

Atlas ZEN

Zener diode analyser
Model: ZEN50

PEAK
electronic design ltd

PRODUCT BRIEF

Designed and made in the UK

The *Atlas ZEN* is a unique instrument that allows you to test components that were previously very tricky to test. Now Zener diodes, avalanche diodes, transient suppressors, LEDs (even long LED strings) can be easily tested.

The *Atlas ZEN* generates short pulses of current (selectable from 2mA up to 15mA) with voltages of up to 50V. So even fairly high voltage Zeners can be properly tested.

The voltage and test current are displayed along with the component's slope resistance (sometimes known as dynamic impedance).

Test pulses are kept short to minimise any temperature rise of the component under test and also to provide very long battery life from the single Alkaline AAA cell (included).

Features

- Measure Zener voltage up to 50V.
- Selectable test currents: 2mA, 5mA, 10mA and 15mA.
- Measure slope resistance.
- Also tests LEDs, VDRs, TVSs.
- Narrow test pulses to minimise temperature rise.
- Long life from single AAA cell.
- Gold plated crocodile probes.
- Continuous measurement display (updated at 2Hz).
- Supplied with battery and guide.
- Ultra-slim and compact design.



The *Atlas ZEN* fits a curve to the Zener's V/I characteristic to determine the slope resistance:



Test long LED strings too:



Parameter	Min.	Typ.	Max.	Notes
Zener voltage range (Vz)	0.0V		50.0V	
Nominal test currents (Iz)	2mA, 5mA, 10mA, 15mA			
Set test current accuracy	±2% ±0.2mA			
Zener voltage accuracy	±1% ±40mV			
Zener voltage resolution	20mV		40mV	
O/C test voltage (pulsed)			60V	
S/C test current (pulsed)			35mA	
Test current duty cycle	0.5%	3%	3.5%	
Test pulse duration	100µs	260µs		
External abuse voltage			±50V	
Slope resistance range	0Ω		8000Ω	Iz=2mA
	0Ω		3200Ω	Iz=5mA
	0Ω		1600Ω	Iz=10mA
	0Ω		1000Ω	Iz=15mA
Displayed Slope resistance resolution		5Ω		Iz=2mA
		2Ω		Iz=5mA
		1Ω		Iz=10mA
		1Ω		Iz=15mA
Slope resistance accuracy		±2% ±10Ω		Iz=2mA
		±2% ±4Ω		Iz=5mA
		±2% ±2Ω		Iz=10mA
		±2% ±2Ω		Iz=15mA
Slope res. current span	(Iz-50%) to (Iz+50%)			
Slope resistance measurement method	Differentiation of curve that fits: (Iz-50%, Vz1), (Iz, Vz2) and (Iz+50%, Vz3)			
Measurement rate		10Hz	21Hz	
Display update rate	11Hz	21Hz	31Hz	
Auto-off period		60 seconds		
Battery type	AAA Alkaline, NiMH or Lithium-Iron-Disulphide			
Battery voltage range	1.0V		1.6V	
Battery life	Typically ~1400 operations			
Low battery warning	1.1V ± 0.1V			
Dimensions (excl. leads)	103 x 70 x 20mm			
Operating temperature	15°C		35°C	

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

Peak Electronic Design Limited

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