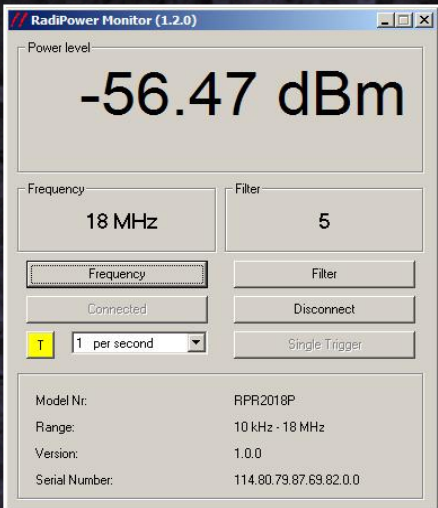


RadiPower®



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

DARE!!

Instruments

The accurate EMC Power Meter Fast • Accurate • Flexible

An accurate power meter is indispensable to perform reliable EMC measurements. The RadiPower® offers a range of RF power meters dedicated for CW power measurements during EMC tests. The RadiPower® offers 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 and 10 MHz till 18 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 detector 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. The RadiPower® 6GHz (RPR1006A) has a dynamic range of 65 dB. The RadiPower® 18GHz (RPR2018C) has a dynamic range of 55 dB. With an accuracy of 0.2 dB over is suitable for measurements in accordance to Automotive, CE-marking and Military 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

The RadiPower® has a very low Standing Wave Ratio (SWR) and this will result in a low impedance mismatch, which is one of the contributions to the measurement uncertainty in RF power measurements.

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

The RadiPower® RPR1006A and RPR2018C are dedicated for CW power measurements. When measuring RF/burst signals is required the RadiPower® can be delivered as a dedicated RF pulse power head (RPR1006P and RPR2018P). These versions sample RF bursts with a fast sampling rate up to 1.0 MSps, storing the peak value or the complete waveform into internal buffer.

Technical Specifications

RadiPower®			
RadiPower® Head		RPR1006A	RPR2018C
Detector type	:	Diode	Diode
Measurement function	:	RMS CW power	RMS CW power
Frequency range	:	9 kHz to 6 GHz	10 MHz to 18 GHz
Power measuring range	:	-55 dBm till +10 dBm	- 45 dBm till + 10 dBm
Input damage level	:	> +20 dBm	> +20 dBm
Resolution	:	0,01 dB	0,01 dB
RF input impedance	:	50 Ohm	50 Ohm
Maximum SWR	:	1,05 @ 9 kHz to 100 MHz 1,15 @ 100 MHz to 2 GHz 1,35 @ 2 GHz to 6 GHz	1,20 @ 10 MHz to 18 GHz
Frequency response accuracy (at 23 °C ± 2 °C)	:	± 0,25 dB	± 0,25 dB (≤ 10 GHz) ± 0,50 dB (> 10 GHz)
Linearity error (0 dBm reference point)	:	0,05 dB / 10 dB	0,5 db / 10 dB
Measuring speed	:	100 samples per second (depending on filter setting)	
Temperature effect	:	0,15 dB over full temperature range	
Measurement units	:	dBm	
Frequency response correction	:	Stored frequency response data is taken into account by numerical entry of the measurement frequency	

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

Environmental conditions	Card & Head	
Temperature range (use)	:	+20 ⁰ C - +40 ⁰ C
Temperature range (storage)	:	0 ⁰ C - + 85 ⁰ 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	:	< 200 mA
RF input connector	:	Precision N-type
Mechanical dimensions (6 GHz head)	:	124 x 32 x 32 mm
Mechanical dimensions (18 GHz head)	:	152 x 32 x 32 mm
Warranty	:	3 years

Filters CW	# of averages
Filter 1	1
Filter 2	3
Filter 3	10
Filter 4	30
Filter 5	100
Filter 6	300
Filter 7	500

Auto filter mode	
+10 to 0 dBm	10 (Filter 3)
0 till -10 dBm	10 (Filter 3)
-10 till -20 dBm	10 (Filter 3)
-20 till -30 dBm	30 (Filter 4)
-30 till -40 dBm	100 (Filter 5)
-40 till -50 dBm	300 (Filter 6)
Below -50 dBm	500 (Filter 7)*

* Only applicable for RPR1006A

Models

USB1004A	:	Plug-in card for RadiCentre® - 4 channels
RPR1006A	:	RadiPower® RF power head, 6 GHz
RPR2018C	:	RadiPower® RF power head, 18 GHz

More information

For more information contact:

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