

50-MHz 2-Channel Delayed Sweep Oscilloscope



LS 8050

A lab-grade instrument with dual-channel operation, the LS8050 meets the needs of advanced scope uses with bright, sharp traces, superior long-term stability and reliability. Operating features include high sensitivity with band limiting to 15 MHz on the most sensitive ranges, delayed sweep to closely examine small parts of the main time base, a trigger lock function to establish the trigger point within the p-p signal swing and ensure rock-solid

- 50 MHz Bandwidth CH1 & CH2
- High Sensitivity: 1 mV/div
- 15 Mhz Bandwidth at 1 & 2 mV/div
- Delayed Sweep Capability
- Video, TV-V and TV-V Trigger
- Trigger Level Lock Function
- Variable Holdoff for Complex Wavetrains
- X-Y Operation
- CH1 Output Puts the CH1 Amplifiers to Work as a Calibrated Preamp
- Scale Illuminator Facilitates Waveform Photography
- Meets International Standards for EMI, EMS and Safety

triggering despite wide variations in signal excursions and dedicated H and V sync separators for fuss-free video waveforms. Other refinements include variable holdoff to view long, complicated wavetrains, X-Y operation, an internal illuminated scale (a must for waveform photography), and CH1 output to put the scope's CH1 amplifiers to work as a high-gain calibrated preamp.

key specifications

VERTICAL DEFLECTION

Bandwidth (-3dB)

5 mV/div to 5 V/div

dc coupled: dc to 5 MHz

ac coupled: 10 Hz to 50 MHz

1 mV/div to 2 mV/div

dc coupled: dc to 15 MHz

ac coupled: 10 Hz to 15 MHz

Rise Time

7 ns or less 5 mV/div to 5 V/div

23 ns or less 1 mV/div to 2 mV/div

Deflection Coefficients

1 mV/div to 5 V/div in 12 steps

Accuracy

± 3% 5 mV/div to 5 V/div

± 5% 1 mV/div to 2 mV/div

Input Impedance

1 M Ω ± 2%, 27 pF approx.

Maximum Input

400 V (dc plus ac peak)

Output

CH1 100 mV/div of CRT deflection

Display Modes

CH1, CH2, Dual, ADD

Dual Mode

Alt: 2 ms/div to 0.1 μ s/div

Chop: 0.5 s to 5 ms/div

(Chop at all rangers with CHOP set)

Chop Frequency

250 kHz, approx.

Polarity Inversion

CH2 only

EXTERNAL HORIZONTAL DEFLECTION

X-Y MODE

Input

X-Axis: CH1

Y-Axis: CH2

Deflection Factor

Same as CH1/CH2

Accuracy

Norm ± 4%, MAG ± 6%

Bandwidth

dc to 2 MHz (dc coupled)

50 V (dc plus ac peak), CH3

X-Y Phase Difference

Less than 3° dc to 100 kHz

INTERNAL HORIZONTAL DEFLECTION

SWEEP MODE

Display Modes

A, A Int, B, B Triggered

A (Main) Sweep

0.1 μ s/div to 0.5 s/div in 21 steps

Sweep Accuracy

± 3%

Holdoff Time

Variable to 2X sweep time

B (Delayed) Sweep Modes

Continuous and triggered delay

B Sweep Time

0.1 μ s/div to 0.5 ms/div in 12 steps

B Sweep Accuracy

± 3%

Delayed Time

1 μ s to 5 ms

Delay Jitter

Less than 1/10000

Sweep Magnification

X10 (max sweep speed 10 ns/div)

TRIGGERING

Sources

CH1, CH2, ALT, LINE, EXT

Coupling

AC, HR, REG, TV, DC

(TV-V at 0.5 s to 0.1 ms time base)

(TV-H at 50 μ s to 0.1 μ s time base)

Sensitivity

0.5 div (0.1 V EXT) dc to 10 MHz

1.5 div (0.2 V EXT) 10 to 50 MHz

2.0 div (0.2 V EXT) TV (video)

Z-AXIS MODULATION

Input Level

3 V p-p (negative brightens trace)

Bandwidth

dc to 5 MHz

Input Impedance

5 k Ω approx.

INTERNAL CALIBRATOR

Waveform

2 V p-p ± 2% 1 kHz squarewave

CRT DISPLAY

Accelerating Potential/Phosphor

12 kV approx./P31

Graticule

Illuminated, internal, 8 X 10 div

POWER REQUIREMENTS

100, 120, 220, 230 V ac ± 10%

50/60 Hz, 70 VA, 60 W

PHYSICAL

Size (W x H x D)

12¹/₄ x 6 x 18 in.

310 x 150 x 455 mm

Weight

18 lbs., 8.2 kg

SUPPLIED ACCESSORIES

2 X1/X10 Probes (LP-051C)