

A grayscale photograph of an anechoic chamber. The walls, floor, and ceiling are covered with dark, star-shaped electromagnetic absorbers. In the center, a person in a light-colored shirt and dark trousers stands next to a large, complex antenna structure mounted on a tripod. The scene is dimly lit, with some highlights on the absorbers and the person's shirt.

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E&E

**CGE06
40 GHz
Comb Emitter
Generator**

The CGE06 is a broadband reference comb source producing frequencies within the 915 MHz to 40 GHz range, with two step sizes selectable by the user.

It is the ideal reference source for carrying out checks on fully- or semi-anechoic chambers and other E-field test environments.

Overview

The CGE06 is compact and can be run from a mains power adapter (supplied) or independently from the PPU01 battery pack to minimise the effect of cabling when characterising an electromagnetic environment.

The generator unit is housed in a metal enclosure so that it can be mounted in direct electrical contact with a ground plane, as may be required by some tests.

The comb signal allows both the reference and noise floor signal levels to be viewed simultaneously, aiding dynamic range measurements.

The CGE06 is equipped with a 2.92 mm output connector to which an antenna can be fitted for generating radiating E-fields.

Features

- 915 MHz to 40 GHz output
 - Applications across a broad spectrum
- Stable output
 - Repeatable measurements
- Selectable comb output frequency
 - Flexibility across a range of applications
- Compact and portable
 - 56 x 17.5 x 72 mm
- PPU01 battery or external power supply
 - No power cable effects using the PPU01
 - Continuous operation using an external power adapter



CGE06 with PPU01

Applications

- Conducted and radiated measurement systems validation and verification
- Investigation and characterisation of different measurement environments such as fully- or semi-anechoic chambers
- Reference source for:
 - Daily pre-test checks as required by accreditation authorities e.g. ISO 17025, DEFSTAN 59-411
 - Comparisons between test sites
 - Long-term performance monitoring
 - Investigation of screened room behaviour
 - Cable loss measurements
- Evaluating component assembly characteristics e.g. filter loss, amplifier gain and bandwidth
- Spectrum analyser or receiver pre-checks
- Shielding evaluation

CGE06 Specifications

General

Frequency range	Conducted Radiated	915 GHz to 40 GHz direct connection into 50Ω system 1 GHz to 26 GHz radiated using MCN02 monocone antenna
Output level	Conducted	60 dBμV min. into 50 Ω system for 90% of combs up to 40 GHz
Comb signal step size	Comb Mode 1 Comb Mode 2	915 MHz base frequency 915 MHz, 1830 MHz, ... 40 GHz 1 GHz base frequency 1 GHz, 2 GHz, ... 40 GHz
Stability	Amplitude Frequency Time	15°C to 30°C <+/-1 dB, 915 MHz to 40 GHz 5°C to 40°C <+/-1.5 dB, 915 MHz to 40 GHz 5°C to 40°C <+/- 30 ppm max, <+/- 10 ppm typ <1 dB (typical over 12 month period)
Operating Time	Battery powered	6.5 hours typical with fully charged PPU01
Output Connector	50 Ω 2.92 mm jack	
Dimensions	CGE06 With PPU01	56 mm x 17.5 mm x 65 mm (72 mm including connector) 80 mm diameter x 65 mm (72 mm including connector)
Weight	CGE06 With PPU01	0.1kg 0.65kg
Power Supply	9 – 18 Vdc, 0.5 A max	
Indicators	Blue Green Red	Active, Comb mode 1 Active, Comb mode 2 Low battery / supply error
Controls	3-way switch	Comb mode 1 OFF Comb mode 2

Standard Kits

Part Number	Description	Parts Included
CGE06KIT01	Standard CGE06 reference source kit	<ul style="list-style-type: none"> CGE06 reference comb generator PPU01 Portable Power Unit PSU01 18 V mains power adapter Hard case Manufacturer's test certificate
CGE06KIT02	CGE06 kit plus antenna	<ul style="list-style-type: none"> CGE05 reference comb generator PPU01 Portable Power Unit PSU01 18 V mains power adapter Hard case Manufacturer's test certificate MCN02-K 1 GHz to 26 GHz monocone antenna

Also available: CGE05 26 GHz Comb Emitter Generator

The CGE05 is also available, providing an output frequency range of 434 MHz to 26 GHz with comb signal step sizes of 434 MHz and 500 Hz.

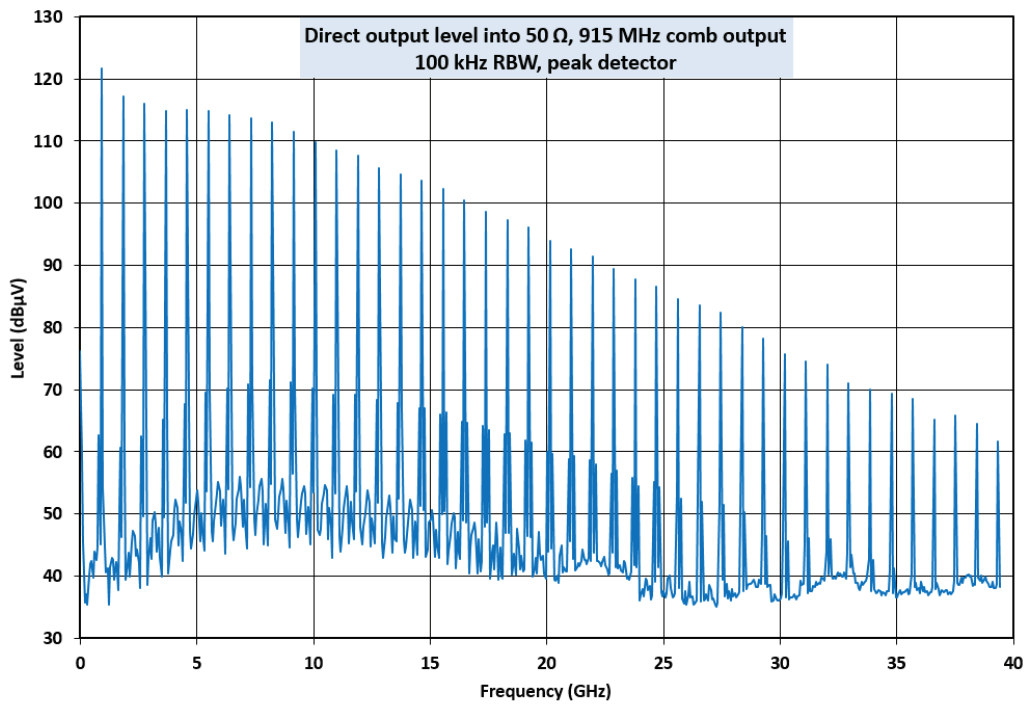
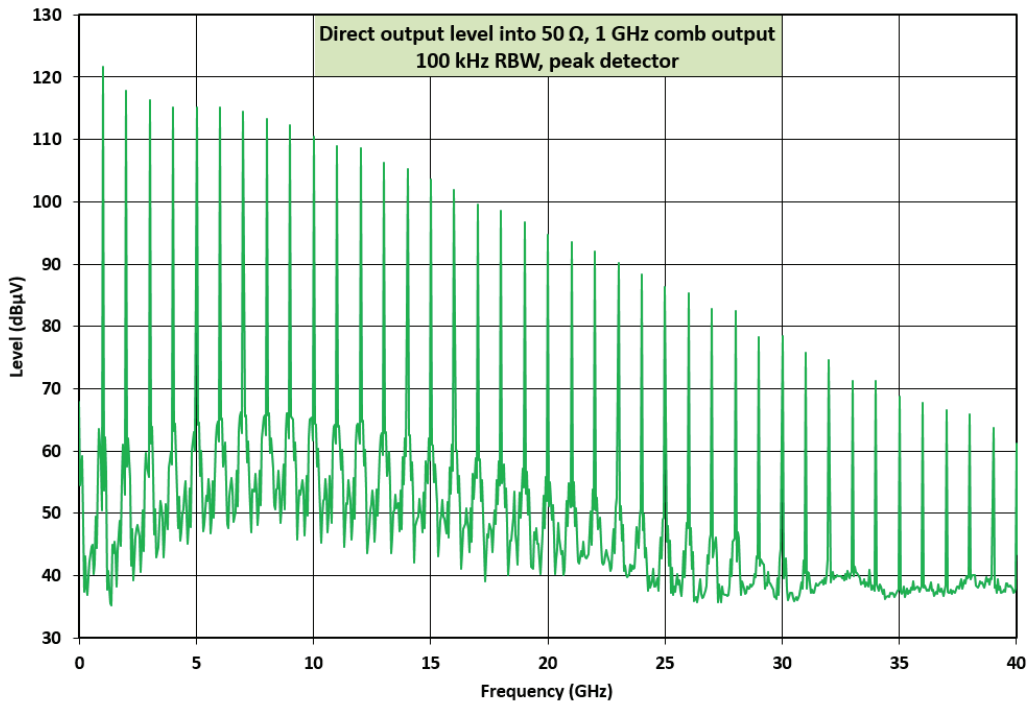
For more details of the CGE05, please contact your local distributor or Eurofins E&E UK.

Accessories

Part Number	Description
MCN02-K	Monocone antenna, 1 GHz to 26 GHz (optimum), 2.92 mm connector
MCN05	Monocone antenna, 26 GHz to 40 GHz (optimum)
PPU01	Rechargeable NiMH portable power unit
PSU01	18v mains power adapter

Comb Emitter Generator: CGE06

Typical output measurement results



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