

DC Pass, Ultra-Thin

# Power Splitter/Combiner

**ZN2PD-272SMP+**

2 Way-0° 50Ω 600 to 2750 MHz

## The Big Deal

- Wideband, 600 - 2750 MHz
- Low insertion loss, 0.4 dB
- High power handling, 10W as a splitter
- Ultra-thin case, 0.3" height (7.62mm)
- SMP snap-on connectors



## Product Overview

Mini-Circuits' ZN2PD-272SMP+ is a connectorized, wideband 2-way 0° splitter/combiner supporting a wide variety of applications from 600 to 2750 MHz. This model is capable of handling up to 10W RF input power as a splitter and provides low insertion loss, good isolation, and low phase and amplitude unbalance. It comes housed in an ultra-thin aluminum alloy case (1.80 x 3.28 x .30") with SMP snap-on connectors, saving space in crowded system layouts.

## Key Features

Feature	Advantages
Wideband, 600 to 2750 MHz	ZN2PD-272SMP+ supports bandwidth requirements for a wide variety of applications.
Ultra-thin case design, 1.8 x 3.3 x 0.3"	Saves space in crowded system layouts.
Blind mate, snap-on SMP connectors	Blind mate SMP connectors enable direct connection to adjacent modules while facilitating thin case height.
Power handling up to 10W as a splitter	Supports a wide variety of power requirements.
Low unbalance: <ul style="list-style-type: none"><li>• Phase unbalance, 1.0°</li><li>• Amplitude unbalance, 0.1 dB</li></ul>	Produces nearly equal output signals, ideal for parallel path / multichannel systems.
DC Passing, 600 mA (300mA for each port)	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.  
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](http://www.minicircuits.com/MCLStore/terms.jsp)



# Power Splitter/Combiner

## ZN2PD-272SMP+

2 Way-0° 50Ω 600 to 2750 MHz

### Maximum Ratings

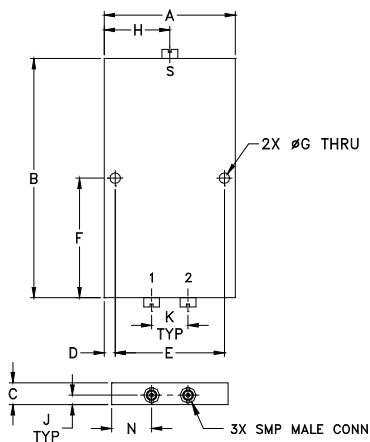
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.6W max.

DC Current 600 mA (300mA for each port)  
 Permanent damage may occur if any of these limits are exceeded.

### Coaxial Connections

SUPPORT	S
PORT 1	1
PORT 2	2

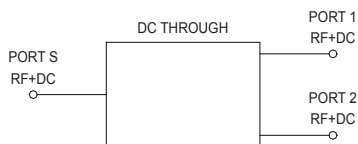
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
1.80	3.28	.30	.15	1.500	1.64
45.72	83.31	7.62	3.81	38.10	41.66
G	H	J	K	N	wt
0.14	0.9	0.13	0.500	.65	grams
3.6576	22.86	3.302	12.7	16.51	55

### Electrical Schematic



### Features

- Ultra-thin package
- Snap-on blind mate SMP connectors
- Wideband, 600-2750 MHz
- Excellent amplitude unbalance, 0.1 dB typ.
- Excellent phase unbalance, 1 deg. typ.
- Up to 10W power input as splitter

### Applications

- Dense Packaging Environment
- Automated Test Systems
- Cellular/ISM/SMG/GSM
- Satellite Distribution
- GPS/L BAND (MARSAT)
- CATV



Generic photo used for illustration purposes only  
 CASE STYLE: UU2046-1

Connectors	Model
SMP (Snap-on)	ZN2PD-272SMP+

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

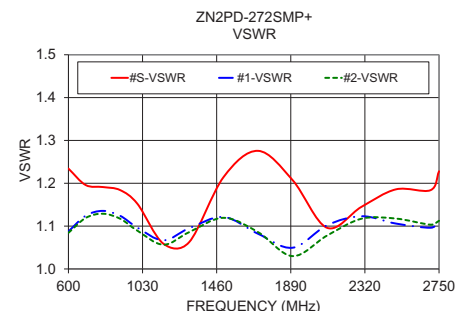
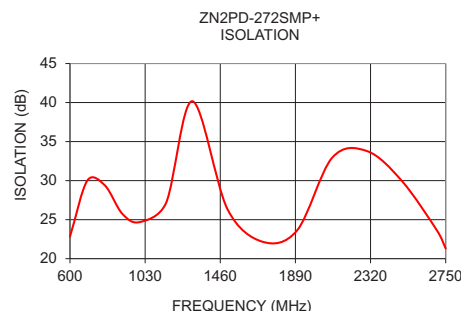
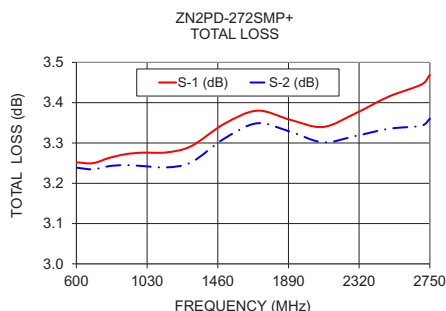
### Electrical Specifications at 25°C

Parameter	Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range		600		2750	MHz
Insertion Loss Above 3.0 dB	600 - 2750 700 - 2650	—	0.4 0.3	0.7 .65	dB
Isolation	600 - 2750 700 - 2650	18 20	22 24	—	dB
Phase Unbalance	600 - 2750 700 - 2650	—	1.0 1.0	4.0 3.5	Degree
Amplitude Unbalance	600 - 2750 700 - 2650	—	0.1 0.1	0.4 0.35	dB
VSWR (Port S)	600 - 2750 700 - 2650	—	1.25 1.20	1.45 1.4	:1
VSWR (Port 1-2)	600 - 2750 700 - 2650	—	1.15 1.12	1.40 1.30	:1

### Typical Performance Data

Frequency (MHz)	Total Loss <sup>1</sup> (dB)		Amplitude Unbalance (dB)	Isolation (dB)	Phase Unbalance (deg.)	VSWR S	VSWR 1	VSWR 2
	S-1	S-2						
600	3.25	3.24	0.01	22.83	0.27	1.23	1.09	1.08
650	3.25	3.24	0.01	26.29	0.30	1.21	1.11	1.10
700	3.25	3.23	0.02	30.03	0.30	1.20	1.12	1.12
800	3.26	3.24	0.02	29.38	0.32	1.19	1.14	1.13
900	3.27	3.25	0.03	25.73	0.37	1.18	1.12	1.12
1000	3.28	3.24	0.03	24.69	0.39	1.15	1.10	1.09
1150	3.28	3.24	0.04	27.15	0.46	1.06	1.07	1.06
1300	3.29	3.25	0.04	40.17	0.53	1.06	1.09	1.09
1500	3.35	3.31	0.04	26.40	0.63	1.21	1.12	1.12
1700	3.38	3.35	0.03	22.18	0.71	1.28	1.08	1.09
1900	3.36	3.33	0.03	23.63	0.77	1.21	1.05	1.03
2100	3.34	3.30	0.04	32.92	0.84	1.10	1.10	1.08
2300	3.37	3.32	0.06	33.78	0.90	1.14	1.12	1.12
2500	3.42	3.34	0.08	29.94	0.98	1.19	1.11	1.12
2700	3.45	3.34	0.10	23.61	1.08	1.18	1.10	1.10
2750	3.47	3.36	0.11	21.31	1.12	1.23	1.11	1.11

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



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