Performance characteristics

Performance characteristics

Bandwidth*	DSO3062A: 60 MHz DSO3102A: 100 MHz DSO3152A: 150 MHz DSO3202A: 200 MHz
Real time sample rate 2 channels interleaved Each channel	 1 GSa/s 500 MSa/s
Channels	2
Display	Color, 320 x 240 1/4 VGA LCD; H: 88 mm, W: 116 mm
Memory	4 kpts per channel
Vertical resolution	8 bits
Vertical sensitivity	2 mV/div to 5 V/div
DC gain accuracy	± 3% for 10 mV/div to 5 V/div; ± 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
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)

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 speeds (slower than 5 µs/div)
Sweep modes	Auto, Normal
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 limits ranging from 20 ns to 10 s
Trigger source	Ch 1, 2, Ext, Ext/5, Line (edge mode only)
Cursors	
Modes	Manual, auto, track
Type	Time and voltage
Measurements	ΔT, ΔV, 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, phase
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/O

Optional ports	GPIB, RS-232
Maximum data transfer rates	GPIB: 500 kbytes/sec

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.