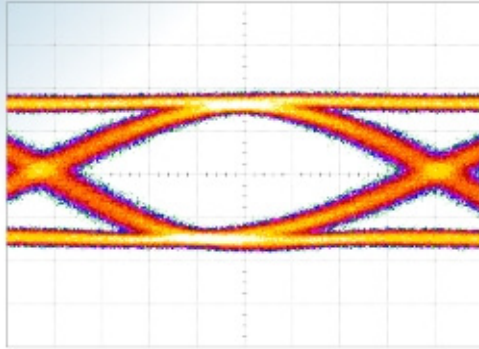




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Datasheet

SHF 1030

5:1 Signal Selector





Description

The SHF 1030 is a five way switch which can select from five inputs and produce a single output. Used in combination with the SHF 5002 A 1:4 demultiplexer, a 50 Gbps signal can be demultiplexed and the four channels fed into the SHF 1030. One of these channels can be selected and analyzed with a 12.5 Gbps error analyzer. The other channels can then be successively tested to ensure that they are also error free. This system thus provides a cheaper alternative to a 50 Gbps error analyzer by testing the subchannels of a data stream in series, rather than in parallel.

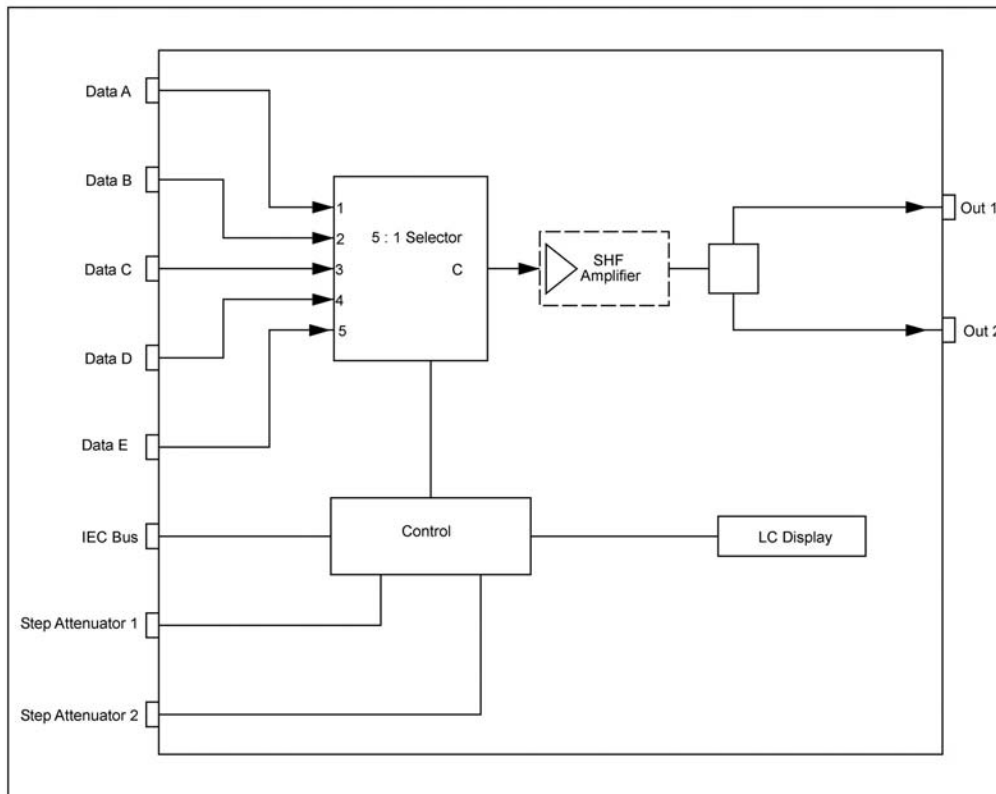
An extra feature of the SHF 1030 is that the user can control up to two external step attenuators. As the requirements of attenuators vary according to manufacturer (different supply voltages and power requirements), the properties of these outputs are set according to the customer's wishes.

To raise the output signal level, an amplifier can be optionally fitted which will produce an output level of up to $2.5 V_{pp}$, depending on the input signal level.

Features

- Broadband operation up to 18 Gbps
- Control for two step attenuators
- SMA female input and output connectors
- High efficiency switching power supply
- All functions microprocessor controlled
- External GPIB control

Functional Block Diagram



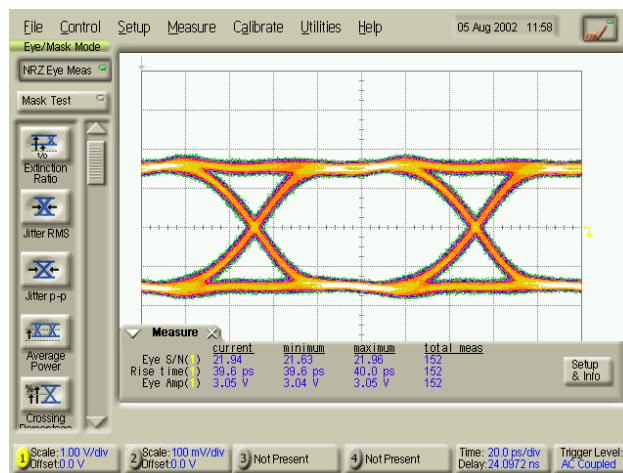


Specifications

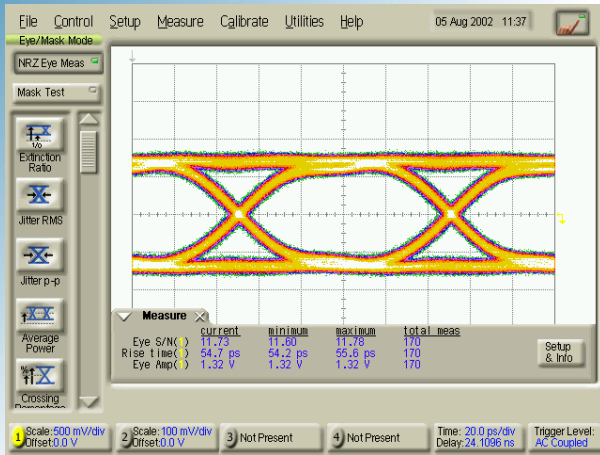
| Parameter | Unit | Min. | Typ. | Max. | Conditions |
|---|------|-----------|------------|------------|--|
| Electrical parameters | | | | | |
| Max. input power without optional input amplifier with optional input amplifier | dBm | | | 30 10 | |
| Impedance | | | 50 | | |
| Frequency range | GHz | 0 | | 18 | |
| Input return loss | dB | | | 15 10 | <15 GHz <18 GHz |
| Output return loss | dB | | | 15 10 | <15 GHz <18 GHz |
| Insertion loss | dB | | 6 | | |
| Output level | V | | | 2.5 | with internal amplifier |
| Attenuator outputs | | | | | Set according to requirements of external attenuator |
| General specifications | | | | | |
| Power supply | V | 90 180 | 110 230 | 135 270 | 47...63 Hz |
| Input connectors | | | | | SMA |
| Output connectors | | | | | SMA |
| Power consumption | W | | | 30 | |
| Operating temperature | °C | 10 | | 35 | |
| Storage temperature | °C | -20 | | 70 | |
| Weight | kg | | 9.5 | | |
| Dimensions (WxHxD) | mm | | | | 472x110x365 |

Output waveforms

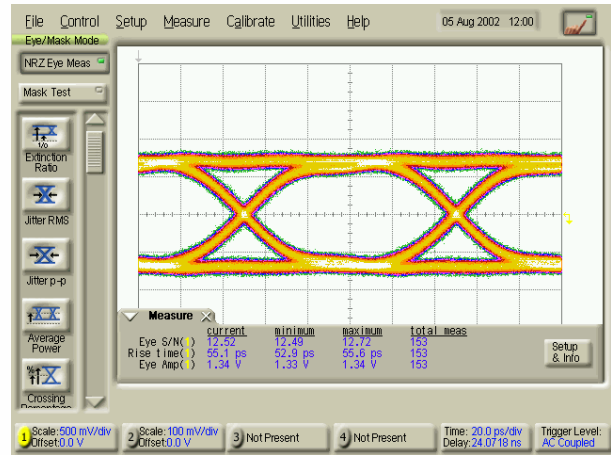
10 Gbps eye diagrams



Input signal

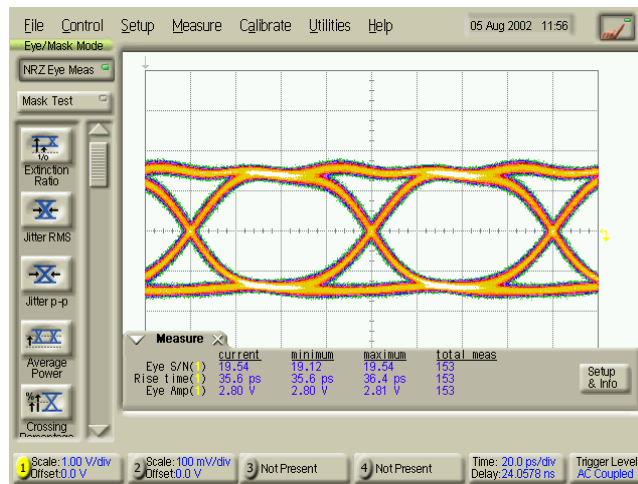


Output 1

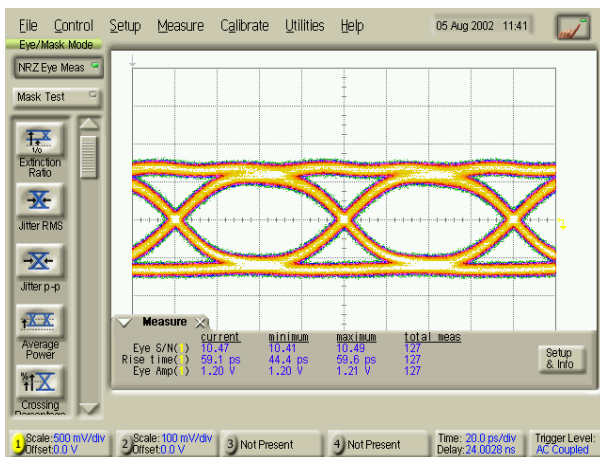


Output 2

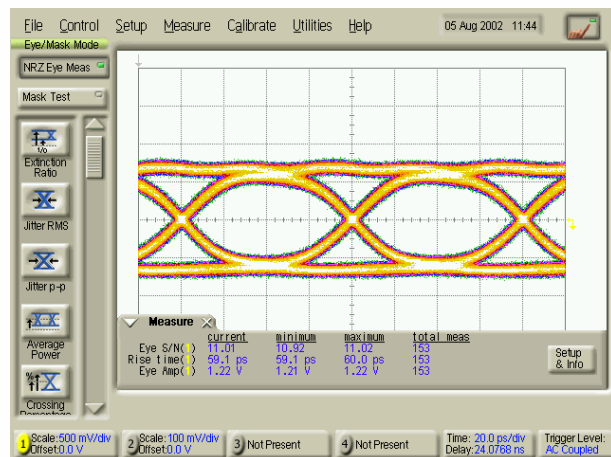
12.5 Gbps eye diagrams



Input signal



Output 1



Output 2