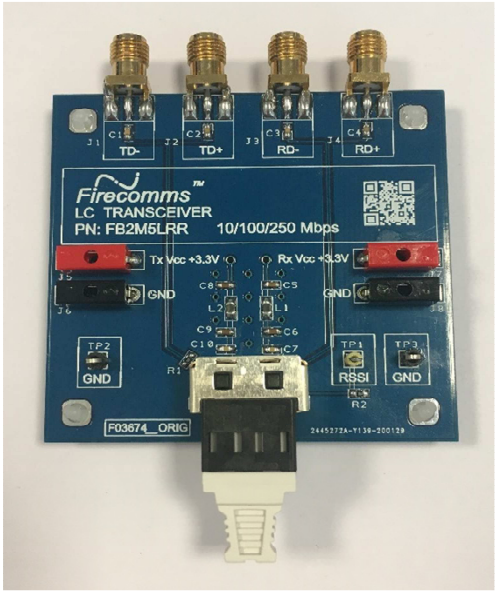
Eval-FB2M5LRR
Ethernet LC Evaluation Kit
User Guide

OVERVIEW

The Eval-FB2M5LRR evaluation kit enables evaluation of the Firecomms LC transceiver for plastic optic fibre (POF) and large core glass fibre (200, 400 um PCS). The kit includes a single LC 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 with LC plug is also included.

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



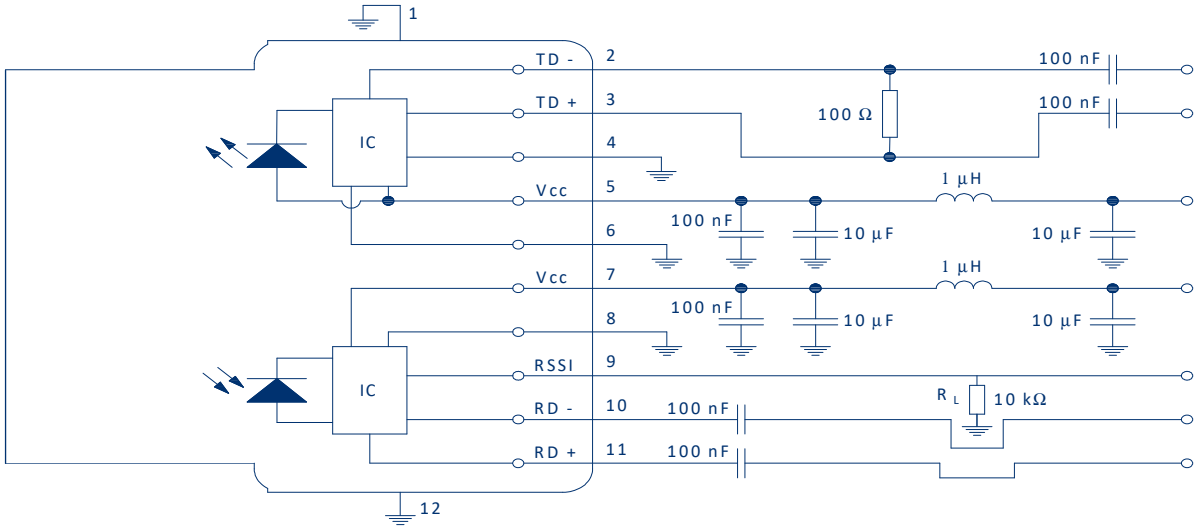


FIGURE 1
Recommended circuit layout for the LC transceiver

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EVALUATION KIT CONTENTS

The Evaluation Kit contains the following:

1. Evaluation PCB
2. FB2M5LRR mounted onto the evaluation PCB
3. POF cable with loop back LC plug (1 m, 0.5 NA, 2.2 mm jacket simplex POF)
4. FB2M5LRR 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, connect the provided LC loop-back cable assembly into the LC connector. This connects the Tx back to the Rx over 1m of Step-Index POF.

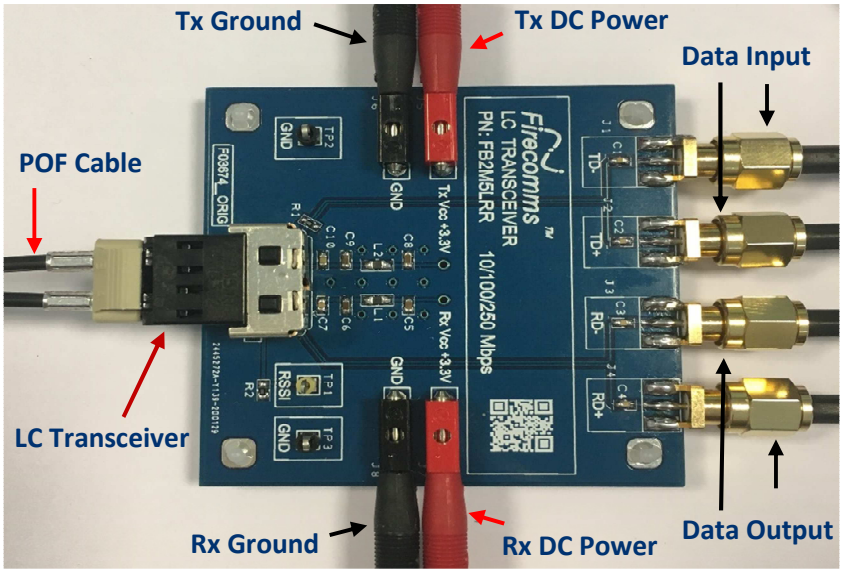

FIGURE 2
Setup of the FB2M5LRR Evaluation PCB