

Dual-channel Q-switch Driver QH0XX-YYDM-ZZZ-2S

Former Model Number: 390XX-YYDMZZZ-2CH-A

- 2x25W or 2x50W dual channel outputs
- 24, 27 or 41MHz
- 28VDC module

The MQH0XX-YYDM-ZZZ-2S module is a high power RF driver with two RF outputs derived from one oscillator and is designed to drive two Q-Switches. There are two digital modulation control 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 of both channels are 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 driver requires forced air cooling.



The product delivered will be manufactured to be compliant with EU Directive 2011/65/EU for Reduction of Hazardous Substance. The product will be manufactured to other standards upon customer request. A compact, dual channel RF driver module manufactured, enabling synchronous control of two AO Q-Switches.

Key Features:

- 24, 27, 41, 68, or 80 MHz RF Frequency (XX)
- 0.01% Quartz Stabilized
- 2 Outputs with up to 50 watts RF power output (YY) per channel (2S)
- Two TTL Digital Modulation Inputs: fixed and variable pulse width.
- Up to 100 kHz pulse rate.
- Analogue Modulation or Triggered RF Ramp Down Mode (ZZZ)
- 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 spoiling the "Q" of a CW laser so as to output an intense pulse of light.

Used in industrial, medical, or military applications.

RF Power Output (yy)	2x25W (yy=25) or 2x50W (yy=50)
Frequency (xx=24, 27, 41, 68 or 80)	24.00MHz, 27.12MHz, 40.68MHz, 68MHz, 80MHz (2x25W)
First Pulse Suppression	Triggered First Pulse Suppression FPS
Pulse Control Mode (zzz=FPS, PPK, R05, A05)	PPK: pre pulse kill; A05: analog control; R05: RF switched to analog control; ___: digital modulation only
FPS Trigger / Analog input	Units Configured With FPS, PPK: TTL Levels, Triggered on TTL Rising Edge. Units Configured With A05, R05: 0 to 5 Volts Analog
Frequency Tolerance	± 0.02%
Output Impedance	50Ω
RF Fall-Time 90% to 10%	< 100ns
RF Rise-Time 10% to 90%	500ns typical
Extinction Ratio	> 52dB
Harmonic Levels	< -30dB at full power
Supply Voltage Input	28VDC ± 5%
Supply Current Input	6.5A (2x25W), 9.0A (2x50W)
Modulation Control Inputs	Digital TTL (TTL high = RF off)
Modulation Repetition Rate	1Hz to 100kHz for fixed modulation; DC to 100kHz for

Fixed Modulation
 Internal Pulse Width
 Status Monitoring

variable mpdulation
 Output pulse width adjustable range: 1 to 14us, customer adj.
 1µs to 14µs, typical
 Power supply on, High VSWR
 RF power low, RF power maximum
 Driver over-heat, Q-Switch over-heat
 Module
 -20°C to +85°C
 +10°C to +55°C
 177x121x54mm

Housing
 Storage Temperature
 Operating Temperature
 Dimension

Ordering Codes:

Example: MQH027-50DM-A05-2S

A two channel 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 two AO Q-Switches requiring 50 watts RF Power or less per channel. Delivered as a RoHS compliant, forced air cooled OEM Module.



