11. SPECIFICATIONS

The following specifications are applicable to the VC-6025, and VC-6045 oscilloscopes unless otherwise noted.

o CRT

Graticule:	6-inch, with internal graticule 0%, 10%, 90% and 100% markers 8 x 10 DIV (1 DIV = 1cm)
Phosphor:	P31
Accelerating potential:	17 kV approx. (12 kV approx. for the VC-6025)
External intensity modulation:	Coupling: DC coupling Voltage: 5 V or more Maximum input voltage: 30 V (DC+AC peak) or 30 Vp-p AC at 1 kHz or less Bandwidth: DC to 5 MHz

o VERTICAL DEFLECTION SYSTEM

Sensitivity:	2 mV/DIV to 5 V/DIV ±3% (switchable in 11 steps) Continuously variable
Bandwidth:	DC to 100 MHz -3dB (DC to 50 Hz -3dB for the VC-6025) 2 mV/DIV : DC to 20 MHz -3dB (DC to 10 MHz -3 dB for the VC-6025) AC low pass : 10 Hz -3 dB
Rise time:	3.5 ns approx. (5.9 ns approx. for the VC-6025) 2 mV/DIV : 17.5 ns approx. (35 ns approx. for the VC-6025)
Delay time:	Leading edge can be monitored

Maximum input voltage:	400 V (DC+AC peak) at 1 kHz or less
Input coupling:	AC, DC, GND
Input impedance:	1 MΩ ±1.5%, 23 pF ±3 pF
Display modes:	CH1, CH2, DUAL, CHOP (250 kHz approx.), ADD (DIFF mode can be established when the CH2 is in the INVERT mode.)
Bandwidth limiting function:	20 MHz (10 kHz for the VC-6025)
Polarity selection	+, - (CH2 only)
Common-mode rejection ratio:	20 dB minimum at 20 MHz
X-Y operation:	REAL TIME mode: X-axis, Y-axis selectable STORAGE mode: X-axis = CH1, Y-axis = CH2
Sensitivity:	X axis: CH1, CH2 2 mV to 5 V/DIV ±5% EXT 0.1 V/DIV ±5% EXT÷10 1 V/DIV ±5% Y axis: 2 mV to 5 V/DIV ±3%
Phase error:	3^{o} or less from DC to 50 kHz
X bandwidth:	DC to 500 kHz (-3 dB)

o HORIZONTAL DEFLECTION SYSTEM

Sweep time	
* REAL TIME mode	
A(main) sweep:	50 ns/DIV to 0.5 s/DIV Continuously variable (UNCAL)
B(delay) sweep	50 ns/DIV to 50 ms/DIV
* STORAGE mode	
A(main) sweep:	50 ns/DIV to 50 s/DIV 50 ns/DIV to 2 μs/DIV available only for a repetitive waveform 0.2 s/DIV to 50 s/DIV only for ROLL mode

B(delay) sweep: 2.5 µs/DIV to 50 ms/DIV
(5 µs/DIV to 50 ms/DIV for the VC-6025)

Accuracy: X1: ±3%, X10 MAG: ±4%

Holdoff time: Variable

Delay time: 1 µs to 5s

Delay jitter: 1/20,000 or less

Sweep magnification: X10

Maximum sweep rate: 5 ns/DIV

Alternate separation: Variable (REAL TIME only)

Trigger lock function: Provided

Auto range function: Provided

o TRIGGERING

Trigger mode: Trigger, auto trigger

Trigger source: CH1, CH2, EXT (AC,DC,DC÷10), LINE

TV trigger: Exclusive sync separator circuit provided

Sensitivity: SYNC signal

INT: 1 DIV or more

EXT: 200 mVp-p or more

Trigger sensitivity:

NORM mode:

Frequency	DC to 20 MHz	20 to 100 MHz (20 to 50 MHz for the VC-6025)
INT	0.35 DIV	1.5 DIV
EXT	50 mV	150 mV

AUTO mode:

Frequency	30 to 100 Hz	100 Hz to 20 MHz	20 to 100 MHz (20 to 50 MHz for the VC-6025)
INT	1.5 DIV	1 DIV	1.5 DIV
EXT	150 mV	100 mV	150 mV

Trigger level variable range:	AUTO: Automatically corresponds to the trigger signal
	NORM:
	INT: ±4 DIV or more
	EXT: ±0.4 V or more
	EXT÷10: ±4 V or more
Slope:	+, -
External input:	Impedance: 1 MΩ ±5%, 25pF ±6 pF
	Voltage: 400 V (DC+AC peak) at 1 kHz

o READOUT FUNCTION

Panel setting display:	Vertical axis: V/DIV, UNCAL, probe conversion
	Sweep speed: S/DIV, UNCAL, MAG (converted value)
	Other: Delay time, X-Y, TRIGGER, No. of averaging

o CURSOR READOUT

Function:	Voltage difference ΔV : Δ-REF
	Time difference ΔT : Δ-REF
	Frequency 1/ΔT : Δ-REF

o EXTERNAL OUTPUT

Trigger signal out:	Output voltage : 25 mV/DIV approx. (Full scale on the CRT) 50-ohm termintation
	Frequency response: DC to 10 MHz (-3 dB)
	Output impedance : 50 ohms approx.

o CALIBRATOR

Waveform:	1 kHz ±20%, square wave
Voltage:	0.5 V ±1%

DIGITAL STORAGE FUNCTIONS

o WAVEFORM DATA STORAGE

Memory capacity

Display memory:	1000 words x 4	
Save memory:	1000 words x 2	
Acquisition memory:	Single trace	2.5 µs/DIV to 50 s/DIV --- 4000 words
		(5 µs/DIV to 50 s/DIV --- 2000 words for the VC-6025)
	Single trace	50 ns/DIV to 2 µs/DIV --- 1000 words
	Dual trace	2.5 µs/DIV to 50 s/DIV --- 2000 words/CH
	Dual trace	50 ns/DIV to 2 µs/DIV --- 1000 words/CH

Vertical resolution:	8 bits/10 DIV
Horizontal resolution:	100 data/DIV

Maximum sampling rate:

VC-6045:	40 Msps, one-channel sampling 40 Msps, two-channel alternate sampling
VC-6025:	20 Msps, two-channel alternate sampling

Sampling rate depends on the time range.

Maximum storage frequency
A single-shot signal
(Maximum amplitude
error: 30% or less): 5 MHz
A repetitive signal
VC-6045: 100 MHz (20 MHz at 2 mV/DIV)
VC-6025: 50 MHz (10 MHz at 2 mV/DIV)

o DATA ACQUISITION

NORM storage mode:	Updates a picture on the CRT at each triggering.
AVG mode:	Averages input signals by the selected number of average and displays the result after the averaging has reached the selected number. (Number of average: 4 or 16)
ROLL mode:	Shifts data from right to left continuously on the CRT. (The updating point is the right end.)
HOLD mode:	Holds the waveform displayed on the CRT.
SINGLE sweep:	Performs an operation of the NORM storage, or AVG mode once at each pressing the SINGLE RESET switch in the HOLD mode, and updates a picture.
o DATA SAVE:	Up to two waveforms can be saved. Two stored waveforms can be displayed with the two sampling waveforms.
o PRETRIGGER:	Variable (in 0.1 DIV steps)
o PLOTTER OUTPUT:	Hard copy is available by the HP-GL through RS-232C. 6 colors are switchable.
o EXT INPUT:	Provided with the RS-232C interface as standard.

o MAGNIFYING DISPLAY: A storage waveform can be magnified up to 10 times in the horizontal direction.

o MEMORY BACK-UP: Only a save memory can be backed up for approx. 48 hours.

o POWER SUPPLY

Voltage:	90 V to 250 V AC
Frequency:	48 to 440 Hz
Power consumption:	50 W approx.

o ENVIRONMENT

Operating temperature:	0 to 40 ^{o}C
Operating humidity:	45 to 85%
Specification guaranteed temperature:	10 to 35^{o}C
Safe storage temperature:	-20 to +70^{o}C
Safe storage humidity:	35 to 85% (70% or less in the ambient temperature of 50^{o}C)

o DIMENSIONS AND WEIGHT

Dimensions:	275(W) x 130(H) x 360(D) mm approx. (10.8(W) x 5.1(H) x 14.2(D) in. approx.)
Weight:	7 kg approx. (15.4 lb. approx.)