

**FEATURES:**

- On-The-Air Test TX, RX Functionality Without Direct Cable Connection to Phone Data Port
- >80 dB Typical RF Isolation
- Flat Coupling Response Over 700 MHz - 3 GHz
- Works with Mobile/Cellular Radio Test Sets
- Phone Placement Fixture Assures Test Repeatability
- Field Proven
- Custom Configurations Available



*ETS-Lindgren's Model 5211  
Wireless Interface Test System*

**ETS-Lindgren's Model 5211 Wireless Interface Test System (WITS<sup>™</sup>)** is a self-contained portable enclosure that can check transmit and receive functionality with or without direct cable connection to the RF or data ports of a cell phone. This is accomplished using a patented near field coupler in the enclosure that couples with the phone's own antenna. The coupling coefficient has a flat response over the frequency range of 700 MHz - 3 GHz.

With this Common Air Interface (CAI), the operator performs the test faster and simulates a real-world environment. In contrast, the direct connection method bypasses the antenna and adds up to several dB of loss to the measurement. The CAI method

provides a shorter signal path and readily detects a faulty antenna. (A connector is provided for testing with a direct connection if desired).

To eliminate nulls and hot spots, each enclosure is lined with ETS-Lindgren's Rantec brand RF absorber, which improves test repeatability. Compressible RF gaskets are used to seal the lid on closure. Nominal shielding effectiveness >80 dB, although higher values are possible.

Consistent orientation of the phone in the enclosure is important for test repeatability. To help the operator position the phone correctly, a sliding clamp and alignment post are built into the bottom of the enclosure.

The base is also marked with an illustration of a typical phone position.

The enclosure includes one external Type-N connector, which links the antenna coupler to the test set; one Type-N connector feedthrough for traditional direct connection testing; and a 9-pin filtered D-sub connector for more advanced test procedures.

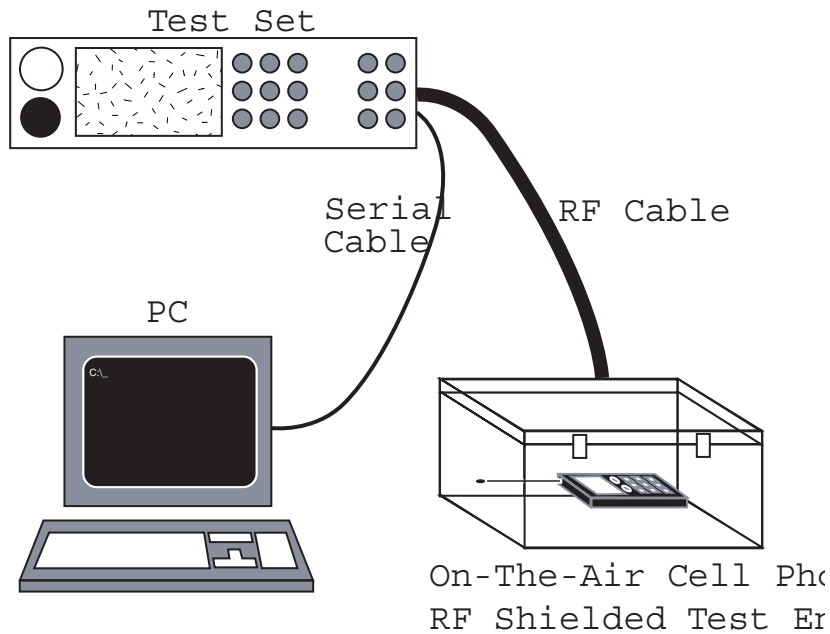
**Electrical Specifications**

Model #	Frequency Range	Typical RF Isolation	Typical Internal RF Absorption	Coupling Factor*	Typical Coupling Loss Repeatability
5211	700 MHz - 3 GHz	1 MHz - 3 GHz > 80 dB	800 MHz - 1.0 GHz 1.8 GHz - 3.0 GHz	824 MHz - 894 MHz 1.8 GHz - 3.0 GHz	+/- 1 dB

\*Typical, to resonant dipole 1 in from coupler surface

**Physical Specifications**

Model #	External Dimensions (L x W x H)	Internal Dimensions (L x W x H)	Max Phone Body Size (L x W x H)	Max Phone Antenna (Length)	Weight	Antenna Coupler Connectors	Calibration Connectors	DC/Audio Connectors
5211	49.5 cm x 35.5 cm x 22.8 cm 19.5 in x 14.0 in x 9.5 in	37.5 cm x 20.3 cm x 8.3 cm 14.8 in x 8.0 in x 3.3 in	19.0 cm x 7.36 cm x 8.2 cm 7.5 in x 3.0 in x 3.3 in	17.8 cm 7.0 in	6.8 kg 15.0 lb	Type N Female External	Type N Female Internal & External	Filtered DB9



*Typical Test Set-up for the Model 5211*