

Features

Reference Signal Source for EMI Test Sites

100 MHz Frequency Steps

Usable Frequency Range up to 18 GHz

Battery Powered

Three Year Warranty



Description

The CGO-5100B Comb Generator is a radiated reference signal source with a 100 MHz frequency step size. Unlike a signal generator the Comb Generator radiates all the harmonics at the same time without any need of tuning. The CGO-5100B has a frequency stability of 5 PPM and radiate signals up to 18 GHz.

This Comb Generators have a built in antenna which is located on top of the circular chassis. The chassis shape helps the Comb Generator radiate the signal more uniformly in all directions in the horizontal plane. It can be turned on its side for vertical plane measurements, but is generally not recommended because the influence of the ground plane on the radiation pattern.

The CGO-5100B is powered by rechargeable internal NimH batteries. Using a battery eliminates the need for external cabling that may interfere with the radiated signals. When fully charged, the battery allows continuous use of the Comb Generator for up to 18 hours. The Comb Generator and the charger are shipped with a custom wooden storage box.

Application

Most EMC regulatory agencies require EMI labs to perform regular calibration of test equipment and test sites used for EMI emission measurements. Most EMC labs calibrate their sites and test equipment annually to ensure this requirement is met. However, it is prudent to check the sites and test equipment more frequently to ensure the data taken on the site is accurate and consistent. The normal calibration methods are not practical for a quick check. The solution is to use a Comb Generator as reference signal source.

The test engineer can keep a regular log of Comb Generators radiated readings. This data can be used to detect potential problems with site or equipment by monitoring any significant changes. Using this method, potentially costly measurements error can be avoided. Without regular monitoring a broken antenna, a bad cable, blown preamplifier and poor RF connections may go undetected. The Comb Generator can be also used compare several sites to determine the impact of the site on the test data.

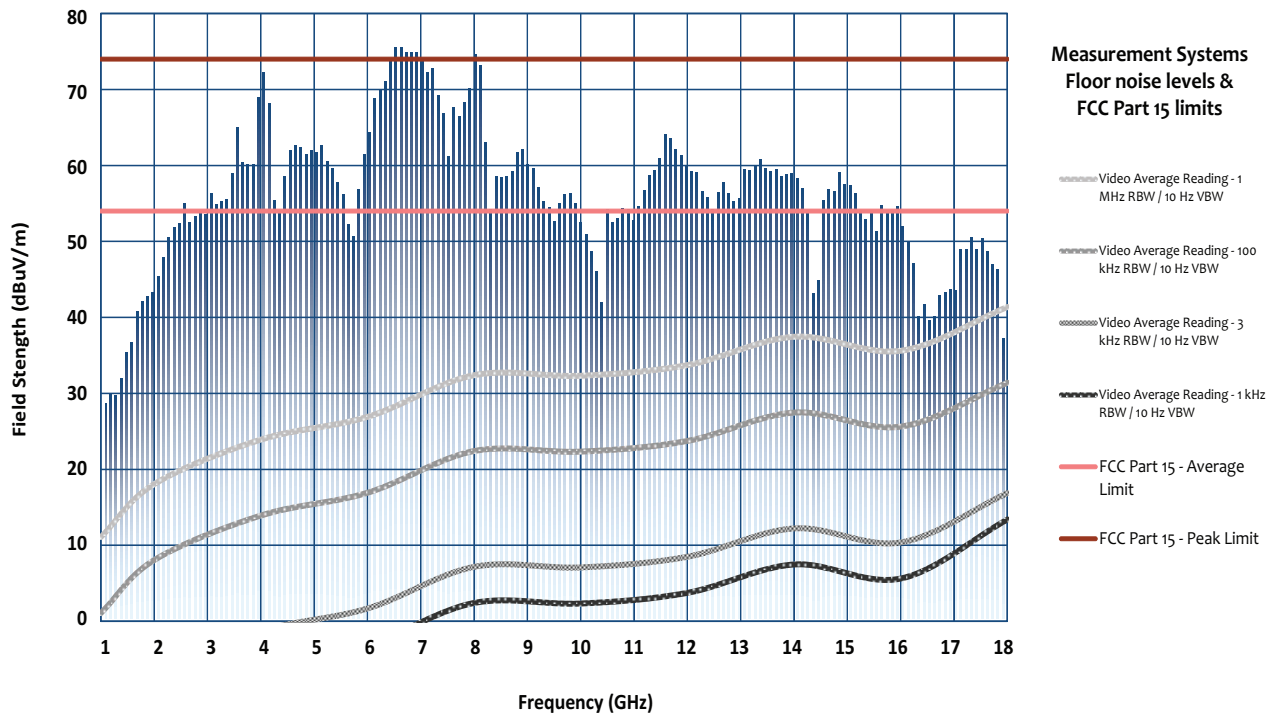
Other applications for the comb Generator include testing shielding effectiveness of an enclosure and materials.

Specifications

Product Name	Comb Generator
Frequency Range	1 to 18 GHz
Intended Application	Reference EMC Site Measurements
Frequency Step Size	100 MHz
Frequency Stability	5 ppm
Time Stability	<1 dB over 12 months
Charger Input	6 VDC, 500A
Operating time	>18 Hours when fully charged
Battery Type	3.6 V, NimH
External Indicators	Battery Low Power On
Antenna	Built in
Circular base dimensions	8 x 1 inches / 19.2 x 2.4 cm
Weight	1 lbs / 0.5 kg

Typical Output

CGO-5100B Comb Generator Radiated Output Levels vs Typical Measurement System Noise Levels
Measurements performed at 3 meter distance, antenna height varied from 1 to 4 meters



All specifications are subject to change without notice.
All values are typical, unless specified.

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