

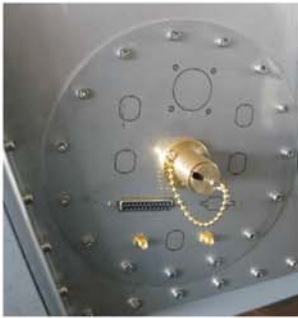
EMC GTEM-750

Gtem Cell

Introduction

The GTEM cell is a TEM waveguide with the upper frequency limit extended to the GHz range. It is a low-cost alternative measurement facility for both radiated emission and immunity measurements. It is included in the recently published standard IEC/EN 61000-4-20 "Emission and Immunity Testing in Transverse Electromagnetic (TEM) Waveguides". Compared to other measuring methods like EMC test in anechoic chambers or OATS (Open Area Test Sites), GTEM-cells offer some significant advantages for the testing of small and medium sized EUT's (Equipment Under Test) up to a frequency range of 20 GHz. Quick turnarounds of the EUT as well as numerous testing variations are easy and fast to handle. Switching from emission to immunity testing requires only simple adjustments from receiver input to amplifier output. You are irrespective of long waiting times associated with off-site test labs or weather and ambient delays that can occur at OATS facilities. Whether you are at the design qualification, pre-compliance, compliance, or production sampling stage, the GTEM is the right choice for you!.





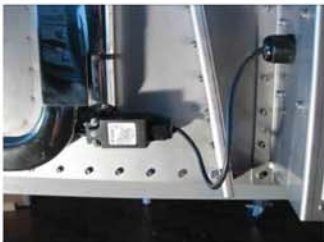
Technical Panel



Screened Window



Lamp: internal view



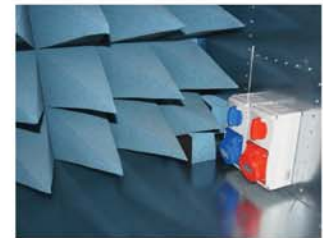
Interlock



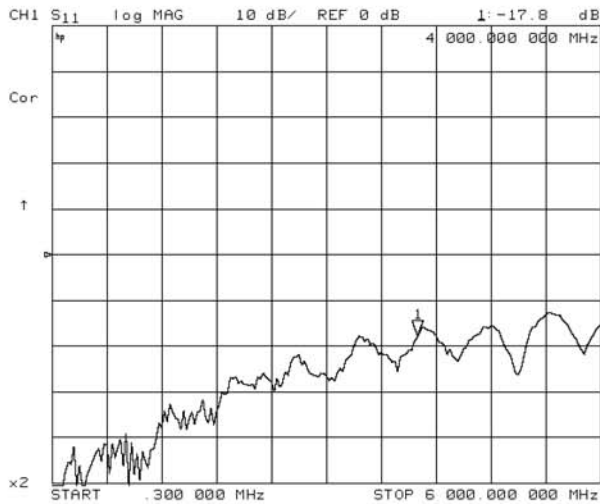
Lamp



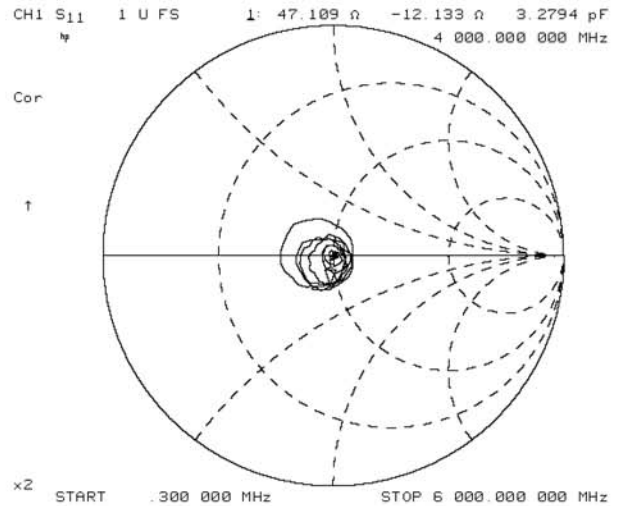
Apex



Internal socket



SWR pattern



Smith's chart

Key Features

- Engineered and completely manufactured both in Italy and Brazil.
- Ruggedized fully hot galvanized steel construction (INOX steel optional)
- Unique compact design.
- Optimized for EMI and EMC.
- Strong fields achieved with low input power
- Broadband up to 20Ghz.
- High effective shielding
- 2 poles 230Vac 50Hz 10A EMI standard line filter

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- Excellent quality at Low cost

Theory of operation

GTEM-cells (Giga-hertz Transversal Electro-Magnetic cells) are waveguide structures intended for electromagnetic compatibility measurements, as well as biomedical applications. The electromagnetic field distribution inside the cell is in TEM mode. With TEM mode propagation, there is no component of electric and magnetic field in the direction of propagation of electromagnetic wave. Therefore the field components are strictly perpendicular. Assuming the field distribution ideal TEM below the cut-off frequency of the cell (before the introduction of higher order modes), the electromagnetic field distribution can be considered static.

Applications

- EMI and EMS devices
- Radiation and susceptibility test
- Specifically designed for telecom application
- Biomedical and dosimetrical applications
- Isotropic sensors calibration
- Receiver sensitivity test
- Antenna pattern
- Shielding effectiveness characterization test

Specifications *

Operating range:	0,1MHz- 20GHz
RF Input	max continuous. input power: 500W RF continuous up to 1GHz, 300W up to 18GHz, Peak 1,5Kw.
Input connector type	"N" UG-21 connector
Shielding:	better than 60 to 100dB depending from frequencies
Absorbers:	650 mm anechoic pyramidal foam
Outer cell dimension:	(L)400x(W)220x(H)160 cm + 70cm trolley
Door Size clearance:	60 x 60 cm
Construction	Fully Hot galvanized steel 10/10 and 20/10 thickness

Technical panel *

Power supply / Filter box - In and out. *

N.2 Feed-thru "SMA/SMA" connector	N.1 16 amp. 450VAC, three phase + Ground line filter
N.1 Feed-thru "N-N" connector	N.1 Ground connection screw
N.1 feed-thru fibre optic penetration for 1 couples.	

Options

Inspection window with shielded polycarbonate glass 20 cm Diam.
Feed-through panels, pipes connector

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multi holes feed-thru fibre optic penetration for 3 or 6 couples.
DB-9, DB-25 filtered connectors
RJ9,RJ11,RJ45,RS-482 filtered connectors
Honeycomb air vents
Exhaust fan
TDK 6mm. ferrite tiles on the bottom

* data subject to variations without notices

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