

2020/2000 SPECIFICATIONS

Number of Outputs 1 analog 1 16-bit digital*	Relative Accuracy (includes linearity) +0.025% of full scale
Non-Volatile Equation Memory Up to 78K characters (30K standard)	Sine Wave Purity (harmonic distortion) 1 kHz: $\leq 0.1\%$; 25 kHz: $\leq 0.15\%$; 2 MHz: $\leq 0.5\%$
Memory Size (output data memory) Up to 512K data points 64K standard 25 MHz model 128K standard 100 MHz model	DC Drift $\leq +0.5\%$ of full scale over full temp. range
Max. Data Clock Period 25 ns/10 ns (optional)	Noise Generator Output White Gaussian, from 0.02 Hz to selected bandwidth and can be either separate or summed with the signal
Min. Data Clock Period 687.173s	Noise Bandwidth Selectable 2 kHz, 20 kHz, 200 kHz, 2 MHz
Clock Rate Control Each 0.05% (approx. 5 trillion steps)	Memory Management Virtual memory is achieved via dynamic looping and constant compression
Clock Stability 100 ppm	Programmable (independent) DC Offset $\pm 5V$ in 1.25 mV steps
External Clock Control dc to 100 MHz	Programmable DC Offset Accuracy $\pm 2\%$
Resolution (number of bits) for Full Scale Output 12 bits analog 16 bits digital	Trigger and Gating Modes 10
Analog Output Impedance Active: 50 Ω Inactive: $> 10 M\Omega$	Trigger Jitter (uncertainty) ≤ 10 ns
Max. Analog Output (into 50Ω) 10 V _{p-p} ($\pm 5V$)	External Clock Jitter $\leq +500$ ps
Max. Analog Output (open circuit) 20 V _{p-p} ($\pm 10V$)	Internal Lumped Constant Filters 10 (internal) user selectable in a 1,2,5 sequence from 20 kHz to 20 MHz plus no filter
Data Point Rise or Fall Time (full scale) ≤ 10 ns	External Data Ports RS232, IEEE 488**
Data Point Settling Time < 60 ns to 1%	Download/Upload Data Transfer Rate Via the GPIB-488 Bus $> 300K$ bytes/s (optional) $> 2K$ bytes/s (standard)
Slew Rate > 800 V/ μ s into 50 Ω > 1600 V/ μ s into 1 M Ω	Minimum Waveform Length*** 16 points 100 MHz model 8 points 25 MHz model
Overshoot (full scale step transition) None	Horizontal Resolution 1 data point
Analog Output Bandwidth > 35 MHz	Attenuation Control Amplitude setting can be made from ± 3.5 mV to $\pm 5V$ in 0.01% increments with 12-bit resolution preserved
Amplitude Flatness ± 0.1 dB dc to 500 kHz; $+1.5$ dB @ 25 MHz; -3 dB @ 35 MHz	Operating Temperature 0°C to 40°C
Residual Noise Including Clock Feed-Through (referenced to full scale output) 72 dB	Power Consumption 75 watts
Glitch Energy Peak voltage: $< 1\%$ of p-p signal amplitude Duration: < 10 ns half power input	Dimensions Height: 5.5" (13.97 cm) Width: 16.5" (41.91 cm) Depth: 17" (43.18 cm)
Absolute Accuracy $\pm 1\%$ of reading, ± 10 mV (when terminated by 50 Ω)	Weight 25 lbs. (11.3 kg)

*Optional on 100 MHz version

**Data ports are optional except IEEE-488 is standard on Model 2000

***Sync output disabled when waveform length is less than 12 points (100 MHz model), 16 points (25 MHz model).