

Power Splitter/Combiner

8 Way-0° 50Ω 1550 to 2500 MHz

ZB8PD-252+



Generic photo used for illustration purposes only

CASE STYLE: Z41

Connectors Model
SMA ZB8PD-252-S+

+RoHS Compliant

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

Maximum Ratings

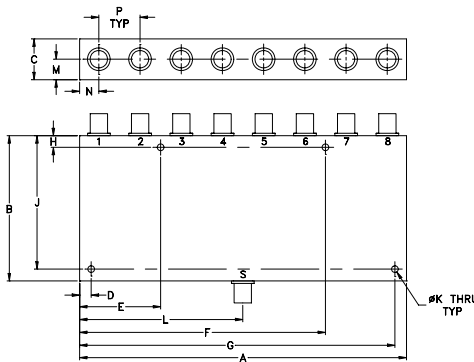
| | |
|-----------------------------|---------------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| Power Input (as a splitter) | 10W max. |
| Internal Dissipation | 0.875W max. |
| DC Current | 1.2A(150mA for each port) |

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 |

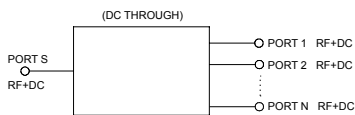
Outline Drawing



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H |
|--------|-------|-------|-------|-------|--------|--------|------|
| 7.06 | 3.13 | .88 | .250 | 1.750 | 5.310 | 6.810 | .250 |
| 179.32 | 79.50 | 22.35 | 6.35 | 44.45 | 134.87 | 172.97 | 6.35 |
| J | K | L | M | N | P | wt | |
| 2.875 | .144 | 3.53 | .44 | .415 | .89 | grams | |
| 73.03 | 3.66 | 89.66 | 11.18 | 10.54 | 22.61 | 800 | |

Electrical Schematic



Features

- low insertion loss, 0.8 dB typ.
- good isolation, 25 dB typ.
- up to 10W power input
- rugged, shielded case

Applications

- cellular
- PCS/DCS
- communication systems
- GPS

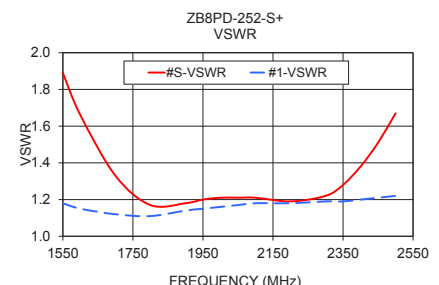
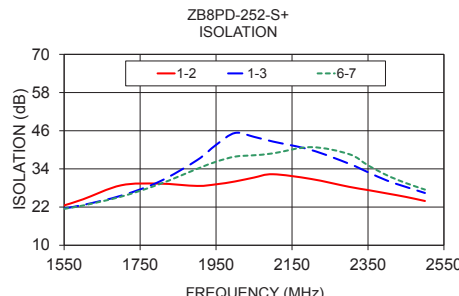
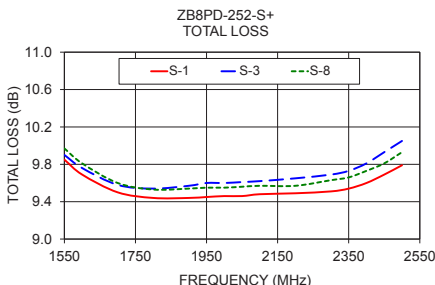
Electrical Specifications at 25°C

| Parameter | Frequency (MHz) | Min. | Typ. | Max. | Unit |
|-----------------------------|-----------------|------|------|------|--------|
| Frequency Range | | 1550 | — | 2500 | MHz |
| Insertion Loss Above 9.0 dB | 1550 - 2500 | — | 0.8 | 1.5 | dB |
| Isolation | 1550 - 2500 | 19 | 25 | — | dB |
| Phase Unbalance | 1550 - 2500 | — | 3.2 | 6.0 | Degree |
| Amplitude Unbalance | 1550 - 2500 | — | 0.3 | 0.6 | dB |
| VSWR (Port S) | 1550 - 2500 | — | 1.7 | 2.2 | :1 |
| VSWR (Port 1-8) | 1550 - 2500 | — | 1.2 | 1.4 | :1 |

Typical Performance Data

| Freq. (MHz) | Total Loss ¹ (dB) | | | | | | Amp. Unb. (dB) | Isolation (dB) | | | | VSWR S | VSWR 1 | VSWR 8 |
|-------------|------------------------------|------|-------|-------|-------|------|----------------|----------------|-------|-------|-------|--------|--------|--------|
| | S-1 | S-2 | S-3 | S-4 | S-6 | S-8 | | 1-2 | 1-3 | 3-4 | 6-7 | | | |
| 1550.00 | 9.85 | 9.83 | 9.90 | 9.94 | 9.94 | 9.97 | 0.14 | 22.53 | 21.59 | 22.15 | 21.46 | 1.89 | 1.18 | 1.20 |
| 1600.00 | 9.69 | 9.67 | 9.76 | 9.78 | 9.79 | 9.81 | 0.14 | 24.45 | 22.66 | 23.91 | 22.50 | 1.66 | 1.15 | 1.17 |
| 1700.00 | 9.50 | 9.49 | 9.58 | 9.60 | 9.60 | 9.60 | 0.11 | 28.84 | 25.58 | 28.07 | 25.28 | 1.33 | 1.12 | 1.13 |
| 1800.00 | 9.44 | 9.42 | 9.54 | 9.55 | 9.54 | 9.53 | 0.13 | 29.37 | 29.96 | 28.94 | 29.16 | 1.17 | 1.11 | 1.12 |
| 1900.00 | 9.44 | 9.43 | 9.57 | 9.56 | 9.54 | 9.54 | 0.13 | 28.65 | 36.75 | 28.29 | 34.00 | 1.18 | 1.14 | 1.13 |
| 1950.00 | 9.45 | 9.45 | 9.60 | 9.58 | 9.55 | 9.55 | 0.15 | 29.15 | 41.55 | 28.50 | 36.25 | 1.20 | 1.15 | 1.14 |
| 2000.00 | 9.46 | 9.45 | 9.60 | 9.59 | 9.56 | 9.55 | 0.15 | 30.05 | 45.30 | 29.13 | 37.86 | 1.21 | 1.16 | 1.15 |
| 2050.00 | 9.46 | 9.46 | 9.61 | 9.60 | 9.57 | 9.56 | 0.16 | 31.28 | 44.07 | 29.74 | 38.29 | 1.21 | 1.17 | 1.16 |
| 2100.00 | 9.48 | 9.48 | 9.62 | 9.62 | 9.58 | 9.57 | 0.14 | 32.32 | 42.59 | 30.09 | 38.88 | 1.21 | 1.18 | 1.17 |
| 2200.00 | 9.49 | 9.50 | 9.65 | 9.64 | 9.61 | 9.57 | 0.16 | 30.84 | 39.96 | 30.71 | 40.84 | 1.19 | 1.18 | 1.18 |
| 2300.00 | 9.51 | 9.55 | 9.69 | 9.65 | 9.67 | 9.63 | 0.17 | 28.37 | 35.64 | 26.54 | 38.65 | 1.22 | 1.19 | 1.18 |
| 2350.00 | 9.54 | 9.59 | 9.73 | 9.69 | 9.71 | 9.66 | 0.19 | 27.35 | 32.96 | 25.64 | 35.12 | 1.28 | 1.19 | 1.18 |
| 2400.00 | 9.60 | 9.64 | 9.81 | 9.76 | 9.79 | 9.73 | 0.21 | 26.28 | 30.34 | 24.78 | 31.99 | 1.38 | 1.20 | 1.19 |
| 2450.00 | 9.69 | 9.74 | 9.93 | 9.88 | 9.90 | 9.81 | 0.24 | 25.19 | 28.33 | 23.96 | 29.54 | 1.51 | 1.21 | 1.20 |
| 2500.00 | 9.79 | 9.85 | 10.05 | 10.01 | 10.02 | 9.93 | 0.26 | 23.91 | 26.43 | 22.93 | 27.49 | 1.67 | 1.22 | 1.21 |

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



Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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