

Features

Reference Signal Source for LISNs

Frequency Steps of 100 kHz and 500 kHz

Usable Frequency Range up to 400 MHz

Battery Operated



Description

The CGC-510E Comb Generator is a conducted reference signal source to test Line Impedance Stabilization Network (LISN). The Comb generator output has the harmonics of the fundamental frequency. It has two user selectable frequency step sizes of 100 kHz and 500 kHz.

This Comb Generator simulates an EUT generating conducted EMI noise. The CGC series Comb Generators have the standard NEMA three blade connector that can plug directly into any LISN with the matching EUT power socket. It can be attached to any other socket type using suitable adapter. The CGC-510E has high impedance to the external line voltage, AC or DC up to 230 V. This feature allows the Comb Generator to be used while the LISNs are connected to external power source.

The CGC-510E is powered by rechargeable internal NimH batteries. The battery power eliminates the need for an 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

The main application of the CGC-510E Comb Generators is to quickly verify conducted emissions test setups. It is designed to plug directly into the EUT power socket of the LISN. The conducted noise output level of the Comb Generators are close to or above the CISPR 22 limits. Typical output plot is shown on the next page.

Most EMI labs typically calibrate LISNs and other equipment (spectrum analyzers, cables, connectors, etc.) in the conducted emissions test setup at regular intervals. However, test equipment malfunctions may occur between any calibration interval and may go undetected until the next calibration. In the meantime, these malfunctions may produce erroneous test results. The time and resources lost due to these unforeseen errors can be avoided with the help of Comb Generator. With the Comb Generator, the test engineer will be able to quickly perform verification of the conducted test setup more frequently to assure accurate test results.

Other possible applications of the CGC-510E Comb Generator could include production evaluation of components, such as cable shields and filters.

Specifications

Intended Application	Reference Signal Source for LISN verification
Frequency Range	100 kHz to 400 MHz
Frequency Step Size	100 kHz or 500 kHz
Frequency Stability	50 ppm
Amplitude Stability	± 0.1 dB
Time Stability	<1 dB over 12 months
Charger Output / Input	6 VDC, 500 mA / 110VAC 60 Hz or 230 VAC 50 Hz
Battery Type	6V NiMH, 1 Ah
Operating Time	>18 Hours Typical With Fully Charged Battery
External Indicators	Battery Low and Power On
LISN Interface Plug	NEMA 15-P type
Dimensions	5 x 2.2 x 2.2 inches / 13.2 x 5.9 x 5.9 cm
Weight	1 lbs / 0.5 kg

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

