TEKTRONIX

AFG2020

The Tektronix AFG2020 is a DDS-synthesized arbitrary function generator designed for benchtop and automated test system applications. It features high vertical resolution, a high-frequency DDS clock, and flexible modulation and sweep capabilities, supporting both standard and custom arbitrary waveforms.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2)
Display	Built-In High-Resolution Monitor with Graphical User Interface

Physical

Power Supply	90 to 250 V AC, 48 to 440 Hz, 80 W (100 VA) maximum
Operating Temperature	0 to +50 °C °C
Dimensions (W×H×D)	218 mm × 142 mm × 412 mm (with handle and feet) mm
Weight	6.0 kg

Channel Characteristics

Number of Channels	1 standard (2 channels with Option 02)
Channel Execution	Fully independent execution per channel (Option 02)

Waveform Generation

Standard Waveforms	Sine, Square, Triangle, Ramp, Pulse
Vertical Resolution	12-bit (1/4096)
Waveform Memory Capacity	16 separate waveforms
Arbitrary Waveform Record Length	1024 to 16384 points
Clock Frequency (Sampling Rate)	250 MHz

Frequency Specifications

Sine Frequency Range	0.5 Hz to 100 MHz
Square Frequency Range	0.5 Hz to 50 MHz
Triangle Frequency Range	0.5 Hz to 31.2 MHz
Ramp Frequency Range	0.5 Hz to 31.2 MHz
Pulse Frequency Range	0.5 Hz to 31.2 MHz
Clock Frequency Accuracy	1 ppm

Amplitude and Output Characteristics

Output Impedance	50 Ω

Modulation, Sweep, and Burst

Internal Modulation Types	AM, FM, PSK, FSK
External Modulation Types	AM
Sweep Types	Linear, Logarithmic

Clock, Trigger, and Synchronization

Trigger Delay Range	700 ns to 100 s

Connectivity and Programming

Waveform Transfer Capability	Direct DSO waveform transfers without a controller

Output Characteristics

Amplitude Range	50 mVp-p to 10 Vp-p (into 50 Ω)
DC Offset Range	±5 V (into 50 Ω)
Sine Wave Harmonic Distortion	≤ -50 dBc (DC to 1 MHz), ≤ -40 dBc (1 to 20 MHz)
Square Wave Rise/Fall Time	≤ 5 ns

Inputs & Outputs

External Trigger Input Impedance	10 kΩ
Reference Clock Input	10 MHz

Environmental

Storage Temperature	-20 to +60 °C
Operating Altitude	Up to 4,500 m (15,000 ft)

TECHNOLOGY

DDS (Direct Digital Synthesis)

APPLICATIONS

Test and Measurement