

# PROJECT CHECKLIST for TEMPEST SHIELDED ROOMS



European EMC Products Ltd

## INTRODUCTION

Tempest certification is only given to ACTIVE products, ie equipment that can emit signals that could be intercepted such as computers, fax machines and printers. Certification is normally to the standards:

**UK TEMPEST STANDARD: BTR/01/202 COMPROMISING EMANATIONS LABORATORY TEST STANDARD: NATO EQUIVALENT: AMSG 720B**

**UK TEMPEST STANDARD: BTR/01/210 TEMPEST STANDARD FOR COMPROMISING EMANATIONS FOR PROTECTED FACILITY EQUIPMENT: NATO EQUIVALENT: AMSG 788A**

If standard, non Tempest certified, active equipment is to be used in Tempest application then it will need to be placed in a shielded enclosure with specified performance. In these cases most national authorities issue shielding performance needed to meet Tempest performance.

The required level of RF attenuation can vary depending on the location but the performance figures below will ensure Tempest levels of protection in the most sensitive locations.

### Attenuation levels for radiated signals as tested to Mil Std 285

Magnetic mode	60dB at 10 kHz rising to 100 dB at 100 kHz
Electric Mode	80 - 100 dB from 1 kHz to 1 GHz
Plane Wave and Microwave	80 - 100 dB from 1 GHz to 10 GHz

**Attenuation levels for conducted signals to Mil Std 220A**      100 dB from 14 kHz to 10 GHz

**GENERAL**      Details required when specifying an RF Shielded room or cabinet.

### SHIELDING PERFORMANCE REQUIRED (If performance different from above)

Frequency range and Attenuation (dB) in:

MAGNETIC FIELD	ELECTRIC FIELD	PLANE WAVE	MICROWAVE
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### SHIELDED AREA STRUCTURAL REQUIREMENTS

Size:	Lm x Wm x Hm	Internal or external.
Available clear space in host building:	Lm x Wm x Hm	
Structural support:	Supported from the host building or self supporting.	
Isolation:	Does the structure need to be isolated from ground? If yes value.	
Doors:	Quantity, size and handing	
Ventilation:	Type required or specification	
Penetrations:	Type required or specification	
Filters:	Power, data, telephone and control line	
Lighting:	Type required or specification	
Electrical distribution:	Circuit required or specification	
Fire detection and suppression:	Type required or specification	
Internal finishes:		

**SHIELDING EFFECTIVENESS TESTING** Standards: MIL STD 285 or other frequencies and range:

### INSTALLATION

Complete or supervised installation, site conditions, off loading responsibility, storage area.

Power and light, site hours and working constraints:

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