

8. Specifications

Performance Condition: The electrical specifications found in these tables of warranted specifications apply when the oscilloscope has been adjusted at an ambient temperature between +20 °C and +30 °C, a warm-up period at least 30 minutes are necessary. This oscilloscope is operating at an ambient temperature between 0 °C and +50 °C only.

Vertical system :

Channel 1(CH1) and Channel 2(CH2) 2mV/div to 5V/div

Accuracy

$\pm(3\% \times | \text{Readout} | + 0.05 \text{ div} \times$

Volts/div + 0.8mV)

Bandwidth

DC ~ 60MHz (-3dB) for 6060S, 6060C
DC ~ 100MHz (-3dB) for 6100S, 6100C
DC ~ 150MHz (-3dB) for 6150S, 6150C
DC~250MHz (-3dB) for 6250S, 6250C

AC couple,

10Hz~60MHz (-3dB) for 6060S, 6060C;
10Hz~100MHz (-3dB) for 6100S, 6100C;
10Hz~150MHz (-3dB) for 6150S, 6150C;
10Hz~250MHz (-3dB) for 6250S, 6250C

Rise time

< 5.8ns for 6060S, 6060C;
< 3.5ns for 6100S, 6100C;
< 2.3ns for 6150S, 6150C;
< 1.4ns for 6250S, 6250C

Input Coupling

AC, DC & Ground

Input Impedance

1MΩ ±2% , ~ 16pF for 6060S, 6060C,
6100S, 6100C, 6250S, and 6250C;
1MΩ ±2% ~22pF for 6150S, 6150C

Polarity

Normal & Invert

Maximum Voltage Between Signal and 300V (DC+AC peak),

Common at input BNC Installation Category II

Waveform Signal Process

CH1 – CH2 , CH1 + CH2 , FFT

Offset Range:

2mV/div ~ 50mV/div ±0.5V

100mV/div ~ 500mV/div ±5V

1V/div ~ 5V/div ±50V

Bandwidth Limit

20MHz (– 3dB)

Trigger :

Sources

CH1 , CH2 , LINE , EXT.

Modes

Auto-Level , AUTO , NORMAL ,
SINGLE , TV , Time-delay ,
Event-delay , Edge , Pulse Width

Time Delay Range

100ns to 1.3ms

Events Delay Range

2 to 65000

Start Trigger Level

±12V adjustable

(For USER Mode)

Coupling

AC , DC , LFrej , HFrej , Noise rej

Sensitivity

DC ~ 25MHz

25MHz ~ 60MHz

Approx. 0.5div or 5mV

Approx. 1.5div or 15mV for 6060S,
6060C

25MHz ~ 100MHz

Approx. 1.5div or 15mV for 6100S,
6100C

25MHz ~ 150MHz

Approx. 1.5div or 15mV for 6150S,
6150C, 6250S, and 6250C

150MHz ~ 250MHz

Approx. 2div or 20mV for 6250S,
6250C

TV

TV trigger sensitivity: 0.5 division of
synch signal

External Trigger :

Range

DC : $\pm 15V$, AC : $\pm 2V$

Sensitivity

DC ~ 25MHz

~ 50mV for 6060S, 6060C, 6100S,
and 6100C

DC ~ 30MHz

~ 50mV for 6150S, 6150C, 6250S,
and 6250C

25MHz~60MHz

~100mV for 6060S, 6060C

25MHz~100MHz

~100mV for 6100S, 6100C

30MHz ~ 150MHz

~ 100mV for 6150S, 6150C, 6250S,
and 6250C

150MHz ~ 250MHz

~ 150mV for 6250S, 6250C

Input Impedance

1M Ω $\pm 2\%$, ~ 16pF for 6060S, 6060C,
6100S, 6100C, 6250S, and 6250C;
1M Ω $\pm 2\%$ ~22pF for 6150S, 6150C

Maximum Input

300V (DC + AC peak), CATII

Horizontal :

Range

1ns/div ~ 10s/div (1-2-5 increments)

Modes

Main, Window, Window Zoom, Roll,

X-Y

0.01%

Accuracy

Delay Range

Pre-trigger

20 div maximum

Post-trigger

1000 div

X-Y mode :

X-Axis Input

Channel 1 (CH1)

Y-Axis Input

Channel 2 (CH2)

Phase shift

$\pm 3^\circ$ at 100kHz

Signal Acquisition System :

Real-time Sample Rate	100MSa/s maximum on each channel
Equivalent Sample Rate	25GSa/s E.T. maximum on each channel
Vertical Resolution	8 Bits
Record Length / Channel	125k Points
Single Shot Record Length	125k Points
Single Shot Bandwidth	10MHz
Acquisition Mode	Sample, Peak Detect, Average
Peak Detection	10ns (500ns/div ~ 10s/div)
Average	2 · 4 · 8 · 16 · 32 · 64 · 128 · 256

Cursors and Measurement :

Automated Voltage Measurement	V_{pp} , V_{amp} , V_{avg} , V_{rms} , V_{hi} , V_{lo} , V_{max} , V_{min}
Automated Time Measurement	Freq, Period, Rise Time, Fall Time, Positive Width, Negative Width, Duty Cycle
Cursors Measurement	Voltage difference between cursors (ΔV) Time difference between cursors (ΔT) Reciprocal of ΔT in Hertz ($1/\Delta T$)

Trigger Frequency Counter

Readout Resolution	6 digits
Frequency Range	20Hz minimum to rated bandwidth
Accuracy	±2%
Signal Source	All available trigger source except the Video trigger mode

Control Panel Functions :

Autoset	"Autoset" adjust Vertical VOLT/DIV, Horizontal SEC/DIV, and Trigger level automatically.
Save/Recall	Up to 15 sets of measurement conditions can be saved and recalled 2 sets of waveform can be saved and recalled
Waveform Trace Save/Recall	100 sets of waveform can be saved and recalled
Template Waveform Save/Recall	

Display System :

LCD Type	5.7 inch Mono LCD (320*240) for 6060S, 6100S, 6150S, and 6250S 5.7 inch Color LCD (320*240) for 6060C, 6100C, 6150C and 6250C
Waveform Display Graticule	8 × 10 divisions 8 × 12 divisions (menu off)
Display Contrast	Adjustable

Power Source :

Line Voltage Range 100V ~ 240V AC, auto selection

Line Frequency 47Hz ~ 63Hz

Power Consumption 45 Watts, 65VA maximum, with Fan

Fuse Rating 2 Ampere Slow, 250V,

Interface :

Centronics port A 25-pin IBM PC type, parallel printer interface

Printer Compatibility

HP LaserJet with HP PCL5

HP DeskJet

Black & white @150×150dpi

Black & white @150×150dpi

USB Interface

USB 1.1 & USB 2.0 Full speed compatible.

Device only, not support USB printers

RS-232 Interface

A DB 9-pin male DTE RS-232 interface

GPIO Interface (Option)

Fully programmable with IEEE488.2 compliance

Adjustable Probe Compensation Signal

Only available for 6060S, 6060C, 6100S, and 6100C

Frequency Range 1kHz ~ 100kHz adjustable; 1kHz step

Duty Cycle 5% ~ 95% adjustable; 5% step

Miscellaneous :

Probe Compensation Output $2V_{pp} \pm 3\%$

Probe 2 sets

Overall Dimensions 310(W) × 142(H) × 254(D) mm

Weight ~3.8 kg for 6060S, 6060C, 6100S, and 6100C

~4.1 kg for 6150S, 6150C, 6250S, and 6250C

Atmospherics :

Ambient Temperature

Operating $0^{\circ}\text{C} \sim 50^{\circ}\text{C}$

Storage $-20^{\circ}\text{C} \sim 70^{\circ}\text{C}$

Relative Humidity

Operating 80% R.H. @ 35°C

Storage 80% R.H. @ 70°C