WAVECORE™
RF TEST SET

BETTER, FASTER, MORE AFFORDABLE TESTING

Testing is a major expense when manufacturing and introducing new radio frequency (RF) products. RF assemblies can differ greatly, but all require efficient, accurate, reliable and traceable testing. Textron Systems' WaveCore RF Test Set features advanced instrumentation and measurement capabilities to minimize test time and achieve repeatability and test-to-test data correlation.

TEXTRON Systems

FAST, ACCURATE AND REPEATABLE TESTING WITH COTS INSTRUMENTATION

Textron Systems' automated test equipment (ATE) center of excellence is located in Hunt Valley, Maryland. Part of its WaveCore family of standard test systems, the WaveCore RF test set is designed to provide the lowest level of measurement uncertainty with unprecedented reliability, maintainability and supportability.

THE WAVECORE RF IS IDEALLY SUITED TO TEST COMPONENTS INCLUDING:

- Amplifiers
- Mixers
- Filters
- Up/down converters
- Integrated master assemblies, or IMAs
- Weapons replaceable assemblies, or WRAs
- Line replaceable units, or LRUs
- Radio subassemblies

Based on the latest commercial, off-the-shelf (COTS) instrumentation, the WaveCore RF system can be deployed affordably for both production and engineering applications, providing industry-leading levels of data correlation with high system mean time between failures (MTBF) and low mean time to repair (MTTR).

TEXTRON SYSTEMS' WAVECORE RF CAN PERFORM A COMPREHENSIVE ARRAY OF RF TESTS, INCLUDING:

- Direct current, or DC, in standby and operational mode
- Transmitter S-parameters (pulsed or continuous wave)
- Transmitter pulsed phase shifter measurements (Root mean square, or RMS; peak phase; and amplitude errors)
- Transmitter pulsed attenuator measurements (RMS and peak amplitude errors)
- Transmitter pulsed compression measurements
- Transmitter isolation
- Transmitter gain changes versus power supply changes
- Harmonics
- Spurious
- Pulse profile (pulse width variation, rise and fall times, peak output power, amplitude, phase droop and ripple)
- Output pulse delay
- Pulse-to-pulse amplitude and phase stability
- Residual output noise
- Receiver S-parameters (pulsed or continuous wave)
- Receiver noise figure
- Receiver phase shifter (RMS, peak phase and amplitude errors)
- Receiver attenuator (RMS and peak amplitude errors)
- Receiver input third-order intercept, or ITOI
- Module identification
- Module status
- Output third-order intercept
- Gain transfer
- Frequency response
- Phase linearity (AM/PM)
- Frequency translation

The standard WaveCore RF system supports vector-based testing up to 40 gigahertz. Various equipment options are available to support testing at different frequency ranges, as well as other unique test requirements. Systems can be customized for specific customer measurement requirements.

TRACEABLE DATA
The system's software environment utilizes industry-standard test sequencers for consistent, easy-to-access results and calibration data.

REDUCED TEST TIME
The WaveCore RF utilizes the latest commercial test equipment for test time reductions an order of magnitude or more over legacy testers.

STANDARD AND FAMILIAR INTERFACE
By utilizing a standard test conductor interface that is compatible with previous-generation testers, next-generation test systems by Textron Systems' ATE team can be integrated efficiently and with low risk.

FAST, REAL-TIME CALIBRATION CYCLES
Automatic calibration and calibration verification software is included with the WaveCore RF, promoting the achievement of uncertainty targets, reducing calibration cycles and enabling easily correlated confidence checks in real time. The system's self-test software can verify test station setup and stability quickly and automatically.

MODULAR AND SCALABLE
The WaveCore RF features modular, scalable hardware and software, which allow users to populate a tester with only the instruments needed for the desired test sequences. Users may add additional instrument resources as test requirements change.

Test source code, documentation and training are available, enabling customers to modify or add new tests for their own unique requirements.

Textron Systems also offers support plans that can reduce repair time to less than 24 hours, and keep systems up and running within the available support budget.

WARRANTY AND SUPPORT
All Textron Systems WaveCore testers include a standard one-year, return-to-factory warranty on all components. Optional extended warranties also are available. Standard and tailored support contracts are available upon request to address customer needs for 24/7 up-time, application support, quick repair and maintenance.

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