PM6303A AUTOMATIC RCL METER 1kHz

Operating Card
4822 872 10159
051206

Indication that component under test is outside the ±0.25% accuracy range of the instrument

Measured value

- Measurement unit: MΩ, kΩ, Ω, M, nF, pF, µF, nF, µH, mH, H, kHz
- Quality factor
- Automatic mode enable
- Dissipation factor
- Internal dc bias voltage 2 V
- Automatic trimming of:
  - Open-circuit impedance
  - Short-circuit impedance

Equivalent circuit symbols

Power switch

Internal bias voltage on

Automatic measurement mode

Measurement frequency

Parallel / series capacitance or inductance

Phase angle

Selected parameter
- Quality factor
- Dissipation factor
- Impedance
- Phase angle

Connector for:
- Front panel test posts
- PM 9541A Kelvin Clips
- PM 9542A RCL Adapter
- PM 9549/BAN Test Cable
- PM 9540/TWE SMD Tweezers

Auto Mode Decision Diagram

Reactance

- Q = 500
- D = 0.002

Inductive

DOMINANT

Q = D = 1

Resistance

- D = 500
- Q = 0.002

Capacitive

DOMINANT

Q = D = 1

Measurement Ranges and Accuracy

- Basic accuracy better than ±0.25% for dominant component
- 1% in 1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ, 100kΩ, 1MΩ
- 2.5% in 0.1Ω, 1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ, 100kΩ
- 5% in 0.1Ω, 1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ

- Center segments of digits flash when:
  - Component exceeds measurement range. (R >> 20 MΩ, C >> 100 nF, L >> 20 kHz, Q or D >> 500)
  - Resistances or inductances are measured with ±0.25% cm.
  - Discharge capacitors before connecting.
  - ZERO TRIM compensates:
    - Contact and line resistances (up to 10 Ω in short circuit).
    - Stay capacitances in open circuit.
    - Measurement frequency 1 kHz fixed.
    - Measurement update rate: 2 measurements per second.