



GTEM 250-R

GTEM cell for emissions and immunity testing

A GTEM (Gigahertz Transverse Electro Magnetic) cell is a test site for efficiently performing both radiated immunity and emissions testing in a single, controllable and shielded environment. Compared to other test sites, GTEM testing is faster with high accuracy and excellent reproducibility.

In principle, the GTEM cell is a coaxial line expanding pyramidally and having an impedance of 50 Ω. At its end, the line is terminated by a combination of termination resistors and RF absorbers designed and constructed to match the above mentioned impedance.

The GTEM 250 has a maximum septum height of 250 mm and is suitable for emissions and immunity testing.

MAIN FEATURES

- Emissions and immunity testing in a single, shielded environment
- Meets basic standard: IEC/EN 61000-4-20
- Meets standards for emissions testing: CISPR 14-1, IEC 61000-6-3 and IEC 61000-6-4 for EUTs without connected cables
- Ideal for design qualification and pre-certification
- Fields generated are largely homogeneous and simple to calculate
- Efficient power conversion requires smaller power amplifier
- Excellent VSWR over the entire frequency range - no need for measurement of reflected power

Standard configuration

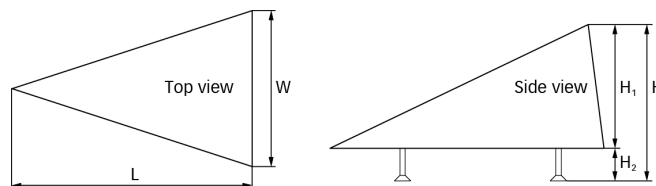
- Desktop version
- Door on the right side, clear opening of 20 cm x 13 cm
- Window in door
- EUT BOX for free application, easily interchangeable
- Feed through tube for fiber optics
- Fan with power supply unit for countries EU, AUS, UK, US/JP
- Measurement report for TDR, return loss and input power requirements for 10 V/m (30 - 3000 MHz)
- Shipped assembled

Specifications

	GTEM 250-R
Max. septum height	250 mm
Septum height at marker position	217 mm
EUT size (max. dimension, LxWxH in m)	0.20 x 0.20 x 0.15
EUT dimension for uniform-area 0 to 6 dB (LxWxH) in m	0.083 x 0.083 x 0.083
RF input connector	N-type
Nominal impedance	50 Ohm
Frequency range	DC up to 20 GHz
Frequency range according IEC/EN 61000-4-20	30 to 3000 MHz
Return loss / VSWR (DC to 18 GHz)	>15 dB / <1.45:1
Shielding effectiveness (30 MHz to 3 GHz)	>60 dB (typ. >80 dB)
Max input power	100 W

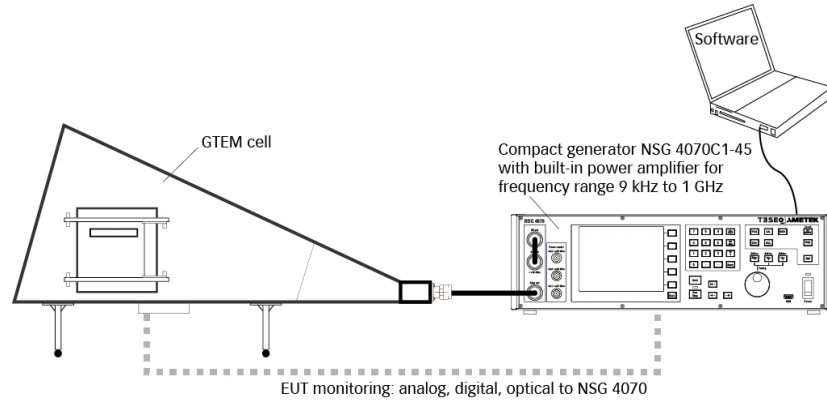
General Specifications

	GTEM 250-R
Dimension (LxWxH in m)	1.23 x 0.66 x 0.54
Weight	approx. 45 kg
Height H1 of cell corpus	0.43 m
Height H2 of supports	0.11 m
Door (LxH in m)	0.20 x 0.13

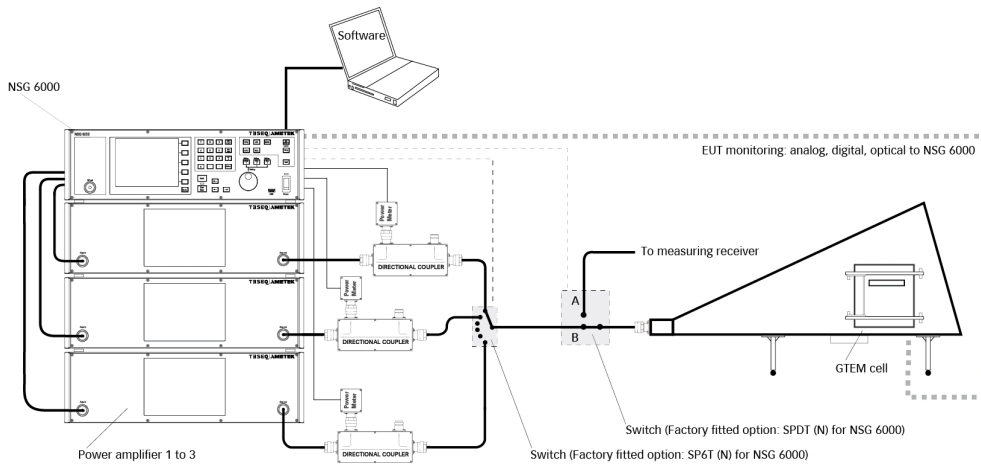


Options

- Special filter solutions
- Endwise version
- Manipulator solution
- Test house software



Example of immunity test setup 9 kHz to 1 GHz with one power amplifier



Example of test setup 9 kHz to 6 GHz with three power amplifiers and measuring receiver

Model No. and options

Description	Item No	Text
GTEM 250-R	258899	GTEM with septum height 250 mm, door side right, max. RF input power 100 W, shielded window in door, optical feed through, empty filter box for individual use
SIA 250	225583	Option for GTEM 250: EUT Box to 10x 15 A filter with banana jacks, 4x 5 A filter with Sub-D 9 pins
SIB 250	225584	Option for GTEM 250: EUT Box to 2x 15 A filter with banana jacks, 37x 5 A filter with Sub-D 37 pins
SIC 250	255200	Option for GTEM 250: EUT Box to mains port 6 A, 6x filter with banana jacks and 9x filter with Sub-D 9 pins
SID 250	255215	Option for GTEM 250: EUT Box to mains port 6 A, 2x filter with banana jacks, 1x PE and 15x filter with Sub-D 15 pins
EUT-BOX251	251151	Option for GTEM 250: Filter box with 4x 16 A power filter, 250 V AC, banana
EUT-BOX252	225507	empty EUT BOX of GTEM 250

emitec
 industrial
 Emitec Messtechnik AG
 Birkenstrasse 47
 6343 Rotkreuz
 +41 41 748 60 10
 info@emitec.ch
 www.emitec-industrial.ch
 Emitec Group #1 in Test & Measurement, worldwide.