



www.analogarts.com

Analog Arts

SA985

SA975

SA935

SA915

Product Specifications [1]

1. These models consist of an oscilloscope, a spectrum analyzer, a data recorder, and a frequency & phase meter.

Oscilloscope/ Spectrum Analyzer/ Data Recorder

Oscilloscope (Typical)

Model	SA985	SA975	SA935	SA915
Bandwidth (Max at probe tip) [2]				
@ 500 mV/ Div with 10X probe	1 GHz	500 MHz	300 MHz	100 MHz
@ 50 mV/ Div with 1X probe	1 GHz	500 MHz	300 MHz	100 MHz
@ 1 V/ Div with 10X probe	500 MHz	400 MHz	200 MHz	75 MHz
@ 100 mV/ Div with 1X probe	500 MHz	400 MHz	200 MHz	75 MHz
@ 2 V/ Div with 10X probe	250 MHz	200 MHz	100 MHz	50 MHz
@ 200 mV/ Div with 1X probe	250 MHz	200 MHz	100 MHz	50 MHz
@ 5 V/ Div with 10X probe	250 MHz	200 MHz	100 MHz	50 MHz
@ 500 mV/ Div with 1X probe	250 MHz	200 MHz	100 MHz	50 MHz
@ 20 V/ Div with 10X probe	200 MHz	200 MHz	100 MHz	50 MHz
@ 2 V/ Div with 1X probe	200 MHz	200 MHz	100 MHz	50 MHz
Rise time	0.5 nS	1.0 nS	2.5 nS	5.0 nS
Input channels	2			
Vertical resolution	8 bits			
DC accuracy	< ±3%			
Input characteristics	1 MΩ in parallel with 5 pF			
CMRR (Common Mode Rejection Ratio)	> 70 dB (@ 100 MHz)			
Channel-to-Channel Crosstalk	< -70 dB			
Input type	Single-ended, BNC connector			
Input coupling	Software selectable AC/DC			
Input ranges (full scale) 10x probe 1x probe	±80 mV to ±80 V in 10 ranges ±8 mV to ±8 V in 10 ranges			
Overload protection	±150 V (DC+AC peak)			
Sampling rate (each channel) Real / per channel Effective / per channel	125 MHz 100 GHz			100 MHz 25 GHz
Vertical Sensitivity 1x probe 10x probe	2 mV - 2 V / DIV 20 mV - 20 V / DIV			

Buffer memory size One channel in use Two channels in use	1024 KB 512 KB			
Time base	1 ns/div to 100 ms/div			5 ns/div to 100 ms/div
Time base (Data Recorder)	500 nS to 365 days with data recorder			
Timing accuracy [3]	50 ppm	100 ppm	200 ppm	
Trigger modes	Normal, auto, one shot, single, Ch1, CH2			
Trigger threshold Internal External	Adjustable, \pm range setting (variable) 8 bits 1.2 Volts			
Basic triggers	External/ CH1/ CH2/ Alternative Rising edge/ Falling edge/ Auto/ Normal/ Single			
External trigger bandwidth	1 GHz	500 MHz	300 MHz	100 MHz

Notes:

2. The bandwidth indicates the highest frequency at which a sine wave can be represented by the oscilloscope with a 10 dB loss. This also applies for narrow band signals. For non-periodical wide band signals the bandwidth is limited by the Nyquist criteria. For the specified real time sampling rate of 120 MHz, the bandwidth is limited to about 50 MHz.
3. For a better performance, please contact the factory.

Spectrum Analyzer (Typical) [4]

Model	SA985	SA975	SA935	SA915
Common features between the oscilloscope and the spectrum analyzer have the same specifications.				
Frequency Bandwidth [5]	1 GHz	500 MHz	300 MHz	100 MHz
Display Span (Default)	204.8 KHz to 60 MHz			
Minimum Span (at selected Display Bandwidth)	100 KHz (display bandwidth of 51.2 MHz) 5 KHz (display bandwidth of 2.56 MHz) 400 Hz (display bandwidth of 204.8 MHz)			
Resolution	(Span / 2^{18}) 0.78 Hz to 195 Hz			
Spectrum Flatness	1 dB			
Frequency Error [6]	50 ppm	100 ppm	200 ppm	
Relative Frequency Accuracy	> 1 ppm			
Maximum number of bins	1M			
Dynamic Range	8 bits (< 65 dB)			
Spurious Free Range	< 70 dB (@ 10 MHz, 2 V range)			
Frequency Response	± 0.5 dB			
Reference Levels (10 ranges) 1x Probe 10x Probe	- 35 dBV to 25 dBV (0.6 to 5.623 VRMS) - 25 dBV to 35 dBV (0.06 to 56.23 VRMS)			
Display modes	Sampling, peak hold, average, history			
Windowing types	Rectangular, Bartlett, Gaussian (2.5, 3.5, 4.5), Triangular, Blackman, Blackman–Harris, Hamming, Hanning, Welch, Kaiser Bessel, Flat Top,			

Frequency & Phase Meter (Typical) [4]

Model	SA985	SA975	SA935	SA915
The same specifications apply to the common features of the oscilloscope and the frequency and phase analyzer in the model.				
Bandwidth [5]	1 GHz	500 MHz	300 MHz	100 MHz
Resolution	0.1 Hz			
Tolerance [6]	50 ppm		100 ppm	200 ppm
Relative Tolerance	0.01 ppm		0.1 ppm	1 ppm

Data Recorder (Typical) [4]

Model	SA985	SA975	SA935	SA915
The same specifications apply to the common features of the oscilloscope and the data recorder in the model.				
Sampling Interval	102 MHz to 10 pHz			
Time base	500 nS to 365 days			
Timing Accuracy [6]	50 ppm		100 ppm	200 ppm

Notes:

- The relevant specifications for the oscilloscope also apply to the spectrum analyzer, frequency analyzer, and data recorder of the corresponding model.
- The bandwidth indicates the highest frequency at which a sine wave can be represented by the instrument with a 10 dB loss. This also applies for narrow band signals. For non-periodical wide band signals the bandwidth is limited by the Nyquist criteria. For the specified real time sampling rate of 120 MHz, the bandwidth is limited to about 50 MHz.
- For a better performance, please contact the factory.

Physical Properties

Dimensions	128.0 x 77.0 x 31.6 (mm), 5.0 x 3.0 x 1.2 (inches)
Weight	300 grams, 10 Ounces
Other	
PC Requirements Recommended	Operating system: 32/ 64-bit edition of Microsoft Windows XP (SP3), Vista, Windows 7/ Windows 8/ Windows 10 Ports: USB 2.0/ 3.0 compliant port
Environmental Operating environment Temperature range Humidity Storage environment Temperature range Humidity	0 °C to 40 °C for normal operation 15 °C to 32 °C for quoted accuracy 5% to 80% RH, non-condensing -20 °C to +60 °C 5% to 95% RH, non-condensing
Software	Save setting, recall setting, save plot, recall/print plot, zoom in vertical, zoom in horizontal, pen editor, line editor, DSP, variable sampling rate