



# GTEM 1500 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 1500 has a maximum septum height of 1500 mm and is suitable for emissions and immunity testing.

GTEM 1500, door right side

- 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
- Meets standards for immunity testing: EN 60118-13
- 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:

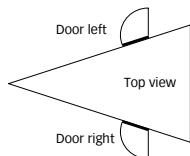
- Support with 25 feet
- Door, left or right side, clear opening of 99 cm x 129 cm
- Shielded window, 30 cm x 10 cm
- Door contact for free application
- Switchable fans
- EUT BOX-1 with 2x 16 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination
- Media interface (Media S) for 3x N-type connectors and optical feed through
- Emission correlation tool (Windows software for manual input)
- Measurement report for TDR and VSWR
- Measurement report for input power requirements for 10 V/m (80 - 1000 MHz)
- Shipped disassembled, required Teseq supervisor, option ASS 1500

### Options:

- Special filter solutions
- SSA 1500, stainless steel angles option for GTEM 1500, recommended for countries with high humidity like Thailand, Malaysia, Philippines...
- Additional door
- Support with 21 wheels
- XYZ manipulator MPH 1500 handoperated or MPC 1500 remote controlled
- Test house software for emission and immunity testing

### Ordering information:

The door side and the country version of the single phase AC socket needs to be selected.



Schuko



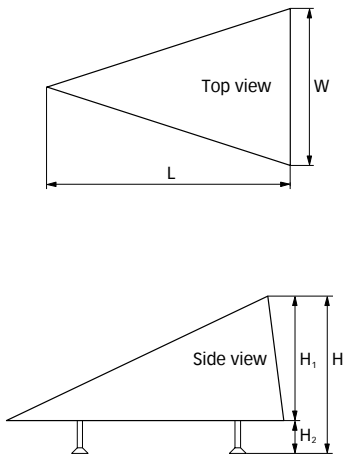
UK version



US/JP version

# GTEM 1500

## GTEM CELL FOR EMISSIONS AND IMMUNITY TESTING



### Specifications

Max. septum height:	1500 mm
Septum height at marker position:	1299 mm
Dimension (LxWxH) in m:	6.95 x 3.58 x 2.55 (H in relation to the selected support)
Weight:	approx. 1470 kg
Height H <sub>1</sub> of cell corpus:	2.41 m
Height H <sub>2</sub> of supports:	0.19 m, optionally 0.455 m or 0.34 m
Height H <sub>2</sub> of supports with option MPC 1500:	0.455 m
Door (clear opening, LxH) in m:	0.99 x 1.29
EUT max. dimension (LxWxH) in m:	1.11 x 1.11 x 0.99
EUT dimension for uniform-area 0 to 6 dB (LxWxH) in m:	0.5 x 0.5 x 0.5
RF input connector:	N-type
Nominal impedance:	50 Ω
Frequency range:	DC up to 20 GHz
Frequency range according IEC/EN 61000-4-20:	30 to 1000 MHz
Return loss / VSWR (DC to 18 GHz):	>13 dB (typ. >15 dB) / <1.6:1 (typ. <1.45:1)
Shielding effectiveness (30 MHz to 3 GHz):	>60 dB (typ. >80 dB)
Max input power:	1000 W
Required input power for 10 V/m (isotropic, 9 points, 80 to 1000 MHz):	21.9 W (6.8 W CW)
Field deviation (isotropic, 9 points, 30 to 1000 MHz):	<6 dB

### Model No. and options

Part number	Description
250500	GTEM 1500 Septum height 1500 mm, door, window, EUT BOX-1 and Media S included
251754	SSA 1500 Stainless steel angles option for GTEM 1500, recommended for countries with high humidity like Thailand, Malaysia, Philippines...
240383	ASS 1500 Supervisor build up for GTEM 1500 (travel and accommodation costs are additionally)
254278	MPH 1500 Manipulator handoperated for GTEM 1500

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### Model No. and options (continued)

254277	MPC 1500 Manipulator remote controlled for GTEM 1500
251920	SHD 2 Additionally shielded door, clear opening 0.44 m x 0.38 m
251960	SHD 6 Additionally shielded door, clear opening 1.00 m x 1.30 m
251100	EUT BOX-1 EUT supply for single phase, 2x 16 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination, available for GTEM 500 to 2000
251200	EUT BOX-3 EUT supply for three phase, 4x 32 A filter, 1 socket inside, line safety switch, earth leakage circuit breaker, switchable illumination, available for GTEM 500 to 2000
251201	EUT BOX-31 Option for GTEM 500 - 2000: Upgrade of EUT BOX-1 (included in standard delivery) to EUT BOX-3, order only with GTEM
251210	EUT BOX-4 Option for GTEM 500 - 2000: EUT Box with DC power filter 4x 10 A, banana jacks 4 mm
251211	EUT BOX-5 Option for GTEM 1000 - 2000: EUT BOX with 2x 63 A power filter, 250 V AC, banana jacks 6 mm / 4 mm, suitable for GTEMs without EUT MG
251212	EUT BOX-6 Option for GTEM 1000 - 2000: EUT BOX with 10x 63 A power filter, 250 V AC, banana jacks 6 mm / 4 mm
251000	DC1 Option for EUT BOX-1, EUT BOX-3 or EUT BOX-31: DC power filter 2x 10 A, banana jacks 4 mm
251820	SIF M 25 lines signal filter for Media, 5 A, D sub 25 pins
248290	ITE Filter Filter for 2 balanced pairs with adapters for RJ11 and RJ45 (ADR T411, ADR T442, ADR T443 and ADR T444)
248270	CAN Filter Filter for 6 lines CAN bus, D sub 9 pins
248375	RS232 Filter 9 lines signal filter, 5 A, D sub 9 pins

# **GTEM 1500**

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### **Model No. and options (continued)**

248382	USB Filter Filter for shielded USB
251600	Media S Connector panel with frame, 3x N-type connectors, 1x optical feed through
251650	Plate S Exchange panel for media S

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