

Atlas ZEN

Zener diode analyser

Model: ZEN50

PEAK

electronic design ltd

PRODUCT BRIEF

Unique Instrument

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.

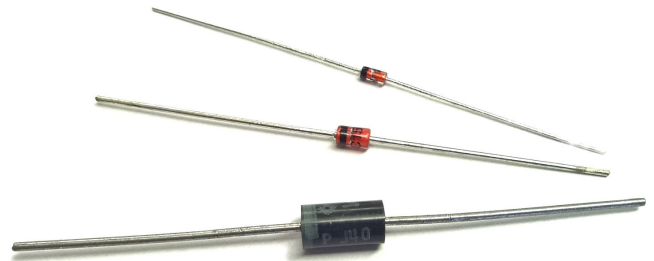
The voltage and test current are displayed along with the component's slope resistance (sometimes known as dynamic impedance).

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

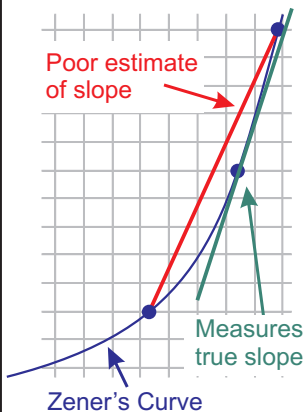
- Measure Zener voltage up to 50V.
- Selectable test currents: 2mA, 5mA, 10mA and 15mA.
- Measure slope resistance.
- Also tests LEDs, VDRs, TVSs.
- Narrow test pulses to minimise temperature rise.
- Long life from single AAA cell.
- Gold plated crocodile probes.
- Continuous measurement display (updated at 3Hz).
- Supplied with battery and guide.
- Ultra-slim and compact design.



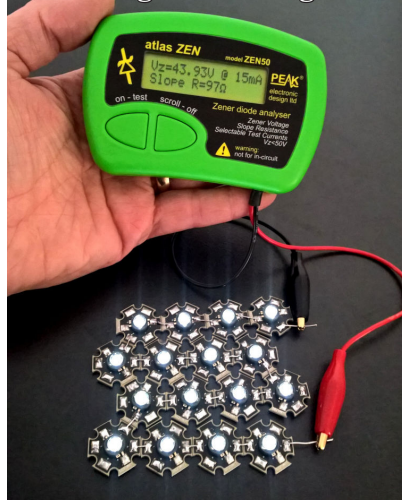
Parameter	Min.	Typ.	Max.	Notes
Zener voltage range (V_z)	0.0V		50.0V	
Nominal test currents (I_z)	2mA, 5mA, 10mA, 15mA			
Set test current accuracy	$\pm 1\% \pm 0.2mA$			
Zener voltage accuracy	$\pm 1\% \pm 40mV$			
Zener voltage resolution	20mV		40mV	
O/C test voltage (pulsed)			60V	
S/C test current (pulsed)			35mA	
Test current duty cycle	0.1%	1%	5%	
External abuse voltage			$\pm 50V$	
Slope resistance range	0 Ω		8000 Ω	$I_z=2mA$
	0 Ω		3200 Ω	$I_z=5mA$
	0 Ω		1600 Ω	$I_z=10mA$
	0 Ω		1000 Ω	$I_z=15mA$
Displayed Slope resistance resolution		5 Ω		$I_z=2mA$
		2 Ω		$I_z=5mA$
		1 Ω		$I_z=10mA$
		1 Ω		$I_z=15mA$
Slope resistance accuracy		$\pm 1\% \pm 10\Omega$		$I_z=2mA$
		$\pm 1\% \pm 4\Omega$		$I_z=5mA$
		$\pm 1\% \pm 2\Omega$		$I_z=10mA$
		$\pm 1\% \pm 2\Omega$		$I_z=15mA$
Slope res. current span	$(I_z-50\%)$ to $(I_z+50\%)$			
Slope resistance measurement method	Differentiation of curve that fits: $(I_z-50\%, V_{Z1})$, (I_z, V_{Z2}) and $(I_z+50\%, V_{Z3})$			
Measurement rate		3Hz		
Auto-off period		60 seconds		
Battery type	AAA Alkaline			
Battery voltage range	0.9V		1.6V	
Low battery warning	$1.0V \pm 0.05V$			
Dimensions (excl. leads)	103x70x20mm			
Operating temperature	10°C		40°C	

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

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



Test long LED strings too:



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