



Comb Generator

CGO- 501, 505, 515, 520

Features

Reference noise source - For site verification

Output upto 4.5 GHz

Stable frequency output

Auto RF shutoff when battery voltage is low

Three year warranty



Description

The CGO- Comb Generator is reference radiated or conducted signal source. The signal contains frequency harmonics at 1,5, 20 MHz intervals. These reference signals are used for validating EMC test sites. A reference signal source must have stable and precise output. Therefore, Comb Generator's internal circuit is built to meet this requirement.

Two antenna supplied with the Comb Generator for low and high frequency signal radiation. The radiated signals are generated by connecting one of the two antennas to the BNC or SMA connector. The circular chassis of Comb Generator helps radiate the signal more uniformly in all directions in the same plane. The conducted reference signals can be obtained by connecting a coax to the BNC or SMA connector.

The Comb Generator is powered by a rechargeable internal battery pack to eliminate any possibility of external cables effecting the radiated signal. When the battery voltage reaches below reliable operating levels the RF will shut off automatically to prevent further use. When fully charged, the battery allows continuous use of the Comb Generator up to 18 hours. The Comb Generator, charger and antennas are shipped in a custom wooden storage box.

Application

EMI measurement are usually conducted in Open Area Test site (OATS) or an Anechoic chamber. OATS and chambers must be calibrated before it is put into service using published calibration procedures at regular intervals. These calibration methods are too elaborate and time consuming to be performed before each test to ensure that the data taken is consistent and accurate.

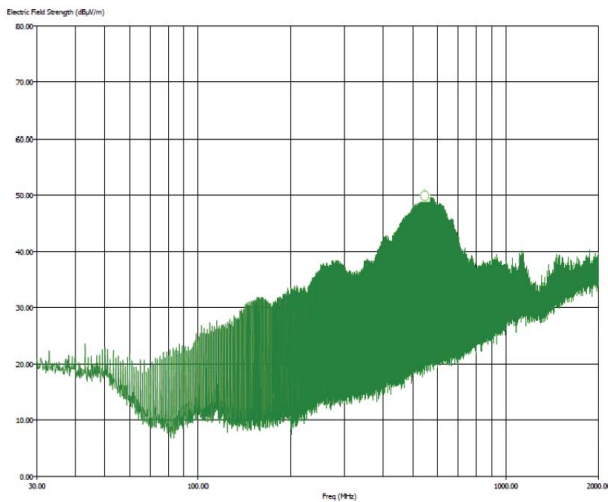
The Comb Generator is a quick site verification tool. The test engineer will be able detect potential problems with site by maintaining a log of the Comb Generator radiated readings prior to taking measurement from a product in the same setup. For instance, test engineer will able to detect problems with antennas, cables, preamplifiers and receiver immediately by comparing previous Comb Generator data in the same setup. The same method can be utilized when EMC emissions measurements taken from the same products varies when the test is repeated. It is difficult to determine if it is the test site or the product is causing the variation. Using the same test setup, measurement can be taken with a Comb Generator in place of the product. This data can be compared with previous Comb Generator measurements to determine the problem. Other uses of the Comb Generator output include testing cables and filters.

Specifications

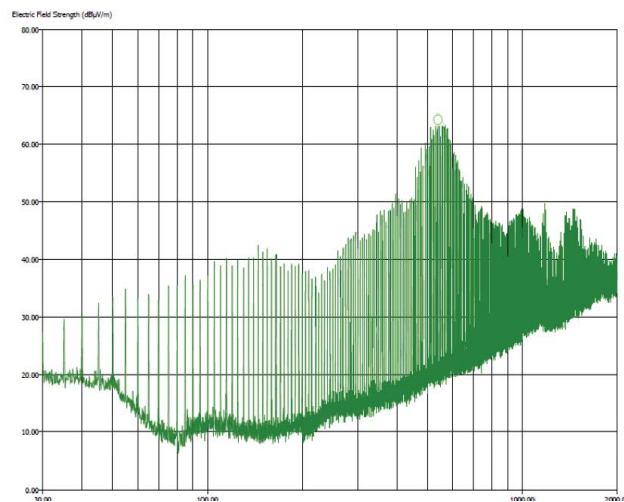
Model	Freq. range (MHz)	Step Size (MHz)	Internal Battery (NimH)	Charger Input (VDC)	Output Connector	Base dimensions dia × height in / cm	Weight lbs / kg
CGO-501	1-1000	1	6 V	7.5	BNC	7 × 0.75 / 17.7 × 1.9	2 / 0.9
CGO-505	5-1500	5	6 V	7.5	BNC	7 × 0.75 / 17.7 × 1.9	2 / 0.9
CG-515	1-1500	1 & 5	6 V	7.5	BNC	4 × 4 × 4 / 10 × 10 × 10*	2 / 0.9
CGO-515	1-1500	1 & 5	6 V	7.5	BNC	7 × 0.75 / 17.7 × 1.9	2 / 0.9
CGO-520	20-4500	20	6 V	7.5	SMA	7 × 1 / 17.7 × 2.5	2 / 0.9

* For Automotive EMC Lab Recognition Program - dimensions L × W × H

Typical radiated output at 3 meter distance (CGO-501, 505 and 515)

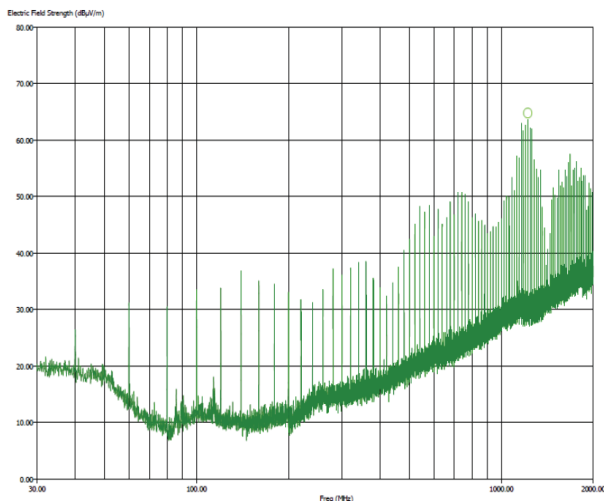


1 MHz step 1- 2000 MHz

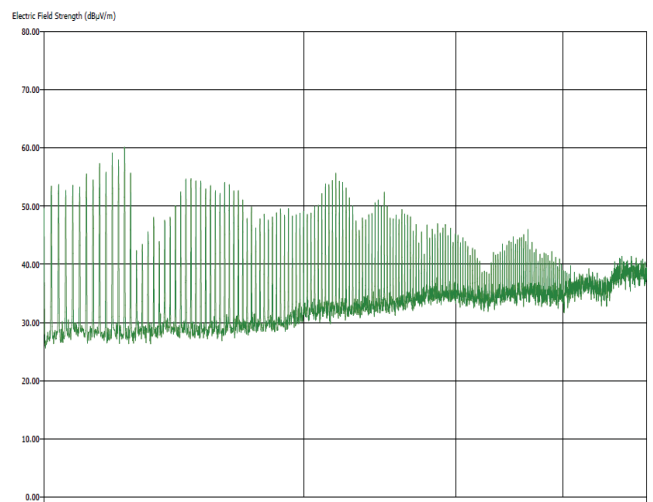


5 MHz step 5 -2000 MHz

Typical radiated output at 3 meter distance (CGO-520)



20 MHz step 20- 2000 MHz



20 MHz step 2 GHz - 5 GHz

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