Automotive Radar Test

Agilent Technologies and Konrad Technologies

Achieve high volume, comprehensive RF testing of automotive radar systems

Automotive radar systems for applications such as blind-spot detection, collision avoidance and intelligent cruise control require sophisticated radar technology to operate in the harsh environment of vehicle electronics. Validation of automotive radar systems requires comprehensive RF testing. When combined with the need to produce devices in ultra-high volume this presents unique manufacturing test challenges to automotive suppliers.

Konrad Technologies has developed a system specifically to address the challenges of testing automotive radar systems. The KT-319000 automotive radar test system combines in-circuit and functional test techniques to optimize the test procedures for performance and throughput. In in-circuit mode, the internal nodes of the device-under-test (DUT) can be probed to measure parameters including R, L, C, Z, continuity and short-circuit. This mode supports both bare and populated substrates.

In functional test mode, the connection to the DUT is via the edge connector and test points. During functional test the DUT is mounted in a purpose-designed RF chamber with the measurement instruments located directly beneath in a separate test rack offering up to 66U of space. Coaxial conductors or waveguides route the RF signals from the instrumentation to the DUT. The chamber includes a drum that can rotate the DUT through 180°. This allows it to be characterized under the real-world conditions that would be encountered when installed in a vehicle. RF testing is performed at up to 24 GHz.

The test system uses Agilent Technologies' RF signal generators, power meters and power supplies, which are fully integrated with the RF chamber, the DUT interfaces and Konrad's proprietary software.

- ***Automotive radar test system***
- ***Addresses needs of high-volume manufacturers***
- ***Combines in-circuit and functional test facilities***
- ***Includes RF chamber for shielded measurements on radar devices***
- ***Chamber can be rotated to simulate real-world operating conditions***
- ***Uses Agilent RF signal generators, power meters and power supplies***
- ***Achieves comprehensive RF testing with high throughput***

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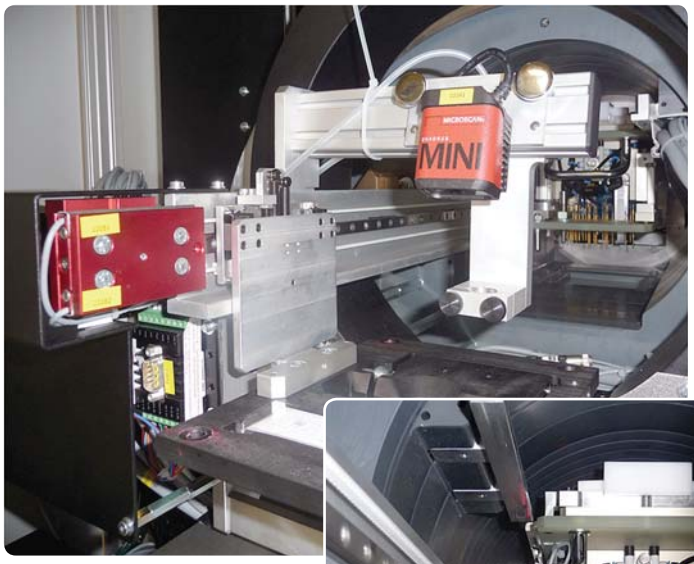

The radar test system is optimized for the manufacturing environment and can be integrated in-line in a high volume manufacturing facility or configured for manual handling.

With Konrad's KT-319000 automotive radar test system you can achieve comprehensive RF testing of your radar devices with the throughput required to meet the high volumes demanded by the automotive industry.

System Components

Agilent Technologies

E8257D-532	PSG signal generator 250 kHz to 31.8 GHz
U2002A	USB power sensor
E3640A	Power supply

Konrad Technologies

KT-319000	Automotive radar test system

To learn how this solution can address your specific needs please contact Agilent's solutions partner, Konrad Technologies.

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Konrad GmbH specializes in the development, production and integration of customer-specific test systems for industries worldwide including automotive, aerospace, communications, medical and semiconductors.
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