

MQH0XX-YYDM-ZZZ (24-80MHz, 25-100W)

Former Model Number: R390XX-YYDMZZZ-A



Description:

The MQH0XX-YYDM-ZZZ module is a high power RF driver, designed to drive a Q-switch. The driver has two digital modulation inputs: Fixed and Variable. These controls allow the customer to issue a pulse command of a "Fixed" pulse width, the duration determined by the Driver's pulse width control, settable by the customer, or issue a "Variable" pulse command, the duration determined by the input signal's pulse width. The output power is controlled by the analog input, where the mode of operation is defined by ZZZ = A05 normal analog mode, or R05 analog switched to full RF mode or a triggered RF Ramp Down mode where ZZZ = FPS first pulse suppression mode or PPK pre-pulse kill mode. The choices of Frequency (XX), Output Power (YY), and Power Control (ZZZ) option are "Factory Set" when ordered. The RF Driver requires forced air cooling.

The product delivered will be manufactured to be compliant with EU Directive 2002/95/EC for Reduction of Hazardous Substance. The product will be manufactured to other standards upon customer request.

Key Features:

- 24, 27.12, 40.68, 68, or 80 MHz RF frequency (XX)
- 0.01% Quartz Stabilized
- Up to 100* watts RF power output (YY)
- Two TTL Digital Modulation Inputs: fixed and variable pulse width.
- Analogue Modulation or Triggered RF Ramp Down Mode (ZZZ)
- Up to 100 kHz Pulse Rate.
- Fault Protection on Low Power, High Power, and High VSWR
- Operates on 28 VDC

Applications:

- RF Driver for an Acousto-Optic Q-Switch Device used to spoil the "Q" of a CW laser so as to output an intense pulse of light.
- Used in industrial, medical, or military applications.

Specifications:

RF Frequency: 24.00, 27.12, 40.68, 68.00, 80.00 MHz ± 0.01%

Spurious Levels: -50 dBc maximum
Harmonic Distortion -30 dBc maximum

Digital Inputs:

Variable Mod In

Fixed Mod In TTL Levels, Triggered on Rising Edge.

Pulse Width Applied >50 ns. TTL Levels, TTL High = RF off



Extinction Ratio:

RF Rise Time 10% to 90% RF Fall Time: 90% to 10%

Modulation Repetition Rates:

Fixed Modulation Output Pulse Width

Adjustment Range:

Available Pulse Control Options: Pulse Control Mode is "Factory Set

When Ordered":

FPS Trigger / Analog input

*RF Output Power "Factory Set When Ordered":

Output Impedance: Shutter Output:

Supply Voltage Input Supply Current Input Operating Temperature Air Flow through Heat Sink

MAXIMUM RATINGS:

Supply Voltage: Power Output:

Storage Temperature:

CONNECTORS & MECHANICAL:

RF Output Connector:

Power Supply Connections:

35 dB minimum 500 ns maximum 100 ns maximum

1 Hz to 100 kHz for Fixed Modulation DC to 100 kHz for Variable Modulation 1 to 14 ms. Customer Adjustable

ZZZ = Mode

FPS = First Pulse Suppression

PPK = Pre Pulse Kill A05 = Analog Control

R05 = RF Switched to Analog Control

= Digital Modulation Only

Units configured with FPS, PPK: TTL Levels,

Triggered on TTL Rising Edge.

Units configured with A05, R05: 0 to 5 volts analog.

YY = 50 or 100 watts nominal for 24, 27, 41, and 68 MHz units

Adjustable from 25 to 100 watts.

50 watts nominal for 80 MHz units, Adjustable from 20 to 50W

50 ohms nominal

0.3 sec delay. Opens on fault. Capable of sinking 1 amp at 28

volts Maximum. +28 VDC ± 1%

6.5 A for 50 W units 9.0 A for 100 W units

+10°C to +55°C

> 36 CFM (> 17 litres / second) @ 25°C

-20°C to +85°C

Located on front panel

30 volts DC maximum

No DC Feedback Allowed

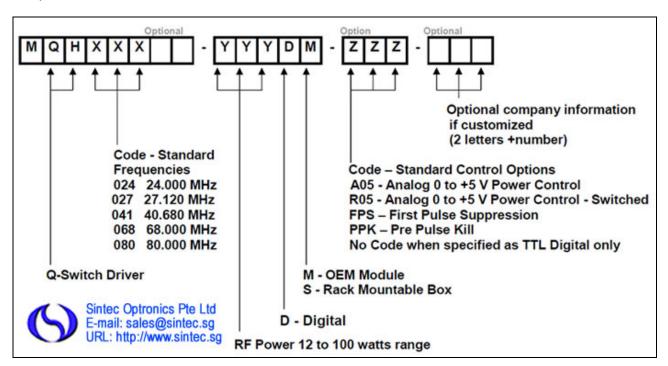
BNC Female

Vcc, Solder Post Return Ground Lug

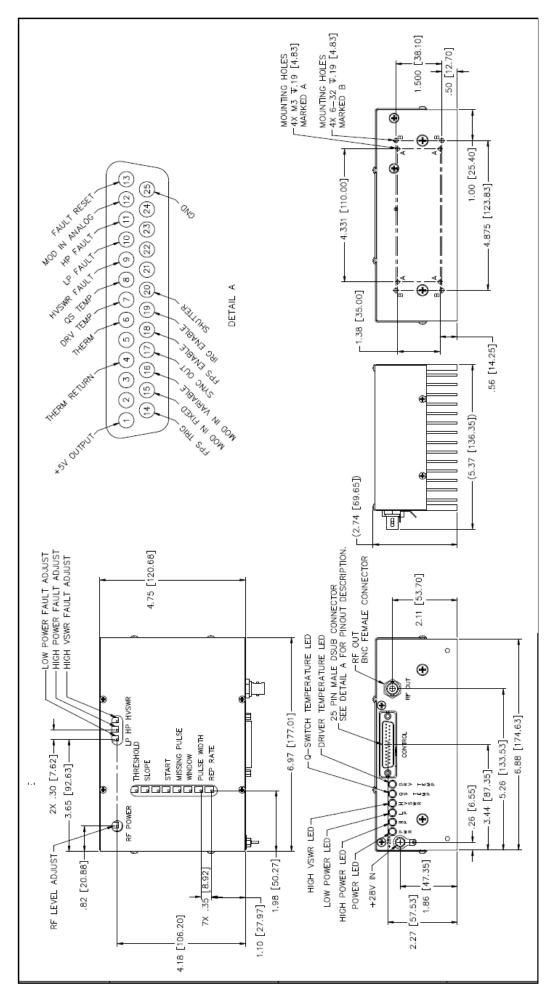


Ordering Codes:

Example: MQH027-100DM-A05, A 27 MHz RF Driver with two TTL digital Modulation inputs (fixed and variable pulse width) and an analog input (A05) which enables control of the RF output power. Designed to Drive an AO Q-switch requiring 100 watts RF Power or less. Delivered as a RoHS compliant, forced air cooled OEM Module.



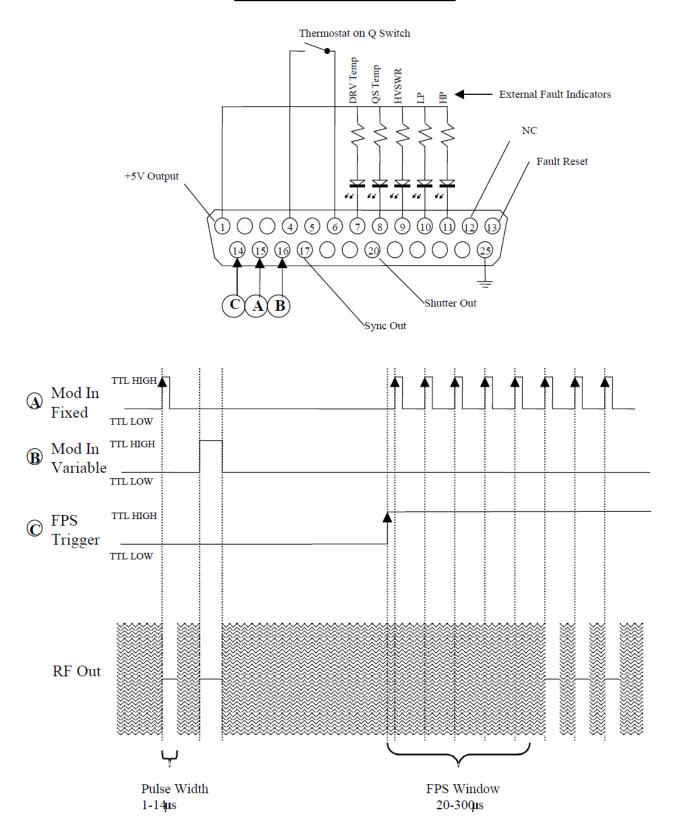




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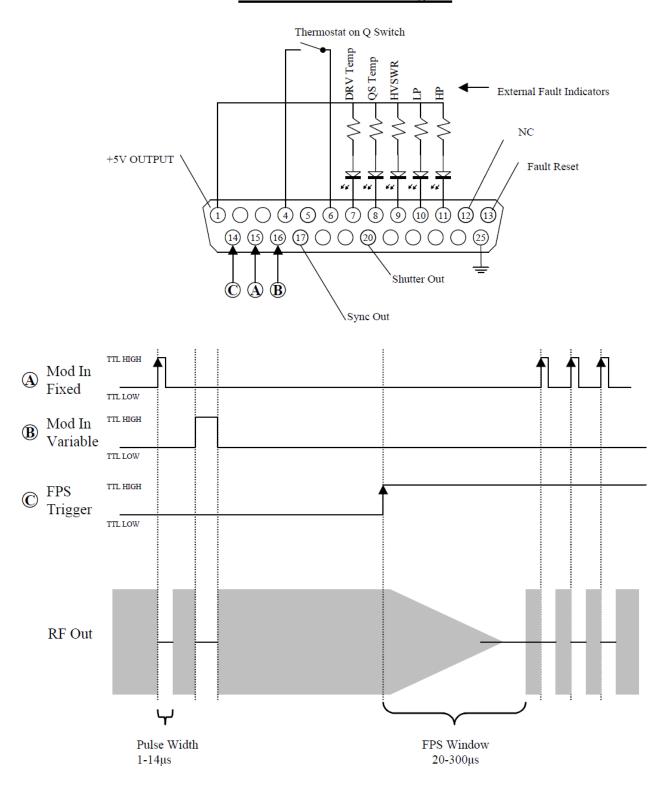


MQH0XX-YYDM-FPS (HIGH POWER) First Pulse Suppression Control Connection and Control Diagrams



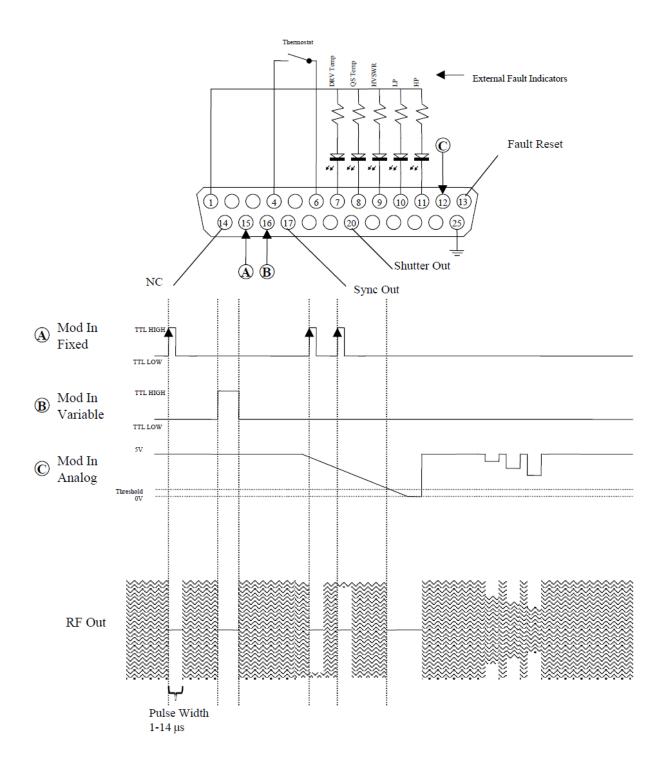


MQH0XX-YYDM-PPK (HIGH POWER) Pre-Pulse Kill Control Connection and Control diagram



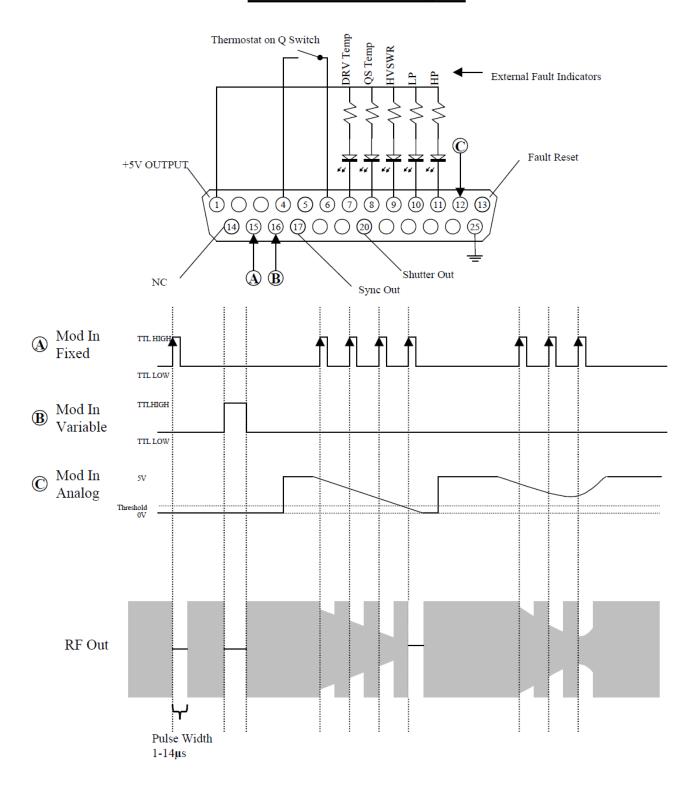


MQH0XX-YYDM-A05 (HIGH POWER) Analog 5 voit Control Connection and Control Diagrams





MQH0XX-YYDM-R05 (HIGH POWER) RF Switch to Analog 5 Volt Control Connection and Control Diagrams





MQH0XX-YYDM (HIGH POWER) Digital Control Only Connection and Control Diagrams

