

Curve Tracer  
HM 6042



For testing and selection of:  
transistors, MOS-FETs, diodes, Z-diodes, LEDs, thyristors

On-screen display of 5 dynamically generated curves

The LCD display shows the active parameters and dynamic numeric data corresponding to the cursor position on the screen

Automatic calculation of h and y parameters

Easy comparison of components based on reference values stored in memory

Intuitive, logical key-based operation

HZ820 (included)



HZ820: Switching feature (DUT 1 and DUT 2) for rapid transistor selection ( $U_{test}$  max. 40 V)

## Curve Tracer HM6042

Valid at 23 °C after a 30 minute warm-up period

### Measurement ranges

**3 voltage ranges:** collector/drain voltages  
 $\leq 2V, 10V, 40V \pm 5\%$

**3 current ranges:** collector/drain currents  
 $\leq 2mA, 20mA, 200mA \pm 5\%$

**3 power ranges:** output power  $\leq 0.04W, 0.4W, 4W \pm 10\%$

### Basis/gate voltages and currents:

$I_B$  1 µA to 10 mA

$V_B$  to 2 V  $\pm 5\%$

$V_G$  to 10 V  $\pm 5\%$

### Measurement accuracy

#### Measurement accuracy of static values:

$V_{C/D}$   $\pm (2\% \text{ of rdg.} + 3 \text{ digits})$

$I_{C/D}$   $\pm (2\% \text{ of rdg.} + 3 \text{ digits})$

$I_B$   $\pm (2\% \text{ of rdg.} + 3 \text{ digits})$

$V_B$   $\pm (2\% \text{ of rdg.} + 3 \text{ digits})$

$V_G$   $\pm (3\% \text{ of rdg.} + 3 \text{ digits})$

$\beta$  to 1000:  $\pm (5\% \text{ of rdg.} + 3 \text{ digits})$

to 100000:  $\pm [(6 + 0,001 \times \beta)\% \text{ of rdg.} + 3 \text{ digits}]$

#### Measurement accuracy of dynamic values:

$h_{11}$   $\leq 1000 \Omega \pm (12\% \text{ of rdg.} + 3 \text{ digits})$

$\geq 1000 \Omega \pm [(12 + 0.001 \text{ Mw.})\% \text{ of rdg.} + 3 \text{ digits}]$

$h_{21}$   $\leq 1000 \pm (12\% \text{ of rdg.} + 3 \text{ digits})$

$\geq 1000 \pm [(12 + 0.001 \text{ Mw.})\% \text{ of rdg.} + 3 \text{ digits}]$

$y_{21}$   $\leq 1S \pm (12\% \text{ of rdg.} + 3 \text{ digits})$

$h/y_{22}$   $\leq 1S \pm (12\% \text{ of rdg.} + 3 \text{ digits})$

### Analysis of curves for:

diodes, zener diodes  
NPN/PNP transistors  
FET/MOS-FET (N/P channel)  
thyristors (to a limited extent only)

### Display:

LCD  
Display of values in the curve set  
Screen display of 5 curves, max.

### Miscellaneous

**CRT:** D14-364GY/123 oder ER151-GH/-,  
rectangular (8 x 10 cm), internal graticule

**Acceleration voltage:** approx. 2 kV

**Trace rotation:** adjustable on front panel

**Power supply:** 100-240V ~ ±10 %, 50/60 Hz

**Power consumption:** approx. 36 Watt at 50 Hz

**Operating temperature:** 0°C to +40°C

**Safety class:** Safety Class I (EN61010-1)

**Color:** techno-brown

**Dimensions (W x H x D):** 285 x 125 x 380 mm

Lockable tilt handle

**Weight:** approx. 5.6 kg

Values indicated without tolerances are intended as aids to orientation and reflect the characteristics of an average device.  
Reference temperature 23°C ± 2°C.  
Subject to change without notice.

### Other Functions

Storing of a reference measurement value, e.g. for support in component selection

#### Cursor measurement functions:

**single mode:** One cursor marks the position on the measurement reading display.

**tracking mode:** Two cursors mark the positions at which the readings for the dynamic values were taken.

**Accessories supplied:** Operator's Manual, power cable, plug-in test adapter

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