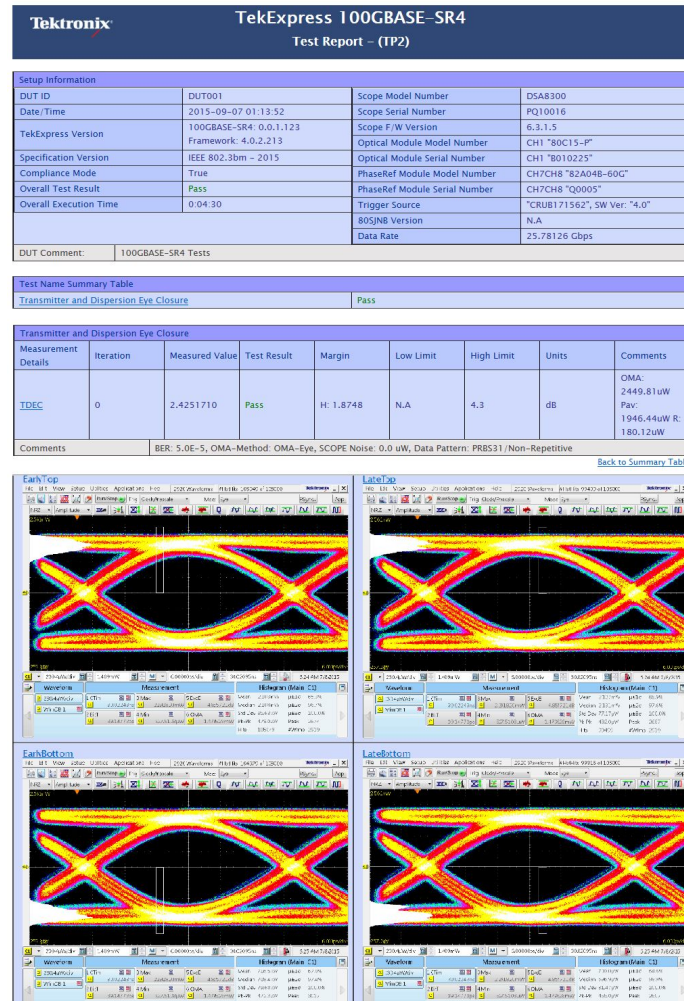


100GBASE-SR4/TDEC

Compliance and Characterization Solution



TekExpress® 100GBASE-SR4/TDEC solution

IEEE 802.3bm (SR4/TDEC) Compliance and Characterization Solution

The new Tektronix Sampling Instrument based 100G-SR4/Transmitter and Dispersion Eye Closure (TDEC) automation system provides turnkey testing and debug of TX Optical properties key to the SR4 Short Reach Ethernet specifications. Automation options help customers meet their compliance needs and generate detailed reports. User-defined mode lets customers make changes to the test limits and perform margin testing beyond compliance. The combination of TDEC and SR4 automation in conjunction with Tektronix 80C15/CRTF broad wavelength high sensitivity optical sampling module offer the most accurate and easiest to use, set of tools to perform these measurements.

Key features

- 80STDEC offers streamlined high performance Transmitter and Dispersion Eye Closure (TDEC) on a variety of Tektronix optical acquisition modules. Ideal for manufacturing settings and minimal conformance validation applications.
- 80SSR4 is a comprehensive set of 100GBASE-SR4 (IEEE 802.3bm) optical transmitter characterization measurements, including TDEC. It's designed to offer a checklist of all relevant tests to verify conformance to the SR4 optical specification.

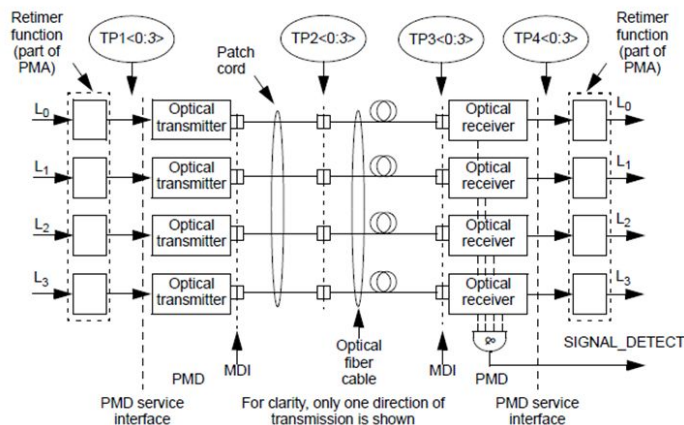
Applications

- Measurements of 100GBASE-SR4 and similar
- TDEC measurement of SR4
- Custom Multi-mode and Single-mode optical signals

IEEE 802.3bm/ 100GBASE-SR4 Optical Transmitter measurements fully automated

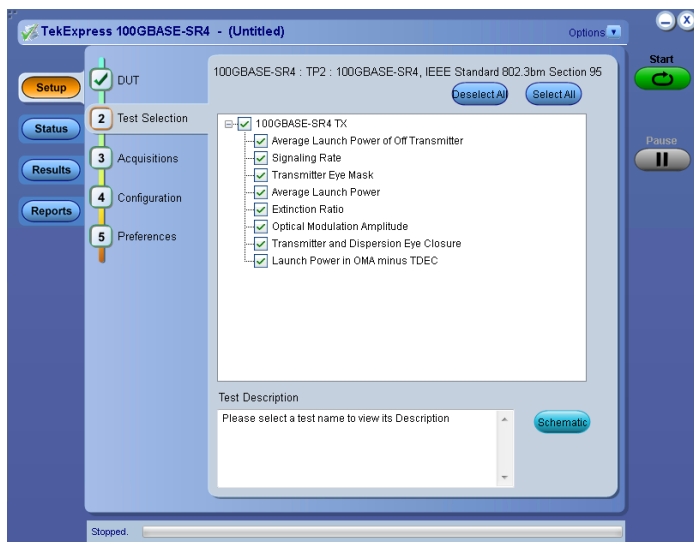
Mapping of TP2 measurements to setup files

Test Point	Supported measurements	Specification reference
TP2	Sampling Rate	IEEE 802.3bm, Table 95.6
	Average Launch Power	IEEE 802.3bm, Table 95.8.3
	Optical Modulation Amplitude	IEEE 802.3bm, Table 95.8.4
	Launch Power in OMA minus TDEC	IEEE 802.3bm, Table 95.6
	Transmitter and Dispersion Eye Closure (TDEC)	IEEE 802.3bm, Table 95.8.5
	Average Launch Power of Off Transmitter	IEEE 802.3bm, Table 95.6
	Extinction Ratio	IEEE 802.3bm, Table 95.8.6
	Transmitter Eye Mask	IEEE 802.3bm, Table 95.8.7



Simplified Instrument setup

Setup and test execution is simple with the 100GBASE-SR4/TDEC software. The oscilloscope acquisition and analysis are all controlled through the 100GBASE-SR4/TDEC automation solution. The Graphical User Interface (GUI) provides an intuitive and easily repeatable workflow for setup and testing.

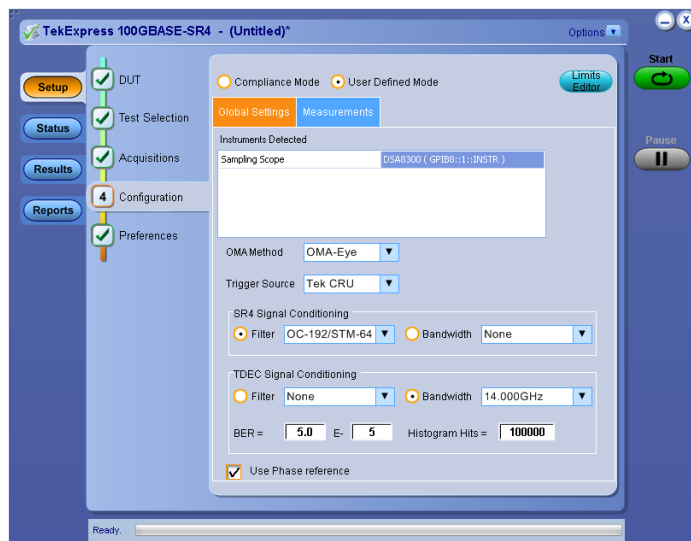


TekExpress® 100GBASE-SR4 measurement setup

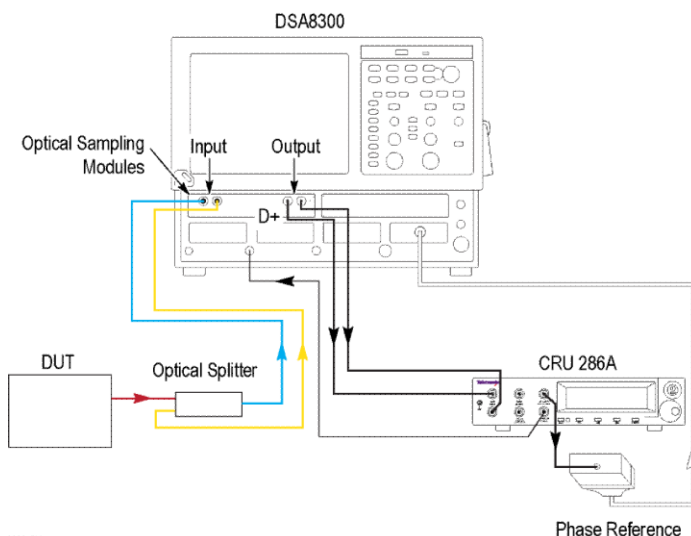
Design characterization is supported beyond 100GBASE-SR4 compliance requirements for all measurements. TekExpress 80SSR4 offers flexible control over test configurations such as analysis windows and other parameters. User defined mode lets customers make changes to the test limits, and perform marginal testing beyond compliance. Optical modules 80C15, 80C10C, 80C14 can be used; refer to the modules' Filter and Bandwidth list for appropriate bandwidth.

User Defined mode

Under user-defined mode, users can configure Global parameters, test specific parameters, measurement repeat parameters, and notification parameters. This supports characterization measurements rather than developing custom lab setups, reducing testing time and complexity.

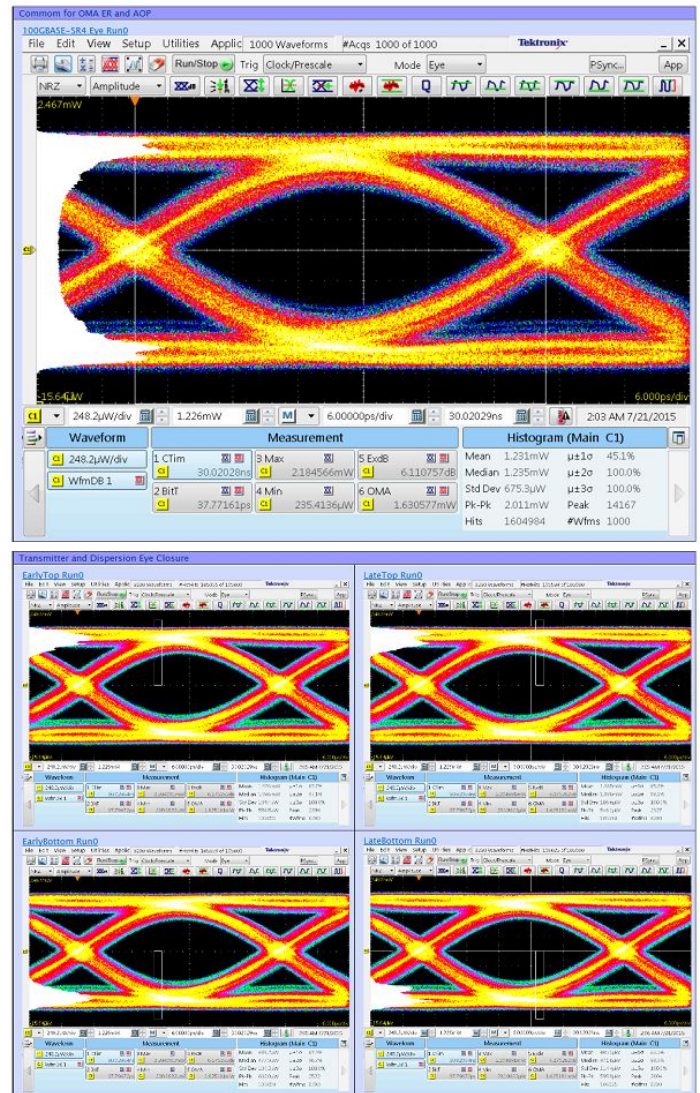
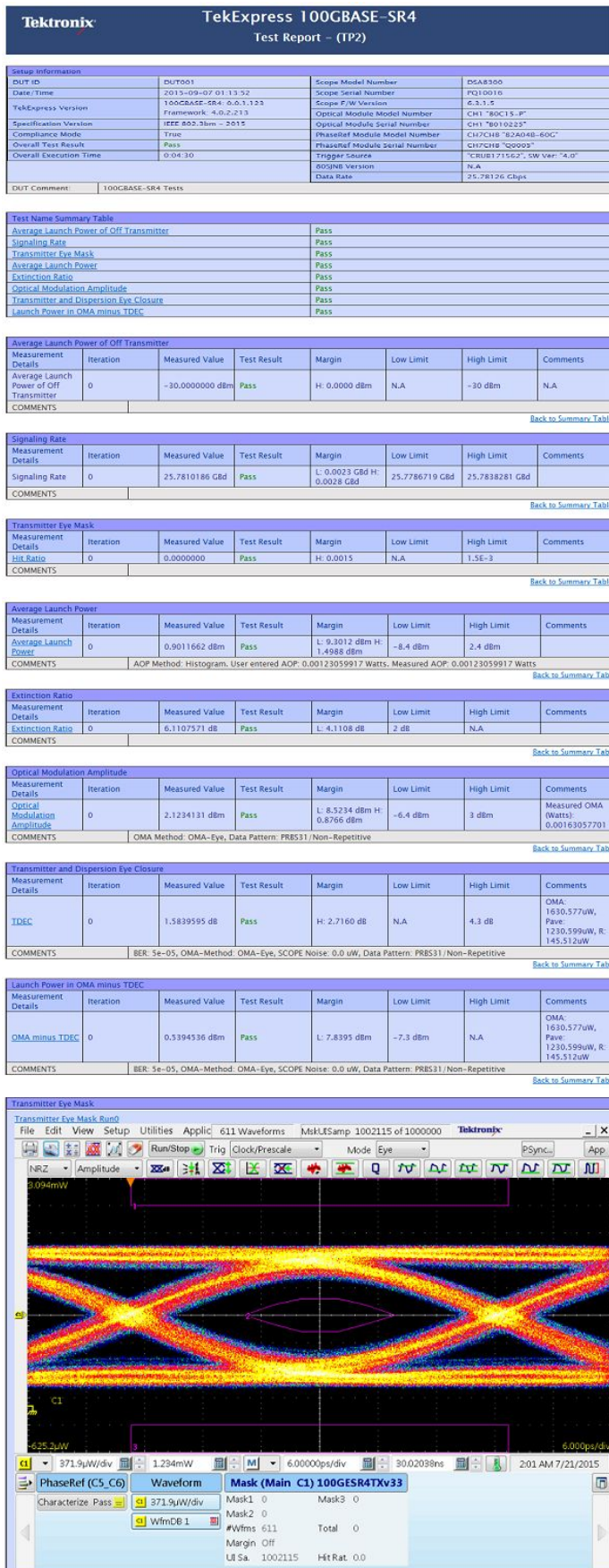


Tektronix 80C15 Connection Diagram



2009-001

Reports



Ordering Information

To order 100GBASE-SR4 including TDEC and general Optical Transmitter with Oscilloscope	Oscilloscope Option DSA8300 Order 80SSR4
To order Standalone Transmitter Dispersion Eye Closure (TDEC) with Oscilloscope	Oscilloscope Option DSA8300 Order 80STDEC
To upgrade to 100GBASE-SR4 including TDEC and general Optical Transmitter	Oscilloscope Option DSA83UP Order 80SSR4
To upgrade to Standalone Transmitter Dispersion Eye Closure (TDEC)	Oscilloscope Option DSA83UP Order 80STDEC
To upgrade Standalone Transmitter Dispersion Eye Closure (TDEC) to 100GBASE-SR4 Optical Transmitter	Oscilloscope Option DSA83UP Order 80STDECTOSR4


SoftwareOptions

80SSR4	100GBASE-SR4 Comprehensive Transmitter compliance testing (Includes TDEC)
80STDEC	Transmitter and Dispersion Eye Closure (TDEC)

Recommended products

Sampling oscilloscope module	Tektronix 80C15 CRTP (Clock Recovery Pickoff)
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Certifications

	CE Marking Not Applicable. Tektronix is registered to ISO 9001 and ISO 14001 by SRI Quality System Registrar.
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* European toll-free number. If not accessible, call: +41 52 675 3777

For Further Information. Tektronix maintains a comprehensive, constantly expanding collection of application notes, technical briefs and other resources to help engineers working on the cutting edge of technology. Please visit www.tektronix.com.

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