## Technical Specifications for Oscilloscope 350 MHz

| S No | Specifications | Details |
| :---: | :---: | :---: |
| 1 | Bandwidth (-3 dB) | 350 MHz |
| 2 | Rise time (10 to 90\%) | $\leq 1 \mathrm{~ns}$ |
| 3 | Input channels | 4 |
| 4 | Maximum sample rate | 2.5 GSa/s all channels |
| 5 | Maximum memory depth | Standard 4 Mpts, segmented memory |
| 6 | Display size and type | 8.5-inch capacitive touch gesture-enabled display |
| 7 | Waveform update rate | >1,000,000 waveforms per second |
|  | Vertical system analog channels |  |
| 8 | Hardware bandwidth limits | Approximately 20 MHz |
| 9 | Input coupling | AC, DC |
| 10 | Input impedance | Selectable: $1 \mathrm{M} \Omega \pm 1 \%$ (14 pF), $50 \Omega \pm 1.5 \%$ |
| 11 | Input sensitivity range | $1 \mathrm{mV} / \mathrm{div}$ to $5 \mathrm{~V} /$ div2 |
| 12 | Vertical resolution | 8 bits |
| 13 | Maximum input voltage | 300 Vrms, 400 Vpk; transient overvoltage 1.6 kVpk |
| 14 | DC vertical gain accuracy | $\pm 2.0 \%$ full scale |
| 15 | DC vertical offset accuracy | $\pm 0.1 \mathrm{div} \pm 2 \mathrm{mV} \pm 1 \%$ of offset setting |
| 16 | Channel-to-channel isolation | $>100: 1$ from DC to maximum specified bandwidth |
| 17 | Offset range | $\pm 2 \mathrm{~V}$ (1 mV/div to $200 \mathrm{mV} / \mathrm{div}$ ) |
|  |  | $\pm 50 \mathrm{~V}$ (> $200 \mathrm{mV} /$ div to $5 \mathrm{~V} / \mathrm{div}$ ) |
| 18 | Time base range | $2 \mathrm{~ns} /$ div to $50 \mathrm{~s} /$ div |
| 19 | Time base accuracy | $\pm 1.6$ ppm |
| 20 | Channel-to-channel deskew range | $\pm 100 \mathrm{~ns}$ |
| 21 | $\Delta$ Time accuracy (using cursors) | $\begin{aligned} & \pm \text { (time base acc. } x \text { reading }) \pm(0.0016 \times \text { screen } \\ & \text { width }) \pm 100 \mathrm{ps} \end{aligned}$ |
| 22 | Horizontal Modes | Main, zoom, roll, XY |
|  | Acquisition system |  |
| 24 | Maximum analog channels record length | 2 Mpts all channel |
|  | Trigger system |  |
| 25 | Trigger modes | Normal |
|  |  | Auto |
|  |  | Single |
| 26 | Trigger coupling | DC, AC, HF Reject, LF Reject, Noise Reject |


| 27 | Trigger holdoff range | 40 ns to 10.00 s |
| :---: | :---: | :---: |
|  | Trigger sensitivity |  |
| 28 | Internal | $<10 \mathrm{mV} / \mathrm{div}$ : Greater of 1 div or $5 \mathrm{mV} ; \geq 10$ $\mathrm{mV} / \mathrm{div}: 0.6$ div |
|  | Waveform measurements |  |
| 29 | Automatic measurements | Voltage: Peak-to-peak, maximum, minimum, amplitude, top, base, overshoot, pre-shoot, average- N cycles, average- full screen, DC RMS- N cycles, DC RMS- full screen, AC RMS- $N$ cycles, AC RMS- full screen (std deviation), ratio- N cycle, ratio- full screen |
|  |  | Time: Period, frequency, counter, + width, width, burst width, +duty cycle, -duty cycle, bit rate, rise time, fall time, delay, phase, $X$ at $\min Y$, $X$ at $\max Y$ |
|  | Waveform math |  |
| 30 | Number of math functions | displays FFT and one math simultaneously |
| 31 | Arithmetic | Add, subtract, multiply, divide, differentiate, integrate, FFT, Ax + B, squared, square root, absolute value, common logarithm, natural logarithm, exponential, base 10 exponential, low pass filter, high pass filter, averaged value, smoothing, envelope, magnify, max hold, min hold, measurement trend, chart logic bus (Timing or State) |
| 32 | Enhanced FFT |  |
| 33 | Record size | Up to 64 kpts resolution |
| 34 | Window types | Hanning, Flat Top, Rectangular, Blackman-Harris |
|  | Display characteristics |  |
| 35 | Display | 8.5-inch capacitive touch/gesture enabled TFT LCD |
| 36 | Resolution | 800 (H) $\times 480$ (V) pixel format (screen area) |
|  | Built-in function/arbitrary waveform generator |  |
| 37 | WaveGen out | Front-panel BNC connector |
| 38 | Waveforms | Sine, Square, Ramp, Pulse, DC, Noise, Sine Cardinal (Sinc), Exponential Rise, Exponential Fall, Cardiac, Gaussian Pulse, and Arbitrary |
| 39 | Sine | Frequency range: 0.1 Hz to 20 MHz |
|  |  | Harmonic distortion: -40 dBc |
|  |  | Total harmonic distortion: $1 \%$ |
| 40 | Square wave /pulse | Frequency range: 0.1 Hz to 10 MHz |
|  |  | Duty cycle: 20 to 80\% |


|  |  | Pulse width: 20 ns minimum |
| :---: | :---: | :---: |
|  |  | Overshoot: < 2\% |
| 41 | Ramp/triangle wave | Frequency range: 0.1 Hz to 200 kHz |
|  |  | Linearity: 1\% |
|  |  | Variable symmetry: 0 to 100\% |
| 42 | Noise | Bandwidth: 20 MHz typical |
| 43 | Arbitrary | Waveform length: 1 to 8k points |
|  |  | Amplitude resolution: 10 bits (including sign bit) |
|  |  | Repetition rate: 0.1 Hz to 12 MHz |
|  |  | Sample rate: 100 MSa /s |
|  | Digital voltmeter |  |
| 44 | Functions | ACrms, DC, DCrms |
| 45 | Resolution | ACV/DCV: 3 digits |
| 46 | Measuring rate | 100 times/second |
| 47 | Autoranging | Automatic adjustment of vertical amplification to maximize the dynamic range of measurements |
|  | Precision counter/totalizer |  |
| 48 | Counter - Source | Any analog channel or trigger qualified event |
|  | Resolution | 8 digits |
|  | Max frequency | 1 GHz |
| 49 | Measurement | Frequency, period, totalize |
|  | Connectivity |  |
| 50 | Standard ports | One USB 2.0 hi-speed device port |
| 51 | Trigger out | BNC connector on the rear panel |
| $\begin{aligned} & 52 \\ & 53 \end{aligned}$ | Warranty Probes | 3-year warranty <br> One per channel, 500 MHz , passive, 10:1 |

