

# Coaxial Amplifier

## ZFL-2500+

50Ω Medium Power 500 to 2500 MHz

### Features

- wideband, 500 to 2500 MHz
- high gain, 31 dB typ.
- protected by US Patent, 6,943,629

### Applications

- spread-spectrum and optical communications
- cellular base stations
- GPS
- test instrumentation



Generic photo used for illustration purposes only

CASE STYLE: Y460

Connectors Model  
**SMA** ZFL-2500+  
**BRACKET (OPTION "B")**

**+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      |                   |
|-----------|-----------------|-------|-----------|---------------|----------------------|-------------------|---------------|----------------|----------------|-----|---------------|-------------------|
|           | $f_L$           | $f_U$ | 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-2500+ | 500             | 2500  | 28        | ±1.5          | +15                  | +5                | 8.0           | +27            | 2.5            | 2.5 | 5             | 220               |

Open load is not recommended, potentially can cause damage.  
With no load derate max input power by 20 dB

### Maximum Ratings

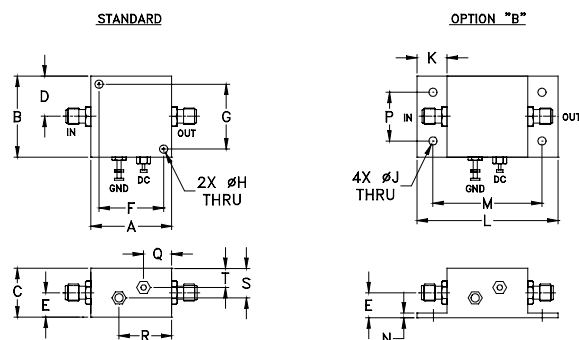
Operating Temperature -20°C to 65°C

Storage Temperature -55°C to 100°C

DC Voltage +6V Max.

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

### Outline Drawing



### 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

- 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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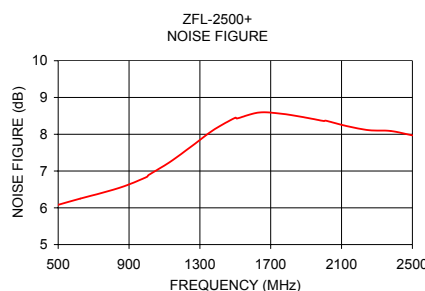
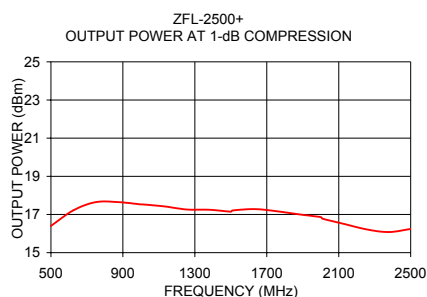
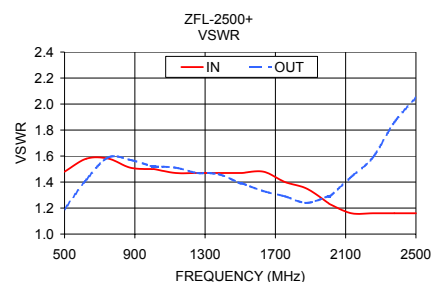
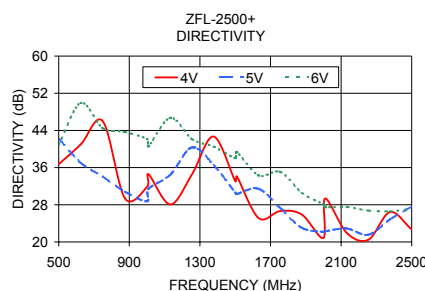
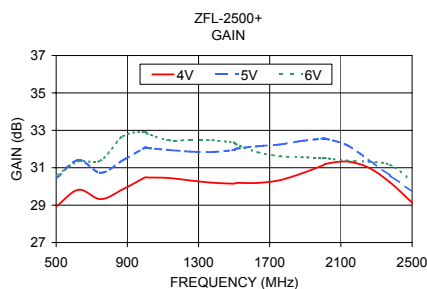
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# Typical Performance Data/Curves

## ZFL-2500+

| FREQUENCY<br>(MHz) | GAIN<br>(dB) |       |       | DIRECTIVITY<br>(dB) |       |       | VSWR<br>(:1)<br>5V |      | NOISE<br>FIGURE<br>(dB) | POUT at<br>1 dB COMPR.<br>(dBm) |
|--------------------|--------------|-------|-------|---------------------|-------|-------|--------------------|------|-------------------------|---------------------------------|
|                    | 4V           | 5V    | 6V    | 4V                  | 5V    | 6V    | IN                 | OUT  |                         |                                 |
| 500.00             | 28.92        | 30.43 | 30.59 | 36.73               | 42.23 | 40.95 | 1.48               | 1.19 | 6.08                    | 16.40                           |
| 625.00             | 29.82        | 31.41 | 31.34 | 41.02               | 37.01 | 49.91 | 1.58               | 1.42 | 6.25                    | 17.22                           |
| 750.00             | 29.32        | 30.73 | 31.38 | 45.97               | 34.04 | 44.45 | 1.58               | 1.59 | 6.41                    | 17.65                           |
| 875.00             | 29.85        | 31.40 | 32.68 | 29.38               | 30.82 | 43.66 | 1.51               | 1.57 | 6.59                    | 17.65                           |
| 1000.00            | 30.49        | 32.08 | 32.93 | 31.84               | 28.74 | 42.15 | 1.50               | 1.52 | 6.84                    | 17.53                           |
| 1010.00            | 30.48        | 32.06 | 32.83 | 34.51               | 31.45 | 40.63 | 1.50               | 1.52 | 6.89                    | 17.53                           |
| 1132.50            | 30.45        | 31.95 | 32.47 | 28.07               | 34.48 | 46.73 | 1.47               | 1.51 | 7.25                    | 17.42                           |
| 1255.00            | 30.32        | 31.86 | 32.49 | 34.55               | 40.35 | 42.13 | 1.47               | 1.47 | 7.68                    | 17.26                           |
| 1377.50            | 30.20        | 31.84 | 32.47 | 42.68               | 36.54 | 40.51 | 1.47               | 1.46 | 8.12                    | 17.25                           |
| 1500.00            | 30.15        | 31.95 | 32.34 | 33.08               | 30.64 | 38.03 | 1.47               | 1.39 | 8.45                    | 17.15                           |
| 1510.00            | 30.19        | 32.05 | 32.26 | 34.08               | 30.33 | 39.34 | 1.47               | 1.39 | 8.43                    | 17.21                           |
| 1632.50            | 30.19        | 32.15 | 31.83 | 25.14               | 31.44 | 34.32 | 1.48               | 1.33 | 8.59                    | 17.28                           |
| 1755.00            | 30.33        | 32.24 | 31.62 | 26.65               | 27.32 | 35.09 | 1.40               | 1.29 | 8.56                    | 17.17                           |
| 1877.50            | 30.69        | 32.43 | 31.56 | 25.90               | 23.05 | 30.59 | 1.35               | 1.24 | 8.47                    | 17.01                           |
| 2000.00            | 31.13        | 32.56 | 31.53 | 20.85               | 22.18 | 28.08 | 1.24               | 1.29 | 8.36                    | 16.86                           |
| 2010.00            | 31.20        | 32.56 | 31.52 | 29.35               | 22.29 | 27.47 | 1.23               | 1.29 | 8.37                    | 16.78                           |
| 2132.00            | 31.33        | 32.22 | 31.38 | 21.96               | 22.88 | 27.51 | 1.16               | 1.44 | 8.22                    | 16.50                           |
| 2255.00            | 31.01        | 31.43 | 31.32 | 20.48               | 21.56 | 26.74 | 1.16               | 1.59 | 8.11                    | 16.22                           |
| 2377.00            | 30.21        | 30.58 | 31.15 | 26.43               | 24.85 | 26.58 | 1.16               | 1.86 | 8.09                    | 16.08                           |
| 2500.00            | 29.13        | 29.72 | 30.29 | 22.69               | 27.61 | 27.12 | 1.16               | 2.05 | 7.97                    | 16.24                           |



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