

Q-Star Test™ from Ridgetop Europe

Q-Star Test Current Measurement Products – 2015 Product Overview



Static/Quiescent and Dynamic Current Measurement Instruments

- Combine high speed and high accuracy with high capacitive load driving capability
- Combine high speed voltage regulation with fast current measurement functionality
- Introduce no voltage droop
- Provide high resolution and highly repeatable current measurements
- Easy to use and test system-independent

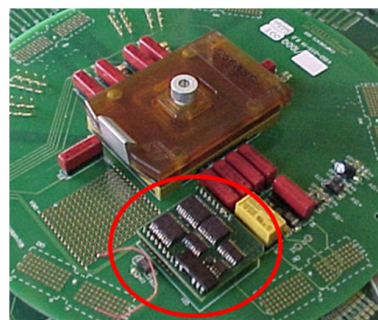
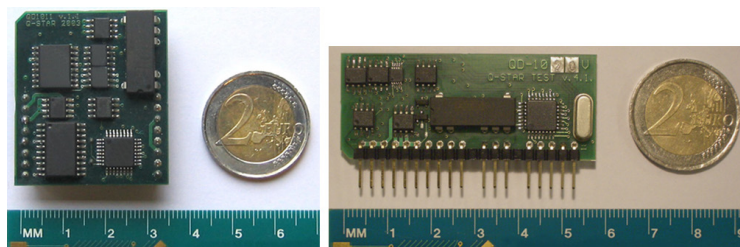
General Description

Ridgetop Europe's Q-Star Test **static/quiescent current measurement instruments** (also referred to as I_{DDQ} or I_{SSQ} modules) serve a wide range of current measurement applications such as: Standard and advanced I_{DDQ} and/or I_{SSQ} tests; standby current measurements; power-down current measurements; bias current measurements; average current measurements; analog DC and low frequency current measurements. In addition, Ridgetop Europe's Q-Star Test **dynamic current measurement instruments** (also referred to as I_{DDT} modules) serve a wide range of active current measurement applications, including: Dynamic and transient (I_{DDT}) current tests; power profiling of circuits and systems; active current consumption; and e-fuse programming validation.

Q-Star Test current measurement instruments are divided into different product categories:

- Analog/Continuous
- Static/Quiescent
- Dynamic
- Supply & Support units
- Custom Solutions

All static/quiescent current measurement instruments have a digital interface and a dedicated fast switching compensated on-board bypass switch, capable of handling large active currents. The table on the next page facilitates selecting a product category.



Q-Star Test instruments

Table Notes

(1) Measurement instruments with basic functionality combine measurement functionality with simple pass/fail decision making.

(2) Measurement instruments with advanced functionality are user-configurable and combine measurement functionality with on-board data storage and data processing and decision making capabilities. They serve a wide range of applications. Their combined hardware-firmware platform easily supports basic and advanced I_{DDQ}/I_{SSQ} test strategies (Delta-I_{DDQ}, relative I_{DDQ}, current ratios, pre/post-stress Delta I_{DDQ}, ...). Instrument functionality can easily be adapted to customer-specific requirements.

(3) Low current ranges are from 100 nA up to 30 mA.

(4) High current ranges are from 50 mA up to 100 A.

Quiescent Instruments Overview Table

| | PRODUCT FAMILY | | | | | | | | | | |
|-----------------------------------|----------------|---------|---------|---------|---------|-----------|-----------|-----------|-----------|---|---|
| | Lite | QH-10xx | QD-10xx | QD-13xx | QD-14xx | QH-10xxHC | QD-10xxHC | QD-13xxHC | QD-14xxHC | | |
| Basic Functionality (1) | | | | | | | | | | | |
| Advanced Functionality (2) | | | | | | | | | | | |
| Socketable | | | | | | | | | | | |
| # of Measurement Channels | | 1 | 1 | 2 | 3 | 4 | 1 | 1 | 2 | 3 | 4 |
| Minimal Size | | | | | | | | | | | |
| Low Current Ranges (3) | | | | | | | | | | | |
| High Current Ranges (4) | | | | | | | | | | | |

Dynamic Current Measurement Instruments

The QT-1411 product family members have a digital interface and allow capturing and storing the dynamic current waveform and simultaneously extracting peak, pulse-width, and charge-related information. They serve a wide range of applications: I_{DDT} (transient current) tests, ECR (energy consumption ratio) tests, power profiling, power consumption measurements, validation of E-Fuse programming, etc.

Custom Solutions

Customized versions of our products or dedicated solutions are available upon request.

Need modified or custom design? Contact Ridgetop at +1 520-742-3300 to discuss your ideal solution!

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