
INTRODUCTION

The model FS-.CS- series oscilloscope is a dual channel, multiple testing application equipment. It built-in at least 2 testing equipment in one.

The oscilloscope is a laboratory-grade instrument that is ideal for the wide range of measurements typically found in electronics, development and scientific research laboratories, some of its outstanding features are :

FS-404 — a 40MHz analog oscilloscope built-in a 50MHz, 5 digits, Auto-Range, Auto Gate-time Counter and the wave form on the CRT at the meanwhile when the input signal is triggering, Or the built in counter can be independent operated by input the signal form the EXT TRIG input BNC.

FS-409 — a 40MHz analog oscilloscope built-in a 5MHz, Function Generator and a 50MHz, Auto-Range, Auto Gate-time Counter, In the other word, FS-409 contain FS-406 and CS-404 in one. Its Function Generator and counter can be operated independently Or jointly, For example, the display of the counter can be the signal of the output of the Function Generator or in signal which been triggering by the oscilloscope and display the wave form on the CRT.

FS-404 SPECIFICATIONS

CRT

Type : 6-inch rectangular with integral graticule,
P31 phosphor.

Display Area : 8 x 10 div (i div = 1 cm).

Accelerating Voltage : 2 kV.

Phosphor : P31.

Trace Rotation : Electrical, front panel adjustable.

VERTICAL AMPLIFIERS (CH 1 and CH 2)

Sensitivity : 5 mV/div to 5 V/div, 1 mv/div to 1 V/div
at X5 MAG.

Attenuator : 10 calibrated steps in 1-2-5 sequence.
Variable control provides fully adjustable
sensitivity between steps; range 1/1 to at
least 1/3.

Accuracy : $\pm 3\%$, 5 mV to 5 V/div; 5%, at X5 MAG.

Input Resistance : $1 \text{ M}\Omega \pm 2\%$.

Input Capacitance : $25 \text{ pF} \pm 10 \text{ pF}$

Frequency Response :

5 mV/div to 5 V/div:

DC to 40 MHz (-3 dB).

X5 MAG :

DC to 10 MHz (-3 dB).

Rise Time :

8.8 nS; 35 nS at X5 MAG.

Overshoot : Less than 5%.

Operating Modes :

CH 1 : CH 1, single trace.

CH 2 : CH 2, single trace.

DUAL : CH 1 and CH 2, dual trace.

Alternate or Chop selectable at
any sweep rate.

ADD : Algebraic sum of CH 1+ CH 2.

Chop Frequency : Approximately 500KHz.

Polarity Reversal : CH 2 invert.

Maximum Input Voltage : 400 V (dc + ac peak).

HORIZONTAL AMPLIFIER

(Input through channel 1 input)

X-Y mode :

CH 1=X axis.

CH 2 = Y axis.

Sensitivity : Same as vertical channel 2.

Input Impedance : Same as vertical channel 2.

Frequency Response:

DC to 1 MHz(-3 dB).

X-Y Phase Difference : 3° or less at 50 kHz.

Maximum Input Voltage : Same as vertical channel 1.

SWEEP SYSTEM

Operating Modes :

Main Time Base, X-Y Operating.

Main Time Base : 0.1 $\mu\text{S}/\text{div}$ to 2.0 S/div in 1 -2-5
sequence, 23 steps. Variable control provides fully
adjustable sweep time between steps.

Accuracy : $\pm 3\%$, except $\pm 6\%$ on 0.2 S/div and $\pm 20\%$
on 0.1 $\mu\text{S}/\text{div}$.

Sweep Magnification : X10 $\pm 10\%$.

Holdoff : Continuously adjustable for main time base f
NORM to 5 times normal.

TRIGGERING

Trigger Modes :

AUTO (free run), NORM, TV-V, TV-H.

Trigger Source :

CH 1, CH 2, Alternate, EXT, LINE.

Slope :

(+)or(-)