



Renewed 3532-50 further shortens line tact time with its high-speed measuring power

High measurement speed of 5 ms with 4 times as many functions as current models.

■ General Description

With variable frequency measurements from 42 Hz to 5 MHz, the highly acclaimed 3532 LCR HiTESTER has been renewed with the power for maximum high speed measurements of 5 ms (4 times that of current models). This means that line tact times can be further shortened, promising you increased line efficiency. Now, with a comparator function for displaying deviations of Δ%.

■ Features

- Measuring Speed (Representative Values):
FAST mode: 5 ms
NORMAL Mode: 21 ms
SLOW 1/2 Mode: 72 ms/140 ms
- Comparator Function: Up to 30 types of measurement settings can be placed in memory: Upper and lower value settings (Hi, IN, Lo) for two measurement parameters, % settings, Δ% settings or absolute value settings
- Measuring Frequency:
Variable from 42 Hz to 5 MHz
- Basic Accuracy:
Highly accurate measurements of ±0.08%
- Enlarged display function for easy observation in production line where the unit is read at a distance.
- PC controllable via RS-232C interface (optional)
- Optional printer allows output of measurement values and comparator results



The applications and LabVIEW driver necessary to save measurement data as Microsoft Excel or CVS files via the RS-232C interface can be downloaded from the HIOKI Web site.

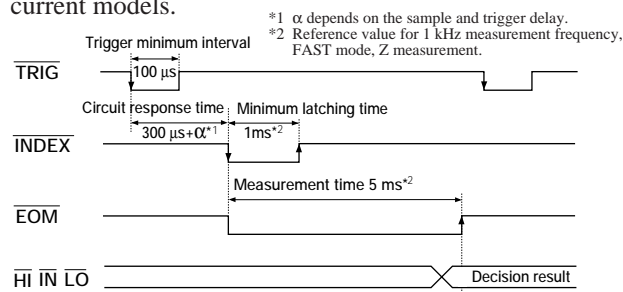
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HIOKI company overview, new products, environmental considerations and other information are available on our website.

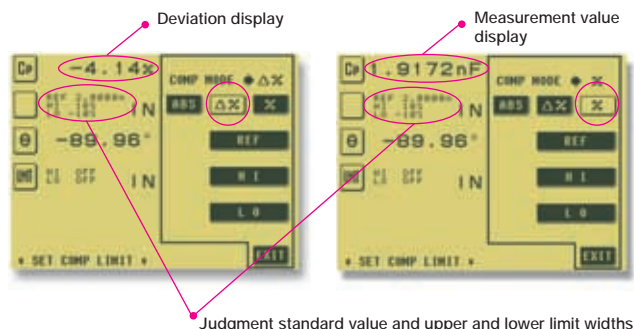
Faster timing sequence reduces tact time

The renewed 3532-50 builds sequences using the signals of the triggers (TRIG), analog measurement completion (INDEX) and end-of-measurement (EOM) that are the same as current models to extract the comparator results under the following timing.

Line tact times can be even further shortened, with its 5 ms measuring speed (when in FAST mode) from measuring start to finish, which is 4 times the speed of current models.



Comparator setting screen with additional $\Delta\%$ display



The screen at left shows an example of the $\Delta\%$ setting; The screen at right shows an example of the % setting from current models. In either, the judgement range is a percentage of the reference values. The $\Delta\%$ display is easy to interpret because the measurement value is displayed as a deviation.

3532 specifications

Measurement parameters	$ Z $, $ Y $, θ , Rp, Rs (ESR), G, X, B, Cp, Cs, Lp, Ls, D (tan δ), Q
Measurement ranges $ Z $, R, X	10.00 m Ω to 200.00 M Ω (depending on measurement frequency and signal levels)
θ	-180.00° to +180.00°
C	0.3200 pF to 370.00 mF
L	16.000 nH to 750.00 kH
D	0.00001 to 9.99999
Q	0.01 to 999.99
$ Y $, G, B	5.0000 nS to 99.999 S
Basic accuracy	Z: $\pm 0.08\%$ rdg. θ : $\pm 0.05^\circ$
Measurement frequency	42 Hz to 5 MHz
Measurement signal levels	10 mV to 5 V rms 10 μ A to 100 mA rms
Output impedance	50 Ω
Display screen	LCD with backlight / 99999 (full 5 digits)
Measurement time (typical values for displaying $ Z $)	FAST: 5 ms, NORMAL: 21 ms, SLOW 1 / 2: 72 ms / 140 ms
Settings in memory	Maximum 30 sets
Comparator functions	HI/IN/LO settings for two measurement parameters; percentage, $\Delta\%$, or absolute value settings
DC bias	External DC bias ± 40 V max. (option)
External printer	9442 PRINTER (option)
External interfaces	GP-IB or RS-232C (selectable options), external I/O for sequencer use
Power source	100, 120, 220 or 240 V($\pm 10\%$) AC (selectable), 50/60 Hz
Maximum rated power	50 VA approx.

Measurement: All parameter ranges are determined by the $|Z|$ range. 100 m Ω , 1 Ω , 10 Ω , 100 Ω , 1 k Ω , 10 k Ω , 100 k Ω , 1 M Ω , 10 M Ω , 100 M Ω

Measurement frequency: 42 Hz to 5 MHz ($\pm 0.005\%$)
Up to 1 kHz (0.1 Hz steps); 1 kHz to 10 kHz (1 Hz); 10 kHz to 100 kHz (10 Hz); 100 kHz to 1 MHz (100 Hz); 1 MHz to 5 MHz (1 kHz)

Measurement levels:

[Voltage and constant voltage]

10 mV to 5 V rms (DC to 1 MHz)
50 mV to 1 V rms (1 MHz to 5 MHz)
Maximum short-circuit current 100 mA rms
1 mV steps

[Constant current]

10 μ A to 100 mA rms (DC to 1 MHz)
50 μ A to 20 mA rms (1 MHz to 5 MHz)
Maximum voltage 5 V rms
10 μ A rms steps

Dimensions and mass:

113W \times 347H \times 270D mm; 5.7 kg approx.
(4.45" \times 13.66" \times 10.63" D; 201.41 oz. approx.)

Conforming standards:

EMC EN61326-1:1997+A1:1998
EN61000-3-2:1995+A1:1998+A2:1998
EN61000-3-3:1995

Safety EN61010-1:1993+A2:1995

Power supply unit:

Pollution degree 2, Overvoltage category II
(Anticipated transition over-voltage: 2.5 kV)

Measurement terminals:

Pollution degree 2, Overvoltage category I
(Anticipated transition over-voltage: 330 V)

3532-50 LCR HiTESTER

(Standard accessories: power cord, spare power fuse (1 A for 100/120 V rating, 0.5 A for 220/240 V rating))

Test fixtures are not supplied with the unit.
Select an optional test fixture when ordering.
Refer to the Parts Catalog for details.

Main optional accessories

9140 FOUR-TERMINAL PROBE

9143 PINCHER PROBE

9261 TEST FIXTURE

9262 TEST FIXTURE (direct connection type)

9263 SMD TEST FIXTURE

(direct connection type)

9593-01 RS-232C INTERFACE

9518-01 GP-IB INTERFACE

HIOKI

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All information correct as of Apr. 12, 2001. All specifications are subject to change without notice.

Internet HIOKI website <http://www.hioki.co.jp/>

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