

MATS-2010SA

Soft Magnetic Material Dynamic Hysteresisgraph System

Model MATS-2010SA



Automatic measurement on hysteresis loop of soft magnetic material under dynamic (AC) condition, accurate measurement on dynamic magnetic characteristic parameters such as amplitude permeability μ_a , loss angle δ , iron loss P_c , remanence B_r and coercive force H_c .

Windows measurement software applied simply. It conforms to China National Standards GB3658 - 83, GB5026 - 85 and GB9632 - 88, industry standard SJ / T10281 - 91 and international standard IEC60404 - 6.

Analog source (bridge), frequency indicator, ammeter, voltmeter and wattmeter are replaced through computer control and high speed A/D sampling, entire testing process automatically completed.

General Features

Software Features

Software Screen

Technical Data

Standard Package

System Specifications

Adopt volammetry to measure loss P_s and amplitude permeability μ_a and loss angle δ , when test frequency is 50kHz, conduct test on ferrite circular ring sample with standard size ($d_1 = 40\text{mm}$, $d_2 = 32\text{mm}$, $h = 6 \sim 10\text{mm}$), technical indices as follows:

Parameters measured	B_m (%)	B_r (%)	H_c (%)	μ_a (%)	P_s (%)	δ (%)
Uncertainty (k=2)	1	1.5	2	3	5	5
Repeatability (constant temperature)	± 0.5	± 1	± 1	± 2	± 3	± 2

Instrument Specifications

MATS - 2010SA Dynamic Hysteresisgraph	PC5012 A/D Card
Output Power: 200VA sine wave (below 300kHz)	Sampling Rate: 50MHz * 2 Channels
Frequency Range: 1kHz~ 500kHz	Resolution and Linearity: 12 Bit $\pm 1/2$ LSB
Frequency Fineness: $< 0.1\%$ * Current Value	Voltage Range: $\pm 0.1V \sim \pm 20V$
Frequency Error: $< 0.05\%$	Sampling Clock: 25ns ~ 5ms Hardware Clock
Output Voltage: 0 ~ 50V (Peak Value)	Internal Storage Capacity: 4M Byte * 2
Voltage Fineness: Program Control 1mV, panel $< 10\text{mV}$	Structure: PCI busbar
Voltage Distortion Factor: Superior to 1%	

Voltage Stability: Superior to 0.1%

Sampling Current: 0 ~ 5A (Peak Value)

Sample Voltage: 0 ~ 10V (Peak Value)