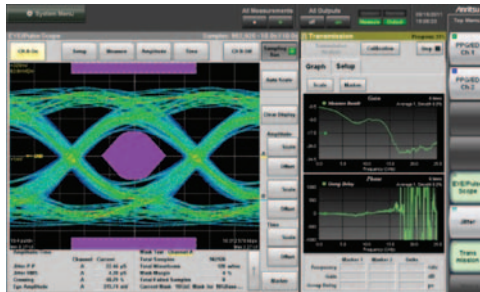
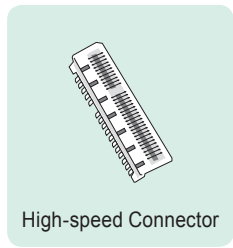


# Evaluation Transmission Characteristics of over Gbps Connectors/Cables

MP2100A Series  
BERTWave

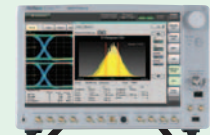


Using S-parameters to check transmission quality of narrow-pitch connectors and high-speed cables requires waveform Eye Margin and BER measurements.



### Evaluation by One Set is Possible

- ✓ Eye pattern measurement
- ✓ Eye mask test
- ✓ Differential IF



**Jitter Analysis Software**

- ✓ Bathtub
- ✓ TJ, DJ, RJ, DDJ etc

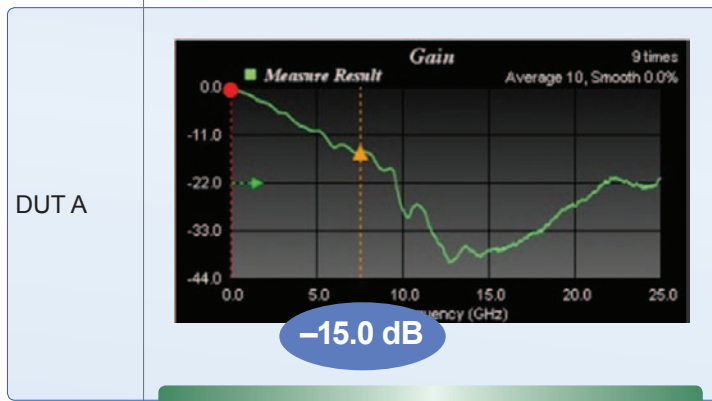
**Transmission Analysis Software**

- ✓ S<sub>21</sub> (Gain, Phase)
- ✓ Waveform simulation
- ✓ Equalizer, Emphasis

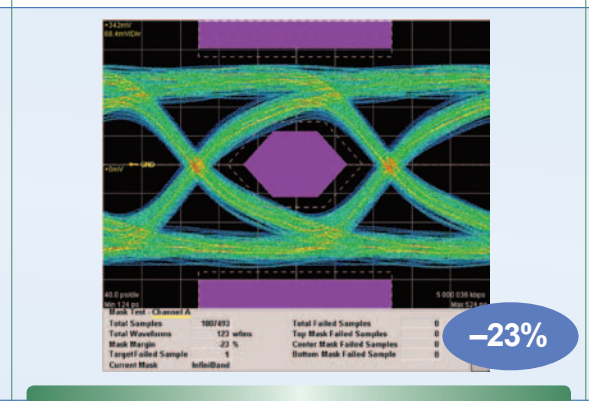
Sometimes, Eye Margin differs for similar S-parameter values. Therefore, checking transmission path quality just by evaluating the S-parameter may not provide sufficient Eye Margin after the transmission path. Consequently, Eye Margin and BER measurements using waveforms are required.

The MP2100A BERTWave series supports signal source (PPG), sampling oscilloscope, and BER measurement functions. Installing the MX210002A Transmission Analysis Software in the all-in-one MP2100A makes waveform, Eye Margin, BER and S<sub>21</sub> measurements simple and fast.

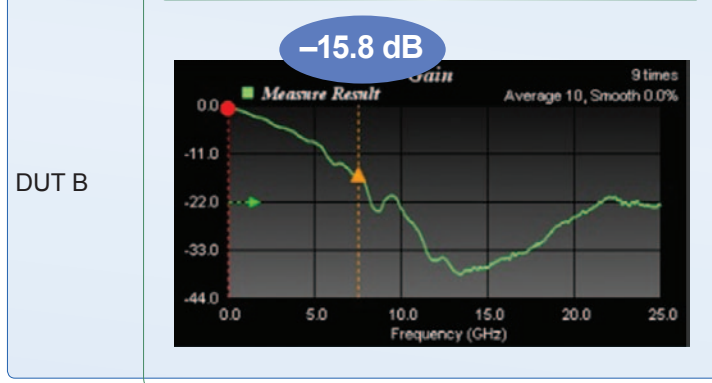
### S<sub>21</sub> Result (7.5 GHz)



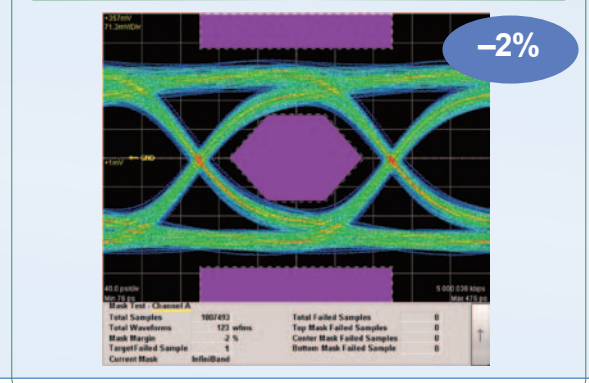
### Eye Margin Result



### S<sub>21</sub> Result is More of the Same



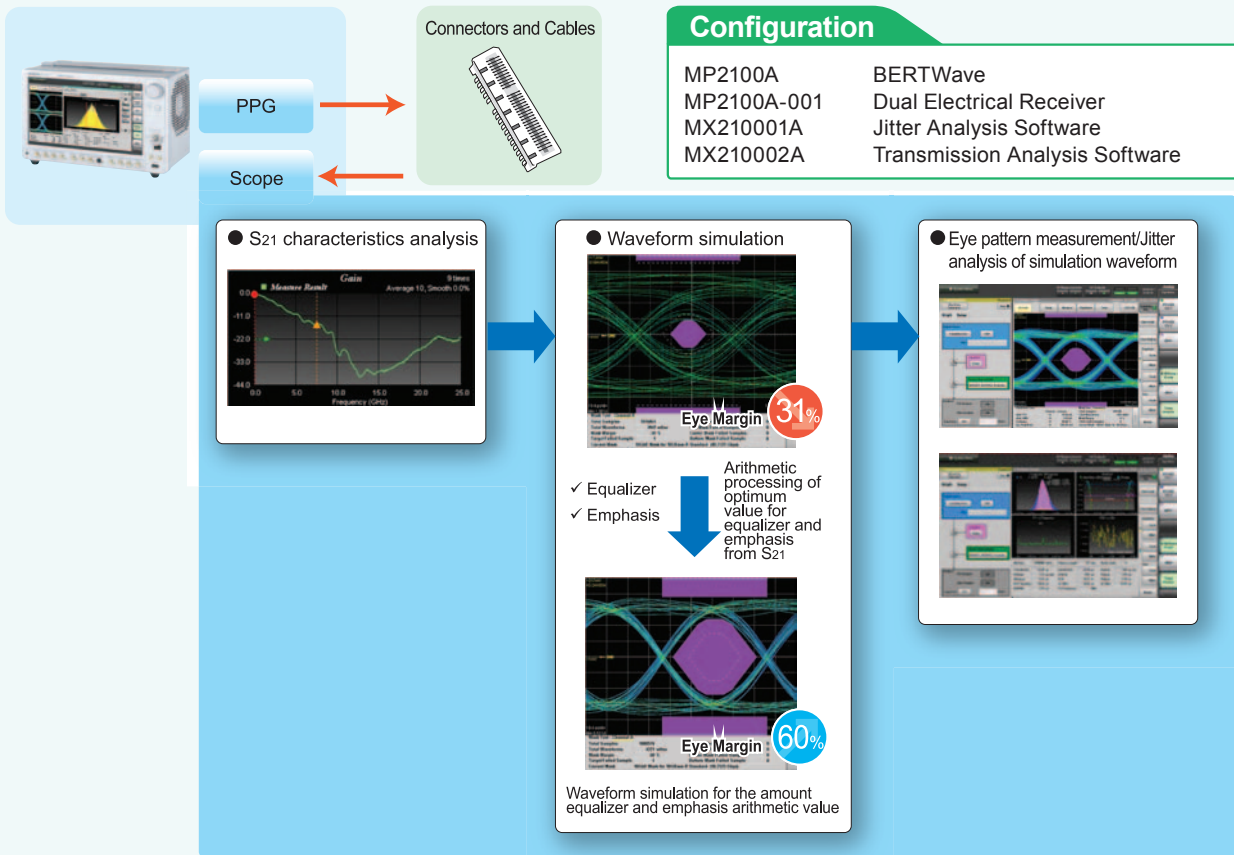
### Eye Margins Differ by This Much!



## Features of Anritsu Solution

### Evaluating Characteristic of Connectors/Cables Solution

Using the MX210002A Transmission Analysis Software in the MP2100A simulates 4-tap emphasis and equalizer waveforms after the DUT.



### Emphasis Effect Simulation

Using the MP1825B 4Tap Emphasis supports actual measurement evaluation of waveform simulation results using emphasis signals to reduce R&D times.

