High Power, DC Pass

Power Splitter/Combiner ZN6PD-272HP+

6 Way-0° 50Ω Up to 100W 650 to 2750 MHz

The Big Deal

- High power, up to 100W as a splitter
- Low insertion loss, 0.9 dB
- Good isolation, 25 dB

ZN6PD-272HPX-S+

ZN6PD-272HP-S+

CASE STYLE: AW257-2

Product Overview

Mini-Circuits' ZN6PD-272HP+ is a 6-way 0˚ high-power splitter/combiner providing up to 100W RF input power handling as a splitter and 3.0W as a combiner across the 650 to 2750 MHz frequency range. Its outstanding combination of high power handling and low loss minimize power dissipation and provide excellent signal fidelity from input to output. The splitter/combiner comes housed in a rugged aluminum alloy case measuring 8.08 x 3.25 x 2.38" and is available with your choice of SMA or N-Type connectors and optional heat sink.

Key Features

Feature	Advantages
Wideband, 650 to 2750 MHz	This model covers a variety of popular wireless communications bands, making it suitable for a wide range of applications.
High power handling: • 100W as a splitter • 3W as a combiner	Supports a wide range of power requirements.
Low insertion loss, 0.9 dB	The combination of 100W power handling and low insertion loss makes this model a suitable candidate for distributing signals while maintaining excellent transmission of signal power.
Low unbalance: • 0.4 dB amplitude unbalance • 4˚ phase unbalance	Produces nearly equal output signals, ideal for parallel path / multichannel systems.
High isolation, 25 dB	Minimizes interference between input ports.
DC Passing, 1.2A (200mA each port)	Supports applications where DC power is needed at later stages in the system.

High Power, DC Pass

Power Splitter/Combiner

ZN6PD-272HP+

6 Way-0° 50Ω Up to 100W 650 to 2750 MHz

ZN6PD-272HPX-S+

ZN6PD-272HP-S+

Maximum Ratings

Operating Temperature	-55°C to 60°C
Storage Temperature	-55°C to 100°C
Power Input (as a splitter[1])	100W max.
Internal Dissipation	3.0W max.
DC Current	1.2A (200mA for each port)

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

Coaxial Connections

SUM PORT	S
PORT 1,2,3,4,5,6,7,8	1,2,3,4,5,6

Features

- power handling up to 100W
- wideband, 650 to 2750 MHz
- low insertion loss, 0.9 dB typ.
- good isolation, 25 dB typ.
- rugged shielded case

Applications

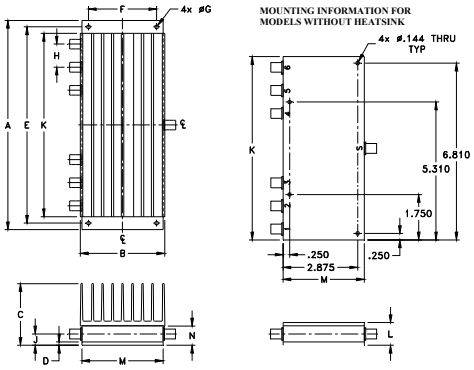
- WiMax
- LTE
- WCDMA

CASE STYLE: AW257-2

Connectors	Model
SMA	ZN6PD-272HP-S+
SMA	ZN6PD-272HPX-S+
N-TYPE	ZN6PD-272HP-N+
N-TYPE	ZN6PD-272HPX-N+

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

Outline Drawing



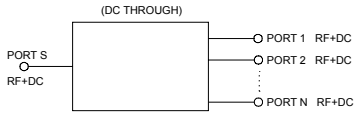
Outline Dimensions (inch / mm)

A	B	C	D	E	F	G
8.06	3.25	2.38	.125	7.560	2.625	.144
204.72	82.55	60.45	3.18	192.02	66.68	3.66

H	J	K	L	M	N	wt
.890	.44	7.06	.88	3.13	.75	grams*
22.61	11.18	179.32	22.35	79.50	19.05	1240

*850 grams without heatsink

Electrical Schematic



Electrical Specifications at 25°C

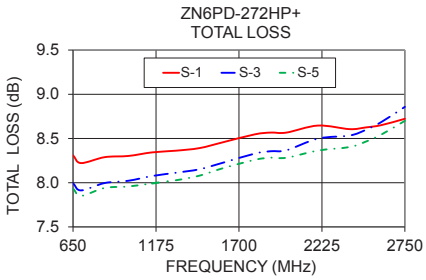
Parameter		Frequency (MHz)	Min.	Typ.	Max.	Unit
Frequency Range			650		2750	MHz
Insertion Loss (above theoretical 7.8 dB)		650-2750 700-2700	— —	1.0 0.9	1.6 1.4	dB
Isolation		650-2750 700-2700	18 20	23 25	— —	dB
Phase Unbalance		650-2750	—	4	10	Degree
Amplitude Unbalance		650-2750 700-2700	— —	0.4 0.3	0.7 0.6	dB
VSWR (Port S)		650-2750 700-2700	— —	1.35 1.30	1.55 1.5	:1
VSWR (Port 1-8)		650-2750	—	1.15	1.30	:1
Power Handling	**As Splitter[1]**	650-2750	—	—	100	Watt
	As Combiner[2]	650-2750	—	—	3.0	

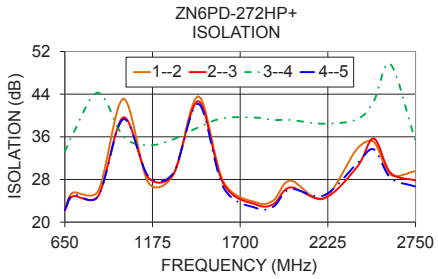
1. All outputs must terminate 50 ohm (VSWR 1.5:1 or better)
2. As a combiner of non-coherent signals, max. power per port is 3.0 watt power rating divided by number of ports.

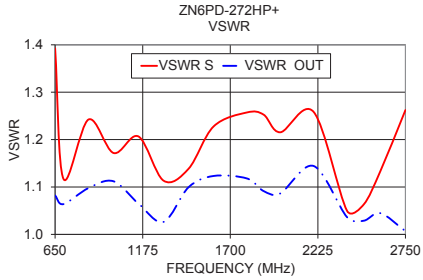
Typical Performance Data

Frequency (MHz)	Total Loss[1] (dB)			Amplitude Unbalance (dB)	Isolation (dB)		Phase Unbal. (deg.)	VSWR S	VSWR OUTPUTS
	S-1	S-3	S-5		Adjacent	Opposite			
650	8.31	8.21	7.93	0.38	22.50	22.35	0.62	1.39	1.08
700	8.22	8.13	7.85	0.37	25.54	25.14	0.68	1.12	1.06
850	8.29	8.20	7.94	0.35	25.88	24.86	0.96	1.24	1.10
1000	8.30	8.21	7.96	0.35	43.12	39.30	1.00	1.17	1.11
1150	8.34	8.25	7.99	0.35	27.41	28.62	1.19	1.21	1.06
1300	8.36	8.28	8.03	0.33	28.87	29.24	1.31	1.11	1.03
1450	8.39	8.32	8.08	0.31	43.55	42.17	1.40	1.14	1.10
1600	8.46	8.40	8.16	0.29	27.59	26.48	1.48	1.23	1.12
1800	8.55	8.49	8.26	0.29	23.65	22.60	1.70	1.26	1.12
1900	8.57	8.51	8.28	0.28	24.11	22.93	1.84	1.25	1.09
2000	8.57	8.50	8.28	0.28	27.79	26.20	1.82	1.22	1.09
2200	8.65	8.59	8.36	0.28	24.43	24.99	1.61	1.26	1.14
2400	8.61	8.56	8.40	0.20	33.75	31.00	1.39	1.05	1.04
2500	8.62	8.60	8.46	0.16	35.06	33.65	1.44	1.06	1.03
2600	8.65	8.66	8.54	0.16	28.92	28.30	1.39	1.13	1.04
2750	8.72	8.77	8.70	0.26	29.56	26.67	1.21	1.26	1.01

1. Total Loss = Insertion Loss + 7.8dB theoretical 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.
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