

## BS8020

### 20MHz Universal Oscilloscope

The BS8020 Analog high performance series has a 1mV high vertical amplifier sensitivity, its' ultra stable performance on TV-H and TV-V synchronization trigger circuit is making the series so reliable to gain user confidence. The 2 channel 4 traces display and trigger level lock are standard offers from this series that are not common to see in this range at the market.



#### Feature:

- 2 Channel, 1mV - 5V/div
- 2 Channel / 4 Trace
- Timebase: 0.2s – 50ns/div
- Triggering DC - 20MHz
- 20MHz BW limiter
- TV-H & TV-V Synchronization
- CE Approved, CATII 600V CE-EMC & LVD

## Specifications

### Vertical System

Sensitivity		5mV/DIV ~ 5V/DIV $\pm 3\%$ , 1mV/DIV ~ 1V/DIV $\pm 3\%$ at $\times 5$ MAG 1-2-5 step, 10 calibrated steps
Bandwidth(-3dB)	$\times 1$	DC: 0 ~ 20MHz AC: 10Hz ~ 20MHz
	$\times 5$ MAG	AC: 10Hz ~ 7MHz DC: 0 ~ 7MHz
Rise Time		$\leq 17.5$ ns
Overshot		$\leq 5\%$
Damp		$\leq 5\%$
Input Impedance		1M $\Omega$ $\pm 2\%$ , 25pF $\pm 3$ pF (direct), 10M $\Omega$ $\pm 5\%$ , 25pF approx 17p (by probe)
Maximum Input Voltage		300V (DC + AC peak, direct), 400V(DC + AC peak, by probe)
Operation Mode		CH1, CH2, ALT, CHOP, ADD, DUAL, X-Y
Coupling Mode		AC, GND, DC
Slope Inverting		CH2 Only

### Trigger System

Trigger Sensitivity		Frequency	INT	EXT
	NORM	10Hz – 20MHz	2 DIV	300mV
	AUTO	20Hz – 20MHz	2 DIV	300mV
	LOCK	50Hz – 15MHz	2 DIV	300mV
Ext. Trigger Input Impedance		1M $\Omega$ $\pm 2\%$ , 25pF $\pm 3$ pF		
Ext. Trigger Maximum Input Voltage		400V (DC+AC peak)		
Trigger Sources		INT/CH2/LINE /ALT/EXT		
Trigger Mode		NORM/AUTO/TV-V/TV-H		

**Horizontal System**

Sweep Mode	× 1, ×5; ×1, ×5 ALT
Sweep Time	0.1μs to 0.2s/DIV ± 5%, in 20 calibrated steps (1-2-5seq)
Sweep Expansion	20ns/Div to 40ms/DIV
Alt. MAG Trace	Maximum 4 Traces
Trace Separate	Minimum 1.5 DIV

**CH1 Output**

Output Voltage	Minimum 20mV/DIV
Output Impedance	Approximately 50Ω
Bandwidth (-3dB)	50Hz to 5MHz

**X-Y Mode**

Sensitivity	Same as the vertical system
Input Impedance	1MΩ ± 2%, 25pF ± 3pF
Bandwidth (-3dB)	DC: 0 ~ 500kHz
X-Y Phase Difference	≤ 3° (DC ~ 50kHz)

**Z Axis System**

Input Signal	± 5V (NEGATIVE INCREASES INTENSITY)
Band Width	DC ~ 2MHz
Input Impedance	33kΩ
Maximum Input Voltage	30V (DC + AC peak), MAX AC 1kHz

**Calibration Signal**

Waveform	Symmetric Square Wave
Amplitude	0.5V ±2%
Frequency	1kHz ±2%
Duty	≥ 48:52



**CRT**

Display Area	8 × 10DIV 1DIV=10mm
Display Color	Green

**Power Source**

Voltage Range	230V ±10%
Frequency	50Hz ±5Hz
Power Consumption	35W

**Physical Features**

Weight	7.2kgs
Dimensions	132H × 321W × 376D mm3

**Working Environment**

Working Temperature	10°C ~ 35°C
Working Humidity	45% ~ 85%
Storage Temperature	-20°C ~ 70°C
Storage Humidity	35 ~ 85%RH

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