100MHz CURSOR READOUT ANALOG OSCILLOSCOPE

GOS-6112/6103/6103C (100 MHz)

CE CURSOR Readout GOS-6103C Without CE Approval

The GOS-6100 Series is a 100MHz, two-channel, dual-sweep, portable oscilloscope for general purpose use. A microprocessor-based operating system controls most of the functions of the instrument, in cluding cursor readout and digitized panel setting.

On-screen alphanumeric readout and cursor function for voltage, time, frequency and phase measurement provide extraordinary operational convenience. The advance Time Base Auto-rang fun ction conveniently acquires waveforms at the push of button (GOS-6103/ 6103C). Ten different user defined instrument settings (GOS-6103/ 6103C) can be saved and recalled without restriction.

The vertical deflection system has two input channels. Each channel has 11 basic deflection factors from 2mV to 5V per division. The horizontal deflection system provides single, dual or delayed sweeps from 0.5s to 50ns per division (delayed sweep, 50ms to 50ns per division). The trigger system provides stable triggering over the full bandwidth of the vertical deflection system.

FEATURES

- **100MHz Bandwidth, Dual Channel, Delayed Sweep**
- **Built-In 6 digits Universal Counter (GOS-6103C)**
- **10 Sets Memory for Front Panel Setting Save & Recall (GOS-6103/GOS-6103C)**
- **Time Base Auto-range (GOS-6103/GOS-6103C)**
- **Cursor Readout with 7 Measurements**
- **Panel Setup Lock of Digital-Control Functions**
- **Buzzer Alarm**
- **LED Indicators**
- **TV Synchronization**
- **Trigger Signal Output**
- **Z-Axis Modulation Input**
- **SMD Technology, High Stability and Reliability**

CURSOR MEASUREMENT FUNCTIONS

The unique, easy-to-use cursor and numerical readouts make waveform observation and measurement easier, faster and more accurate. The on-screen cursors provide seven measurement functions (ΔV,ΔV%,ΔVdB,Δ T, 1/Δ T,T%, Δθ)

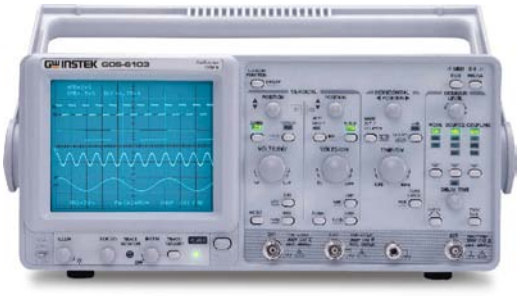
Rear Panel

GOS-6112

SPECIFICATIONS

CRT	
Type	6-inch rectangular type with internal graticule; 0%, 10%, 90% and 100% markers 8 x 10 div (1 div = 1 cm)
Accelerating Potential	16 kV approx. (GOS-6103/GOS-6103C), 12kV approx. (GOS-6112)
Illumination	Continuously adjustable (GOS-6103/GOS-6103C)
Z-axis input	Coupling : DC Sensitivity: 5V or more Maximum input voltage : 30V (DC + AC peak) at 1kHz or less Bandwidth : DC ~ 5 MHz
VERTICAL SYSTEM	
Sensitivity	2mV~5V/div, 11 step in 1-2-5 sequence
Sensitivity Accuracy	≤3% (5div at the center of display)
Vernier Vertical Sensitivity	Continuously variable to 1/2.5 or less of panel-indicate value
Bandwidth(-3dB)	DC~100MHz(2mV/div:DC~20MHz)
Rise Time	3.5ns (2mV/div:17.5ns)
Signal Delay	Leading edge can be monitored
Max. Input Voltage	400V(DC+AC peak) at 1kHz or less
Input Coupling	AC, DC, GND
Input Impedance	1MΩ ±2% // approx. 25pF
Vertical Mode	CH1,CH2,DUAL(CHOP/ALT), ADD, CH2 INV.
Bandwidth Limited	20MHz
Common-Mode Rejection Ratio	50:1 or better at 50kHz
Dynamic Range	8 div at 60MHz; 5div at 100MHz (GOS-6112) 8 div at 100MHz (GOS-6103/GOS-6103C)
HORIZONTAL SYSTEM	
Horizontal Modes	MAIN(A), ALT, DELAY(B)
A(main) Sweep Time	50ns~0.5s/div, continuously variable (UNCAL)
B(delay) Sweep Time	50ns~50ms/div
Accuracy	±3% (±5% at x 10 MAG)
Sweep Magnification	x 10 (maximum sweep time 5nS/div)
Hold Off Time	Variable
Delay Time	1 μs~5s
Delay Jitter	Better than 1:20000
Alternate Separation	Variable
TRIGGER	
Trigger Modes	AUTO, NORM,TV
Trigger Source	CH1,CH2,LINE,EXT
Trigger Coupling	AC,DC,HFR,LFR
Trigger Slope	"+" or "-" polarity or TVsync polarity
Trigger Sensitivity	Mode / Frequency / INT / EXT AUTO: 10 Hz ~ 20 MHz: 0.35 div: 50 mV AUTO: 20 MHz ~ 100 MHz: 1.5 div: 150 mV NORM: DC ~ 20 MHz: 0.35 div: 50 mV NORM: 20 MHz ~ 100 MHz: 1.5 div: 150 mV TV: sync signal: 1 div: 200 mV_{pp}
TV sync	TV-V, TV-H
Max. External Input Voltage	400V(DC+AC peak) at 1kHz
External Input Impedance	1M ±5% // approx.25pF
X-Y OPERATION	
Mode	X-axis: selectable CH1, CH2, EXT ; Y-axis: selectable CH1, CH2, CH1 and CH2
Sensitivity Accuracy	2mV~5V/div±3% ; EXT : 0.1V/div ±5%
X-axis Bandwidth	DC~500kHz(-3dB)
Phase Error	3° or less from DC~50kHz
OUTPUT SIGNAL	
Trigger Signal Output	Voltage: approx. 25mV/div into 50Ω ; Frequency response : DC ~ 10MHz
Calibrator Output	1kHz Square wave, 2Vpp ±2%

GOS-6112



GOS-6103/6103C

SPECIFICATIONS

CURSOR READOUT FUNCTION	
Cursor Measurement Function	ΔV, ΔV%, ΔVdB, ΔT, 1/ΔT, ΔT%, Δθ
Cursor Resolution	1/100 div
Effective Cursor Range	Vertical: ±3div ; Horizontal: ±4 div
Panel Setting Display	Vertical: V/div(CH1,CH2),UNCAL,ALT/CHOP/ADD,INV, probe factor,AC/DC/GND Horizontal: s/div(MTB, DTB), UNCAL, x 10MAG, delay time , Hold-off Trigger: source, coupling, slope, level, TV-V, TV-H Others: X-Y, lock, save/recall MEM 0-9 (GOS-6103/GOS-6103C)
AUTO MEASUREMENT FUNCTION (GOS-6103C)	
Parameter Function	FREQ, PERIOD, ±WIDTH, ±DUTY (+ or - polarity selected by trigger slope)
Display Digits	Max. 6-digits, decimal
Frequency Range	50Hz ~ 100MHz
Accuracy	1kHz ~ 100MHz : ±0.01% ; 50Hz ~ 1kHz : ±0.05%
Measuring Sensitivity	> 2 div (Measuring source selected from CH1 and CH2 as synchronous signal sources)
SPECIAL FUNCTION	
TIME/DIV Auto Range	Provided (GOS-6103/GOS-6103C)
Panel Setting Save & Recall	10 sets (GOS-6103/GOS-6103C)
Panel Setups Lock	Provided
POWER SOURCE	
AC 100V/120V/230V±10% , 50/60Hz	
DIMENSIONS & WEIGHT	
310(W) x 150(H) x 455(D) mm ; Approx. 9kg	

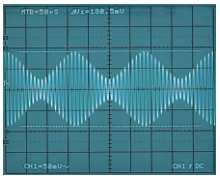
ORDERING INFORMATION

GOS-6112 100MHz, 2-channel, Analog Oscilloscope
GOS-6103 100MHz, 2-channel, Analog Oscilloscope
GOS-6103C 100MHz, 2-channel, Analog Oscilloscope with 100MHz Frequency Counter

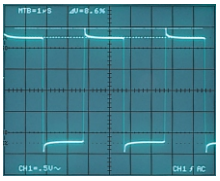
ACCESSORIES :
User manual x 1, Power cord x 1
GTP-100A-2 : 100MHz (10 : 1/1 :1) Switchable Passive Probe (one per channel)

OPTIONAL ACCESSORIES

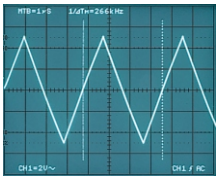
GTC-001 Instrument Cart, 450(W) x 430(D) mm (120V Input Socket)
GTC-002 Instrument Cart, 330(W) x 430(D) mm (120V Input Socket)
GTL-110 Test Lead, BNC-BNC Heads



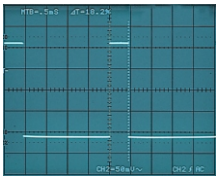
Voltage Measurement



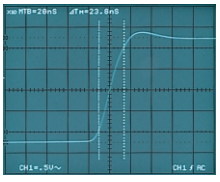
Voltage Percentage Measurement



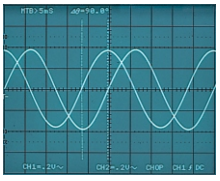
Frequency Measurement



Time Percentage Measurement



Time Measurement



Phase Measurement