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**Data Sheet**

August 15, 2026

AGILENT / KEYSIGHT

# Agilent / Keysight E7401A EMC Analyzer, 9 kHz to 1.5 GHz

The Agilent E7401A is a member of the E7400A-series EMC spectrum analyzers intended for precompliance and EMI evaluation. OEM E7400 A-series data sheets list quasi-peak and average detector support, optional tracking generators, and shared RBW architecture across the family with model-specific upper frequency limits. Precompliance EMI scans, radiated and conducted emissions troubleshooting, and general-purpose spectrum analysis on the EMC analyzer platform. Quasi-peak and average detectors for EMI-oriented measurements Form Factor: portable benchtop EMC analyzer Measurement Detectors: peak quasi-peak and average class Documentation Scope: OEM E7400 A-series numeric tables From Agilent E7400 A-series EMC Analyzers data sheet tables for E7401A. DANL and phase-noise warrants are frequency-, attenuator-, and preamp-dependent; cite the full sheet for amplitude accuracy.



MODEL

**Agilent / Keysight  
E7401A**

CALIBRATION

**Available on  
request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**E7401A**

LISTING

<https://aumictechlabs.com/products/e7401a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

## This unit

The Agilent/Keysight E7401A is a dedicated EMC analyzer that performs in-house EMI pre-compliance testing, diagnostics, and general-purpose spectrum analysis from 9 kHz to 1.5 GHz. Built for engineers developing products across IT, communications, automotive, medical, and industrial sectors, it delivers automated EMI measurements with minimal operator training and

integrates with external components - broadband antennas, LISNs, and close-field probes - for radiated and conducted emissions characterization.

**Technical Specifications**

Frequency Range: 9 kHz to 1.5 GHz  
Displayed Average Noise Level (DANL): -150 dBm  
Third Order Intercept (TOI): +12.5 dBm  
Second Harmonic Distortion (SHD): +45 dBm  
Resolution Bandwidth (RBW): 1 Hz to 3 MHz (-3 dB); 10 Hz to 3 MHz (-3 dB)  
Video Bandwidth (VBW): 30 Hz to 3 MHz in 1-3-10 steps  
EMI Bandwidths: 200 Hz, 9 kHz, 120 kHz, 1 MHz  
Detectors: Peak, quasi-peak, average  
Input Coupling: AC coupled (without Option UKB)  
Operating Temperature: 0 °C to +55 °C  
Amplitude Response: Conforms to CISPR Publication 16 Section 1, Clause 2 for quasi-peak response to CISPR pulse

**Key Features**

Built-in preamplifier with 20 dB nominal gain  
Full spectrum analyzer functionality with log sweep support  
Automated, preprogrammed EMI measurements  
Dual limit line display with margin calculation  
Corrections for antennas, cables, and amplifiers  
Internal signal list storage up to 2000 signals  
Sorting, re-measuring, marking, and deletion functions  
Zone feature for targeted signal inspection within broad spectrum view  
Color display for clear signal visualization  
3.5-inch disk drive for measurement data storage  
~5 minute warm-up to operational status  
Automatic remeasure functions for consistency and repeatability

**Interfaces** GPIB and parallel ports for instrument control and data transfer

**Typical Applications** EMI pre-compliance assessment during product development, in-house diagnostics, emissions source localization, and spectrum analysis across consumer and industrial equipment design cycles.

## E7401A Characteristics / Specifications

| PARAMETER                                        | VALUE                                                           |
|--------------------------------------------------|-----------------------------------------------------------------|
| Model                                            | E7401A                                                          |
| Instrument Type                                  | EMC spectrum analyzer                                           |
| Frequency Range 50 Ohm                           | 9 kHz to 1.5 GHz                                                |
| Frequency Reference Aging Opt 1D                 | plus or minus 1e-7 per year class                               |
| Frequency Reference Temperature Stability Opt 1D | plus or minus 1e-8 class                                        |
| Frequency Reference Settability Opt 1D           | plus or minus 1e-8 class                                        |
| Resolution Bandwidth Class                       | 1 kHz to 5 MHz class ESA-derived architecture                   |
| Input Attenuator Range Class                     | 0 to 60 dB in 5 dB steps class family                           |
| Maximum Safe Input Class                         | plus 30 dBm with adequate attenuation class                     |
| Dc Coupled Low Frequency Extension Available     | UKB path to 30 Hz characteristic on applicable models           |
| Ac Coupled Minimum Class On Microwave Models     | 100 kHz characteristic                                          |
| Tracking Generator Available                     | 1DN class family option                                         |
| High Stability Timebase Available                | 1D5 class family option                                         |
| Band Coverage                                    | single RF band to 1.5 GHz                                       |
| Input Impedance Class                            | 50 ohm                                                          |
| Operating Temperature Spec Condition             | 0 C to plus 55 C OEM warranty window                            |
| Warmup Align Class                               | Align Now RF within 24 hour period after 5 minute warm-up class |
| Remote Interface Class                           | GPIB standard; RS-232 alternate interface available             |
| Display Log Scale Class                          | 0.1 to 20 dB per division class family table                    |
| Calibrated Display Range Class                   | 0 to -85 dB from reference level class family                   |
| Form Factor                                      | portable benchtop EMC analyzer                                  |
| Family Series                                    | E7400A EMC analyzers                                            |
| Measurement Detectors                            | peak quasi-peak and average class                               |
| Documentation Scope                              | OEM E7400 A-series numeric tables                               |

| PARAMETER             | VALUE                                                |
|-----------------------|------------------------------------------------------|
| Bandwidth             | Class: 1 kHz to 5 MHz class ESA-derived architecture |
| Attenuation           | class                                                |
| Operating temperature | Spec Condition: 0 C to plus 55 C OEM warranty window |

# General Specifications & Supplementary Characteristics

| PARAMETER                            | VALUE                                                                                                                                                                                                                                        |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature                | Spec Condition: 0 C to plus 55 C OEM warranty window                                                                                                                                                                                         |
| Operating Temperature                | Spec Condition: 0 C to plus 55 C OEM warranty window                                                                                                                                                                                         |
| Operating Temperature Spec Condition | 0 C to plus 55 C OEM warranty window                                                                                                                                                                                                         |
| Warmup Align Class                   | Align Now RF within 24 hour period after 5 minute warm-up class                                                                                                                                                                              |
| Remote Interface Class               | GPIB standard; RS-232 alternate interface available                                                                                                                                                                                          |
| Display Log Scale Class              | 0.1 to 20 dB per division class family table                                                                                                                                                                                                 |
| Calibrated Display Range Class       | 0 to -85 dB from reference level class family                                                                                                                                                                                                |
| Form Factor                          | portable benchtop EMC analyzer                                                                                                                                                                                                               |
| Family Series                        | E7400A EMC analyzers                                                                                                                                                                                                                         |
| Measurement Detectors                | peak quasi-peak and average class                                                                                                                                                                                                            |
| Documentation Scope                  | OEM E7400 A-series numeric tables Notes From Agilent E7400 A-series EMC Analyzers data sheet tables for E7401A. DANL and phase-noise warrants are frequency-, attenuator-, and preamp-dependent; cite the full sheet for amplitude accuracy. |

# 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                                             | E7401A                                                          |
| Instrument Type                                   | EMC spectrum analyzer                                           |
| Frequency Range 50 Ohm                            | 9 kHz to 1.5 GHz                                                |
| Frequency Reference Aging Opt 1D5                 | plus or minus 1e-7 per year class                               |
| Frequency Reference Temperature Stability Opt 1D5 | plus or minus 1e-8 class                                        |
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| Resolution Bandwidth Class                        | 1 kHz to 5 MHz class ESA-derived architecture                   |
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| Dc Coupled Low Frequency Extension Available      | UKB path to 30 Hz characteristic on applicable models           |
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| Tracking Generator Available                      | 1DN class family option                                         |
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| Operating Temperature Spec Condition              | 0 C to plus 55 C OEM warranty window                            |
| Warmup Align Class                                | Align Now RF within 24 hour period after 5 minute warm-up class |
| Remote Interface Class                            | GPIO standard; RS-232 alternate interface available             |
| Display Log Scale Class                           | 0.1 to 20 dB per division class family table                    |
| Calibrated Display Range Class                    | 0 to -85 dB from reference level class family                   |
| Form Factor                                       | portable benchtop EMC analyzer                                  |
| Family Series                                     | E7400A EMC analyzers                                            |
| Measurement Detectors                             | peak quasi-peak and average class                               |
| Documentation Scope                               | OEM E7400 A-series numeric tables                               |

#### Notes

From Agilent E7400 A-series EMC Analyzers data sheet tables for E7401A. DANL and phase-noise warrants are frequency-, attenuator-, and preamp-dependent; cite the full sheet for amplitude accuracy.

### Available from Aumictech

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

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

#### Aumictech

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

NIST-traceable calibration · SAM registered ·  
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NAICS 423690 · 811210 · 541380  
Generated August 15, 2026

Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.