

Real Time/Digital Storage Oscilloscope

NEW
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FEATURES :

- * GRS-6052: DC~50MHz, 20MSa/s, 2kW/CH x 2
- * GRS-6032: DC~30MHz, 20MSa/s, 2kW/CH x 2
- * Equivalent Time Sampling of 500MSa/s max.
- * Waveform SAVE/RECALL 10 sets (REF0~REF9)
- * Pre-Trigger Function 0 ~ 10 DIV
- * ROLL Mode to 100s/DIV
- * ALT-MAG Function (x5, x10, x20)
- * Smoothing Function ON/OFF
- * Max. Sweep Rate 10ns/DIV
- * Cursor Readout Function: ΔV , ΔT , $1/\Delta T$
- * Panel Setting SAVE/RECALL 10 sets (M0~M9)
- * Averaging Function (2 ~ 256)
- * VERT Mode Triggering
- * TV Synchronization
- * CH1 Signal Output & Z-axis Input
- * RS-232C Interface

GRS-6052/6032(50,30MHz)

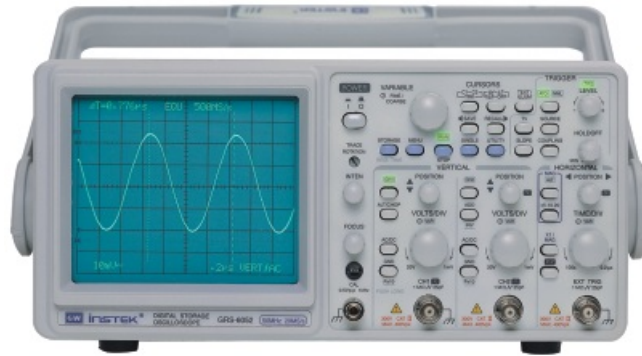
SPECIFICATIONS

MODEL		GRS-6052 50MHz, 20MSa/s, 500MSa/s (ETS)	GRS-6032 30MHz, 20MSa/s, 500MSa/s (ETS)
CRT	Type and Acceleration INTEN and FOCUS ILLUM Z-axis Input	6-inch CRT 150CTB31, 10kV Front panel control Front panel control Sensitivity : at least 5V(TTL) Polarity : positive going input decrease intensity Max. input voltage:30V(DC+ACpk) Input Impedance :approx. 47k Ω	6-inch CRT D14-363GY, 2kV Front panel control Front panel control Sensitivity : at least 5V(TTL) Polarity:positive going input decrease intensity Max. input voltage:30V(DC+ACpk) Input Impedance :approx.33k Ω
VERTICAL SYSTEM	Deflection Coefficient and Accuracy Variable Continuously Frequency Bandwidth (-3dB) Vertical Mode Chopper Frequency Sum or Difference Invert Input Impedance Input Coupling Input Voltage	1mV ~ 2mV/DIV \pm 5%, 5mV ~ 20V/DIV \pm 3%, 14 steps in 1-2-5 sequence 2.5 : 1 ~ min. 50V/DIV 1mV ~ 2mV/DIV: DC~7MHz 5mV ~ 20V/DIV: DC~50MHz CH1, CH2, DUAL (ALT or CHOP) Approx. 250kHz CH1+CH2, CH1-CH2 CH2 1M Ω \pm 2%/approx. 25pF AC, DC, GND Max. 400V(DC+ACpk)	1mV ~ 2mV/DIV \pm 5%, 5mV ~ 20V/DIV \pm 3%, 14 steps in 1-2-5 sequence 2.5 : 1 ~ min. 50V/DIV 1mV ~ 20mV/DIV: DC~7MHz 5mV ~ 20V/DIV: DC~30MHz CH1, CH2, DUAL (ALT or CHOP) Approx. 250kHz CH1+CH2, CH1-CH2 CH2 1M Ω \pm 2%/approx. 25pF AC, DC, GND Max. 400V(DC+ACpk)
HORIZONTAL SYSTEM	Sweep Time Variable Continuously Accuracy Sweep Magnification Max. Sweep Time ALT-MAG Function HOLD-OFF Time	0.2 μ s/DIV ~ 0.5s/DIV, 20 steps 2.5 : 1 up to 1.25s/DIV (uncal.) \pm 3%, \pm 5% at x5, x10MAG. \pm 8% at x 20MAG x5, x10, x20 20ns/DIV (10ns/DIV uncal) Yes Variable	0.2 μ s/DIV ~ 0.5s/DIV, 20 steps 2.5 : 1 up to 1.25s/DIV (uncal.) \pm 3%, \pm 5% at x5, x10MAG. \pm 8% at x 20MAG x5, x10, x20 50ns/DIV (10ns~40ns/DIV uncal) Yes Variable
TRIGGER	Trigger Mode Trigger Source Trigger Coupling Trigger Slope ALT Trigger Indicator Trigger LED TV Sync. Separator Trigger Sensitivity	AUTO, NORM, TV VERT, CH1, CH2, LINE, EXT AC, HFR, LFR " + " or " - " polarity Yes Yes TV-V " - " , TV-H " - "	AUTO, NORM, TV VERT, CH1, CH2, LINE, EXT AC, HFR, LFR " + " or " - " polarity Yes Yes TV-V " - " , TV-H " - "
		GRS-6052 20Hz ~ 5MHz	5MHz ~ 40MHz 40MHz ~ 50MHz
		GRS-6032 20Hz ~ 2MHz	2MHz ~ 20MHz 20MHz ~ 30MHz
		CH1, CH2 0.5 DIV	1.5 DIV 2.0 DIV
		VERT-MODE 2.0 DIV	3.0 DIV 3.5 DIV
		EXT 200mV	800mV 1V
	External Trigger Input	TV sync. pulse more than 1 DIV or 200mV (EXT) Input impedance :Approx. 1M Ω //25pF (AC coupling) Max. input voltage :400V (DC + AC pk)	
X-Y OPERATION	Input Sensitivity Bandwidth X-Y Phase Shift	X-axis : CH1 ; Y-axis : CH2 1mV/DIV ~ 20V/DIV X-axis : DC ~ 500kHz (-3dB) <3 $^\circ$ from DC ~ 50kHz	X-axis : CH1 ; Y-axis : CH2 1mV/DIV ~ 20V/DIV X-axis : DC ~ 500kHz (-3dB) <3 $^\circ$ from DC ~ 50kHz
DIGITAL STORAGE	Acquisition Digitizer Max. Sampling Rate Storage Bandwidth Dynamic Range	8 bit ADC x 2 500MSa/s for equivalent time sampling 20MSa/s for normal sampling Single shot: DC ~ 5MHz Repetitive: DC ~50MHz \pm 5DIV	8 bit ADC x 2 500MSa/s for equivalent time sampling 20MSa/s for normal sampling Single shot: DC ~ 5MHz Repetitive: DC ~30MHz \pm 5DIV

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ISO-9001 & ISO-14001

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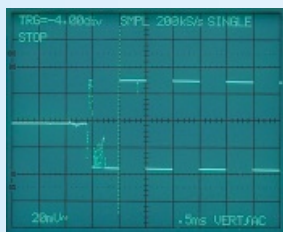


GRS-6052/6032(50,30MHz)

SPECIFICATIONS

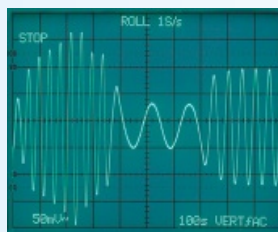
	Memory Length	2k words/CH x 2, 1k words/CH(equivalent)	2k words/CH x 2, 1k words/CH(equivalent)
	Acquisition Memory	1k words/CH x 10 with back-up memory (REF0~REF9)	1k words/CH x 10 with back-up memory (REF0~REF9)
	Save REF Memory		
	Display Memory	1k words/CH x 4 waveform(max.)	1k words/CH x 4 waveform(max.)
	Sweep Time	Equivalent: 0.2 μ s/DIV ~ 2 μ s/DIV Normal Sample: 5 μ s/DIV ~ 0.1s/DIV Roll: 0.2s/DIV ~ 100s/DIV	Equivalent: 0.2 μ s/DIV ~ 2 μ s/DIV Normal Sample: 5 μ s/DIV ~ 0.1s/DIV Roll: 0.2s/DIV ~ 100s/DIV
	Sweep Magnification	x 5, x 10, x 20	x 5, x 10, x 20
	Max.Sweep Time	10ns/DIV	10ns/DIV
	MAG Interpolation	DOTS, LINEAR	DOTS, LINEAR
	ALT-MAG Function	Yes	Yes
	Operation Mode	Auto, Norm, Single, Single-roll, Roll, X-Y	Auto, Norm, Single, Single-roll, Roll, X-Y
	Smoothing Function	Average(2~256), Run/Stop	Average(2~256), Run/Stop
	Pre-Trigger	Dot joint ON/OFF selectable	Dot joint ON/OFF selectable
	X-Y Operation	Pre-trigger 0 ~10DIV in 0.02DIV steps	Pre-trigger 0 ~10DIV in 0.02DIV steps
	Storage Bandwidth	X-axis: CH1 Y-axis: CH2	X-axis: CH1 Y-axis: CH2
	Display Resolution	DC~50MHz(-3dB)	DC~30MHz(-3dB)
	Waveform SAVE/RECALL	H: 100points/DIV; V: 25points/DIV; X-Y: 25 x 25 points/DIV	H: 100points/DIV; V: 25points/DIV; X-Y: 25 x 25 points/DIV
	Waveform SAVE/RECALL	10 sets(REF0~REF9)	10 sets(REF0~REF9)
OPERATION/CONTROL/INTERFACE	Panel Setting SAVE/RECALL	10 sets(M0 ~M9)	10 sets(M0 ~M9)
	RS-232C Interface	Yes	Yes
READOUT & CURSOR	Cursor Measurement	ΔV , ΔT , 1/ ΔT	ΔV , ΔT , 1/ ΔT
	Readout Intensity	Adjustable	Adjustable
OUTPUT SIGNAL	CH1 Signal Output	Voltage : approx. 20mV/DIV (with 50 Ω terminated) ; Bandwidth : 50Hz ~ 5MHz	Voltage : approx. 20mV/DIV (with 50 Ω terminated) ; Bandwidth : 50Hz ~ 5MHz
	Calibrator Output	Voltage : 0.5V \pm 3% ; Frequency : approx. 1kHz, square wave	Voltage : 0.5V \pm 3% ; Frequency : approx. 1kHz, square wave
POWER SOURCE		AC 100V/120V/230V \pm 10%, 50/60Hz	AC 100V/120V/230V \pm 10%, 50/60Hz
ACCESSORIES		Power cord x 1, Instruction manual x 1, GLF-190C Probes (10:1/1:1) x 2	Power cord x 1, Instruction manual x 1, GLF-190C Probes (10:1/1:1) x 2
DIMENSIONS & WEIGHT		275(W) x 130(H) x 370(D) mm; Approx. 8.5kg	275(W) x 130(H) x 370(D) mm; Approx. 8.5kg

DIGITAL MODE FUNCTIONS



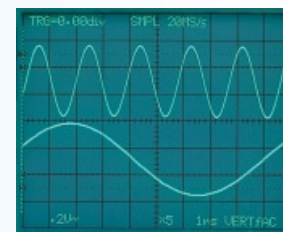
Pre-Trigger

GRS-6000 Series provide Pre-Trigger function, which allows user to observe Pre-Trigger waveform up to 10 divisions ahead of the trigger point.



ROLL Mode

The low-speed transient event of the input signal could be viewed easily under ROLL Mode. The waveform will roll on from right to the left to show the updated input signal all the time.



ALT-MAG

with ALT-MAG function, the user could expand the waveforms by 5, 10, or 20 times for a more detailed waveform observation. Both original waveforms and expanded waveforms could be shown on the screen at the same time.