

Product Overview

AA proposes fixed frequency driver based on Quartz oscillators that provide standard frequencies such as 35 MHz, 40 MHz, 80 MHz, 110 MHz... AA is also capable of providing any other frequencies (on request) up to 460 MHz with a precision in the KHz range such as 40.002 MHz, 94.297 MHz, 108.456 MHz. These RF drivers have integrated amplifiers and can deliver up to 20W. The RF power is modulated by two external signals: analog and TTL (or only one in option). These drivers are available either as OEM 24 VDC versions or laboratory 110-230 VAC rack versions.

FEATURES

- **Carrier frequency (MHz):** Any up to 460Mz
- **As Option:** any frequency in the range of 10-460 MHz
- **RF power (W):** 1, 2.5, 4, 10, 20
- **Modulation inputs:** Dual Analog +TTL

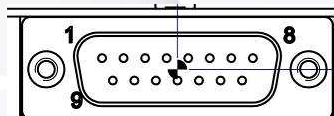


SPECIFICATIONS (T=25°C)

| Parameter | Units | MODAxx |
|---|-----------------|---|
| Carrier Frequency F (MHz) | MHz | 35/ 40 / 80 / 110 / 160 / 110 / 180 / 200 / 250 / 350 Any fixed in 10-460 |
| Frequency Stability | ppm/°C | Nom +/- 1 |
| Frequency Accuracy | ppm | < 50 |
| Output RF Power (@1dB compression) | W | 1 / 2.5 / 4 / 10 / 20 |
| Power Supply OEM version | VDC | 24 nom 0.50 A (1W) - nom 0.65A (2.5W) - nom 1.0A (4W) - nom 2-3 A (10-20W) |
| Power Supply Laboratory version | VAC | 110 – 230 |
| Modulation Input Control (AM) | | Dual (Analog + TTL): 0-5V/1kΩ + TTL/1kΩ for F< 150 MHz 0-1V/50Ω + TTL/1kΩ for F> 150 MHz |
| Rise Time/Fall time (10-90%) < 4 watts | ns | < 20 @40 MHz, < 10 @80 MHz < 8 @110 MHz, < 5 @180 MHz, < 3 @F>200MHz |
| Output Impedance | Ω | 50 |
| VSWR | | < 1.5/1 |
| Extinction Ratio | dB | Nom 45 Option Digital >75dB available (≤110MHz) |
| Input / Output Connectors | | SMA + DB15 / SMA |
| Size / Weight | mm ³ | 129 X 61 X 30.1 / 500 g (OEM Version) 340 x235X90 mm / 3.6-3.8 Kg (Laboratory Version) |
| Heat Exchange | | Conduction through baseplate for OEM versions AA adds a supplementary heatsink + fan on top for 4-20 Watts versions Standalone (fan integrated) for laboratory versions |
| Operating Temperature | °C | 10 to 40 (max Tcase 50°C) |
| Storage Temperature | °C | -40 to +70 Non condensing |

PIN connections (MODAxx)

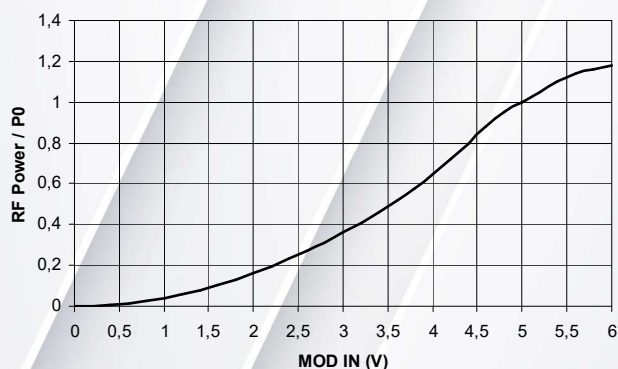
| | |
|-------------------------|-----------------------|
| Pin 1 | : ANALOG INPUT* |
| Pin 3 | : TTL INPUT* |
| Pin 5 | : QUIETING** |
| Pin 6 | : NC |
| Pin 8 | : NC |
| Pin 9, 11, 13, 15 | : POWER SUPPLY (+VDC) |
| Pin 2, 4, 7, 10, 12, 14 | : GND |



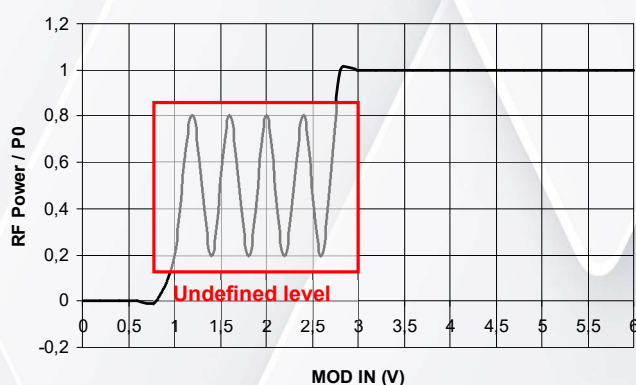
*either input can be deactivated at factory (Option)

**response time <1μs, do not connect if not used

Typ Relative Output RF power vs ANALOG MOD IN (0-5V)



Relative Output RF power vs DIGITAL MOD IN (TTL)



Chronogram Analog-TTL inputs

Laboratory version or OEM version?

Laboratory 110-230 VAC

- Standalone bench top box with built in MODAxx (OEM)
- AC power supply 110-230VAC.
- Cooling is assured by integrated fan
- User can be assured to activate/deactivate the analog and/or TTL inputs via the front panel switches.
- Front panel potentiometer to adjust the Max RF power
- Front panel ON/OFF switch with LED indicator.

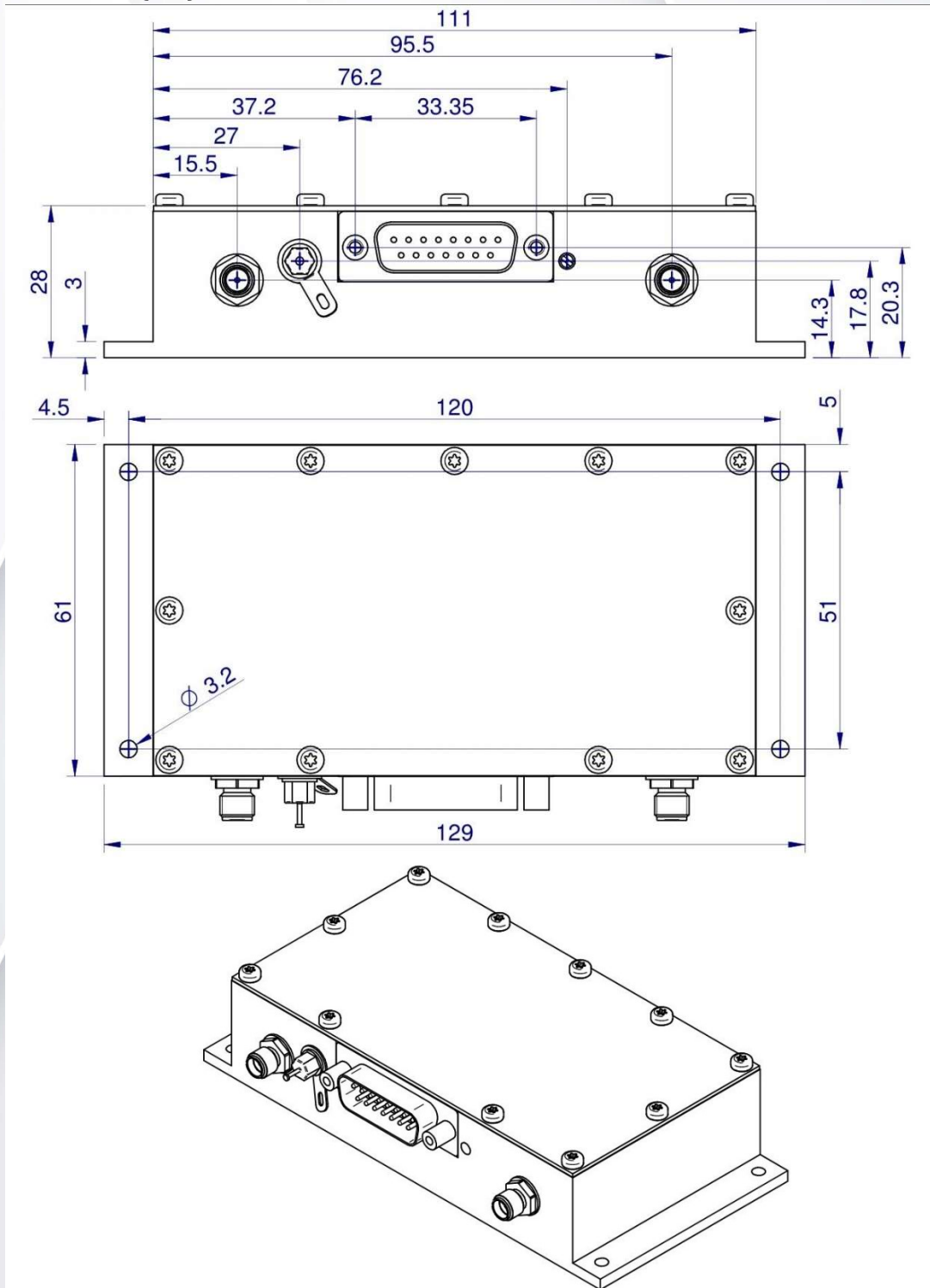


OEM version 24 VDC

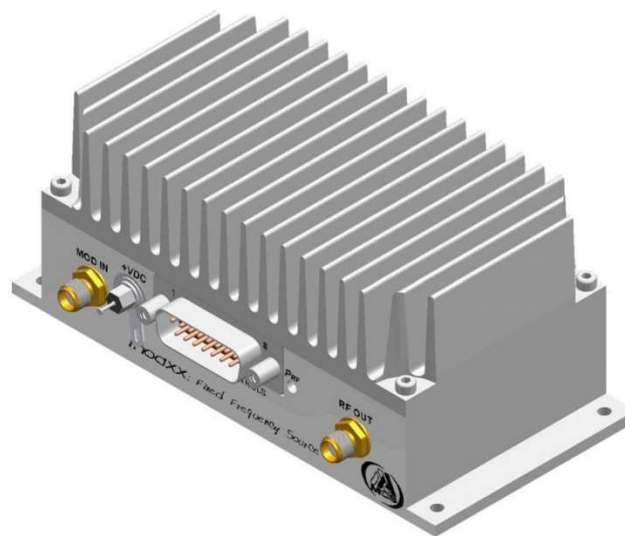
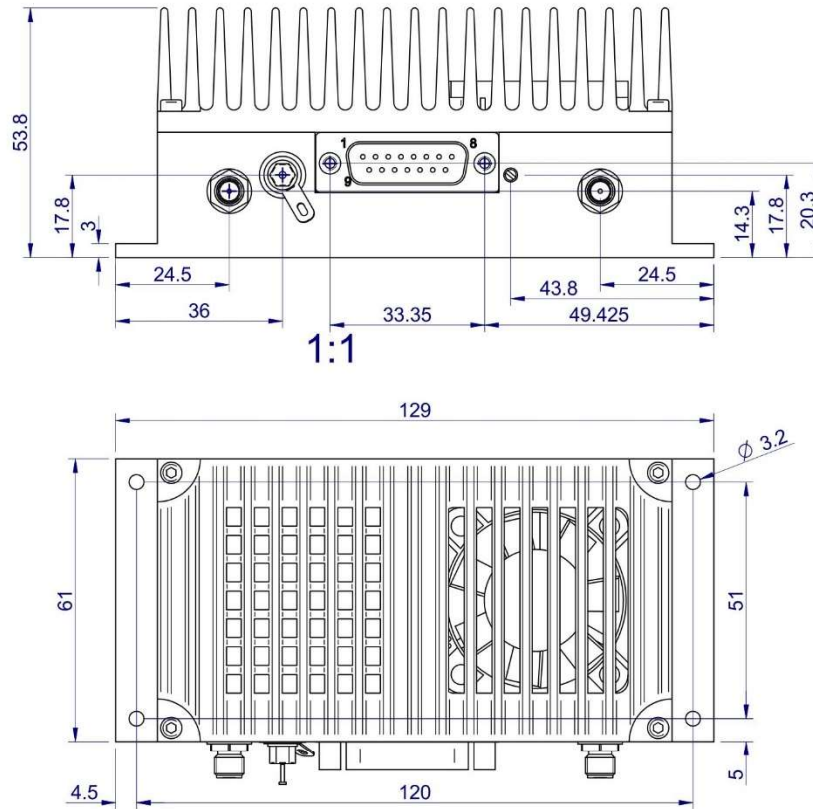
- Compact housing generally meant to be integrated inside a larger system.
- Convenient power supply must be provided by user.
- Contact cooling through the baseplate is required (by fixing it on a metallic plate for e.g)



OUTLINE DRAWING (mm)



MODAxx/MODAGxx - OEM - ≤ 2.5 Watts (mm)



MODAxx/MODAGxx - OEM - 4-20 Watts (mm)