



Hilberling GmbH Entwicklungslabor Hochfrequenztechnik
Heinrich-Hertz-Strasse 2 24790 Schacht-Audorf / Germany
eMail: info@hilberling.de

HLT-27/24/50

RF Generator for Acousto-Optic Q-Switches
[Q-Switch Driver]



A21117-EN

RF POWER: 1 ... 50 Watt
DC VOLTAGE: 24 Volt



Project: Q-Switch Driver 50 Watt

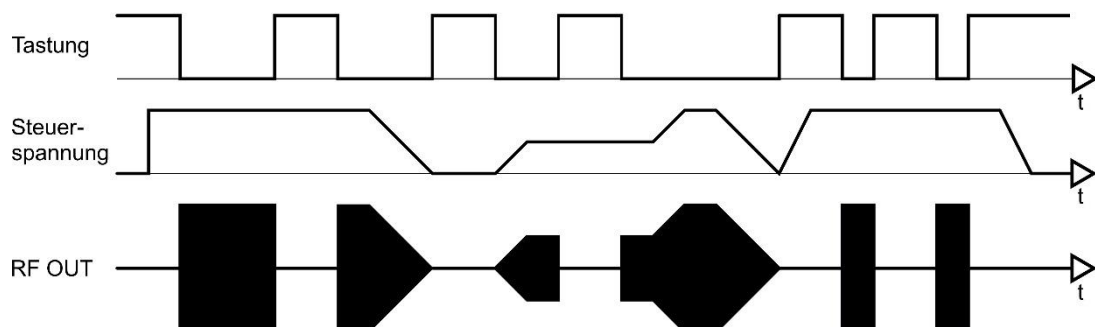
Technical Data

Performance Data

- Output Frequency 27.12 MHz according to ISM
- Output Power 1 ... 50 W @ 50 Ω (adjustable through trim-pot)
- Output Voltage Sinus max. 50V-RMS / 141,4V_{ss} @ 50 Ω
- Output V.S.W.R. VSWR max. 1 : 2.0
- Overload protection
Error Message Overheat
5V = Overheat / 0V = OK
Error Message SWR Overload
5V = High SWR / 0V = OK

RF-Modulation

- Analog Modulation 0 ... +1V $\hat{=}$ 0 ... 100% pre-selected Power
- Digital Modulation
0V / n.c. = RF ON
+5V = RF OFF
- Duty Cycle / Pulse Width min. 50 ns / max. CW
- Fall Time <20 ns 90 / 10%
- Rise Time <200 ns 10 / 90%
- Repetition Rate 0 ... 1 MHz





Project: Q-Switch Driver 50 Watt

Technical Data

Power Supply

- Supply Voltage DC +24 V max. 110W
-DC / GND

Connectors

- X1 DC Connector Universal Mate-N-Lok (UN-MNL) 3-pol. *)
350766-1 / 926901-1 (TE Connectivity)
Cable Length 150 mm
- X2 Control D-Sub Mixed Layout Connector 7W2 *)
FM7W2S5-K121 (FCT Electronics)
- X3 HF Connector BNC-f 50 Ω
- Cooling Contact Cooling through Housing Bottom

Environment

- Operating Temperature 0 ... +55°C
- Storage Temperature 0 ... +65°C

Housing

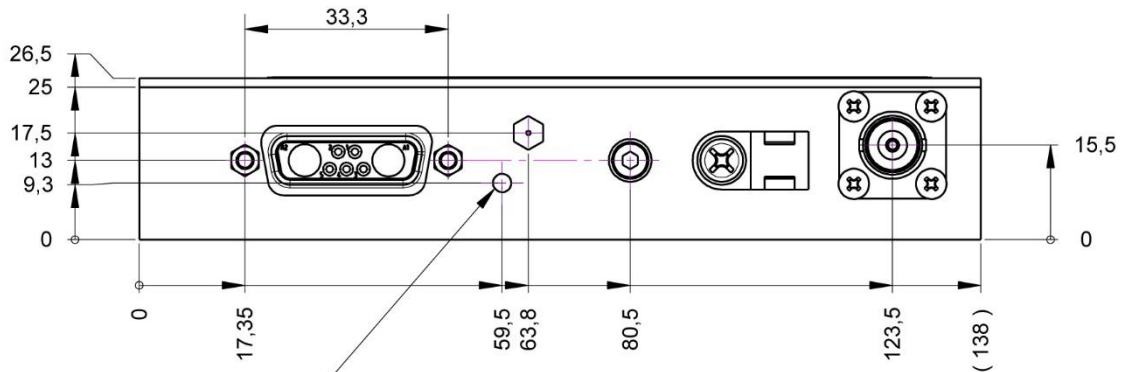
- Material Aluminum alloy / transparent chromated
Base: solid material, milled
Cover: 1.5 mm sheet
- Dimensions 138.0 x 85.0 x 26.5 mm (W x H x D)
138.0 x 103.0 x 26.5 mm over all
- Weight 0.440 kg
- Mounting Holes 6 x Ø3.5 mm (for M3)

*) see Page 05

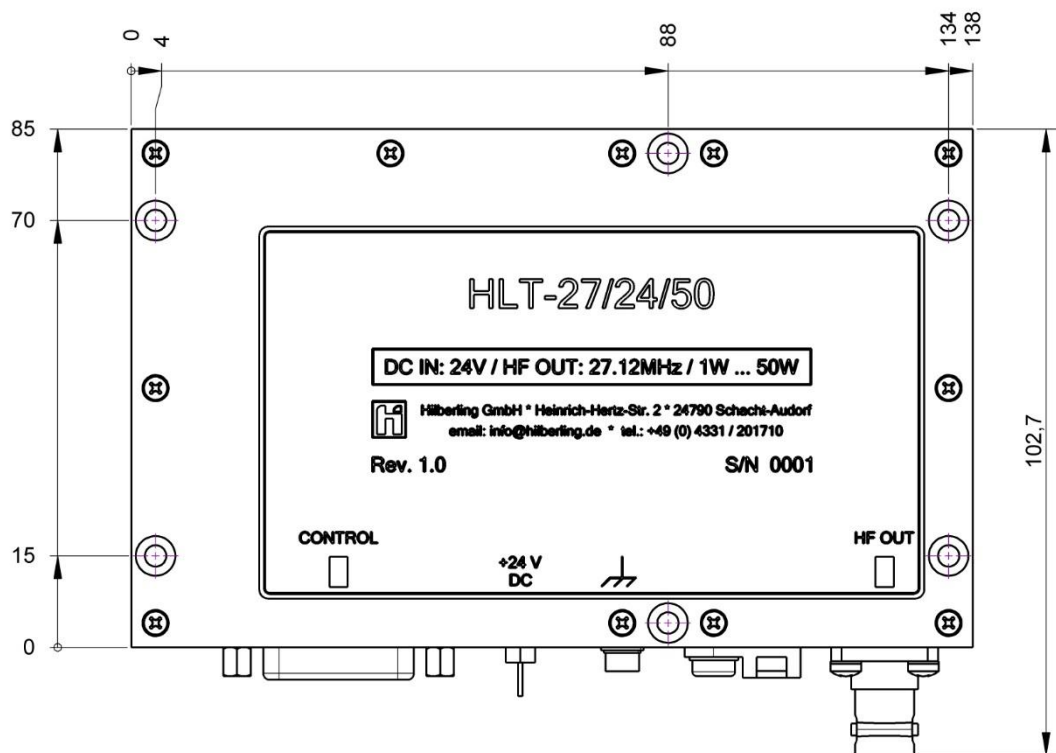


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Housing



Drilling for Trim-pot /
Power adjustment

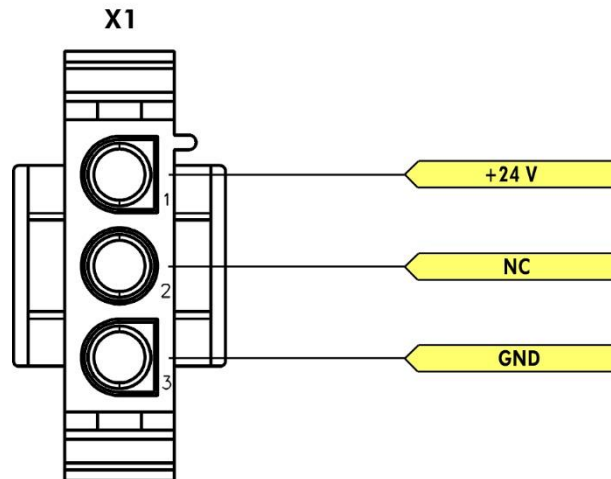




Project: Q-Switch Driver 50 Watt

Pin Assignment X1 / X2

X1	I/O/P	Description
1	P	+24V
2		NC
3	P	GND



UN-MNL 3-pol.

X2	I/O/P	Description
1	O	Error Message Overheat
2	O	Error Message SWR Overload
3	I	Interlock
4	P	GND
5	O	SYNC OUT (50 Ω)
A1	I	Coaxial 50 Ω Connector for Digital Modulation
A2	I	Coaxial 50 Ω Connector for Analog Modulation

