

# Coaxial Amplifier

## ZVE-8G+

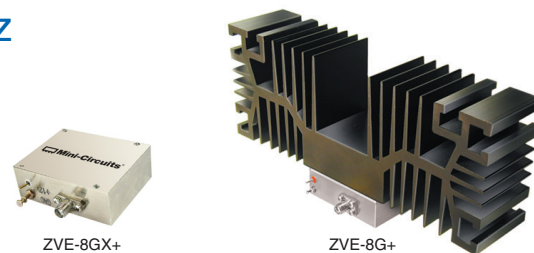
50Ω Medium High Power 2000 to 8000 MHz

### Features

- wideband, 2 to 8 GHz
- low noise, 4 dB typ.
- high IP3, +40 dBm typ.
- high dynamic range
- high gain, 30 dB min
- laser sealed case

### Applications

- satellite communications
- line-of-sight transmitters
- signal generators
- spread-spectrum communication



ZVE-8GX+

ZVE-8G+

CASE STYLE: BN333

| Connectors | Model    | Price         | Qty.  |
|------------|----------|---------------|-------|
| SMA        | ZVE-8G+  | \$1095.00 ea. | (1-9) |
| SMA        | ZVE-8GX+ | \$1020.00 ea. | (1-9) |

### +RoHS Compliant

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

### Electrical Specifications

| MODEL NO. | FREQUENCY (MHz) |       | GAIN (dB) |               | MAXIMUM POWER (dBm)       |                   | DYNAMIC RANGE |                | VSWR (:1) Max. |     | DC POWER      |                  |
|-----------|-----------------|-------|-----------|---------------|---------------------------|-------------------|---------------|----------------|----------------|-----|---------------|------------------|
|           | $f_L$           | $f_U$ | Min.      | Flatness Max. | Output (1 dB Compr. Min.) | Input (no damage) | NF (dB) Typ.  | IP3 (dBm) Typ. | In             | Out | Volt (V) Nom. | Current (A) Max. |
| ZVE-8G+   | 2000            | 8000  | 30        | ±2.0          | +30**                     | +20               | 4             | +40            | 2.0            | 2.0 | 12            | 1.2              |
| ZVE-8GX+* | 2000            | 8000  | 30        | ±2.0          | +30**                     | +20               | 4             | +40            | 2.0            | 2.0 | 12            | 1.2              |

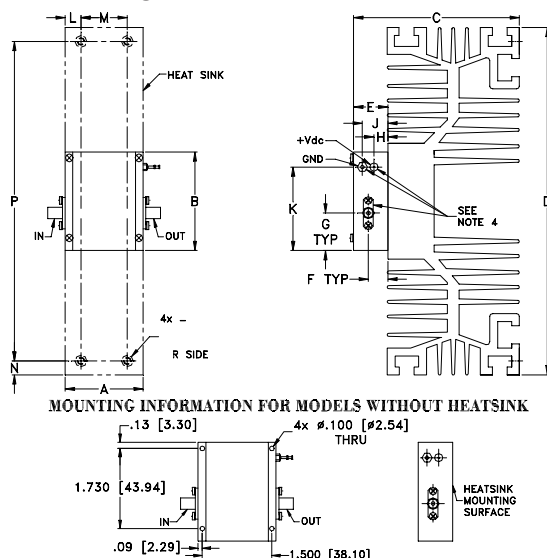
\* Heat sink not included

\*\* At 25°C; +30 dBm typ. at 54°C ambient.

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

To order without heat sink, add suffix X to model number. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 85°C, in order to ensure proper performance. For reference, this requires thermal resistance of user's external heat sink to be 1.3°C/W Max.

### Outline Drawing



### Maximum Ratings

Operating Temperature -55°C to 54°C

Storage Temperature -65°C to 150°C

DC Voltage +18V Max.

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

### Outline Dimensions (inch mm)

| A     | B     | C     | D      | E     | F     | G     | H    | J     | K     | L    | M     | N    | P      | wt     |
|-------|-------|-------|--------|-------|-------|-------|------|-------|-------|------|-------|------|--------|--------|
| 1.680 | 2.130 | 3.6   | 7.5    | .74   | .42   | .81   | .30  | .55   | 1.80  | .34  | 1.000 | .30  | 6.900  | grams* |
| 42.67 | 54.10 | 91.44 | 190.50 | 18.80 | 10.67 | 20.57 | 7.62 | 13.97 | 45.72 | 8.64 | 25.40 | 7.62 | 175.26 | 700    |

\*100 grams without heatsink

### 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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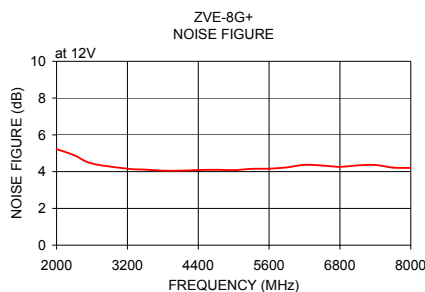
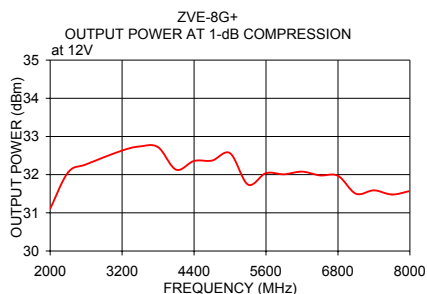
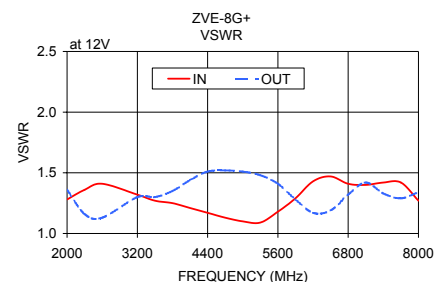
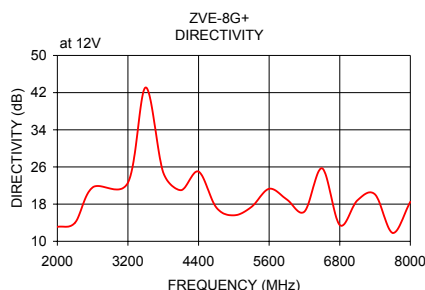
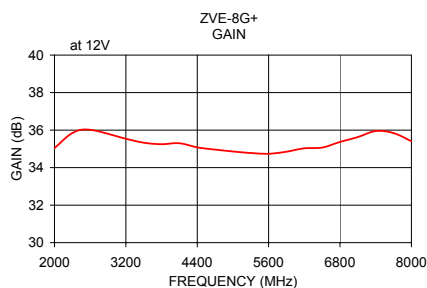
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ZVE-8G+  
131007  
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# Typical Performance Data/Curves

# ZVE-8G+

| FREQUENCY<br>(MHz) | GAIN<br>(dB) | DIRECTIVITY<br>(dB) | VSWR<br>(:1) |      | NOISE<br>FIGURE<br>(dB) | POUT at<br>1 dB COMPR.<br>(dBm) |
|--------------------|--------------|---------------------|--------------|------|-------------------------|---------------------------------|
|                    | 12V          | 12V                 | IN           | OUT  | 12V                     | 12V                             |
| 2000.00            | 35.04        | 13.10               | 1.28         | 1.36 | 5.23                    | 31.11                           |
| 2300.00            | 35.84        | 14.00               | 1.36         | 1.16 | 4.89                    | 32.06                           |
| 2600.00            | 36.02        | 21.60               | 1.41         | 1.13 | 4.44                    | 32.27                           |
| 3200.00            | 35.54        | 22.60               | 1.32         | 1.30 | 4.16                    | 32.63                           |
| 3500.00            | 35.33        | 43.10               | 1.27         | 1.30 | 4.11                    | 32.74                           |
| 3800.00            | 35.25        | 24.80               | 1.25         | 1.35 | 4.05                    | 32.72                           |
| 4100.00            | 35.30        | 21.00               | 1.21         | 1.44 | 4.05                    | 32.13                           |
| 4400.00            | 35.08        | 25.00               | 1.17         | 1.51 | 4.09                    | 32.36                           |
| 4700.00            | 34.96        | 17.30               | 1.13         | 1.52 | 4.10                    | 32.37                           |
| 5000.00            | 34.86        | 15.60               | 1.10         | 1.51 | 4.08                    | 32.56                           |
| 5300.00            | 34.78        | 17.40               | 1.09         | 1.48 | 4.15                    | 31.74                           |
| 5600.00            | 34.74        | 21.30               | 1.18         | 1.41 | 4.16                    | 32.04                           |
| 5900.00            | 34.85        | 19.00               | 1.29         | 1.28 | 4.23                    | 32.01                           |
| 6200.00            | 35.03        | 16.40               | 1.43         | 1.17 | 4.37                    | 32.08                           |
| 6500.00            | 35.07        | 25.70               | 1.47         | 1.19 | 4.33                    | 31.98                           |
| 6800.00            | 35.37        | 13.50               | 1.41         | 1.32 | 4.26                    | 31.97                           |
| 7100.00            | 35.63        | 18.80               | 1.40         | 1.42 | 4.34                    | 31.50                           |
| 7400.00            | 35.95        | 20.10               | 1.42         | 1.33 | 4.36                    | 31.59                           |
| 7700.00            | 35.84        | 11.80               | 1.42         | 1.29 | 4.22                    | 31.48                           |
| 8000.00            | 35.41        | 18.50               | 1.27         | 1.34 | 4.20                    | 31.57                           |



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