# HD31007
# SOLID STATE HIGH POWER AMPLIFIER

HD Communications Corp.

**FEATURES**

Small form factor, light weight rack mounted system
Linear GaAsFET design
Instantaneous wide bandwidth
Suitable for all modulations standards
Built-in control, monitoring, protection and interfacing circuits
User friendly local and remote interface
High reliability and ruggedness



**ELECTRICAL SPECIFICATIONS**

| Parameter | Specification | | Notes |
|---|---|---|---|
| Operating Frequency Range | 5.9 - 6.4 GHz | | AMP4013A: 5.85 - 6.425 GHz |
| Power Output @ P1dB GCP | 200 Watt Min | | CW |
| Power Gain | 63 dB Nom | | Pin = -10 dBm Typ |
| Power Gain Flatness | 2.0 dB p-p Max | | Constant input power |
| Gain Adjustment Range | 20 dB in 0.25 dB steps | | |
| Gain Variation Over Temperature | ±1.0 dB | | |
| Input Return Loss | 12 dB Min | | Relative to 50 Ohm |
| 2-Tone Intermodulation (IMD) | >30 dBc Typ<br>>23 dBc Min | | 45dBm/Tone, Δ = 1MHz<br>47dBm/Tone, Δ = 1MHz |
| AM to PM Conversion | 1.0° Typ, 2.5° Max | | At rated Pout |
| Group Delay Measurement Type | Linear | Parabolic | Ripple |
| Group Delay | ±0.03 nS/MHz | ±0.003 nS/MHz$^2$ | 1.0 nS p-p |
| Noise Figure | 8 dB Typ, 15 dB Max | | At Max Gain |
| Harmonics | >40 dBc Typ | | At rated output power |
| Non Harmonics Spurious | >60dBc | | |
| Operating Voltage | 180 - 240 VAC | | |
| Power Consumption | 1250 Watt Max | | At rated Pout |
| Max Input Power | -2 dBm | | Without damage |
| Load VSWR Protection | ∞ : 1 | | |

**PHASE NOISE**

| Offset Frequency | 100 Hz | 1 KHz | 10 KHz | 100 KHz | 1 MHz |
|---|---|---|---|---|---|
| (dBc/Hz) | -79 | -91 | -105 | -120 | -132 |

**ENVIRONMENTAL CHARACTERISTICS**

| Parameter | Specification | Notes |
|---|---|---|
| Operating Ambient Temperature | 0 to +50 °C | |
| Storage Temperature | -40 to +85 °C | |
| Relative Humidity | 5 to 95 % | Non Condensing |

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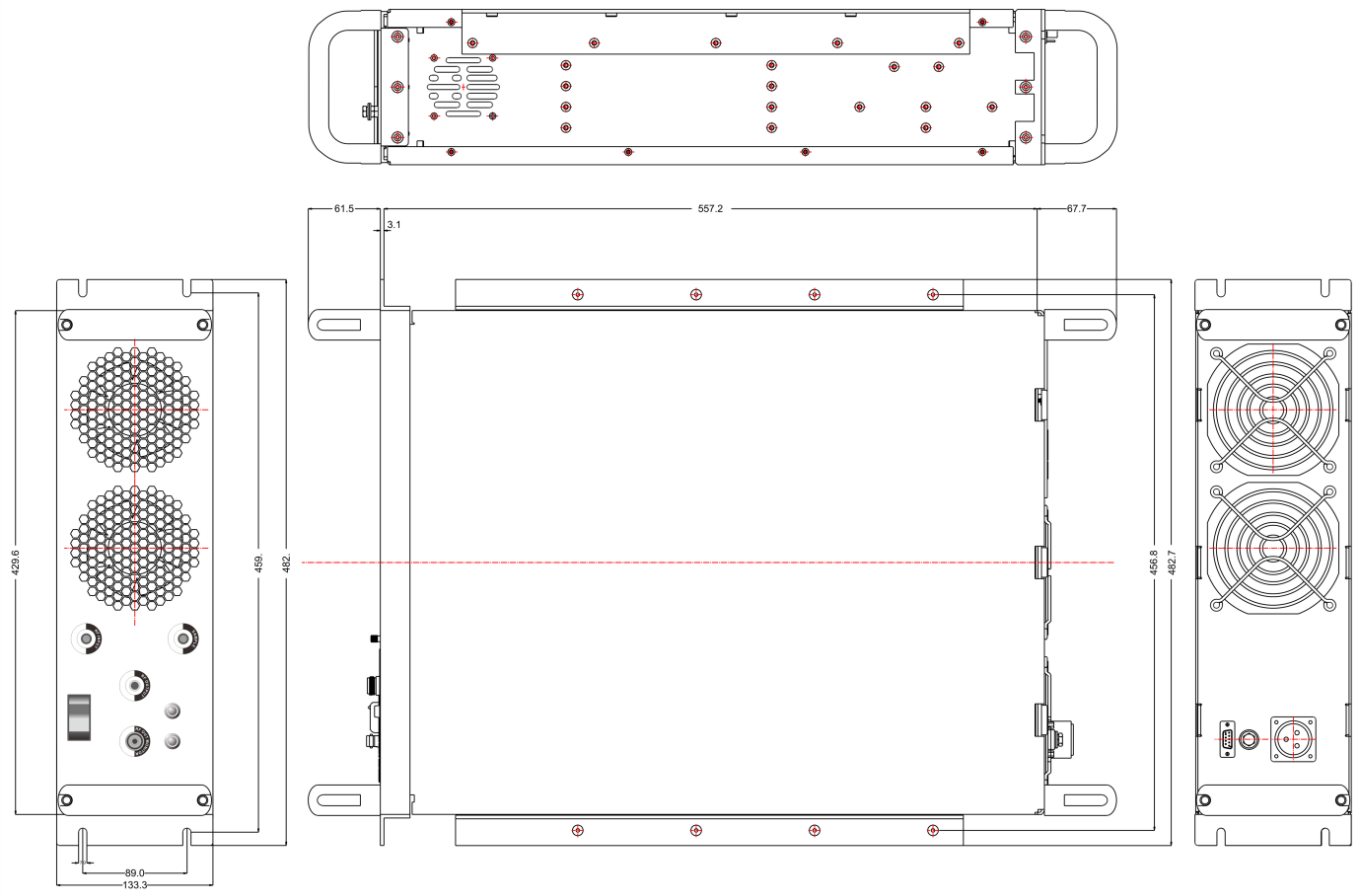
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**MECHANICAL SPECIFICATIONS**

| Parameter | Specification | Notes |
|---|---|---|
| Dimensions W x H x D | 430 x 560 x 133.3 mm | 3U |
| Weight | 20 kg. | |
| RF Connectors In / Out | Type-N Female / Waveguide CPR-137G | Front Panel Standard |
| AC Power / Interface Connector | IEC 60320-C14 / 9-Pin D-Sub | |
| Monitor & Control (Digital Control Option):<br>FWD, REV, VSWR, GAIN, ALC, V & I, TEMP | 1 Ethernet RJ-45 circular connector TCP/IP<br>1 RS422/485 D-dub 9S port for redundancy | Remote Bluetooth application |
| Cooling | Built in Fan Cooling | Variable speed |

**OUTLINE DRAWING**




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