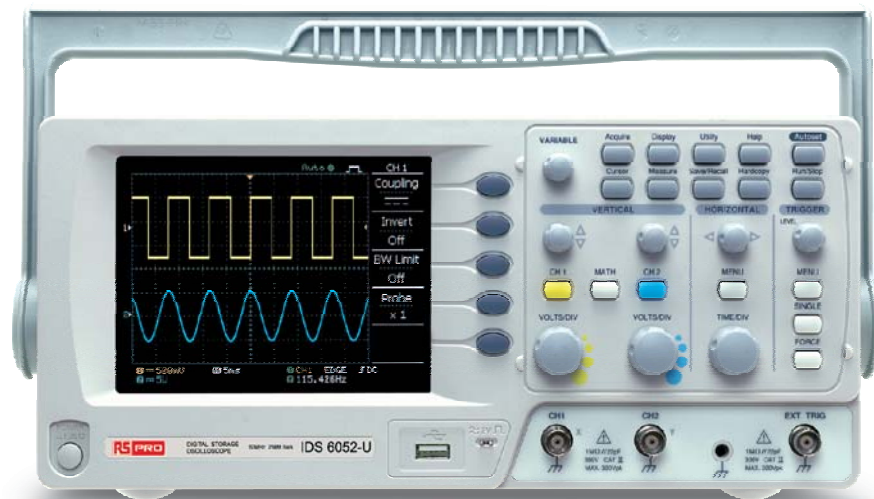# Datasheet
50MHz Digital Storage Oscilloscope

Stock No. :   **Model :**

123-3538   **IDS-6052-U**

FEATURES

- 50 MHz Bandwidth, 2 Input Channels
- 250MSa/s Real-Time & 25GSa/s Equivalent-Time Sampling Rate
- 4k Record Length per Channel
- Save/Recall of 15 Front Panel Settings & Waveforms
- 5.7" Color TFT LCD Display
- 19 Auto Measurements
- Math Function: Add, Subtract, FFT
- USB Host & Device Ports
- Go/NoGo Function
- Data Logger

IDS-6052-U is a general purpose 2-channel oscilloscope designed to meet diversified educational demands and basic industrial requirements. This series provides bandwidths ranging from 50MHz. Together with intuitive human machine interface design and 5.7 inch color TFT LCD, IDS-6052-U allows users to enjoy better measurement experiences.

IDS-6052-U offers dual sampling modes, 250MSa/s Real-Time and 25GSa/s Equivalent sampling rates, giving users a more flexible option to process incoming signals. With fast waveform process capability, more advanced triggering functions, and 2.5Kg light-weight design, IDS-6052-U is a very capable oscilloscope to enhance users' returns on their investments in terms of price versus performance. IDS-6052-U is also viewed as a replacement of analog oscilloscope. With its good functionality and capability, IDS-6052-U can satisfy diversified educational demands as well as fulfill industrial basic requirements in servicing, maintenance, or production.

IDS-6052-U also provides great accessibility through its USB Host and Device ports. Via USB Device port, user can easily build a remote control program to manipulate the machine. Via USB Host port, user is capable of not only storing data directly into flash disk for further analysis but also activating data logging function to monitor waveform data in designated time sequence.

Easy to use

Several acquisition mode and 19 auto measurement functions help user to measure the accurate property of waveforms. The advanced auto-set function makes IDS-6052-U catch waveform automatically and display waveform quickly. With arithmetic functions, FFT function keeps user being aware of the results by updating value immediately. Without almost extra-calculation IDS-6052-U can provide sufficient information of testing.

USB Host & USB Device supported

A total of 15 waveforms could be saved into the internal memory for later recall and display, and 2 saved reference waveforms plus 2 live waveforms could be shown on the screen at the same time for comparison. USB Host mass storage and USB device port are supported, providing storage/transfer of measurement data and remote control for diversified solutions.

APPLICATIONS

- **Laboratories and Educational Facilities**

- **Product Testing and Quality Assurance**

- **Service Operation and Post-Sales Support**

- **Product Development and Debugging**

SPECIFICATIONS

		IDS-6052-U
VERTICAL	Channels	2
	Bandwidth	DC~50MHz(－3dB)
	Rise Time	<7ns Approx.
	Sensitivity	2mV/div ~ 10V/div (1-2-5 increments)
	Accuracy	± (3% x |Readout| + 0.1 div + 1mV)
	Input Coupling	AC, DC & Ground
	Input Impedance	1MΩ± 2%, ~15pF
	Polarity	Normal & Invert
	Maximum Input	300V (DC+AC peak), CATII
	Waveform Signal Process	+, －, FFT
	Offset Range	2mV/div ~ 50mV/div : 0.4V ; 10mV/div ~ 500mV/div : 4V ; 1V/div ~ 5V/div : 40V ; 10V/div: 300V
	Bandwidth Limit	20MHz (- 3dB)
TRIGGER	Sources	CH1 , CH2 , Line , EXT
	Modes	AUTO, NORMAL, SINGLE, TV, Edge, Pulse width
	Coupling	AC , DC , LF rej. , HF rej. , Noise rej.
	Sensitivity	DC ~ 25MHz: Approx. 0.5div or 5mV; 25MHz ~ 50/70/100MHz: Approx. 1.5div or 15mV
EXT TRIGGER	Range	15V
	Sensitivity	DC ~ 25MHz : ~ 50mV ; 25M ~ 50/70/100MHz : ~15mV
	Input Impedance	1MΩ 2% , ~ 16pF
	Maximum Input	300V (DC＋AC peak) , CATII
HORIZONTAL	Range	1ns/div ~ 50s/div (1-2.5-5 increments); ROLL : 50ms/div ~ 50s/div
	Modes	MAIN, WINDOW, WINDOW ZOOM, ROLL, X-Y
	Accuracy	0.01%
	Pre-Trigger	10 div maximum
	Post-Trigger	1000 div
X-Y MODE	X-Axis Input	Channel 1
	Y-Axis Input	Channel 2
	Phase Shift	3 at 100kHz
SIGNAL ACQUISITION	Real-Time Sample Rate	250MSa/s maximum
	Equivalent Sample Rate	25GSa/s maximum
	Vertical Resolution	8 Bits
	Record Length	4K Points maximum
	Acquisition Mode	Normal, Peak Detect, Average
	Peak Detection	10ns(500ns/div ~ 50s/div)
	Average	2 , 4 , 8 , 16 , 32 , 64 , 128 , 256
CURSORS AND MEASUREMENT	Voltage Measurement	V_{pp} , V_{amp} , V_{avg} , V_{rms} , V_{hi} , V_{lo} , V_{max} , V_{min} , Rise Preshoot/ Overshoot , Fall Preshoot/Overshoot
	Time Measurement	Freq , Period , Rise Time , Fall Time , Positive Width , Negative Width , Duty Cycle
	Cursors Measurement	Voltage difference between cursors (△V) Time difference between cursors (△T)
	Auto Counter	Resolution : 6 digits ; Accuracy : 2%
		Signal Source: All available trigger source except the Video trigger mode
ADJUSTABLE PROBE COMPENSATION SIGNAL	Frequency Range	1kHz ~ 100kHz, 1kHz/STEP
	Duty Cycle Range	5% ~ 95%, 5%/STEP
CONTROL PANEL FUNCTION	Autoset	Adjust Vertical VOLT/DIV, Horizontal TIME/DIV, and Trigger level automatically
	Save Setup	Up to 15 sets of measurement conditions
	Save Waveform	15 sets of waveform
DISPLAY	TFT LCD Type	5.7 inch
	Display Resolution	234 (Vertically) x 320 (Horizontally) Dots
	Display Graticule	8 x 10 divisions
	Display Brightness	Adjustable
INTERFACE	USB Device	USB1.1 & 2.0 full speed compatible
	USB Host	Image (BMP) waveform data (CSV) and setup (SET)
POWER SOURCE	Line Voltage Range	AC 100V ~ 240V , 48Hz ~ 63Hz , Auto selection
MISCELLANEOUS	Go/NoGo Function	Available
	Data Logger	Available
	Multi-Language Menu	Available
	Online Help	Available
DIMENSIONS & WEIGHT	310(W) 142 (H) 140(D)mm, Approx. 2.5kg	

Specifications subject to change without notice.

ORDERING INFORMATION

IDS-6052-U 50MHz, 2-channel, Color LCD Display DSO

ACCESSORIES

User Manual x 1, Power Cord x 1
Probe-GTP-070A-4 : 70MHz(10:1/1:1)Switchable Passive Probe for IDS-6052-U(one per channel)

OPTIONAL ACCESSORIES

GTL-242	USB Cable, USB 1.1 A-B TYPE CABLE, 4P
GTL-110	Test Lead, BNC-BNC Heads
GSC-006	Soft Carrying Case

FREE DOWNLOAD

PC Software	FreeWave software
Driver	USB driver
	LabView Driver