DC Pass

Power Splitter/Combiner ZN2PD-02183-S+

2 Way-0° 50Ω 2 to 18 GHz

The Big Deal

- Ultra-wideband, 2 to 18 GHz
- Low insertion loss, 0.5 dB
- Good power handling, 10W as a splitter
- Low unbalance, 0.05 dB, 1.5˚
- High isolation, 20 dB

CASE STYLE: UU2386

Product Overview

Mini-Circuits' ZN2PD-02183-S+ is a 2-way 0˚ ultra-wideband splitter/combiner supporting a wide range of applications from 2 to 18 GHz. This model is capable of handling up to 10W RF input power as a splitter with low insertion loss across its full frequency range, providing excellent signal power transmission from input to output. It delivers nearly equal output signals with very low amplitude unbalance and low phase unbalance, with excellent isolation minimizing interference between channels. The ZN2PD-02183-S+ comes housed in a rugged, compact aluminum alloy case measuring 1.0 x 2.25 x 0.38" with SMA-Female connectors.

Key Features

Feature	Advantages
Ultra-wideband, 2 to 18 GHz MHz	A single model supports bandwidth requirements for a wide variety of applications.
High power handling, 10W as a splitter	The ZN2PD-02183-S+ is suitable for systems with a wide range of power requirements.
Low insertion loss, 0.5 dB	The combination of 10W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
Low unbalance: • 0.05 dB amplitude unbalance • 1.5˚ 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.

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Connectors	Model
SMA-Female	ZN2PD-02183-S+

+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)*	10W max.
Internal Dissipation	0.25W max.
DC Current	600 mA (300mA for each port)

Permanent damage may occur if any of these limits are exceeded.
*Assume output match of 2.0:1 or better.

Coaxial Connections

SUM PORT	S
PORT 1	1
PORT 2	2

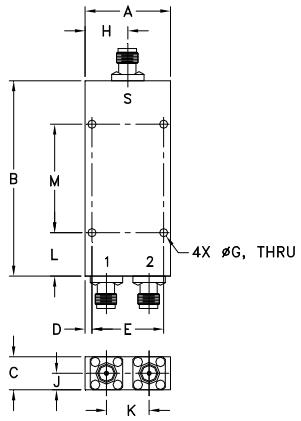
Features

- wideband, 2 to 18 GHz
- excellent amplitude unbalance, 0.05 dB typ.
- excellent insertion loss 0.5 dB typ.
- up to 10W power input as splitter

Applications

- PCS/DCS
- instruments
- satellite distribution
- WLAN
- LTE
- radar

Outline Drawing

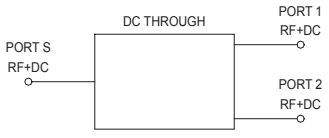


Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
1.00	2.25	.38	.08	.840	--	.095
25.40	57.15	9.65	2.03	21.34	--	2.41

H	J	K	L	M	N	wt
.50	.19	.50	.50	1.250	--	grams
12.70	4.83	12.70	12.70	31.75	--	95

Electrical Schematic



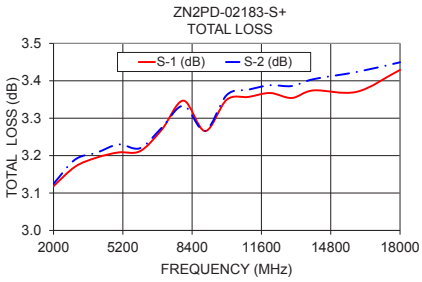
Electrical Specifications at 25°C

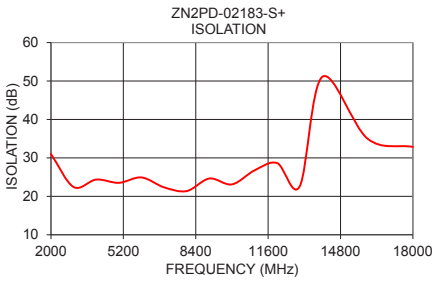
Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
Frequency Range		2		18	GHz
Insertion Loss Above 3.0 dB	2 - 18	—	0.5	1.0	dB
Isolation	2 - 18	16	20		dB
Phase Unbalance	2 - 18	—	1.5	4.0	Degree
Amplitude Unbalance	2 - 18	—	0.05	0.3	dB
VSWR (Port S)	2 - 18	—	1.35	1.55	:1
VSWR (Port 1-2)	2 - 18	—	1.25	1.5	:1

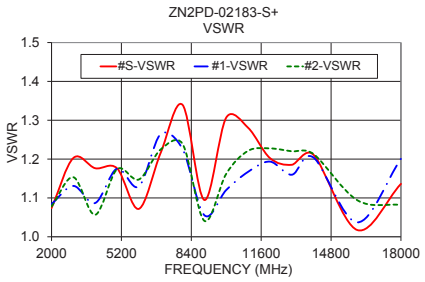
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
2000	3.12	3.12	0.01	31.00	0.24	1.07	1.08	1.08
3000	3.17	3.19	0.02	22.42	0.32	1.20	1.13	1.15
4000	3.19	3.21	0.01	24.36	0.44	1.18	1.09	1.06
5000	3.21	3.23	0.02	23.51	0.46	1.18	1.18	1.17
6000	3.21	3.22	0.01	24.91	0.61	1.07	1.13	1.15
7000	3.27	3.27	0.01	22.33	0.67	1.22	1.26	1.22
8000	3.35	3.33	0.01	21.36	0.88	1.34	1.23	1.24
9000	3.27	3.27	0.00	24.63	1.06	1.09	1.06	1.04
10000	3.35	3.36	0.01	23.10	1.21	1.31	1.12	1.16
11000	3.36	3.38	0.02	26.75	1.29	1.28	1.17	1.22
12000	3.37	3.39	0.02	28.64	1.36	1.20	1.19	1.23
13000	3.35	3.39	0.03	22.64	1.52	1.19	1.16	1.22
14000	3.37	3.40	0.03	51.11	1.59	1.21	1.20	1.21
16000	3.37	3.42	0.05	34.96	1.75	1.02	1.04	1.09
18000	3.43	3.45	0.02	32.85	1.56	1.14	1.20	1.08

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.
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