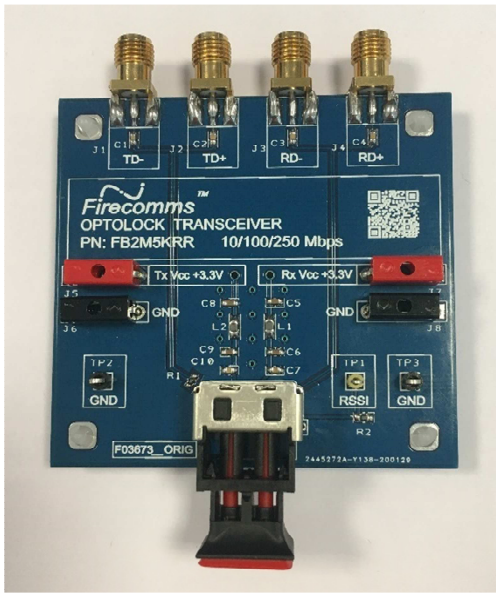
Eval-FB2M5KRR

Ethernet OptoLock® Evaluation Kit User Guide

OVERVIEW

The Eval-FB2M5KRR evaluation kit enables evaluation of the Firecomms OptoLock® transceiver for plastic optic fibre (POF) and large core glass fibre (200, 400 um PCS). 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 inputs (TD +/-) and data outputs (RD +/-) are connected via standard screw terminal SMA connectors. A single loop-back POF cable is also included.

For particular POF or PCS lengths and assemblies please contact Firecomms Applications support directly.



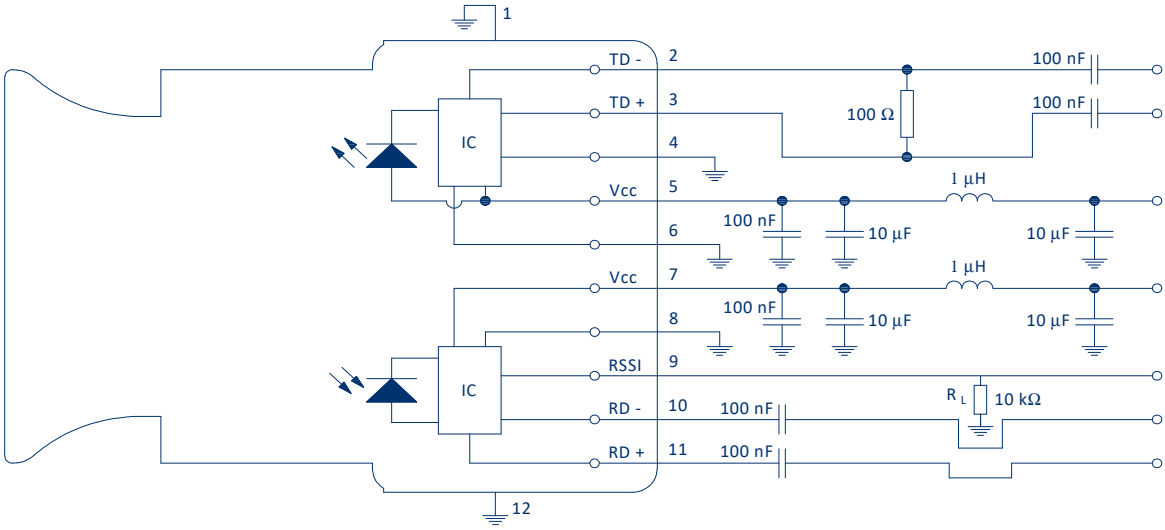


FIGURE 1
Recommended circuit layout for the OptoLock® transceiver

Eval-FB2M5KRR
Ethernet OptoLock® Evaluation Kit
User Guide

EVALUATION KIT CONTENTS

The Evaluation Kit contains the following:

1. Evaluation PCB
2. FB2M5KRR mounted onto the evaluation PCB
3. POF cable (1 m, 0.5 NA, 2.2 mm jacket simplex POF)
4. FB2M5KRR 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. To monitor RSSI, connect a multimeter or oscilloscope channel set to 1 MΩ input and measure the voltage V_{RSSI}. V_{RSSI} is set by a 10 kΩ resistor. See datasheet for graph of optical power against V_{RSSI}.
4. Connect suitable pattern generator differential data signals via SMA cables to the TD +/- data pins.
5. Connect the RD +/- data pins to a suitable high-speed oscilloscope using 50 Ω termination and high-speed coax, SMA terminated cables.
6. 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.

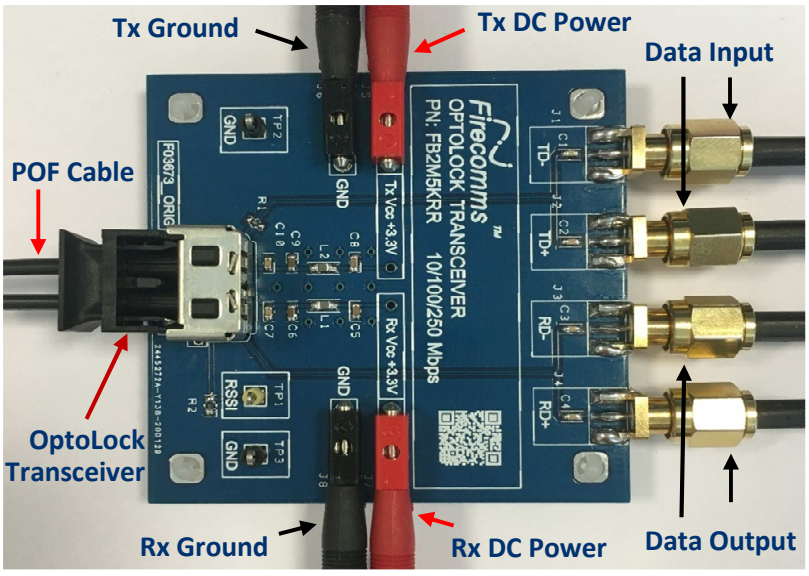


FIGURE 2
Setup of the FB2M5KRR Evaluation PCB