BPR-40-U-M

DEVICE

40 Gbit/s Balanced PhotoReceiver, Module

OVERVIEW

Optilab BPR-40-U-M is a 40 Gbit/s balanced photo receiver module. It features high differential gain of typically 2800 V/W. It is a differential front-end for digital applications such as 43 Gbit/s DPSK communication. The BPR-40-U-M contains two waveguide-integrated pin-photodiodes (PD) and a limiting amplifier (LA), which provides a differential output voltage swing of typ. 600 mV. With built-in MCU and USB remote interface, the input optical power can be monitored and the threshold voltage can be easily adjusted for each optical path to ensure an optimized differential output signal. The BPR-40-U-M has well balanced optical & electrical paths so that a total skew of less than 10 ps is achieved. Contact Optilab for more information.
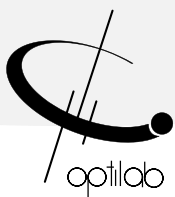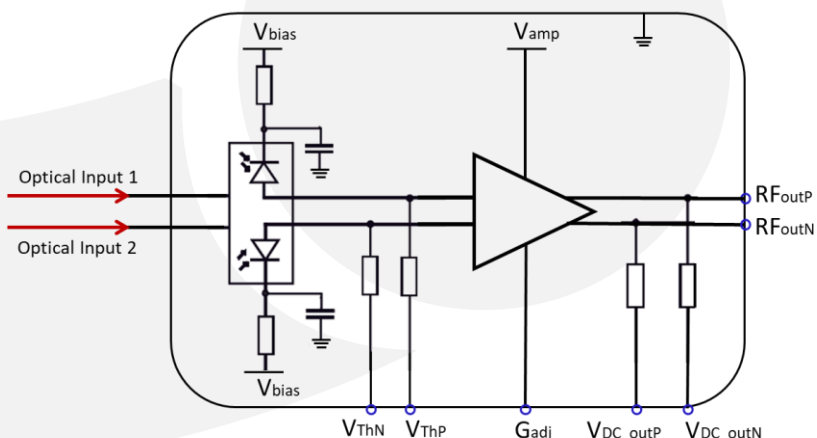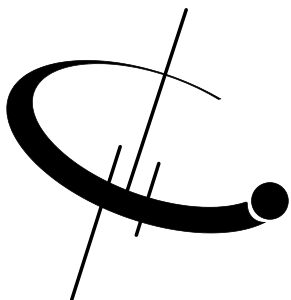
FEATURES

- USB Power and Control
- Differential RF Output
- Adjustable High Gain TIA
- Remote Threshold Control
- Low Skew

USE IN

- Low Noise Transmission System
- Transponder and Line Card Design
- 43 Gbit/s DPSK Communication Systems
- OC-768/STM-406 System

FUNCTION DIAGRAM
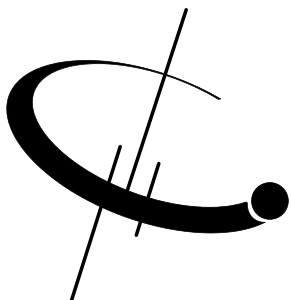
BPR-40-U-M

SPECIFICATIONS

GENERAL

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Operating Wavelength Range	1530 nm to 1630 nm
Optical Input Signal Level	-10 to 4 dBm
S21 Bandwidth	37 GHz typ.
Bit Rate	40 Gbit/s typ.
Conversion Gain	2800 V/W typ. 2000 V/W min.
Optical Return Loss	30 dB typ.
Polarization Dependent Loss	0.4 dB typ.
Low Frequency Cutoff	100 kHz max.
Sensitivity	-8 dBm typ.
Differential Voltage Swing	600 mV typ.
Pulse Width	25 ps typ. 26 ps max.
Skew	10 ps max.
Threshold Voltage Setting Range	-3V to +3V

MECHANICAL

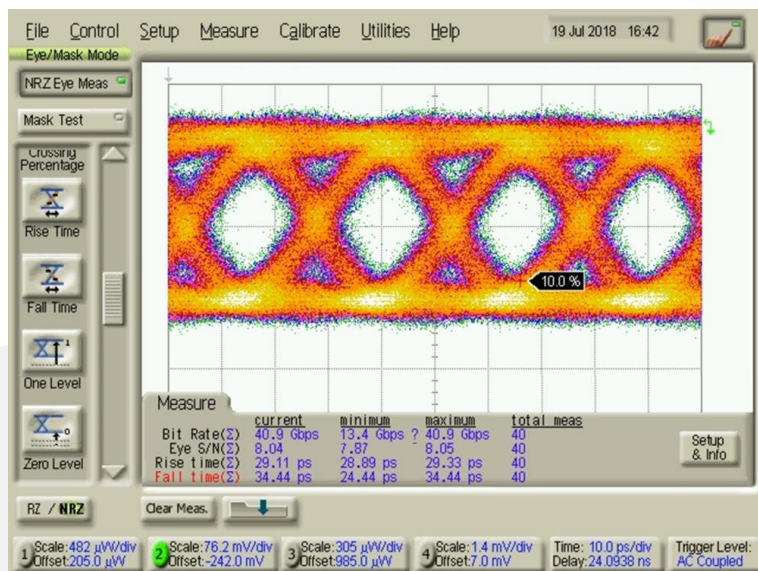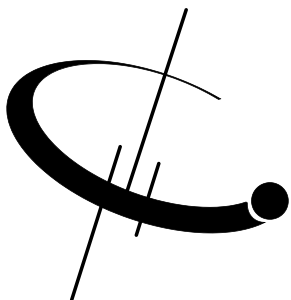|	
Operating Temperature	0ºC to + 60ºC
Storage Temperature	-40 ºC to 85 ºC
Operating Humidity	5% to 85% Relative Humidity
Power Supply	+5 V DC (Via USB)
Power Consumption	1 W typ.
Control Interface	USB
Housing Dimensions	150 mm x 150 mm x 30 mm
Fiber Connector	FC/APC
Optical Fiber	SMF-28
RF Output Connector	K type female, differential

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Typical S21 Characteristics
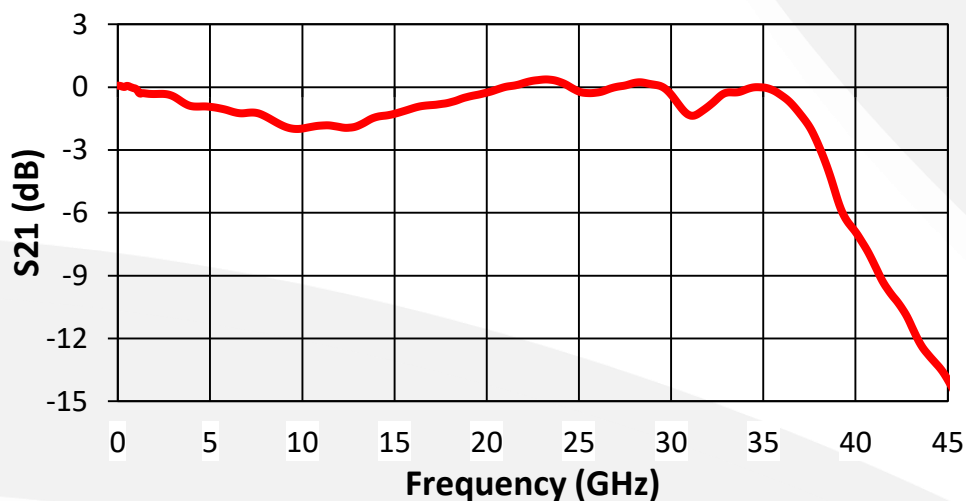
Typical 40 Gbit/s Eye Diagram

BPR-40-U-M

Mechanical Drawing

Unit: mm

163,12

150,00

142,00

4-Ø3,20

30,00

142,00 150,00