

## KEYSIGHT TECHNOLOGIES (AGILENT HP)

# 86105B

The Keysight (Agilent) 86105B is a high-performance optical and electrical plug-in module designed for the 86100 series Infiniium Digital Communications Analyzer (DCA) mainframes. It features a 15 GHz optical channel optimized for 9/125  $\mu\text{m}$  single-mode fiber compliance testing from 155 Mb/s to 10 Gb/s, and a 20 GHz electrical channel, enabling accurate transmitter characterization for SONET/SDH, Fibre Channel, Ethernet, and InfiniBand standards.

## SPECIFICATIONS

### Physical

|                       |                                                |
|-----------------------|------------------------------------------------|
| Power Supply          | Powered directly by the mainframe plug-in slot |
| Operating Temperature | 10 °C to 40 °C °C                              |

### Optical Channel Specifications

|                                   |                                            |
|-----------------------------------|--------------------------------------------|
| Optical Channel Bandwidth         | 15 GHz                                     |
| Wavelength Range                  | 1000 nm to 1600 nm                         |
| Fiber Core Diameter Compatibility | 9/125 $\mu\text{m}$ (Single-mode)          |
| Optical Connector Interface       | Interchangeable (supports FC, SC, ST etc.) |

### Electrical Channel Specifications

|                                        |                       |
|----------------------------------------|-----------------------|
| Electrical Channel Bandwidth           | 20 GHz                |
| Electrical Input Connector Type        | 3.5 mm male           |
| Characteristic RMS Noise (12.4 GHz BW) | 0.25 mV               |
| Characteristic RMS Noise (20 GHz BW)   | 0.5 mV                |
| Input Impedance                        | 50 $\Omega$ (nominal) |

### Physical and System Integration

|                         |                                                       |
|-------------------------|-------------------------------------------------------|
| Mainframe Compatibility | 86100A, 86100B, 86100C Infiniium DCA/DCA-J Mainframes |
| Module Slot Width       | Single-slot                                           |

### Electrical Channel Performance

|                                               |                                                           |
|-----------------------------------------------|-----------------------------------------------------------|
| Electrical Channel Rise Time (10% to 90%)     | 28.2 ps (12.4 GHz bandwidth) / 17.5 ps (20 GHz bandwidth) |
| Electrical Channel Maximum Safe Input Voltage | $\pm 2$ V dc + ac peak (+16 dBm)                          |

### Optical Channel

|                         |                  |
|-------------------------|------------------|
| Calibration Wavelengths | 1310 nm, 1550 nm |
|-------------------------|------------------|

## TECHNOLOGY

Optical and Electrical Sampling

## APPLICATIONS

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### Transmitter Compliance Testing

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