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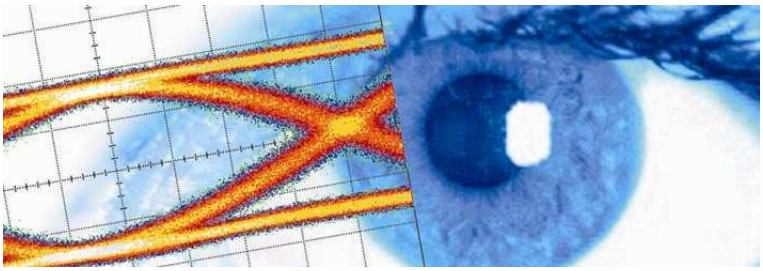
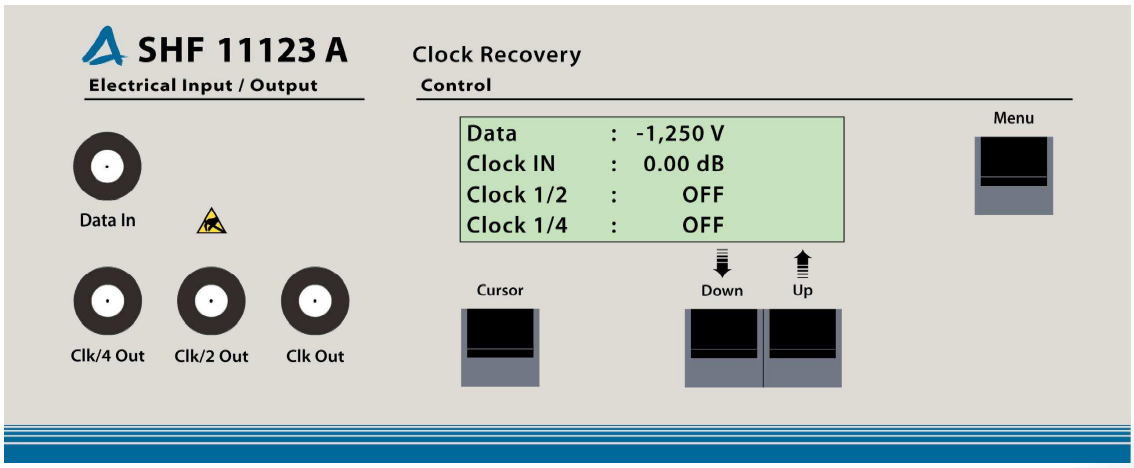


# Preliminary Datasheet

# SHF 11123A

## Clock Recovery



# Description

The SHF 11123A Clock Recovery is designed to extract and synchronize the clock from a serial data stream. It operates at bit rates from 19 to 26 (CR25) or 25.3 to 32 (CR28) Gbps. An internal synthesizer provides a reference clock for the whole bit rate range.

The SHF 11123A can be operated locally by the front panel or remote controlled via Ethernet-connection from a PC running the SHF BERT Control Center control software (BCC). Its programming features allow automated measurements using test programs like Agilent VEE or National Instruments LabView.

The module is a compact solution which offers superb performance while including easy to use features.

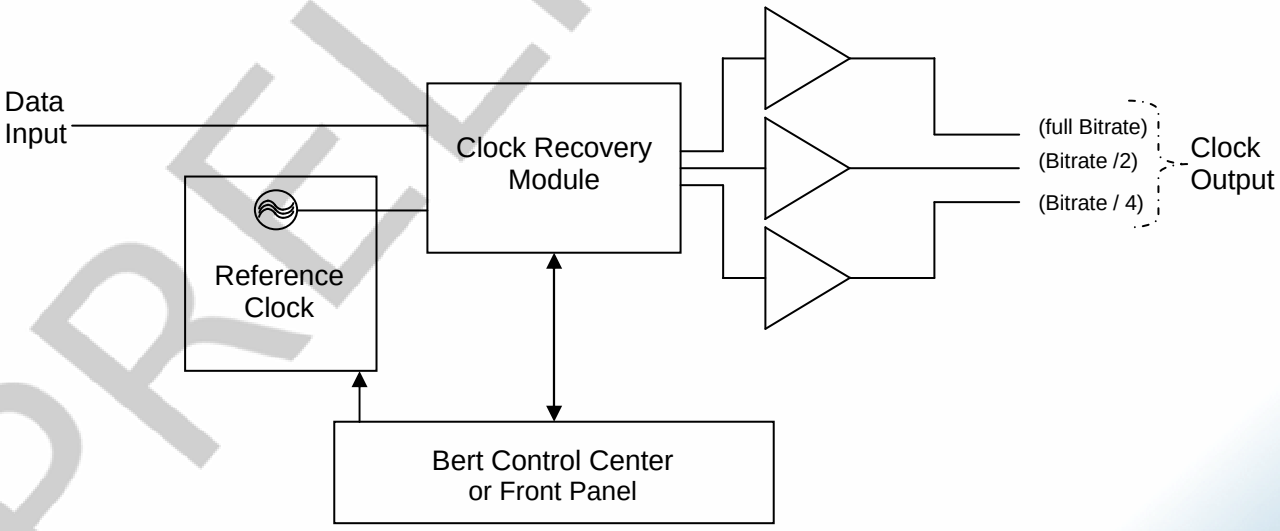
# Features

- Operating bit rate range from 19 to 26 Gbps (Option CR25)[1]
- Operating bit rate range from 25.3 to 32 Gbps (Option CR28)[1]
- Clock output frequency at full, half and quarter of the nominal input data bit rate
- Local or remote operation via Ethernet-connection to a PC (SHF BERT Control Center)

# Options

- Option CR25: With clock recovery 19 to 26 Gbps
- Option CR28: With clock recovery 25.3 to 32 Gbps

# Block Diagram




[1] Not available at the same time

# Specifications – SHF 11123A

| Parameter | Unit | Min. | Typ. | Max. | Comment |
|---|---|---|---|---|---|
| **Data Input** | | | | | |
| Operating bit rate<br>CR25<br>CR28 | Gbps | <br>19.0<br>25.3 | | <br>26.0<br>32.0 | |
| Input Voltage | mV | 200 | | 1000 | |
| Connector | Ω | | 50 | | ruggedized 2.92 mm male |
| **Clock / 4 Output (quarter bit rate)** | | | | | |
| Output Frequency<br>CR25<br>CR28 | GHz | <br>4.75<br>6.33 | | <br>6.5<br>8.0 | |
| Output Voltage ($V_{pp}$) | mV | 500 | | 800 | |
| Connector | Ω | | 50 | | SMA - female |
| RMS-Jitter | fs | | | 1000 | |
| **Clock / 2 Output (half bit rate)** | | | | | |
| Output Frequency<br>CR25<br>CR28 | GHz | <br>9.50<br>12.65 | | <br>13<br>16 | |
| Output Voltage ($V_{pp}$) | mV | 500 | | 800 | |
| Connector | Ω | | 50 | | SMA - female |
| RMS-Jitter[2] | fs | | | 800 | |
| **Full Clock Output (full bit rate)** | | | | | |
| Output Frequency<br>CR25<br>CR28 | GHz | <br>19.0<br>25.3 | | <br>26<br>32 | |
| Output Voltage ($V_{pp}$) | mV | 500 | | 800 | |
| Connector | Ω | | 50 | | ruggedized 2.92 mm male |
| RMS-Jitter[2]<br>CR25<br>CR28 | fs | | | <br>600<br>800 | |

[2] on scope display, measured with Agilent 86100A with precision time base