Eval-FE50MKIR

DC-50 MBd OptoLock® Evaluation Kit User Guide

OVERVIEW

The Eval-FE50MKIR evaluation kit enables evaluation of the Firecomms DC-50 MBd inverting (Rx) 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 input (TXD) and data output (RXD) are connected via standard screw terminal SMA connectors. A simplex loop-back POF cable is also included.

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

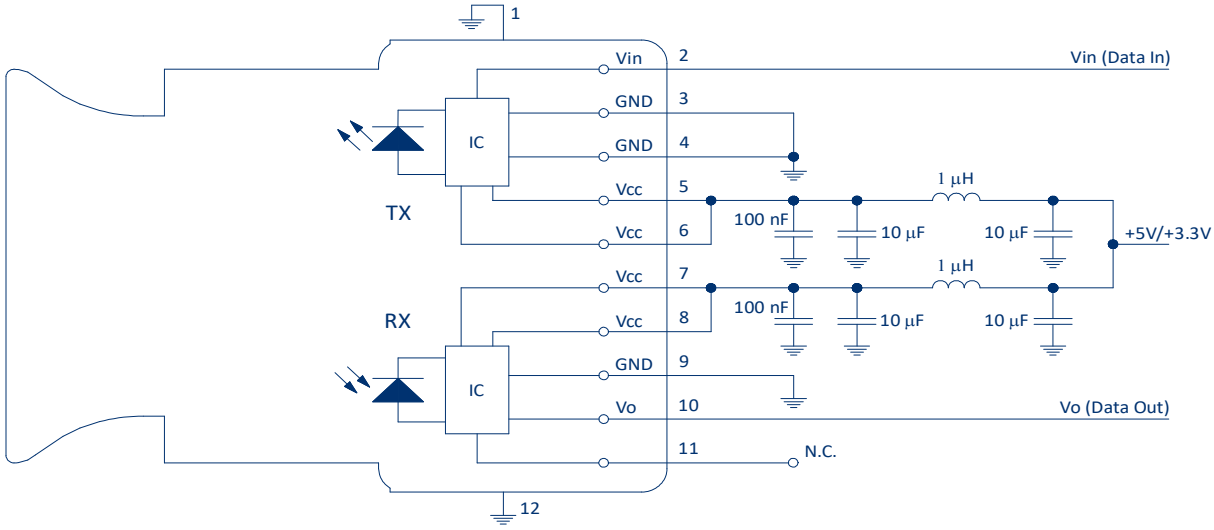

FIGURE 1
Recommended circuit layout for the DC-50 MBd OptoLock® transceiver

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EVALUATION KIT CONTENTS

The Evaluation Kit contains the following:

1. Evaluation PCB
2. FE50MKIR mounted onto the evaluation PCB
3. POF cable (1 m, 0.5 NA, 2.2 mm jacket simplex POF)
4. FE50MKIR 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 MΩ termination and high-speed coax, SMA terminated cable.
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.

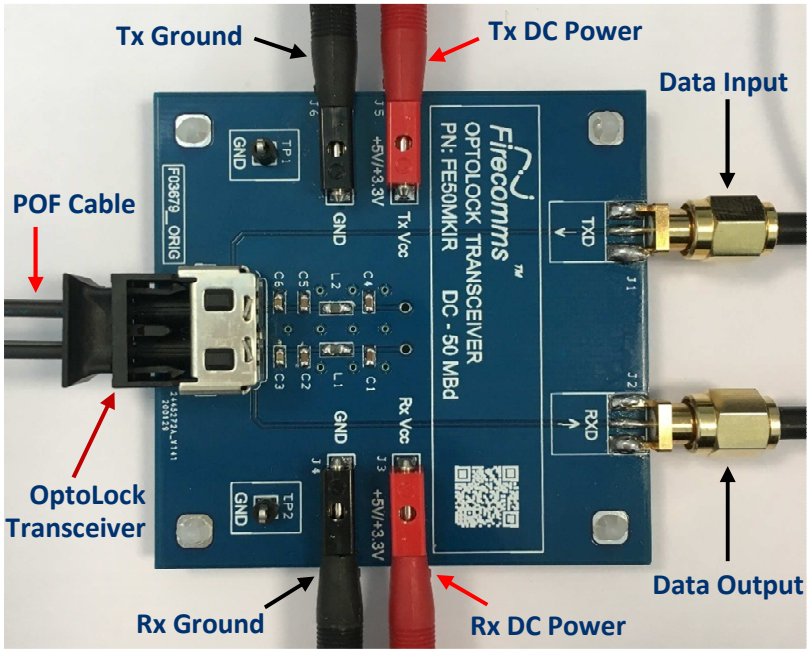

FIGURE 2
Setup of the FE50MKIR Evaluation PCB