

Product Technical Information

CGE06 40 GHz Comb Emitter Generator

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

The CGE06 is the ideal source for carrying out checks on fully- or semi-anechoic chambers and other E-field test environments.

Overview

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.

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

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 with PPU01

CGE06 Specifications

Frequency range	Conducted	915 MHz to 40 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 40 GHz	
Comb signal step size	Comb Mode 1	915 MHz base frequency	915 MHz, 1830 MHz, ... 40 GHz
	Comb Mode 2	1 GHz base frequency	1 GHz, 2 GHz, ... 40 GHz
Stability	Amplitude	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
	Frequency	5°C to 40°C	<+/- 30 ppm max, <+/- 10 ppm typ
	Time	<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	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	CGE06	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
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"> • CGE06 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

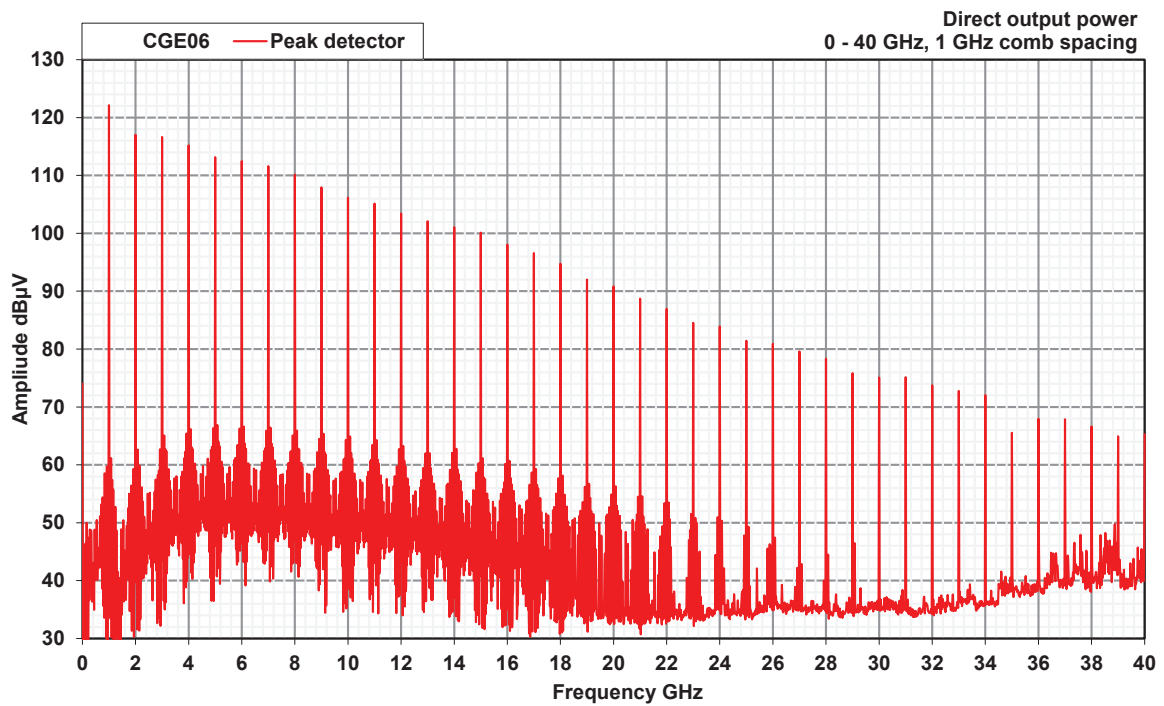
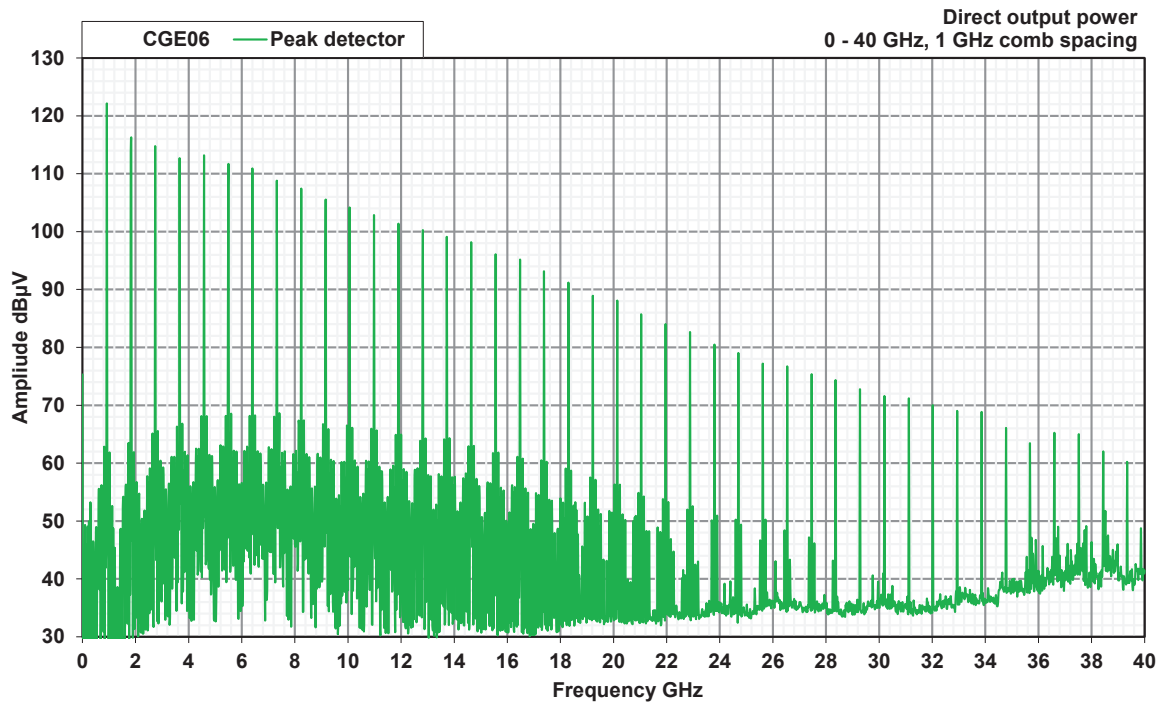
Also available: CGE05 26 GHz Comb Emitter Generator

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 MHz.

For more details of the CGE05, please contact your local distributor or Eurofins York.

Comb Emitter Generator: CGE06

Typical output measurement results





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