

## 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

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

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**GOS-6112**

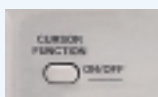


**GOS-6103/6103C**

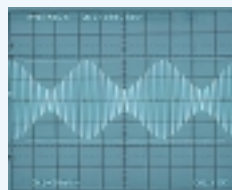
### SPECIFICATIONS

<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

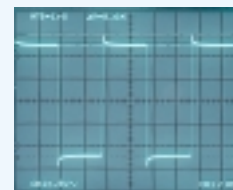
### CURSOR MEASUREMENT FUNCTIONS



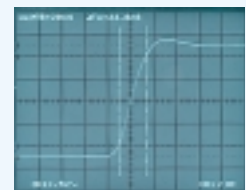
The unique easy-to-use cursor and numerical readouts make waveform observation and measurement easier, faster and more accurate. The on screen cursors provide seven measurement functions ( $\Delta V$ ,  $\Delta V\%$ ,  $\Delta VdB$ ,  $\Delta T$ ,  $1/\Delta T$ ,  $T\%$ ,  $\Delta \theta$ )



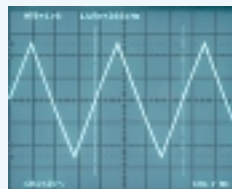
**Voltage Measurement**



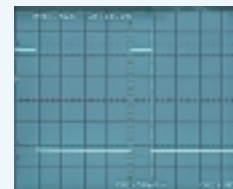
**Voltage percentage Measurement**



**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