LCR200 Passive Component LCR Meter

L, C, R measurements with test Frequency up to 100kHz

- Simultaneous 20,000/2,000 count backlit display of the primary parameter (L, C or R) with the secondary parameter of Q (quality), D (dissipation) R (resistance), θ (phase), or ESR (equivalent series resistance)
- Auto Select measurement function with 1kHz default test frequency
- Five test frequencies
- Set Hi/Lo limits using absolute values or percentage limits
- Relative function, Auto power off with disable, Low battery and over-range indicators
- Parallel or Series equivalent circuit
- Built-in test fixture or use external test leads
- Open and Short calibration removes unwanted stray impedances from the measurement
- Complete with test leads and 9V battery; 1 year warranty
- Optional SMD Tweezer (LCR203) and plug-in SMD Component Fixture (LCR205)

SPECIFICATIONS	RANGE	BASIC ACCURACY
Inductance	20µH, 200µH, 2000.0µH, 20.000mH, 200.00mH, 2000.0mH, 20.000H, 200.00H, 2000.0H	±(0.5%rdg)
Capacitance	20pF, 200pF, 2000pF, 20.000nF, 200.00nF, 2000.0nF, 20.000µF, 200.00µF, 2.0000mF, 20.00mF	±(0.5%rdg)
Resistance	20.00Ω, 200.00Ω, 2.0000kΩ, 20.000kΩ, 200.00kΩ, 2.0000MΩ, 20.000MΩ, 200.0MΩ	±(0.5%rdg)
DF (with C)	0.000 to 999	
Q	0.000 to 999	
Phase	±90°	
Test Frequency	100Hz/120Hz/1kHz/10kHz/100kHz	
Dimensions/ Weight	7.6 x 3.5 x 1.6" (193 x 88 x 41mm)/ 14.8oz (420g)	

ORDERING		
LCR200	Passive Component LCR Meter	$259.99
LCR205	SMD Component Fixture for Model LCR200	$79.99

LCR203 — Optional SMD Tweezer for sorting out SMD components

LCR205 — Optional SMD Component Fixture

380193 Passive Component LCR Meter

Complete with software, cable, test leads with alligator clip, 9V battery, and protective holster; 1yr warranty

Measures Inductance, Capacitance, and Resistance with secondary parameter

- Simultaneous 20,000/10,000 count backlit display of the primary parameter (L, C or R) with the secondary parameter of Q (quality), D (dissipation) or R (resistance)
- Set Hi/Lo limits using absolute values or percentage limits
- Parallel or Series equivalent circuit
- Max/Min/Avg; Auto power off with disable; Automatic blown fuse indication
- Built-in test fixture or use external test leads
- Open and Short Zero removes unwanted stray impedances from the measurement
- Relative mode, zero, or supplied reference

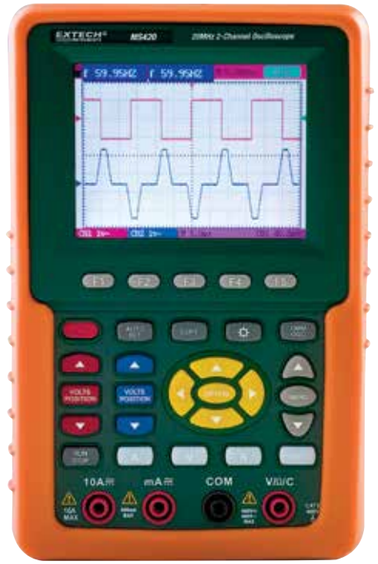
SPECIFICATIONS	RANGE	BASIC ACCURACY
Inductance	2000.0µH, 20.000mH, 200.00mH, 2000.0mH 20.000H, 200.00H, 2000.0H, 10000H	±(0.7%rdg)
Capacitance	2000.0pF, 20.000nF, 200.00nF, 2000.0nF, 20.000µF, 200.00µF, 2000.0µF	±(0.7%rdg)
Resistance	20.000Ω, 200.00Ω, 2.0000kΩ, 20.000kΩ, 200.00kΩ, 2.0000MΩ, 20.000MΩ	±(0.5%rdg)
DF (with C)	0 to 0.9999	±(0.7%rdg)
Q	0 to 9999	±(1.2%rdg)
Test Freq.	120Hz and 1kHz	
Dimensions/Weight	7.56x3.58x2.1" (19.2x9.1x5.25cm) / 12.87oz (365g)	

ORDERING		
380193	Passive Component LCR Meter	$219.99
153117	117VAC adaptor	$31.99
153220	230VAC adaptor	$26.99

CALIBRATION TRACEABLE TO NIST

N Indicates products that are available with optional calibration traceable to NIST. See page 160 for a complete listing.

MS420 20MHz 2-Channel Digital Handheld Oscilloscope



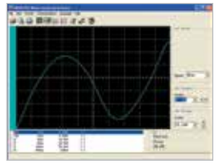
3.8" (96mm) color LCD display simplifies viewing multiple waveforms

- 20MHz bandwidth
- Auto-set function optimizes the position, range, timebase, and triggering to assure a stable display of virtually any waveform
- Peak Detect function for 50ns glitch capture
- XY Mode
- Five Automatic Measurements: Frequency, Duty Cycle, Average, Peak to Peak, RMS
- Waveform Math: Add, Subtract, Multiply, and Divide
- Average Mode for smoothing waveforms
- Persistence Mode for observing dynamic signals
- Store and recall up to 4 waveform screens and setups
- USB interface and PC software for transferring waveforms and data

SPECIFICATIONS	
Display Size	3.8" (96mm) color LCD; 320 x 240 pixels
Bandwidth	20MHz
Real time sample rate	100MS/s
Risetime	17.5ns
Channels	2
Record Length	6K points per channel
Glitch Capture	50ns
Vertical Sensitivity	5mV to 5V/div
Vertical Resolution	8 bits
Timebase Range	5ns to 5s/div
Sample Mode	Sample, Average, Peak Detect
Trigger Modes	Free Run, Single Shot, Edge, Video
Trigger Source	CH1, CH2
Trigger Coupling	AC, DC
Input impedance	1MΩ/20pF
Max Input Voltage	400V (peak)
Cursor Measurement	Voltage and time
True RMS MultiMeter Functions	
AC/DC Voltage	400mV, 4V, 40V, 400V
AC/DC Current	40mA, 300mA, 20A
Resistance	400Ω, 4kΩ, 40kΩ, 400kΩ, 40MΩ
Capacitance	51.2nF to 100µF
Diode and Continuity	Yes
PC Interface	USB cable
Power Supply	6 hours Li-ion rechargeable battery; AC Adaptor/charger
Dimensions/Weight	7x4.4x1.6" (180x113x40mm) / 24.3oz (690g)

ORDERING		
MS420	20MHz 2-Channel Oscilloscope	$949.00
PWRCORD-MS420	European Power Cord for MS420	$15.99

Complete with two 1X/10X oscilloscope probes, test leads, Windows® compatible software, capacitor measuring module, adjustment screwdriver, universal AC adaptor, and carrying case; 1 year warranty



Software PC screens display analog bargraph and graphical waveform