

# Atlas ESR+

equivalent series resistance meter, with audible alerts.

Model: ESR70

**PEAK**<sup>®</sup>

electronic design ltd

**PRODUCT BRIEF**

## Simplicity

Measuring a capacitor's ESR (equivalent series resistance) is a great indicator of capacitor condition.

The *Atlas ESR+* offers instant results, just connect the probes and press test. Innovative audible alerts give you an instant feedback of the measurement results with further detail shown on the screen.

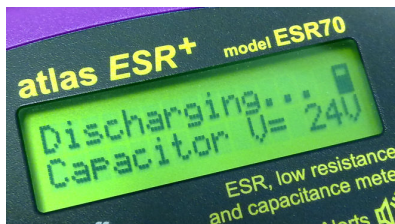
And the tones themselves are surprising pleasant, including "Bell-like" pings (a couple of different types for ESR that is below certain values), and also a "Beep-Barp" type tone for ESR that is likely to be too high. There is also a reassuring "Blip" when the measurement has started and completed.

You can even use the *Atlas ESR+* in-circuit, saving you the trouble of removing capacitors. When testing capacitors out-of-circuit, the unit will also display the capacitance.

## All You Need

This clever instrument is a great way to check the physical condition of a wide range of capacitors (it's not just capacitance that's important!).

Elevated ESR is a sure indicator that the capacitor is failing and likely to dissipate heat and perform less like a capacitor and more like a resistor at high ripple currents.



It can measure and compensate for the effects of measuring ESR in-circuit too, it also knows that you don't want to be hassled with capacitor polarity, just connect any way round.

## Unique Controlled Discharge

It's designed with the real world in mind. Some capacitors can be charged up, but the *Atlas ESR+* doesn't mind. If your capacitor is charged, the unit will automatically carry out a controlled discharge procedure before measuring the capacitance and ESR.

## Low Resistance Checking

The superb low resistance measurement capability is a great way of tracing PCB shorts.

### Feature Summary

- Measure capacitance and ESR.
- Enhanced ESR range from 0 to 40 ohms.
- Resolution down to 0.01 ohms.
- Analyses at industry standard of 100kHz.
- Capable of In-Circuit testing.
- Special tones for >40Ω, <5Ω, <1Ω, OC.
- Audible alerts can be turned on or off.
- Polarity free, connect any way round.
- Protected against highly charged capacitors.
- Supplied with comprehensive ESR look-up chart included in the user guide.

Parameter	Min	Typ	Max	Note
Peak test current into S/C		±20mA	±22mA	
Peak test voltage, full scale ESR		±40mV	±44mV	
Peak test voltage across O/C		±2.5V	±3.0V	
Capacitance measurement range	1μF		22,000μF	
Capacitance accuracy		±4% ±0.2μF		
ESR measurement range	0Ω		40Ω	2
ESR resolution for ESR < 2Ω	0.01Ω		0.02Ω	
ESR resolution for ESR > 2Ω	0.1Ω		0.2Ω	
ESR accuracy for ESR < 2Ω		±1.5% ±0.02Ω		
ESR accuracy for ESR > 2Ω		±1.5% ±0.2Ω		
Abuse voltage (for C < 10μF)			±275V	3
Abuse voltage (for C > 10μF)			±50V	3
Auto-Discharge voltage limit			±50V	
Battery type		MN21/GP23A 12V Alkaline		
Battery voltage range	8.5V	12V		
Battery voltage warning threshold		8.5V		
Inactivity power-down period		30 seconds		
Dimensions (excluding test leads)		103 x 70 x 20 mm		
Operating temperature range	10°C		40°C	1

Notes:

1. Subject to acceptable LCD visibility.
2. Subject to revision.
3. Maximum abuse voltage is limit of protection electronics. Probes, leads and unit are not certified for high voltage use.

**NEW! Universal gold plated 2mm plugs and sockets:  
Supplied with removable gold plated croc probes**



Please note that specifications of our products are subject to change without notice. E&OE.

08/2012

## Peak Electronic Design Limited

Atlas House, 2 Kiln Lane, Harpur Hill Business Park, Buxton, Derbyshire, SK17 9JL. Tel.+44 (0)1298 70012, Fax. +44 (0)1298 70046

See us on the Web: [www.peakelec.co.uk](http://www.peakelec.co.uk) Email: [sales@peakelec.co.uk](mailto:sales@peakelec.co.uk) Twitter: @peakatlas