MODAxx – MODKxx - MODAGxx

FIXED FREQUENCY DRIVERS

Product Overview

AA proposes mainly two types of fixed frequency drivers:
***The MODAxx/MODKxx** drivers are based on quartz oscillators and provide standard fix frequencies such as 40 MHz, 80 MHz, 110 MHz…*
***The MODAGxx** drivers can provide any fixed frequencies according to the user's needs in the range of 10-400 MHz, such as 40.002 MHz, 94.297 MHz, 108.456 MHz...*
Both drivers have got integrated amplifiers and deliver the necessary RF power to drive the associated acousto optic device. The RF power can be externally modulated with a convenient input signal, analog or TTL on request. Cooling is assured by conduction through baseplate for the OEM version.

Features

- **MODAxx/MODKxx:** Fixed frequency (MHz): 40, 80, 110, 160, 180, 200, 250, 350
- **MODAGxx:** any fixed frequency in the range of 10-400 MHz
- RF power (W): 1, 2.5, 4, 10, 20
- Analog or TTL Modulation input controls
- Dual AM controls available Analog + TTL
- RoHS compliant

Technical Specifications

Parameter	Units	MODAxx / MODKxx	MODAGxx
Carrier Frequency (MHz)	MHz	40 / 80 / 110 / 160 / 110 / 180 / 200 / 250 / 350 Any fixed in 10-600	
Frequency Stability	ppm/°C	Nom +/- 1	
Frequency Accuracy	ppm	< 50	
Output RF Power (@1dB compression)	W	1 / 2.5 / 4 / 10 / 20 / 50	
Power Supply OEM version	VDC	24 nom 0.45 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)		Analog, TTL, or Analog+TTL (DUAL)	
Rise Time/Fall time (10-90%) < 4 watts	ns	< 20 @40 MHz, < 10 @80 MHz < 8 @110 MHz, < 5 @180 MHz, < 3 @F>200MHz	
Input / Output Impedance	Ω	50	
VSWR		< 1.5/1	
Extinction Ratio	dB	Nom 45 Option Digital >75dB available (≤110MHz)	
Input / Output Connectors		SMA - DB15 / SMA / Power supply pin through filter (MODAxx/MODAGxx) SMC / SMA / Power supply pin through filter	
Size / Weight	mm^3	129 X 61 X 30.1 / 500 g (OEM MODAxx/MODAGxx) 340 x235X90 mm / 3.6-3.8 Kg (Laboratory)	
Heat Exchange		Conduction through baseplate for OEM versions AA adds a supplementary heatsink + fan on top of 4-20 Watts versions Stand alone (fan integrated) for laboratory versions	
Operating Temperature	°C	10 to 40 (max Tcase 50°C)	
Storage Temperature	°C	-40 to +70 Non condensing	

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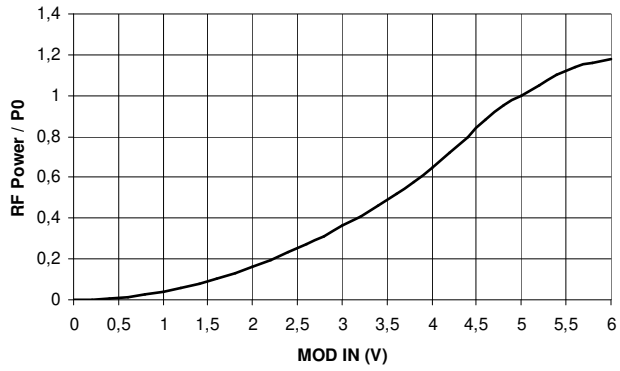
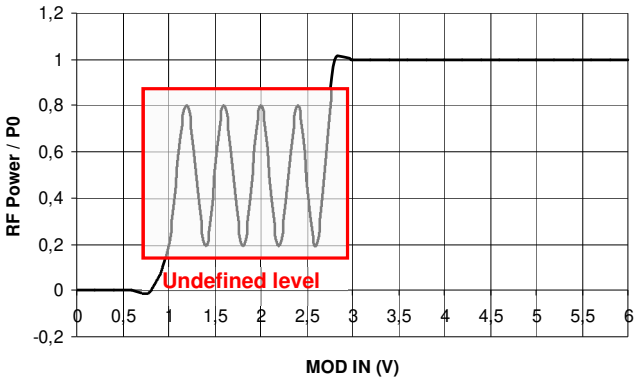
Typ Relative Output RF power vs ANALOG MOD IN (0-5V)

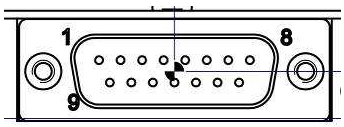


Relative Output RF power vs DIGITAL MOD IN (TTL)

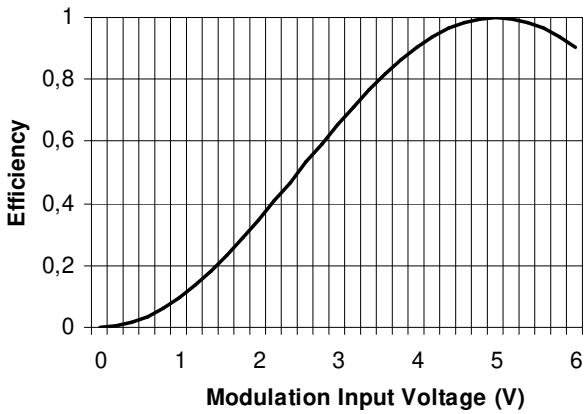


PIN connections (MODAxx/MODAGxx)

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



AO relative Efficiency vs driver MOD IN



Laboratory version or OEM version?

Laboratory version is a standalone bench top box with built in MODAXX or MODAGXX (OEM) and AC power supply 110-230VAC.
The driver is self cooled and can operate in two modes:
CW mode: the output RF power is adjusted thanks to the front panel potentiometer. External signal is not needed.
EXT mode: the output RF power is adjusted thanks to AM control signal provided by user. The maximum RF power is fixed by the front panel potentiometer.

OEM version is compact, generally dedicated to be integrated inside a larger system and the power supply (24 VDC in most cases) must be provided.

The heat exchange is done by contact cooling through baseplate and therefore it should be attached with screws (and thermal grease) on a metallic plate or a heatsink.
External control signals should be provided in order to operate the driver.

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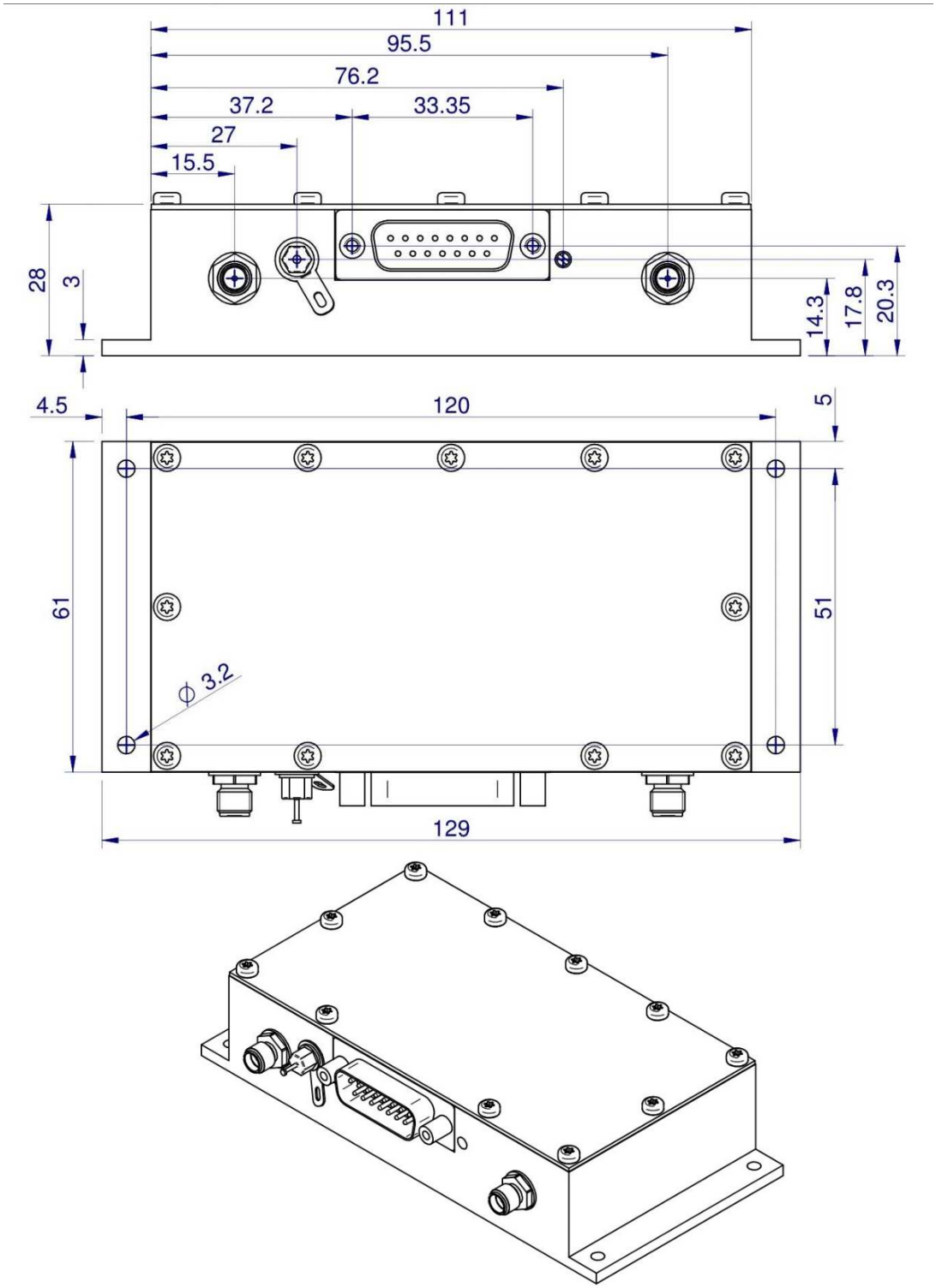

MODAxx/MODAGxx – OEM – ≤2.5 Watts (mm)

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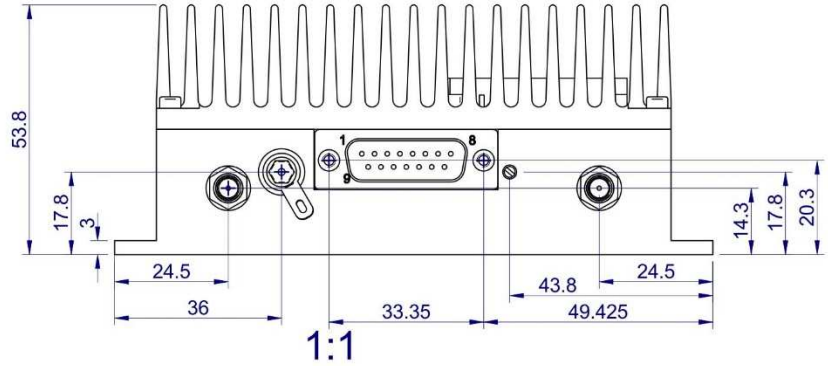

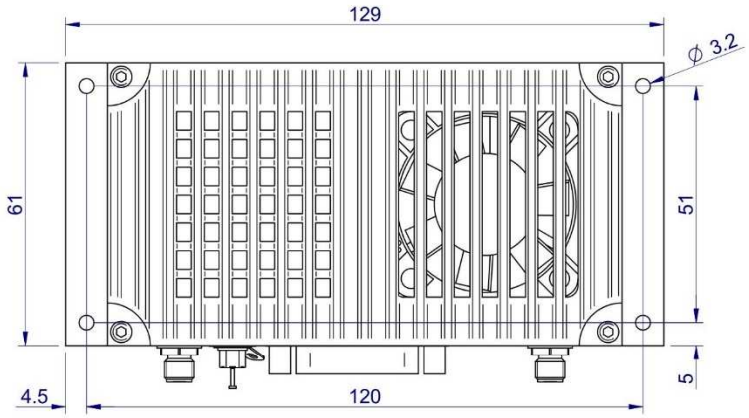

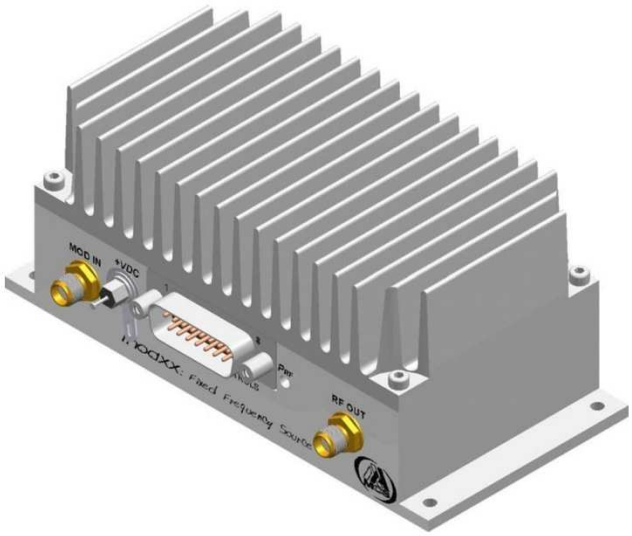

MODAxx/MODAGxx – OEM – 4-20 Watts (mm)

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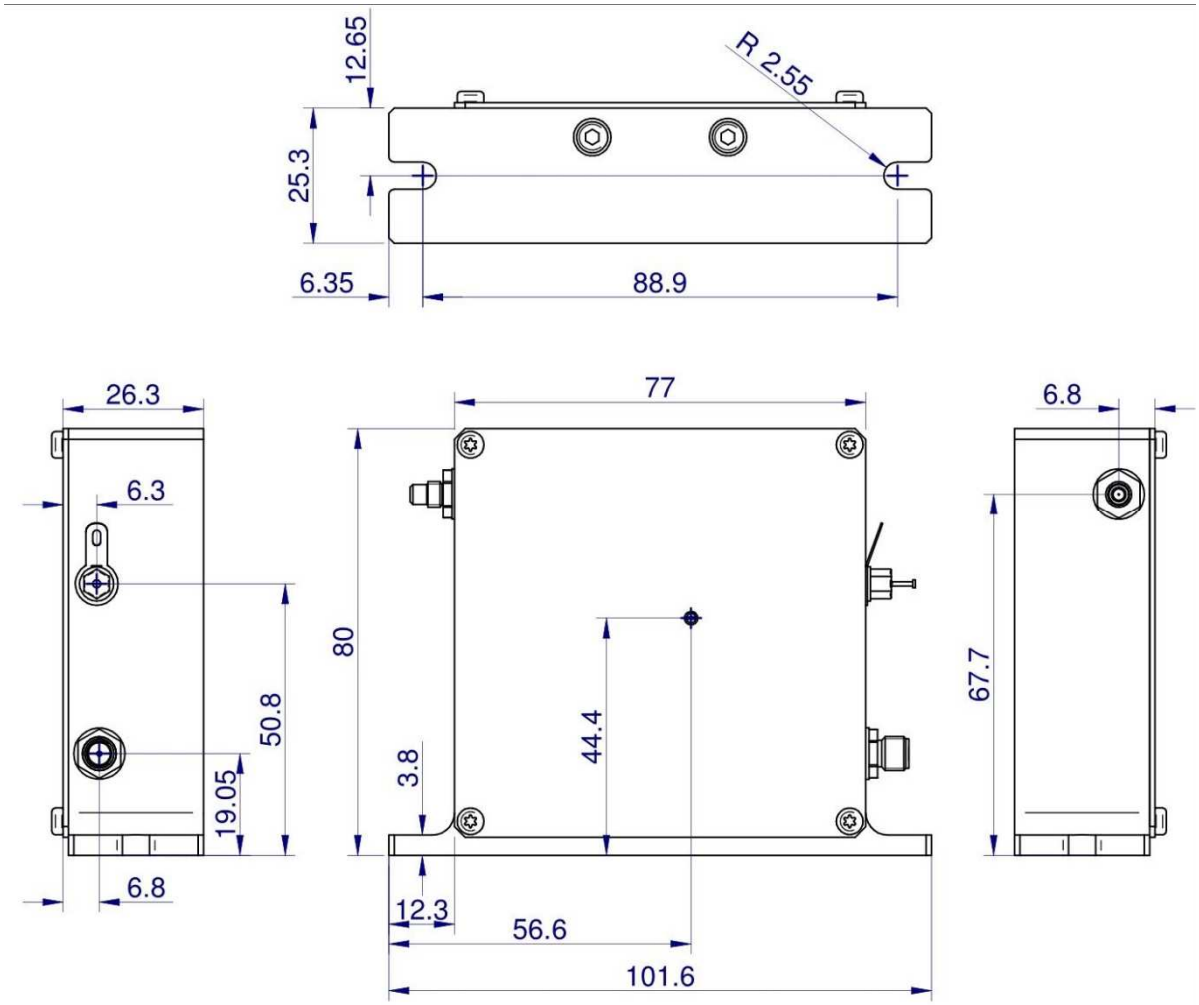

MODKxx – OEM (mm)

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