

Product Overview

In order to drive most AO devices, AA proposes a 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 got 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

Standard carrier frequency (MHz): 35, 40, 80, 110, 160, 180, 200, 250, 350

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



OEM version, 4-20 W

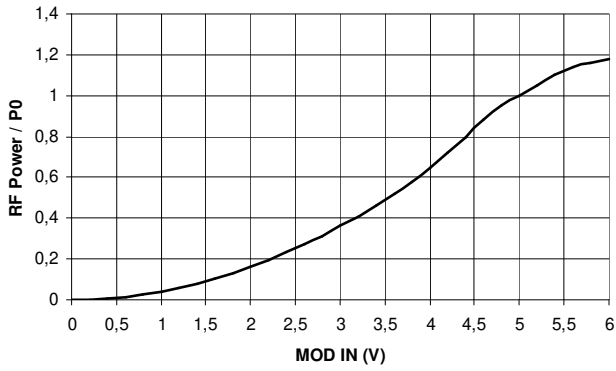


OEM version, 1-2.5 W

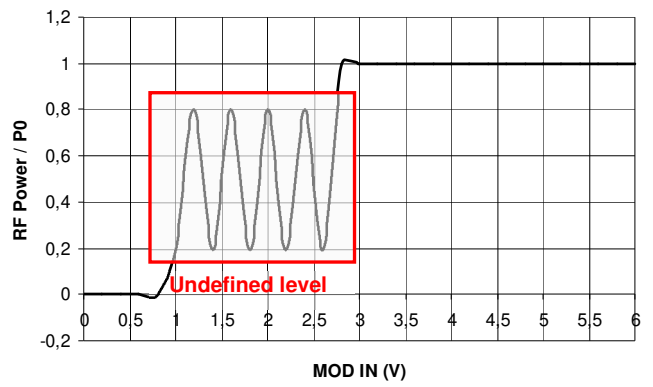
Technical Specifications

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

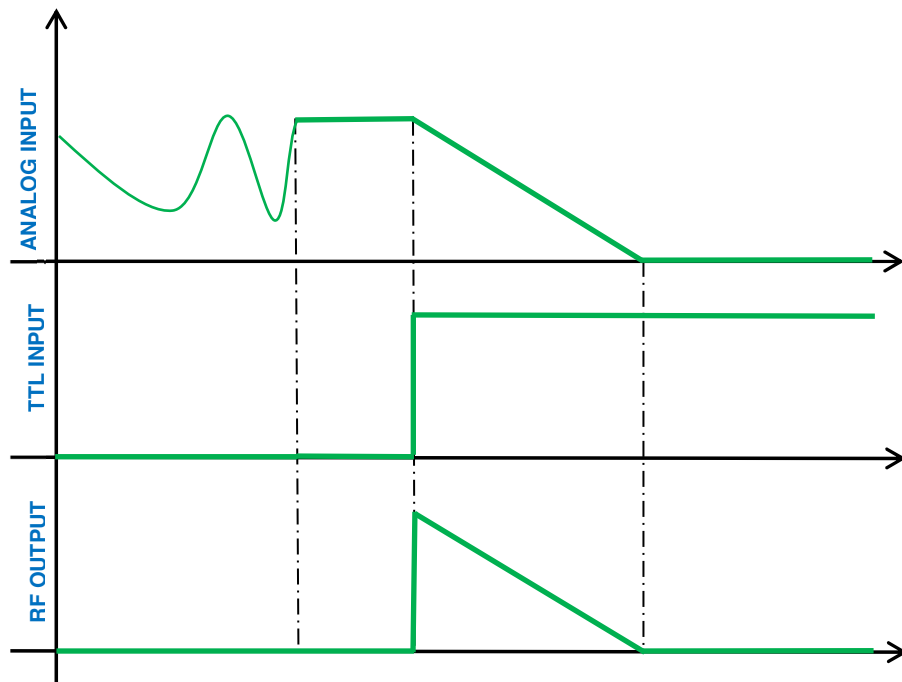
Typ Relative Output RF power vs ANALOG MOD IN (0-5V)



Relative Output RF power vs DIGITAL MOD IN (TTL)



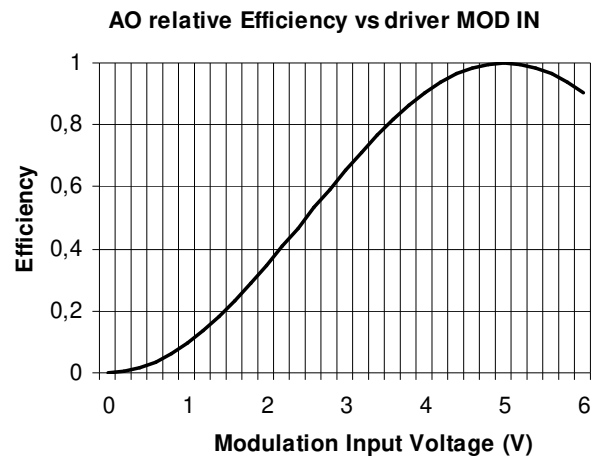
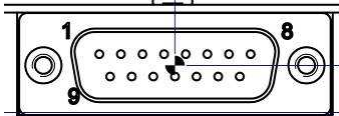
Chronogram Analog-TTL inputs



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

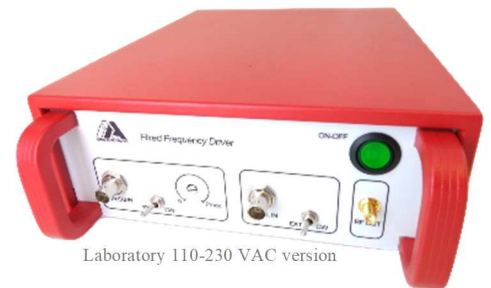
*either input can be deactivated at factory (Option)
**response time <1 μ s, do not connect if not used



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 choose 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.

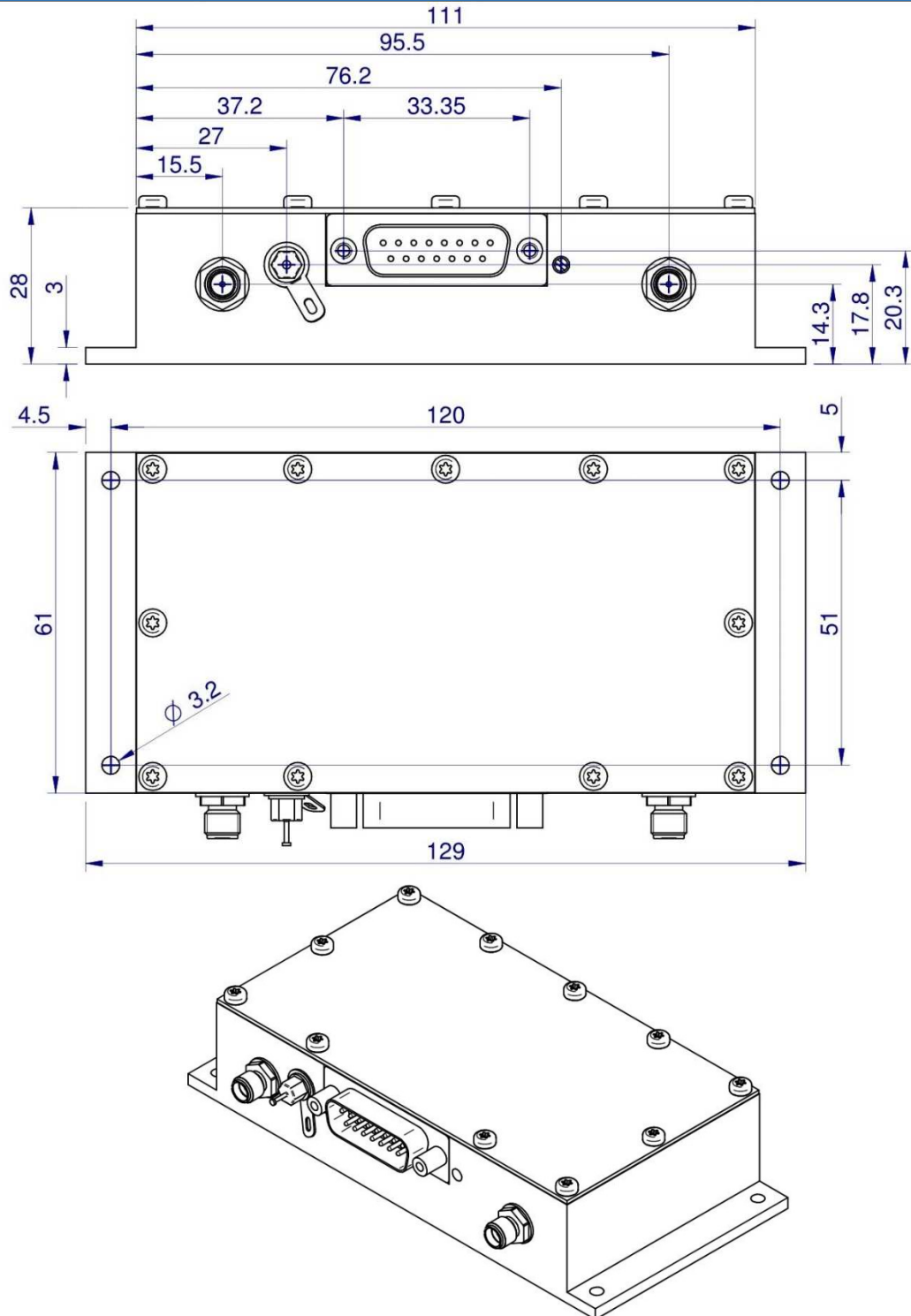


OEM version 24 VDC

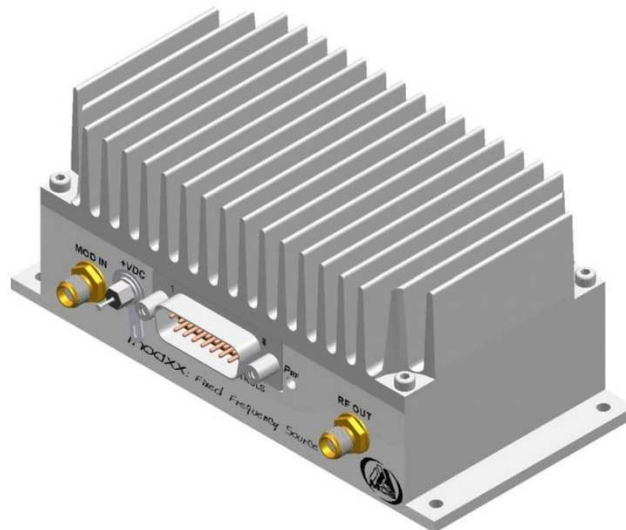
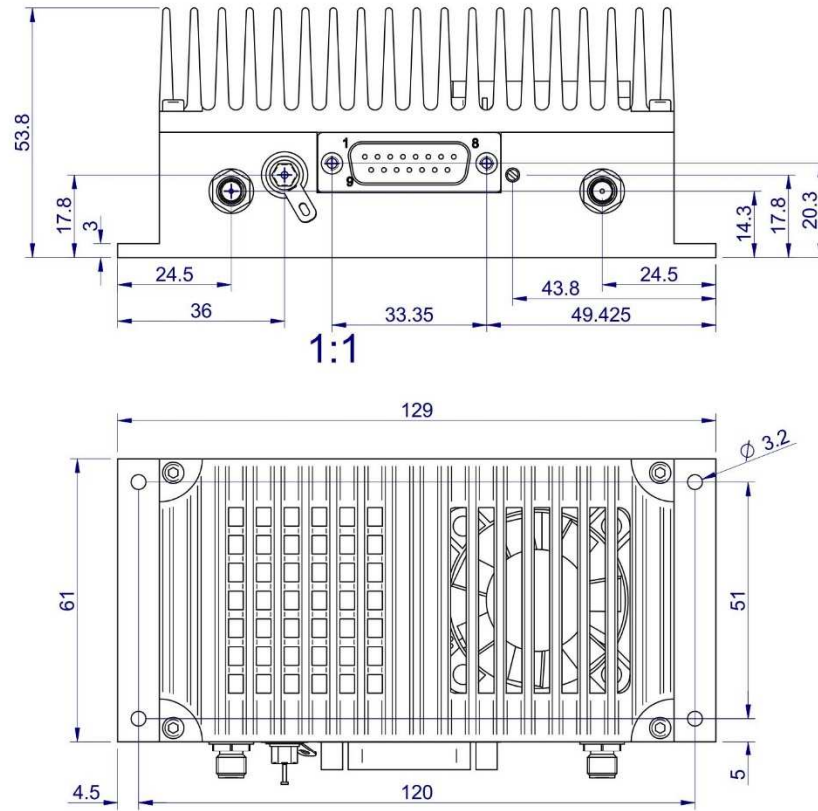
- Compact housing generally meant to be integrated inside a larger system.
- Convenient power supply must be provided by user.
- Contact cooling through the baseplate is required (by fixing it on a metallic plate for e.g)



OEM 24 VDC version



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



MODAxX/MODAGxx – OEM – 4-20 Watts (mm)