

## Cursor Readout Analog Oscilloscope



### FEATURES

- \* 100MHz Bandwidth, Dual Channel, Delayed Sweep
- \* Built-In 6 Digit 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

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

#### SPECIFICATIONS

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<b>CRT</b>	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																									
<b>VERTICAL SYSTEM</b>	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)																									
<b>HORIZONTAL SYSTEM</b>	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																									
<b>TRIGGER</b>	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	<table border="1"> <thead> <tr> <th>Mode</th> <th>Frequency</th> <th>INT</th> <th>EXT</th> </tr> </thead> <tbody> <tr> <td rowspan="2">AUTO</td> <td>10 Hz ~ 20 MHz</td> <td>0.35 div</td> <td>50 mV</td> </tr> <tr> <td>20 MHz ~ 100 MHz</td> <td>1.5 div</td> <td>150 mV</td> </tr> <tr> <td rowspan="2">NORM</td> <td>DC ~ 20 MHz</td> <td>0.35 div</td> <td>50 mV</td> </tr> <tr> <td>20 MHz ~ 100 MHz</td> <td>1.5 div</td> <td>150 mV</td> </tr> <tr> <td>TV</td> <td>sync signal</td> <td>1 div</td> <td>200 mVpp</td> </tr> </tbody> </table>				Mode	Frequency	INT	EXT	AUTO	10 Hz ~ 20 MHz	0.35 div	50 mV	20 MHz ~ 100 MHz	1.5 div	150 mV	NORM	DC ~ 20 MHz	0.35 div	50 mV	20 MHz ~ 100 MHz	1.5 div	150 mV	TV	sync signal	1 div	200 mVpp
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	TV sync	TV-V, TV-H																									
	Max. External Input Voltage	400V(DC+AC peak) at 1kHz																									
	External Input Impedance	1MΩ ± 5% // approx.25pF																									
<b>X-Y OPERATION</b>	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																									
<b>OUTPUT SIGNAL</b>	Trigger Signal Output	Voltage: approx. 25mV/div into 50Ω ; Frequency response : DC ~ 10MHz																									
	Calibrator Output	1kHz Square wave, 2Vpp ± 2%																									

# Cursor Readout Analog Oscilloscope



**GOS-6112**

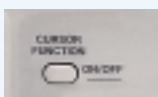


**GOS-6103/6103C**

## SPECIFICATIONS

<b>CURSOR READOUT FUNCTION</b>	<b>Cursor Measurement Function</b> <b>Cursor Resolution</b> <b>Effective Cursor Range</b> <b>Panel Setting Display</b>	$\Delta V, \Delta V\%, \Delta VdB, \Delta T, 1/\Delta T, \Delta T\%, \Delta \theta$ 1/100 DIV Vertical: $\pm 3$ div ; Horizontal: $\pm 4$ div 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 , HO Trigger: source, coupling, slope, level, TV-V, TV-H Others: X-Y, lock, save/recall MEM 0-9 (GOS-6103/GOS-6103C)
<b>AUTO MEASUREMENT FUNCTION (GOS-6103C)</b>	<b>Parameter Function</b> <b>Display Digits</b> <b>Frequency Range</b> <b>Accuracy</b> <b>Measuring Sensitivity</b>	FREQ, PERIOD, $\pm$ WIDTH, $\pm$ DUTY (+ or - polarity selected by trigger slope) Max. 6-digits, decimal 50Hz ~ 100MHz 1kHz ~ 100MHz : $\pm 0.01\%$ ; 50Hz ~ 1kHz : $\pm 0.05\%$ > 2 div (Measuring source selected from CH1 and CH2 as synchronous signal sources)
<b>SPECIAL FUNCTION</b>	<b>TIME/DIV Auto Range</b> <b>Panel Setting Save &amp; Recall</b> <b>Panel Setups Lock</b>	Provided (GOS-6103/GOS-6103C) 10 sets (GOS-6103/GOS-6103C) Provided
<b>POWER SOURCE</b>		AC 100V/120V/230V $\pm 10\%$ , 50/60Hz
<b>ACCESSORIES</b>		Instruction manual x 1; Power cord x 1; LF-210E Probe (10:1/1:1) x 2
<b>DIMENSIONS &amp; WEIGHT</b>		310(W) x 150(H) x 455(D) mm ; Approx. 9kg

## 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 ( $\Delta V, \Delta V\%, \Delta VdB, \Delta T, 1/\Delta T, T\%, \Delta \theta$ )



**Voltage Measurement**



**Voltage percentage Measurement**



**Time Measurement**



**Frequency Measurement**



**Time percentage Measurement**



**Phase Measurement**

## 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

### Option

**Opt. 01** : GTC-001 Instrument Cart, 450(W) x 430(D) mm  
**Opt. 02** : GTC-002 Instrument Cart, 330(W) x 430(D) mm

NOTE : GOS-6103C Without Approved