


Schedule of Accreditation

issued by

United Kingdom Accreditation Service

21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

 <p>Accredited to ISO/IEC 17025:2005</p>	<h3>Environmental Test Services Ltd</h3> <p>Issue No: 016 Issue date: 07 October 2009</p>	
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<p>Testing performed at the above address only</p>		

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used
<p>AEROSPACE COMPONENTS AND EQUIPMENT BATTERIES AND CELLS CIRCUIT BREAKERS AND SWITCHES COATINGS: METALLIC COATINGS: NON-METALLIC COMPUTERS AND PERIPHERALS ELECTRICAL/ELECTRONIC COMPONENTS, CONNECTORS AND PRODUCTS ELECTRICAL CABLES ELECTRO-MECHANICAL DEVICES ENCLOSURES FOR ELECTRICAL EQUIPMENT FANS FASTENERS HOSES, PIPES AND TUBES INSTRUMENTS: INDICATING/RECORDING INSULATION MATERIALS: ELECTRICAL IT EQUIPMENT LUMINAIRES MARINE EQUIPMENT MEASURING EQUIPMENT MICRO-ELECTRONIC CIRCUITS AND COMPONENTS MISSILE COMPONENTS MOTOR VEHICLE ACCESSORIES AND COMPONENTS OFFICE EQUIPMENT: ELECTRICAL</p>	<p>ENVIRONMENTAL TESTS (non-explosive items)</p> <p>CLIMATIC</p> <p>HIGH TEMPERATURE - Constant Max temp: +200°C Max chamber size: 0.47 m x 0.65 m x 0.4 m</p> <p>Constant/Cyclic Max temp: +150°C Max chamber size: 0.6 m x 0.6 m x 0.6 m Max temp: +100°C</p> <p>Max chamber size: 0.9 m x 0.87 m x 0.76 m (high) Max temp: +70°C Max chamber size: 1.8 m x 2.4 m x 2.4 m (high)</p> <p>LOW TEMPERATURE - Constant/Cyclic Min temp: -70°C Max chamber size: 0.9 m x 0.87 m x 0.76 m (high)</p> <p>Min temp: -40°C Max chamber size: 1.8 m x 2.4 m x 2.4 m (high)</p>	<p>BS EN 60068-2-2:2007 IEC 60068-2-2:2007 RTCA DO-160F para 4.5.4 BS 2011:B:1977(1980) BS EN 60068-2-2:2007 BS EN 60068-2-2:1993 Tests Ba, Bb, Bd (forced air Circulation Methods A and B) IEC 68-2-2:1974(1976) IEC 60068-2-2:2007 IEC 60068-2-2:1974 DEF STAN 07-55:1975 Tests B1, B2 MIL-STD-810E:1989(1990) Method 501.3 RTCA DO-160F para 4.5.3, 4.5.4 4.5.5, 5.3.1 BS 2011:A:1990 BS EN 60068-2-1:2007 BS EN 60068-2-1:1993 Tests Aa, Ab, Ad (forced air Circulation, Methods A and B) IEC 68-2-1:1990 IEC 60068-2-1:2007 IEC 60068-2-1:1993 DEF STAN 07-55:1975 Tests B4, B5</p>



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Continued from Page 1 OPHTHALMIC PRODUCTS: OPTICAL OPTICAL FIBRE PACKAGES AND PACKAGING MATERIALS PAINTS AND VARNISHES PLUGS AND SOCKETS: ELECTRICAL POWER SUPPLIES: ELECTRICAL PRINTED CIRCUIT BOARDS RADAR EQUIPMENT RADIO AND TV EQUIPMENT SATELLITES AND SUB-ASSEMBLIES SECURITY DEVICES AND ALARMS SMOKE DETECTORS SONAR EQUIPMENT TELECOMMUNICATION EQUIPMENT TRANSFORMERS: ELECTRICAL WEAPONS AND SUB-ASSEMBLIES	ENVIRONMENTAL TESTS (cont'd) CLIMATIC (cont'd) CHANGE OF TEMPERATURE - Automatic transference Temp range: -70°C to +200°C Max chamber size: 0.47 m x 0.65 m x 0.40 m (high) - Single chamber Temp range: -70°C to +150°C Max rate of change: 10°C/min Max chamber size: 0.6 m x 0.6 m x 0.6 m HIGH HUMIDITY - Constant/Cyclic Humidity range: 10% rh to 98% rh (at temps > +10°C) Temp range: -70°C to +100°C Max chamber size: 0.9 m x 0.87 m x 0.76 m (high) Temp range: -40°C to +70°C Max chamber size: 1.8 m x 2.4 m x 2.4 m (high) HIGH PRESSURE Temp range: ambient Max pressure: 304 kPa Chamber size: 1.0 m x 0.75 m (diameter) LOW PRESSURE Temp range: ambient Min pressure: 400 Pa Chamber size: 1.0 m x 0.75 m (diameter) DECOMPRESSION Temp range: ambient Max/Min pressure: 304 kPa/400Pa Chamber size: 1.0 m x 0.75 m (diameter)	MIL-STD-810E:1989(1990) Method 502.3 RTCA DO-160F para 4.5.1, 4.5.1 5.3.1 BS 2011:N:1985(1987) Tests Na, Nb BS EN 60068-2-14:2000 IEC 68-2-14:1984 IEC 60068-2-14:1984 DEF STAN 07-55:1975 Test B14 (Proc A) MIL-STD-810E:1989(1993) Method 503.3 RTCA DO-160F para 5.3.1, 5.3.2, 5.3.3 BS 2011:Ca:1977(1987) BS 2011:Cb:1990 BS 2011:Db:1981 IEC 68-2-3:1969 IEC 68-2-56:1988 IEC 68-2-30:1980 IEC 60068-2-30:2005 BS EN 60068-2-30:2005 Test Db BS EN 60068-2-78:2002 Test Cab RTCA DO-160F para 6.3.1, 6.3.2, 6.3.3 DEF STAN 07-55:1975 Tests B6, B7, B8 MIL-STD-810E:1989(1990) Method 507.3 MIL-STD-883E:1995 Method 1004.7 RTCA DO-160F para 4.6.3 Overpressure DEF STAN 07-55:1975 Test B15 BS 2011:M:1984 IEC 68-2-13:1983 IEC 60068-2-13:1983 BS EN 60068-2-13:1999 RTCA DO-160F para 4.6.1 MIL-STD-810E:1989(1990) Method 500.3



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As listed on Pages 1 and 2	<p>ENVIRONMENTAL TESTS (cont'd)</p> <p>CLIMATIC (cont'd)</p> <p>WATER - drops (ambient temperature) Test area: 1.0 m x 1.0 m</p> <p>WATER - Ingress Protection</p> <p>DUST - Dust protected</p> <p>Chamber size: 1.0 m x 1.0 m x 1.0 m</p> <p>DUST - Dust tight</p> <p>Chamber size: 1.0 m x 1.0 m x 1.0 m</p> <p>WATER IMMERSION 850 mm x 550 mm x 390 mm (high)</p> <p>SALT MIST Temp range: ambient to +55°C Chamber size: 1.4 m x 0.8 m x 0.8 m</p> <p>SALT CORROSION Temp range: ambient to +55°C Chamber size: 1.4 m x 0.8 m x 0.8 m</p> <p>ICING Max chamber size: 1.8 m x 2.4 m x 2.4 m (high)</p> <p>ICING/FREEZING RAIN Max chamber size: 1.8 m x 2.4 m x 2.4 m (high)</p> <p>COMPOSITE Temperature/humidity cyclic</p>	<p>RTCA DO-160F para 4.6.2 MIL-STD-810F:2000 Method 500.4 Rapid Decompression DEF STAN 07-55:1975 Test D4 MIL-STD-108E:4.3:1966 RTCA DO-160F para 10.3.1, 10.3.2 BS EN 60529:1992, IPX3, IPX4, IPX5 and IPX6 BS EN 60529:1992, IPX7 and IPX8 to 20 metres RTCA DO-160F para 12.3.1 BS EN 60529:1992, IP5X RTCA DO-160F para 12.3.1 BS EN 60529:1992, IP6X BS EN 60068-2-18:2001 IEC 60068-2-18:2000 MIL-STD-810E 1989, Method 512.3 DEF STAN 00-35, CI 29 BS 2011:Ka:1982 IEC 68-2-11:1981 BS EN 60068-2-11:1999 IEC 60068-2-11:1981 RTCA DO-160F para 14 DEF STAN 07-55:1975 Test C5 MIL-STD-810E:1989(1990) Method 509.3 BS 2011:Kb:1987 BS EN 60068-2-52:1996 IEC 60068-2-52:1996 IEC 68-2-52:1984 RTCA DO-160F para 14 DEF STAN 07-55:1975 Test C2 RTCA DO-160F para 24.4.4 DEF STAN 00-35, Chapter 3 Test CL10, Test Proc A RTCA DO-160F para 24.4.4 MIL-STD-810-F:2000 Method 521.2 BS EN 60068-2-38:1999 Test Z/AD IEC 60068-2-38:1974</p>



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<p>Combined cold/vibration (sinusoidal) Tests are BS2011-2-1Z/Afc:1984 IEC 60068-2-50:1983 BS EN 60068-2-50:2000</p> <p>Combined dry heat/vibration (sinusoidal) Tests are BS2011-2-1Z/Bfc:1984 IEC 60068-2-51:1983 BS EN 60068-2-51:2000</p>		



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	END	