Elektromechanik
Entwicklungs- und Produktions GmbH

RF-Driver **QSD-Mini**

FEATURES

120 Watt Output

24 V Industrial Supply
24 MHz - 46 MHz
Analogues modulation
Digital Pulse Control
First pulse suppression implemented
Serial bus interface RS-232 / RS-485 / CAN
Configuration software

APPLICATIONS

The Mini RF-driver mainly applied for controlling
acoustic-optical modulators and Q-switches.
Meets **industrial, medical** and **scientific** Laser requirements.

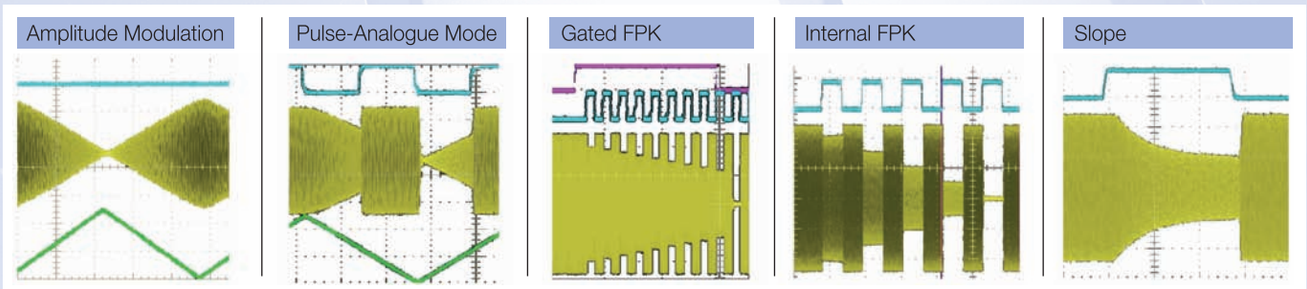
GENERAL DESCRIPTION

The QSD-Mini is a Q-Switch driver module with digital and analogue modulation features.
It can deliver an output power from 10 to 120 Watt into a 50 Ω load.

Operating mode options:

The most popular operating mode applies a digital and analogues modulation input signal.
The output RF pulse width follows thereby the input pulse width. The analogues input signal varies the output RF amplitude envelope of its shape. That can control the RF output power for „first-pulse-kill“ or laser pulse intensity adjustment.
Hence, an analogues down ramp signal must be matched to the laser cavity.
This ramp can be used for equalizing first laser pulses in burst mode.
An internal ramp generator provides a scalable automatic down slope.
This can be triggered internally or from an external gate signal.
A serial interface enables full setup and configuration of the device.

Pulse Properties:



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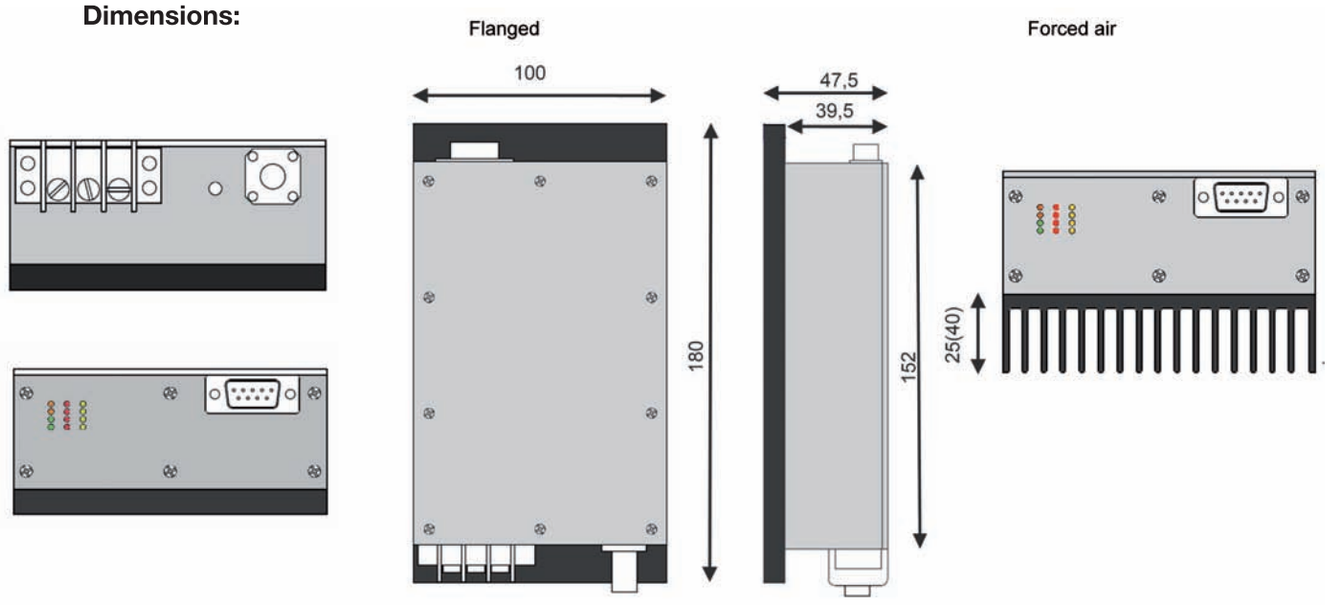
Specifications:

Electrical	MIN	MAX	Unit
Output power (into 50 Ω)	10	120	W
Power supply	23.5	24.5	V
Input current	4.5	9.5 @100W	A
Power loss	105	128	W
Maximum permissible VSWR		1:1.25	
Pulse rate ext. FPK	DC	500	KHz
Modulation, analogues	DC	2 @50Ωinput	MHz
Linearity - deviation	-	7	%
Operating frequency * (extended Frequency on request)	24	46	MHz
Dynamic response			
Fall time* (slope improved on request)	80* @40.68 MHz	120* @27MHz	ns
Rise time		100	ns
Harmonics suppression	<40		dB
Dynamic response	<40		dB
Thermal			
Temperature drift	-	0.2	$^{W}/_{K}$
Time to reach thermo stability		120	s
Ambiance / Installation / Transport			
Airflow rate @ 40°C standard heat sink 152x100x25 (40)	3.5 (2)	-	l/s
Storage temperature	-5	+80	°C
Relative humidity in storage		90	%
Ambient temperature during operation	+5	+45	°C
Relative humidity during operation	10	90- non condensing	%
Ambient conditions, room air	Atmospheric 0 - 3000 m		
Body Dimensions L x W x H	-	152x100x 40	mm
Weight - heat sink dependent	1100	1800	g

Dimensions:



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