raditeq

Data Sheet

Pro Series

RadiGen®

RF Signal Generator

Fast Accurate Monotone

RadiGen® 2000 Series

The ideal EMC/RF Signal Generator

Fast **Accurate** **Monotone**

An important component of an EMC immunity test system is the RF signal generator. It produces the modulated or un-modulated RF carrier signal at a certain frequency and signal level. The RadiGen® RF Signal generators are optimized for EMC test purposes in order to perform fast and accurate EMC immunity tests without the need of external modulation. .sources.

Flexible | The RadiGen® EMC/RF signal generator is available in three models; the model RGN2400A covers a frequency range from 9 kHz to 400 MHz. The RGN2006B covers the frequency range from 9 kHz to 6 GHz. These models offer a solution for all conducted and radiated immunity test applications. The generator provides CW, AM, FM and Pulse modulated signals using a digital internal modulator. The pulse on/off times can be individually set between 200 ns and 100 s. Pulse duration/repetition times can be configured separately offering very flexible pulse modulation settings including Automotive Radar Gated Pulse (ARGP) tests (Ford, GM and PSA).

Accurate and pure signal | The RadiGen® is an EMC/RF signal generator with a frequency error of less than 1 ppm, a modulation frequency accuracy of 0.5% and an output level settling time which is shorter than 1 ms. These figures make it the perfect generator for fast and accurate EMC immunity testing. Due to the fully solid state design of the RadiGen® issues caused by defects to the output attenuator or RF switches are eliminated. Thus allowing variations in the output power level while maintaining a completely monotone signal without any glitches. Also mechanical defects to the output attenuator cannot occur, thereby resulting in a better Mean Time Between Failure (MTBF) for the RadiGen®.

Modular system | The RadiGen® signal generator is delivered as a very compact, one slot, plug-in card designed to fit into the modular RadiCentre® system. The RadiGen® plug-in card is compatible with the RadiCentre® two or seven slot systems. The system is muntifunctional and can for example contain a RF signal generator (RadiGen®), one or more different E-field probes (RadiSense®), coaxial switch cards (RadiSwitch®), RF power meters (RadiPower®) and an E-field generator (RadiField®). If needed, even larger EMC test systems can be built by combining multiple RadiCentre® systems, still controlled as one system.

Easy to use | The RadiCentre® systems are "Plug and Play", which means that every plug-in card is automatically recognised and initialised by the RadiCentre® and immediately ready to use. The user can configure and control the system using USB, LAN* and GPIB* or through the touchscreen*.

Software support | The system can be controlled by the RadiMation® integral EMC test and measurement software or by any other EMC measurement software packages using the RadiGen® software command codes.

(*) = only applicable for the 2-slot and 7-slot RadiCentre®

- All specifications are measured alowing 10 minutes warm-up time and -0 dBm output level unless specified otherwise.
- Typical specifications indicate that the specifications are met on at least 80% of the measurements.
- 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

Model	RGN2400A	RGN2006B
Frequency range	9 kHz – 400 MHz	4 kHz – 6 GHz
RF output connector	1x SMA	1x SMA
Frequency resolution	1 Hz	
VSWR (9 kHz – 400 MHz):	2.5 : <1 typical	
VSWR (400 MHz – 6 GHz)	3 : <1 typical	
Internal frequency standard		
Accuracy	± 1 ppm | ± 1 Hz	
Frequency	10 MHz reference	
Aging	1 ppm / year	
Internal reference output level	+10 dBm typical	
Internal reference output connector	BNC	
External reference standard		
Frequency	10 MHz	
Input level range	-10 dBm to +10 dBm	
External reference input connector	BNC	
Output level		
Range	+ 13 dBm to -70 dBm (guaranteed over whole frequency range)(¹) Output level limited to +7 dBm when AM is applied.	
Level resolution	0.01dB	
Amplitude accuracy (0dBm reference)	±1 dB ±0.01 dB/dB	
Output level setting time	< 1 ms	
Output impedance	50 Ohm	
Harmonics	< -20 dBc (typical < -40 dBc)	
Sub harmonics	< -90 dBc	
Non harmonic spurious	< -60 dBc (9 kHz – 400 MHz)	< -60 dBc (4 kHz – 400 MHz) < -50 dBc (400 MHz – 6 GHz)
Environmental		
Dimensions (Height, Depth, Width)	100 mm (3U) , 220 mm, 40 mm (Occupies one RadiCentre slot)	
Temperature range (operating)	0 to +35 ℃ (up to 40 ℃ with reduced specifications)	
Temperature range (storage)	-20 to +70 ℃	
Relative humidity (operating)	10% to 90% (non-condensing)	
Relative humidity (storage)	0% to 95% (non-condensing)	
Supply voltage	12V & 28V	
Power consumption	<30W	
Modulation types	CW, AM, FM, Pulse and gated pulse	
LF modulation generator		
Frequency range	1 Hz – 100 kHz	
Frequency resolution	0.1%	
Frequency accuracy	0.5%	
AM Modulation		
Modulation depth range	0 – 100%	
AM modulation resolution	0.1%	
AM accuracy	0.5%	
FM modulation		
Frequency modulation range	1 Hz – 100 kHz	
FM deviation resolution	0.1%	
FM accuracy	0.5%	
Pulse modulation		
Pulse modulation range	200 ns – 100 s	
Pulse modulation resolution	100 ns	
Pulse accuracy	0.1% ± 20 ns	
On/Off ratio	> 100 dB	

raditeq