

## **6420** Precision Impedance Analyzer



Wayne Kerr  
Electronics Ltd

# 6420 Precision Impedance Analyzer

## Comprehensive Measurement Functions!!



## Key Features

- 0.1% Basic Accuracy
- Up to 10MHz Frequency
- 5 Digits frequency step resolution
- Comprehensive measurement functions
- Graphical sweep mode
- Straight forward intuitive operation
- GPIB & Printer Port interfaces
- Unbeatable performance , Unbeatable price.

## Comprehensive measurement functions.

Providing all the well-known measurement parameters:

Impedance |  $Z$  | 、 Admittance |  $Y$  | 、  
Phase Angle (  $\theta$  ) 、 Reactance (  $X$  ) 、  
Conductance (  $G$  ) 、 Susceptance (  $B$  ) 、  
Inductance (  $L$  ) 、 Capacitance (  $C$  ) 、  
Quality Factor (  $Q$  ) 、  
Dissipation Factor (  $D$  ) 、  
Resistance (  $DCR$  ) 。

## Continuous frequency range from 20Hz-10MHz

Providing a continuous Variable frequency from 20Hz~10MHz ,5 digits resolution , test all components at the desired test frequency, allowing a component to be test at a actual operating frequency.

## Graphical sweep

Graph the parameter against frequency or AC drive level.Characterize a component graphically, helps the engineer understand how the component perform under different conditions.



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## 6420 Impedance Analyzer Specifications

### Fast!Accurate!Repeatable! measurements

Testing components is easy with 6420 Impedance Analyzer. Just connect the component and the analyzer accurately measures the component value displaying selected primary and secondary with a basic accuracy of 0.1%. Connection to the component is made using one of a range of 4 terminal Kelvin connectors.

### Excellent performance!! Frequency

With excellent performance, 20Hz to 10MHz continuous measurement frequency, 0.1% basic accuracy, comprehensive measurement functions and GPIB, handler interfaces. The 6420 Impedance analyzer provides you total solution.

### Flexible, full remote control

Providing control and output capability. The 6420 offers three useful interface as standard, GPIB, Handler and Printer Port, Making remote control and printing straightforward.

#### MEASUREMENT PARAMETERS :

$|Z|$  ·  $|Y|$  ·  $\theta$  · R · X · G ·  
B · L · C · Q · D · ESR · DCR

#### Measurement Circuit:

Series or Parallel

#### Mathematical Functions:

absolute and percent deviation

#### Test Signal information

##### Test Frequency

6420A	20Hz—3MHz
6420B	20Hz—5MHz
6420C	20Hz 10MHz

Frequency step resolution 5 Digits

Frequency Accuracy  $\pm 0.005\%$

Output Impedance 100  $\Omega$

AC Drive Level 10mV to 2V rms  
(1m Vrms steps)

#### Measurement Range

$ Z $ R X	0.1m $\Omega$ —100M $\Omega$
$ Y $ G B	10nS—1000S
C	0.1pF—1F
L	0.1nH—100KH
D	0.0001—9.9999
Q	0.1 9999.9
$\theta$	-180° —+180°
DCR	0.1m $\Omega$ —100M $\Omega$
$\Delta\%$	-999.99%—999.99%

#### Basic Accuracy

$\pm 0.1\%$   $|Z|$  · R · X ·  $|Y|$  · G · B · C · L

#### Measurement Time

	DC	AC
Max :	30 mS	75 mS
Fast :	60 mS	150 mS
Medium :	120 mS	450 mS
Slow :	500 mS	600 mS

#### LCD Display

320x240 dot-matrix display

#### Correction

##### OPEN/SHORT:

Eliminates measurement errors due to stray parasitic impedances in the test fixtures.

##### Comparator Function :

HIGH/PASS/LOW

For each primary measurement parameter and secondary measurement parameter.

#### Other Functions

##### Save/Recall:

64 Multi-step can be saved/recalled from the internal nonvolatile memory.

##### Continuous Memory Capability:

If the instrument is turned off, or if a power failure occurs, instrument settings are automatically memorized.

##### Interface:

Handler · GPIB and Printer Port

#### General Specifications

##### Power requirements

90—132Vac or  
198—264Vac(selectable)  
47—66Hz  
45VA max.

##### Operation Temperature

10°C to 45°C

##### Operation Humidity

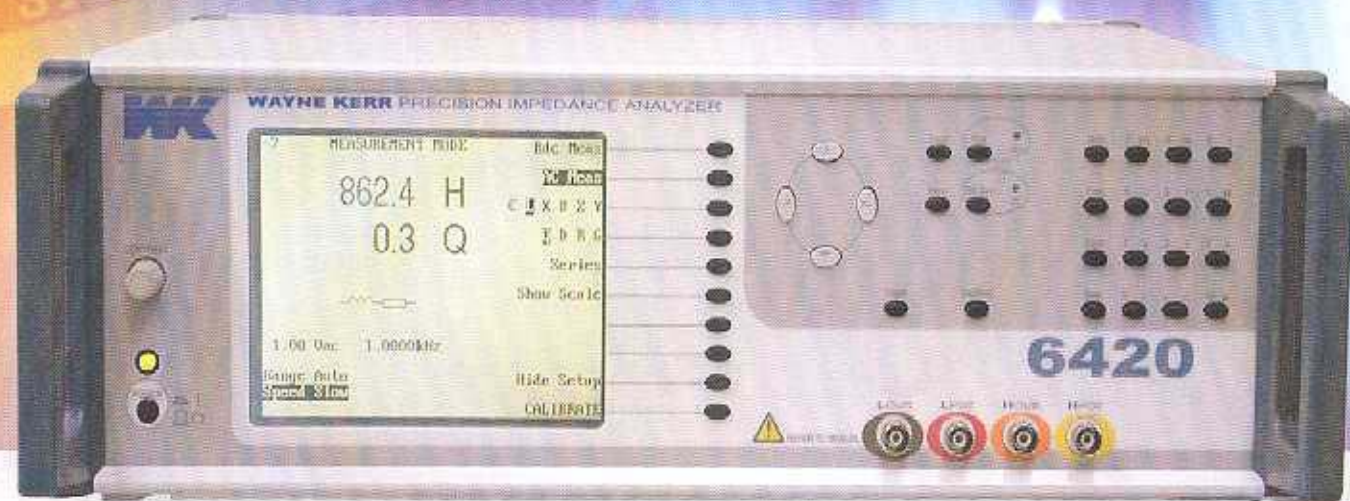
<95% at 40°C

##### Size and Weight

Height	150mm (5.9" )
Width	440mm (17.37" )
Depth	525mm (20.5" )
Weight	9kg (19.8lbs)



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