

Power Splitter/Combiner

ZN8PD-642W+

8 Way-0° 50Ω 1800 to 6400 MHz



Maximum Ratings

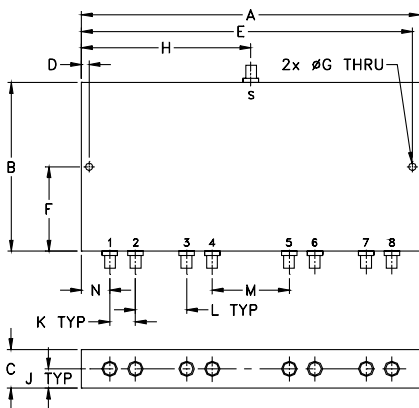
| | |
|-----------------------------|----------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 10W max. |
| Internal Dissipation | 0.875W max. |

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

Coaxial Connections

| | |
|--------------------|---------------|
| SUM PORT | S(COM) |
| PORT 1,2,3,.....,8 | 1,2,3,.....,8 |

Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G |
|--------|-------|-------|-------|--------|-------|-------|
| 6.60 | 3.28 | .75 | .150 | 6.45 | 1.64 | .144 |
| 167.64 | 83.31 | 19.05 | 3.81 | 163.83 | 41.66 | 3.66 |
| H | J | K | L | M | N | wt |
| 3.30 | .38 | .500 | 1.000 | 1.500 | 0.550 | grams |
| 83.82 | 9.65 | 12.70 | 25.4 | 38.1 | 13.97 | 360 |

electrical schematic



Features

- wideband, 1800 to 6400 MHz
- low insertion loss, 1.5 dB typ.
- low amplitude unbalance, 0.2 dB typ.
- excellent output VSWR, 1.15:1 typ.
- DC PASS from sum port to output ports

Applications

- high band PCS
- UNII
- WIMAX
- WiFi
- bluetooth

Electrical Specifications at 25°C

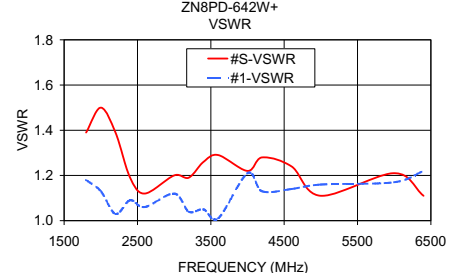
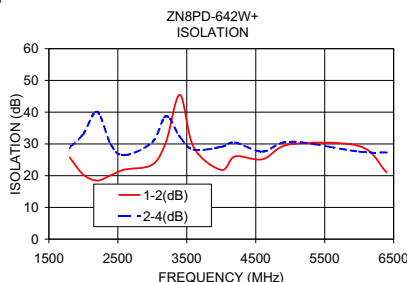
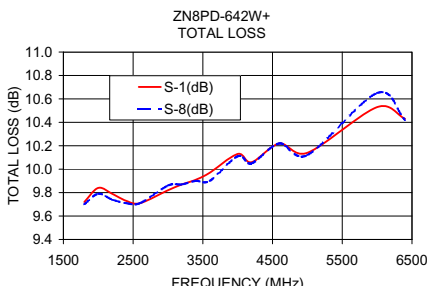
| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|--|------------------------|----------|--------------|------------|--------|
| Frequency Range | | 1800 | | 6400 | MHz |
| Insertion Loss (above theoretical 9.0 dB) | 1800-3200 3200-6400 | — | 0.9 1.5 | 1.4 2.3 | dB |
| Isolation | 1800-3200 3200-6400 | 15 18 | 20 25 | — | dB |
| Phase Unbalance | 1800-3200 3200-6400 | — | 2 5 | 8 12 | Degree |
| Amplitude Unbalance | 1800-3200 3200-6400 | — | 0.15 0.30 | 0.5 0.7 | dB |
| VSWR (Port S) | 1800-3200 3200-6400 | — | 1.4 1.2 | — | :1 |
| VSWR (Port 1-8) | 1800-3200 3200-6400 | — | 1.15 1.15 | — | :1 |

1. Over -55°C to +55°C. Derate linearly to 20% of rating at 100°C

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 | 1-3 | 3-4 | 5-6 | | | | |
| 1800.00 | 9.72 | 9.67 | 9.66 | 9.64 | 9.77 | 9.70 | 0.16 | 25.78 | 28.68 | 26.43 | 24.46 | 1.73 | 1.39 | 1.18 | 1.19 |
| 2000.00 | 9.84 | 9.80 | 9.83 | 9.81 | 9.92 | 9.79 | 0.13 | 20.29 | 33.24 | 20.60 | 19.95 | 1.89 | 1.50 | 1.13 | 1.15 |
| 2200.00 | 9.79 | 9.77 | 9.74 | 9.72 | 9.81 | 9.74 | 0.14 | 18.45 | 40.43 | 18.75 | 18.57 | 1.44 | 1.39 | 1.03 | 1.09 |
| 2400.00 | 9.73 | 9.74 | 9.70 | 9.66 | 9.80 | 9.71 | 0.15 | 20.16 | 29.69 | 19.86 | 19.97 | 1.49 | 1.19 | 1.09 | 1.07 |
| 2600.00 | 9.71 | 9.75 | 9.73 | 9.71 | 9.83 | 9.71 | 0.12 | 21.93 | 26.40 | 21.99 | 22.22 | 1.40 | 1.12 | 1.06 | 1.04 |
| 3000.00 | 9.82 | 9.87 | 9.88 | 9.84 | 9.99 | 9.86 | 0.17 | 23.46 | 30.50 | 23.32 | 23.43 | 1.64 | 1.20 | 1.12 | 1.11 |
| 3200.00 | 9.87 | 9.90 | 9.90 | 9.86 | 9.99 | 9.87 | 0.13 | 30.75 | 38.89 | 28.89 | 29.31 | 2.00 | 1.19 | 1.04 | 1.07 |
| 3400.00 | 9.91 | 9.91 | 9.90 | 9.88 | 10.03 | 9.90 | 0.16 | 45.47 | 32.14 | 35.75 | 37.68 | 2.11 | 1.26 | 1.05 | 1.02 |
| 3600.00 | 9.97 | 9.97 | 9.95 | 9.96 | 10.03 | 9.90 | 0.13 | 28.90 | 28.38 | 27.91 | 28.25 | 2.21 | 1.29 | 1.01 | 1.03 |
| 4000.00 | 10.13 | 10.19 | 10.24 | 10.28 | 10.34 | 10.11 | 0.28 | 21.81 | 29.25 | 20.71 | 20.89 | 2.25 | 1.22 | 1.21 | 1.12 |
| 4200.00 | 10.06 | 10.14 | 10.15 | 10.13 | 10.23 | 10.05 | 0.20 | 26.07 | 30.25 | 24.95 | 23.54 | 2.48 | 1.28 | 1.13 | 1.07 |
| 4600.00 | 10.22 | 10.27 | 10.19 | 10.13 | 10.30 | 10.22 | 0.18 | 25.17 | 27.39 | 23.49 | 25.46 | 3.48 | 1.24 | 1.14 | 1.05 |
| 5000.00 | 10.14 | 10.17 | 10.16 | 10.12 | 10.35 | 10.12 | 0.24 | 29.89 | 30.66 | 32.53 | 29.80 | 4.17 | 1.11 | 1.16 | 1.11 |
| 6000.00 | 10.53 | 10.56 | 10.49 | 10.39 | 10.78 | 10.65 | 0.38 | 29.32 | 27.33 | 29.76 | 29.12 | 5.23 | 1.21 | 1.17 | 1.15 |
| 6400.00 | 10.43 | 10.46 | 10.48 | 10.49 | 10.59 | 10.42 | 0.23 | 21.01 | 27.28 | 20.87 | 21.95 | 5.65 | 1.11 | 1.22 | 1.11 |

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



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet are subject to Mini-Circuit's 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-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp.

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