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### DSO3062A Oscilloscope, 60 MHz

Product Status: Currently Orderable | Currently Supported

### **Key Specifications**

### 60-MHz Bandwidth

- 2 channels
- 4 kpts memory depth
- 1 GSa/s sample rate
- Standard USB host and device connectivity; and optional GPIB and RS232 connectivity.

#### Features

- Color VGA display with 320 x 240 resolution
- Advanced triggering including edge, pulse width and line-selectable video
- FREE Scope Connect Software
- 3 year warranty, standard

### Analysis

- 20 automatic measurements
- 4 math functions including FFTs
- · Mask Testing, sequence mode and delayed sweep

### Description

The new 3000 Series 2-Channel oscilloscopes redefine economy scopes by offering large color displays for easy viewing, and advanced measurement and triggering capability for analysis--all at budget-minded prices.



# Agilent Technologies 3000 Series Oscilloscopes

Data Sheet

## Full-featured oscilloscopes for the smallest budgets

### Features:

- 60 to 200 MHz bandwidths
- 1 GSa/s maximum sample rate
- Large 15-cm (5.7-in) color display
- Advanced triggering including edge, pulse width, and lineselectable video
- 4 kpts of waveform memory
- USB host and device connectivity, standard
- 20 automatic measurements plus hardware counter and Measure All
- Four math functions, including FFTs standard
- Mask test standard
- GPIB and RS-232 connectivity and SCPI programming available with N2861A communications module
- Interface localized into 12-languages
- Sequence mode (segmented memory) standard



### Get more for your money

Agilent's 3000 Series oscilloscopes give you an affordable way to see what's happening in your designs. Developed with the features you need to make your job easier – including a large LCD color display. Need flexibility? Choose from four models with bandwidths ranging from 60-MHz to 200-MHz. To give you the debugging power you need, each oscilloscope comes standard with advanced features including sophisticated triggering, automatic measurements, digital filtering, sequence mode acquisition, math functions (including FFTs), stored setups and waveforms, mask testing and much more.



## **Performance characteristics**

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Bandwidth*	DS03062A: 60 MHz DS03102A: 100 MHz DS03152A: 150 MHz DS03202A: 200 MHz
Real time sample rate	1.00- /-
2 channels interleaved	USA/S E00 MSc /c
Fouivalent time sample rate	50 GSa/s
Channels	2
Display	Color, 320 x 240 1/4 VGA LCD; H: 88 mm, W: 116 mm
Memory	4 kpts per channel; 1.200 pts in roll mode
Vertical resolution	8 bits
Vertical sensitivity	2 mV/div to 5 V/div (5ns/div to 50 s/div in DS03062A)
DC gain accuracy	$\pm$ 3% for 10 mV/div to 5 V/div; $\pm$ 4% for 2 mV/div to 5 mV/div
Vertical zoom	Vertical expand
Maximum input voltage	300 Vrms CAT II; derated at 20 dB/decade above 100 kHz to 13 V p-p AC at 3 MHz and above
Time base range	2 ns/div to 50 s/div (5 ns/div to 50 s/div in DSO3062A)
BW limit	~ 20 MHz
Input coupling	DC, AC, Ground
Input impedance	1 MΩ: ≈ 13 pF
Time base accuracy	100 ppm

\* Denotes warranted specifications, all others are typical. Specifications are valid after a 30-minute warm-up period and ±10 °C from firmware calibration temperature.

# Performance characteristics (continued)

### Performance characteristics (continued)

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Acquisition modes	
Normal	Displays sampled data directly to the screen in real time
Averaging	Selectable from 2, 4, 8, 16, 32, 64, 128 or 256
Peak detect	Captures high-frequency glitches as narrow as 10 ns when viewing signals at slower sweep
Sweep modes	Auto, Normal, Single
Trigger coupling	AC, DC, LF reject, HF reject
Trigger modes	
Force	Triggers immediately when front-panel button is pushed
Edge	Triggers on the positive or negative slope on any channel
Video	Triggers on one of three standard television waveforms: NTSC, PAL, SECAM
Pulse triggering	Triggers on a pulse width greater than, equal to, or less than a specified time limit, with time lim-
its	ranging from 20 ns to 10 s
Trigger source	Ch 1, 2, Ext, Ext/5, Line (edge mode only)
Cursors	
Modes	Manual, auto, track
Туре	Time and voltage
Measurements	$\Delta T$ , $\Delta V$ , frequency
Automatic measurements	20 plus 5-digit hardware counter
Voltage	Peak-to-peak, maximum, minimum, average, amplitude, top, base, Vrms, overshoot, preshoot
Time	Frequency, period, +width, –width, +duty cycle, –duty cycle, rise time, fall time, delay.
Math functions	Add, subtract, multiply, FFT
FFT	
Window modes	Hanning, Hamming, Blackman-Harris, rectangular
Sample size	1024 points
Autoscale	Single button automatic setup of all channels
Display	1/4 VGA (320 x 240), passive color LCD with adjustable brightness
Interpolation	Sin(x)/x
Display types	Dots and vectors
Persistence	Off, infinite
Format	YT and XY

# Performance characteristics (continued)

## I/0

Standard ports	USB device port (Requires Scope Connect software for use) N2865A DSO3000 Series USB host module
Optional ports	GPIB, RS-232 w/N2861A Communication Module
Maximum data transfer rates	GPIB: 500 kbytes/sec
Tested Printers	
HP Deskjets	6940, 6988
HP LaserJets	3050, 3055
HP OfficeJet All In One	5610, J5780
HO OfficeJet Pro	K5400
General characteristics	
Physical size	30 cm wide x 15 cm high x 29 cm deep (without handle) 34.6 cm wide x 18.2 cm high x 29 cm deep (with handle)
Weight	Net: 4.8 kgs (10.5 lbs) Shipping: 7 kgs (15 lbs)
Power requirements	
Line voltage range	100-240 VAC, CAT II, automatic selection
Line frequency	47 Hz to 440 Hz
Power usage	50 VA
Environmental characteristics	
Ambient temperature	Operating 0 °C to +55 °C; non-operating –40 °C to +70 °C
Humidity	Operating 95% RH at 40 °C for 24 hr; non-operating 90% RH at 65 °C for 24 hr
Altitude	Operating to 4,570 m (15,000 ft); non-operating to 15,244 m (50,000 ft)
Vibration	Agilent class B1
Shock	Agilent class B1
Pollution degree2	Normally only dry non-conductive pollution occurs. Occasionally a temporary conductivity caused by condensation must be expected.

## **Ordering information**

Model number	Description
DS03062A	60 MHz 2-ch DS0
DS03102A	100 MHz 2-ch DS0
DS03152A	150 MHz 2-ch DS0
DS03202A	200 MHz 2-ch DS0

### Accessories included

Quick Start manual, CD-ROM with User's Guide (French, German, Japanese, Korean, Russian, Simplified Chinese, and English) and Programmer's Manual, power cord, accessory pouch, two passive probes, Scope Connect software

## **Optional accessories**

	Description
N2861A (communication module)	Provides GPIB and RS-232 connectivity and pass/fail output for automatic testing.
N2862A	150 MHz passive probe (standard with the DSO3062A, DSO3102A, and DSO3152A oscilloscopes.)
N2863A	300 MHz passive probe (standare with the DS03201A oscilloscope.)
N2864A	Rack mount kit for the DSO3000 series oscilloscope.)

### Warranty options

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All models include a standard 3-year warranty. Contact your local sales office for prices of extended options: