



Temperature test chamber with RF shielding

WT-180/40-SA/3.5-HF

Application

This RF shielded test chamber allows operational mobile phones to be subjected to temperature tests. Unambiguous measuring results can only be achieved if RF radiation is shielded from the outside. Furthermore, any RF radiation generated by mobile phones inside the test space is shielded to the outside. That is the special equipment used for; E.g. vibration, simulation, ageing, corrosion.

Branch

- Mobile communications
- Electronics industry
- Cross sectoral



Identity Number: DE – 22606077



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Technical Data

Test space volume: 150 litres

Door: with special sheet plates and special RF shielding, additional grounding, cable pit in lateral test space wall, for connection of radio frequency etc.

Temperature range: -40 ... +90 °C

Specimen weight: max. 10 kg (mobile phones)

Cooling-down: 3,5 K/min (between +60... -20°C)

Heating-up: 3,5 K/min (between -20... +60°C)

Frequency range: 433 MHz...2,5 GHz

Attenuation value: 60 dB

Control system: SIMCON/32*-NET / Color-Touch-Panel

Operation Mode

RF shielded test chambers differ in some significant aspects from standard chambers. They are equipped with special sheets and additional grounding. All openings (door, access ports etc.) are sealed by special RF sealing (with an integrated metal insert) in order to prevent RF ambient radiation from entering the test space. The attenuation value achieved by these measures clearly proves that this goal has been well achieved. In this case, the chamber has an attenuation value of 60 dB, as requested by the customer. In other words: The measured residual disturbance voltage that had entered the test space was only 1/1000 of the ambient disturbance voltage. This value was measured and proven in a frequency range between 433 MHz and 2,5 GHz in steps of 50 MHz. The measurements were carried out successfully on all four sides of the test chamber.

Features

Since 2007, the EMC laboratory of Weiss Umwelttechnik GmbH is in a position to measure attenuation values of up to 3 GHz thanks to new unit equipment.

Benefits

The environmental burden of pulsed radio frequency radiation (RF radiation) is constantly increasing due to ever increasing mobile applications. The most commonly used frequencies are 433MHz (ISDN), 2GHz (UMTS) or 2,4GHz (WLAN), the latter being on an enormous upward trend.

The Electromagnetic Compatibility Law (EMC Law) provides for a uniform protection against RF electromagnetic disturbance caused by electronic and electrical equipment. Moreover, the disturbance resistance of such equipment is being defined.



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