

# 20MHz DUAL TRACE OSCILLOSCOPE

## Model – AN102-B



### Salient Features

- 20MHz / 25MHz Band Width.
- 10 times sweep magnification.
- TV Synchronization, X-Y mode.
- Japanese electronic encoder, light, handy and reliable.
- Fully sealed durable vertical mode switch.
- ALT Triggering Function, simultaneous observation of two independent signals.
- MOS-600CF series have built-in 6 digit Frequency Counter.



### Technical Specifications

#### v VERTICAL AXIS

Sensitivity	: 5mv~5V/DIV, 10 steps in 1-2-5 sequence
Sequence Sensitivity accuracy	: ≤3%
Vernier vertical sensitivity	: ≤ 1/2.5 of panel-indicated value
Frequency bandwidth	: DC ~ 20MHz / DC ~ 25MHz (-3dB)
Vertical modes	: CH1 single channel. CH2 single channel
DUAL	: CH1 and CH2 are displayed ALT or CHOP selectable at any sweep rate.
ADD	: CH1+CH2 algebraic addition.
Chopping repetition freq.	: Approx.250KHz
Input coupling	: AC , GND , DC .
Maximum input voltage	: 300V peak(AC: frequency 1KHz or lower) When set probe switch at 1:1,the maximum effective readout is 40Vpp (14Vrms at sine wave),or set probe switch at 10:1,the maximum effective readout is 400Vpp (140Vrms at sine wave).
Common mode rejection ratio	: 50:1 or better at 50KHz sinusoidal wave.(when sensitivities of CH1 and CH2 are set equally)
Isolation between channels	: > 1000:1 at 50 MHz (at 5mV/DIV range): > 30:1 at 20MHz

## v TRIGGERING

Triggering source	:	CH1,CH2,LINE,EXT(CH1and CH2 can be selected only when the vertical mode is DUAL or ADD. in ALT mode, if the TRIG.ALT switch is pushed in, it can be use for alternate triggering of two different source.
Coupling: AC	:	20Hz to full bandwidth
Slope	:	+/-
Sensitivity	:	20Hz-2MHz: 1.0DIV, TRIG-ALT: 2DIV,EXT : 200mV 2MHz-20MHz: 1.5DIV 20MHz or higher ::2.0DIV TRIG-ALT: 3DIV, EXT:800mv TV:Sync pulse more than 1 DIV (EXT:1V)
Triggering modes	:	AUTO: NORM: TV-V: TV-H: (Both TV-V and TV-H synchronize only when the synchronizing signal is negative)
EXT triggering signal input		
Input impedance	:	1M ohm//approx.25pF
Max input voltage	:	Approx:300V(DC+AC peak), AC: frequency not higher than 1KHz.

## v HORIZONTAL AXIS

Sweep time	:	0.2 $\mu$ Sec-0.5Sec/DIV, 20Steps in 1-2-5 sequence.
Sweep time accuracy	:	$\pm$ 3%
Vernier sweep time control	:	$\leq$ 1/2.5 of panel-indicated value.
Sweep magnification	:	10 times
$\times$ 10MAG sweep time accuracy	:	$\pm$ 5% (20nsec-50nsec are uncalibrated)
Linearity	:	$\pm$ 3%, $\times$ 10MAG: $\pm$ 5%(20ns and 50ns are uncalibrated)
Position shift caused by $\times$ 10 MAG	:	Within 2 DIV, at CRT screen center.

## v X-Y MODE

Sensitivity	:	Same as vertical axis .(X-axis:CH1 input signal,Y-axis:CH2 input signal)
Frequency bandwidth	:	DC to at least 500KHz
X-Y phase difference	:	$\leq$ 3 $^{\circ}$ at DC-50KHz

## v CALIBEATION VOLTAGE

Waveform	:	positive-going square wave
Frequency	:	Approx. 1KHz
Output voltage	:	2Vp-p $\pm$ 2%

## v CRT

Type	:	6-inch rectangular type, internal graticule
Phosphor	:	P31
Acceleration voltage	:	Approx 2KV (20MHz) 12KV (40MHz)
Effective screen size	:	DIV (1 DIV= 10mm ( 0.39in )
Graticule	:	internal
Trace rotation	:	provided

## v Mechanical Specification

Dimension	:	51.5*39*25cm
Net weight	:	8kg
Gross weight	:	10kg

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Specifications subject to change without notice.