# imall

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# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



### **HFBR-0410Z Evaluation Kit** DC to 5MBd 820nm Miniature Link Fiber Optic Evaluation Kit



## User Guide

#### Introduction

HFBR-0410Z evaluation kit is used to evaluate Avago fiber optic device HFBR-1412Z and HFBR-2412Z. The evaluation kit is equipped with necessary documents and accessories to ease product evaluation and verification.

#### **Evaluation Kit**

HFBR-0410Z contains:

- 1. Evaluation board
- 2. HFBR-1412Z and HFBR-2412Z unit
- 3. HFBR-1412Z/2412Z 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 5 V supply voltage to TXVCC and RXVCC
- 2. Connect 0 V 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**

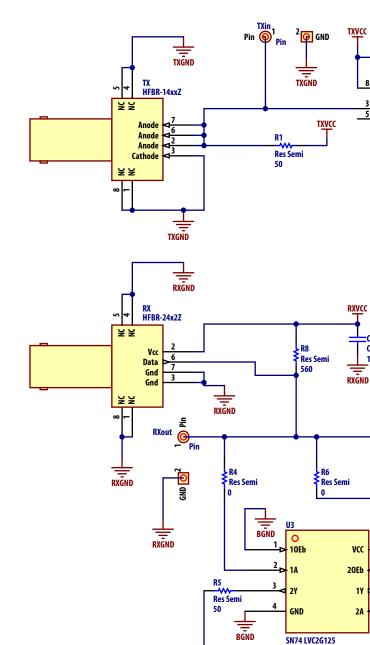
Though the transmitter driver IC's input and receiver's output is based on TTL logic (high impedance), the board can be modified to connect 500hm load instrument by doing the following steps:

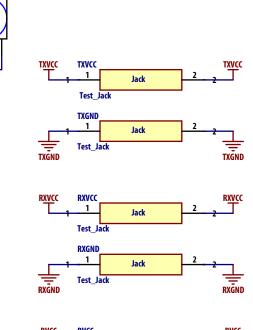
- 1. Put R2 (50 ohm resistor).
- 2. Remove R3 (0 ohm resistor).
- 3. Put R4 (0 ohm resistor) and R7 (50 ohm resistor).
- 4. Put U3 (SN74LVC2G125).
- 5. Connect BVCC (5 V) and BGND (0 V).



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For product information and a complete list of distributors, please go to our web site: www.avagotech.com





TXD

SMA

₩>

TXGND

U1

VCC

2Y

SN75451BD

1A 1B 2A 2B GND

R2

50

TXGND

Res Semi

RXD

RXGND

smΔ

R3

0

BVCC

Res Semi

BGND R7

Res Semi

50

8

3 1Y

5

**C**4

Cap Semi 100nF

