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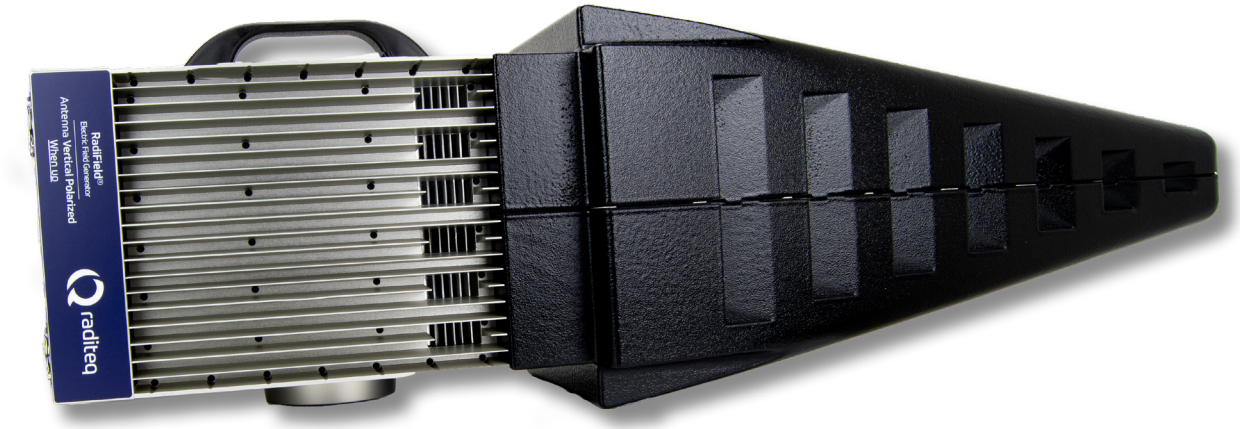
Data Sheet

Pro Series

RadiField® Series

Compact | Efficient | Full Compliant



24/03/23

RadiField®

The EMC Immunity Test Solution

Compact **Efficient** **Full Compliant**

The patented RadiField® Triple A is a revolutionary concept that caused a paradigm shift in the world of EMC immunity testing when it was introduced in 2015. The RadiField® system consists of a combination of high level integration and a lossless field combining techniques. This makes several discrete components with high power losses like combiners and external cabling superfluous.

General -The patented RadiField® E-field generator represents a ground breaking approach to generating Electric fields during EMC immunity testing. Its lossless field combining techniques make costly and lossy power combiners obsolete, leading to a reduced number of separate system components and increased reliability. Moreover, this approach significantly simplifies the system setup, significantly reducing the time required for configuration.

Conventional testing - Conventional radiated immunity testing systems typically rely on a broadband amplifier and antenna. Often this amplifier is constructed from multiple small amplifier modules, an internal power combiner, and interconnecting RF cabling. To complete the system, external couplers and power meters are typically required. Regrettably, this approach experiences poor efficiency at high frequencies, primarily due to significant power losses in the output combiner and the coaxial cable connecting the amplifier and antenna.

Lossless Field combining –The RadiField approach employs separate amplifier modules, as in a conventional amplifier, but instead of combining their output power levels, each module features its own transmitting antenna. By combining the fields generated by these antennas, lossless field combining is achieved without the losses that arise when using an conventional amplifier with output combiner.

The RF test signal directed towards the RadiField® unit is transmitted at low power (typically 0 dBm) through a standard N-type coaxial cable. Any losses that may occur in this cable are considered negligible due to the low power levels at the amplifier's input.

Full compliant– The RadiField technology complies with international immunity standards, making it a suitable solution for EMC testing across various industries, including automotive, military, medical, and commercial sectors.

Cost of ownership - The RadiField® technology not only boasts a lower price tag but also offers additional cost-saving benefits such as easy installation, low power consumption, reduced mechanical wear and tear of cables and connectors, and lower calibration costs. All of these factors contribute to a substantially lower cost of ownership for the immunity system.

Flexible - The RadiField® technology's compact size, lightweight design, and full integration make setting up an immunity test as easy as connecting a single coaxial cable! This feature makes the system ideal for on site testing and situations where the system will be used at different locations.

RadiCentre Integration - The RadiField® E-Field generator seamlessly integrates with the RadiCentre® modular test system, allowing for easy and efficient operation. The RadiSupply® plug-in card in the RadiCentre® provides power to the RadiField® via a standard coaxial cable, which is also used for test signal transmission, bidirectional communication with the RadiField®.

Antenna mast- The RadiField® can be used with the RTW2000A mast, which enables automated polarization of the radiated field. The automated H/V positioner of the RadiTower can be easily controlled without the need for any additional cabling. This feature greatly simplifies the setup process and ensures efficient testing.

Broad Range – The RadiField® technology is available in various models that cover a broad frequency range from 800 MHz up to 18 GHz and provide high test levels up to 100 V/m. This range of options allows for flexibility in testing and ensures compatibility with a wide range of testing requirements.

RadiField® Specifications

Model	RFS2006A	RFS2006B
Frequency range	0.8 GHz - 6 GHz	0.8 GHz - 6 GHz
Three Meter Equivalent (1) One Meter Maximum field	3 V/m 16 V/m	10 V/m 54V/m
Max. dBm input to reach TME[1] Field	0 dBm (Typical)	
Internal power meters	Forward power Reflected power	
Power meter type	Integrated RadiPower®	
Directional coupler	Integrated	
Input connector	N-Type	
Harmonic suppression @ 1 dB compression	- 12 dBc (minimum, 2nd harmonic) - 16 dBc (typical, 2nd harmonic)	
Safety specifications		
Voltage	56 VDC (Safe voltage)	
Safety circuit	Safe start & shut-down	
Cable (dis)connect	Intrinsically safe	
Connections		
Tri-pod mount	¼-20” UNC thread	
Dimensions	**RFS2006A**	**RFS2006B**
Length	860 mm	860 mm
Height	250 mm	250 mm
Width	250 mm	250 mm
Weight	10 kg	11 kg
Environment conditions		
Temperature range	10˚ C – 40˚ C	
Relative humidity	10% - 90% (non-condensing)	
Sound level produced	< 70 dB(A)	
Maximum installation height	2.000 meters above sea level	
Power consumption	**RFS2006A**	**RFS2006B**
Max power consumption	300 W	400 W
Mains fuse of PSU	4 AT	
Supply voltage	115 VAC / 230 VAC	
Mains	Safety class I, Over voltage category II	
Saftey		
Warranty (2)	3 Years	

- All specifications are measured after 10 minutes warm-up time and 0dBm unless specified otherwise.
- Typical specifications indicate that the measured values are met on at least 80% of the points.
- 1) Three Meter Equivalent (TME) Field: 1,5 m x 1,5 m Homogeneous field @ 3 m and 2 dB field compression according to IEC 61000-4-3
- 2) Standard one year of warranty is given on Raditeq equipment. After you register your new Raditeq product two (2) years of warranty will be added for free resulting in three (3) years of warranty. Registration can be done at: www.raditeq.com

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