

Coaxial Amplifier

ZHL-42W+

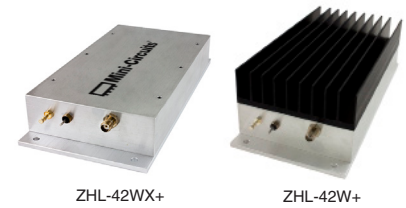
50Ω Medium High Power 10 to 4200 MHz

Features

- wideband, 10 to 4200 MHz
- high IP3, +38 dBm typ.
- high gain, 30 dB min.

Applications

- communication systems
- cellular
- instrumentation
- laboratory



ZHL-42WX+

ZHL-42W+

CASE STYLE: U36

| Connectors | Model |
|------------|-----------|
| SMA | ZHL-42W+ |
| SMA | ZHL-42WX+ |

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

Electrical Specifications at 25°C

| Parameter | Condition (MHz) | ZHL-42W+ ▲ZHL-42WX+ | | | Units |
|------------------------------------|-----------------|------------------------|------|------|-------|
| | | Min. | Typ. | Max. | |
| Frequency Range | | 10 | — | 4200 | MHz |
| Gain | 10-4200 | 30 | 34 | 40 | dB |
| Gain Flatness | 10-4200 | — | ±1.3 | ±1.8 | dB |
| Output Power at 1dB compression* | 10-4200 | +28 | +30 | — | dBm |
| Output Power at 3dB compression** | 10-4200 | +29 | +31 | — | dBm |
| Noise Figure | 10-4200 | — | 6 | — | dB |
| Output third order intercept point | 10-4200 | — | +38 | — | dBm |
| Input VSWR | 10-4200 | — | — | 2.5 | :1 |
| Output VSWR | 10-4200 | — | — | 2.7 | :1 |
| DC Supply Voltage | | — | 15 | — | V |
| Supply Current | | — | — | 1.0 | A |

Open load is not recommended, potentially can cause damage.

With no load derate max. input power by 20 dB.

* +27 dBm at 3700-4200 MHz

** +28 dBm at 3700-4200 MHz

▲Heat sink not included. Alternative heat sinking and heat removal must be provided by the user to limit maximum base-plate temperature to 65°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.

Maximum Ratings

| Parameter | Ratings |
|----------------------------|----------------|
| Operating Temperature | -20°C to 65°C |
| Storage Temperature | -55°C to 100°C |
| DC Voltage | +20V |
| Input RF Power (no damage) | +3 dBm |

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

Notes

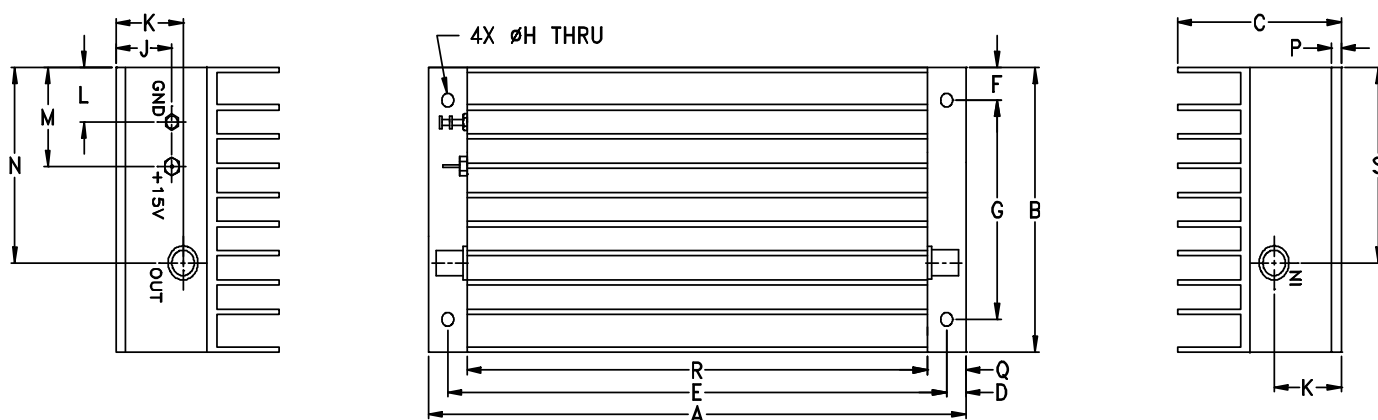
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

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.

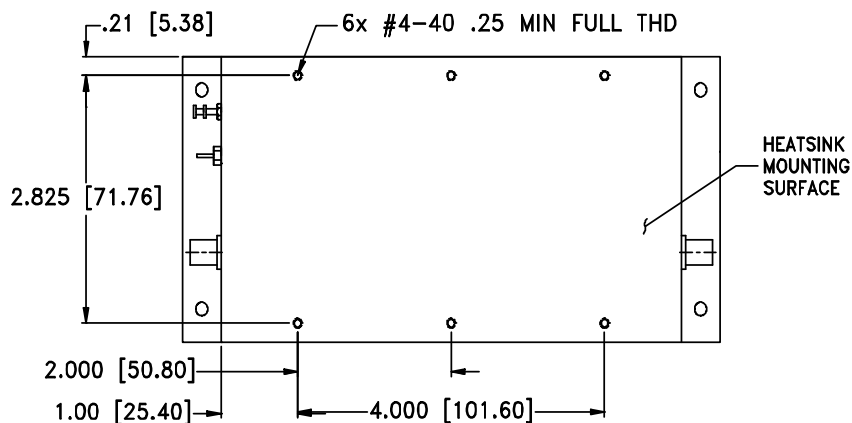
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Outline Drawing for models with heatsink



MOUNTING INFORMATION FOR MODELS WITHOUT HEATSINK



Outline Dimensions (inch/mm)

| A | B | C | D | E | F | G | H | J | K | L | M | N | P | Q | R | S | wt |
|--------|-------|-------|------|--------|------|-------|------|-------|-------|-------|-------|-------|------|-------|--------|-------|-------|
| 7.00 | 3.25 | 2.13 | .25 | 6.500 | .38 | 2.500 | .156 | .73 | .88 | .63 | 1.13 | 2.23 | .125 | .50 | 6.00 | 2.23 | grams |
| 177.80 | 82.55 | 54.10 | 6.35 | 165.10 | 9.65 | 63.50 | 3.96 | 18.54 | 22.35 | 16.00 | 28.70 | 56.64 | 3.18 | 12.70 | 152.40 | 56.64 | 900 |

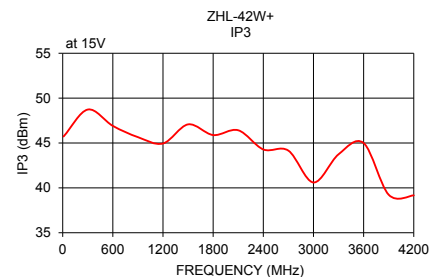
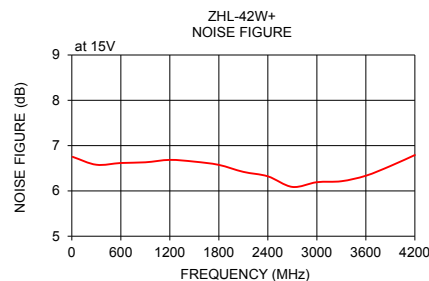
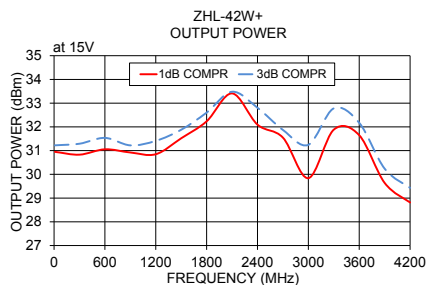
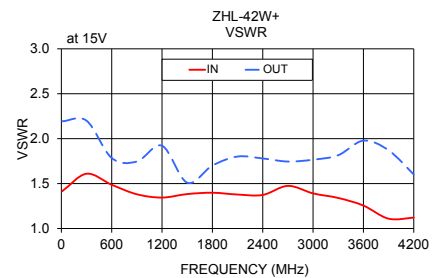
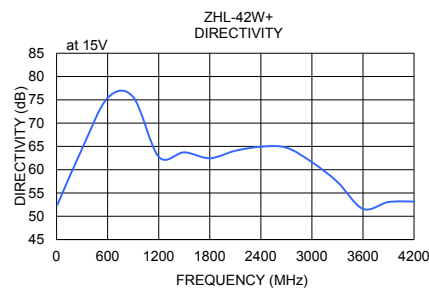
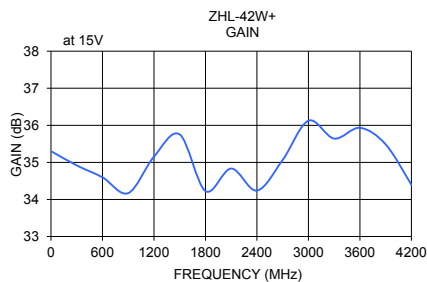
*600 grams without heatsink

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| FREQUENCY (MHz) | GAIN (dB) | DIRECTIVITY (dB) | VSWR (:1) | | POUT at 1 dB COMPR. (dBm) | NOISE FIGURE (dB) | IP3 (dBm) |
|-----------------|-----------|------------------|-----------|------|---------------------------|-------------------|-----------|
| | 15V | 15V | IN | OUT | 15V | 15V | 15V |
| 10 | 35.29 | 52.49 | 1.42 | 2.19 | 30.95 | 6.75 | 45.72 |
| 300 | 34.92 | 64.51 | 1.61 | 2.20 | 30.83 | 6.58 | 48.73 |
| 600 | 34.60 | 75.41 | 1.49 | 1.78 | 31.06 | 6.62 | 46.90 |
| 900 | 34.17 | 75.61 | 1.38 | 1.75 | 30.92 | 6.63 | 45.65 |
| 1200 | 35.15 | 62.78 | 1.34 | 1.92 | 30.85 | 6.68 | 44.95 |
| 1500 | 35.75 | 63.73 | 1.38 | 1.51 | 31.52 | 6.65 | 47.07 |
| 1800 | 34.23 | 62.47 | 1.40 | 1.70 | 32.24 | 6.57 | 45.88 |
| 2100 | 34.83 | 64.07 | 1.38 | 1.80 | 33.41 | 6.42 | 46.42 |
| 2400 | 34.24 | 64.93 | 1.37 | 1.78 | 32.09 | 6.32 | 44.28 |
| 2700 | 35.07 | 64.73 | 1.47 | 1.75 | 31.55 | 6.09 | 44.15 |
| 3000 | 36.12 | 61.62 | 1.39 | 1.77 | 29.84 | 6.19 | 40.60 |
| 3300 | 35.64 | 57.37 | 1.34 | 1.82 | 31.88 | 6.21 | 43.74 |
| 3600 | 35.93 | 51.58 | 1.26 | 1.98 | 31.65 | 6.34 | 45.00 |
| 3900 | 35.49 | 53.06 | 1.11 | 1.87 | 29.64 | 6.55 | 39.23 |
| 4200 | 34.39 | 53.16 | 1.12 | 1.60 | 28.82 | 6.79 | 39.17 |



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