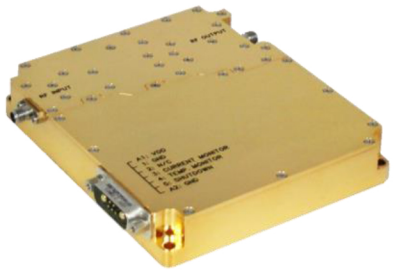
# HD31530
# SOLID STATE HIGH POWER AMPLIFIER

HD Communications Corp.

**FEATURES**

Class AB linear GaAs hybrid design
Instantaneous wide bandwidth
Suitable for all single channel modulation standards
Built-in protection circuits
High reliability and ruggedness



**ELECTRICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Operating Frequency Range | 26.0 - 32.0 GHz | |
| Power Output | 10 Watt Typ | CW |
| Power Output @ P1dB G.C.P. | 8 Watt Typ | |
| Power Gain | 40 dB Min | |
| Power Gain Flatness | 4.0 dB p-p Max | Constant input power |
| Input / Output Return Loss | 10 dB Min | Relative to 50 Ohm |
| Harmonics | >20 dBc Typ | At rated Pout |
| Non-Harmonics Spurious | >60 dBc Min | |
| Operating Voltage | 9.0 VDC Nom | |
| Current Consumption | 19 Amp Max | At rated Pout |
| Max Input Power | +3 dBm | Without damage |
| Load VSWR Protection | 5 : 1 | |

**ENVIRONMENTAL CHARACTERISTICS**

| Parameter | Specification | Notes |
|---|---|---|
| Operating Case Temperature | -20 to +55 °C | |
| Storage Temperature | -40 to +85 °C | |
| Relative Humidity | 5 to 95 % | Non-Condensation |

**MECHANICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions | 110 X 130 X 22 mm | Excluding Connectors |
| Weight | 650 gr. | |
| RF Connectors In/Out | 2.92mm(K) / 2.92mm(K) | |
| DC Power / Interface Connector | 7-Pin Hybrid D-Sub | |
| Cooling | External Heatsink | Forced air required |

**D-SUB CONNECTOR PIN ASSIGNMENT**

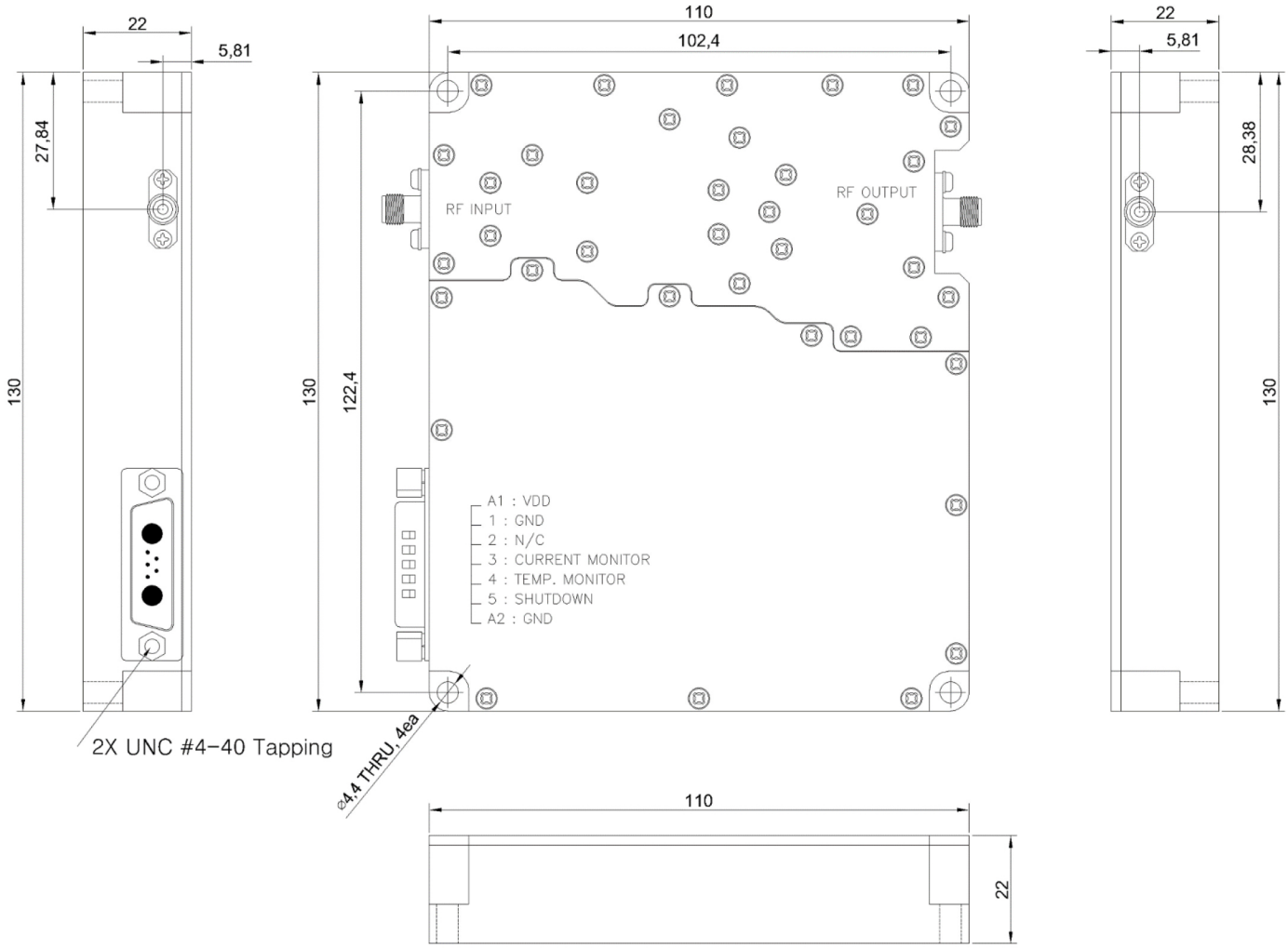
| Pin | Function | Description |
|---|---|---|
| 1 | N/C | Reserved |
| 2 | N/C | Reserved |
| 3 | CURRENT SENSOR | $I_D$@20mV/100mA Typ |
| 4 | TEMP SENSOR | $V_T$@10mV/°C + 500mV Typ |
| 5 | SHUTDOWN | TTL |
| A1 | VDD | 9VDC |
| A2 | GND | Ground |

332C Dante Ct. Holbrook, NY 11741 Phone: 631-588-3877 Fax: 631-648-0518
www.rfamplifiers.com www.rfcomp.com sales@hdcom.com

HD Communications Corp.

# HD31530
# SOLID STATE HIGH POWER AMPLIFIER

## OUTLINE DRAWING





332C Dante Ct. Holbrook, NY 11741 Phone: 631-588-3877 Fax: 631-648-0518
www.rfamplifiers.com www.rfcomp.com sales@hdcom.com

HD Communications Corp.

# HD31530
# SOLID STATE HIGH POWER PULSE AMPLIFIER

## FEATURES

Class AB linear LDMOS design
Instantaneous bandwidth
Suitable for high peak power VHF pulse applications
Built-in monitoring and protection circuits
High reliability and ruggedness

## ELECTRICAL SPECIFICATIONS

| Parameter | Specification | | | | | | Notes |
|---|---|---|---|---|---|---|---|
| Operating Frequency | 150 - 250 MHz | | | | | | |
| Power Output | 1.5 KW Min | | | | | | Peak Pulse |
| Power Gain | 62 dB Nom | | | | | | |
| Pulse Characteristics | **Width** | **Duty** | **PRF** | **Rise/Fall** | **Droop** | **Jitter** | |
| | 100µS | 10% | - | <100nS | <1dB | - | |
| Input Return Loss | -12 dB Min | | | | | | Relative to 50 Ohm |
| Harmonics | 30 dBc Typ | | | | | | |
| Operating Voltage | 50 VDC | | | | | | |
| Current Consumption | 40 Amp Peak / 4 Amp Avg. Max | | | | | | 1.5KW Peak @ 10% duty cycle |
| Input Overdrive protection | +3 dBm | | | | | | Limited to 10 Sec |
| Load VSWR Protection | 5 : 1 Max | | | | | | |

## ENVIRONMENTAL CHARACTERISTICS

| Parameter | Specification | Note |
|---|---|---|
| Operating Case Temperature | -20 to +65 °C | |
| Storage Temperature | -40 to +85 °C | |
| Relative Humidity | 5 to 95 % | Non Condensation |

## MECHANICAL SPECIFICATIONS

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions | 320 x 250 x 32 mm | Excluding Heatsink |
| Weight | TBD | |
| RF Connectors In/Out | SMA female / Type N female | |
| DC Power / Interface Connector | Hybrid D-Sub / TBD | |
| Cooling | External Heatsink | Forced air required |

332C Dante Ct. Holbrook, NY 11741 Phone: 631-588-3877 Fax: 631-648-0518
www.rfamplifiers.com www.rfcomp.com sales@hdcom.com