

Analog Oscilloscope

AT7328 / AT7340 / AT7328S / AT7340S



AT7328 / AT7340



AT7328S / AT7340S

AT7328S / AT7340S ANALOG OSCILLOSCOPE with CRT Readout

CHARACTERISTIC

- 20MHz/40MHz Dual Channel
- High Sensitivity 1Mv/DIV
- 5mV/div ~20v/Div Sensitivity on Both Channels
- Cursor Readout Function, Measure ΔV , ΔT , $1/\Delta T$
- CH1 & CH2 Independent Channels
- CH1 Signal Output
- High luminance, internal graticule
- Pulse encoder switch
- Adjustable cursor function, Easy to operator
- Cursor measurement function, aids to object measurement
- Visible coordinate sensitivity to 10V~20V/DIV
- Unique Digital Filter function and Waveform recorder function
- Two waveforms in different frequency can be observed via alternative trigger function
- High-speed sweep
- Algebraic Addition and Subtraction
- X-Y Operation
- 0.2 μ s/div to 0.5s/div Time Base(Uncal upto 20ns)
- Z Modulation TTL Level
- 8 x 10 cm Display Internal Graticule
- TV signal synchronous function, TV Triggering Frame (V) & Line (H)
- Line Trigger
- ALT Triggering

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VERTICAL AXIS

Sensitivity	5mV~20V/DIV ,20 steps in 1-2-5 sequence (X5 MAG: 1mV/DIV) (AT7328S / AT7340S) 5mv~5V/DIV ,20 steps in 1-2-5 sequence (X5 MAG: 1mV/DIV) (AT7328 / AT7340)
Sensitivity accuracy	≤3% (x5MAG: =5%)
Vernier vertical sensitivity	Continuously variable to 1/2.5 or less of panel-indicated value
Frequency bandwidth	DC-20MHz (x5MAG:DC-7MHz) DC-40MHz (x5MAG:DC-15MHz)
AC coupling	Low limit frequency 10Hz. (With reference to 100KHz,8DIV.Frequency response with-3dB)
Rise time	Approx.17.5Ns (x5MAG:Approx.50Ns) / 9.5nS (X5MAG: Approx.25nS)
Input impedance	Approx. 1M ohm//Approx. 25pF
Square wave characteristics	Overshoot: =5%(At 10Mv/DIV range) other distortions and other ranges: 5% added to the above value DC balance shift: 5mV~5V/DIV; ±0.5 DIV, 1mV~2mV/DIV±2.0DIV Linearity: < ±0.1DIV of amplitude change when waveform of 2 DIV at graticule center is moved vertically.
Vertical modes	CH1 single channel. CH2 single channel
DUAL	CH1 and CH2 are displayed ALT or CHOP selectable at any sweep rate.
ADD	CH1+CH2 algebraic addition
Chopping repetition frequency	Approx.250KHz
Input coupling	AC, GND , DC
Maximum input voltage	300V peak (AC: frequency 1KHz or lower) When set probe switch at 1:1, the maximum effective readout is 40Vp p(14Vrms at sine wave); or set probe switch at 10:1, the maximum effective readout is 400Vpp(140Vrms at sine wave)
Common mode rejection ratio	50:1 or better at 50KHz sinusoidal wave.(when sensitivities of CH1 and CH2 are set equally)
Isolation between channels (at 5Mv/DIV range)	> 1000:1 at 50 MHz; > 30:1 at 20MHz; > 30:1 at 40MHz
CH1 signal output	At least 20Mv/DIV into a 50 ohm termination, Bandwidth is 50Hz to at least 5MHz.
CH2 INV BAL	Balanced point variation: =1DIV(Reference at center graticule)

HORIZONTAL AXIS

Sweep time	0.2 μ Sec-0.5Sec/DIV,20Steps in 1-2-5sequence
Sweep time accuracy	±3%
Vernier sweep time control	=1/2.5 of panel-indicated value
Sweep magnification	10 times
x10MAG sweep time accuracy	±5%(20nsec-50nsec are uncalibrated)
Linearity	±3%,x10MAG: ±5%(20ns and 50ns are uncalibrated)
Position shift caused byx10MAG	Within 2 DIV, at CRT screen center

TRIGGERING

Triggering source	CH1, CH2, LINE, EXT
Coupling	AC:20Hz to full bandwidth
Slope	+/-
Sensitivity	20Hz-2MHz: 1.0 DIV, TRIG-ALT: 2DIV,EXT:200Mv; 2MHz-20MHz: 1.5DIV; 20MHz or higher: 2.0DIV TRIG-ALT: 3DIV,EXT:800mv
TV	Sync pulse more than 1 DIV (EXT:1V)
Triggering modes	AUTO; NORM; TV-V; TV-H. (Both TV-V and TV-H synchronize only when the synchronizing signal is negative)
Input impedance	Approx:1M ohm//approx.25pF
Max input voltage	300V(DC+ AC peak), AC: frequency not higher than 1KHz

X-Y MODE

Sensitivity	Same as vertical axis.(X-axis:CH1 input signal,Y-axis:CH2 input signal)
Frequency bandwidth	DC to at least 500KHz
X-Y phase difference	≤3° at DC-50KHz

Z AXIS

Sensitivity	5Vp-p (positive-going signal decreases intensity)
Frequency bandwidth	DC-2MHz
Input resistance	Approx. 47k ohm
Maximum input voltage	3V (DC+ AC peak, AC frequency = 1KHz)

CALIBRATION VOLTAGE

Waveform	positive-going square wave
Frequency	Approx, 1KHz
Output voltage	2Vp-p ±2%
Output impedance	Approx, 1K ohm

CRT

Type	6-inch rectangular type, internal graticule
Phosphor	P31
Acceleration voltage	Approx 2KV
Effective screen size	8x10 DIV(1 DIV= 10mm(0.39in))
Graticule	Internal
Trace rotation	Provided

OPTIONALS

GPIB Communication Module, Serial Interface Communication Module, Pass/Fail Interface Module