

TEKTRONIX

AWG2005

The Tektronix AWG2005 is a high-performance, 4-channel Arbitrary Waveform Generator belonging to the renowned AWG2000 Series. Featuring a 20 MS/s clock rate and 12-bit vertical resolution, it is designed for creating complex multi-channel analog and digital signals. Its built-in real-time sequencer, floppy drive, and options such as 24-bit digital pattern generation (Option 04) make it a versatile tool for automatic testing, sensor simulation, and communication applications.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2), RS-232-C
Display	9-inch monochrome CRT
Warm-up Time	20 minutes

Physical

Power Supply	90 to 250 V AC, 48 to 63 Hz
Operating Temperature	10 °C to 40 °C °C
Dimensions (W×H×D)	362 mm × 164 mm × 491 mm mm
Weight	10.5 kg kg

Output Channels & Sampling

Number of Channels	4
Maximum Sampling Rate	20 MS/s (50 ns clock period)
Minimum Sampling Rate	10 S/s
Vertical Resolution	12-bit (1 part in 4096)
Maximum Sine Wave Frequency	5 MHz

Waveform Memory & Sequencing

Waveform Memory Depth	64 kS (64,000 points) per channel
Waveform Sequencer	Real-time Waveform Sequencer for automatic test sequences
Formula Entry	Supported (built-in mathematical formula entry for waveforms)

Analog Output Characteristics

Output Impedance	50 Ω
Amplitude Range (into 50 Ohms)	50 mV to 10 V p-p
DC Offset Range	-5.0 V to +5.0 V
Rise/Fall Time	≤ 35 ns
Edge Placement Resolution	50 ps (via Region Shift)
Selectable Low-pass Filters	300 kHz, 1 MHz, 5 MHz

Trigger & Clocking

Run Modes	Continuous, Triggered, Gated
Trigger Sources	Internal, External, Manual

Auxiliary Inputs & Outputs

Digital Pattern Output Channels	24-Bit TTL Digital Data Generator (Option 04)
Time Base Reference (TBR)	Option 05
Marker Outputs	CH 1 to CH 4 Marker Outputs, TTL levels

System, Storage, & Connectivity

Removable Storage Media	Built-in 3.5-inch 1.44 MB Floppy Disk Drive
FFT Editor	Frequency Domain Editing (Option 09)
Direct DSO Waveform Transfers	Supported

Trigger

Trigger Input Impedance	1 M Ω 25 pF
Trigger Input Voltage Range	-10 V to +10 V
Trigger Input Minimum Pulse Width	30 ns

Clock

External Clock Input Frequency Range	100 Hz to 20 MHz
External Reference Input Frequency	10 MHz
External Reference Input Level	1 Vp-p to 5 Vp-p
External Reference Input Impedance	50 Ω
Internal Reference Output Frequency	10 MHz
Internal Reference Output Level	1 Vp-p into 50 Ω

Performance

Channel-to-Channel Skew	< 2 ns
Harmonics	$\leq$ -50 dBc (at 1 MHz, 1 Vp-p)
Spurious	$\leq$ -60 dBc (at 1 MHz, 1 Vp-p)

Compliance

Safety Certifications	UL1244, CSA C22.2 No. 231, EN61010-1
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Environmental

Operating Altitude	Up to 4,570 m (15,000 ft)
Non-Operating Altitude	Up to 15,240 m (50,000 ft)
Non-Operating Temperature Range	-20 °C to +60 °C
Operating Humidity Range	20% to 80% RH (non-condensing)
Non-Operating Humidity Range	5% to 90% RH (non-condensing)

Power Specifications

Maximum Power Consumption	300 W (300 VA)
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Performance Accuracy & Resolution

Amplitude Accuracy	±(1.5% of setting + 2 mV) at 1 kHz
DC Offset Accuracy	±(1.0% of setting + 10 mV)
Amplitude Resolution	1 mV or 3 digits
DC Offset Resolution	1 mV or 3 digits

Timebase & Clock

Internal Clock Accuracy	±10 ppm (+10 °C to +40 °C)
Internal Clock Aging Rate	±1 ppm/year

TECHNOLOGY

Arbitrary Waveform Synthesis

APPLICATIONS

Automated Testing, Sensor Simulation, Signal Generation, Communication Test

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.