

Comparison of LCR-Reader-MPA, LCR-Reader-MP, LCR-Reader and Smart Tweezers

Feature	LCR-Reader-MPA	LCR-Reader-MP	LCR-Reader	Colibri	ST-5S
Basic Accuracy	0.10%	0.10%	0.50%	0.50%	0.20%
Automatic L, C, R	Yes	Yes	Yes	Yes	Yes
Manual L, C, R	Yes	Yes	No	Yes	Yes
Designated ESR	Yes	Yes	Yes	Yes	Yes
Variable Tolerances	1, 5, 10, 20%	1, 5, 10, 20%	N/A	N/A	1, 5, 10, 20%
Continuity/Diode test	Yes	Yes	No	No	Yes
Parasitic Offset subtraction	Yes	Yes	No	No	Yes
LED Testing	Yes	Yes	No	No	No
Li-Ion battery	Yes	Yes	Yes	Yes	Yes
Screen Type	Back-lit LCD	Back-lit LCD	OLED	OLED	OLED
Weight	1.1 oz.	1.5 oz.	1 oz.	1 oz.	1 oz.
NIST Traceable Calibration	Yes	Yes	Yes	Yes	Yes
Navigation	4-way joystick button	Jog-wheel	One-button	One-button	4-way joystick button
Signal Generator	Sine up to 100 kHz	Sine, Rectangle, Triangle up to 100 kHz	N/A	N/A	N/A
Technical Specs					
Test Signal Frequency	100, 120 Hz, 1, 10, 20, 30, 40, 50, 60, 75, 100 kHz	100, 120 Hz, 1, 10, 20, 30, 40, 50, 60, 75, 100 kHz	0.1, 1, 10kHz +/- 0.5%	0.1, 1, 10kHz +/- 0.005%	0.1, 0.12, 1, 10kHz +/- 0.005%
Test Signal Level	0.1, 0.5, 1.0 +/- 5% Vrms	0.45, 0.9 +/- 5% Vrms	0.45 +/- 5% Vrms	0.45 +/- 5% Vrms	0.5, 1.0 +/- 5% Vrms
Source Impedance	100 Ω/10 MΩ +/- 1%	1k Ω/10 MΩ +/- 1%	1k Ω/16k Ω +/- 1%	1k Ω/16k Ω +/- 1%	100 Ω/16k Ω +/- 1%
Typical Accuracy					
Resistance	0.1%	0.05%	0.5%	0.5%	0.2%
Capacitance	0.1%	0.1%	1%	1%	0.2%
Inductance	0.2%	0.2%	1%	1%	0.5%
Voltage DC	0.5%	0.5%	N/A	N/A	N/A
Voltage AC	5%+3	5%+3	N/A	N/A	N/A
Frequency	±(0.005%+5) Hz	±(0.005%+5) Hz	N/A	N/A	N/A
Measurement Range					
Resistance	0.05 Ω to 20 MΩ	0.05 Ω to 20 MΩ	0.1 Ω to 10 MΩ	0.1 Ω to 10 MΩ	0.05 Ω to 10 MΩ
Capacitance	0.1 pF to 680 mF	0.1 pF to 680 mF	2 pF to 5 mF	2 pF to 5 mF	0.5 pF to 5 mF
Inductance	10 nH to 100 H	20 nH to 100 H	0.5 uH to 1 H	0.5 uH to 1 H	0.5 uH to 1 H
Voltage	0.01 to 15 V	0.01 to 15 V	N/A	N/A	N/A
Frequency	25 Hz to 100 kHz	25 Hz to 100 kHz	N/A	N/A	N/A