

TOS2000C Series

Features

- ✓ Dual channel 20MHz/40MHz/50MHz
- ✓ 10 times sweep magnification
- ✓ TV synchronization; X-Y mode
- ✓ High illumination internal graticule CRT
- ✓ Japanese encoded switch, reliable and durable
- ✓ Fully sealed durable attenuation switch
- ✓ ALT triggering function, enabling simultaneous observation of two independent signals

Product photo

TOS-2020CH



TOS-2020CF



With built-in 6 digits frequency counter

TOS-2020CT



With component test function

Specifications

Model	TOS-2020CH TOS-2020CF TOS-2020CT		TOS-2040CH TOS-2040CF TOS-2040CT		TOS-2050CH TOS-2050CF TOS-2050CT				
Vertical system									
Sensitivity	5mV~5V/DIV, 10 steps in 1-2-5 sequence								
Sensitivity accuracy	≤3%								
Vernier sensitivity	1/2.5 or less than panel indicated value								
Bandwidth	DC (AC 10Hz)~20MHz		DC (AC 10Hz)~40MHz		DC (AC 10Hz)~50MHz				
AC coupling	<10Hz (at 100kHz, 8DIV, frequency response -3dB)								
Rise time	Approx. 17.5ns		Approx. 8.75ns		Approx. 7ns				
Input impedance	Approx. 1MΩ//Approx. 25pF								
DC balance shift	5mV~5V/DIV: ±0.5DIV								
Vertical mode	CH1, CH2, DUAL (ALT/CHOP), ADD, CH2 INV								
Chopping repetition frequency	Approx. 250kHz								
Input coupling	AC, GND, DC								
Max. Input voltage	400V peak-peak, AC frequency≤1kHz								
Common mode rejection ratio	>50:1 at 50kHz sine wave (set CH1 and CH2 at same sensitivity)								
CH2 INV BAL	Balanced point variation≤1DIV (referred to graticule center)								
Horizontal system									
Sweep time base	0.2us~0.5s/DIV, 20 steps in 1-2-5 sequence								
Sweep time base accuracy	±3%, X10MAG: ±5% (20ns~50ns/DIV uncalibrated)								
Vernier sweep time base	≤1/2.5 of panel indicated value								
Sweep magnification	X10 (Max. sweep time base 20ns/DIV)								
Position shift caused by X10MAG	Within 2DIV at CRT screen center								
Linearity	±5%, X10MAG: ±10% (0.2s~1us)								
Trigger system									
Trigger mode	AUTO, NORM, TV-V, TV-H								
Trigger level lock	Not provided								
Trigger source	CH1, CH2, LINE, EXT								
Trigger coupling	AC: 20Hz to full bandwidth								
Polarity	"+" or "-" polarity								
Sensitivity	Frequency	20Hz~2MHz		2MHz~20MHz		20MHz~40MHz		40MHz~50MHz	
	CH1, CH2	1DIV		1.5DIV		2.5DIV		3DIV	
	ALT	2DIV		3DIV					
	EXT	200mV		800mV					
	TV: Sync pulse>1DIV (EXT: 1V)								
External trigger input	Input impedance: Approx. 1MΩ//Approx. 25pF Max. input voltage: 400V (DC+AC peak), AC frequency≤1kHz								
X-Y mode									
Sensitivity	5mV~5V/DIV, ±3%								
X-axis bandwidth	DC~500kHz (-3dB)								
X-Y phase error	≤3° at DC~50kHz								

Output signal		
Calibration signal	Waveform	Positive-going square wave
	Frequency	Approx. 1kHz
	Duty ratio	<48:52
	Output voltage	2Vpp±2%
	Output impedance	Approx. 1kΩ
Frequency counter (only for TOS-2020CF, TOS-2040CF, TOS-2050CF)		
Display	6 digits LED	
Display accuracy	0.01%	
Component test (only for TOS-2020CT, TOS-2040CT, TOS-2050CT)		
Testing subject	Resistor, capacitor, coil, diode, zener or simple combination of the components	
Testing voltage	Approx. 9Vac pp	
Testing frequency	50/60Hz	
Testing current	Approx. 0.6mA	
CRT		
Display	6" rectangle, internal graticule, 8x10DIV (1DIV=1cm)	
Phosphor	P31	
Accelerating voltage	Approx. 2kV (20MHz); Approx. 12kV (40MHz)	
Trace rotation	Adjustable at front panel	
General		
Power source	AC110V/220V±10% selectable, 50/60Hz, Max. 35VA	
Accessories	Power cord x1, Operation manual x1, Probe x2 Component test lead x1 (only for TOS-2020CT, TOS-2040CT, TOS-2050CT)	
Dimension	310x150x455mm	
Weight	Approx. 8kg	