Semight

rBT2250

25G Burst Mode Bit Error Ratio Tester

Version 2.0

Product Description

rBT2250 is a burst bit error ratio tester to evaluate 10G/25G/50G OLT (Optical Line Terminal) receiver performance in burst mode. rBT2250 provides 2 independent pattern generator/error detector channels, and provide laser enable/ receiver reset /RSSI trigger signals and SD signal detect function. With Build-in burst clock data recovery, clock would be recovered from the burst data every time, it is a must in long fiber testing. The high integration multi-channel design of rBT2250 make it the best choice for burst bit error ratio analysis.

Key Features

- Burst Mode：Different tests for 10G or 25G PON OLT, can be run without double investment by using high-quality burst signals generation and analysis of 9.953Gbps/ 10.3125Gbps/12.4416Gbps / 24.8832Gbps and 25.78125Gbps.
- Multichannel Configuration：Integrated 2 in-dependent Channels，which support maximum 2 Data output/input channels with 2 Enable Control & 2 Reset Control channel at the same time.
- PON Dedicated Software：Dedicated software supports easy signal timing setting and editing of PON data.
- Control Signal Output：Laser enable control and receiver reset control channel make it very easy to setup OLT testing platform. rBT2250 is the first integrated BERT which support Double Reset control channels which meet the latest 25G PON application requirement.
- Support both continuous or burst BER testing.
- Burst CDR： rBT2250 has integrated burst clock data recover, which make it can do BER testing through long fiber transmission

Technical Specification

Pattern Generator Specification

Output	Differential	AC Coupling, 100 Q Termination
	Single End	AC Coupling, 50 Q Termination
Output Amplitude	300-600mVpp	Differential
Output Channel	2 in-depended Burst Channels	Burst/Continuous mode
	1 Continuous Channel(25Gbps NRZ) or 2 Continuous Channels (50Gbps NRZ/PAM4)	Continuous mode
Pattern	PRBS7，15，23，31，SSPR，User Defined, CID pattern	
Support Data Rate	9.953Gbps, 10.3125Gbps, 12.4416Gbps, 24.8832Gbps，25.78125Gbps	
Rise Time	<20ps	20%~80%
Jitter	<1 ps	RMS
Pre-emphasis	Support Pre-Cursor & Post Cursor adjustment to minimize testing fixture or RF cable insertion loss	
Pattern Sequence	Each Channel can be set preamble/payload/guard-time pattern sequence in-dependently	
CID Pattern	Support add continuous "1"，continuous "0" pattern as length from 64-128 bits(adjustable)	
Connector	2.92mm(Female)	

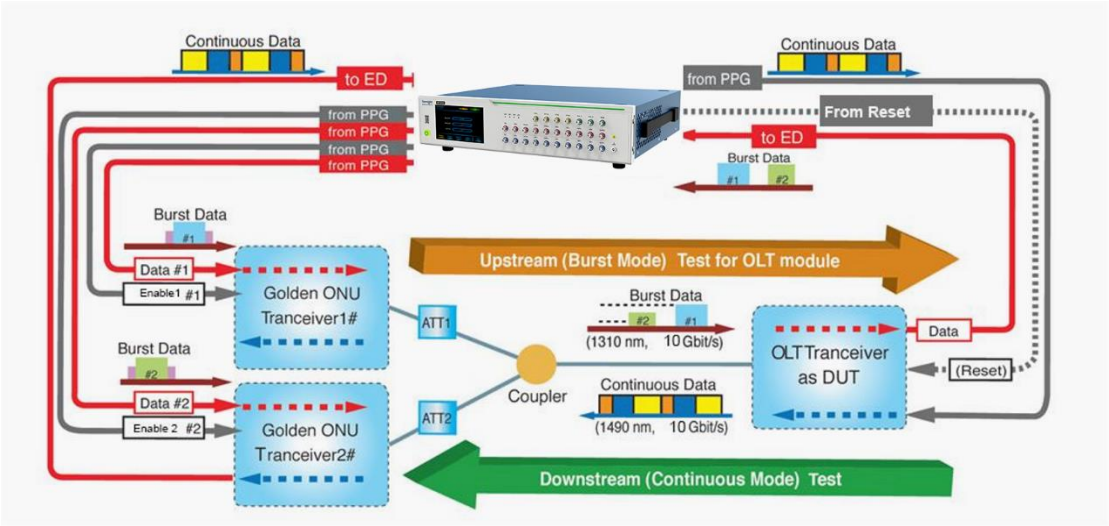
Clock Output	1/2、1/4、1/8、1/16 divided clock output
Laser Enable Channel	Support 2 laser enable control channel outputs(each enable control channel is synchronized with Pattern Generator channel)
Enable Control Level	TTL Level, support selection as High/Low and Continuous High/Low
Reset Channel	Support 2 reset channel outputs (reset channel is synchronized with error detector channel)
Reset Width	Adjustable
Reset Position	Adjustable, support Auto-Range to find the right reset position
RSSI Trigger Output	Support RSSI trigger (adjustable for RSSI trigger pulse width/repeat frequency and position)

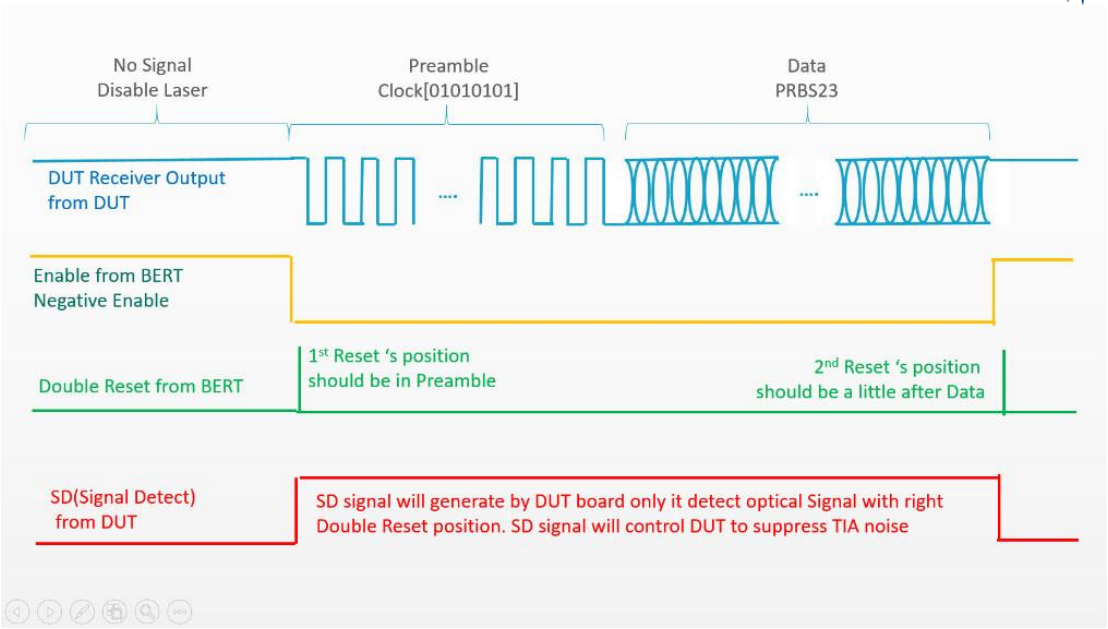
Error bits detector indicators

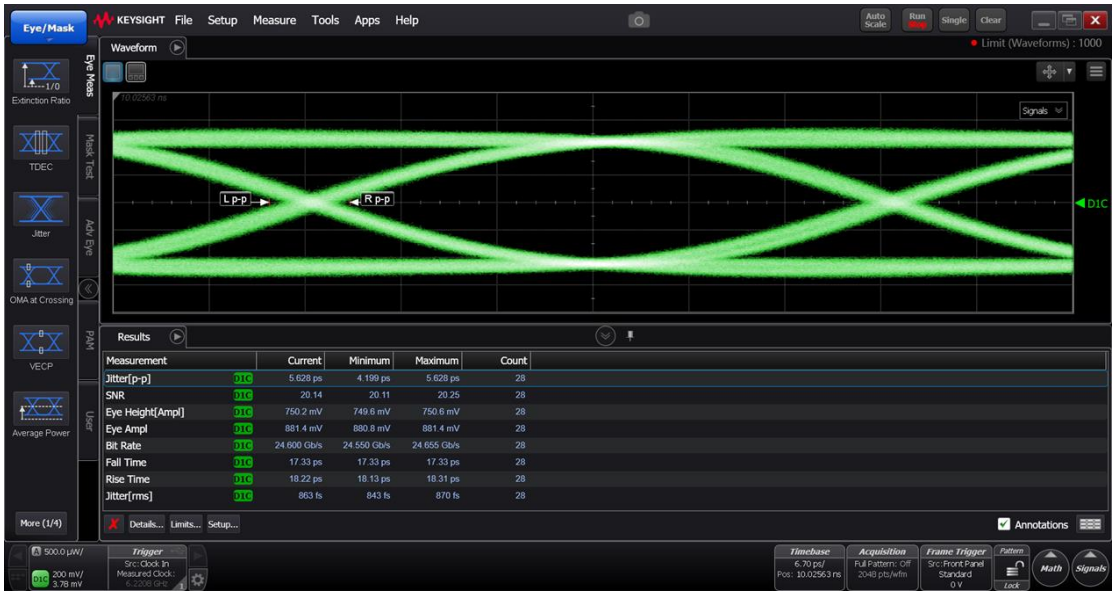
Input Type	Differential/Single end
Data Rate	9.953Gbps, 10.3125Gbps, 12.4416Gbps, 24.8832Gbps，25.78125Gbps
Impedance	100Ω
Input Amplitude Range	100~800mVpp
Sensitivity	>100mV
Clock Mode	Internal burst clock data recovery unit
Synchronization	Auto-synchronization and Auto-range
Connector	2.92mm(Female)

General indicators

Operation	Temperature: 0°C ~ +55° Humidity: 30 %~ 80% non-condensing
Storage	Temperature: -30 °C ~ +70 °C; Humidity: 10 % ~ 90 % non-condensing
Altitude	Operation:0 m ~ 2000 m, Storage:0 m ~ 4600 m
Power	LINE：100-240VAC，50/60Hz，250W
Warm-up time	10 minutes
Dimensions(mm)	395±0.5*440±0.8*112±0.3 (with foot pad/handle)
Weight	Net weight: 8.2kg（rBT2250-B22-CM50）




No Signal
Disable Laser
Preamble
Clock[01010101]
Data
PRBS23
DUT Receiver Output
from DUT
Enable from BERT
Negative Enable
Double Reset from BERT
1st Reset 's position
should be in Preamble
2nd Reset 's position
should be a little after Data
SD(Signal Detect)
from DUT
SD signal will generate by DUT board only it detect optical Signal with right
Double Reset position. SD signal will control DUT to suppress TIA noise


Eye/Mask
KEYSIGHT File Setup Measure Tools Apps Help
Waveform
Limit (Waveforms) : 1000
Signals
L p-p
R p-p
D1C
Results
Measurement Current Minimum Maximum Count
Jitter[p-p] 5.628 ps 4.199 ps 5.628 ps 28
SNR 20.14 20.11 20.25 28
Eye Height[Ampl] 750.2 mV 749.6 mV 750.6 mV 28
Eye Ampl 881.4 mV 880.8 mV 881.4 mV 28
Bit Rate 24.600 Gb/s 24.550 Gb/s 24.655 Gb/s 28
Fall Time 17.33 ps 17.33 ps 17.33 ps 28
Rise Time 18.22 ps 18.13 ps 18.31 ps 28
Jitter[rms] 863 fs 843 fs 870 fs 28
Details... Limits... Setup...
Annotations
Extinction Ratio
TDEC
Jitter
OMA at Crossing
VECP
Average Power
More (1/4)
Eye Meas
Mask Test
Adv Eye
PAM
User
Trigger
Timebase
Acquisition
Frame Trigger
Math
Signals

Ordering Information

Host	
rBT2250	25G Burst BERT Host
Options	
CN25	25Gb/s NRZ Continuous Channel
CN50	50Gb/s NRZ Continuous Channel
CM50	50Gb/s NRZ & PAM4 Continuous Channel
B11	1x25Gb/s Burst PPG + 1x25Gb/s Burst ED
B21	2x25Gb/s Burst PPG + 1x25Gb/s Burst ED
B22	2x25Gb/s Burst PPG + 2x25Gb/s Burst ED

Contact us

Mail

sales@semight.com

Address

No. 1508, Xiangjiang Road, Suzhou New District (SND), Jiangsu , China

Web

Visit www.semight.com for more information.

*This information is subject to change without notice.