Schedule of Accreditation

issued by

United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

0026

Accredited to ISO/IEC 17025:2017

Element Materials Technology Warwick Ltd

Issue No: 128 **Issue date:** 23 July 2020

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Testing performed by the Organisation at the locations specified below

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details		Activity	Location code
Address Rothwell Road Warwick CV34 5JX	**Local contact** Mr I Scotney Mr M Pitham (Structural/Fatigue) Tel: +44 (0)1926 478478 Fax: +44 (0)1926 478479 E-Mail: info.warwick@element.com Website: www.element.com	Environmental Ingress Protection Pressure Structural/Fatigue	P
Address 100 Frobisher Business Park Leigh Sinton Road Malvern Worcestershire WR14 1BX	**Local contact** Mr N Roche (EMC Commercial) Mr I Forshaw (EMC Mil Aero) Tel: +44 (0)1684 571700 Fax: +44 (0)1684 571701 E-Mail: info.malvern@element.com Website: www.element.com	EMC	A
Address Unit 1 Pendle Place Skelmersdale West Lancashire WN8 9PN	**Local contact** J Charters (EMC & Radio) Mr E Gadsby (ATEX, Ingress Protection) Tel: +44 (0)1695 556666 Fax: +44 (0)1695 557077 E-Mail: info.skelmersdale@element.com Website: www.element.com	EMC ATEX Testing Ingress Protection Radio	B H
Address 74-78 Condor Close Woolsbridge Industrial Park Three Legged Cross Wimborne Dorset BH21 6SU	**Local contact** Mr J Yates (EMC) Mr Damon Close (Environmental) Tel: +44 (0)1202 811700 Fax: +44 (0)1202 811701 E-Mail:info.wimborne@element.com Website: www.element.com	EMC Environmental	C S

0026 **Accredited to** **ISO/IEC 17025:2017**	**Schedule of Accreditation** **issued by** **United Kingdom Accreditation Service** 2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK **Element Materials Technology Warwick Ltd** **Issue No:** 128 **Issue date:** 23 July 2020

Testing performed by the Organisation at the locations specified

Location details		Activity	Location code
Address Wilbury Way Hitchin SG4 0TW United Kingdom	**Local contact** Mr C Rouse Tel: +44 (0) 1462 427850 Fax: +44 (0)1923 226261 E-Mail: info.watford@element.com Website: www.element.com	Electrical Safety	D
Address Unit E South Orbital Trading Park Hedon Road Hull HU9 1NJ	**Local contact** Mr N Parrot Tel: +44 (0)1482 801801 Fax: +44 (0)1482 801806 E-Mail: info.hull@element.com Website: www.element.com	Electrical Safety Environmental Engineering (Climatic/Dynamic)	F
Address Unit E South Orbital Trading Park Hedon Road Hull HU9 1NJ	**Local contact** Mr M Baker (EMC) Mr J Charters (Radio) Mr L Giddings (Telecoms) Tel: +44 (0)1482 801801 Fax: +44 (0)1482 801806 E-Mail: info.hull@element.com Website: www.element.com	EMC Radio Telecoms	G

Site activities performed away from the locations listed above:

Location details		Activity	Location code
Address Any Customer Premises	**Local contact** Mr N Roche (EMC) Mr C Rouse (Electrical Safety) Tel: +44 (0)1684 571700 Fax: +44 (0)1684 571701 E-Mail: info.malvern@element.com Website: www.element.com	EMC Electrical Safety	E
Address Any Customer Premises	**Local contact** Mr E Gadsby (ATEX) Tel: +44 (0)1695 556666 Fax: +44 (0)1695 557077 EMail:info.skelmersdale@element.com Website: www.element.com	ATEX Testing	I

Flexible Scope

The laboratory is accredited for the use of a Flexible Scope for testing activities in the areas of EMC (Military and Commerical), Radio, and in the area of Electrical Safety.

This may include tests on the same or similar product types against standards, or customer-specified methods that are not specifically listed in this Schedule for EMC Military, EMC Commerical, Radio , and Electrical Safety testing providing that:
(1) The method or standard does not introduce new principles of measurement.
(2) The method or standard does not require measurements to be made outside the parametric boundaries defined in this Schedule.

Information about flexible scopes of accreditation is available in UKAS document LAB39

NOTE: Where EN Standards have exact equivalents in IEC, or BS EN Standards, these are also included in the accreditation

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GENERAL NON-EXPLOSIVE STORES AND EQUIPMENT including: AEROSPACE STRUCTURES, MATERIALS AND EQUIPMENT AGRICULTURAL EQUIPMENT COMPUTERS AND PERIPHERALS CONSTRUCTION PLANT, EQUIPMENT, PRODUCTS AND MATERIALS CRYOGENIC EQUIPMENT DOMESTIC APPLIANCES ELECTRICAL/ELECTRONIC COMPONENTS, CONNECTORS AND PRODUCTS ELECTRO-MECHANICAL DEVICES FIREARMS FIRE FIGHTING AND DETECTION EQUIPMENT HYDRAULIC EQUIPMENT AND FITTINGS MARINE EQUIPMENT MECHANICAL PRODUCTS AND PLANT MINING EQUIPMENT AND COMPONENTS MISSILE AND COMPONENTS MOTOR VEHICLE ACCESSORIES AND COMPONENTS OFFICE EQUIPMENT PACKAGES AND PACKAGING MATERIAL PLASTICS AND PRODUCTS	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** 1.1 CLIMATIC 1.1.1 High temp - low humidity **- constant and cyclic** Max temp: +170 °C Max chamber size: 1.2 m x 1.2 m x 1.2 m Max temp: +70 °C Max chamber size: 4.0 m x 2.5 m x 2.5 m **- constant** Max temp: +500 °C Max chamber size: 0.54 m x 0.47 m x 0.54 m High temperature - solar radiation Radiation area: 2.0 m x 1.0 m heating effects only (infrared source)	Deviations from prescribed standards are permitted. Subject to agreement under the terms of a documented contract review with the customer and using approved procedures, providing the tests still lie within the limits of accredited tests described in this schedule and are reported accordingly. DEF STAN 00-35, Issue 4 Chapters 3-01 and 3-02:2006 ETSI EN 300 019-2-1:2000 ETSI EN 300 019-2-2:1999 ETSI EN 300 019-2-3:2003 RTCA DO 160F:4.5:2007 RTCA DO 160G:2010 TR 2130C:2005 BS EN 50155:10.2.4:2007 BS EN 50133-1:1997 BS EN 60068-2-2:2007 BS EN 60945:2002 IEC 68-2-2:1974(1994) BS 3G100:Part 2:Subsect 3.2: 1970(1983) DEF STAN 07-55:1983 Tests B1, B2 MIL-STD 810G:2008 Method 501.5 (Procedures I and II) JCPS 05-07:1987, Clause 7.1.4.2 NES 1004:1995 Data Sheet 7 DEF STAN 08-123:2000 Data Sheet 7 Lloyds Register Specification No 1:1996:Dry Heat Test DEF STAN 00-35, Issue 4 Chapter 3-02:2006 (Procedure A) BS EN 60068-2-5:2000 IEC 60068-2-5:1975 MIL-STD 810G:2008 Method 505.5 BS EN 60945:2002	P P P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GENERAL NON-EXPLOSIVE STORES AND EQUIPMENT including: (cont'd) PRESSURE VESSELS RADAR EQUIPMENT RADIO AND TV EQUIPMENT SAFETY APPLIANCES AND EQUIPMENT SATELLITES AND SUB-ASSEMBLIES SECURITY DEVICES AND ALARMS STRUCTURES AND COMPONENTS TELECOMMUNICATION EQUIPMENT THERMAL IMAGING WEAPONS AND SUB-ASSEMBLIES	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.1 CLIMATIC (cont'd) 1.1.2 Low temperature **- constant and cyclic** Min temp: -70 °C Max chamber size: 1.2 m x 1.2 m x 1.2 m Min temp: -50 °C Max chamber size: 4.0 m x 2.5 m x 2.5 m	DEF STAN 00-35, Issue 4 Chapters 3-04 and 3-05:2006 BS EN 60068-2-1:2007 Tests Aa, Ab, Ad ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 IEC 68-2-1:1990 TR 2130C:2005 BS 3G100:Part 2:Subsect 3.2: 1970(1983) RTCA DO 160F:4.5.1:2007 RTCA DO 160G:2010 DEF STAN 07-55:1983 Tests B4, B5 BS EN 50155:10.2.3 and 10.2.14:2007 MIL-STD 810G:2008 Method 502.5 BS EN 50133-1:1997 NES 1004:1995 Data Sheet 8 DEF STAN 08-123:2000 Data Sheet 8 Lloyds Register Specification No 1:1996:Low temperature test	P
	1.1.3 Thermal Shock a) Automatic transference Max temp: +200 °C Min temp: -70 °C Max chamber size: 0.6 m x 0.6 m x 0.4 m	BS EN 60068-2-14:2000 Tests Na, Nb IEC 68-2-14:1984 BS 3G100:Part 2: Subsect 3.15:1978(1983) DEF STAN 00-35, Issue 4 Chapter 3-14:2006 DEF STAN 07-55:1983 Test B14 MIL-STD 810G:2008 Method 503.5	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.1 CLIMATIC (cont'd) 1.1.3 Thermal Shock (cont'd) b) Manual transference Max temp: +170 °C Min temp: -70 °C Max chamber size: 1.2 m x 1.2 m x 0.9 m	BS EN 60068-2-14:2000 Tests Na, Nb IEC 68-2-14:1984 BS 3G100:Part 2: Subsect 3.15:1978(1983) DEF STAN 00-35, Issue 4 Chapter 3-14:2006 DEF STAN 07-55:1983 Test B14 MIL-STD 810G:2008 Method 503.5	P
	1.1.4 Temperature Change/Variation (limits as above)	RTCA DO 160F:5.3:2007 RTCA DO 160G:2010 Category B and C only ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003	P
	1.1.5 High temp - high humidity **- constant and cyclic** Max temp: +70 °C Humidity range: 10 to 98% rh Max chamber size: 4.0 m x 2.5 m x 2.5 m Max temp: +80 °C Humidity range: 30 to 98% rh Max chamber size: 0.91 m x 0.91 m x 0.91 m	DEF STAN 00-35, Issue 4 Chapter 3-07:2006 RTCA DO 160F:6.3:2007 RTCA DO 160G:2010 MIL-STD 810G:2008 Method 507.5 TR 2130C:2005 BS EN 50155:10.2.5:2007 BS 2011:Ca:1977 BS 2011:Cab:1990 BS 2011:Cb:1990 BS EN 60068-2-30:2005 BS EN 60068-2-78:2002 BS EN 60945:2002 IEC 68-2-3:1969 IEC 60068-2-30:1980 IEC 68-2-56:1988 BS 3G100:Part 2:Subsect 3.7: 1972(1983) DEF STAN 07-55:1983 Tests B6, B7	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.1 CLIMATIC (cont'd) 1.1.5 High temp - high humidity **- constant and cyclic** (cont'd)	ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995 Data Sheet 9 DEF STAN 08-123:2000 Data Sheet 9 Lloyds Register Specification No 1:1996:Humidity tests 1 and 2	P
	1.1.6 High/low temp - low/high pressure (atmospheric) - high humidity (combined and sequential) Temperature range: -70 °C to +150 °C Humidity range: 30 to 98 %rh Pressure range: 20 mbar to 1090 mbar Chamber size: 1.01 m x 1.01 m x 1.02 m	BS EN 60068-2-13:1999 BS EN 60068-2-40:2000 BS EN 60068-2-41:2000 BS EN 60068-2-61:1994 DEF STAN 00-35 (Part 3), Issue 4 Tests CL11, CL12, and CL21:2006 DEF STAN 07-55:1983 Test B11 and B12 MIL-STD 202F:105C:1980 MIL-STD 810G:2008 Method 500.5 Procedures I and II MIL-STD 810G:2008 Method 520.3 RCTA DO 160F:2007 RTCA DO 160G:2010 Sections 4.6.1 and 4.6.3	P
	1.1.7 Dust and Sand - Driving Chamber size: 1.5 m x 1.5 m x 2.5 m Temperature Range: +20 to +70 °C Maximum Test Area: 200 mm diameter	DEF STAN 07-55:1983 Test D1 RTCA DO 160F:12.0:2007 RTCA DO 160G:2010 MIL-STD 810G:2008 Method 510.5 Procedures I and II DEF STAN 00-35, Issue 4 Chapter 3-25:2006	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.1 CLIMATIC (cont'd) 1.1.7 Dust and Sand - Driving (cont'd) Maximum Velocity: 25 m/s with 200 mm dia Duct 40 m/s with 140 mm dia Duct Dust Concentration: 0.1 g/m^3 to 20 g/m^3		P
	1.1.8 Dust and Sand - Turbulent Chamber size: 1.5 m x 1.5 m x 2.5 m Temperature Range: +20 to +70 °C Dust Concentration: 0.1 g/m^3 to 20 g/m^3	DEF STAN 07-55:1983 Test D1 DEF 133:1971 para 10	P
	1.1.9 Drip Proof Drip Tray area: 0.77 m x 0.77 m	ETSI EN 300 19-2-1:2000 BS 3G100:Part 2:Subsect 3.11: 1973(1983) Grade B RTCA DO 160F:10.3.1:2007 RTCA DO 160G:2010 DEF STAN 00-35, Issue 4 Chapter 3-28:2006 BS EN 60068-2-18:2001 IEC 60068-2-18:2000 DEF STAN 07-55:1983 Test D4 BS EN 50133-1:1997 MIL-STD 810G:2008 Method 506.5 Procedure III	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.1 CLIMATIC (cont'd) 1.1.10 Fine Mist Chamber size: 0.76 m x 0.76 m x 0.5 m	BS EN 60068-2-18:2001 IEC 60068-2-18:2000 DEF STAN 07-55:1983 Test D2	P
	1.1.11 Spray Proof Max Item size: 3.0 m x 3.0 m x 3.0 m	RTCA DO 160F:10.3.2:2007 RTCA DO 160G:2010	P
	1.1.12 Driving Rain Max item size: 3.0 m x 3.0 m x 3.0 m (single pass)	BS EN 60068-2-17:1995 IEC 68-2-17:1994 BS 3G100:Part 2: Subsect 3.11:1973(1983) Grade B DEF STAN 00-35, Issue 4 Chapter 3-27:2006 DEF STAN 07-55:1983 Test D3 NES 1004:1995 Data Sheet 18 DEF STAN 08-123:2000 Data Sheet 18	P
	1.1.13 Icing/Freezing Rain Min temp: -50 °C Max chamber size: 4.0 m x 2.5 m x 2.5 m	MIL-STD 810G:2008 Method 521.3 RTCA DO 160F:24.0:2007 RTCA DO 160G:2010 DEF STAN 00-35, Issue 4 Chapter 3-10:2006 NES 1004:1995 Data Sheet 15 DEF STAN 08-123:2000 Data Sheet 15	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.1 CLIMATIC (cont'd) 1.1.14 Corrosion Salt Max chamber size: 1.9 m x 1.2 m x 0.9 m	BS EN 60068-2-11:1999:Ka BS EN 60068-2-52:1996:Kb IEC 68-2-11:1981 IEC 68-2-52:1996 TR 2130C:2005 BS 3G100:Part 2: Subsection 3.8:1977(1983) BS EN 50155:10.2.10:2007 BS EN ISO 9227:2006 Test NSS DEF STAN 07-55:1983 Tests C2, C5 RTCA DO 160F:14.0:2007 RTCA DO 160G:2010 MIL-STD 810G:2008 Method 509.5 DEF STAN 00-35, Issue 4 Chapters 4-02:2006 and 4-05:2006 ASTM B117-07 NES 1004:1995, Data Sheet 21 DEF STAN 08-123:2000 Data Sheet 21 Lloyds Register Specification No 1:1996: Salt mist	P
	1.2 DYNAMIC (a) Ambient Temperature **(electromagnetic)** Freq range: 2 to 3000 Hz Max peak thrust: 160 kN Max payload (vertical): 2000 kg Max payload (horizontal): 7000 kg Max displacement: 40 mm pk-pk	NES 1004:1995 Data Sheet 25 (externally generated) DEF STAN 08-123:2000 Data Sheet 25 (externally generated) DEF STAN 07-55:1983 Test A1 Test A2 MIL-STD 810G:2008 Method 514.6 Method 519.6 BRB/RIA 13:1990 BRB/RIA 20:1988	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) (a) Ambient Temperature (cont'd) **(hydraulic)** Freq range: 1 to 150 Hz Max peak thrust: 133 kN (30,000 lbf) Max payload: 3500 kg Max displacement: 20 mm pk-pk (b) High/low Temperature (Standard Chamber) Freq range: 2 to 2000 Hz Max peak thrust: 30 kN Max payload (vertical): 800 kg Max displacement: 40 mm pk-pk Max temp: +170 °C Min temp: -70 °C Chamber size: 1.2 m x 1.2 m x 0.9 m (c) High/Low Temperature (Prefabricated Enclosure) Freq range: 2-3000Hz Max peak thrust: 160 kN Max payload (vertical): 2000 kg Max payload (horizontal): 7000 kg Max displacement: 40 mm pk-pk Max temp: +150 °C Min temp: -70 °C	BRB/RIA 20:1995 Lloyds Register Specification No 1:1996:Vibration tests 1 and 2 BR 967:1973:Mechanical Environments, Clauses 5.2 and 5.3 (2-100 Hz)	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) 1.2.1 Vibration Sine, random, broadband random, swept sine, fixed sine dwell, notching, force notching, sine-on-random, random-on-random, sine-on-random-on-random, and gunfire - with slip table facility	DEF STAN 00-35, Issue 4 Chapter 2-01:2006 BS 2011:Fd:1973(1984) BS 2011:Fda:1973(1984) BS 2011:Fdb:1973(1984) BS 2011:Fdc:1973(1984) BS EN 60068-2-6:2008:Fc BS EN 60945:2002 IEC 60068-2-64:2008 IEC 68-2-6:1993 TR 2130C:2005 BS 3G100:Part 2: Subsection 3.1:1969(1983) RTCA DO 160F:8.0:2007 RTCA DO 160G:2010 IEC 61373:1999 BS EN 50155-1:2007 BS EN 60255-21-1:1996 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003	P
	1.2.2 Shock Classical shock with half sine, initial and terminal peak sawtooth, trapezoidal, and rectangular pulse shape Shock response spectrum synthesis (SRS) **- Vertical** half sine, sawtooth Max item mass: 2000 kg	DEF STAN 00-35, Issue 4 Chapters 2-03, 2-06 and 2-07:2006 RTCA DO 160F:7.0:2007 RTCA DO 160G:2010 TR 2130C:2005 BS EN 60068-2-27:1993:Ea EN 60068-2-81:2003 IEC 68-2-27:1987	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) 1.2.2 Shock (cont'd) **- Ambient temperature** Severity: 1 g to 210 g Duration: 1 ms to 70 ms (severity dependent) **- with temperature (prefabricated enclosure)** Severity: 3 g to 1500 g Duration: 0.2 ms to 70 ms (severity dependent) Max temp: +150 °C Min temp: -70 °C **- Horizontal** half sine, sawtooth Max item mass: 7000 kg **- ambient temperature** Severity: 1 g to 210 g Duration: 1 ms to 70 ms (severity dependent)	DEF STAN 07-55:1983 Test A3 MIL-STD 810G:2008 Method 516.6 BRB/RIA 20:1995 IEC 61373:1999 BS EN 50155:10.2.11:2007 BS EN 60255-21-2:1996 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995, Data Sheet 28 DEF STAN 08-123:2000 Data Sheet 28 DEF STAN 00-35, Issue 4 Chapters 2-03, 2-06 and 2-07:2006 RTCA DO 160F:7.0:2007 RTCA DO 160G:2010 TR 2130C:2005 BS EN 60068-2-27:1993:Ea IEC 68-2-27:1987 DEF STAN 07-55:1983 Test A3 MIL-STD 810G:2008 Method 516.6	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) 1.2.2 Shock (cont'd) **- with temperature (prefabricated enclosure)** Severity: 1 g to 210 g Duration: 1 ms to 70 ms (severity dependent) Max temp: +150 °C Min temp: -70 °C **- SRS** Limited by: 210g acceleration 50mm displacement	 BRB/RIA 20:1995 IEC 61373:1999 BS EN 50155:10.2.11:2007 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995 Data Sheet 28 DEF STAN 08-123:2000 Data Sheet 28 MIL STD 810G:2008 Method 516.6	 P
	1.2.3 Bump **- ambient temperature** Max item mass: 2000 kg **- with temperature (prefabricated enclosure)** Max item mass: 2000 kg Max temp: +150 °C Min temp: -70 °C	DEF STAN 00-35, Issue 4 Chapter 2-12:2006 TR 2130C:2005 BS EN 60068-2-29:1993:Eb IEC 68-2-29:1987 DEF STAN 07-55:1983 Test A5 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) 1.2.4 Drop and Topple **- with temperature (prefabricated enclosure)** Max item mass: 2000 kg Max temp: +150 °C Min temp: -70 °C	DEF STAN 00-35 Chapter 2-04:2006 TR 2130C:2005 BS EN 60068-2-31:2008:Ec IEC 68-2-31:1969 ETSI EN 300 19-2-2:1999 DEF STAN 07-55:1983 Test A4 BR 967:1973:Mechanical Environmental Clause 5.1	P
	- at laboratory ambient temperature	BS EN 60068-2-31: DEF Stan 00-35 Chapter 2-04:2006 ETSI EN 300 19-2-2:1999 TR2130C:2005	S
	1.2.5 Free Fall Impact Test **- with temperature (prefabricated enclosure)** Max drop ht: 4.5 m Max item mass: 8000 kg Max temp: + 150 °C Min temp: -70 °C	DEF STAN 00-35: Chapter 2-05:2006 TR 2130C:2005 BS EN 60068-2-31:2008 IEC 68-2-32:1975 ETSI EN 300 19-2-2:1999 DEF STAN 07-55:1983 Test A9	P
	- at laboratory ambient temperature	DEF STAN 00-35: Chapter 2-05:2006 TR 2130C:2005 BS EN 60068-2-31:2008 IEC 68-2-32:1975 ETSI EN 300 19-2-2:1999 DEF STAN 07-55:1983 Test A9	S
	1.2.6 Bounce (Wheeled vehicle transportation) Max item size: 0.7 m x 0.7 m x 0.7 m	DEF STAN 00-35, Issue 4 Chapter 2-11:2006 BS EN 60068-2-55:1993 IEC 68-2-55:1987 DEF STAN 07-55:1983 Test A8	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) 1.2.7 Lifting Max height (Crane): 4.5 m Max mass (Crane): 8000 kg Max mass (Forklift): 2000 kg	DEF STAN 00-35, Issue 4 Chapter 2-15:2006 DEF STAN 07-55:1983 Test A12	P
	1.2.8 Stacking (Static Load) Max load (Weights): 4000 kg	DEF STAN 00-35, Issue 4 Chapter 2-16:2006 DEF STAN 07-55:1983 Test A13	P
	1.2.9 Bending Max load (Weights): 4000 kg	DEF STAN 00-35, Issue 4 Chapter 2-17:2006 DEF STAN 07-55:1983 Test A14	P
	1.2.10 Racking Max mass: 8000 kg	DEF STAN 00-35, Issue 4 Chapter 2-18:2006 DEF STAN 07-55:1983 Test A15	P
	1.2.11 Acceleration **- steady state** Max acceleration: 70 g Max radius: 1.22 m Max item mass: 22 kg (at max gn) Max item size: length 0.5 m width 0.3 m height 0.3 m	BS EN 60068-2-7:1993:Ga IEC 68-2-7:1983 BS 3G100:Part 2: Subsection3.6:1972(1983) DEF STAN 07-55:1983 Test A6 DEF STAN 00-35, Issue 4 Chapter 2-13:2006 MIL-STD 810G:2008 Method 513.6 RTCA DO 160F:7.3:2007 RTCA DO 160G:2010	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 4 and 5	**1 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 1.2 DYNAMIC (cont'd) 1.2.12 Highly Accelerated Life Testing (HALT) (Using Screening Systems Incorporated QRS-410T HALT System) Analysed Frequency Range: 20Hz to 2kHz Max item mass: 20kg Max item size: 300mm x 500mm x 400mm (in prefabricated enclosure) Temperature Range: -60°C to +150°C Max rate of change: 50°C (over 100mm x 100mm area)	Documented In House Procedure: COP 88 Issue 1:Feb 09	P
	1.3 MISCELLANEOUS 1.3.1 Fluid contamination Max temp: +100 °C Max chamber size: 0.9 m x 0.9 m x 0.9 m	BS EN 60068-2-74:2000:Xc DEF STAN 00-35, Issue 4 Chapter 4-04:2006 BS 3G100:Part 2: Subsect 3.12:1991 RTCA DO 160F:11.0:2007 RTCA DO 160G:2010 DEF STAN 07-55:1983 Test C4	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ENCLOSURES FOR ELECTRICAL EQUIPMENT	**2 INGRESS PROTECTION TESTS**		
	IP1X Protected against solid objects greater than 50 mm dia	BS EN 60529:1992 (2000) EN 60529:1991 IEC 60529:1989 BS EN 60598-1:2008, Clause 9.2 Lloyds Register Specification No 1:1996:Enclosure test TR 2130C:2002	P
	IP2X Protected against solid objects greater than 12.5 mm dia		
	IP3X Protected against solid objects greater than 2.5 mm dia		
	IP4X Protected against solid objects greater than 1.0 mm dia		
	IP5X Dust protected		
	IP6X Dust tight		
	IPX1 Protected against dripping water		P
	IPX2 Protected against dripping water when tilted up to 15°		
	IPX3 Protected against spraying water		
	IPX4 Protection against splashing water		
	IPX5 Protected against water jets		
	IPX6 Protected against powerful water jets		
	IPX7 Protected against the effects of immersion		
	IPX8 Protected against submersion		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
AMUNITION EXPLOSIVES and PROPELLANTS FUZES: WEAPONS FIREARMS WEAPONS and SUB-ASSEMBLIES	**3 ENVIRONMENTAL TESTS (EXPLOSIVE ITEMS)** (UN Class 1 Hazard Divisions 1.3 and 1.4)		
	All tests in Section 1 and 2 may be carried out	See Sections 1 and 2	P
	Certain tests listed in Sections 1 and 2 can/may increase the potential hazard of the explosive item	Where necessary, pre-fabricated Standard Safety Cells are constructed for containment	
	The hazard classifications mentioned above (1.3 and 1.4) must not be violated before, during, or after testing		
	All tests in Section 1 and 2 may be carried out (cont'd)	See Sections 1 and 2	P
	Assurances that the item will remain potentially safe under the test conditions must be furnished by the customer		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
AEROSPACE STRUCTURES, MATERIALS AND EQUIPMENT AGRICULTURAL EQUIPMENT CONSTRUCTION PLANT, EQUIPMENT, PRODUCTS AND MATERIALS CRYOGENIC EQUIPMENT ELECTRICAL/ELECTRONIC COMPONENTS, CONNECTORS AND COMPONENTS ELECTRO-MECHANICAL DEVICES ENCLOSURES MARINE EQUIPMENT MECHANICAL PRODUCTS AND PLANT MINING EQUIPMENT AND COMPONENTS MOTOR VEHICLE ACCESSORIES AND COMPONENTS PACKAGES AND PACKAGING MATERIAL STRUCTURES AND COMPONENTS WELDMENTS	**4 MECHANICAL TESTS** 4.1 Structural Tests (a) Static (universal testing machines) Max force: 53 kN Max crosshead ht: 0.45 m (b) Static/low frequency (reaction frames) - ambient, high/low temp (prefabricated enclosures) Purpose built reaction frames Maximum specimen size: 4 m x 4 m x 3 m (high) Max single force: 500 kN (hydraulic actuators) Max temp: +70°C Min temp: -70°C Properties measured:- displacement mechanical strain	 Documented In-House Procedure COP No 15:Issue 1:1993 DEF STAN 00-970:1989 Part 2:Chapter 200 NES 1004:1995 Data Sheet 36 DEF STAN 08-123:2000 Data sheet 36 DEF STAN 00-35, Issue 4 Chapters 2-15 and 2-16:2006 and 3.22 NES 1004:1995 Data Sheet 35 DEF STAN 08-123:2000 Data Sheet 35	 P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 20	**4 MECHANICAL TESTS** (cont'd) 4.1 Structural Tests (cont'd)		
	Fatigue Tests - Mechanical sinusoidal, random, synthesised Purpose built reaction frame Maximum specimen size: 4 m x 4 m x 3 m (high) Max force: 53 kN Max freq: 50 Hz (force/stiffness dependent)	Documented In-House Procedure COP No 15:Issue 1:1993 DEF STAN 00-970:1989 Part 2:Chapter 201	P
	Endurance Tests - Mechanical Purpose-built rigs utilising pneumatic/hydraulic/electric actuators Measurement of: force - static and dynamic displacement strain frequency-cycles completed : at failure	Documented In-House Procedure COP No 15:Issue 1:1993	P
JET ENGINE COMPONENTS INCLUDING GUIDE VANES; LOW, INTERMEDIATE AND HIGH PRESSURE COMPRESSOR STAGES FOR COMMERCIAL AND MILITARY AIRCRAFT	High Cycle Fatigue Testing (HCF) Electromagnetic shaker, or air-jet excitation Frequency range: 50Hz to 3kHz	Documented In-house Procedure: COP No 86:Issue 2:Feb 09	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
HOSES, PIPES AND TUBES HYDRAULIC EQUIPMENT AND FITTINGS PRESSURE VESSELS	**4 MECHANICAL TESTS** (cont'd) 4.2 Pressure Tests (a) Hydraulic fatigue Max pressure: 17.25 MPa (2500 lb/in$^{2)}$ Cycle rate: 2 to 600 cpm (b) Hydrostatic proof Max pressure: 414 MPa (60,000 lb/in^2) (c) Air pressure/vacuum Positive gauge pressure limit: 13.79 MPa (2000 lb/in^2) Vacuum gauge pressure limit: - 96 kPa (-14 lb/in^2)	DEF STAN 00-35, Issue 4 Chapter 3-15:2006 NES 1004:1995 Data Sheet 13 DEF STAN 08-123:2000 Data Sheet 13 BS EN 60068-2-13:1999	P
ELECTRICAL/ELECTRONIC COMPONENTS and PRODUCTS	**5 ELECTRICAL OPERATION AND MEASUREMENT** Voltage: DC: 100 mV to 1000 V AC: 10 mV to 1000 V at 10 Hz AC: 100 mV to 10 V at 50 kHz Frequency: 1 Hz to 100 kHz Current: AC: 1 mA to 1000 A DC: 10 μA to 1000 A Resistance: 1 mΩ to 10 MΩ	Documented In-House Methods (as agreed with the client) QAI No 3	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ELECTRICAL/ELECTRONIC COMPONENTS and PRODUCTS (cont'd)	**5 ELECTRICAL OPERATION AND MEASUREMENT** (cont'd) Insulation Resistance: 100 MΩ to 1 TΩ at 500 V 100 MΩ to 1 GΩ at 1 kV max Break detection (Contacts): 1 μS to 100 mS (max current: 100 mA) Capacitance: 100 pF to 1 μF Inductance: 1 mH to 1 H	Documented In-House Methods (as agreed with the client)	P
ELECTRO-MECHANICAL and MECHANICAL PRODUCTS	**6 MECHANICAL OPERATION AND MEASUREMENTS** Torque: 1 lb-in to 500 lb-ft Air Pressure: 0 to 16,000 psi Vacuum: 100 mb to 1050 mb Internal Dimensions: 0.1 to 150 mm External Dimensions: 0.1 to 150 mm Weight: 1.00g to 12 kg	Documented In-House Methods (as agreed with the client) QAI No 3	P

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GENERAL NON-EXPLOSIVE STORES AND EQUIPMENT including: AEROSPACE STRUCTURES, MATERIALS AND EQUIPMENT AGRICULTURAL EQUIPMENT COMPUTERS AND PERIPHERALS CONSTRUCTION PLANT, EQUIPMENT, PRODUCTS AND MATERIALS CRYOGENIC EQUIPMENT DOMESTIC APPLIANCES ELECTRICAL/ELECTRONIC COMPONENTS, CONNECTORS AND PRODUCTS ELECTRO-MECHANICAL DEVICES FIREARMS FIRE FIGHTING AND DETECTION EQUIPMENT HYDRAULIC EQUIPMENT AND FITTINGS MARINE EQUIPMENT MECHANICAL PRODUCTS AND PLANT MINING EQUIPMENT AND COMPONENTS MISSILE AND COMPONENTS MOTOR VEHICLE ACCESSORIES AND COMPONENTS OFFICE EQUIPMENT PACKAGES AND PACKAGING MATERIAL PLASTICS AND PRODUCTS PRESSURE VESSELS	**7 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** 7.1 CLIMATIC 7.1.1 High temp - low humidity - **constant and cyclic** Max temp: +170 °C Max chamber size: 0.91 m x 0.91 m x 0.91 m	DEF STAN 00-35 Issue 4 Chapters 3-01 and 3-02:2006 ETSI EN 300 019-2-1:2000 ETSI EN 300 019-2-2:1999 ETSI EN 300 019-2-3:2003 RTCA DO 160F:4.5:2007 RTCA DO 160G:2010 TR 2130C:2005 BS EN 50155:10.2.4:2007 BS EN 50133-1:1997 BS EN 60068-2-2:1993 BS EN 60945:2002 IEC 68-2-2:1974(1994) BS 3G100:Part 2: Subsect 3.2:1970(1983) DEF STAN 07-55:1983 Tests B1, B2 MIL-STD 810G:2008 Method 501.4 (Procedures I and II) JCPS 05-07:1987 Clause 7.1.4.2 NES 1004:1995 Data Sheet 7 DEF STAN 08-123:2000 Data Sheet 7 Lloyds Register Specification No 1:1996:Dry Heat Test	S
	7.1.2 Low temperature - **constant and cyclic** Min temp: -40 °C Max chamber size: 0.91 m x 0.91 m x 0.91 m	DEF STAN 00-35, Issue 4 Chapters 3-04 and 3-05:2006 BS EN 60068-2-1:2007 Tests Aa, Ab, Ad ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 IEC 68-2-1:1990 TR 2130C:2005 BS 3G100:Part 2: Subsect 3.2:1970(1983)	S

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Continued from Page 24 RADAR EQUIPMENT SAFETY APPLIANCES AND EQUIPMENT SATELLITES AND SUB-ASSEMBLIES ALARMS STRUCTURES AND COMPONENTS TELECOMMUNICATION EQUIPMENT THERMAL IMAGING WEAPONS AND SUB-ASSEMBLIES	**7 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 7.1.2 Low temperature **- constant and cyclic** (cont'd)	RTCA DO 160F:4.5.1:2007 RTCA DO 160G:2010 DEF STAN 07-55:1983 Tests B4, B5 BS EN 60945:2002 10.2.14:2007 MIL-STD 810G:2008 Method 502.5 EN 50133-1:1996 NES 1004:1995 Data Sheet 8 DEF STAN 08-123:2000 Data Sheet 8 Lloyds Register Specification No 1:1996:Low temperature test	S
	7.1.3 High temp - high humidity **- constant and cyclic** Max temp: +80 °C Humidity range: 30 to 95% rh Max chamber size: 0.91 m x 0.91 m x 0.91 m	DEF STAN 00-35, Issue 4 Chapter 3-07:2006 RTCA DO 160F:6.3:2007 RTCA DO 160G:2010 TR 2130C:2005 BS EN 50155:10.2.5:2007 BS 2011:Ca:1977 BS 2011:Cb:1990 BS EN 60068-2-30:2005 BS EN 60068-2-78:2002 BS EN 60945:2002 IEC 68-2-3:1969 IEC 60068-2-30:1980 IEC 68-2-56:1988 BS 3G100:Part 2: Subsect 3.7:1972(1983) DEF STAN 07-55:1983 Tests B6, B7 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995 Data Sheet 9 DEF STAN 08-123:2000 Data Sheet 9 Lloyds Register Specification No 1:1996:Humidity tests 1 and 2	S

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 24 and 25	**7 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 7.2 DYNAMIC 7.2.1 Vibration Sine, random, broadban random, swept sine, fixed sine dwell, notching, force notching, sine-on-random, random-on-random, sine-on-random-on-random, and gunfire - with slip table facility	DEF STAN 00-35, Issue 4 Chapter 2-01:2006 BS 2011:Fd:1973(1984) BS 2011:Fda:1973(1984) BS 2011:Fdb:1973(1984) BS 2011:Fdc:1973(1984) BS EN 60068-2-6:2008:Fc BS EN 60945:2002 IEC 60068-2-64:2008 IEC 68-2-6:1993 TR 2130C:2005 BS 3G100:Part 2: Subsection 3.1:1969(1983) RTCA DO 160F:8.0:2007 RTCA DO 160G:2010 IEC 61373:1999 BS EN 50155-1:2007 BS EN 60255-21-1:1996 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995 Data Sheet 25 (externally generated) DEF STAN 08-123:2000 Data Sheet 25 (externally generated)	S

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 24 and 25	**7 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 7.2 DYNAMIC (cont'd) 7.2.1 Vibration (cont'd) **(**a) Ambient Temperature **(electromagnetic)** Freq range: 2 to 3000 Hz Max peak thrust: 160 kN Max payload (vertical): 2000 kg Max payload (horizontal): 12000kg Max displacement: 50 mm pk-pk	DEF STAN 07-55:1983 Test A1 Test A2 MIL-STD 810G:2008 Method 514.6 Method 519.6 BRB/RIA 13:1990 BRB/RIA 20:1988 BRB/RIA 20:1995 Lloyds Register Specification No 1:1996:Vibration tests 1 and 2 Method 516.4 BRB/RIA 20:1995 IEC 61373:1999 BS EN 50155:10.2.11:2007 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003	S
	7.2.2 Shock Classical shock with half sine, initial and terminal peak sawtooth, trapezoidal, and rectangular pulse shape Shock response spectrum synthesis (SRS) **- Vertical** half sine, sawtooth Max item mass: 2000 kg **- Ambient temperature** Severity: 1g to 210g Duration: 1ms to 70ms (severity dependent)	DEF STAN 00-35, Issue 4 Chapters 2-03, 2-06 and 2-07:2006 RTCA DO 160F:7.0:2007 RTCA DO 160G:2010 TR 2130C:2005 BS EN 60068-2-27:1993:Ea EN 60068-2-81:2003 IEC 68-2-27:1987 DEF STAN 07-55:1983 Test A3 MIL-STD 810G:2008 Method 516.6 BRB/RIA 20:1995 IEC 61373:1999 BS EN 50155:10.2.11:2007 BS EN 60255-21-2:1996	S

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Pages 24 and 25	**7 ENVIRONMENTAL TESTS (NON-EXPLOSIVE ITEMS)** (cont'd) 7.2 DYNAMIC (cont'd) 7.2.2 Shock (cont'd) **Shock** **- Horizontal** half sine, sawtooth Max item mass: 12000 kg **- Ambient temperature** Severity: 1g to 210g Duration: 1ms to 70ms (severity dependent)	 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995 Data Sheet 2	
	7.2.3 Bump **- ambient temperature** Max item mass: 2000 kg Severity: 3 g to 1500 g Duration: 0.5 ms to 70 ms (severity dependent)	DEF STAN 00-35, Issue 4 Chapter 2-12:2006 TR 2130B:1993 BS EN 60068-2-29:1993:Eb IEC 68-2-29:1987 DEF STAN 07-55:1983 Test A5 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 DEF STAN 07-55:1983 Test A3 MIL-STD 810G:2008 Method 516.6 BRB/RIA 20:1995 IEC 61373:1999 BS EN 50155:10.2.11:2007 BS EN 60255-21-2:1996 ETSI EN 300 19-2-1:2000 ETSI EN 300 19-2-2:1999 ETSI EN 300 19-2-3:2003 NES 1004:1995, Data Sheet 28 DEF STAN 08-123:2000 Data Sheet 28	S

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
ELECTRICAL/ELECTRONIC COMPONENTS and PRODUCTS	**8 ELECTRICAL OPERATION AND MEASUREMENT** Voltage: DC: 100 mV to 1000 V AC: 100 mV to 750 V at 60 Hz AC: 100 mV to 200 V at 1kHz Frequency: 50 Hz to 100 kHz Current: AC: 1 mA to 2 A DC: 1 mA to 2 A Resistance: 10Ω to 10 MΩ	Documented In-House Methods (as agreed with the client)	S
ELECTRO-MECHANICAL and MECHANICAL PRODUCTS	**9 MECHANICAL OPERATION AND MEASUREMENTS** Internal Dimensions: 0.1 to 150 mm External Dimensions: 0.1 to 150 mm		S
Aerospace Equipment Circuit Breakers/Switches Computers and Peripherals Domestic Appliances Electrical/Electronic Components Electrical/Electronic Connectors Electrical/Electronic Products Electric Cables Electronic Products: Digital Enclosures for Electrical Equipment Electrically Driven Wheelchairs Electro-Mechanical Devices Fans	**10 EMC TESTS** 10.1 CIVIL EMC TESTS 10.1.1 Conducted Emissions: Power Leads: 9 kHz to 30 MHz	EN 55011:2007+A1:2007 EN 55011:2009+A1:2010 **EN 55011:2016 (excluding grid connect power converter equipment)** AS/NZS CISPR 11:2004 EN 55013:2001+A1:2003+A2:2006 CISPR 13:2006 Edition 4.2 CISPR 13:2009 Edition 5.0 AS/NZS CISPR 13:2004 EN 55014-1:2006+A1:2009	A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G G G G G A,B,C,E,G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	10 EMC TESTS (cont'd)		
Fire Fighting and Detection Equipment Generators, Electrical Generators, Power Instruments, Indicating/ Recording IT Equipment Lamps, Electrical Luminaries Magnetic Materials Marine Equipment Measuring Equipment Medical Equipment Micro Electronic Circuits and Components Motors, Electrical Office Equipment: Electrical, Optical, and Photometric Equipment Plugs and Sockets: Electrical Printed Circuit Boards Power Supplies: Electrical Radio and TV Equipment Safety Appliances/ Equipment Security Devices and Alarms Telecoms Equipment Toys	10.1 CIVIL EMC TESTS (cont'd) 10.1.1 Conducted Emissions (cont'd)	EN 55014-1:2006+A2:2011 EN 55014-1:2017 AS/NZS CISPR14.1:2010 EN 55015:2006+A1:2007+A2:2009 EN 55015:2013 CISPR 15:2009 Ed 7.2 AS/NZS CISPR 15:2006 EN 55016-2-1:2014 +A1:2017 CISPR 16-2-1:2014 + Amd1:2017 EN 55022: 1998 EN 55022:2006 + A1:2007 EN 55022:2010 CISPR 22:1997 CISPR 22:2006 Ed 5.2 CISPR22: 2008 AS/NZS CISPR 22:2006 AS/NZS CISPR 22:2009+A1:2010 CAN/CSA-CEI/ IEC CISPR 22:2002 FCC CFR 47:Part 18 FCC CFR 47:Part 15B ANSI C63.4:2003 ANSI C63.4:2009 ANSI C63.4:2014 ICES-001:Issue 4:2006 ICES-003:Issue 2:2004 ICES-003 Issue 5:2012 ICES-003 Issue 6:2016 ICES-005:Issue 3:2009 VCCI V-3 EN 60945:2002 Section 9.2 EN 55032:2012 EN 55032:2015 GEL210 11-14-0182	A,B,C,E,G A,B,C,E A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E A,B,C,G A,B,C,E,G A,B,C,E,G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd)		
	10.1 CIVIL EMC TESTS (cont'd)		
		EN 50065-1:1991	A,B,C
	10.1.2 Conducted Emissions:	EN 50065-1:1992	A,B,C
	Signal and Control Lines: 9 kHz to 30 MHz	EN 55011:2009+A1:2010	A,B,C,E,G
		EN 55011:2016 (excluding grid connect power converter equipment)	A,B,C,E,G
		EN 55014-1:2006+A1:2009 +A2:2011	A,B,C,E,G
		EN 55014-1:2017	A,B,C,E,G
		EN 55016-2-1:2014 +A1:2017	A,B,C,E,G
		CISPR 16-2-1:2014 + Amd1:2017	A,B,C,E,G
		EN 55022:1998[1]	A, B, C, G
		including ISDN ports where CDNs can be used	A,B,C,E,G
		EN 55022:2006 + A1:2007[1]	A,B,C,E,G
		CISPR 22:2006 Ed 5.2[1]	A,B,C,E,G
		CISPR 22:2008[1]	A, B, C, G
		AS/NZS CISPR 22:2006[1]	A,B,C,E,G
		AS/NZS CISPR 22:2009 +A1:2010	A,B,C,E,G
		EN 55032:2012	A,B,C,E,G
		EN 55032:2015	
		GEL210 11-14-0182	
		FCC CFR 47 Part 15B	A, B, C, G
		FCC CFR 47:Part 18	A, B, C, G
		VCCI V-3[1]	A,B,C,G
	30 MHz to 1 GHz	FCC CFR 47 Part 15B	G, B
		Section 15.111, 15.115 subpart	G, B
		b(1), b(2), (c), (h) & (i)	G, B
	Antenna port 30 MHz to 2.15 GHz	EN 55013:2001+A1:2003+ A2:2006	G
		CISPR 13:2006 Edition 4.2	G
		CISPR 13:2009 Edition 5.0	G
		AS/NZS CISPR 13:2004	G
		EN 55032:2012	A,B,C,E,G
		EN 55032:2015	
		GEL210 11-14-0182	

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd) 10.1.3 Conducted Current Harmonics (Emissions): Measurements up to 40th Harmonic	EN 61000-3-2:2006 + A1:2009+ A2:2009 IEC 61000-3-2:2009 Ed 3.2 EN 61000-3-2:2014	A, B, C, G A, B, C, G A, B, C, G
	10.1.4 Conducted AC Mains Flicker (Emissions):	EN 61000-3-3:2008 EN 61000-3-3:2013 IEC 61000-3-3:2008 Ed 2.0 IEC 61000-3-3 Amd1:2017	A, B, C, G A, B, C, G A, B, C, G A, B, C, G
	10.1.5 Radiated Emissions: Magnetic Field 9 kHz to 30 MHz	EN 55011:2007 + A2:2007 EN 55011:2009 + A1:2010 **EN 55011:2016 (excluding grid connect power converter equipment)** AS/NZS CISPR 11:2004 EN 60945:2002 Section 9.3 FCC CFR 47:Part 18 ICES-001:Issue4:2006	A,B C,E,G A,B C,E,G A,B,C,E,G A,B,C,E,G A,B C,E,G A,B C,E,G A,B C,E,G
	10.1.6 Radiated Emissions Electric Field 30 MHz to 18 GHz	EN 55011: 2009 + A1:2010 **EN 55011:2016 (excluding grid connect power converter equipment)** AS/NZS CISPR 11:2004	A,B,C,E,G A,B,C,E,G A,B,C,E,G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd)		
	10.1 CIVIL EMC TESTS (cont'd)	EN 55013:2001 including Amendment A1:2003 & A2:2006	G
		CISPR 13:2006 Edition 4.2	G
		CISPR 13:2009 Edition 5.0	G
		AS/NZS CISPR 13:2004	G
	10.1.6 Radiated Emissions Electric Field (cont'd) 30 to 26.5GHz	EN 55014-1:2006 + A1:2009	A,B,C,E,G
		EN 55014-1:2006+ A2:2011	A,B,C,E,G
		EN 55014-1:2017	A,B,C,E,G
		AS/NZS CISPR14.1:2010	A,B,C,E,G
		EN 55015:2013	A,B,C,E,G
		EN 55015:2006+A2:2009	A,B,C,E,G
		EN 55015:2006 + A1:2007 + A2:2009	A,B,C,E,G
		CISPR 15:2009 Ed 7.2	A,B,C,E,G
		AS/NZS CISPR 15:2006	A,B,C,E,G
		EN 55016-2-3:2017	A,B,C,E,G
		CISPR 16-2-3:2016	A,B,C,E,G
		EN 55022:1998	A,B,C,E,G
		EN55022:2006 + A1:2007	A,B,C,E,G
		EN55022:2010	A,B,C,E,G
		CISPR 22:2006 Ed 5.2	A,B,C,E,G
		CISPR 22:2008 Ed 6.0	A,B,C,E,G
		AS/NZS CISPR 22:2006	A,B,C,E,G
		AS/NZS CISPR 22:2009	A,B,C,E,G
		AS/NZS CISPR 22:2009 +A1:2010	A,B,C,E,G
		EN 60945:2002 Section 9.3	A,B,C,E,G
		FCC CFR 47:Part 15B	A,B,C,E,G
		FCC CFR 47:Part 18	A,B,C,E,G
		ANSI C63.4:2003	A,B,C,E,G
		ANSI C63.4:2009	A,B,C,E,G
		ANSI C63.4:2014	A,B,C,E,G
		ICES-003 Issue 5:2012	A,B,C,E,G
		ICES-003 Issue 6:2016	A,B,C,E,G
		EN 55032:2012	A,B,C,E,G
		EN 55032:2015	
		GEL210 11-14-0182	

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd)		
	10.1.7 Interference Power Measurements 30 MHz to 1GHz	EN 55013:2001+ A1:2001+ A2:2006 CISPR 13:2006 Edition 4.2 CISPR 13:2009 Edition 5.0 AS/NZS CISPR 13:2004 EN 55014-1:2006+A1:2009 +A2:2011	G G G G A, B, C, G
	10.1.8 Magnetic field emissions 10 kHz to 400 kHz	EN 50366:2003 + A1:2006 Time Domain Evaluation Method EN 62233:2008	G
	10.1.9 Electrostatic Discharge Immunity	EN 61000-4-2:2009 IEC 61000-4-2:2008 Ed 2.0 EN 55020:2002	A,B,C,E,G A,B,C,E,G G
	10.1.10 Radio Frequency Susceptibility Magnetic Field DC and 10 Hz to 50 kHz 500 A/m	EN 61000-4-8:2010 IEC 61000-4-8:2009 Ed 2.0 EN 61000-4-9:1994+ A1:2001 IEC 61000-4-9:2001 Ed 1.1	A, B, C, G A, B, C, G A,B,C,E,G A,B,C,G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd) 10.1.11 Radio Frequency Susceptibility Electric Field 14 kHz to 6 GHz 100 V/m maximum 10 kHz to 6 GHz Field uniformity: 0 to +6 dB for 1.5 m x 1.5 m plane using 75 % rule (10 kHz to 1 GHz) up to 20 V/m at 3 m (1 GHz to 6 GHz) up to 10 V/m at 3 m Stripline up to 10 V/m	 EN 61000-4-3:2006+A1:2008 EN 61000-4-3:2006 + A2:2010 IEC 61000-4-3:2006 Ed 3.0 IEC 61000-4-3:2008 Ed 3.1 IEC 61000-4-3:2010 Edition 3.2	 A,B,C,E,G A,B,C,E,G A,B,C,EG A,B,C,E G A,B,C,E G
NOTE: Radiated Immunity Tests These tests must normally be carried out in a screened enclosure, or other arrangements made to prevent contravention of the Wireless Communications Act.			
	10.1.12 Fast Transient/Burst Immunity: 0.25 kV to 5.0 kV (A,B,C) Up to 4kV (G) Positive and Negative Polarity 5 ns rise time 10 ns duration 15 or 75 ms burst duration	 EN 61000-4-4:2004 + A1:2010 EN 61000-4-4:2012 IEC 61000-4-4:2004 Ed 2.0 EN 55020:2002 Documented Element Procedure STP-1009 Electrical Fast Burst Transient	 A, B, C,E,G A, B, C,E,G A,B,C,E,G G A,B,C,E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd) 10.1.13 Surge Immunity Waveforms: 0.2 kV to 6.6 kV (A,B,C) up to 6 kV/3 kA (G) 1.2/50 (8/20) μs Common mode Differential mode 10/700 μs (up to 7 kV) (G)	 EN 61000-4-5:2006 EN 61000-4-5:2014 ITU-T K20:2003 ITU-T K21:2000 ITU-T K21:2003 ITU-T K44:2000 ITU-T K44:2003	 A,B,C,E,G A,B,C,E,G G G G G G
	10.1.14 Conducted Susceptibility CW, Transients and Magnetic Field: 20 Hz to 230 MHz, 20 V rms 10.1.14 Conducted Susceptibility (cont'd)	 EN 61000-4-6:2009 IEC 61000-4-6:2008 Ed 3.0 EN 61000-4-6:2014	 A, B, C,E,G A,B,C,E,G A,B,C,E,G
NOTE: Conducted Immunity Tests These tests must normally be carried out in a screened enclosure, or other arrangements made to prevent contravention of the Wireless Communications Act.			

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd)		
	10.1.15 Voltage Dips, Interruptions and Voltage Variations	EN 61000-4-11:2004 IEC 61000-4-11:2004 Ed 2.0	A,B,C,G A,B,C,G
	10.1.16 Site Surveys Conducted Emissions Radiated E-Field Radiated H-Field	Documented Element Procedures STP-1004 Power Line Conduction STP-1005 Magnetic Field (H) Emissions STP-1006 E-Field Emissions Testing	E
Coating, Metallic Composite Materials Enclosures for Electrical Equipment Insulating Materials: Electrical Coating, Metallic	10.1.17 VOID		,
	10.1.18 Compass Safe Distance	EN 60945:2002 Section 11.2	A, B, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd)		
	10.1 CIVIL EMC TESTS (cont'd)		
	10.1.19 EMC Tests These Generic and Product specific standards are included in this schedule, but limited to those referred basic standards that are explicitly listed in Sections 10.1.1 to 10.1.15. Note: International Standards, EN, ENV and IEC, listed in this Schedule, that have been adopted nationally as BS EN DD ENV and BS IEC and are technically identical, can be considered as being included in this Schedule.	EN 12184:2006	A,B,C,E
		EN 50121-1:2015	A,B,C,E,G
		EN 50121-2:2015	A,B,C,E,G
		EN 50121-3-1:2015	A,B,C,E,G
		EN 50121-3-2:2015	A,B,C,E,G
		EN 50121-4:2015	A,B,C,E,G
		EN 50121-5:2015	A,B,C,E,G
		EN 50121-1:2017	A,B,C,E,G
		EN 50121-2:2017	A,B,C,E,G
		EN 50121-3-1:2017	A,B,C,E,G
		EN 50121-3-2:2016	A,B,C,E,G
		EN 50121-4:2016	A,B,C,E,G
		EN 50121-5:2017	A,B,C,E,G
		EN 50130-4:2011 EN 50130-4:2011 + A1:2014	A,B,C,E,G
		EN 50131-2-3:2008	A,B,C,E,G
		EN 50131-2-4:2008	A,B,C,E,G
		EN 50131-2-5:2008	A,B,C,E,G
		EN50131-2-6:2008	A,B,C,E,G
		EN 50131-4:2009	A,B,C,E,G
		DD CLC/TS EN 50131-7:2010	A,B,C,E,G
		10/30227151DC (EN50131-9:2010)	A,B,C,E,G
		EN 50131-1:2006 + A1: 2009	A,B,C,E,G
		08/30179399 DC (EN50131-1)	A,B,C,E,G
		EN 50131-2-2:2008	A,B,C,E,G
		EN 50131-3:2009	A,B,C,E,G
		EN 50270:2006	A,B,C,E
		EN 50270:2015	A,B,C,E
		EN 50293:2012	A,B,C,E,G
		EN 50165:1997 + A1:2001 Sections 19.101.1 to 19.101.8	A,B,C,E
		EN 50199:1995	A,B,C,E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd) 10.1.19 EMC Tests (cont'd) Note: International Standards, EN, ENV and IEC, listed in this Schedule, that have been adopted nationally as BS EN DD ENV and BS IEC and are technically identical, can be considered as being included in this Schedule.	EN 55014-2:1997+ A1:2001 EN 55014-2:1997+A2:2008 EN 55014-2:2015 EN 55020:2007 + A11:2011 + A12:2016 For the testing of LNB only ESD and Stripline Tests. EN 55024:2010 CISPR 24: 2010 Ed 2.0 EN 55024:2010 + A1:2015 EN 55035:2017 EN55103-1:2009[1] [1]excluding TV and video products CISPR 35:2016 excluding xDSL EN55103-2:2009 BS IEC 60533:1999 IEC 60533:2015 IEC 60601-1-2:2007 Ed 3.0 EN 60601-1-2:2007 IEC 60601-1-2:2014 Ed 4 EN 60601-1-2:2015 IEC / EN 60601-1-11:2015 IEC / EN 60601-1-12:2015 EN 61000-6-1:2007 EN 61000-6-1:2019 excluding EN 61000-4-34 EN 61000-6-2:2005 EN 61000-6-2:2019 excluding EN 61000-4-34 EN 61000-6-3:2007 EN 61000-6-3:2007+A1:2011 IEC 61000-6-3:2011 Ed 2.1 EN 61000-6-4:2007 EN 61000-6-4:2007+A1:2011 IEC 61000-6-4:2011 Ed 2.1 EN 61204-3:2001 EN 61326-1:2013 EN 61326-2-1:2013	A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,G A,B,C,E,G A,B,C,E A,B,C,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,G A,B,C,E,G A,B,C,E,G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd)		
	10.1 CIVIL EMC TESTS (cont'd) 10.1.19 EMC Tests (cont'd)	EN 61326-2-2:2013 EN 61326-2-3:2013 EN 61326-2-4:2013 EN 61326-2-5:2013 EN 61326-2-6:2013 EN 61547:2009	A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G
	Note: International Standards, EN, ENV and IEC, listed in this Schedule, that have been adopted nationally as BS EN DD ENV and BS IEC and are technically identical, can be considered as being included in this Schedule.	EN 61800-3:1996 excluding "walkie talkie" tests BS IEC 62003:2009 excluding testing to EN 61000-4-10:1993 EN 61000-4-13:2002 EN 61000-4-14 (undated ref) EN 61000-4-12:2006 EN 61000-4-16 EN 61000-4-28	A,B,C,E A,B,C,E
		Lloyds Register Test Specification No.1:1990	A,B,C,E
		EN 300 386 V1.5.1 EN 300 386-2:1997 EN 300 386 V1.6.1:2012	B,G B,G A,B,C,D,E
		EN 301 489-1 V1.8.1:2008 EN 301 489-1 V1.9.2:2011 EN 301 489-1 V2.1.1:2016 EN 301 489-1 V2.2.3 (2019-11) excluding EN 61000-4-34 EN 301 489-2:V1.3.1:2002 EN 301 489-3:V1.6.1:2013 EN 301 489-3:V2.1.1:2019 EN 301 489-4 V1.4.1:2009 EN 301 489-5:V1.3.1:2002 EN 301 489-6 V1.3.1:2008 EN 301 489-7 V1.3.1: 2005 EN 301 489-8 V1.2.1:2002 EN 301-489-9 V1.4.1:2007 EN 301 489-10 V1.3.1:2002 EN 301 489-11 V1.3.1:2006 EN 301 489-12 V2.2.2:2008 EN 301 489-13 V1.2.1:2002 EN 301 489-14 V1.2.1:2003 EN 301 489-15 V1.2.1:2002 EN 301 489-16 V1.2.1:2002	A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G A,B,C,E,G B,G A,B,C,E,G B,G A,B,C,E,G B,G B,G B,G A,B,C,E,G B,G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.1 CIVIL EMC TESTS (cont'd) 10.1.19 EMC Tests (cont'd) Note: International Standards, EN, ENV and IEC, listed in this Schedule, that have been adopted nationally as BS EN DD ENV and BS IEC and are technically identical, can be considered as being included in this Schedule.	EN 301 489-17 V3.1.1:2017 EN 301 489-17 v2.2.1:2012 EN 301 489-18 V1.3.1:2002 EN 301 489-19 V1.2.1:2002 EN 301 489-20 V1.2.1:2002 EN 301 489-24 V1.5.1:2010 EN 301 489-28 V1.1.1:2004 EN 60945:2002 Section 10	A,B,C,G A,B,C,G B,G B,G B,G B,G B,G A,B,C,E,G
	10.1.20 Site testing The in house procedures indicate how various test methods may be implemented on a customer site. All procedures at version 3 June 2015	STP-1001 Site Safety Procedures STP-1002 Initial Site Survey(s) and Test Plan(s) STP-1003 Equipment Verification STP-1004 Power Line Conduction STP-1005 Magnetic Field (H) Emissions STP-1006 E-Field Emissions Testing STP-1007 Radiated Immunity Using Licensed Transmitters STP-1008 Conduced Immunity Testing as per EN61000-4-6 2009 STP-1009 Electrical Fast Burst Transient Testing as per EN6100-4-4 2004 STP-1010 Voltage Surge Testing as per EN61000-4-5 2006 STP-1011 Electrostatic Discharge Testing as per EN61000-4-2 2009 STP-1012 Voltage Dips and Interruptions STP-1013 Voltage Fluctuations and Flicker Testing	E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS 10.2.1 Conducted Emissions: Power, Control and Signal Leads: DC to 400 MHz Antenna Terminals 10 kHz to 18 GHz	BS 3G100 Part 4 Section 2:1980 RTCA/DO-160B:1988 RTCA/DO-160C:1989 RTCA/DO-160 D E, F G Section 21 RTCA/DO-160E Section 21 RTCA/DO-160F Section 21 MVEE 595:1970 DGS 250B:1981 SP-P-90003 Issue 3:1970 MIL STD 461 B:1980 MIL STD 462:1967 MIL STD 461C, CE01, CE02, CE101, CE102, CE03 and CE04 DEF STAN 59-41:Issue 3 and 5 DCE01 and DCE02 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999, DCE01 and DCE 02 Def Stan 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DCE01 and DCE 02 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DCE01, DCE02 and DCE03 MIL STD 461D, E and F and G CE101, CE 102 and CE106 DEF STAN 59-411:Part 4:2007 Inc A1 DCE01 and DCE02 EuroFighter SPE-J-000-E-1000 CE-EFA-1, CE-EFA-2, CE-EFA-3	A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.2 Radiated Emissions: Electric Field: 20 Hz to 18 GHz	BS 3G100 Part 4 Section 2:1980 MVEE 595:1970 DGS 250B:1981 SP-P-90003 Issue 3:1970 NWS 3:1991 MIL STD 461B:1980 MIL STD 461C:1986 MIL STD 461C, RE02 MIL STD 461D, E,F and G , RE102, and RE103 MIL STD 462:1967	A, C, E
		DEF STAN 59-41:1988 Issue 2 DEF STAN 59-41:1988 Part 3 iss 3 EuroFighter SPE-J-000-E-1000 RE-EFA-1 DEF STAN 59-41:1993 Part 3 iss 1 DRE01, DRE02 and DRE03 DEF STAN 59-41:1998 Part 4 iss 2 DEF STAN 59-41:Issue 3 and 5, DRE01 and DRE03 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999 DRE01 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DRE01.3 and DRE03.3 Def Stan 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DRE01 and DRE03 RTCA/DO160B:1988 RTCA/DO160C, D,E, F, G Section 21 DEF STAN 59-411 Part 3 DRE01 and DRE03 DEF STAN 59-411:Part 4:2007 inc A1 DRE01, DRE03 and DRE04	A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.3 Radiated Emissions: Magnetic Field: 20 Hz to 30 MHz	MIL STD 461C, RE01, RE04 MIL STD 461D, E,F and G RE101 DEF STAN 59-41:1998 Issue 3 DEF STAN 59-41:Issue 3 and 5, DRE02 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DRE02.3 DEF STAN 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DRE02	A, C, E
	10.2.4 Exported Transients Power Lines	DEF STAN 59-41:Issue 3 and 5, DCE03 DEF STAN 59-41 Part 3 Iss 1:1993 DCE03 EuroFighter SPE-J-000-E-1000 CE-EFA-3 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DCE03.3 DEF STAN 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DCE03	A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.5 Radiated Susceptibility: Electric Field: 14 kHz to 18 GHz Maximum Field Strength: 200 V/m	BS 3G100 Part 4 Section 2:1980 Bureau Veritas Part III:1991 Chapters 19 - 25, Clause 8 MIL STD 461B:1980 MIL STD 461C, RS03 MIL STD 461D, E, F, and G RS103 MIL STD 462:1967 DEF STAN 59-41:Issue 3 and 5, DRS02 DEF STAN 59-41 Part 3 Iss 1:1993 DRS02 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999 DRS02 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DRS02.3 DEF STAN 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DRS02 RTCA/DO-160B, C, D, E, F, G Sections 19, 20 and Change Notice 2 BOEING D6-16050:para 7.3 DEF STAN 59-411:Part 4:2007 Inc A1 Low Level Swept Current DEF STAN 59-411:Part 4:2007 Inc A1 DRS02 DGS 250B:1981 MVEE 595:1970 NWS 3:1981 EuroFighter SPE-J-000-E-1000 RS-EFA-2, RS EFA-3 SP-P-90003 Issue 3:1970	A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS (cont'd)** 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.5 Radiated Susceptibility: (cont'd) HIRF The following levels have been demonstrated: 400 MHz to 1 GHz 700 V/m 1 GHz to 1.6 GHz 4000 V/m 1.6 GHz to 2 GHz 5000 V/m 2 GHz to 6 GHz 7000 V/m 6 GHz to 8 GHz 2500 V/m 8 GHz to 12 GHz 6000 V/m 12 GHz to 18 GHz 4000 V/m Levels up to: 8000 V/m in restricted bands	Section 20.5 RTCA/DO 160F & G DEF STAN 59-41/411 Issues 1 & 2 DRS02B	A, C, E
	10.2.6 Radiated Susceptibility: Magnetic Field: 20 Hz to 100 kHz Maximum Field Strength: 170 dBT	MIL STD 461C, RS01 and RS02 MIL STD 461D, E,F and G RS101 DEF STAN 59-41 Part 3 Iss 1:1993 DRS01 DEF STAN 59-41:1988 Issue 3 DEF STAN 59-41:Issue 3 and 5, DRS01 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DRS01.3 DEF STAN 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DRS01 RTCA/DO-160D, E, F and G Section 19 EuroFighter SPE-J-000-E-1000 RS-EFA-1	A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.7 Magnetostatic Field Susceptibility	DEF STAN 59-41:1988 Issue 3 DEF STAN 59-41 Part 3 Iss 1:1993 DMFS01 DEF STAN 59-41:Issue 3 and 5, DMFS01 and DRS03 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DRS03 DEF STAN 59-411:Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DRS03	A, C, E
	10.2.8 Conducted Susceptibility: Inter and Cross Modulation and Rejection of Unwanted Signals: 10 kHz to 400 MHz	MIL STD 461D, E,F and G CS103, CS104 and CS105	A, C
	10.2.9 Conducted Susceptibility: Structure Current	MIL STD 461 G CS 109	A, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.10 Conducted Susceptibility: Power, Control and Signal Lines including Bulk Current Injection 20 Hz to 400 MHz Maximum current: 2 A	BS 3G100 Part 3:1979 Bureau Veritas Part III:1991 Chapters 19 - 25, Clause 9 MIL STD 461B:1980 MIL STD 461C, CS02 MIL STD 461D, E,F and G CS101 and CS114 MIL STD 462:1967 DEF STAN 61-5 Part 6: Iss 4:1984 and Part 6: Issue 5:1990 DEF STAN 61-5 Part 6: Iss 6:2009 Vehicle Testing Det 01A, Det 02A, Det 03A, Det 04A, Det 05A, Det 06A, Det 07A, Det 08A Dit 01A, Dit 02A, Dit 03A, Dit 04A Platform and Terminal Equipment testing DET01.B, DET02.B, DET03.B DIT01.B, DIT02.B, DIT03.B DIT04.B, DIT05.B, DIT06.B DIT07.B, DIT08.B, DIT01.B DEF STAN 59-41:1998 Issue 3 DEF STAN 59-41:Issue 3 and 5, DCS01, DCS02, DCS03, DCS05 and DCS06 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999 DCS02 and DCS03 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DCS02, DCS03, DCS05, DCS06 DEF STAN 59-41 Part 3:Iss 1:1993 DCS01, DCS02 and DCS06 DEF STAN 59-41 Part 3 Section 3 Issue 1:2003 DCS01.3, DCS02.3 and DCS03.3 DEF STAN 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DCS01, DCS02 and DCS03	A, C, E A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.10 Conducted Susceptibility: (cont'd)	RTCA/DO-160B, C, D, E F and G Sections 18, 19, 20 and Change Notice 2 DEF STAN 59-411:Part 4:2007 Inc A1 High level bulk current injection DGS 250B:1981 EuroFighter SPE-J-000-E-1000 CS EFA-2 SP-P-90003 Issue 3:1970 TS 1527 Issue 2:1976	A, C, E
	10.2.11 Conducted Susceptibility Transients	MIL STD 461C, CS06 MIL STD 461D, E,F and G CS115 and CS116 DEF STAN 59-41:Issue 3 and 5, DCS04, DCS05, DCS06, DCS07 and DCS08 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999 DCS05 and DCS06 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DCS04, DCS05, DCS06, DCS08 and DCS12 DEF STAN 59-411 Part 3 inc A1 Def Stan 59/411 Part 3 iss 2:2014 DCS04, DCS05, DCS06, DCS08, DCS09 and DCS12 DEF STAN 59-411:Part 4:2007 Inc A1 DCS05 and DCS06 RTCA/DO-160C, D, E F and G Sections 17 and 19 EuroFighter SPE-J-000-E-1000 CS-EFA-4 MIL-STD-704E & F Inc Notice 1 MIL HNBK 704-1 to 8	A, C, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.12 Conducted Susceptibility: Primary Power Lines, 20 Hz - 50 kHz	MIL STD 461D, E and F CS101 MIL STD 461C, CS01 DEF STAN 59-41:Issue 3 and 5, DCS01 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999 DCS01 DEF STAN 59-411:Part 4:2007 Inc A1 DCS01 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DCS01 Def Stan 59-411 Part 3 inc A1 DCS01 RTCA/DO-160C, D, E ,F and G Section 18 EuroFighter SPE-J-000-E-1000 CS-EFA-1	A, C A, C
	10.2.13 Electrostatic Discharge	DEF STAN 59-41:Issue 3 and 5, DCS10 DEF STAN 59-41:Part 3 Issue 5 DCS10 DEF STAN 59-41:Part 3, Section 2, Issue 2:1999 DCS10 DEF STAN 59-41 Part 3, Section 3, Issue 1:2003 DCS10.3 DEF STAN 59-411 Part 3 Def Stan 59/411 Part 3 iss 2:2014 DCS10 RTCA/DO-160B, C, D, E , F and G Section 25 DEF STAN 59-41:Part 3, Section 3, Issue 1:2003 DCS10 MIL STD 461 G CS 118	A, C, E A, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.2 MILITARY AND AEROSPACE EMC TESTS (cont'd) 10.2.14 Compass Safe Distance	BS 3G100 Part 2, Section 2:1972 RTCA/DO-160B, C, D, E F and G Section 15 IATA Packing Instruction 902:1999	A, C
	10.2.15 Power Input Checks and 28 V DC Electrical Systems in Military Vehicles	DEF STAN 61-5:Issue 5 DEF STAN 61-5 Part 6: Iss 6:2009 Vehicle testing Det 01A, Det 02A, Det 03A, Det 04A, Det 05A, Det 06A, Det 07A, Det 08A Dit 01A, Dit 02A, Dit 03A, Dit 04A Platform and Terminal Equipment testing DET01.B, DET02.B, DET03.B DIT01.B, DIT02.B, DIT03.B DIT04.B, DIT05.B, DIT06.B DIT07.B, DIT08.B, DIT01.B MIL STD 1275B, C, D E and F RTCA/DO-160C, D, E F and G Section 16	A, C
	10.2.16 Lightning Effects	RTCA/DO-160C, D, E F and G Section 22 BOEING D6-16050:Section 7.4 MIL STD 461 G CS 117	A, C, E
	Damage (Cat a, B & C) and functional upset (Cat D & E) testing (multiple stroke/burst)	Airbus ABD0100.1.2 Issue G Section 3.2.2	A, C
	10.2.17 Ground Reference Fluctuation	Airbus ABD0100.1.2 Issue G Section 3.4.6	A, C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.3 AUTOMOTIVE EMC TESTS		
	10.3.1 Conducted and Radiated Emissions 9 kHz to 18 GHz Components/ESA (whole vehicle only at Location A)	CISPR 12:2001 CISPR 25:2002 2004/104/EC, Annexes IV, V, VII and VIII 2005/83/EC EN50498:2010 72/245/EEC 97/24/EEC Chapter 8 2009/64/EC ECE Regulation 10.04 ECE Regulation 10.05 +Amd1 EN 13309:2010 ISO 14982:2009 EN 13766:2006 EN 12895:2015	A, B, C A, B, C, E
	[1]Excluding vehicle antenna port emissions	[1]EN 55025:2008	A
	10.3.2 Radiated Immunity Absorption Chamber 400 MHz - 10 GHz at 200 V/m Components / ESA (whole vehicle only at Location A)	ISO 11452-1:2005 ISO 11452-2:2004, substitution method ISO 11451-1:2003 ISO 11451-2:2004 2004/104/EC Annexes VI, IX 2005/83/EC EN50498:2010 72/245/EEC 97/24/EEC Chapter 8 2009/64/EC ECE Regulation 10.04 ECE Regulation 10.05 + Amd1 EN 13309:2010 ISO 14982:2009 EN 13766:2006 ISO 11452-1:2015	A, B, C A, B, C, E A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 29 and 30	**10 EMC TESTS** (cont'd) 10.3 AUTOMOTIVE EMC TESTS (cont'd)		
	10.3.3 Conducted Immunity BCI 1 MHz to 400 MHz	ISO 11452-1:2005 ISO 11452-4:2005, substitution method 2004/104/EC Annexes IX 2005/83/EC EN50498:2010 72/245/EEC 97/24/EEC Chapter 8 2009/64/EC ECE Regulation 10.04 ECE Regulation 10.05 + Amd1 EN 13309:2010 ISO 14982:2009 EN 13766:2006 ISO 11452-1:2015 ISO 11452-4:2011 (excludes TWC)	A, B, C A, B, C, E A A
	10.3.4 Vehicular Transient Testing 12 and 24 V Emissions and Immunity Components/ESA (whole vehicle only at Location A) [1]Excluding ICC method	ISO 7637-1:1990 ISO 7637-2:1990 ISO 7637-2:2004, pulses 1, 2a, 2b, 3a, 3b and 4 only 2004/104/EC Annexes X 2005/83/EC EN50498:2010 72/245/EEC 97/24/EEC Chapter 8 2009/64/EC ECE Regulation 10.04 ECE Regulation 10.05 + Amd 1 EN 13309:2010 ISO 14982:2009 EN 13766:2006 ISO 7637-1:2015 ISO 7637-2:2011 [1]ISO 7637-3:2007	A, B, C A,B,C,E A A A
	10.3.5 Electrostatic Discharge Immunity Positive and Negative Polarity (ESD) Up to 20 kV Direct and Indirect Air and Contact Discharge	ISO 10605:2008 ISO 10605 +A1:2014	A, B, C A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	11 ELECTRICAL SAFETY TESTS		
Audio, Video and similar Electronic Apparatus	Electrical Safety	EN 60065:2002+ A1: 2006+ A11:2008 + A11:2008 + A12:2011 EN.60065: 2014 Excluding:- 6.2 (laser radiation test) 8.22 (thin sheet insulation test) 12.3 (cable connected remote control devices) 12.5 (coax sockets, including on TV receivers) 14 (components) 18 (cathode ray tubes)	E, F
Householpld and Similar Electrical Appliances	Electrical Safety	EN 60335-1:2012 EN 60335-1:2012+A11:2014 + A13 2017 IEC 60335-1-2010, IEC 60335-1-2010+Am1:2013, IEC 60335-1-2010+Am2:2016 Excluding: 22.32 (rubber-aging test) 22.46 (protective software evaluation) 22.48 (backsiphonage test) 24.1 (component tests) 24.7 (hose-set tests)	E, F F
Vacuum cleaners and water-suction cleaning appliances	Electrical Safety	EN.60335-2-2 2010 (excluding current carrying hoses) IEC 60335-2-2:2009+Am.2:2016	E, F
Skin or Hair Care Appliances (excluding heated curlers, helmet type, flexible hood, fixed hairdryers and those with a swivel cord connector)	Electrical Safety	EN 60335-2-23:2003+A12:2008 +A11:2010 + A1 IEC 60335-2-23:2016 IEC 60335-2-23:2016+Am.1:2019	E, F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	11 ELECTRICAL SAFETY TESTS (cont'd)		
Particular requirements for cosmetic and beauty care appliances incorporating lasers and intense light sources	Electrical Safety	IEC 60335-2-113:2016 Edition 1.0 Excluding: Clauses 22.108 and 32.101 (Testing to IEC 60825-1) Clauses 22.109 and 32.102 (Testing to IEC 62471) Annex R (Software Evaluation)	
Instantaneous water heaters	Electrical Safety	EN.60335-2-35: 2001 + A1 + A2	E, F
Floor treatment machines for commercial use	Electrical Safety	EN.60335-2-67: 2012 (excluding current carrying hoses) IEC 60335-2-67:2012+Am.1:2016 (excluding current carrying hoses)	E, F
Spray extraction machines, for commercial use	Electrical Safety	EN.60335-2-68: 2012 IEC 60335-2-68:2012+Am.1:2016	E, F
Wet and dry vacuum cleaners, including power brush, for commercial use	Electrical Safety	EN.60335-2-69: 2012 (excluding current carrying hoses) IEC 60335-2-69:2016 (excluding current carrying hoses)	E, F
Automatic machines for floor treatment for commercial use	Electrical Safety	EN.60335-2-72: 2012	E, F
Fans	Electrical Safety	EN 60335-2-80:2003 + A1 + A2	E, F
Service and Amusement Machines (excluding Kiddie Rides and equipment intended for outdoor use)	Electrical Safety	EN 60335-2-82:2003 + A1 IEC 60335-2-82:2002 + A1:2008 + A2:2015	E, F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	11 ELECTRICAL SAFETY TESTS (cont'd)		
Battery chargers	Electrical Safety	EN.60335-2-29: 2004 + A2: 2010 Excluding Clause 15.1 Moisture resistance	E, F
Information Technology Equipment	Electrical Safety	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 +A2:2013 Excluding:- 4.2.8 (CRTs) 4.3.13 (lasers) Annex U (insulated winding wire) Annex Y (UV conditioning) Annex AA (mandrel test) Annex CC (IC current limiters) AS/NZS 60950.1:2003 AS/NZ 60950.1:2011	D, E, F
Information Technology Equipment Equipment Installed Outdoors	Electrical Safety	IEC 60950-22:2005 EN 60950-22:2006 IEC 60950-22:2016 EN 60950-22:2017 Excluding the following: Clause 7: Wiring terminals, relating to IEC 60364 Clause 8.2: Resistance to UV relating to Table 1 Clause 8.3: Resistance to Corrosion Clause 9.3: Protection from excessive dust Clause 11: Outdoor equipment containing vented batteries Clause A: Water - saturated sulphur dioxide atmosphere Clause B: Water spray test Clause C: UV light conditioning Test	F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	11 ELECTRICAL SAFETY TESTS (cont'd)		
Audio/video, information and communication technology equipment	Electrical Safety	IEC 62368-1:2014 EN 62368-1:2014 EN 62368-1:2014/A11:2017 Excluding clause 4, clause 8.5.5 High pressure lamps, clause 10 Radiation. Annex C, Annex D, Annex J, Annex S.	D, E, F
Electrical Equipment for Measurement, Control and Laboratory use.	Electrical Safety	EN 61010-1:2001 EN 61010-1:2010 IEC 61010-1:2010 IEC 61010-1:2010 Am 1:2016 AS 61010.1:2003 Excluding:- 12.2.1 (ionising radiation) 12.3 (UV radiation) 12.4 (microwave radiation) 12.5.1 (sound level) 12.5.2 (ultrasonic pressure) 12.6 (laser sources) 14.1(d) (components, non-IEC standards compliance)	D, E, F
Testing and measuring circuits	Electrical Safety	IEC 61010-2-030:2010 EN 61010-2-030:2010	D, E
Automatic and semi automatic laboratory equipment for analysis	Electrical Safety	IEC 61010-2-081:2015 EN61010-2-081:2015	D, E
In vitro diagnostic (IVD) medical equipment	Electrical Safety	IEC 61010-2-101:2015 EN 61010-2-101:2017	D, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	11 ELECTRICAL SAFETY TESTS (cont'd)		
Medical Electrical intended for oxygen-rich environment, use with flammable anaesthetics, and programmable electrical medical systems (PEMS) Equipment, except those	Electrical Safety	EN.60601-1:2006 + A1:2013 + A12:2014 IEC 60601-1:2005 +A1 Excluding:- 8.8.4.2 (environmental stress) 8.11.1e (supply mains switch) 9.6.2.1 (noise measurement) 9.6.3 (hand transmitted vibration) 9.7.5 (pressure tests) 10.4 (laser and LED emissions) 11.6.7 (sterilization) 11.7 (biocompatibility) 12.4.5 (diagnostic or therapeutic radiation) 15.4.3.4 (lithium batteries) Annex L (insulated winding wire)	D, E, F
Laboratory equipment for the heating of material	Electrical Safety	IEC 61010-2-010:2014 EN 61010-2-010:2014	D, F
Safety of Nerve and Muscle Stimulators	Electrical Safety	IEC 60601-2-10:2012+Am.1:2016 EN 60601-2-10:2015+A1:2016	D, E
Safety and essential performance of electromyogrpahs and evoked repsonse equipment	Electrical Safety	IEC 60601-2-40:2016 Excluding EMC testing	D
Safety and essential performance of surgical, cosmetic, therapeutic, and diagnostic laser equipment	Electrical Safety	IEC 60601-2-22:2007 +Am.1:2012 EN 60601-2-22:2013 Excluding:- 201.12.1.101 (Laser O/P indication) 201.12.4.2 (Indication of Parameters relevant to safety)	D, E

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	11 ELECTRICAL SAFETY TESTS (cont'd)		
Safety of Home Healthcare Equipment	Electrical safety	EN 60601-1-11: 2010 EN 60601-1-11: 2015 IEC 60601-1-11:2015	D, F D, F D, F
Safety of Infusion Pumps	Electrical safety	IEC 60601-2-24: 2012 Excluding:- 208 (alarm noise level measurement)	D, F
Safety of Emergency Medical Equipment	Electrical safety	IEC 60601-1-12:2014 BS EN 60601-1-12:2015 Excluding EMC Testing	D, F
Safety of non-laser light source equipment for therapeutic, diagnostic, monitoring and cosmetic use	Electrical safety	EN 60601-2-57: 2011	D
Medical device software -	Software life cycle processes	IEC 62304:2006+AMD1:2015	D
Medical electrical equipment	Part 1-6 General requirements for Basic Safety and essential performance - Collateral standard: Usability	IEC 60601-1-6:2010/AMD1:2013	D
Medical devices	Part 1: Application of usability engineering to medical devices	IEC 62366-1:2015 Note: only in conjunction with IEC 60601-1-6:2010/AMD1:2013	D
Alarm systems in medical electrical equipment	Electrical safety noise emission	IEC 60601-1-8:2006 + A1 EN 60601-1-8:2007 + A1 Excluding:- 6.3.3 (alarm noise level measurement) 6.3.3 (alarm noise level measurement)	D, F G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Note: Where EN electrical Safety Standards have exact equivalents in IEC, or BS EN Standards, these are also included in the accreditation.			
Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in Potentially Explosive Atmospheres	**12 EX PRODUCT TESTS**		
Electrical apparatus for explosive gas atmospheres General requirements	Construction, safety and marking Thermal Stability min temp - 70 °C max temp 200 °C	IEC 60079-0:2011 (Ed.6) EN 60079-0:2012/A11:2013 IEC 60079-0:2007 (Ed.5) EN 60079-0:2009 (withdrawn) IEC 60079-0:2004 (withdrawn) EN 60079-0:2006 (withdrawn)	B, I
Tests for Flameproof equipment (Exd)	Construction, safety and marking	IEC 60079-1:2014 (Ed.7) EN 60079-1:2014 IEC 60079-1:2007 (Ed.6) (withdrawn) EN 60079-1:2007 (withdrawn)	B, I
Tests for Purged and Pressurised equipment (Exp)	Construction, safety and marking	IEC 60079-2:2014 (Ed.6) EN 60079-2:2014 IEC 60079-2:2007 (Ed.5) (withdrawn) EN 60079-2:2007 (withdrawn)	B, I
Tests for oil immersion (Exo)	Construction, safety and marking	IEC 60079-6:2007 (Ed.3) EN 60079-6:2007	B, I
Tests for Increased Safety Apparatus (Exe)	Construction, safety and marking	IEC 60079-7:2006 Ed. 4 (withdrawn) EN 60079-7:2007 (withdrawn) EN 60079-7:2015 IEC 60079-7:2015 Ed. 5	B, I

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in Potentially Explosive Atmospheres (cont'd)	**12 EX PRODUCT TESTS** (cont'd)		
Tests for Intrinsically Safe Apparatus, Associated Apparatus and Systems (Exi)	Construction, safety and marking	IEC 60079-11:2011 (Ed.6) EN 60079-11:2012 IEC 60079-11:2006 (Ed.5) (withdrawn) EN 60079-11:2007 (withdrawn)	B, I
Tests for Electrical Apparatus for Explosive Atmospheres with Pressurized room "p"	Construction, safety and marking	IEC 60079-13:2010 (Ed.1) EN 60079-13:2010	B, I
Tests for Electrical Apparatus for Explosive Atmospheres with Type of Protection n (Exn)	Construction, safety and marking	IEC 60079-15:2010 (Ed.4) EN 60079-15:2010 IEC 60079-15:2005 (Ed.3) (withdrawn) EN 60079-15:2005 (withdrawn)	B, I
Tests for Encapsulated equipment (Exm)	Construction, safety and marking	IEC 60079-18:2009 (Ed.3) (withdrawn) EN 60079-18:2010 (withdrawn) EN 60079-18:2015 IEC 60079-18:2014 (Ed. 4) IEC 60079-18:2004 (Ed. 2) (withdrawn) EN 60079-18:2004 (withdrawn)	B, I
Equipment with equipment protection level (EPL) Ga	Construction, safety and marking	IEC 60079-26:2007 EN 60079-26:2007	B, I
Protection of equipment and transmission systems using optical radiation	Construction, safety and marking	IEC 60079-28:2015 (Ed.2) EN 60079-28:2015 IEC 60079-28:2006 (Ed.1) (withdrawn) EN 60079-28:2007 (withdrawn)	B, I

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in Potentially Explosive Atmospheres (cont'd)	**12 EX PRODUCT TESTS** (cont'd)		
Protection by enclosure "t"	Construction, safety and marking	IEC 60079-31:2008 (Ed.1) EN 60079-31:2009	B, I
Non-Electrical Equipment for explosive atmospheres	Basic method and requirements	IEC 80079-36:2016	B, I
Non-Electrical Equipment for explosive atmospheres	Non electrical type of protection constructional safety "c", control of ignition "b", liquid immersion "k"	IEC 80079-37:2016	B, I
Tests for Electrical Apparatus with Protection by Enclosure for use in the presence of Combustible Dusts General requirements	Construction, safety and marking	IEC 61241-0:2004 (withdrawn)	B, I
Tests for Electrical Apparatus with Protection by Enclosure for use in the presence of Combustible Dusts Protection by enclosure "tD"	Construction, safety and marking	IEC 61241-1:2004 (withdrawn) Excluding: Practice B	B, I
Tests for Purged and Pressurised equipment (Exp) Enclosure for use in the presence of Combustible Dusts	Construction, safety and marking	IEC 61241-4:2001 (withdrawn)	B, I

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Electrical and Non-Electrical Apparatus, Systems, Components, Accessories and Enclosures for use in Potentially Explosive Atmospheres (cont'd)	**12 EX PRODUCT TESTS** (cont'd)		
Tests for Encapsulated equipment for use in the presence of Combustible Dusts (ExmD)	Construction, safety and marking	IEC 61241-18:2004 (withdrawn)	B, I
Protection by intrinsic safety "iD"	Construction, safety and marking	IEC 61241-11:2005 (withdrawn)	B, I
Basic Methods and Requirements	Construction, safety and marking	EN 13463-1:2009 EN 13463-1:2001 (withdrawn)	B, I
Constructural safety 'c'	Construction, safety and marking	EN 13463-5:2011 EN 13463-5:2003 (withdrawn)	B, I
Protection by liquid immersion "k"	Construction, safety and marking	EN 13463-8:2003	B, I
Environmental Conditions and test procedures for Airborne Equipment	Explosion Testing Explosive Atmospheres	RTCA DO-160F Section 9 General exclusions to Ex tests (a) HV machines operating at >1000V e.g. motors and transformers; (b) Shock and Vibration tests; (c) UV light testing; (d) Specific tests on luminaires: torque tests (clause 5.3); asymmetric pulse test (Annex H); sulphur dioxide test (clause 6.3).	B, I

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Where IEC or EN standards have exact equivalents in BS, EN or BS EN Standards these are also included in the accreditation.			
	13 INGRESS PROTECTION TESTS		
Enclosures for Electrical Equipment	IP1X Protected against solid objects greater than 50 mm diameter	IEC 60529:1989/A2:2013 EN 60529:1991/A2:2013	B
	IP2X Protected against solid objects greater than 12 mm diameter		
	IP3X Protected against solid objects greater than 2.5 mm diameter		
	IP4X Protected against solid objects greater than 1.0 mm diameter		
	IP5X Dust Protected Excluding: Objects greater than 2500 x 2500 x 2500 mm Max weight: 800 kg		
	IPX7 Protection by immersion		
	IP6X Dust Tight Excluding: Objects greater than 2500 x 2500 x 2500 mm Max weight: 800 kg	IEC 60529:2001, Amd 1 (cont'd)	B
	IPX3 Protected against spraying water		
	IPX4 Protected against splashing water		
	IPX5 Protected against water jets		
	IPX6 Protected against heavy seas		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Where IEC or EN standards have exact equivalents in BS, EN or BS EN Standards, these are also included in the accreditation.			
Aerospace Components and Equipment Audio Amplifying Equipment Battery Chargers Circuit Breakers and Switches Computer and Peripherals Data terminal equipment Electrical/Electronic Components Electrical Cables Electrical Control Equipment Electrical and Electronic Products Electrical Musical Instruments Electrical Measurement and Test Equipment Electronic Products: Digital Enclosures for Electrical Equipment Fans Fire Fighting and Detection Equipment Generators: Electric Generators: Power Instruments: Indicating and Recording IT Equipment Measuring Equipment Medical/Dental Equipment Micro-Electronic Circuits and Components Missile Components Motors: Electrical Motor Vehicle Accessories and Components Office Equipment: Electrical Photocopying Machines Plugs and Sockets: Electrical Point of Sale Terminals	**14 ENVIRONMENTAL TESTS** 14.1 LOW TEMPERATURE (constant and cyclic) Min temp: -50 °C Max chamber size: 2100 x 1650 x 2550h mm Min temp: -65 °C Max chamber size: 750 x 1000 x 750 mm	BS EN 60068-2-1:1993+ A1:1993+ A2 !994 IEC 60068-2-1:1990 IEC/EN 60068-2-1:2007 BS 2011:Part 2.1A:1990+A1: Including Amendment 1 BS 2011:Part 2.1A:1977 EN 50130-5:1999 EN 50130-5:2011	F
	14.2 HIGH TEMPERATURE **(constant only)** Max temp: +200 °C Max chamber size: 530 x 470 x 800 mm **(constant and cyclic)** Max temp: +70 °C Max chamber size: 2100 x 1650 x 2550h mm Max temp: +150 °C Max chamber size: 750 x 1000 x 750 mm Max temp: +200 °C Max chamber size: 390 x 270 x 300 mm	BS EN 60068-2-2:1993+ A1:1993 IEC 60068-2-2:1974 IEC/EN 60068-2-2:2007 BS 2011:Part 2.1B:1977 EN 50130-5:1999 EN 50130-5:2011	F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 65	**14 ENVIRONMENTAL TESTS** (cont'd) 14.3 HIGH HUMIDITY (Constant and cyclic) Temp range: +20 °C to +70 °C Humidity range: 40 % rh to 98 % rh Max chamber size: 2100 x 1650 x 2550h mm Temp range: +20 °C to +100 °C Humidity range: 40 % rh to 98 % rh Max chamber size: 750 x 1000 x 750 mm **(Constant only)** Temp range: +30 °C to +100 °C Humidity range: 40 % rh to 98 % rh Max chamber size: 640 x 500 x 540 mm	BS 2011:Part 2.1Ca:1977+A1 IEC 60068-2-3:1969 BS 2011:Part 2.1Cb:1990 IEC 60068-2-56:1988 BS EN 60068-2-30:1999 BS EN 60068-2-30:2005 IEC 60068-2-30:1980 IEC/EN 60068-2-30:2005 IEC/EN 60068-2-78:2001 EN 50130-5:1999 EN 50130-5:2011 BS 2011:Part 2.1Db:1981+A1 BS EN 60068-2-38:1999 BS EN 60068-2-38:2009 IEC 60068-2-38:1974 IEC/EN 60068-2-38:2009 BS 2011:Part 2.1Z/AD:1977	F
	14.4 THERMAL SHOCK Max temp: +150 °C Min temp: -65 °C Max chamber size: 750 x 1000 x 750 mm Max temp: +200°C Max chamber size: 530 x 470 x 800 mm	BS EN 60068-2-14:2000 IEC 60068-2-14:1984 IEC/EN 60068-2-14:2009 BS 2011:Part 2.1N:1985,+ A1 Tests Na, Nb EN 50130-5:1999 EN 50130-5:2011	F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 65	**14 ENVIRONMENTAL TESTS** (cont'd) 14.5 VIBRATION (Ambient temperature only) Sinusoidal VP30 Freq range: 5 to 4000 Hz Max peak thrust: 1245 N Max payload (vertical): 22.7 kg Max displacement: ± 6·35 mm VP1200 Freq range: 5 to 1000 Hz Max peak thrust: 55600 N Max payload (vertical): 750 kg Max displacement: ± 12.5 mm Random VP30 Freq range: 5 to 4000 Hz Max peak thrust: 587 N Max payload (vertical): 22.7 kg Max displacement: ± 6·35 mm VP1200 Freq range: 5 to 2500 Hz Max peak thrust: 35140 N Max payload (vertical): 750 kg Max displacement: ± 12.7 mm	BS EN 60068-2-6:1996 IEC 60068-2-6:1995+C1:1995 IEC/EN 60068-2-6:2008 BS 201:Part 2.1Fc:1983+A1+A2 BS 2011:Part 2.1Fd:1973 BS 2011:Part 2.1Fda:1973 BS 2011:Part 2.1Fdb:1984+A1+A2 BS 2011:Part 2.1Fdc:1973+A1+A2 BS EN 60068-2-64:1995 IEC 60068-2-64:1993+C1:1993 IEC/EN 60068-2-64:2008 EN 50130-5:1999 EN 50130-5:2011	F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 65	**14 ENVIRONMENTAL TESTS** (cont'd)		
	14.6 SHOCK/BUMP (Ambient temperature only) Half sign Rectangle Triangle Sawtooth VP30 Severity: 1 g to 30 g Duration: 2 ms to 25 ms (severity dependant) Max item mass: 10 kg VP1200 Severity: 1 g to 80 g Duration: 2 ms to 25 ms (severity dependant) Max item mass: 750 kg	BS EN 60068-2-27:1993+A1 IEC 60068-2-27:1987 IEC/EN 60068-2-27:2009 EN 50130-5:1999 EN 50130-5:2011 BS 2011:Part 2.1Ea:1987 BS EN 60068-2-29:1993+A1 IEC 60068-2-29:1987 BS 2011:Part 2.1Eb:1987 ETS 300 019-2-1:1994 ETS 300 019-2-2:1999 ETS 300 019-2-3:1999 ETS 300 019-2-4:1999 ETS 300 019-2-5:1994 ETS 300 019-2-6:1994 ETS 300 019-2-7:1994 ETS 300 019-2-8:1999 Excluding: ETS 300 019-2-2 T2.3 rain test ETS 300 019-2-3 T3.1 to 3.5 Earthquake test ETS 300 019-2-4 T4.1 Earthquake test T4.1 and 4.1E rain tests ETS 300 019-2-5 T5.1 and T 5.2 (IEC Class 5M3) Shock test ETS 300 019-2-6 T6.2 and 6.3 rain tests ETS 300 019-2-7 T7.3 and 7.3E rain tests ETS 300 019-2-8 T8.1 water tests	F
	14.7 Free Fall (Operational) Height: 0.5 m to 1.5 m	EN 50130-5:1999 EN 50130-5:2011	F

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Telecommunications Equipment IT Equipment Electronic Products, Digital	**15 TELECOMMUNICATIONS TESTING** 15.1 Analogue attachments for connection to the PSTN	AS/ACIF S002:2010 AS/ACIF S002:2010 Amdt 1/2012	G
	15.2 Digital attachments for connection to Digital Private and Public Circuits	AS/ACIF S016:2001 AS/ACIF S031:2001** AS/ACIF S038:2001** TBR 3:1995 (+ A1:1997) (CTR 3) TBR 4:1995 (+ A1:1997) (CTR 4) **As interpreted by current ACA requirements (using issued ITAAB notes current at the time of test)	G
	15.3 Analogue and Digital attachments to the PSTN	FCC:Part 68:Sub Part D TIA-968-B:2009 TIA-968-B1:2012 TIA-968-B2: 2015 TIA-968-B3: 2016 TIA-168-C: October 2015 TIA 1096-A:2008 TIA/EIA/TSB 168-B-1:2012 CS-03, Part I Issue 9, Amdt 5 CS-03, Part II, Issue 9, Amdt 1 CS-03, Part V Issue 9, Amdt 2 CS-03, Part VI Issue 9, Amdt 1 CS-03, Part VII Issue 9, Amdt 4 CS-03, Part VII Issue 9, Amdt 5 AS/ACIF S003.1:2010 AS/ACIF S004:2013 1985 Ministry of Post & Telecoms Ordinance No 31: (Japan) as amended 2004 and 2010 excluding inter-connected devices	G

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Short Range Radios DECT Telephones CT1 & CT1+ Telephones Land Mobile Radio (PMR) Public mobile services Equipment Personal Communications Services Equipment Satellite communications Equipment Radio Broadcast Services Equipment Experimental radio, auxiliary Special broadcast and Other program distributional Services equipment Private Land Mobile radio Services Equipment Personal Radio services Equipment Amateur Radio Service Equipment	**16 RADIO TESTING** Analogue measurements 9 kHz to 1000 MHz Digital measurements 9 kHz to 2500 MHz DECT test cases 1 to 26 as stated in EN 301 406 16.1 Frequency Error 0.5 MHz to 2.6 GHz 16.2 Transmitter Carrier Power 5 mW to 50 W 16.3 Adjacent Channel Power 4 MHz to 1000 MHz 5 mW to 50 W 16.4 Adjacent Channel Selectivity 0.5 MHz to 1000 MHz 16.5 Co-Channel Rejection 0.5 MHz to 1000 MHz 16.6 Conducted Spurious Emissions 9 kHz to110 GHz 16.7 Radiated Spurious Emissions 9 kHz to 110 GHz 16.8 Transient Power 16.9 Modulation Bandwidth 16.10 Frequency Stability	EN 300 086-1:V1.4.1:2010 EN 300 086-2:V1.3.1:2010 EN 300 113-1:V1.7.1:2011 EN 300 113-2:V1.5.1:2011 ETSI EN 300 113 V2.2.1(2016-12) ETSI EN 300 220-1 v3.1.1 ETSI EN 300 220-2 v3.1.1 ETSI EN 300 220-3-1 v2.1.1 ETSI EN 300 220-3-2 v1.1.1 ETSI EN 300 220-4 v1.1.1 ETSI EN 300 224-1:V1.3.1:2001 EN 300 224-2:V1.1.1:2001 EN 300 296-1:V1.4.1:2013 EN 300 296-2:V1.4.1:2012 EN 300 328:V1.8.1:2012 EN 300 328:V1.9.1:2015 EN 300 328 V2.1.1: 2016 EN 300 328 V2.2.2 (2019-07) ETSI EN 300 330 v2.1.1 (2017-02) EN 301 406:V2.1.1:2009 EN 302 291-1 V1.1.1:2005 EN 300 440-1:V1.6.1:2010 EN 300 440-2:V1.4.1:2010 ETSI EN 300 440 v2.1.1 (2017-03) ETSI EN 300 440 v2.2.1 (2018-07) EN 300 422-1:V1.2.2:2000 EN 300 422-2:V1.1.1:2000 EN 302 208-1:V1.4.1:2011 EN 302 208-2:V1.4.1:2011 AS/NZS 4268:2008	G, H G, H G, H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on page 70	**16 RADIO TESTING** (cont'd)		
	16.11 Receiver Sensitivity	ETSI EN 301 893 V1.8.1 (2015-03) ETSI EN 301 893 V2.1.1 (2017-05 ETSI EN 302 502 V1.2.1 (2008-07)	
		ETSI EN 301 908-11 V11.1.2 ETSI EN 301 908-15 V11.1.2 ETSI EN 303 609 V12.5.1	G, H
		AS/NZS 4268:2012 AS/NZ 4295:2004 AS NZS 4415:1996	G,H
	16.12 Channel Characteristics	ETSI EN 302 625 V1.1.1 (2009-07) AS NZS 4415:1996	G, H
		EN 303 372-1:V1.1.1 (excluding clause 4.3.2 Antenna gain pattern)	G, H, E
		Radiated LO and EIRP tests in Reverb Chamber. Excludes Wind tunnel tests other than pointing accuracy part. EN 303 372-2:V:1.1.1 EN 303 340:V1.1.2	G, H, E G, H, E
	16.13 Intermodulation		
	16.14 Distortion	BETS-1 Issue 1 (FM only) BETS-6 Issue 2 (FM only)	G, H G, H
	16.15 SINAD and S/N Ratio		
	16.16 Selectivity		
	16.17 Non Occupancy Period		
	16.18 DFS Detection		
	16.19 Channel Availability Check time and Off Channel Availability Check		
	16.20 U-NII Detection Bandwidth		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on page 70	**16 RADIO TESTING** (cont'd)		
	16.21 U-NII Detection Bandwidth and statistical performance check	RSS Gen issue 5 April 2018 RSS 111 Issue 5 September 2014 RSS 131 Issue 3 May 2017	G,H
	16.22 Channel Closing Transmission time (Channel Shutdown) 16.23 Channel Move Time	RSS-210 Issue 10, December 2019 RSS 213 issue 3 March 2015 RSS 215 issue 2 June 2009 RSS 220 issue 1 Amendment 1 July 2018 RSS 243 issue 3 Feb 2010 RSS 247 issue 2 February 2017 RSS 251 Issue 2 July 2018 RSS 287 issue 2 Feb 2014 RSS 288 issue 1 Jan 2012	G,H
		ANSI C63.10 2009 ANSI C63.17 2006 ANSI C63.26 2015 ANSI/TIA-603-D ANSI/TIA-603-E	G,H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Facilities at Skelmersdale: Shielded Room A: 9 m x 5.7 m x 5.75 m Semi / Fully Anechoic (Chamber 1) Shielded Room B: 9 m x 5.7 m x 5.75 m Semi / Fully Anechoic (Chamber 2) Shielded Room C: 7.1 m x 4.1 m x 3.5 m Semi / Fully Anechoic (Immunity) Shielded Room D: 5.1 m x 3.1 m x 2.6 m Screened Room (Transient) Shielded Room E: 5.6 m x 2.4 m x 2.6 m (Semi / Fully Anechoic (MAC) Numerous Bench Laboratories ranging from 5 m x 3 m x 2.5 m to 6 m x 6 m x 3 m Secure Storage Room: 10.1 m x 2.7 m x 3 m Dimensions = Length (l) x Width (w) x Height (h) Max EUT Size: 2 m x 2 m x 3 m Max EUT Weight: 5000 kg Max Turntable Weight of EUT:2000 kg Power Supplies Available: ≤ 240V AC 13A, 1 phase 50Hz 240V AC 16A, 1 phase 50Hz ≤ 240V AC 32A, 1 phase 50Hz 240V AC 64A, 1 phase 50Hz 415V AC 92A (115kVA), 3 phase 50Hz 415V AC 64A, 3 phase 50Hz ≤ 415V AC 32A, 3 phase 50Hz 115V AC 13A, 1 phase 50 / 60Hz 0.1V AC - 341V AC, 3 phase 20Hz – 5kHz (6kVA) 0 - 110V DC 10A 0 - 60V DC 50A		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Facilities at Skelmersdale (cont'd): Freezer/Oven enclosure size for Thermal Stability test -40 °C to 60 °C, 490 x 500 x 480 mm Freezer enclosure size for Thermal Stability test -70 °C, 1120 x 540 x 650 mm Humidity enclosure size for Thermal Stability test -25 °C to 100 °C, 650 x 650 x 600 mm Humidity enclosure size for Thermal Stability test -25 °C to 100 °C, 700 x 700 x 500mm Dust Chamber for IP5X and IP6X, size 2500 x 2500 x 2500 mm Max weight: 800 kg		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Facilities at Malvern: Shielded Room A: 8.7 m x 5.7 m x 5.4 m Shielded Room B: 8.7 m x 5.7 m x 5.4 m Shielded Room C: 2.5 m x 2.5 m x 3 m Shielded Room D: 5.7 m x 2.6 m x 2.4 m Shielded Room E: 18 m x 16 m x 6 m Shielded Room F: 5 m x 5 m x 4 m Shielded Room G: 5.5 m x 5 m x 4 m Shielded Room H: 4 m x 3 m x 3 m Shielded Room I: 4 m x 3 m x 3 m GTEM 1650 Power supplies Available:- 240V AC 13A, 1 phase 240V AC 32A, 1 phase 115V AC 13A, 1 phase 415V AC 16A, 3 phase 415V AC 32A, 3 phase 415V AC 64A, 3 phase 60V DC 100A 415V AC 400Hz 32A, 3 phase		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Facilities at Wimborne: Shielded Room A: 9 m x 5.7 m x 5.75 m Semi / Fully Anechoic (Comm 1) Shielded Room B: 9 m x 5.7 m x 5.75 m Semi / Fully Anechoic (Comm 2) Shielded Room C: 5 m x 4 m x 2.5 m Screened Room (Transient 1) Shielded Room D: 8 m x 6 m x 4 m Semi Anechoic (Mil 1) Shielded Room E: 8 m x 6 m x 4 m Semi Anechoic (Mil 2) Shielded Room F: 8 m x 6 m x 4 m Semi Anechoic (Mil 3) Shielded Room G: 3.5 m x 2.5 m x 2.9 m Reverb Chamber (Reverb 1) Shielded Room H 1.3 m x 1.1 m x 1.5 m Reverb Chamber (Reverb 2) 6 x Sielded Control Rooms 3 m x 2.5 m x 2.5 m Indirect Lightning Laboratory Secure Storage Room: 6 m x 5 m x 2.3 m Dimensions = Length (l) x Width (w) x Height (h) Max EUT Size: 2 m x 2 m x 3 m Max EUT Weight: 5000 kg Max Turntable Weight of EUT: 2000 kg Environmental Chamber 940 mm x 870 mm x 775 mm Temperature (- 20 ºC to + 100 ºC) and Humidity (20 % to 75 %)		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Facilities at Wimborne (cont'd) Power Supplies Available:- 240V AC 50 / 60 Hz 1 Phase up to 32 A 115V AC 50 / 60 Hz 1 Phase up to 32A 415V AC 50 / 60 Hz 3 Phase up to 125A 3 x115 / 208V AC 400Hz 3 Phase up to 5 kVA 28 V DC up to 100 A 100Vdc up to 100A Programmable 1 Phase Supply DC to 500Hz / 0 to 270 V up to 18.5 A		
	Facilities at Century Court: Safety Tests		
	EMC Facilities at Hull: Open Field Site: 3 m and 10 m Screened Rooms (h x w x l) a) 3.66 m x 4.28 m x 6.7 m 2 ft absorbers on all walls: 3 ft absorber on ceiling b) 2.4 m x 2.4 m x 3.66 m c) 2.4 m x 2.4 m x 3.66 m d) 5.8 m x 6.3 m x 9.2 m Ferrite tiles on walls and ceiling (3 m alternative emissions test site) Power supplies: DC and 50/60 Hz		

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	EMC Facilities at Hull: (cont'd) a) 3.66 m x 4.28 m x 6.7 m 2 ft absorbers on all walls: 3 ft absorber on ceiling b) 2.4 m x 2.4 m x 3.66 m c) 2.4 m x 2.4 m x 3.66 m d) 5.8 m x 6.3 m x 9.2 m Ferrite tiles on walls and ceiling (3 m alternative emissions test site)		
FCC Scope			
UNINTENTIONAL RADIATORS FCC Part 15, subpart B	Radiated Emissions 30 MHz to 40 GHz Conducted Emissions 9 kHz to 30 MHz	ANSI C63.4-2014	A, B, C, G, H
INDUSTRIAL, SCIENTIFIC AND MEDICAL EQUIPMENT Consumer ISM Equipment FCC Part 18	Radiated Emissions 30 MHz to 40 GHz Conducted Emissions 9 kHz to 30 MHz	FCC MP-5 (February 1986),	A, B, C, G, H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
INTENTIONAL RADIATORS FCC Part 15, subpart C	Radiated Emissions 9 kHz to 110 GHz Conducted Emissions 9 kHz to 30 MHz Radio tests as per standard. Includes but not limited to: *Peak transmit power* *Emission bandwidth / Occupied BW* *Modulation* *Power spectral density* *Band edge tests* *Permitted Frequency range* *In-band unwanted emissions* *Out-of-band emissions* *Spurious Emissions* *Reaction time* *Frequency and Time Stability*	ANSI C63.10-2013	G, H
UNLICENSED PERSONAL COMMUNICATION SYSTEMS DEVICES FCC Part 15, Subpart D	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI C63.17-2013	G, H
UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE DEVICES WITHOUT DFS (INTENTIONAL RADIATORS) FCC Part 15, Subpart E	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI C63.10-2013 KDB Publication 789033	G, H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE (U-NII) DEVICES WITH DYNAMIC FREQUENCY SELECTION (DFS) FCC Part 15 Subpart E	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 110 GHz Radio tests as per standard. DFS tests per new rules.	ANSI C63.10-2013 KDB Publication 905462 D02 UNII DFS Compliance Procedures New Rules v01 (April 8, 2016)	G, H
ULTRA-WIDEBAND OPERATION INTENTIONAL RADIATORS FCC Part 15, Subpart F	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI C63.10-2013	G, H G, H
COMMERCIAL MOBILE SERVICES (FCC LICENSED RADIO SERVICE EQUIPMENT) FCC Part 22 (cellular) FCC Part 24 FCC Part 25 (non-microwave) FCC Part 27	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI/TIA-603-D ANSI/TIA-603-E TIA-102.CAAA-D KDB Publication 971168	G, H
GENERAL MOBILE RADIO SERVICES (FCC LICENSED RADIO SERVICE EQUIPMENT) FCC Part 22 (non-cellular) FCC Part 90 (non-microwave) FCC Part 95 FCC Part 96 (Citizens Broadband Radio Service) FCC Part 97 FCC Part 101 (non-microwave)	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI C63.26 2015 ANSI/TIA-603-D ANSI/TIA-603-E TIA-102.CAAA-D KDB 940660 D01	G, H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
MICROWAVE AND MILLIMETRE BANDS RADIO SERVICES (FCC LICENSED RADIO SERVICE EQUIPMENT) FCC Part 25 FCC Part 74 FCC Part 90 (90Y, 90Z, DSRC) FCC Part 101	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI/TIA-603-D ANSI/TIA-603-E TIA-102.CAAA-D	G, H
BROADCAST RADIO SERVICES (FCC LICENSED RADIO SERVICE EQUIPMENT) FCC Part 73 FCC Part 74 (non-microwave)	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Radio tests as per standard.	ANSI/TIA-603-D ANSI/TIA-603-E TIA-102.CAAA-D	G, H
SIGNAL BOOSTERS Wideband Consumer signal boosters Provider-specific signal boosters Industrial signal boosters FCC Part 20	Radiated Tests 9 kHz to 110 GHz Conducted Tests 9 kHz to 50 GHz Noise Limits, Power Limits Bidirectional Capability Booster Gain Limits, Gain Control Transmit Power Off Mode Out of Band Emission Limits Intermodulation Limits Booster Antenna Kitting Uplink Inactivity Anti-Oscillation Occupied bandwidth Spurious emissions	FCC KDB Publication 935210 D03 Signal Booster Measurements v04 (February 12, 2016) FCC KDB Publication 935210 D04 Provider Specific Booster Measurements v02 (February 12, 2016) FCC KDB Publication 935210 D05 Indus Booster Basic Measurements v01r01 (February 12, 2016)	G, H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Canadian MRA - ISED Scope of Accreditation			
General Requirements for Compliance of Radio Apparatus	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-Gen Issue 5:2018	G, H
Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus	Exclusion Calculation only	RSS-102 Issue 5:2015 (RF exposure evaluation)	G, H
Broadband Public Safety Equipment	Operating in the Band 4940-4990 MHz	RSS 111 Issue 5 September 2014	G,H
Zone Enhancers	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-131 Issue 3, updated May 2017	G, H
Licence-Exempt Radio Apparatus: Category I Equipment	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-210 Issue 10, December 2019	G, H
2 GHz Licence-Exempt Personal Communications Services (LE-PCS) Devices	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-213 Issue 3, March 2015	G, H
Analogue Scanner Receivers	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-215 Issue 2, June 2009	G, H
Ultra-Wideband (UWB) Technology	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-220 Issue 1, March 2009 (Amendment July 2018)	G, H
Active Medical Implants Operating in the 401-406 MHz Band	Conducted and Radiated Tests 9 kHz to 40 GHz	RSS-243 Issue 3, February 2010	G, H

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-247 Issue 2:2017 including DFS	G, H
Field Disturbance Sensors in the Bands 46.7-46.9 GHz (Vehicular Radar) and 76-77 GHz (Vehicular and Airport Fixed Radar)	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-251 Issue 2, July 2018	G, H
Emergency Position Indicating Radio Beacons (EPIRB), Emergency Locator Transmitters (ELT), Personal Locator Beacons (PLB), and Maritime Survivor Locator Devices (MSLD)	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-287 Issue 2, March 2014	G, H
Global Maritime Distress and Safety System (GMDSS)	Conducted and Radiated Tests 9 kHz to 110 GHz	RSS-288 Issue 1, January 2012	G, H
END			