

DC Pass

Power Splitter/Combiner

ZN12PD-63-S+

12 Way-0° 50Ω 600 to 6000 MHz 20Watt

The Big Deal

- Wideband, 600 - 6000 MHz
- High power, 20W as a splitter
- Good isolation, 19 dB
- Ultra-slim case, 8.5 x 9.5 x 0.50"
- SMA connectors



CASE STYLE: UU2061-1

Product Overview

Mini-Circuits' ZN12PD-63-S+ is a connectorized, wideband 12-way 0° splitter/combiner supporting a wide variety of applications from 600 to 6000 MHz. This model is capable of handling up to 20W RF input power as a splitter and provides low insertion loss and good isolation. It comes housed in an aluminum alloy case (8.5 x 9.5 x 0.50") with SMA connectors, saving space in crowded system layouts. This model covers all cellular bands including LTE through WiFi in a single unit.

Key Features

Feature	Advantages
Wideband, 600 to 6000 MHz	ZN12PD-63-S+ supports bandwidth requirements for a wide variety of applications.
Power handling up to 20W as a splitter (1.5W as a combiner)	Supports a wide range of power requirements.
Low insertion loss, 1.4 – 3.0 dB	Provides good transmission of signal power, making this model an excellent candidate for signal distribution applications where low loss is a requirement.
DC passing up to 1.2A (100 mA each port)	Supports applications where DC power is needed through the RF line.
High isolation, 19 dB	Minimizes interference between input ports.
Case design, 8.5 x 9.5 x 0.50"	Saves space in crowded system layouts.

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



Power Splitter/Combiner

12 Way-0° 50Ω 600 to 6000 MHz 20Watt

Maximum Ratings

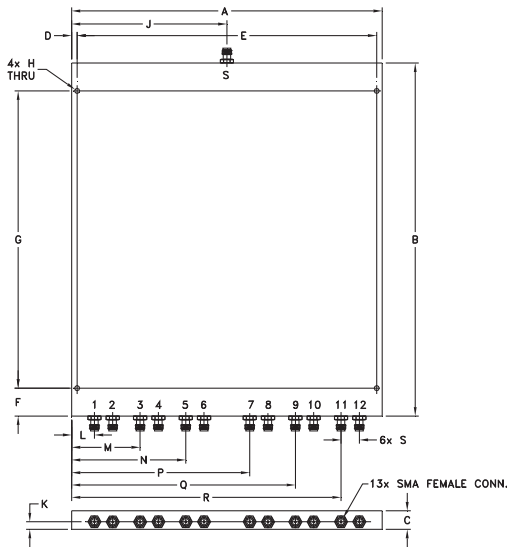
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
DC Current	1.2 A (100mA for each port)

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

Coaxial Connections

SUM PORT	S(COM)
PORT 1,2,3,.....,12	1,2,3,.....,12

Outline Drawing



Outline Dimensions (inch mm)

A	B	C	D	E	F	G	H	J
8.50	9.50	.50	.15	8.200	.75	8.00	.136	4.25
215.90	241.30	12.70	3.81	208.28	19.05	203.20	3.45	107.95
K	L	M	N	P	Q	R	S	wt
.205	.63	1.88	3.13	4.88	6.13	7.38	0.5	grams
5.21	16.00	47.75	79.50	123.95	155.70	187.45	12.70	1320

Features

- Wideband 600 to 6000 MHz
- High isolation, 19 dB typ.
- Good output VSWR, 1.4:1 typ.
- Good amplitude unbalance, 0.7 dB typ.

Applications

- All cellular bands including LTE
- WiFi
- Bluetooth
- Lab
- Test and measurement

ZN12PD-63-S+



CASE STYLE: UU2061-1

Connectors SMA Model ZN12PD-63-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		600		6000	MHz
Insertion Loss Above 10.8 dB	600 - 3000	—	1.4	2.4	dB
	3000 - 6000	—	3.0	4.5	dB
Isolation	600 - 3000	14	20	—	dB
	3000 - 6000	13	18	—	dB
Phase Unbalance	600 - 3000	—	8.0	—	Degree
	3000 - 6000	—	10.0	—	Degree
Amplitude Unbalance	600 - 3000	—	0.4	0.9	dB
	3000 - 6000	—	0.9	1.6	dB
VSWR (Port S)	600 - 6000	—	1.5	2.4	:1
VSWR (Port 1-2)	600 - 3000	—	1.6	—	:1
	3000 - 6000	—	1.5	—	:1
Power Handling ¹	As Splitter	600 - 6000	—	20	Watt
	As Combiner ²	600 - 6000	—	1.5	Watt

1. Over 25°C to 100°C. Derate linearly to 50% of rating at 100°C.
2. As a combiner of non-coherent signals, max. power per port is 1.5 watt power rating divided by number of ports.

Electrical Schematic



Notes

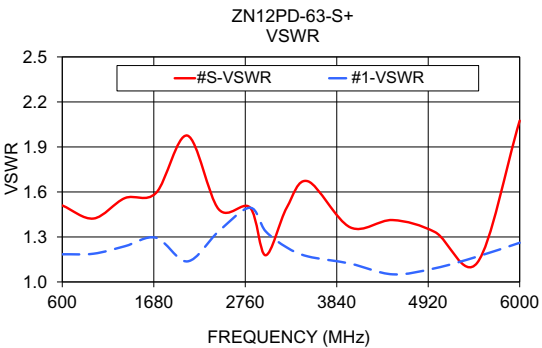
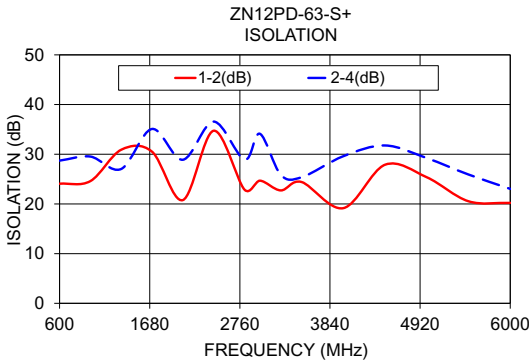
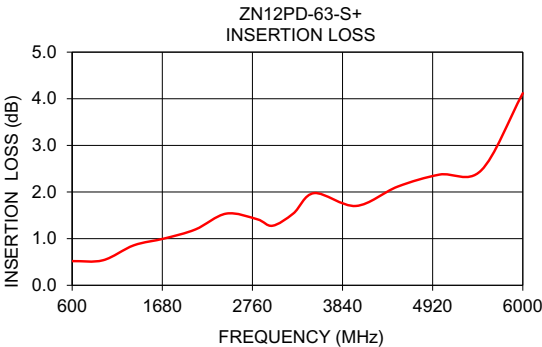
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Typical Performance Data

Freq. (MHz)	Insertion Loss ¹ (dB)	Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbalance (deg.)	VSWR S	VSWR 12
			Adjacent	Opposite			
600	0.52	0.22	24.07	28.72	0.98	1.51	1.18
969	0.54	0.56	24.60	29.53	2.47	1.42	1.19
1338	0.86	0.21	30.91	27.04	3.01	1.56	1.24
1708	1.01	0.20	30.52	35.09	5.56	1.59	1.29
2077	1.20	0.15	20.77	28.89	4.07	1.98	1.14
2446	1.54	0.24	34.73	36.57	6.15	1.48	1.34
2815	1.42	0.32	22.89	28.90	4.88	1.50	1.49
3000	1.28	0.35	24.68	34.12	6.13	1.18	1.34
3250	1.54	0.48	22.72	25.87	5.07	1.50	1.23
3500	1.98	0.62	24.41	25.37	6.10	1.67	1.17
4000	1.70	0.63	19.15	29.61	6.30	1.36	1.12
4500	2.12	0.62	27.89	31.77	4.46	1.41	1.05
5000	2.37	0.77	25.37	29.22	5.26	1.33	1.09
5500	2.46	1.29	20.53	25.92	6.43	1.13	1.17
6000	4.12	0.72	20.21	23.03	10.65	2.07	1.26

1. Total Loss = Insertion Loss + 10.8dB splitter loss.



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