

Eval-FE50MLNR

DC-50 MBd LC Evaluation Kit

User Guide



OVERVIEW

The Eval-FE50MLNR evaluation kit enables evaluation of the Firecomms DC-50 MBd non-inverting (Rx) 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 input (TXD) and data output (RXD) are connected via standard screw terminal SMA connectors. A simplex loop-back POF cable with LC plug is also included. For particular POF or PCS lengths and assemblies please contact Firecomms Applications support directly.

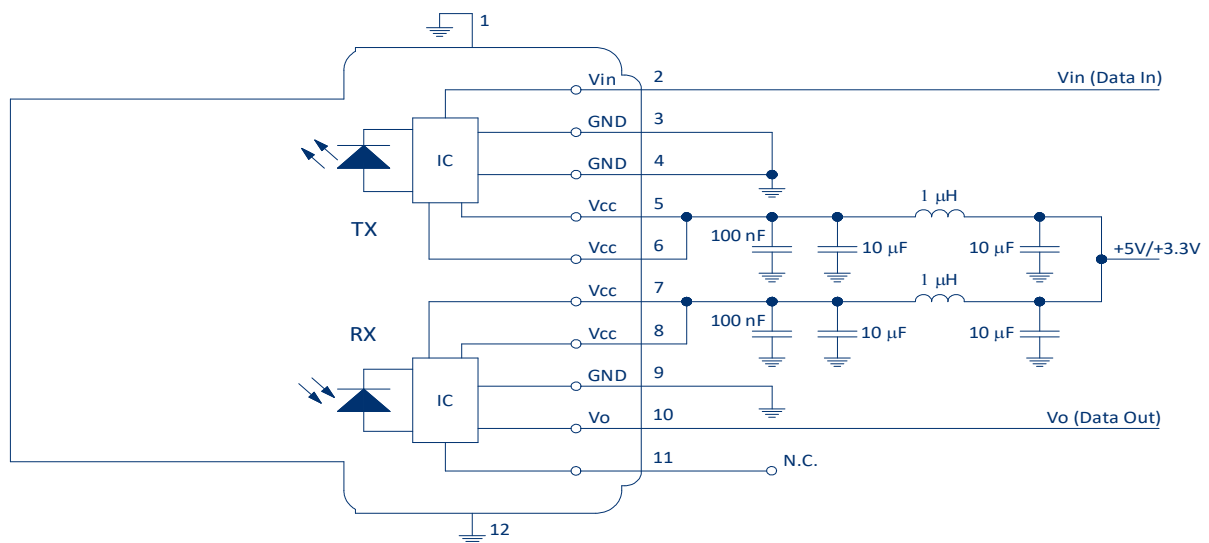


FIGURE 1
Recommended circuit layout for the DC-50 MBd LC transceiver

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EVALUATION KIT CONTENTS

The Evaluation Kit contains the following:

1. Evaluation PCB
2. FE50MLNR 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. FE50MLNR Datasheet

INITIAL SETUP

1. Connect GND of a DC power supply to the ground points of the PCB (black terminals).
2. Connect 3.3 / 5 V to each of the Tx and Rx VCC jacks (red terminals).
3. To measure common GND, connect a probe to the test points TP1 (Tx) and TP2 (Rx).
4. Connect suitable pattern generator signal via an SMA cable to the TXD data pin.
5. Connect the RXD data pin (TTL output) to a suitable high-speed oscilloscope using 1 M Ω termination and high-speed coax, SMA terminated cable.
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.

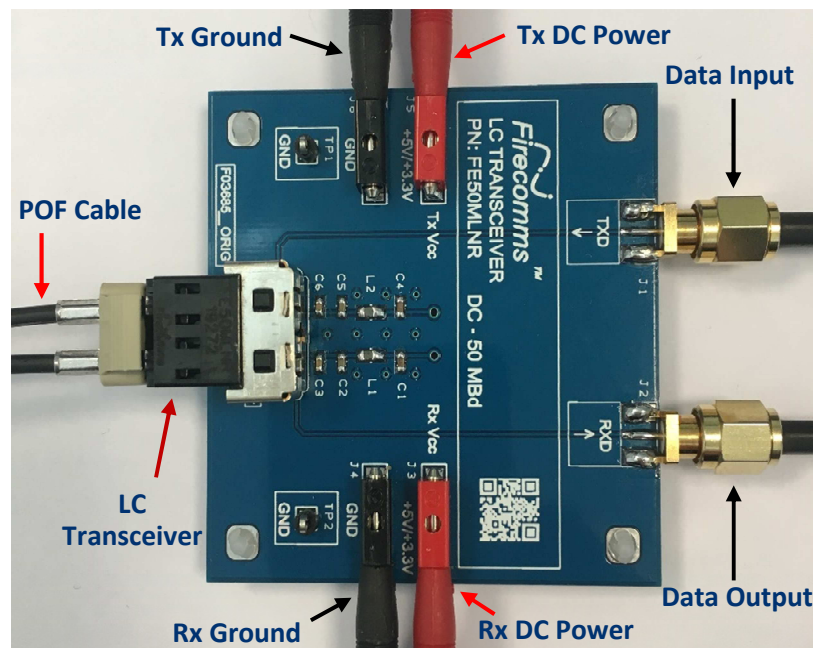


FIGURE 2
Setup of the FE50MLNR Evaluation PCB