

DC Pass, High Power

# Power Splitter/Combiner ZC16PD-02183-S+

16 Way-0° 50Ω 2000 to 18000 MHz

## The Big Deal

- Super wideband, 2 to 18 GHz
- Low insertion loss, 2.3 dB typ. at 10 GHz
- High Isolation, 33 dB typ. at 10 GHz
- 20W power handling
- Low amplitude unbalance, 0.12 dB typ. at 10 GHz



CASE STYLE: UU179-1

## Product Overview

Mini-Circuits' ZC16PD-02183-S+ is a super wideband 16-way 0° splitter/combiner providing coverage from 2 to 18 GHz, supporting a wide range of applications including S-Band, C-Band, X-Band, Ku-Band and 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 ZC16PD-02183-S+ comes housed in a case measuring 8.27 x 3.62 x 0.5" with SMA connectors.

## Key Features

Feature	Advantages
Super wideband, 2 to 18 GHz	Extremely wide frequency range supports many broadband applications in a single model.
Low insertion loss, 2.3 dB typ. at 10 GHz	The combination of 20W 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 10 GHz	Minimizes interference between ports.
High power handling: <ul style="list-style-type: none"><li>• 20W as a splitter at 25°C</li><li>• 1.6W as a combiner</li></ul>	The ZC16PD-02183-S+ is suitable for systems with a wide range of power requirements.
Low amplitude unbalance, 0.12 dB at 10 GHz	Produces nearly equal output signals, ideal for parallel path and multichannel systems.
DC Passing, 510mA input to output	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.  
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## ZC16PD-02183-S+

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Generic photo used for illustration purposes only  
CASE STYLE: UU179-1

### 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	1.6W max.
DC Current	510 mA

Permanent damage may occur if any of these limits are exceeded.  
\* Derate linearly to 13W at 100°C

### Coaxial Connections

Sum Port	S
Port 1-16	1-16

### Features

- Super wideband, 2000 - 18000 MHz
- Low insertion loss, 2.3 dB typ at 10 GHz
- Low amplitude unbalance, 0.12 dB typ at 10 GHz
- Excellent VSWR, 1.19:1 typ at 10 GHz
- High isolation, 33 dB typ at 10 GHz

### Applications

- Fixed satellite
- Mobile
- Space research

Connectors	Model
SMA-Fem	ZC16PD-02183-S+

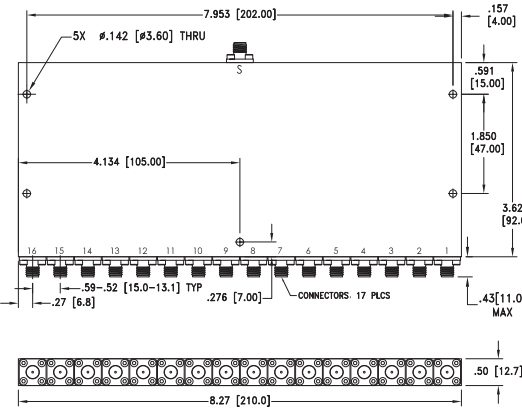
**+RoHS Compliant**  
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		2000		18000	MHz
Insertion Loss Above 12.0 dB	2000-8000		1.4	3.0	dB
	8000-18000		2.9	5.6	
Isolation	2000-8000	16	27		dB
	8000-18000	18	33		
Phase Unbalance (±) <sup>1</sup>	2000-8000		1.7	6	Degree
	8000-18000		4.5	9	
Amplitude Unbalance (±) <sup>1</sup>	2000-8000		0.10	0.5	dB
	8000-18000		0.16	0.6	
VSWR (Port S)	2000-8000		1.11	1.5	:1
	8000-18000		1.13	1.6	
VSWR (Port 1-16)	2000-8000		1.11	1.6	:1
	8000-18000		1.08	1.6	

1. With reference to average.

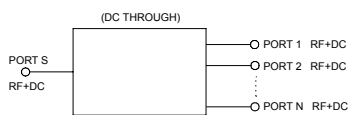
### Outline Drawing



Weight: 750 grams;

Dimensions are in inches (mm). Tolerances: 2 PL±.03; 3 PL±.015

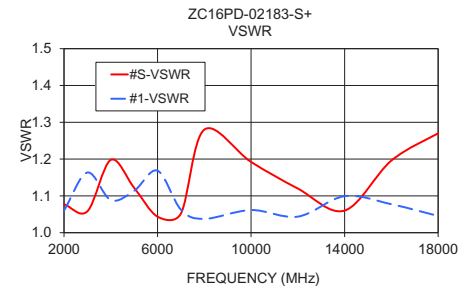
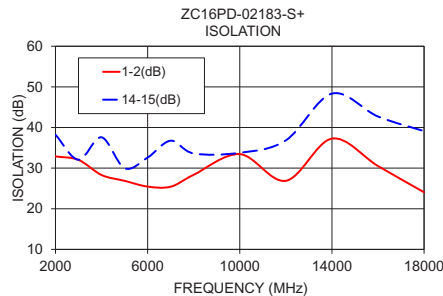
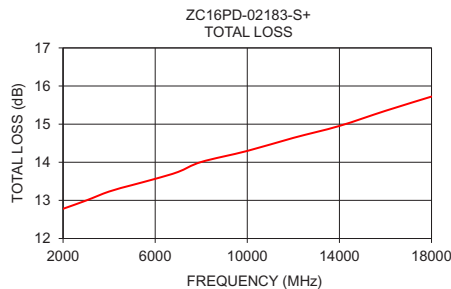
### Electrical Schematic



### Typical Performance Data

Freq. (MHz)	Total Loss <sup>1</sup> (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 1
			1-2	14-15			
			S-1				
2000	12.78	0.08	32.88	38.22	0.56	1.08	1.06
3000	13.00	0.08	32.03	32.06	0.70	1.06	1.16
4000	13.23	0.08	28.31	37.58	0.95	1.20	1.09
5000	13.40	0.09	26.87	29.97	1.57	1.12	1.11
6000	13.56	0.06	25.45	32.60	1.97	1.04	1.17
7000	13.75	0.09	25.43	36.75	2.06	1.05	1.06
8000	14.01	0.10	28.36	33.60	2.22	1.28	1.04
10000	14.30	0.12	33.45	33.77	3.14	1.19	1.06
12000	14.64	0.13	26.88	36.83	3.82	1.12	1.04
14000	14.95	0.16	37.27	48.34	4.49	1.06	1.10
16000	15.35	0.14	30.51	42.70	5.36	1.20	1.08
18000	15.72	0.24	24.06	39.12	5.90	1.27	1.05

1. Total Loss = Insertion Loss + 12dB splitter loss.



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