

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



CASE STYLE: UU2046-1

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: • Phase unbalance, 1.0° • Amplitude unbalance, 0.1 dB	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



Power Splitter/Combiner

ZN2PD-272SMP+

2 Way-0° 50Ω 600 to 2750 MHz

Maximum Ratings

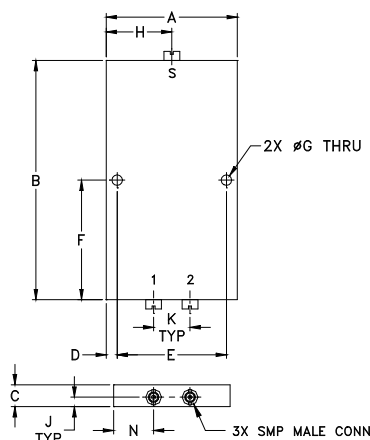
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter)	10W max.
Internal Dissipation	0.6W max.
DC Current	600 mA (300mA for each port)

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

Coaxial Connections

SUMPORT	S
PORT 1	1
PORT 2	2

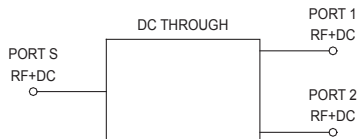
Outline Drawing



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

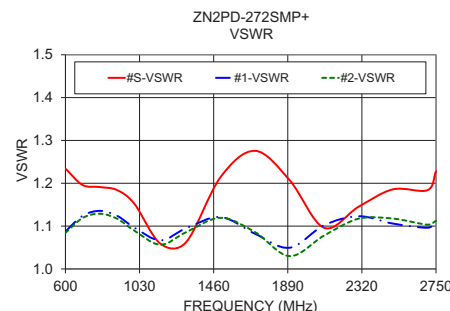
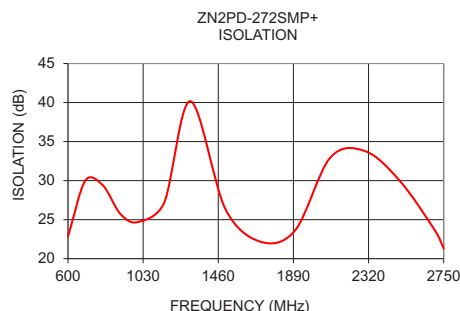
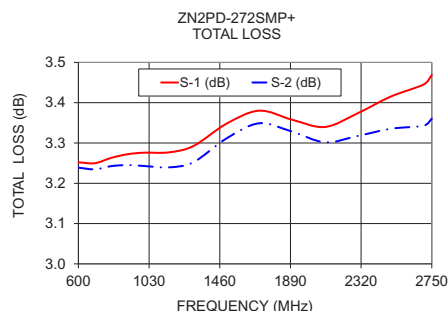
Electrical Specifications at 25°C

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 ¹ (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	1.08
650	3.25	3.24	0.01	26.29	0.30	1.21	1.10
700	3.25	3.23	0.02	30.03	0.30	1.20	1.12
800	3.26	3.24	0.02	29.38	0.32	1.19	1.13
900	3.27	3.25	0.03	25.73	0.37	1.18	1.12
1000	3.28	3.24	0.03	24.69	0.39	1.15	1.09
1150	3.28	3.24	0.04	27.15	0.46	1.06	1.06
1300	3.29	3.25	0.04	40.17	0.53	1.06	1.09
1500	3.35	3.31	0.04	26.40	0.63	1.21	1.12
1700	3.38	3.35	0.03	22.18	0.71	1.28	1.08
1900	3.36	3.33	0.03	23.63	0.77	1.21	1.05
2100	3.34	3.30	0.04	32.92	0.84	1.10	1.10
2300	3.37	3.32	0.06	33.78	0.90	1.14	1.12
2500	3.42	3.34	0.08	29.94	0.98	1.19	1.12
2700	3.45	3.34	0.10	23.61	1.08	1.18	1.10
2750	3.47	3.36	0.11	21.31	1.12	1.23	1.11

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



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2 Way-0° Power Splitter/Combiner

ZN2PD-272SMP+

Typical Performance Data

FREQUENCY (MHz)	TOTAL LOSS ¹ (dB)		AMPLITUDE UNBALANCE (dB)	ISOLATION (dB)	PHASE UNBALANCE (deg.)	FREQUENCY (MHz)	VSWR (:1)		
	S-1	S-2					S	1	2
300	3.45	3.43	0.01	11.30	0.18	300	1.64	1.17	1.17
400	3.35	3.34	0.01	14.17	0.21	400	1.48	1.06	1.06
500	3.28	3.27	0.01	17.77	0.24	500	1.33	1.03	1.03
550	3.26	3.25	0.01	20.04	0.27	550	1.28	1.06	1.06
600	3.25	3.24	0.01	22.83	0.27	600	1.23	1.09	1.08
650	3.25	3.24	0.01	26.29	0.30	650	1.21	1.11	1.10
700	3.25	3.23	0.02	30.03	0.30	700	1.20	1.12	1.12
750	3.26	3.24	0.02	31.39	0.33	750	1.19	1.13	1.13
800	3.26	3.24	0.02	29.38	0.32	800	1.19	1.14	1.13
850	3.27	3.25	0.02	27.22	0.36	850	1.19	1.13	1.13
900	3.27	3.25	0.03	25.73	0.37	900	1.18	1.12	1.12
950	3.28	3.25	0.03	24.93	0.38	950	1.17	1.11	1.10
1000	3.28	3.24	0.03	24.69	0.39	1000	1.15	1.10	1.09
1050	3.28	3.24	0.03	24.93	0.43	1050	1.13	1.08	1.07
1100	3.28	3.24	0.04	25.71	0.42	1100	1.09	1.07	1.06
1150	3.28	3.24	0.04	27.15	0.46	1150	1.06	1.07	1.06
1200	3.28	3.24	0.04	29.45	0.47	1200	1.03	1.07	1.06
1300	3.29	3.25	0.04	40.17	0.53	1300	1.06	1.09	1.09
1400	3.32	3.28	0.04	33.12	0.59	1400	1.14	1.12	1.11
1500	3.35	3.31	0.04	26.40	0.63	1500	1.21	1.12	1.12
1600	3.37	3.34	0.03	23.40	0.68	1600	1.26	1.11	1.11
1700	3.38	3.35	0.03	22.18	0.71	1700	1.28	1.08	1.09
1800	3.37	3.34	0.03	22.26	0.75	1800	1.26	1.05	1.05
1900	3.36	3.33	0.03	23.63	0.77	1900	1.21	1.05	1.03
2000	3.35	3.31	0.03	26.73	0.81	2000	1.15	1.07	1.05
2100	3.34	3.30	0.04	32.92	0.84	2100	1.10	1.10	1.08
2200	3.35	3.30	0.05	44.45	0.87	2200	1.10	1.12	1.10
2300	3.37	3.32	0.06	33.78	0.90	2300	1.14	1.12	1.12
2400	3.40	3.33	0.07	30.51	0.93	2400	1.18	1.12	1.12
2500	3.42	3.34	0.08	29.94	0.98	2500	1.19	1.11	1.12
2550	3.42	3.34	0.09	29.60	1.01	2550	1.18	1.10	1.11
2600	3.42	3.33	0.09	28.25	1.01	2600	1.17	1.09	1.11
2650	3.43	3.33	0.10	26.13	1.05	2650	1.17	1.09	1.10
2700	3.45	3.34	0.10	23.61	1.08	2700	1.18	1.10	1.10
2750	3.47	3.36	0.11	21.31	1.12	2750	1.23	1.11	1.11
2800	3.51	3.39	0.11	19.18	1.15	2800	1.30	1.13	1.13
2900	3.63	3.51	0.12	15.84	1.25	2900	1.52	1.20	1.21
3000	3.86	3.72	0.14	13.48	1.37	3000	1.84	1.33	1.34

¹Total Loss = Insertion Loss + 3dB Splitter Loss



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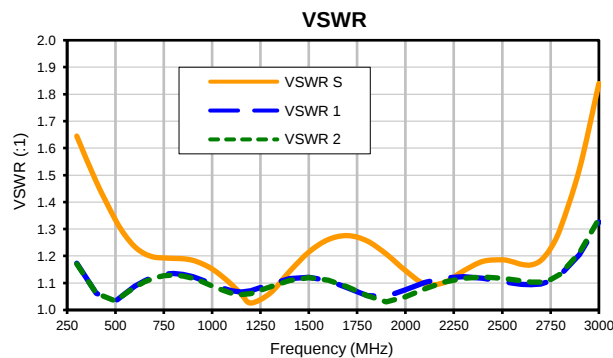
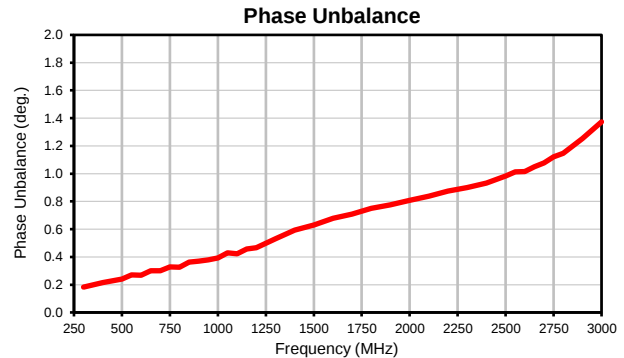
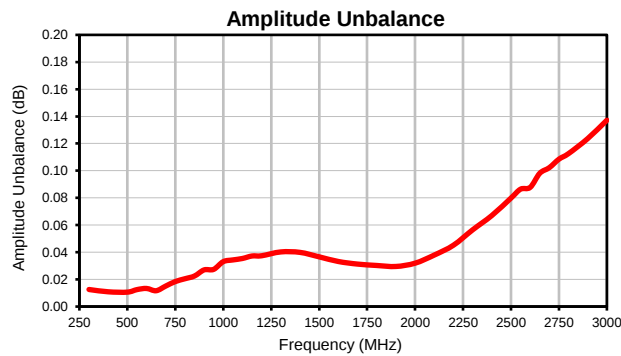
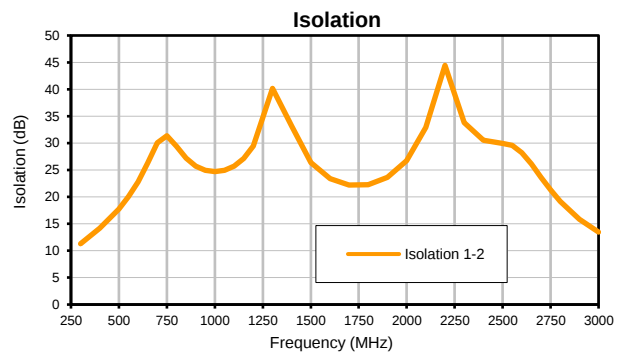
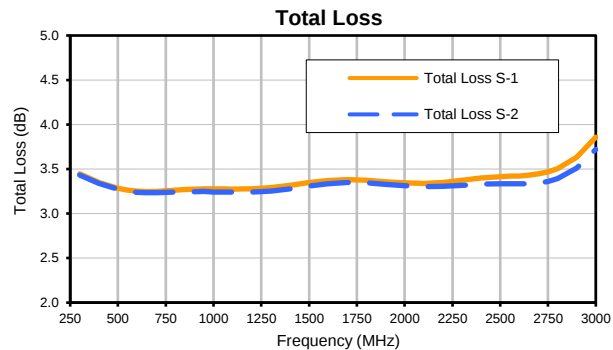
IF/RF MICROWAVE COMPONENTS

REV. OR
ZN2PD-272SMP+
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Page 1 of 1

2 Way-0° Power Splitter/Combiner

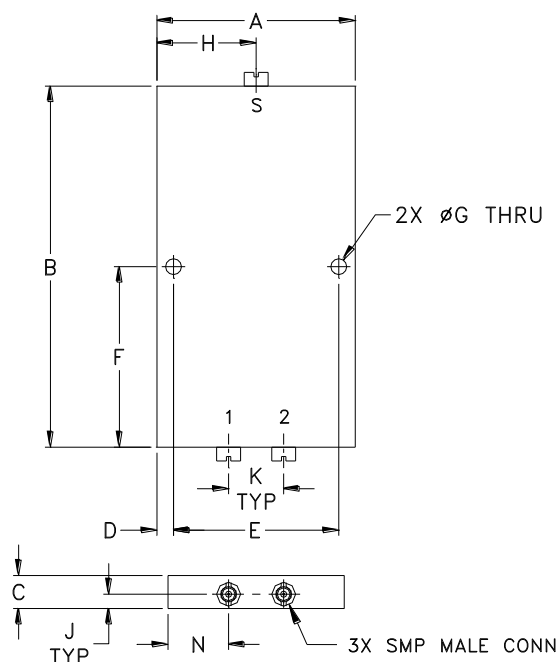
ZN2PD-272SMP+

Typical Performance Curves



Outline Dimensions

UU2046-1



CASE#	A	B	C	D	E	F	G	H	J	K	L
UU2046-1	1.80 (45.72)	3.28 (83.31)	.30 (7.62)	.150 (3.81)	1.500 (38.10)	1.64 (41.66)	.144 (3.66)	.90 (22.86)	.13 (3.30)	.500 (12.70)	-- --

CASE#	M	N	WT, GRAMS
UU2046-1	-- --	.65 (16.51)	55

Dimensions are in inches (mm). Tolerances: 2 Pl. $\pm .03$; 3 Pl. $\pm .015$

Notes:

- Case material: Aluminum alloy.
- Case finish:
For RoHS Case Styles: Clear chemical conversion coating, non-chrome or trivalent chrome based.
- Refer to the individual model data sheet for the type of connectors available.



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RF/IF MICROWAVE COMPONENTS



All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

Specification	Test/Inspection Condition	Reference/Spec
Operating Temperature	-55° to 100°C Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Barometric Pressure	100,000 Feet	MIL-STD-202, Method 105, Condition D
Humidity	90% RH, 65°C Units may require bake-out after humidity to restore full performance.	MIL-STD-202, Method 103
Thermal Shock	-65° to 125°C, 5 cycles	MIL-STD-202, Method 107, Condition B
Vibration (High Frequency)	20g peak, 10-2000 Hz, 12 times in each of three perpendicular directions (total 36)	MIL-STD-202, Method 204, Condition D
Mechanical Shock	100g, 6ms sawtooth, 3 shocks each direction 3 axes (total 18)	MIL-STD-202, Method 213, Condition I