

Product Technical Information

CGE05 26 GHz Comb Emitter Generator

The CGE05 26 GHz Comb Emitter Generator is a broadband reference comb source producing frequencies within the 434 MHz to 26 GHz range, with two step sizes selectable by the user.

The CGE05 is the ideal source for carrying out checks on fully- or semi-anechoic chambers and other E-field test environments.

Overview

The CGE05 is a broadband reference comb source producing frequencies within the 434 MHz to 26 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.

The CGE05 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 CGE05 is equipped with a precision SMA output connector to which an antenna can be fitted for generating radiating E-fields.



CGE05 with PPU01

Features

- 434 MHz to 26 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

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

CGE05 Specifications

Frequency range	Conducted	434 GHz to 26 GHz direct connection into 50Ω system
	Radiated	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 26 GHz
Comb signal step size	Comb Mode 1	434 MHz base frequency 434 MHz, 868 MHz, ... 25.606 GHz
	Comb Mode 2	0.5 GHz base frequency 0.5 GHz, 1 GHz, ... 26 GHz
Stability	Amplitude	15°C to 30°C <+/-1 dB, 0.5 GHz to 26 GHz
		5°C to 40°C <+/-1.5 dB, 0.5 GHz to 26 GHz
	Frequency	5°C to 40°C <+/- 30 ppm max, <+/- 10 ppm typ
	Time	<1 dB (typical over 12 month period)
Operating Time	Battery powered	10 hours typical with fully charged PPU01
Output Connector		50 Ω precision SMA jack
Dimensions	CGE05	56 mm x 17.5 mm x 65 mm (72 mm including connector)
	With PPU01	80 mm diameter x 65 mm (72 mm including connector)
Weight	CGE05	0.1kg
	With PPU01	0.65kg
Power Supply		9 – 18 Vdc, 0.5 A max
Indicators	Blue	Active, Comb mode 1
	Green	Active, Comb mode 2
	Red	Low battery / supply error
Controls	3-way switch	Comb mode 1 OFF Comb mode 2

Standard kits

Part Number	Description	Parts included
CGE05KIT01	Standard CGE05 reference source kit	<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
CGE05KIT02	CGE05 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 1 to 26 GHz monocone antenna

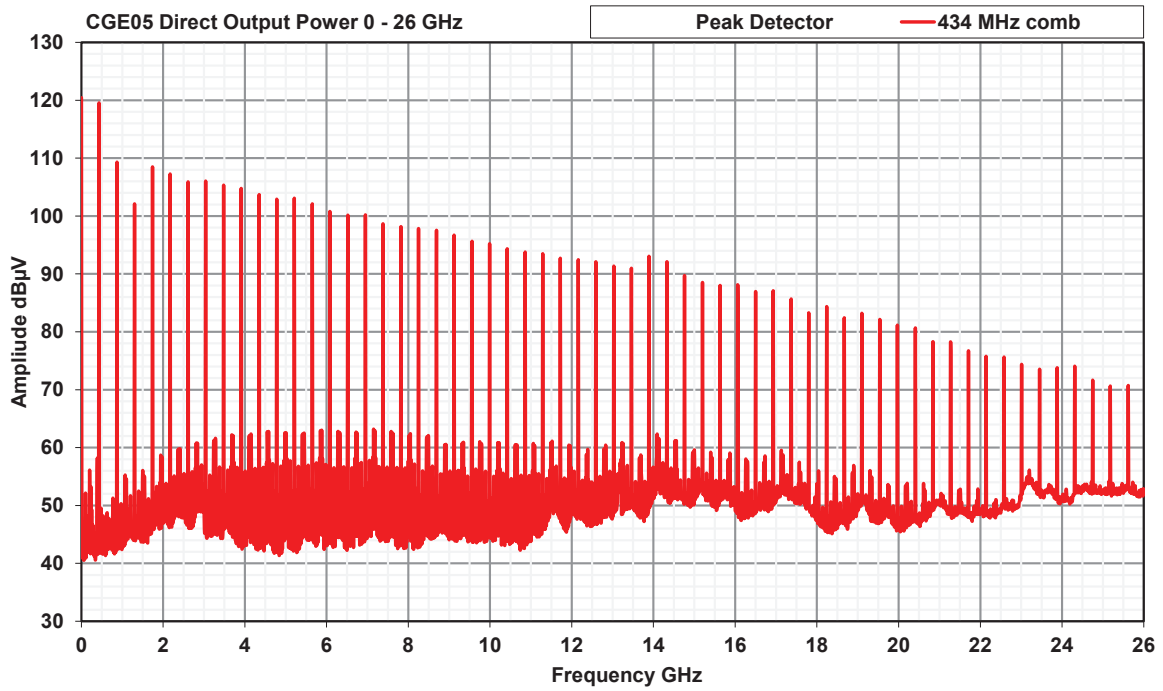
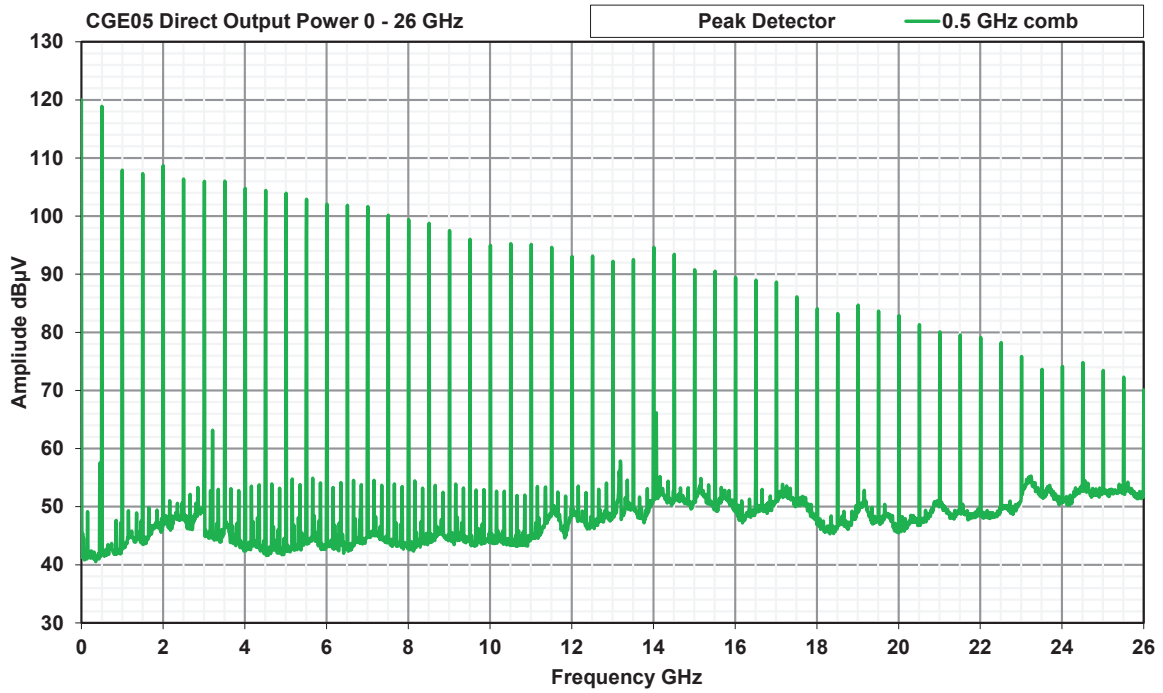
Also available: CGE06 40 GHz Comb Emitter Generator

The CGE06 is also available, providing an output frequency range of 915 MHz to 40 GHz with comb signal step sizes of 915 MHz and 1 GHz.

For more details of the CGE06, please contact your local distributor or Eurofins York.

Comb Emitter Generator: CGE05

Typical output measurement results





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