High Power, DC Pass

Power Splitter/Combiner ZN8PD-362HP+

8 Way-0° 50Ω Up to 100W 650 to 3600 MHz

The Big Deal

- High power, up to 100W as a splitter
- Low insertion loss, 1.0 dB
- Good isolation, 23 dB

ZN8PD-362HPX-S+▲


ZN8PD-362HP-S+

Product Overview

Mini-Circuits' ZN8PD-362HP+ is an 8-way 0˚ splitter/combiner providing very high power handling and low insertion loss across 600 to 3600 MHz, covering many wireless communications bands as well as satellite IF and more. Its outstanding combination of high power and low loss minimize power dissipation due to intrinsic losses and provide excellent signal fidelity from input to output. This model also provides high port-to-port isolation and low amplitude and phase unbalance. It comes housed in a rugged aluminum alloy case with your choice of SMA or N-Type connectors and an optional heat sink for cooling.

Key Features

Feature	Advantages
Wideband, 600 to 3600 MHz	ZN8PD-362HP+ covers many popular wireless communications bands, making it suitable for a wide variety of applications.
High power handling: • 100W as a splitter • 3.2W as a combiner	Suitable for many high power applications.
Low insertion loss, 1.0 dB	Very low insertion loss minimizes intrinsic losses, making this model a suitable candidate for high power signal distribution applications where low loss is a requirement.
Low unbalance: • 0.35 dB amplitude unbalance • 4˚ phase unbalance	ZN8PD-362HP+ produces nearly equal output signals, ideal for parallel path / multichannel systems.
DC Passing, 1.2A (each port)	Supports applications where DC power is needed at later stages in the system.

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Power Splitter/Combiner

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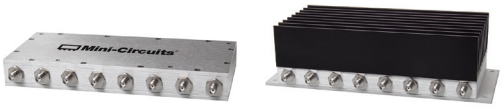


ZN8PD-362HPX-S+▲ ZN8PD-362HP-S+

Generic photo used for illustration purposes only

CASE STYLE: AW257-1

Connectors	Model
SMA	ZN8PD-362HP-S+
SMA	ZN8PD-362HPX-S+▲
N-TYPE	ZN8PD-362HP-N+
N-TYPE	ZN8PD-362HPX-N+▲

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

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	3.2W max.
DC Current	1.2A (150mA 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	1,2,3,4,5,6,7,8

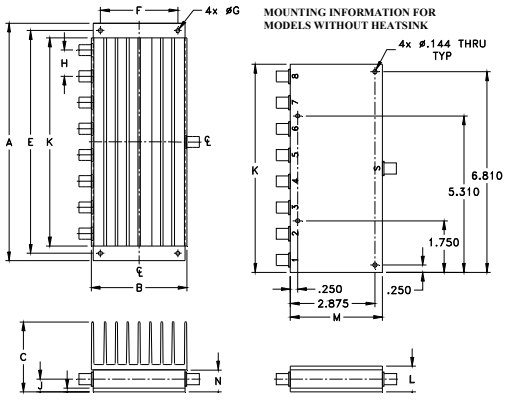
Features

- power handling up to 100W
- wideband, 600 to 3600 MHz
- low insertion loss, 1.0 dB typ.
- good isolation, 23 dB typ.
- rugged shielded case

Applications

- WiMax
- LTE
- WCDMA

Outline Drawing



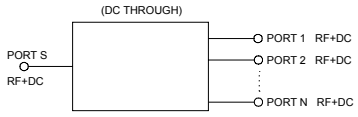
Outline Dimensions (inch / mm)

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			600		3600	MHz
Insertion Loss (above theoretical 9.0 dB)		600 - 700	—	0.7	1.0	dB
		700 - 2700	—	1.0	1.6	
		2700 - 3600	—	1.6	2.2	
Isolation		600 - 700	16	20	—	dB
		700 - 2700	19	23	—	
		2700 - 3600	16	20	—	
Phase Unbalance		600 - 700	—	1	3	Degree
		700 - 2700	—	4	8	
		2700 - 3600	—	5	10	
Amplitude Unbalance		600 - 700	—	0.1	0.3	dB
		700 - 2700	—	0.2	0.7	
		2700 - 3600	—	0.4	0.9	
VSWR (Port S)		600 - 700	—	1.5	1.7	:1
		700 - 2700	—	1.4	1.8	
		2700 - 3600	—	1.5	1.8	
VSWR (Port 1-8)		600 - 700	—	1.1	1.35	:1
		700 - 2700	—	1.15	1.35	
		2700 - 3600	—	1.2	1.35	
Power Handling	**As Splitter[1]**	600 - 2700	—	—	100	Watt
		2700 - 3600	—	—	50	
	As Combiner[2]	600 - 3600	—	—	3.2	

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 3.2 watt power rating divided by number of ports.

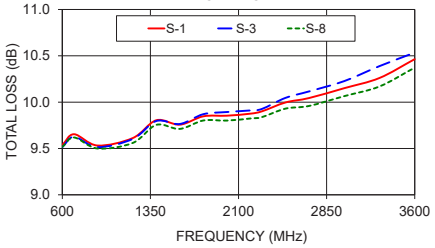
▲ Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 60°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 1.1°C/W max.

Typical Performance Data

Freq. (MHz)	Total Loss[1] (dB)						Amp. Unb. (dB)	Isolation (dB)				Phase Unb. (deg.)	VSWR S	VSWR 1	VSWR 8
	S-1	S-2	S-3	S-4	S-6	S-8		1-2	2-3	3-4	5-6				
600	9.54	9.54	9.51	9.51	9.53	9.52	0.05	19.47	23.95	19.46	19.53	0.76	1.43	1.06	1.05
700	9.65	9.65	9.63	9.62	9.64	9.62	0.04	27.87	25.82	27.94	28.59	0.88	1.56	1.08	1.08
900	9.53	9.52	9.51	9.49	9.53	9.50	0.05	27.88	42.88	28.04	27.48	1.13	1.17	1.11	1.12
1200	9.61	9.60	9.60	9.57	9.62	9.56	0.06	28.86	32.22	29.31	29.33	1.40	1.13	1.18	1.17
1400	9.80	9.80	9.80	9.78	9.81	9.75	0.06	32.05	29.51	31.81	32.32	1.55	1.44	1.13	1.12
1600	9.76	9.76	9.76	9.74	9.78	9.71	0.07	26.32	40.86	26.51	26.51	1.75	1.28	1.10	1.08
1800	9.85	9.86	9.87	9.85	9.87	9.80	0.07	27.99	29.65	27.91	28.39	1.76	1.37	1.07	1.06
2000	9.85	9.88	9.89	9.86	9.89	9.80	0.09	29.49	32.00	30.28	30.28	2.02	1.20	1.07	1.07
2200	9.88	9.89	9.91	9.87	9.91	9.82	0.09	29.04	43.15	28.13	28.94	1.94	1.16	1.02	1.03
2300	9.90	9.91	9.93	9.89	9.92	9.84	0.09	25.28	47.28	24.64	24.90	1.98	1.07	1.04	1.04
2500	10.00	10.00	10.05	10.01	10.06	9.93	0.13	25.44	32.67	24.86	24.11	2.07	1.22	1.08	1.09
2700	10.04	10.04	10.12	10.06	10.10	9.96	0.16	26.28	32.17	26.22	26.24	2.16	1.12	1.10	1.10
3000	10.15	10.15	10.23	10.18	10.19	10.06	0.16	26.67	48.18	26.42	26.37	2.35	1.09	1.10	1.11
3300	10.26	10.29	10.39	10.32	10.34	10.17	0.22	36.49	26.63	36.18	36.31	2.54	1.15	1.05	1.05
3600	10.46	10.49	10.53	10.48	10.50	10.37	0.16	41.31	29.44	45.05	46.39	2.57	1.14	1.10	1.12

1. Total Loss = Insertion Loss + 9dB theoretical splitter loss.

ZN8PD-362HP+
TOTAL LOSS



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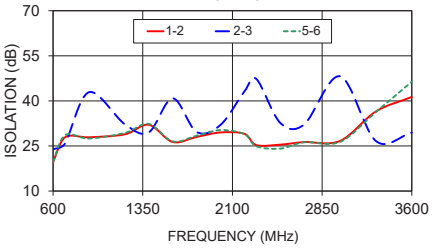
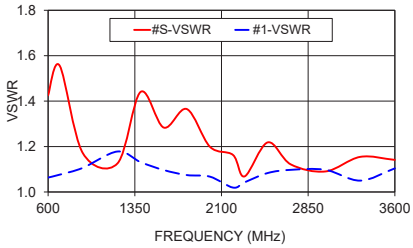
ISOLATION



ZN8PD-362HP+
VSWR



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

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