

RadiPower®

The accurate EMC Power Meter

Fast • Accurate • Flexible

An accurate power meter is indispensable to perform reliable EMC measurements. The RadiPower® is a RF power meter dedicated for CW power measurements during EMC tests. The RadiPower® is an affordable, accurate and extremely fast power meter. It provides measurements within 0.2 dB over a frequency range from 9 kHz till 6 GHz, which enables effective measurements in accordance with the latest international EMC standards.

Fast

EMC immunity measurements are time consuming. The total elapsed time is mainly depending on the number of frequency points, the dwell time and the speed of the power meter. As standards in general prescribe the first two parameters, the speed of the power meter is the only one that can be optimised. The unprecedented diode technology of D.A.R.E!! makes extremely fast though accurate power measurements finally a reality, even at low power levels.

Accurate

Next to speed, accuracy is the first concern when performing EMC measurements. The RadiPower® allows high precision EMC measurements with a high dynamic range of over 65 dB. With an accuracy of 0.2 dB over the complete band it is suitable for measurements in accordance to ISO11451-x or EN61000-4-3/-6 standards.

Flexible

The RadiPower® plug-in card contains 4 USB slots to connect a maximum of four RadiPower® power heads. RadiPower® plug-in cards are designed to fit in the RadiCentre® 19-inch rack-mountable modular system. Together with the other available cards the RadiCentre® offers an affordable and comprehensive EMC test system. Alternatively the RadiPower® power head can be connected directly to a PC using a standard USB port.

Measurement uncertainty

As impedance mismatch is often the main contribution to the measurement uncertainty the RadiPower® has a very low Standing Wave Ratio (SWR). Because of this, very good measurement uncertainties can be obtained.

Software support

In case the RadiPower® is used in a RadiCentre®, it is software controllable with RS-232 and IEEE-488. Besides the RadiMation® integral EMC measurement software the system can be controlled by all EMC measurement packages as all software codes to control the unit are available. For stand-alone use the RadiMon® measurement software is delivered with the system.

Pulse Power measurements

To enable the possibility of measuring RF pulse signals the RadiPower® can be delivered as a dedicated RF pulse power head. This version measures pulses as short as 20µs.



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The Standard for Consultancy, (Re)design
and Training in RF EMC and Product Safety

DARE!!
Instruments

Technical Specifications

RadiPower®	
RadiPower® Head	
Detector type	: Diode
Measurement function	: Average power
Calibrated frequency range	: 9 kHz till 6 GHz (pulse power head starts at 10 MHz)
Power measuring range	: -55 dBm till 10 dBm (usable from -60 dBm till 12 dBm)
Input damage level	: > 20 dBm
Resolution	: 0.01 dB
SWR: 9 kHz till 100 MHz	: < 1.05
100 MHz till 2 GHz	: < 1.15
2 GHz till 6 GHz	: < 1.20
Measuring speed	: 100 samples per second (depending on filter setting)
Accuracy [23 ± 2]° C	: 0.2 dB
Maximum linearity error	: 0.05 dB / 10 dB (0 dBm reference point)
Temperature effect	: < 0.15 dB over full temperature range
Measurement units	: dBm

RadiPower® Plug-in Card	
Form factor	: Occupies one slot in a RadiCentre®

Environmental conditions	Card & Head
Temperature range (use)	: +20° C - +40° C
Temperature range (storage)	: 0° C - + 85° C
Relative humidity	: 10 – 90% (non-condensing)

Connectors and cables	Head
To plug-in card or PC (data)	: USB-B
USB Communication	: USB 1.1
USB power consumption	: < 100 mA
RF input connector	: N-type precision
Warranty	
Warranty	: 3 years

Filters	Time constant
Filter 1	1 ms
Filter 2	3 ms
Filter 3	10 ms
Filter 4	30 ms
Filter 5	100 ms
Filter 6	300 ms
Filter 7	1,000 ms
Auto mode	See below

Auto mode	
+10 till 0 dBm	3 ms (filter 2)
0 till -10 dBm	3 ms (filter 2)
-10 till -20 dBm	3 ms (filter 2)
-20 till -30 dBm	3 ms (filter 2)
-30 till -40 dBm	10 ms (filter 3)
-40 till -50 dBm	30 ms (filter 4)
-50 till -60 dBm	100 ms (filter 5)

Models

USB1004A	: Plug-in card for RadiCentre®
RPR1006A	: RadiPower® RF power head
RPR1006P	: RadiPower® RF pulse power head

More information

For more information contact:

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