

# HFBR-0542Z Evaluation Kit

## DC to 5MBd 850nm VCSEL Evaluation Kit



## User Guide

### Introduction

HFBR-0542Z evaluation kit is used to evaluate Avago fiber optic device HFBR-1712TZ and HFBR-2412TZ. The evaluation kit is equipped with necessary documents and accessories to ease product evaluation and verification.

### Evaluation Kit

HFBR-0542Z contains:

1. Evaluation board
2. HFBR-1712TZ and HFBR-2412TZ unit
3. HFBR-1412Z/2412Z datasheet
4. HFBR-1712TZ datasheet
5. 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.

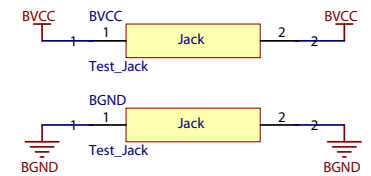
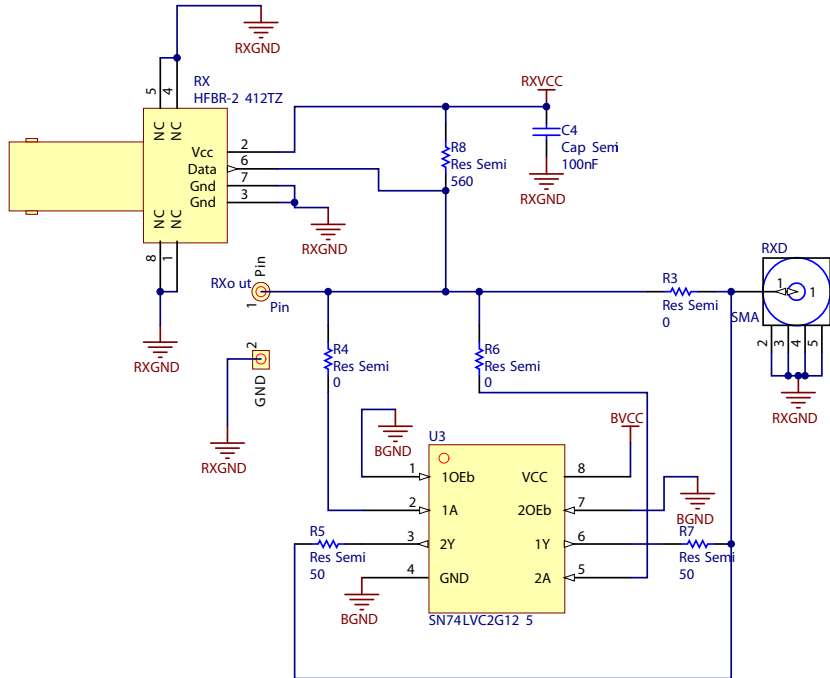
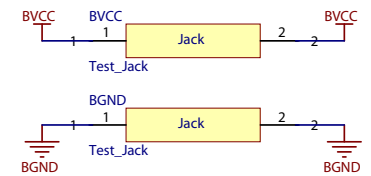
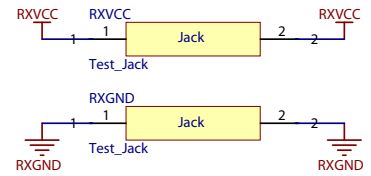
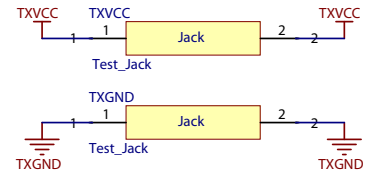
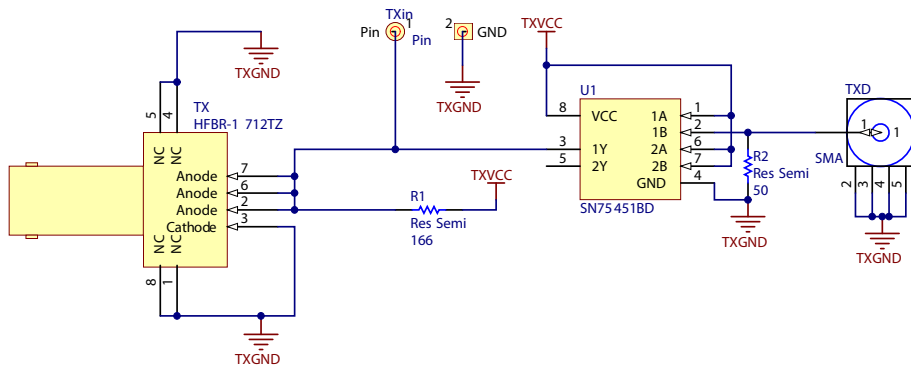
### Initial Setup

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 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 (5V) and BGND (0V).



For product information and a complete list of distributors, please go to our web site: [www.avagotech.com](http://www.avagotech.com)

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