

Coaxial Pulse Amplifier

ZPUL-21

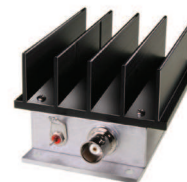
50Ω Inverting 0.0025 to 700 MHz

Features

- wideband, 2.5 KHz to 700 MHz, useable to 1000 MHz
- excellent flatness, ± 0.6 dB typ.
- can handle wide pulse width & (15 μ s typ.) with excellent rise/fall time (1.1 ns typ.)
- delay time, 1.5 ns typical
- protected by US Patent, 6,943,629

Applications

- computers
- digital communication
- medical test set-ups



CASE STYLE: S32

| Connectors | Model | Price | Qty. |
|------------|---------|--------------|-------|
| BNC | ZPUL-21 | \$249.00 ea. | (1-9) |

Pulse Amplifier Electrical Specifications

| MODEL NO. | FREQUENCY (MHz) | | GAIN (dB) | | RISE/FALL TIME (ns) | PULSE WIDTH* (μ s) | MAXIMUM POWER (dBm) | | DYNAMIC RANGE | | VSWR (:1) Typ. | | DC POWER | |
|-----------|-----------------|-------|-----------|-----------|---------------------|-------------------------|----------------------|-------------------|----------------|----------------|----------------|-----|---------------|-------------------|
| | f_L | f_U | Min. | Max. | Max. | Max. | Output (1 dB Compr.) | Input (no damage) | NF** (dB) Typ. | IP3 (dBm) Typ. | In | Out | Volt (V) Nom. | Current (mA) Max. |
| ZPUL-21 | 0.0025 | 700 | 21 | ± 1.0 | 1.5 | 6 | +22 | +10 | 7.3 | +34 | 2.0 | 2.0 | 24 | 350 |

* Pulse width for less than 10% droop.

** Noise Figure tested above 10 MHz.

Open load is not recommended, potentially can cause damage.

With no load derate max input power by 20 dB

Maximum Ratings

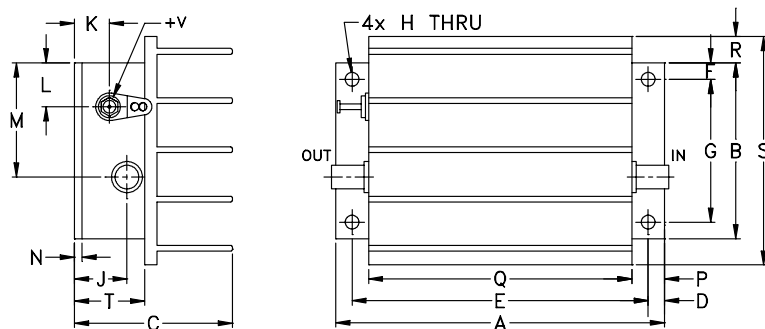
Operating Temperature -20°C to 65°C

Storage Temperature -55°C to 100°C

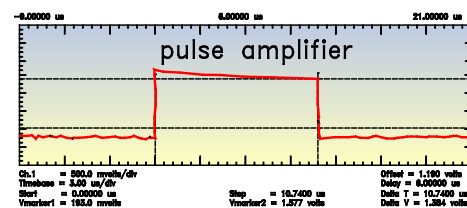
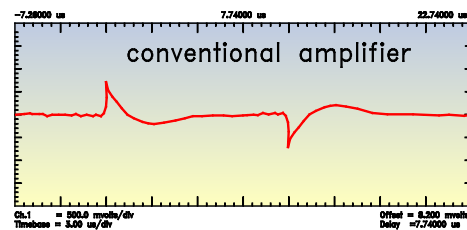
DC Voltage +24.5V Max.

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

Outline Drawing



typical amplifier response to a pulse input



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | T | wt |
|-------|-------|-------|------|-------|------|-------|------|-------|-------|-------|-------|------|------|-------|------|-------|-------|-------|
| 3.75 | 2.00 | 1.80 | .19 | 3.375 | .19 | 1.625 | .144 | .50 | .40 | .50 | 1.30 | .10 | .38 | 3.00 | .30 | 2.60 | .80 | grams |
| 95.25 | 50.80 | 45.72 | 4.83 | 85.73 | 4.83 | 41.28 | 3.66 | 12.70 | 10.16 | 12.70 | 33.02 | 2.54 | 9.65 | 76.20 | 7.62 | 66.04 | 20.32 | 220.0 |

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.

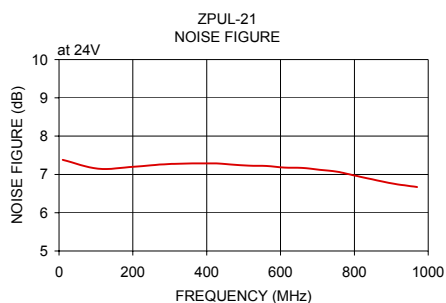
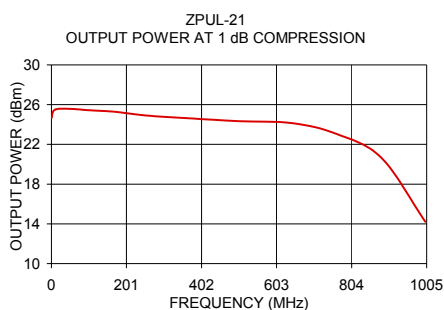
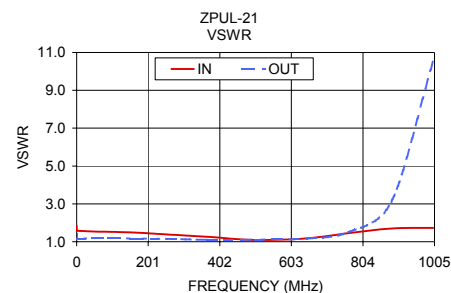
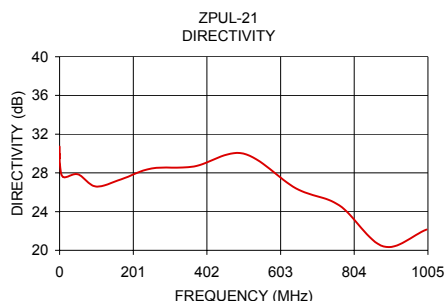
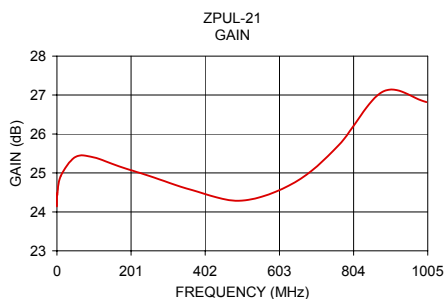
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Typical Performance Data/Curves

ZPUL-21

| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR (:1) | | POUT at 1 dB COMPR. (dBm) | FREQUENCY (MHz) | NOISE FIGURE (dB) |
|-----------------|-----------|------------------|-----------|-------|---------------------------|-----------------|-------------------|
| | 24V | 24V | IN | OUT | 24V | | 24V |
| 0.0025 | 24.14 | 30.72 | 1.85 | 1.40 | 24.63 | 10.00 | 7.38 |
| 0.01 | 24.47 | 29.52 | 1.61 | 1.20 | 24.76 | 106.00 | 7.15 |
| 0.05 | 24.42 | 29.95 | 1.58 | 1.18 | 24.70 | 202.00 | 7.20 |
| 1.01 | 24.43 | 28.89 | 1.58 | 1.17 | 24.82 | 298.00 | 7.27 |
| 10.08 | 24.92 | 27.56 | 1.57 | 1.17 | 25.50 | 418.00 | 7.29 |
| 50.00 | 25.41 | 27.85 | 1.54 | 1.18 | 25.58 | 466.00 | 7.26 |
| 98.88 | 25.40 | 26.60 | 1.52 | 1.18 | 25.44 | 514.00 | 7.23 |
| 167.88 | 25.17 | 27.34 | 1.48 | 1.17 | 25.30 | 562.00 | 7.22 |
| 251.25 | 24.92 | 28.45 | 1.39 | 1.15 | 24.91 | 610.00 | 7.18 |
| 366.25 | 24.56 | 28.65 | 1.26 | 1.10 | 24.64 | 658.00 | 7.17 |
| 501.38 | 24.29 | 30.00 | 1.09 | 1.11 | 24.34 | 706.00 | 7.12 |
| 645.13 | 24.76 | 26.40 | 1.18 | 1.17 | 24.14 | 754.00 | 7.07 |
| 763.00 | 25.71 | 24.64 | 1.45 | 1.50 | 23.06 | 802.00 | 6.97 |
| 883.75 | 27.09 | 20.40 | 1.70 | 3.10 | 20.65 | 898.00 | 6.77 |
| 1001.63 | 26.82 | 22.14 | 1.73 | 10.56 | 14.21 | 970.00 | 6.67 |



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