



raditeq

Data Sheet

RadiPower® 2000 Pulse Series

RF Power Meter

Flexible

Versatile

Fast



4TECT

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RadiPower® Pulse Series

The accurate EMC Power Meter

Flexible | Versatile | Extensible

An adequate power meter is indispensable to perform reproducible and reliable RF power measurements. The RadiPower® Pulse offers a range of RF power meters dedicated for RF/Burst power measurements. The RadiPower® Pulse USB power heads are affordable, accurate and extremely fast. The RPR2006P provides measurements over a frequency range from 9 kHz up to 6 GHz. The RPR2018P measures over a frequency range of 80 MHz up to 18 GHz.

Extremely Fast

The RadiPower® Pulse USB power heads perform power measurements with a maximum sampling speed of 1 million samples per second! By using such a high sampling mode it is capable to measure RF Burst/Pulse signals with pulse durations down to 2 ns and it can measure CW and RMS power as well.

Accurate

Next to speed, accuracy is another main requirement when performing RF Burst/Pulse power measurements. The RPR2006P allows high precision RF power measurements with a high dynamic range of over 65 dB. Both power meters provide a basic accuracy of 0.25 dB and are way within requirements for measurements in accordance to international EMC immunity standards.

Flexible

The RadiPower® plug-in card (USB1004A) contains 4 USB slots to connect a maximum of four RadiPower® power heads of any combination and is designed to fit into the RadiCentre® EMC test systems. Alternatively the RadiPower® heads can be connected directly to a PC USB port.

'RMS' and 'Peak' mode

Using the 'RMS' mode an unmodulated RF power signal can be measured with a maximum speed of 10 MSps. But, the RadiPower® Pulse is not only able to measure extremely fast. In 'Peak' mode the RadiPower® Pulse keeps track of the highest level detected. This can be done for an infinite time.

'Envelop trace' mode

The 'envelop trace' mode can be used to visualize an RF/Burst signal using an internal buffer that can store 4.000 samples, using 2.000 pre-trigger measurements and 2.000 post-trigger measurements. The RadiPower® supports 'edge' or 'level' triggering modes and using this mode RF Burst signals can be visualized in a very easy way. This unique function can be used to perform different kind of RF Burst/Pulse measurements including the RI-114 Radar Pulse power measurements in accordance to the Automotive Ford standard FMC1278.

Software support

The standard RadiMation® FREE freeware control software fully supports the RadiPower® measurement modes where the measurement parameters can be configured and the results are graphically displayed or printed/exported. Beside this RadiMation® EMC test software can be used to perform fully automated immunity tests and control of the RadiPower power meter. Using the instrument command codes the RadiPower® can be used with any other software control package.

RadiPower® Pulse Series

Model	RPR2006	RPR2018
Detector type	Log envelop detector	
Measuring function	CW power, Peak power, Envelop tracing	
Measurement speed	20 kSps, 100 kSps, 1 MSps	
Resolution	0,01 dB	
Measuring units	dBm or Watt	
RF input impedance	50 Ohm	
Input damage level	> +20 dBm	
Measurement range & accuracy		
Frequency range	(4 kHz) 9 kHz to 6 GHz	80 MHz to 18 GHz
Power measuring range	-55 dBm to +10 dBm (Usable to -60 dBm)	-45 dBm to +10 dBm (Usable to -50 dBm)
Frequency response accuracy (at 23°C ± 2°C)	+/- 0,25 dB (≤ 6 GHz)	+/- 0,25 dB (≤ 10 GHz) +/- 0,50 dB (> 10 GHz)
Linearity error	0,05 dB + 0,005 dB/dB (-50 dBm to +10 dBm)	0,025 dB / dB (-40 dBm to +10 dBm)
Temperature effect	0,15 dB max over full temperature range	
VSWR		
< 100 MHz	1,05	1,20
100 MHz to 2 GHz	1,15	1,20
2 GHz to 6 GHz	1,35	1,20
6 GHz to 18 GHz	n/a	1,35
Power Consumption		
Supply voltage	+5Vdc from USB port (4,75 V to 5,25 V)	
Current consumption (USB)	120 mA	160 mA
Connections & Demensions		
Dimensions of the power sensor (h * b * d)	124 * 32 * 32 mm	152 * 32 * 32 mm
RF input connector	N type precision	
USB connector	USB type B (1.1)	
Enviromental conditions		
Temperature range (operating)	0° to 40° Celsius	
Temperature range (storage)	-20 to 85° C	
Relative humidity	10 – 90% (non-condensing)	
Warranty		
Warranty	3 years after product registration (excluding misuse)	
Model		
USB1004A		
Supply voltage	12 V	
Current consumption (USB)	100 mA max.	
Dimensions of the power sensor (h * b * d)	2U * 84TE * 250,4mm	
Data connector	USB type A (1.1)	
Number of power sensors per card	4 max.	
Temperature range (operating)	0° to 40° Celsius	
Temperature range (storage)	-20 to 85° C	
Relative humidity	10 – 90% (non-condensing)	