

# Coaxial Amplifier

50Ω Low Power 0.05 to 500 MHz

**ZFL-500+  
ZFL-500**



SMA version shown  
CASE STYLE: Y460

## Features

- wideband, 0.05 to 500 MHz
- rugged, shielded case
- low noise, 5.3 dB typ.
- protected by US Patent, 6,943,629

## Applications

- instrumentation
- lab use
- VHF/UHF

| Connectors           | Model       | Price   | Qty.  |
|----------------------|-------------|---------|-------|
| SMA                  | ZFL-500(+)  | \$69.95 | (1-9) |
| BNC                  | ZFL-500-BNC | \$74.95 | (1-9) |
| BRACKET (OPTION "B") |             | \$5.00  | (1+)  |

## +RoHS Compliant

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

## Amplifier Electrical Specifications

| MODEL NO.  | FREQUENCY (MHz) |                | GAIN (dB) |               | MAXIMUM POWER (dBm)  |                   | DYNAMIC RANGE |                | VSWR (:1) Typ. |     | DC POWER      |                   |
|------------|-----------------|----------------|-----------|---------------|----------------------|-------------------|---------------|----------------|----------------|-----|---------------|-------------------|
|            | f <sub>L</sub>  | f <sub>U</sub> | Min.      | Flatness Max. | Output (1 dB Compr.) | Input (no damage) | NF (dB) Typ.  | IP3 (dBm) Typ. | In             | Out | Volt (V) Nom. | Current (mA) Max. |
| ZFL-500(+) | 0.05            | 500            | 20        | ±1.0          | +9                   | +5                | 5.3           | +18            | 1.9            | 1.9 | 15            | 80                |

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 71°C

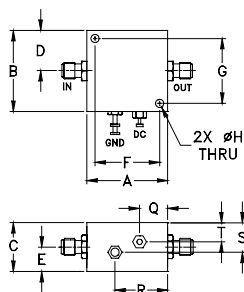
Storage Temperature -55°C to 100°C

DC Voltage +17V Max.

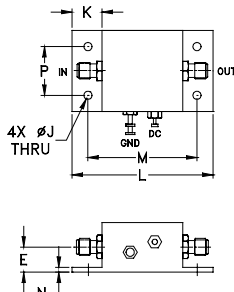
Permanent damage may occur if any of these limits are exceeded.

## Outline Drawing

STANDARD



OPTION "B"



## Outline Dimensions (inch/mm)

| A     | B     | C     | D     | E    | F     | G     | H    | J    | K     | L     | M     | N    | P     | Q     | R     | S     | T    | wt.   |
|-------|-------|-------|-------|------|-------|-------|------|------|-------|-------|-------|------|-------|-------|-------|-------|------|-------|
| 1.25  | 1.25  | .75   | .63   | .36  | 1.000 | 1.000 | .125 | .125 | .46   | 2.18  | 1.688 | .06  | .750  | .50   | .80   | .45   | .29  | grams |
| 31.75 | 31.75 | 19.05 | 16.00 | 9.14 | 25.40 | 25.40 | 3.18 | 3.18 | 11.68 | 55.37 | 42.88 | 1.52 | 19.05 | 12.70 | 20.32 | 11.43 | 7.37 | 38    |

## 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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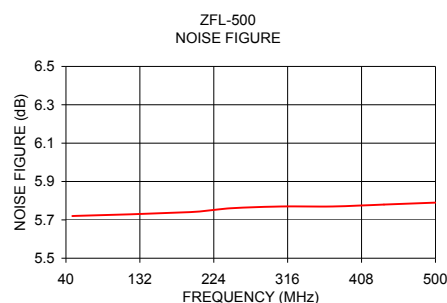
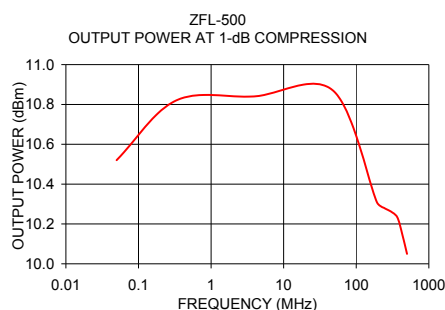
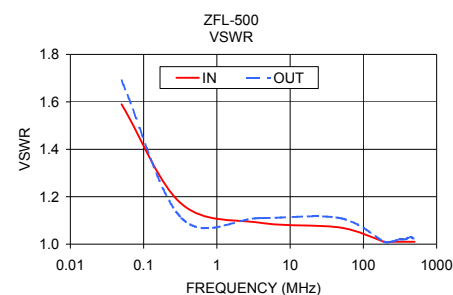
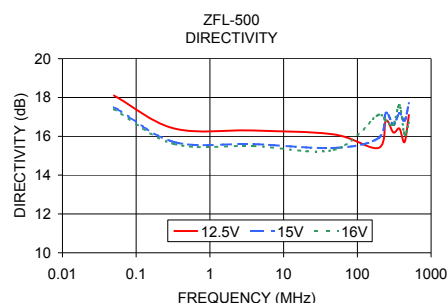
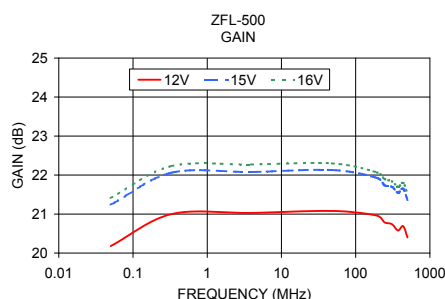


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M125292  
ZFL-500  
131015  
Page 1 of 2

## Typical Performance Data/Curves

| FREQUENCY<br>(MHz) | GAIN<br>(dB) |       |       | DIRECTIVITY<br>(dB) |       |       | VSWR<br>(:1)<br>15V |      | NOISE<br>FIGURE<br>(dB) | POUT at<br>1 dB COMPR.<br>(dBm) |
|--------------------|--------------|-------|-------|---------------------|-------|-------|---------------------|------|-------------------------|---------------------------------|
|                    | 12V          | 15V   | 16V   | 12V                 | 15V   | 16V   | IN                  | OUT  |                         |                                 |
| 0.05               | 20.18        | 21.24 | 21.41 | 18.10               | 17.50 | 17.40 | 1.59                | 1.69 | —                       | 10.52                           |
| 0.33               | 21.00        | 22.06 | 22.23 | 16.40               | 15.70 | 15.60 | 1.17                | 1.11 | —                       | 10.82                           |
| 3.90               | 21.03        | 22.08 | 22.27 | 16.30               | 15.60 | 15.50 | 1.09                | 1.11 | —                       | 10.84                           |
| 47.90              | 21.08        | 22.13 | 22.30 | 16.10               | 15.40 | 15.30 | 1.07                | 1.11 | 5.72                    | 10.87                           |
| 192.30             | 20.96        | 21.93 | 22.07 | 15.40               | 15.90 | 17.10 | 1.01                | 1.01 | 5.74                    | 10.31                           |
| 243.60             | 20.79        | 21.74 | 21.90 | 16.80               | 17.20 | 16.80 | 1.01                | 1.01 | 5.76                    | 10.28                           |
| 307.70             | 20.74        | 21.70 | 21.84 | 16.20               | 16.60 | 16.60 | 1.01                | 1.02 | 5.77                    | 10.26                           |
| 371.80             | 20.58        | 21.55 | 21.70 | 16.40               | 17.20 | 17.60 | 1.01                | 1.02 | 5.77                    | 10.23                           |
| 435.90             | 20.69        | 21.65 | 21.80 | 15.70               | 16.80 | 16.10 | 1.01                | 1.03 | 5.78                    | 10.14                           |
| 500.00             | 20.40        | 21.36 | 21.52 | 17.10               | 17.70 | 16.70 | 1.01                | 1.02 | 5.79                    | 10.05                           |



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