TEKTRONIX

CTS850

The Tektronix CTS850 is a comprehensive telecommunications test set designed for installation, commissioning, and maintenance of SDH and PDH transmission systems. It supports transmission rates ranging from E1 (2.048 Mb/s) up to STM-4 (622.08 Mb/s), providing extensive electrical and optical physical interface options alongside jitter, wander, and comprehensive protocol analysis capabilities.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2), RS-232-C, Centronics Parallel Printer Port
Display	Built-in Color LCD

Physical

Power Supply	90 to 260 V AC, 47 to 63 Hz
Operating Temperature	5 °C to 40 °C °C

Telecom and Transmission Testing

Supported Physical Line Standards	SDH (ITU-T G.707), PDH (ITU-T G.703)
Supported Data Rates	2.048 Mb/s (E1), 8.448 Mb/s (E2), 34.368 Mb/s (E3), 139.264 Mb/s (E4), 155.52 Mb/s (STM-1), 622.08 Mb/s (STM-4)
Optical Transmitter Wavelengths	1310 nm, 1550 nm (option dependent)
Line Coding Formats	HDB3 (2, 8, 34 Mb/s), CMI (140, 155 Mb/s)
Bit Error Rate (BER) Test Patterns	PRBS 2^9-1, 2^11-1, 2^15-1, 2^20-1, 2^23-1, 2^31-1
SDH Mapping Support	ITU-T G.707 mapping of PDH tributaries (E1, E2, E3, E4) into SDH containers
PDH Electrical TX Output Impedance	75 Ω unbalanced (BNC), 120 Ω balanced (interface option dependent)
PDH Electrical RX Input Impedance	75 Ω unbalanced (BNC), 120 Ω balanced (interface option dependent)
Jitter and Wander Testing	Supported (option dependent)
Alarm Generation	LOS, LOF, LOP, MS-AIS, MS-RDI, AU-AIS, AU-LOP, HP-UNEQ, TU-AIS, TU-LOP, TU-LOM
Error Insertion Capability	FAS, Bit, parity, and overhead errors (single or continuous rate)
Overhead Byte Access	Full access to SDH Section Overhead (SOH) and Path Overhead (POH)

Physical Interfaces and Connections

STM-1e Coaxial Interface	75 Ω unbalanced, BNC connector
E1 Interface Connectors	75 Ω BNC unbalanced, 120 Ω balanced (Siemens or RJ-45 dependent on option)
E2, E3, E4 Interface Connectors	75 Ω BNC unbalanced
External Reference Clock Input	2.048 MHz / 2.048 Mb/s, BNC connector
External Reference Clock Output	2.048 MHz / 2.048 Mb/s, BNC connector
Storage Drive	Built-in 3.5-inch floppy disk drive

Environmental and Compliance

Measurement Analysis Standards	ITU-T G.821, G.826, M.2100

Physical and Mechanical

Form Factor	Portable, benchtop instrument with integrated carrying handle

Environmental

Storage Temperature	-20 °C to +60 °C
Operating Humidity	20% to 80% RH (non-condensing)

Compliance & Safety

Laser Safety	Class 1 (IEC 60825-1)

Interfaces

Optical Connector Options	FC/PC, SC/PC, ST/PC

TECHNOLOGY

SDH / PDH Transmission Testing

APPLICATIONS

Installation, commissioning, and maintenance of digital transmission networks

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