

Updated Information: ESR70 - Atlas ESR Gold - Equivalent Series Resistance Meter

Model: ESR70

Name: Peak Atlas ESR Gold (previously Peak Atlas ESR Plus)

Summary Specification Table

ESR range: 0.00Ω to 40.0Ω

ESR accuracy: ±2% (typical)

ESR resolution (ESR<2Ω): 0.01Ω to 0.02Ω

ESR resolution (ESR>2Ω): 0.1Ω to 0.2Ω

Capacitance range: 0.3μF to 90,000μF

ESR test frequency: 50-100kHz ±4%

ESR test voltage (across 40Ω): 40mV (typical)

Operating temperature range: 15°C to 35°C (60°F to 95°F)

Battery type: AAA Alkaline (1.5V) Supplied

Display: Backlit Alphanumeric LCD

Auto-off period: 1 minute (typical)

Summary Description

The **Peak Atlas ESR Gold** is an enhanced version of the previous Peak Atlas ESR Plus. It provides instant measurement of a capacitor's ESR and its capacitance value. Using the supplied gold plated probes (removable), the **Peak Atlas ESR Gold** can measure ESR down to a resolution of 0.01Ω, up to 40Ω. It can even measure ESR for capacitors that are in-circuit. Probes are removable, allowing 2mm compatible probes to be fitted. Audible alerts are produced for various ESR levels allowing you to perform many tests in succession without having to look at the display.

- Measure ESR (even in-circuit).
- Measure capacitance (from 0.3μF to 90,000μF).
- Automatically starts analysis when the ESR70 is connected.
- Audible alerts with different tones for various ESR levels.
- ESR resolution down to 0.01Ω.
- Polarity free due to bi-directional low voltage (500mV) test span.
- Low DC resistance checking measurement (even in-circuit).
- Supplied complete with 2mm male test leads and 2mm compatible gold plated crocs.
- Test leads are ultra-durable and 45cm (18") long with 2mm plugs.
- Enhanced software compensation of cable resistance.
- Enhanced compensation for leakage or parallel resistance.

Remember, this is an improved version of the Peak Atlas ESR Plus (ESR70). This new "Gold" version does everything the "Plus" version did, but it does it better.

New Gold Features:

Improved LCD with better backlight.

10x faster capacitance measurement for large capacitors.

Enhanced user options system.

New triple-slope measurement system to vastly reduce the influence of parallel resistance and/or leakage current on capacitance measurements.

Much wider capacitance measurement range now 0.3 μ F to 90,000 μ F (was 1 μ F to 22,000 μ F).

Includes:

ESR70 - Equivalent Series Resistance Meter.

Extra-long and extra-flexible test cables (450mm of Silicone covered cable).

2mm plugs and sockets with removeable gold plated crocodile clips.

Comprehensive illustrated user guide.

AAA Alkaline cell.

Detailed Specification Table

Parameter	Min	Typ	Max	Note
Peak test current into S/C		±20mA	±23mA	
Peak test voltage, full scale ESR		±40mV	±46mV	
Peak test voltage across O/C			±5.5V	
Capacitance measurement range	0.3µF		90,000µF	1
Capacitance accuracy	±4%±0.2µF			2
Capacitance test current	1.7mA	2.0mA	2.3mA	3
	17mA	20mA	23mA	4
Capacitance measurement ΔV		±500mV		5
ESR measurement range	0Ω		40Ω	
ESR resolution for ESR < 2Ω	0.01Ω		0.02Ω	
ESR resolution for ESR > 2Ω	0.1Ω		0.2Ω	
ESR accuracy for ESR < 2Ω	±2%±0.02Ω			
ESR accuracy for ESR > 2Ω	±2%±0.2Ω			
ESR test current	±0.8mA		±23mA	
ESR test frequency	48kHz	50kHz	104kHz	5
Abuse voltage (for C < 10µF)			±275V	6
Abuse voltage (for C > 10µF)			±50V	6
Auto-Discharge voltage limit			±50V	6
Auto-Discharge RMS power		1.5W		
Battery type	AAA Alkaline, NiMh or Lithium-Iron-Disulphide			
Battery life	Typically ~1500 operations			7
Inactivity power-down period	60 seconds			
Dimensions (excluding leads)	103 x 70 x 20 mm			
Operating temperature range	15°C		35°C	8

Notes

1. The UK convention of the decimal point “.” is used in most of our products. This must not be confused with the comma thousands separator “,”.
2. Capacitance accuracy quoted for capacitance between 10µF and 10,000µF.
3. Capacitance test current of 2mA if C < ~125µF or ESR > ~10Ω.
4. Capacitance test current of 20mA if C > ~125µF and ESR < ~10Ω.
5. Subject to revision.
6. Maximum abuse voltage rated limitation of internal protection electronics. Probes, leads and unit are not certified for high voltage use.
7. Based on <1 minute per operation.
8. Also subject to acceptable LCD visibility.

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