EVAL-FE50MSNR

DC-50 MBd SMI Evaluation Kit User Guide

OVERVIEW

Eval-FE50MSNR evaluation kit enables evaluation of the Firecomms DC-50 MBd non-inverting (Rx) SMI transceiver for Plastic Optic Fiber (POF) and large core glass fiber (200, 400 um PCS). The kit includes a single SMI 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. An SMI long body plug with 1m of simplex POF cable in a loop back is also included.
For particular POF or PCS lengths and assemblies please contact Firecomms Applications support directly.

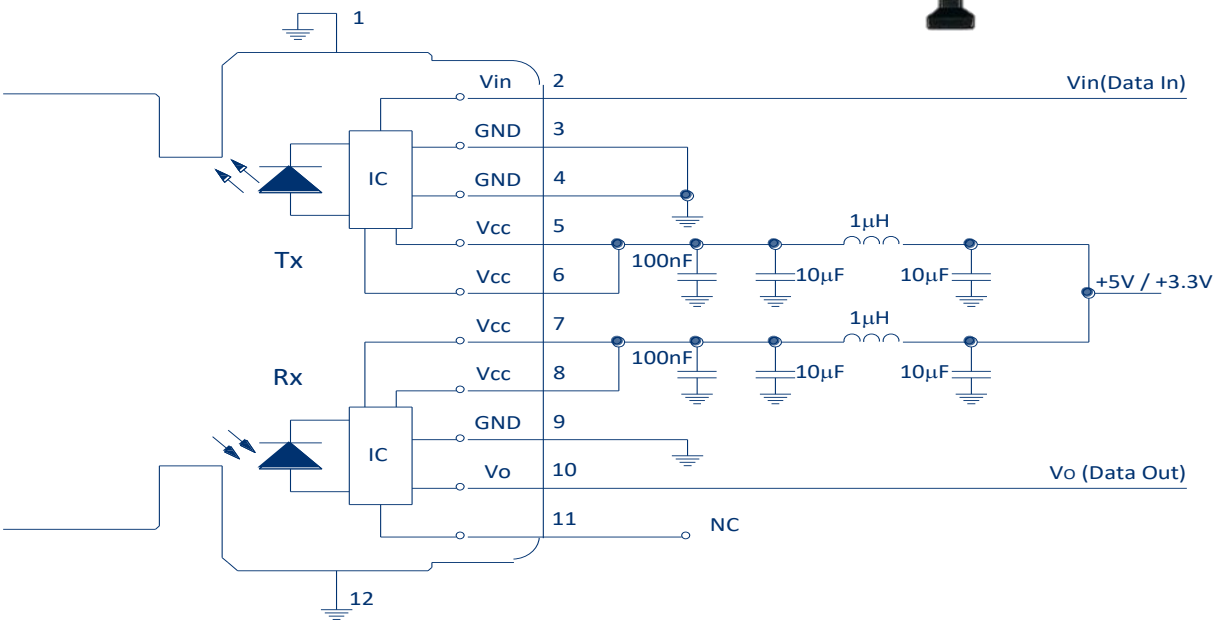

FIGURE 1
Recommended circuit layout for the DC-50 MBd SMI transceiver

EVALUATION KIT CONTENTS

The Evaluation Kit contains the following:

1. Evaluation PCB
2. FE50MSNR mounted onto the evaluation PCB
3. Long body SMI plug FP-00C-3F0 with looped back POF cable (1 m, 0.5 NA, 2.2 mm jacket simplex POF)
4. FE50MSNR Datasheet

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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 SMI long body plug with 1m of looped back simplex POF cable into the SMI transceiver.

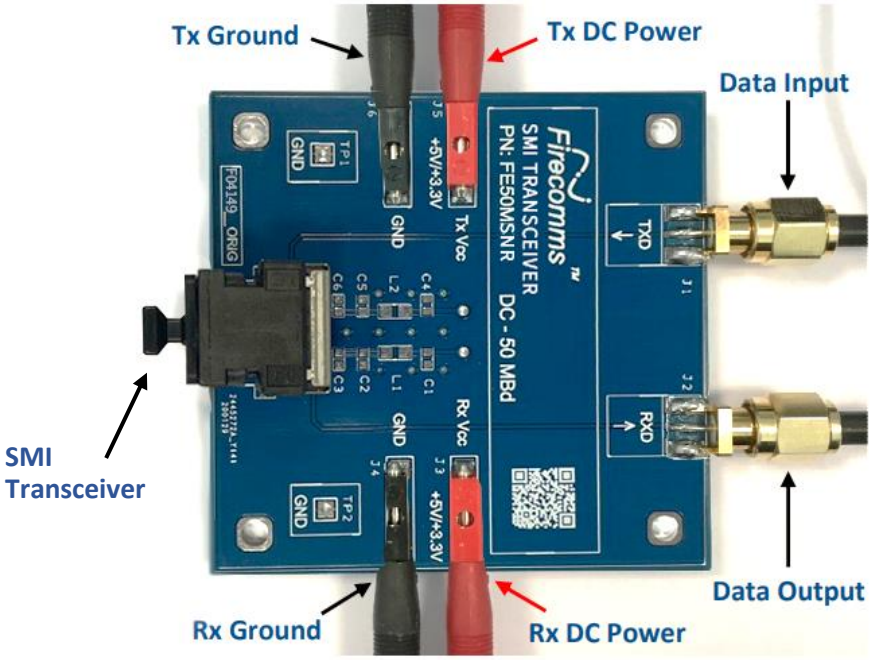

FIGURE 2
Setup of the FE50MSNR Evaluation PCB