

HIOKI

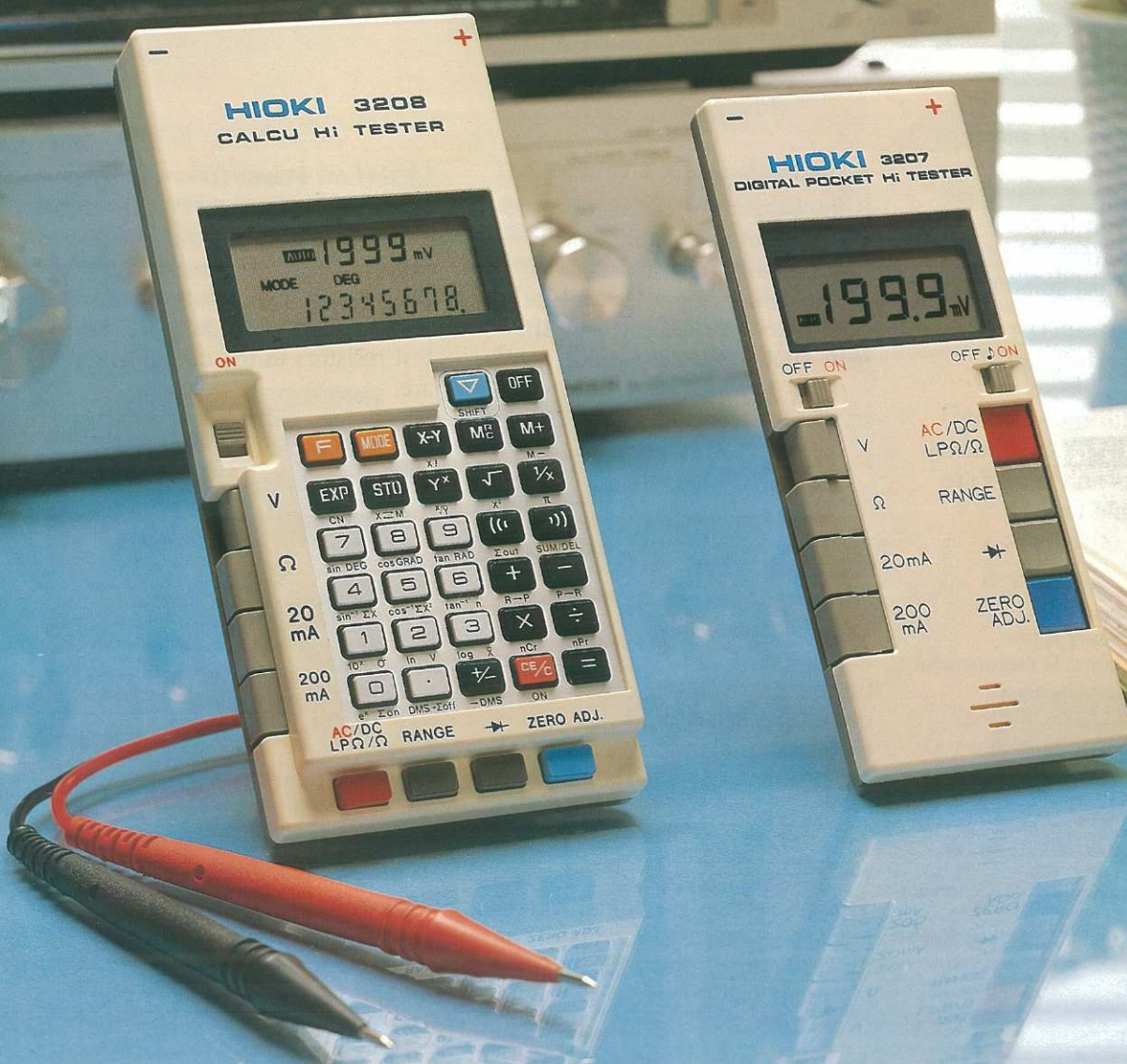
DMM

3207 DIGITAL POCKET HI TESTER
3208 CALCU HI TESTER

3207

3208

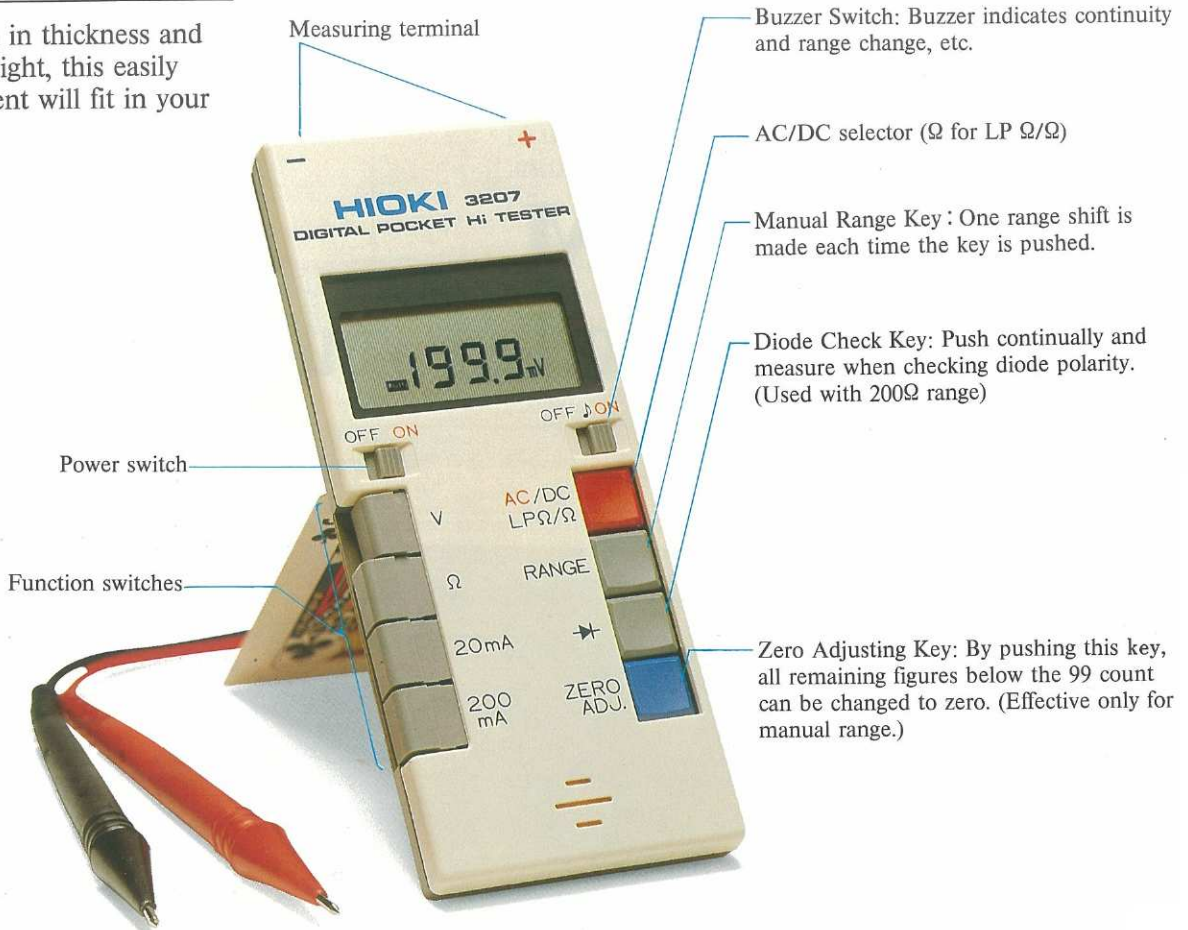
A personal DMM with all the function you'll need



Full autorange, Thin DMM

3207 DIGITAL POCKET HI TESTER

Merely 12.5mm in thickness and only 120g in weight, this easily carried instrument will fit in your breast pocket.



DMM unit (common to 3207 and 3208)

Autorange

Not only does this 3207 have individual ranges but it also is provided with automatic range changing for the most suitable range.

All Operating Conditions are displayed

In addition to units and polarity, the auto range, **AUTO**, and battery low, **BATT**, marks and others are displayed, according to the condition for use of the instrument.

- When adjusting the zero
- When battery power is low
- For low power Ω measurement



- When overrange, the 1 in the maximum place blinks.
- When making the autorange setting
- When measuring DC negative polarity
- When measuring AC

Audible warning

If the buzzer switch is left in the ON position, continuity check, range change, function change, and excessive input (except for ohmmeter) are indicated by the high pitched buzzer sound.



As a continuity meter: When in the resistance function, an indication of 19 or less will cause the buzzer to sound, thus permitting check of continuity. (For example, in the 2k Ω range, for 19 Ω or less, or in the 20k Ω range, for 190 Ω or less, the buzzer will sound.)

For diode check

The 200 Ω range and diode check key (\rightarrow \leftarrow) are used together. The forward and reverse directions for the diode can thus be checked.

Buzzer Switch: Buzzer indicates continuity and range change, etc.

AC/DC selector (Ω for LP Ω/Ω)

Manual Range Key: One range shift is made each time the key is pushed.

Diode Check Key: Push continually and measure when checking diode polarity. (Used with 200 Ω range)

Zero Adjusting Key: By pushing this key, all remaining figures below the 99 count can be changed to zero. (Effective only for manual range.)

LP Ω (Low Power Ω)

LP Ω stands for Low Power Ohm and is that function which makes it possible to take measurements at a voltage lower than the diode rising voltage and therefore can test resistors in the circuit as they are.



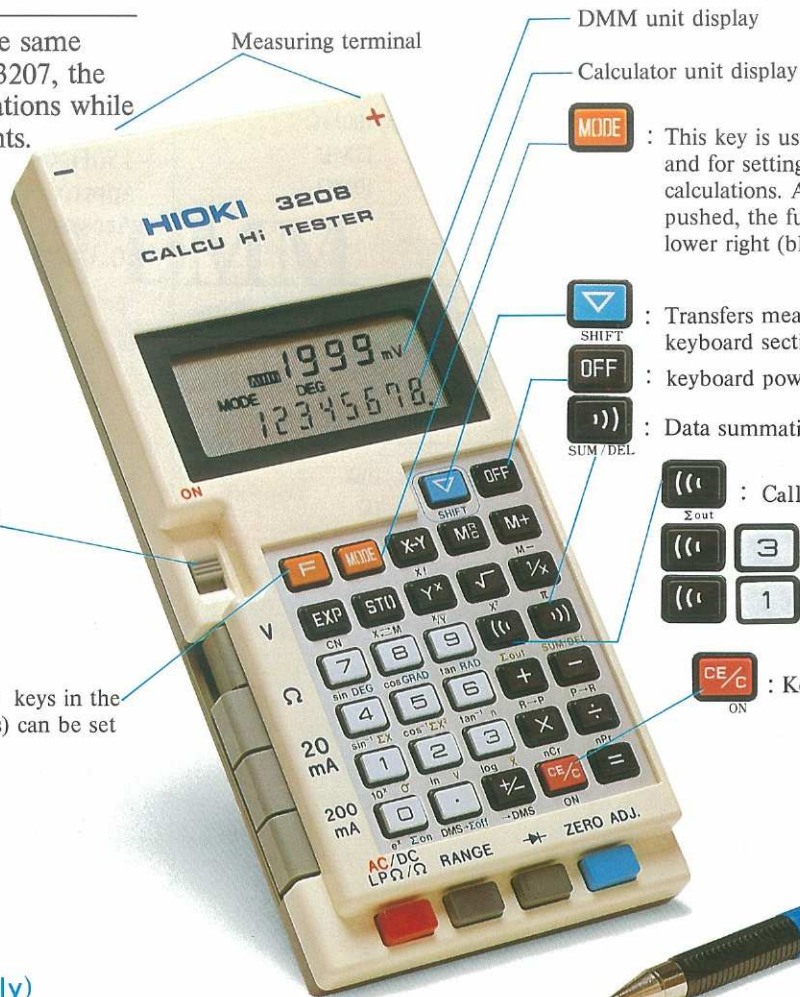
Input resistance exceeding 10M Ω

Input resistance for both AC and DC in the voltmeter is in excess of 10M Ω so that small amounts of voltage in transistor circuits, etc., can be measured without adversely affecting the condition of the circuit.

A compact DMM with a Calculator

3208 CALCU HI TESTER

In addition to having the same DMM functions as the 3207, the 3208 can also do calculations while performing measurements.



- MODE** : This key is used for statistical calculations and for setting the units for angle calculations. After the MODE key is pushed, the function of the keys on the lower right (blue characters) can be set.
- SHIFT** : Transfers measured values of DMM to keyboard section
- OFF** : keyboard power source OFF
-))** : Data summation
- Σout** : Calls out totalled data
- 3** (\bar{X}) : Calls out average value
- 1** (σ) : Calls out standard deviation
- CE/C** : Keyboard power source ON

DMM power source ON/OFF

After the F key is pushed, the keys in the lower section (black characters) can be set for their functions.

Calculator (3208 only)

The measured value can be keyed into the calculator

Just by pushing the SHIFT key, the DMM displayed data can be transferred to the calculator display with the proper exponent.

DMM display



Calculator display



Provided with automatic power shut off circuit for calculator

If the calculator is not used for 15 minutes, the power to the circuit automatically shuts off.

Example of the use of the SHIFT key transferred measurement and the calculator

(Example 1) Battery voltage measured, average value (\bar{X}) and standard deviation (σ) desired.

Preparation: DMM section switch ON; V, AC/DC keys pushed to make DC voltage measurement. Push ON power to keyboard section with **CE/C** (ON) key.

MODE, **0** (Σ on) key to set calculator.

Measurement & calculation:

(1.500V = measured value, transfer to calculator display 1.500) Successive measured values are transferred from the DMM display to the calculator display by pushing the SHIFT key.

1.500V	SHIFT	1.500))
1.600V	SHIFT	1.600))
1.400V	SHIFT	1.400))
1.700V	SHIFT	1.700))

Result: **Σout**, **3** (\bar{X})

1.55 ... Average value

Σout, **1** (σ)

0.1290994 ... Standard deviation

Completion: **MODE**, **0** (Σ off)

Statistical calculation cancelled.

(example 2) In the circuit diagram below, the value of the emitter current is desired. (the circuit values are actual measured data.)

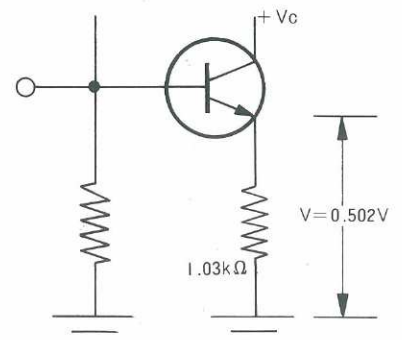
(1) With the circuit power OFF, the resistance value is measured. (LPΩ measurement)

Measure: **SHIFT** 1.030 03 **÷**

(2) With circuit power ON, the voltage cross the resistor due to current flow is measured.

Measure: **SHIFT** 0.502 **X→Y** **=**

4.8737 -04 Thus, the current is 487 μ A.



Specifications

Common to 3207 and 3208

Measurement Range (23°C ±5°C; 80%RH; zero adjust)

Function	Range	Resolution	Accuracy	Notes
DC V	200mV	100μV	±0.7% rdg. ±4 dgt.	input imp. 100MΩ
	2V	1mV	"	" 11MΩ
	20V	10mV	"	" 10MΩ
	200V	0.1V	"	" "
	1000V	1V	"	" "
AC V	2V	1mV	±0.8% rdg. ±10 dgt.	input imp. 11MΩ 40~500Hz
	20V	10mV	±0.8% rdg. ±5 dgt.	" 10MΩ 40~1kHz
	200V	0.1mV	"	" 10MΩ 40~500Hz
	600V	1V	"	" 10MΩ 40~500Hz
DC mA	20mA	10μA	±1% rdg. ±5 dgt.	input imp. 10Ω
	200mA	100μA	"	" 1Ω
AC mA	20mA	10μA	±1.3% rdg. ±5 dgt.	input imp. 10Ω 40~500Hz
	200mA	100μA	"	" 1Ω 40~500Hz
Ω	200Ω	0.1Ω	±0.5% rdg. ±5 dgt.	1.5V ±0.2V (open terminal V)
	2kΩ	1Ω	"	0.65V ±0.065V (")
	20kΩ	10Ω	"	" (")
	200kΩ	100Ω	"	" (")
	2000kΩ	1kΩ	±1% rdg. ±5dgt.	" (") (abt. 0.4V f.s.)
LP Ω	2kΩ	1Ω	±0.8% rdg. ±8 dgt.	under 0.5V (open terminal V)
	20kΩ	10Ω	"	" (")
	200kΩ	100Ω	"	" (")
	2000kΩ	1kΩ	±1.3% rdg. ±8 dgt.	" (") (under 0.2V f.s.)
Diode check	200Ω			
Continuity check	Ω & LPΩ			

When the meter is on AUTO RANGE, or when ZERO ADJUST is not performed, the above values are changed as follows:

- The highest sensitivity range of each function has an accuracy of ±15 digits.
- The 200Ω range accuracy becomes ±19 digits.
- ±10 digits must be added to the digit accuracy of all other ranges.

Display: 3-1/2 digit LCD (1999) with automatic polarity and function indications.

Ranging: Auto & manual

Overrange indication: 1 in MSD column blinks, and buzzer sounds (except Ω range) when buzzer switch ON.

Battery check: **BATT** appears on display when batteries low.

Sampling rate: 2 readings/second

Operating temperature/humidity: 0~40°C; less than 80% RH

Max. input:

DC V: 1000V AC V: 750V
mA: 0.3A (fuse protected to 120V AC)

ohms: 0.3A (fuse protected to 120V AC)

Dielectric strength: 1.5kV (AC) for 1 min. (between input terminals and case)

3207 only

Power source: Two SR44 (G13) silver oxide, or LR44 alkaline-manganese cells (battery life: 70 hours – SR44)

Dimensions/weight: 150H×60W×12.5D mm; approx. 120g

Accessories: test leads, 1 set; fuse (0.3A – 125V); soft case

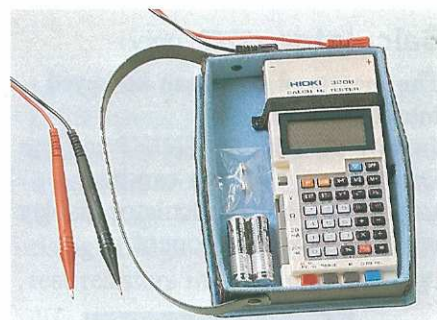


3208 only

Power source: Two AA cells (battery life: 200 hours)

Dimensions/weight: 170H×76W×20D mm; approx. 250g

Accessories: test leads, 1 set; fuse (0.3A – 125V); carrying case



Accessories available:

9014 DC 30kV high voltage probe
9081 10A shunt

HIOKI

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All specifications are subject to change without notice.

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