

# 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.

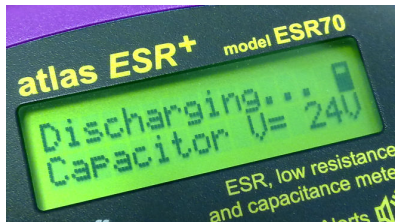
The *Atlas ESR+* offers instant results, just connect the probes and press test. Innovative audible alerts give you an instant feedback of the measurement results with further detail shown on the screen.

And the tones themselves are intuitive, including "Bell-like" tones (a couple of different types for ESR that is below certain values), and also a "High-Low" 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 measure ESR in-circuit, saving you the trouble of removing capacitors. When testing capacitors out-of-circuit, the unit will also display the capacitance.

### Capacitor Condition

This smart 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.

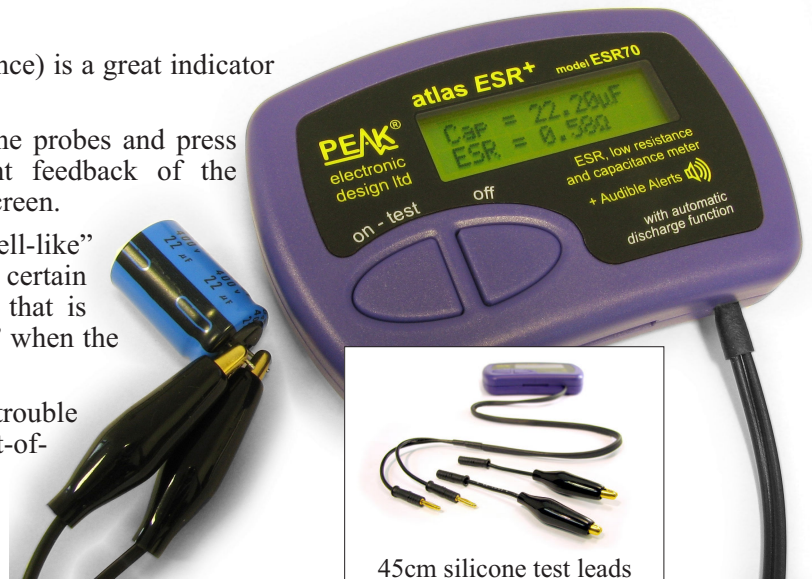


It can measure and compensate for the effects of measuring ESR in-circuit too.

There's no need to worry about capacitor polarity, just connect any way round.

### Unique Controlled Discharge

If your capacitor is charged, the unit will automatically carry out a controlled discharge procedure before measuring the capacitance and ESR. This is important because capacitors can often accumulate charge even if not powered for a long time.



45cm silicone test leads

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:

- Subject to acceptable LCD visibility.
- Subject to revision.
- 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**



### Test Frequency

ESR is measured at a test frequency of 100kHz. Capacitance is measured using DC pulses.

### Feature Summary

- Measure ESR and capacitance.
- Enhanced ESR range from 0 to 40 ohms.
- Resolution down to 0.01 ohms.
- ESR tested at industry standard 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 moderately charged capacitors.
- Supplied with comprehensive ESR look-up chart included in the user guide.

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

02/2017

## 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