Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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HFBR-0543Z Evaluation Kit
DC –10MBd Short Fiber Optics Link Evaluation Kit

User Guide

Introduction

HFBR-0543Z evaluation kit is used to evaluate Avago fiber optic device HFBR-3810Z or HFBR-3810MSZ. The evaluation kit is equipped with necessary documents and accessories to ease product evaluation and verification.

Evaluation Kit

HFBR-0543Z contains:

1. Evaluation board
2. HFBR-3810Z unit
3. HFBR-3810Z and HFBR-3810MSZ datasheet
4. User guide document

Evaluation Board

The basic evaluation board that you receive from Avago incorporates transmitter driver IC SN75451BD, some passive components, and SMA connectors for the TX input (TXD) and RX output (RXD) port connection. This basic evaluation board allows you to connect waveform/pattern generator to the TXD with TTL input signal. Receiver's output signal can be monitored from the RXD or RXout with oscilloscope by using high impedance setting.
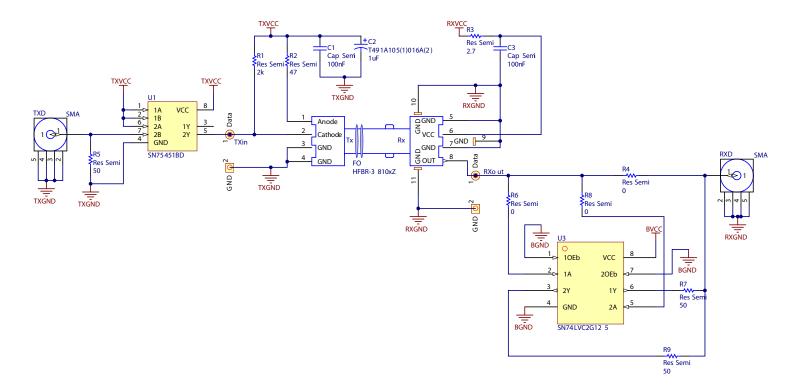
Initial Setup

1. Connect 5V supply voltage to TXVCC and RXVCC
2. Connect 0V to TXGND and RXGND
3. Connect TXD to pattern generator output
4. Connect RXout to Oscilloscope with high impedance probe

Bit Error Rate Test Setup

Though the transmitter driver IC's input and receiver's output is based on TTL logic (high impedance), the board can be modified to connect 50ohm load instrument by doing the following steps:

1. Put R5 (50 ohm resistor).
2. Remove R4 (0 ohm resistor).
3. Put R6 (0 ohm resistor) and R7 (50 ohm resistor).
4. Put U3 (SN74LVC2G125).
5. Connect BVCC (5V) and BGND (0V).

AVAGO TECHNOLOGIES

Schematic labels:

TXD SMA — TXGND

R5 Res Semi 50 — TXGND

TXVCC — U1 SN75451BD
- 1 1A
- 2 1B
- 6 2A
- 7 2B
- 4 GND
- 8 VCC — TXVCC
- 3 1Y
- 5 2Y

Data 1 TXin — GND 2 — TXGND

TXVCC — R1 Res Semi 2k — R2 Res Semi 47

C1 Cap Semi 100nF — +C2 T491A105(1)016A(2) 1uF — TXGND

Anode 1 / Cathode 2 / GND 3 / GND 4 — FO HFBR-3 810xZ (Tx / Rx)

RXVCC — R3 Res Semi 2.7 — C3 Cap Semi 100nF — RXGND

10 GND / GND 5 / VCC 6 / GND 7 GND 9 / GND OUT 8 / 11 — RXGND — GND 2

Data 1 RXout — R4 Res Semi 0 — RXD SMA — RXGND

R6 Res Semi 0 — BGND
R8 Res Semi 0 — BVCC — BGND

U3 SN74LVC2G12 5
- 1 1OEb
- 2 1A
- 3 2Y
- 4 GND
- 8 VCC
- 7 2OEb
- 6 1Y — R7 Res Semi 50
- 5 2A
- BGND

R9 Res Semi 50