

32-Gbit/s High-Sensitivity BER Testing

MU183040B/MU183041B High-Sensitivity ED

MP1800A Signal Quality Analyzer Series

The rapid growth of cloud computing services has seen explosive increases in data center traffic, resulting in investigation of new high-speed communications standards, such as 100 GBASE-SR4, 100 GBASE-KR4, etc., to increase internal processing speeds of server and network equipment as well as communications speeds between equipment. Key subjects for data center devices are how to increase speeds while lowering power consumption and there is a trend towards lower PHY input/input voltages. In addition, when using printed-circuits boards, copper cable and Active Optical Cables (AOC) based on silicon photonics technologies, etc., as transmission media, there is increasing need for high-Rx-sensitivity measuring instruments to help decrease the EYE opening caused by transmission media losses.

The Anritsu MU183040B/MU183041B High Sensitivity ED is a new plug-in module for MP1800A Signal Quality Analyzer, supporting multichannel BER measurements up to 32.1 Gbit/s. It extends the performance of the earlier A-type ED to offer world's best Rx sensitivity¹⁾ with the world's fastest Auto Adjust¹⁾ (auto-align of threshold level and phase points). The MU18304xB High Sensitivity ED supports simultaneous multichannel measurements of low-amplitude, low EYE Opening DUT outputs to achieve more-accurate, ideal signal quality analysis.

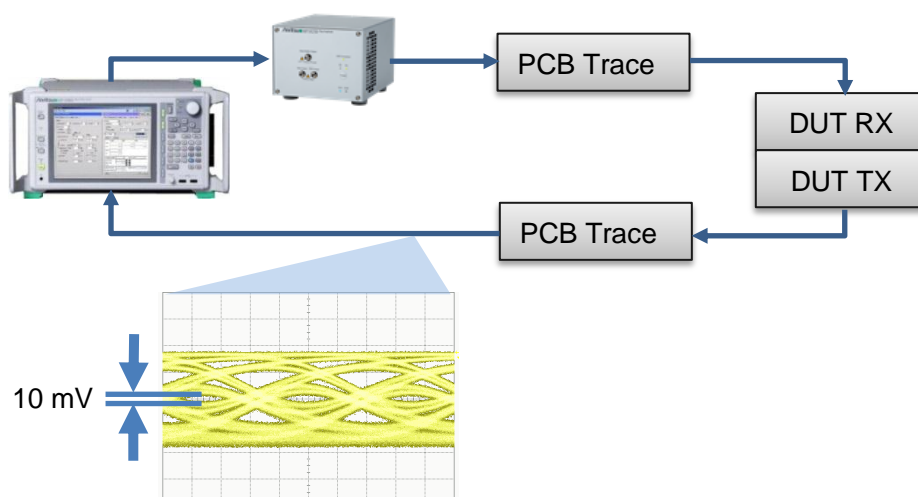
1) As of 2013/Sep.

■ Applications

- ✓ High Speed Back Planes and Cables: 100 GbE (100 GBASE-KR4, CR4)
- ✓ SERDES and CDR: CEI-25 G, CEI-28 G-VSR
- ✓ AOC (Active Optical Cable): InfiniBand™ EDR (26 G)
- ✓ Optical Transceiver Modules such as CFP/CFP2/CFP4, QSFPs: 32 G Fibre Channel, 100 GbE (100 GBASE-SR4, LR4, ER4), OTU4 (28 Gx4)
- ✓ TOSA/ROSA, Silicon Photonics Device

■ Features

- ✓ High Sensitivity: 10 mV (typ., single-end, EYE Height)
- ✓ High-Speed Auto Adjust: Simultaneous search in under 1 s for optimum BER voltage threshold/phase for up to 8 channels
- ✓ Wideband bit rate from 2.4 to 32.1 Gbit/s
- ✓ 1/2/4-Channel Selection



■ Typical Specifications

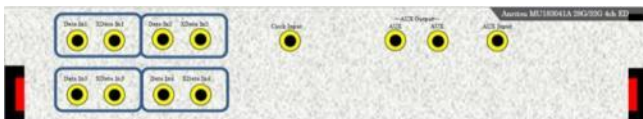
High Sensitivity ED	Specification
Operating Bit Rate	2.4 to 28.1 Gbit/s, 2.4 to 32.1 Gbit/s (Opt-001)
Data Input	Differential, 1/2/4 ch (depends on model and option), K-connector, 50 ohm
Input Amplitude	0.05 to 1.0 Vp-p
Sensitivity	EYE Height: 10 mVp-p (Typ. at 28.1 Gbit/s, single-end, at equivalent to BER 1E-9 with 70 GHz bandwidth Sampling Scope) EYE Amplitude: 15 mVp-p (Typ. at 28.1 Gbit/s, Single-end), =<25 mVp-p (at 28.1 Gbit/s, Single-end)
External Clock Input	Single-end, 1 ch, SMA-connector, 50 ohm
Frequency	Half-rate operation (1.2 GHz to 16.05 GHz)
Amplitude	0.3 to 1.0 Vp-p (-6.5 to +4.0 dBm)
Clock Delay Range	-1000 m to +1000 mUI / 2 m UI step
Pattern Detection	
PRBS	2 ⁿ -1 (n = 7, 9, 10, 11, 15, 20, 23, 31), Logic POS/NEG
Programmable	Length 2 to 268,435,456 bits / ch, step 1 bit
Aux Output	SMA-connector, 50 ohm, Divided Output, Pattern Sync. Output
Analysis Functions	Auto Adjust (4 ch Simultaneous, <1s search) Auto Search, Bathtub Jitter, EYE Diagram, EYE Margin

■ Ordering Information

Model Number	Model Name
MU183040B	28 G/32 G bit/s High Sensitivity ED
MU183040B-001	32 G bit/s Extension
MU183040B-010	1 ch ED
MU183040B-020	2 ch ED
MU183041B	28 G/32 G bit/s 4 ch High Sensitivity ED
MU183041B-001	32 G bit/s Extension



MU183040B (1 ch or 2 ch)



MU183041B (4 ch)

Please contact our sales representative for more details about products and conditions.
The specifications and other details in these materials may change without prior notification.

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