

Certificate of Test



Certificate number: QinetiQ/D&TS/SS/TC0606513
Date of issue: 08/05/2006
Issue: 1.0

EMC Facility
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Administrative Information

Customer: QinetiQ (Malvern)
Customer Representative: Jonathan Wardle / Dyf Morgan / Gary Abraham
Equipment under test: Tarsier Airfield Radar System
Model No: T1100
Compliance ID: ID: QAR01
Control / Test Plan References: QinetiQ/D&TS/SS/TPN0605694 Feb 2006
Power supply: 230 V 50Hz or 115V 60Hz
Test specifications: See EMC test results summary table below
Test dates: May 2006
Contract assignment: 05/440
Test engineers: M Blackwell, M Arasalingam
EMC Lab Manager: T C Osprey
Location of Testing: QinetiQ Farnborough, Chamber G

Test Item Details

Item	Manufacturer	Model No	Serial No
Tarsier Airfield Radar System	QinetiQ (Malvern)	T1100 (QAR01)	P05

EMC Test Results Summary

The following tables summarise the tests to date performed to cover the commercial EMC test requirements of the test plan. The test plan requires immunity testing to the general requirements of, EN 55024: 1998 and emissions to EN 55022: 1998, with the test levels, limits and explicabilities set by the test plan.

Emissions Tests				Result
Applied Test	Reference Standard	Level / Limit	Tarsier Supply Voltage	
Radiated Emissions	EN 55022: 1998	Class A	230V 50Hz	Pass ¹
Radiated Emissions	EN 55022: 1998	Class A	115V 60Hz ²	Pass ¹
Conducted Emissions, (power lines)	EN 55022: 1998	Class A	230V 50Hz	Pass
Conducted Emissions, (power lines)	EN 55022: 1998	Class A	115V 60Hz ²	Pass
Harmonic Current Emissions	EN 61000-3-2: 2001	Class A	230V 50Hz	Pass
Voltage Fluctuations & Flicker	EN 61000-3-3: 1995	Clause 5 a	230V 50Hz	Pass ³

Immunity Tests (EN 55024: 1998)				Result
Applied Test	Reference Standard	Level / Limit	Tarsier Supply Voltage	
ESD	EN 61000-4-2: 1995	± 4 kV contact, ± 8 kV Air	230V 50Hz	Pass
Radiated Immunity	EN 61000-4-3: 1997	10 V/m (1 kHz 80% AM) 80 MHz to 2 GHz	230V 50Hz	Pass ¹
Fast Transient Bursts (power lines)	EN 61000-4-4: 1995	± 1 kV @ 5kHz	230V 50Hz	Pass
Fast Transient Bursts (signal cables, T2, C1, C2 & C3)	EN 61000-4-4: 1995	± 0.5 kV @ 5kHz	230V 50Hz	Pass
Surge Immunity (power lines)	EN 61000-4-5: 1995	± 1 kV Line to Line ± 2 kV Line to ground	230V 50Hz	Pass
Conducted Disturbances (power cables, signal cables T2, C1, C2 & C3)	EN 61000-4-6: 1996	10 V rms (1 kHz 80% AM) 150 kHz to 80 MHz	230V 50Hz	Pass
Voltage Dips & Interruptions	EN 61000-4-11: 1994	30% dip for 500 ms >95% dip for 10 ms >95% interrupt for 5 s	230V 50Hz	Pass

¹ Test not including Environmental Control Unit's "Operator's Control Box", test scheduled for 9th May 2006

² Tarsier Radar module operating from a 115V/60Hz supply, with Environmental Control Unit operating from a 230V/50Hz supply.

³ Test to Tarsier Radar unit only.

IT IS CERTIFIED THAT THE TESTS DETAILED IN THIS CERTIFICATE HAVE BEEN CARRIED OUT AS SPECIFIED, WITH THE RESULTS SHOWN TO THE REQUIREMENTS OF THE CONTRACT. Full test details are retained in the QinetiQ File reference: QinetiQ/S&E/EMC/05-440

Signed



Date: 8 May 2006

EMC Business Group
Spectrum Solutions