

SMARTWARE CQM SOLUTIONS

Electromagnetic and RF communication tests before shipping cards to personalization service

Tests requested by



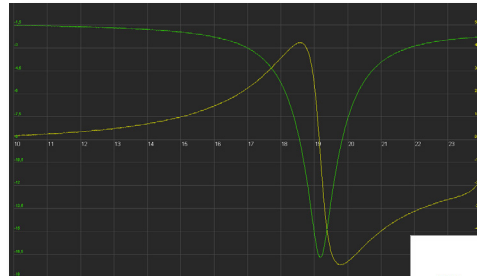
Financial card producers have to prove to Mastercard or Visa that, for each issued banking card, it has successfully completed a series of tests including those related to chip card quality.

MasterCard specifies in the document CQM (Card Quality Management) some requirements in order to ensure the quality of the product during the manufacturing phases.

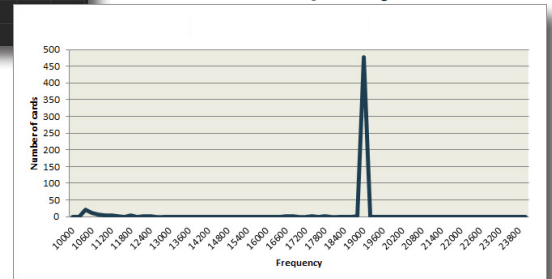
Smartware offers solutions for desktop usage and for milling/implanting machine ensuring a complete coverage of required tests related to electromagnetic characteristics and RF functional tests:

- Resonance frequency
- Quality factor
- Reading distance

Resonance frequency measurement



Resonance frequency distribution



Smartware contactless tester



Test & Communication antenna

Smartware contactless tester specifications

Communication contactless interface for both chip card module and contactless card

- ISO 14443-3/4 Type A/B up to 847 Kbps, ISO 15693
- Proprietary format: Mifare™, Mifare+™, FeliCa™, I-Code™
- Envelope Data acquisition

Parametric tests for CQM test

- Resonance frequency, Q Factor
- Reading distance

Parametric tests for chip card module (before module implanting)

- Capacitor measurement
- Load Amplitude Measurement, FVMI, FIMV

Parametric tests for card antenna coil (after card milling and before module implanting)

- Inductance measurement
- Resonance Frequency, Q Factor for SPS and CoM card

