

EVAL-FB01GKUJ

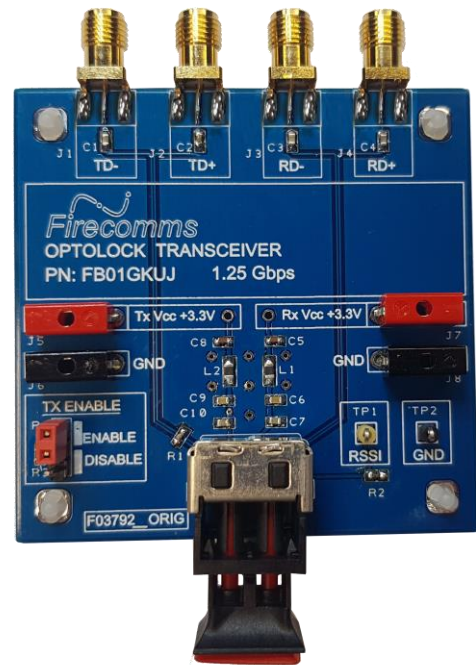
1.25 Gbps Ethernet OptoLock® Evaluation Kit User Guide

**CLASS 1
LASER PRODUCT**

OVERVIEW

The EVAL-FB01GKUJ evaluation kit enables evaluation of the Firecomms Gbit OptoLock® transceiver for Plastic Optical Fiber (POF). The kit includes a single OptoLock® transceiver pre-mounted onto a simple PCB that allows easy application of DC power via standard 2 mm diameter DC jacks. Data input (TD) and data output (RD) are via standard screw terminal SMA connectors. A single loop-back POF cable is also included.

For particular POF assemblies please contact Firecomms Applications support directly.



EVALUATION KIT CONTENTS

The Evaluation Kit contains the following:

1. Evaluation PCB
2. FB01GKUJ mounted onto the evaluation PCB
3. POF cable (1 m, 0.5 NA, 2.2 mm jacket simplex POF)
4. FB01GKUJ Datasheet

INITIAL SETUP

1. Connect GND of a DC power supply to the ground points of the PCB (black terminals).
2. Connect 3.3 V to each of the Tx and Rx VCC jacks (red terminals).
3. Ensure Tx ENABLE is set to the ENABLE position.
4. Connect a multi-meter/oscilloscope probe to the received signal strength indication (RSSI) test point to measure the voltage signal across the populated 1k resistor.
5. Connect a suitable pattern generator differential data signals via SMA cables to the TD +/- data pins.

6. Connect the RD +/- data pins to a suitable high-speed oscilloscope using 50Ω termination and high-speed coax, SMA terminated cables.
7. For a loop-back cable test, insert the POF cable into the Tx and then loop it back to the Rx side of the OptoLock® transceiver. Push in the OptoLock® clamp to lock it securely into place.

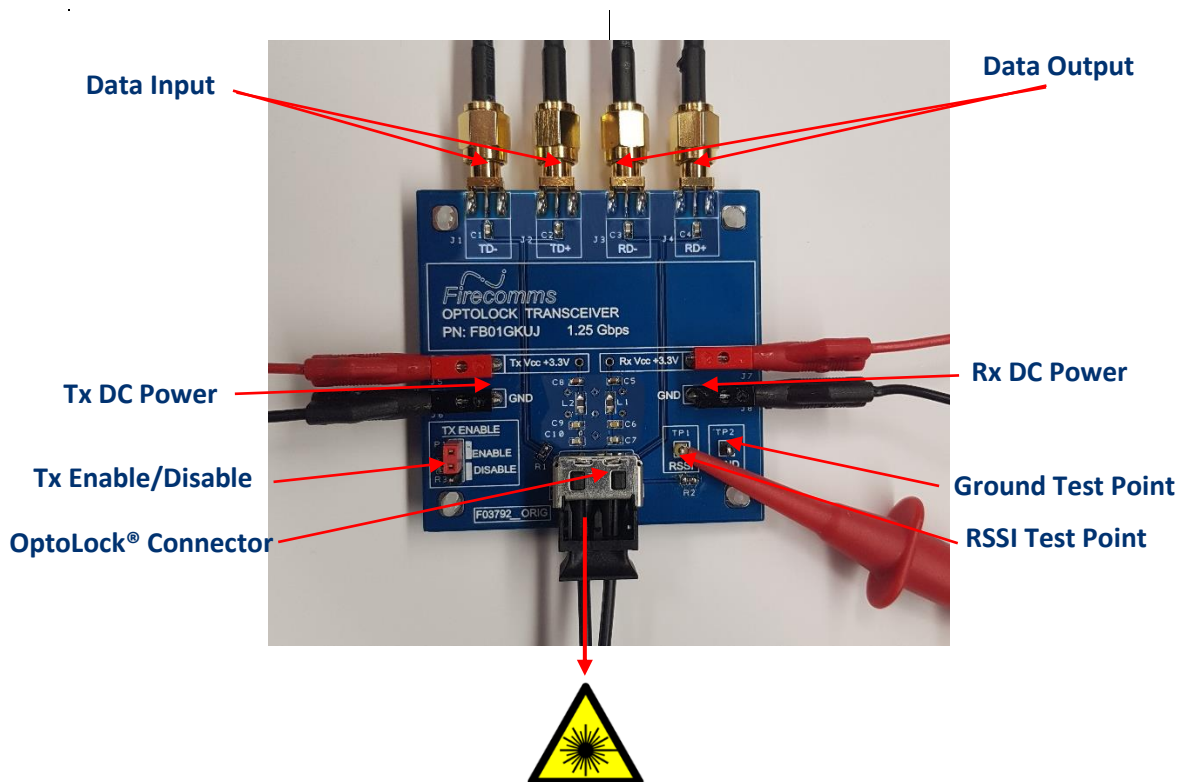


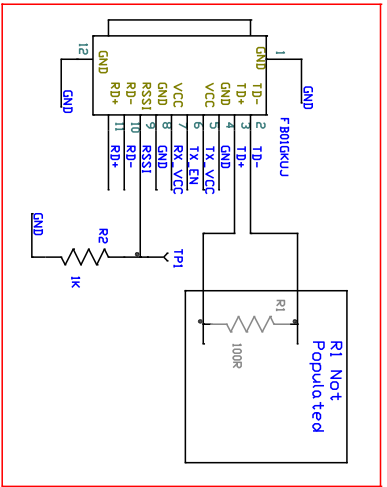
FIGURE 1
Setup of the FB01GKUJ Evaluation PCB

LASER SAFETY

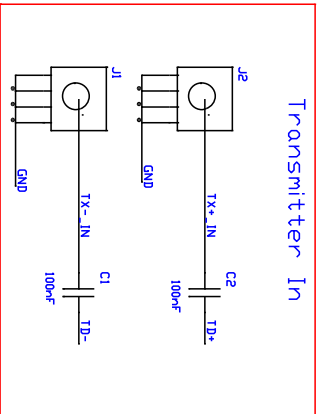
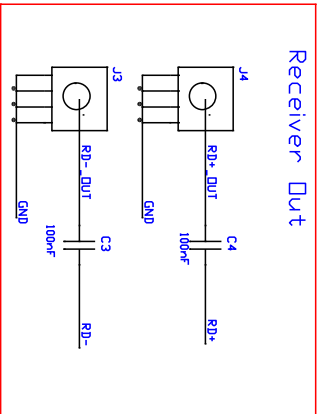
The FB01GKUJ is an invisible light emitting device operating at a wavelength of 850 nm with a diverging beam diameter. Invisible radiation is emitted from the front of the device with a maximum optical power of 1 mW. This device is classified as class 1 per EN 60825-1:2014.



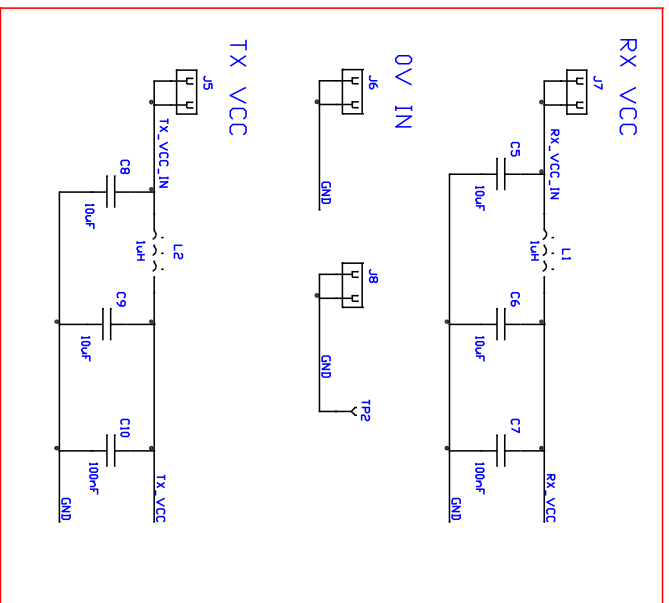
CAUTION: Invisible Laser Radiation – Avoid long term viewing of laser



Receiver Out

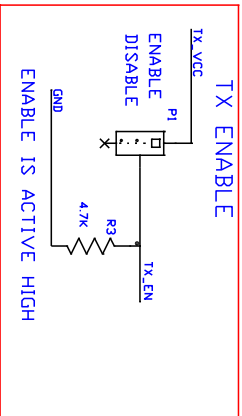


Transmitter In



Mounting

- MTHP1
- MTHP2
- MTHP3
- MTHP4



TX ENABLE

Title		F01GKUJ 1.25Gbps Fiber Optic DPTDLDCK Transceiver Evaluation Board, F03792 with RSSI.
Revision	REVA	Sheet 1 of 1