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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 3785A

HP Agilent 3785A PCM/TDM Jitter Generator and Receiver The HP 3785A is a dedicated jitter generator and receiver for CEPT or Bell digital transmission equipment through the third hierarchical level (34368 kb/s or DS-3). OEM 3785A product literature lists six receiver measurements in unit intervals, CCITT high-pass and low-pass filters at each of four bit rates, and a modulated clock output for external pattern generators such as the 3762/3764 family. Production, installation, and maintenance jitter testing of PCM/TDM links over cable, radio, satellite, and fiber to CCITT recommendations. The HP 3785A is a dedicated jitter generator and receiver for CEPT or Bell digital transmission equipment through the third hierarchical level (34368 kb/s or DS-3). OEM 3785A product literature lists six receiver measurements in unit intervals, CCITT high-pass and low-pass filters at each of four bit rates, and a modulated clock output for external pattern generators such as the 3762/3764 family. Production, installation, and maintenance jitter testing of PCM/TDM links over cable, radio, satellite, and fiber to CCITT recommendations.



MODEL

**Agilent / Keysight
3785A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

3785A

LISTING

<https://aumictechlabs.com/products/3785a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 3785A is a specialized jitter generation and measurement instrument designed for testing digital transmission terminal and link equipment in CEPT and Bell hierarchies up to DS-3 (34368 kb/s). It performs production testing, field installation, and maintenance across

cable, radio, satellite, and fiber optic transmission media. The instrument delivers six distinct jitter measurement types - absolute amplitude in Unit Intervals (UI) peak-to-peak, positive/negative jitter peak, jitter hit count, jitter hit seconds, and hit-free seconds - against CCITT

Recommendation 0.171 tolerance masks. Microprocessor control and HP-IB interface enable automated measurement sequencing and bus-controlled operation. Technical Specifications

Maximum bit rate handling: Four internal bit rates (up to DS-3, 34368 kb/s) Jitter measurement:

Absolute amplitude in Unit Intervals (UI) peak-to-peak; positive or negative peak values; hit count with user-defined thresholds; hit seconds and hit-free seconds tracking Jitter generation:

Sinusoidal phase modulation with manually controlled or swept amplitude and frequency per

CCITT Recommendation 0.171 Measurement filters: Two high-pass and one low-pass filter per bit

rate, all CCITT-compliant Input capabilities: Clock or data inputs with optional internal filtering

Jitter source: Internal crystal clock or external data stream modulation Key Features Transient-free sweeping of CCITT-defined jitter tolerance masks Real-time jitter analysis against amplitude

thresholds Four-rate portable configuration in single unit Front-panel frequency display for

internal modulation Ergonomic front-panel layout with integrated switch and connector

arrangement Typical Applications CEPT and Bell PCM/TDM transmission system validation

Production testing of digital transmission terminals Field installation verification and maintenance

diagnostics Multi-media link testing: cable, radio, satellite, and fiber optic systems Compatibility &

Integration HP-IB interface for automated control and data sequencing Microprocessor-based operation for programmable measurement workflows

Features & description

From manufacturer datasheet

Built-in CCITT filters per hierarchical rate

Clock or data inputs with optional external filters Interval timer and real-time clock for jitter-versus-time plots Technical Specifications Model: 3785A Instrument Type: PCM/TDM jitter generator and receiver Hierarchy Coverage: through third level 34368 kb/s or DS-3 Standards Family: CEPT or Bell digital hierarchy Jitter Amplitude Measure: absolute jitter in U.I. pk-pk Jitter Peak Measure: positive or negative peak Jitter Hit Count: hits beyond user threshold in U.I. pk Jitter Hit Seconds: seconds containing one or more hits Jitter Hit Free Seconds: seconds free of jitter hits Maximum Jitter Hold: maximum absolute U.I. pk-pk during gate Filter Set Per Rate: two high pass and one low pass as specified by CCITT Bit Rates Supported Class: four hierarchical rates with matching filters Input Types: clock or data with or without internal filtering Demodulated Jitter Output: for external rms voltmeter or spectrum analyzer External Filter Path: between demodulated jitter output and measuring input Modulated Clock Output: to external pattern generator Partner Pattern Generators: 3762A 3764 class Ac Mains: 100/120 VAC or 220/240 VAC plus or minus 10 percent Use Case: CCITT jitter tolerance and transfer

3785A Characteristics / Specifications

PARAMETER	VALUE
Model	3785A
Instrument Type	PCM/TDM jitter generator and receiver
Hierarchy Coverage	through third level 34368 kb/s or DS-3
Standards Family	CEPT or Bell digital hierarchy
Jitter Amplitude Measure	absolute jitter in U.I. pk-pk
Jitter Peak Measure	positive or negative peak
Jitter Hit Count	hits beyond user threshold in U.I. pk
Jitter Hit Seconds	seconds containing one or more hits
Jitter Hit Free Seconds	seconds free of jitter hits
Maximum Jitter Hold	maximum absolute U.I. pk-pk during gate
Filter Set Per Rate	two high pass and one low pass as specified by CCITT
Bit Rates Supported Class	four hierarchical rates with matching filters
Input Types	clock or data with or without internal filtering
Demodulated Jitter Output	for external rms voltmeter or spectrum analyzer
External Filter Path	between demodulated jitter output and measuring input
Modulated Clock Output	to external pattern generator
Partner Pattern Generators	3762A 3764 class
Ac Mains	100/120 VAC or 220/240 VAC plus or minus 10 percent
Use Case	CCITT jitter tolerance and transfer
Manufacturer	HP Agilent Keysight
Form Factor	benchtop telecom jitter analyzer
Remote Class	HP-IB capable 3785-family instruments
Gating	user jitter analysis gating period
Real Time Clock	yes for jitter distribution versus time

3785A Specifications

PARAMETER	VALUE
HP Agilent 3785A PCM/TDM Jitter Generator and Receiver	Overview
Key Features	Jitter generation and reception through DS-3 / 34 Mb/s
Technical Specifications	Model: 3785A

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	
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Notes	
From HP 3785A PCM/TDM Jitter Generator and Receiver product description (hierarchy to 34368 kb/s or DS-3, six	

U.I. measurements, CCITT filters, 100/120 or 220/240 VAC plus or minus 10 percent). Exact UI masks are in the 3785A operating manual matching the installed CEPT or Bell option.

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.