BARNES INTERNATIONAL

CQM Compliance Solution
SmartQC - New Mastercard CQM Quality Control Tool

Assure the quality of contactless payment cards to Mastercard CQM standards

Financial card producers have to prove to Mastercard that for each issued banking card they have successfully completed a series of tests including those related to chip card quality. Mastercard issues their Card Quality Manufacturing (CQM) requirements to ensure the quality of the product during the manufacturing and personalisation phases.

SmartQC software brings a simple step by step process to calculate your sample results set and subsquent monitoring for:
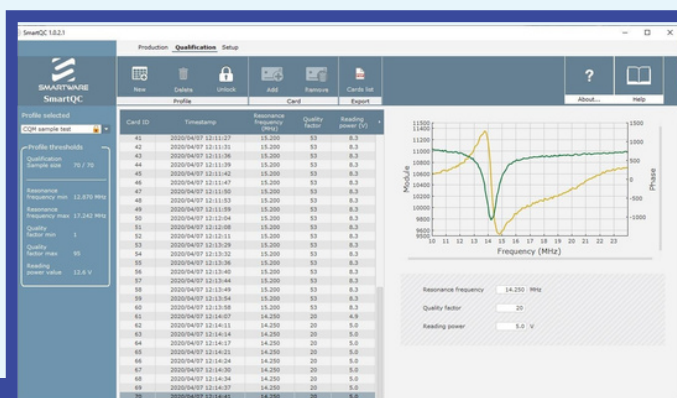- #3062# Resonance Frequency
- #3063# Q-Factor
- #3064# Reading Distance

Solution Overview

Barnes and Smartware offer a solution adapted for personalisation bureaus offering complete coverage of Mastercard mandatory tests including contactless electro-magnetic tests.

☑ Step 1) Qualification phase - Create your sample set, edit number of cards to be sampled- default of 70 for CQM.

☑ Step 2) Production phase – test your cards one by one – results automatically calculated and compared with sample set results.

☑ Step 3) View results in the software individually, Powerful pdf reporting available.
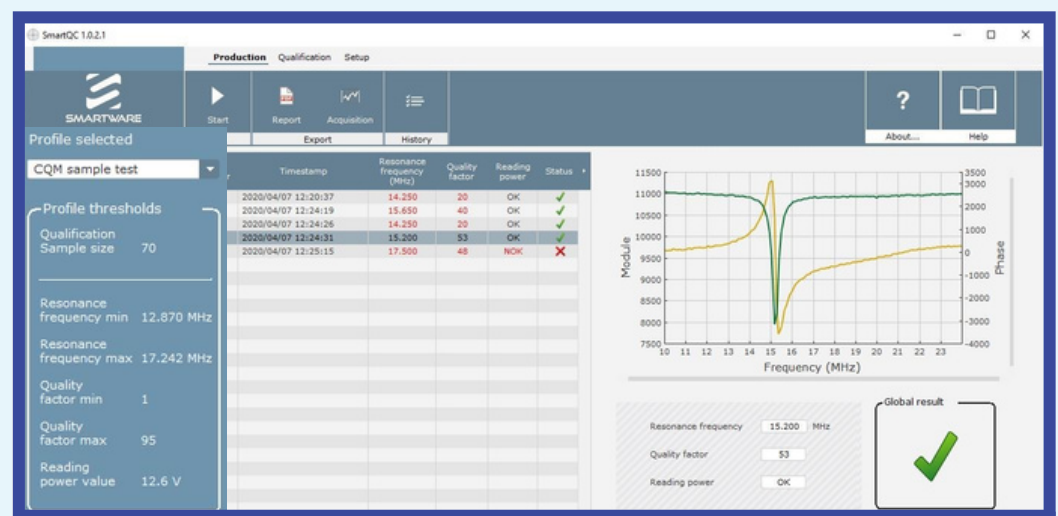
FEATURES AND BENEFITS

- The US-CLT hardware allows the measurement of the Resonance Frequency and Quality Factor of a PICC.
- The SmartQC application supports ISO14443 level 3, level 4, type A and type B PICC.
- VNA circuitry is used to measure the Module and Phase of the signal, while the carrier frequency is updated.
- The carrier frequency goes from 10 MHz up to 24 MHz with a minimal 10 kHz step.
- The thresholds are automatically calculated.

Instant Result Summary
showing a PASS, or in the case of FAIL, the Error(s) which caused the failure.

RESONANCE FREQUENCY OPTIONS

VNA power:
define the power applied by the VNA on the contactless interface to perform the resonance frequency and quality factor measurements.

VNA calibration:
Before starting a test, the contactless tester is calibrated.
This initialisation records the phase values from 10 to 24 MHz without any tag on the X-Coil 30.
By pressing the Calibrate button, the initialisation data is stored in the non-volatile tester memory. It is not required to perform a calibration sequence each time the tester reboots.

TECHNICAL SPECIFICATIONS

Software requirements:
- OS: Windows 7, 10 (32-bit and 64-bit)

Hardware requirements:
- PC with Ethernet Port