

KEYSIGHT TECHNOLOGIES (AGILENT HP)

83485B

The Keysight (Agilent/HP) 83485B is a high-performance optical and electrical plug-in receiver module designed for use with the HP/Agilent 83480A Digital Communications Analyzer (DCA) and 54750A Digitizing Oscilloscope mainframes. This single-slot module features a 20 GHz optical channel and a 20 GHz electrical channel, making it ideal for characterizing optical transmitters, transceivers, and high-speed electrical signals in telecommunications and data communications applications. It provides high precision, low noise, and stable measurements at calibrated wavelengths of 1310 nm and 1550 nm.

SPECIFICATIONS

General

Interfaces	1x Optical Input (HP/Agilent Universal Adapter), 1x Electrical Input (2.4 mm male)
Display	None (uses mainframe display)

Physical

Power Supply	Powered directly via mainframe plug-in slot
Operating Temperature	15 °C to 35 °C °C
Dimensions (W×H×D)	Standard single-width mainframe plug-in module mm

System Compatibility

Platform Compatibility	HP / Agilent 83480A, HP / Agilent 54750A
Module Slot Width	1 slot

Optical Channel (Channel 1)

Optical Wavelength Range	1200 nm to 1600 nm
Optical Bandwidth (-3 dBo)	20 GHz
Electrical Bandwidth (-3 dBe)	12.4 GHz
Calibrated Wavelengths	1310 nm, 1550 nm
Fiber Type Compatibility	9/125 μm single-mode fiber
Optical Connection Interface	HP/Agilent Universal Adapter (HMS-10 compatibility)
Maximum Safe Optical Input Power	10 mW peak
Optical RMS Noise (Typical)	2.5 μW
Optical RMS Noise (Maximum)	4.0 μW
Optical Scale Factor Range	1 μW/div to 100 μW/div

Electrical Channel (Channel 2)

Electrical Channel Bandwidth	40 GHz
Calculated Electrical Rise Time (10% to 90%)	8.8 ps
Electrical RMS Noise (Typical)	0.4 mV
Electrical RMS Noise (Maximum)	1.0 mV
Electrical Maximum Input Voltage	±2 V DC + AC peak
Electrical Connector Type	2.4 mm (male)
Electrical Input Impedance	50 Ω
Electrical Scale Factor Range	1 mV/div to 100 mV/div

Optical Channel

Average Power Monitor Range	-30 to +3 dBm
Average Power Monitor Accuracy	±0.35 dB (at calibrated wavelengths)
Optical Return Loss	> 30 dB
Calculated Optical Rise Time (10% to 90%)	17.5 ps (calculated from 20 GHz bandwidth)

Electrical Channel

Electrical Bandwidth Settings	26 GHz / 40 GHz (selectable)
Electrical Input Coupling	DC

Environmental

Storage Temperature	-40 to +75 °C
Operating Humidity	Up to 95% RH (non-condensing)

Clock Recovery Options

Option 021 Clock Recovery Rate	2.48832 Gb/s (OC-48/STM-16)
Option 021 Min Optical Input Level	-17 dBm (typical at 1310 nm / 1550 nm)
Option 021 Min Electrical Input Level	10 mV p-p
Option 022 Clock Recovery Rate	9.95328 Gb/s (OC-192/STM-64)
Option 022 Min Optical Input Level	-11 dBm (typical at 1310 nm / 1550 nm)
Option 022 Min Electrical Input Level	20 mV p-p

TECHNOLOGY

Optical and Electrical Sampling Oscilloscope Receiver

APPLICATIONS

High-speed optical transmitter testing, telecom and datacom transceiver characterization, and high-bandwidth electrical waveform analysis

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.