



COAXIAL

# High Power Amplifier ZHL-100W-52-S+

50Ω 100W 50 to 500 MHz

## FEATURES

- High Power, 100 Watt
- Excellent IP3, +58 dBm typ.
- Class A amplifier, usable up to 100W.
- No damage with an open or short output load under full CW output power<sup>1</sup>
- Shuts off when base plate temperature exceeds +100°C
- Internal power regulator (current remains constant over +22 to +28V)
- Over voltage protection, shut off above +29V
- Protected by US Patent 7,348,854



Generic photo used for illustration purposes only

|            |                |
|------------|----------------|
| Model No.  | ZHL-100W-52-S+ |
| Case Style | BT1165         |
| Connectors | SMA            |

### +RoHS Compliant

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

## APPLICATIONS

- VHF/UHF transmitters
- Defense
- Amateur radio, FM, TV
- Laboratory use

## ELECTRICAL SPECIFICATIONS AT 25°C

| Parameter                                 | Condition (MHz)       | Min.           | Typ.           | Max.   | Units |
|---|-----------------------|----------------|----------------|--------|-------|
| Frequency Range                           |                       | 50             |                | 500    | MHz   |
| Gain                                      |                       | 47             | 52             | —      | dB    |
| Gain Flatness                             |                       | —              | ±1.2           | ±1.8   | dB    |
| Output Power at 1dB compression           | 200 - 300<br>50 - 500 | +46.5<br>+45   | +48.5<br>+47.5 | —<br>— | dBm   |
| Saturated Output Power at 3dB compression | 200 - 300<br>50 - 500 | +47.5<br>+46.5 | +49.5<br>+49   | —<br>— | dBm   |
| Noise Figure                              |                       | —              | 4.5            | 8.0    | dB    |
| Output third order intercept point        |                       | —              | +58            | —      | dBm   |
| Input VSWR                                |                       | —              | 1.75           | —      | :1    |
| Output VSWR                               |                       | —              | 2.5            | —      | :1    |
| DC Supply Voltage                         |                       | —              | 24             | 25     | V     |
| Supply Current                            |                       | —              | —              | 10.5   | A     |

1. At constant open or short load 24V nominal supply voltage

## ABSOLUTE MAXIMUM RATINGS

| Parameter                               | Ratings           |
|---|-------------------|
| Operating Temperature                   | -20 °C to +85 °C  |
| Storage Temperature                     | -55 °C to +100 °C |
| Base Plate Temperature                  | +85 °C            |
| Input RF Power <sup>2</sup> (no damage) | 3 dBm             |

2. At nominal output load, +24V nominal supply voltage. Permanent damage may occur if any of these limits are exceeded.

REV. J  
ECO-017544  
ZHL-100W-52-S+  
MCL NY  
230420



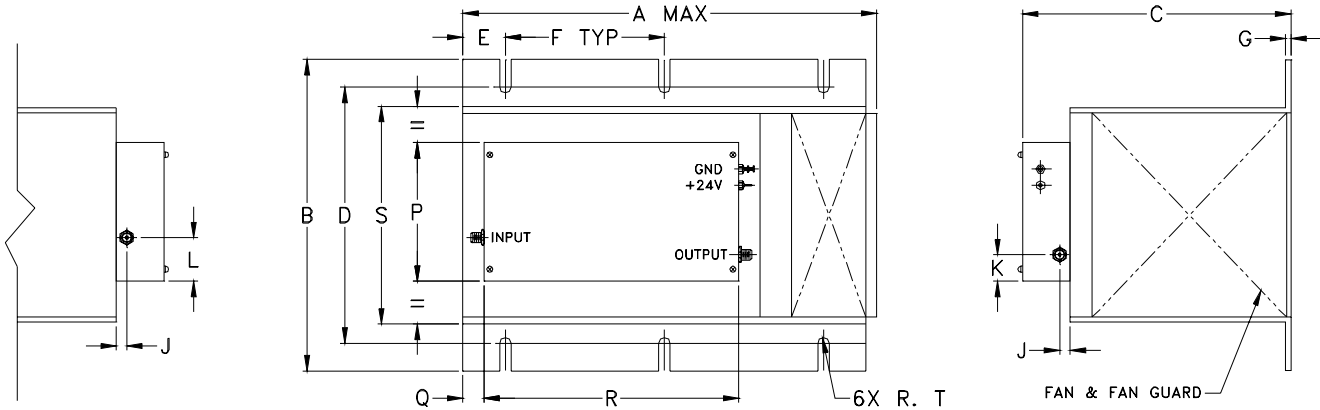


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## OUTLINE DRAWING FOR MODELS WITH HEATSINK



## OUTLINE DIMENSIONS (Inch/mm)

| A      | B      | C      | D      | E     | F     | G    | H | J    | K     | L     | M | N | P     | Q     | R      | S      | T    | wt     |
|--------|--------|--------|--------|-------|-------|------|---|------|-------|-------|---|---|-------|-------|--------|--------|------|--------|
| 9.85   | 7.3    | 6.3    | 6.00   | 1.00  | 3.75  | .13  | — | .25  | .63   | 1.03  | — | — | 3.25  | .5    | 6.00   | 5.1    | .135 | grams* |
| 250.19 | 185.42 | 160.02 | 152.40 | 25.40 | 95.25 | 3.30 | — | 6.35 | 16.00 | 26.16 | — | — | 82.55 | 12.70 | 152.40 | 129.54 | 3.43 | 4185   |

\*500 grams without heatsink