

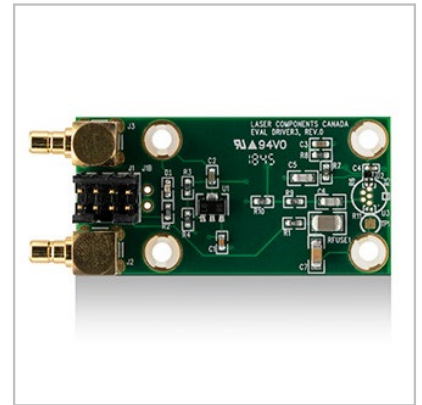
QS (QuickSwitch®) Evaluation Board QS-EVAL Driver 3

Description

This is the evaluation board for the QS905D1S3JTXU pulsed lasers. The board has an internal short pulse generator, allowing direct drive from a square wave generator. The board has a socket for easy QS905D1S3JTXU installation.

Features

- TO-56, 5 pins socket
- Variable output power depending of HV input selection.
- Firing rate up to 80 kHz (w/o heatsink)



Applications

- Range finding
- Laser radar / LIDAR
- Ceilometer
- Medical
- Optical trigger

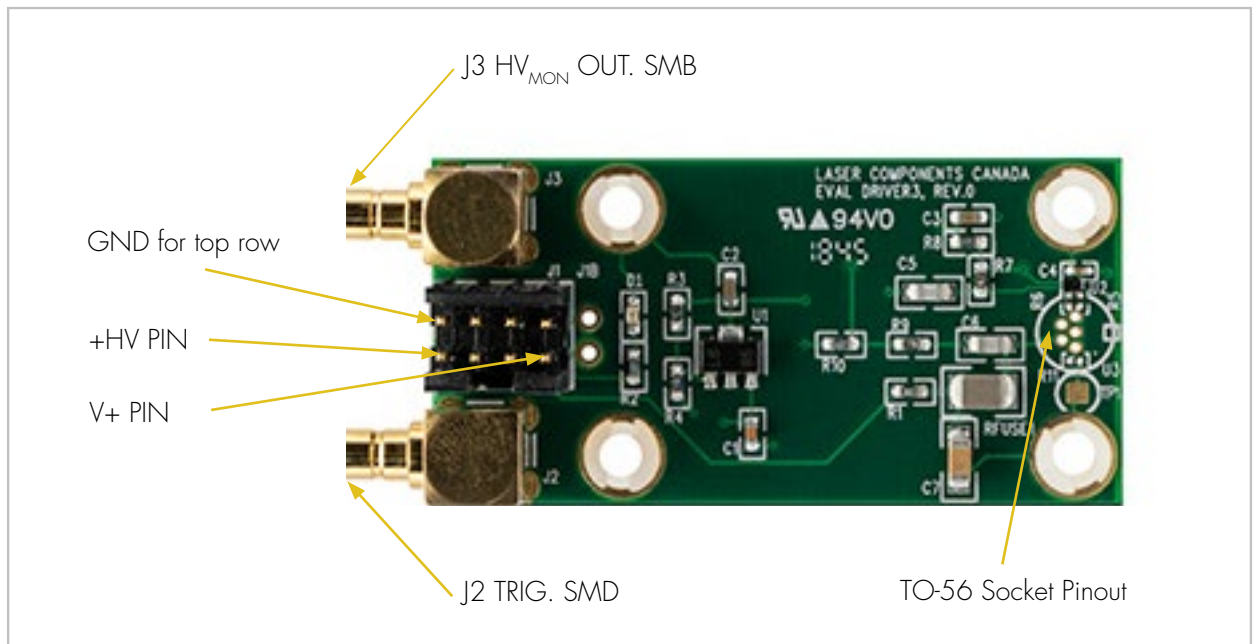
Specifications for QS-EVAL Driver 3

V_+ , input voltage	8.0	V
V_{TrigLOW}	< 0.8	V
V_{TrigHIGH}	$2.0 < V < 3.3$	V
R_{Trig} internal termination	50	Ohms
T_D turn on delay (trigger to laser pulse)	15	ns

TO-56 Socket Pinout

Pin 1	Gate
Pin 2	Gnd
Pin 3	HV (high voltage; 20 – 80 VDC)
Pin 4	Gnd
Pin 5	Case (connected to Gnd)

Electrical Interface



25 mm x 51 mm QuickSwitch® Evaluation Board

Note:

Please consult „PIN Configuration“ for details of 8-pin connector pin-out.

PIN Configuration

Pin	Function	Comment
J1 (see note) 1 3, 5 7 2, 4, 6, 8	HV NC V+ GND	20 V – 80 V DC, HV input TP1 and TP2 (spares) supply input, 8 V DC min, 12 V DC max ground pins
J2 (SMB)	TRIG	TRIG IN – internally terminated into 50 Ω
J3 (SMB)	MON	TRIG OUT/MON – see note

Note:

J1 Connector is Amphenol PV® part number: 69168-108HLF, while adapter is part number: 65846-016LF
J3, HV Mon is only available for repetition rate < 20 KHz and should then be loaded by 50 ohms.
It should be kept open if not used.

Negative pulse when laser fires: with 3 ns fall time followed by 700 ns rise time

Operating Procedure and Recommendations:

- Connect trigger source to J2 (leave J3 unpopulated).
- Ensure trigger pulse has a minimum of 2.0 V for the high side and a maximum of 0.8 V for the low side (pulse width is open to user choice).
- Once trigger is set, connect V+ (8 – 12 V) to pin 7, and HV to pin 1 (make sure HV is above 13 V to avoid reverse biasing, the correct range should be 20 – 80 V).
- Insert the QuickSwitch laser to the socket and set power supplies to the correct voltages.
- Once everything is set, turn on the V+ (8 – 12 V) trigger first, and then the HV input (20 – 80 V): initially at the lower value of HV, but always above 13 V.
- If the oscilloscope and optical detector are configured for very short pulses, then the output pulses of the QuickSwitch laser should be detectable.

Product Changes

LASER COMPONENTS reserves the right to change the product information contained herein without notice. No liability is assumed as a result of use or application.

Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at www.lasercomponents.com