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Data Sheet
August 14, 2026

ADVANTEST

Advantest U3851 9kHz to 8GHz Cross Domain Analyzer

Advantest U3851 8 GHz Two Channel Cross Domain Analyzer The Advantest U3851 is an 8 GHz two channel Cross Domain Analyzer for synchronized vector and spectrum comparison. OEM U3841/U3851 specification lists 9 kHz to 8 GHz, 40 MHz analysis bandwidth, standard preamp 10 MHz to 8 GHz, and DANL minus 123 dBm plus 2f(GHz) dB with preamp off in band 0 at 100 Hz RBW. Two channel RF comparison, multipath and interference analysis, EMC transients, and IQ capture to 40 MHz CBW. Spectrum plus vector time domain overlays The Advantest U3851 is an 8 GHz two channel Cross Domain Analyzer for synchronized vector and spectrum comparison. OEM U3841/U3851 specification lists 9 kHz to 8 GHz, 40 MHz analysis bandwidth, standard preamp 10 MHz to 8 GHz, and DANL minus 123 dBm plus 2f(GHz) dB with preamp off in band 0 at 100 Hz RBW. Two channel RF comparison, multipath and interference analysis, EMC transients, and IQ capture to 40 MHz CBW. Spectrum plus vector time domain overlays Instrument Type: 8 GHz Cross Domain Analyzer two channel

MODEL **Advantest U3851**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **U3851**	LISTING **https://aumictechlabs.com/products/u3851-2/**

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NAICS 423690 · 811210 · 541380

This unit

The Advantest U3851 is a cross-domain analyzer that integrates network analysis, spectrum analysis, and impedance analysis within a single instrument spanning 9 kHz to 8 GHz. It performs

simultaneous two-channel measurement and analysis across time, amplitude, phase, and frequency domains - a capability enabling direct signal comparison and characterization of components and circuits. The instrument features industry-first two-channel phase synchronization for vector signal analysis, making it suited for R&D and manufacturing environments in telecommunications and broadcasting.Technical Specifications Frequency Coverage: 9 kHz to 8 GHz Time-Domain Analysis Maximum analysis bandwidth: 40 MHz Time resolution: 15.4 ns (at 40 MHz CBW) to 2 ms (at 100 Hz CBW) Supports Frequency vs. Time, Power vs. Time, and Phase vs. Time analysis Wide-band time-domain analysis available Capture Bandwidth: 100 Hz to 30 MHz (1-3 steps); extends to 40 MHz Sampling Rate: 500 Hz (at 100 Hz CBW) to 65 MHz (at 40 MHz CBW) for I/Q pair data per sample Inter-Channel Balance (at 1 GHz, CBW 100 kHz/ms, −30 dBm input) Amplitude: ±2.0 dB Phase: ±15 deg RF Input (L-input) Connector: N-type female, 50 Ω nominal impedance VSWR: <1.7:1 (10 MHz to 3.0 GHz); 3.0 GHz) Maximum safe input: +30 dBm (Pre-Amp OFF, ≥10 dB attenuator); +13 dBm (Pre-Amp ON, 0 dB attenuator) DC rating: ±15 VDC max RF Input (H-input) Maximum safe input: +10 dBm (0 dB attenuator) DC rating: ±25 VDC max Calibration Signal Output N-type female connector, 50 Ω impedance 20 MHz reference frequencyKey Features Two-channel phase-synchronized vector signal analysis Vector math operations (composition and decomposition via X function) High-purity spectrum analysis option for enhanced phase noise measurement FFT analysis capability Built-in pre-amplifier for high sensitivity and antenna loss compensationTypical Applications Component and circuit characterization; phase noise measurements; multi-channel signal correlation in telecommunications and broadcast systems; time-domain and frequency-domain signal decomposition.Compatibility & Integration Standard 50 Ω RF interface. Dual N-type connectors support independent measurement channels with synchronized timing and phase reference.

U3851 Characteristics / Specifications

PARAMETER	VALUE
Model	U3851
Instrument Type	8 GHz Cross Domain Analyzer two channel
Frequency Range	9 kHz to 8 GHz
Frequency Bands	9 kHz to 3.1 GHz band 0 and 3 GHz to 8 GHz band 1
Preamp Frequency	10 MHz to 8 GHz
Reference Aging	less than plus or minus 2e-6 per year
Reference Temperature Stability	less than plus or minus 2.5e-6 from 0 to 50 C
Span Range	zero span 5 kHz to full sweep and 100 Hz to 40 MHz FFT CBW step
Span Accuracy	less than plus or minus 1 percent
Spectrum Purity	minus 85 dBc/Hz at 10 kHz offset span less than or equal to 200 kHz
RBW Sweep	100 Hz to 3 MHz 1-3 steps
RBW FFT	1 Hz to 400 kHz CBW/100
RBW Accuracy	less than plus or minus 12 percent
VBW Range	10 Hz to 3 MHz 1-3 steps
Sweep Time Spectrum	20 ms to 1000 s
Sweep Time Zero Span	50 us to 1000 s
Sweep Time Accuracy	less than plus or minus 2 percent
Measurement Range	DANL to plus 30 dBm
Max Safe Input Preamp Off Atten 10 dB or more	plus 30 dBm
Max Safe Input Preamp On	plus 13 dBm plus or minus 15 VDC max
Input Attenuator	0 to 50 dB in 10 dB steps
Level Accuracy 10 MHz to 3.1 GHz	plus or minus 0.8 dB after auto cal preamp off 20 to 30 C atten 10 dB
Level Accuracy 3.1 GHz to 8 GHz	plus or minus 1.0 dB same conditions
Level Accuracy 9 kHz to 10 MHz	plus or minus 1.5 dB
Calibrator	20 MHz minus 20 dBm plus or minus 0.3 dB

PARAMETER	VALUE
DANL Preamp Off Band	minus 123 dBm plus 2f GHz dB RBW 100 Hzfless than or equal to 3.1 GHz
DANL Preamp On Band	minus 138 dBm plus 3f GHz dB
One dB Gain Compression Preamp Off	greater than minus 8 dBm frequency greater than or equal to 20 MHz
TOI Distortion	less than minus 50 dBc preamp off mixer minus 20 dBm 10 MHz to 8 GHz
RF Connector	N type female 50 ohm
VSWR 10 MHz to 3 GHz	less than 1.7 to 1
VSWR Above 3 GHz	less than 2.0 to 1
Interfaces	GPIB USB VGA LAN 10/100
Power Consumption	150 VA or less
Mass	10 kg or less excluding options
Dimensions Body	approx 308 × 175 × 339 mm
Operating Temperature	0 to plus 50 C 85 percent RH or less no condensation

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	0 to plus 50 C 85 percent RH or less no condensation
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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
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Span Range	zero span 5 kHz to full sweep and 100 Hz to 40 MHz FFT CBW step
Span Accuracy	less than plus or minus 1 percent
Spectrum Purity	minus 85 dBc/Hz at 10 kHz offset span less than or equal to 200 kHz
RBW Sweep	100 Hz to 3 MHz 1-3 steps
RBW FFT	1 Hz to 400 kHz CBW/100
RBW Accuracy	less than plus or minus 12 percent
VBW Range	10 Hz to 3 MHz 1-3 steps
Sweep Time Spectrum	20 ms to 1000 s
Sweep Time Zero Span	50 us to 1000 s
Sweep Time Accuracy	less than plus or minus 2 percent
Measurement Range	DANL to plus 30 dBm

Max Safe Input Preamp Off Atten 10 dB or more: plus 30 dBm

Specifications

PARAMETER	VALUE
Max Safe Input Preamp On	plus 13 dBm plus or minus 15 VDC max
Input Attenuator	0 to 50 dB in 10 dB steps
Level Accuracy 10 MHz to 3.1 GHz	plus or minus 0.8 dB after auto cal preamp off 20 to 30 C atten 10 dB
Level Accuracy 3.1 GHz to 8 GHz	plus or minus 1.0 dB same conditions

PARAMETER	VALUE
Level Accuracy 9 kHz to 10 MHz	plus or minus 1.5 dB
Calibrator	20 MHz minus 20 dBm plus or minus 0.3 dB
DANL Preamp Off Band 0	minus 123 dBm plus 2f GHz dB RBW 100 Hzfless than or equal to 3.1 GHz
DANL Preamp Off Band 1	minus 122 dBm plus 1.2f GHz dBfgreater than or equal to 3 GHz
DANL Preamp On Band 0	minus 138 dBm plus 3f GHz dB
One dB Gain Compression Preamp Off	greater than minus 8 dBm frequency greater than or equal to 20 MHz
TOI Distortion	less than minus 50 dBc preamp off mixer minus 20 dBm 10 MHz to 8 GHz
RF Connector	N type female 50 ohm
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Notes
From Advantest U3841/U3851 specification PDF U3841/3851/3872-2E. One table header misprints U3751 for the 8 GHz band split; U3851 coverage is 9 kHz to 8 GHz.

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
788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
https://aumictechlabs.com

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