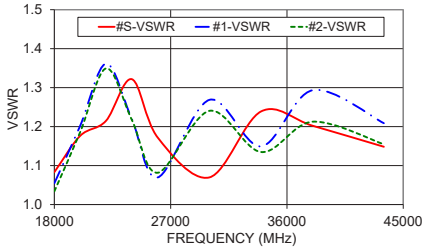
ZC2PD-V18443+
TOTAL LOSS



ZC2PD-V18443+
ISOLATION



ZC2PD-V18443+
VSWR



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