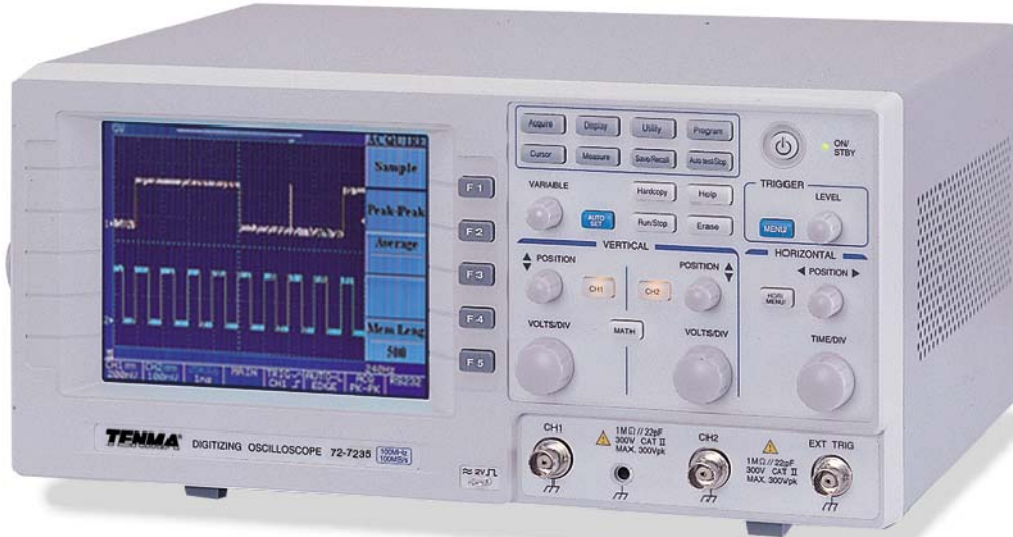




REVISIONS

DOC. NO. SPC-F004 * Effective: 7/8/02 * DCP No: 1398

DCP #	REV	DESCRIPTION	DRAWN	DATE	CHECKD	DATE	APPRVD	DATE
		NOT Released	JWM	11/14/03				



General Description and Features

The 72-7235 2-channel digital storage oscilloscope has the following general features:

- 72-7235 has 150MHz repetitive bandwidth and 100MSa/s sample rate per channel (25GSa/s E.T. sample rate per channel). Up to 10ns peak detection for glitch capture.
- A large 5.7" color LCD.
- Two input channels, each with a record length of 125kB dots and 8 bits vertical resolution. Both channels acquire waveforms simultaneously.
- Time base: 1ns/div~10s/div.
- 6-digit trigger frequency counter.
- Auto-setting for quick setup and hands-free operation.
- Four Acquisition mode: Sample, peak detect, average, accumulate.
- Cursors and 15 continuously update, automatic measurements: Vhi, Vlo, Vmax , Vmin , Vpp, Vaverage, Vrms, Vamp , rise time, fall time, duty cycle, frequency, period, positive width, negative width.
- 15 sets memory for front panel setting save & recall.
- 2 sets memory for waveform trace save & recall.
- FFT spectrum analysis.
- Two valuable "Program mode" and "Go-No Go" function are included.
- Advanced video and pulse width trigger.
- A large 8 ×12 divisions (menu off) waveform display graticule.
- RS-232, printer port and USB output are included.

INTERIM DRAWING
NOT RELEASED

SPC-F004.DWG

TOLERANCES: UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE FOR REFERENCE PURPOSES ONLY.	DRAWN BY:	DATE:	DRAWING TITLE:			
	Jeff McVicker	11/14/03	Oscilloscope, Digital Storage, 150MHz			
	CHECKED BY:	DATE:	SIZE	DWG. NO.	ELECTRONIC FILE	REV
			A	72-7235	22H6394.dwg	
APPROVED BY:	DATE:	SCALE: NTS		U.O.M.: Millimeters		SHEET: 1 OF 3

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Specifications

Performance Condition: The electrical specifications found in these tables of warranted specifications apply when the oscilloscope has been adjusted at an ambient temperature between +20°C and +30°C, a warm-up period at least 30 minutes are necessary. This oscilloscope is operating at an ambient temperature between 0°C and +50°C only.

Vertical System:

Channel 1(CH1) and Channel 2(CH2) 2mV/div to 5V/div

Accuracy: $\pm(3\% \times \text{Readout} + 0.05 \text{ div} \times \text{Volts/div})$

Bandwidth: DC ~ 150MHz (-3dB) for 72-7235

AC couple, 10Hz~150MHz (-3dB) for 72-7235

Rise time: <2.3ns for 72-7235

Input Coupling: AC, DC & Ground

Input Impedance : $1\text{M}\Omega \pm 2\%$, ~22pF

Polarity: Normal & Invert

Maximum Voltage Between Signal and 300V (DC + AC peak), CATII

Common at input BNC

Waveform Signal Process: CH1 - CH2、CH1 + CH2、FFT

Offset Range:

2mV/div ~ 50mV/div: $\pm 0.5\text{V}$

100mV/div ~ 500mV/div: $\pm 5\text{V}$

1V/div ~ 5V/div: $\pm 50\text{V}$

Bandwidth Limit: 20MHz (- 3dB)

Trigger

Sources: CH1、CH2、LINE、EXT.

Modes: Auto-Level、AUTO、NORMAL、SINGLE、TV、Time-delay、

Event-delay、Edge、Pulse Width

Time Delay Range: 100ns to 1.3ms

Events Delay Range 2 to 65000

Start Trigger Level: $\pm 12\text{V}$ adjustable

(For USER Mode)

Coupling: AC、DC、LFrej、HFrej、Noise rej

Sensitivity:

DC ~ 25MHz: Approx. 0.35div or 3.5mV

25MHz ~ 150MHz: Approx. 1.5div or 15mV

TV: TV trigger sensitivity: 0.5 division of synch signal

External Trigger

Range: DC : $\pm 15\text{V}$, AC : $\pm 2\text{V}$

Sensitivity

DC ~ 30MHz~ 50mV

30MHz ~ 150MHz~ 100mV

Input Impedance: $1\text{M}\Omega \pm 2\%$, ~ 22pF

Maximum Input: 300V (DC + AC peak), CATII

Horizontal

Range: 1ns/div ~ 10s/div (1-2-5 increments)

Modes: Main, Window, Window Zoom, Roll, X-Y

Accuracy: 0.01%

Delay Range:

Pre-trigger: 20 div maximum

Post-trigger 1000 div

X-Y Mode:

X-Axis Input: Channel 1 (CH1)

Y-Axis Input: Channel 2 (CH2)

Phase shift: ± 3 at 100kHz

INTERIM DRAWING
NOT RELEASED

Signal Acquisition System

Real-time Sample Rate: 150MSa/s maximum on each channel
Equivalent Sample Rate: 25GSa/s E.T. maximum on each channel
Vertical Resolution: 8 Bits
Record Length / Channel: 125k Points
Single Shot Record Length: 125k Points
Single Shot Bandwidth: 10MHz
Acquisition Mode: Sample, Peak Detect, Average, Accumulate
Peak Detection: 10ns (500ns/div ~ 10s/div)
Average: 2, 4, 8, 16, ..., 256

Cursors and Measurement

Automated Voltage Measurement: V_{pp} , V_{amp} , V_{avg} , V_{rms} , V_{hi} , V_{lo} , V_{max} , V_{min}
Automated Time Measurement: Freq, Period, Rise Time, Fall Time, Positive Width, Negative Width, Duty Cycle
Cursors Measurement: Voltage difference between cursors (ΔV)
Time difference between cursors (ΔT)
Frequency different between cursor ($1/\Delta T$)

Trigger Frequency Counter

Readout Resolution: 6 digits
Accuracy: $\pm 2\%$
Signal Source: All available trigger source except the Video trigger mode

Control Panel Functions

Autoset: "Autoset" adjust Vertical VOLT/DIV, Horizontal SEC/DIV, and Trigger level automatically
Save/Recall: Up to 15 sets of measurement conditions can be saved and recalled
Waveform Trace Save/Recall: 2 sets of waveform can be saved and recalled

Display System

LCD Type: 5.7 inch Mono LCD (320 x 240)
Waveform Display Graticule: 8 x 10 divisions,
8 x 12 divisions (menu off)

Display Contrast: Adjustable

Power Source

Line Voltage Range: 100V ~ 240V AC, auto selection
Line Frequency: 48Hz ~ 63Hz Power
Consumption: 45 Watts, 65VA maximum, with Fan
Fuse Rating: 2 Ampere Slow, 250V

Interface

Centronics Port: A 25-pin IBM PC type, parallel printer interface
Printer Compatibility:
HP LaserJet with HP PCL5 Black & white @150x150dpi
HP DeskJet Black & white @150x150dpi
Epson InkJet with ESC/P2 Black & white @180x180dpi
Epson Dot Matrix Printer Black & white @180x180dpi

RS-232 Interface: A DB 9-pin male DTE RS-232 interface

USB Interface: USB 1.1 & USB 2.0 Full speed compatible.

Device only, not support USB printers

Miscellaneous

Probe Calibration Output: 2Vpp $\pm 3\%$
Probe: 2 sets
Overall Dimensions: 310(W) x 142(H) x 254(D) mm
Weight: Approx. 4.1 kg

Atmospherics

Ambient Temperature
Operating: 0°C ~ 50°C
Storage: -20°C ~ 70°C

Relative Humidity

Operating: 80% R.H @ 35°C
Storage: 80% R.H. @ 70°C

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SPC-F004.DWG

SIZE DWG. NO.

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72-7235

ELECTRONIC FILE

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REV

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SCALE: NTS

U.O.M.: Millimeters

SHEET: 3 OF 3