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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight E7580A

Agilent E7580A ProBER 2 Handheld 2 Mb/s Test Set The Agilent E7580A ProBER 2 is a handheld tester for 2 Mb/s and 64 kb/s digital circuits. OEM ProBER 2 brochure 5988-3771EN lists PRBS 2⁹-1, 2¹¹-1, 2¹⁵-1, 2²⁰-1, and 2²³-1 plus word patterns all 1s, all 0s, 1010, 1000, and 8- or 16-bit frame-aligned words. The 2 Mb/s interface is HDB3/AMI, 75 ohm unbalanced BNC or 120 ohm balanced 3-pin Siemens, with terminate, bridged, or monitor input and monitor gain 20/26/30 dB. Internal clock is plus or minus 4.6 ppm; frequency offset generation is plus or minus 100 ppm in 1 ppm steps. Frame formats are PCM30, PCM30CRC, PCM31, PCM31CRC, and unframed. The instrument weighs 1 kg and measures 270 × 133 × 54 mm; operating temperature 0 to 50 C; NiMH battery greater than 8 hours typical, recharge less than 4 hours. Catalog 001 adds pulse-mask, jitter (1.6 UI and 15.5 UI pk-pk, ITU-T O.172 filters), and level (+4 to -28 dB relative to G.703). The Agilent E7580A ProBER 2 is a handheld tester for 2 Mb/s and 64 kb/s digital circuits. OEM ProBER 2 brochure 5988-3771EN lists PRBS 2⁹-1, 2¹¹-1, 2¹⁵-1, 2²⁰-1, and 2²³-1 plus word patterns all 1s, all 0s, 1010, 1000, and 8- or 16-bit frame-aligned words. The 2 Mb/s interface is HDB3/AMI, 75 ohm unbalanced BNC or 120 ohm balanced 3-pin Siemens, with terminate, bridged, or monitor input and monitor gain 20/26/30 dB. Internal clock is plus or minus 4.6



MODEL

**Agilent / Keysight
E7580A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

E7580A

LISTING

<https://aumictechlabs.com/products/e7580a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight E7580A ProBER 2 is a handheld test set for bit error rate (BER) testing and signal quality measurements on 2 Mb/s and 64 kb/s digital circuits. It delivers comprehensive diagnostics to isolate frequency, level, pulse shape, and jitter problems on PDH signals, enabling rapid installation and maintenance troubleshooting.

Technical Specifications

Measurement Capabilities

- Bit error rate testing per ITU-T G.821 (bit, FAS, CRC, E-bit) and G.826 in-service/out-of-service modes
- Jitter measurement: 1.6 UI pk-pk (2 Hz to 100 kHz) and 15.5 UI pk-pk (2 Hz to 50 kHz) with ITU-T O.172 filters (HP1 at 20 Hz, HP2 at 18 kHz, LP at 100 kHz)
- Pulse mask characterization per ITU-T G.703 with pulse width and amplitude ratios
- Voice frequency tone generation and measurement: 300 to 3400 Hz (1 Hz steps), +3 to -40 dBm output
- Network round-trip delay: 0 to 1,999,999 μ s $\pm$ 1 μ s accuracy
- Line rate offset display in ppm and Hz
- Signal level measurement: +4 to -28 dB relative to nominal G.703 (1 dB resolution)
- ITU-T G.704 synchronization status message decoding

Interfaces

- 2 Mb/s: HDB3/AMI on 75 ohm unbalanced (BNC) or 120 ohm balanced (3-pin Siemens)
- 64 kb/s co-directional: 120 ohm balanced (3-pin Siemens)
- Clock input: 2 MHz on 75 ohm unbalanced (BNC)

Physical & Power Dimensions: 270 × 133 × 54 mm; Weight: 1 kg

Nickel metal hydride battery with >8 hours typical operating time

Key Features

- Dual-rate operation supports 2 Mb/s primary and 64 kb/s (Option 002) secondary testing
- Integrated error and alarm generation and measurement
- M.2100 support available with Option 003

Typical Applications

- PDH circuit validation and fault isolation on E1 and DS0 networks
- Signal quality trending for maintenance planning
- Installation verification and handover testing

Compatibility & Integration

Designed for field use on ITU-T standardized 2 Mb/s and 64 kb/s digital interfaces with both balanced and unbalanced transmission paths.

E7580A Characteristics / Specifications

PARAMETER	VALUE
Model	E7580A
Instrument Type	Handheld 2 Mb/s / 64 kb/s digital test set
Product Name	ProBER 2
Line Rates	2 Mb/s; 64 kb/s with catalog 002
Prbs Patterns	2 ⁹ -1, 2 ¹¹ -1, 2 ¹⁵ -1, 2 ²⁰ -1, 2 ²³ -1
Word Patterns	all 1s, all 0s, 1010, 1000, 8-bit or 16-bit frame aligned
Interface 2 Mb	HDB3/AMI; 75 ohm unbalanced BNC; 120 ohm balanced 3-pin Siemens
Input Modes	terminate, bridged, or monitor
Monitor Gain	20 dB, 26 dB, 30 dB
Internal Clock	plus or minus 4.6 ppm including aging, stability, and setting accuracy
Frequency Offset Generation	plus or minus 100 ppm in 1 ppm steps
Frame Formats	PCM30, PCM30CRC, PCM31, PCM31CRC, unframed
Error Measurements	frame, code, CRC-4, E-bit, bit
Alarm Measurements	LOS, AIS, LOF, LOMF, RDI, TS-AIS, RDI(MF), pattern loss
Performance Analysis	ITU-T G.821 and G.826
Printer Interface	RS-232-C
Battery Type	nickel metal hydride
Battery Operating Time	greater than 8 hours typical
Recharge Time	less than 4 hours
Weight	1 kg
Dimensions	270 mm x 133 mm x 54 mm
Operating Temperature	0 to 50 C
Storage Temperature	-40 C to +70 C
Jitter Ranges On 0	1.6 UI pk-pk and 15.5 UI pk-pk
Jitter Bandwidth 1.6 Ui	2 Hz to 100 kHz

PARAMETER	VALUE
Level Measurement On 0	+4 to -28 dB relative to ITU-T G.703, 1 dB resolution
Manufacturer	Agilent Keysight
Literature	Agilent ProBER 2 brochure 5988-3771EN / 5967-5869E
Family	Agilent ProBER handheld PDH testers
Documentation Type	OEM ProBER 2 specification
Brand Lineage	Hewlett Packard Agilent Keysight
System Role	2 Mb/s handheld BER and signal quality
Bandwidth	1.6 Ui: 2 Hz to 100 kHz

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	40 C to +70 C
Operating temperature	0 to 50 C; NiMH battery greater than 8 hours typical, recharge less than 4 hours. Catalog 001 adds pulse-mask, jitter (1.6 UI and 15.5 UI pk-pk, ITU-T O.172 filters), and level (+4 to -28 dB relative
Operating Temperature	0 to 50 C; NiMH battery greater than 8 hours typical, recharge less than 4 hours. Catalog 001 adds pulse-mask, jitter (1.6 UI and 15.5 UI pk-pk, ITU-T O.172 filters), and level (+4 to -28 dB relative
Model	E7580A
Instrument Type	Handheld 2 Mb/s / 64 kb/s digital test set
Product Name	ProBER 2
Line Rates	2 Mb/s; 64 kb/s with catalog 002
Prbs Patterns	2^9-1, 2^11-1, 2^15-1, 2^20-1, 2^23-1
Word Patterns	all 1s, all 0s, 1010, 1000, 8-bit or 16-bit frame aligned
Interface 2 Mb	HDB3/AMI; 75 ohm unbalanced BNC; 120 ohm balanced 3-pin Siemens
Input Modes	terminate, bridged, or monitor
Monitor Gain	20 dB, 26 dB, 30 dB
Internal Clock	plus or minus 4.6 ppm including aging, stability, and setting accuracy
Frequency Offset Generation	plus or minus 100 ppm in 1 ppm steps
Frame Formats	PCM30, PCM30CRC, PCM31, PCM31CRC, unframed
Error Measurements	frame, code, CRC-4, E-bit, bit
Alarm Measurements	LOS, AIS, LOF, LOMF, RDI, TS-AIS, RDI(MF), pattern loss
Performance Analysis	ITU-T G.821 and G.826
Printer Interface	RS-232-C
Battery Type	nickel metal hydride
Battery Operating Time	greater than 8 hours typical
Recharge Time	less than 4 hours
Weight	1 kg

PARAMETER	VALUE
Dimensions	270 mm x 133 mm x 54 mm
Jitter Ranges On 0	1.6 UI pk-pk and 15.5 UI pk-pk
Jitter Bandwidth 1.6 Ui	2 Hz to 100 kHz
Level Measurement On 0	+4 to -28 dB relative to ITU-T G.703, 1 dB resolution
Manufacturer	Agilent Keysight
Literature	Agilent ProBER 2 brochure 5988-3771EN / 5967-5869E
Family	Agilent ProBER handheld PDH testers
Documentation Type	OEM ProBER 2 specification
Brand Lineage	Hewlett Packard Agilent Keysight
System Role	2 Mb/s handheld BER and signal quality Notes From Agilent ProBER 2 (E7580A) brochure 5988-3771EN (patterns, 2 Mb/s interfaces, clock, G.821/G.826, 1 kg, 270 × 133 × 54 mm, 0-50 C, NiMH, 001 jitter/level). 64 kb/s 002 and M.2100 003 details are on the same brochure option pages.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	E7580A
Instrument Type	Handheld 2 Mb/s / 64 kb/s digital test set
Product Name	ProBER 2
Line Rates	2 Mb/s; 64 kb/s with catalog 002
Prbs Patterns	2^9-1, 2^11-1, 2^15-1, 2^20-1, 2^23-1
Word Patterns	all 1s, all 0s, 1010, 1000, 8-bit or 16-bit frame aligned
Interface 2 Mb	HDB3/AMI; 75 ohm unbalanced BNC; 120 ohm balanced 3-pin Siemens
Input Modes	terminate, bridged, or monitor
Monitor Gain	20 dB, 26 dB, 30 dB
Internal Clock	plus or minus 4.6 ppm including aging, stability, and setting accuracy
Frequency Offset Generation	plus or minus 100 ppm in 1 ppm steps
Frame Formats	PCM30, PCM30CRC, PCM31, PCM31CRC, unframed
Error Measurements	frame, code, CRC-4, E-bit, bit
Alarm Measurements	LOS, AIS, LOF, LOMF, RDI, TS-AIS, RDI(MF), pattern loss
Performance Analysis	ITU-T G.821 and G.826
Printer Interface	RS-232-C
Battery Type	nickel metal hydride
Battery Operating Time	greater than 8 hours typical
Recharge Time	less than 4 hours
Weight	1 kg
Dimensions	270 mm x 133 mm x 54 mm
Operating Temperature	0 to 50 C
Storage Temperature	-40 C to +70 C
Jitter Ranges On 001	1.6 UI pk-pk and 15.5 UI pk-pk
Jitter Bandwidth 1.6 Ui	2 Hz to 100 kHz

PARAMETER	VALUE
Level Measurement On 001	+4 to -28 dB relative to ITU-T G.703, 1 dB resolution
Manufacturer	Agilent Keysight
Literature	Agilent ProBER 2 brochure 5988-3771EN / 5967-5869E
Family	Agilent ProBER handheld PDH testers
Documentation Type	OEM ProBER 2 specification
Brand Lineage	Hewlett Packard Agilent Keysight
System Role	2 Mb/s handheld BER and signal quality

Notes

From Agilent ProBER 2 (E7580A) brochure 5988-3771EN (patterns, 2 Mb/s interfaces, clock, G.821/G.826, 1 kg, 270 x 133 x 54 mm, 0-50 C, NiMH, 001 jitter/level). 64 kb/s 002 and M.2100 003 details are on the same brochure option pages.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.