Schedule of Accreditation

issued by

United Kingdom Accreditation Service

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

1911 **Accredited to ISO/IEC 17025:2017**	**Samsung Electronics Quality Assurance Lab** **Issue No:** 169 **Issue date:** 26 January 2024
Blackbushe Business Park **Saxony Way** **Yateley** **Hampshire** **GU46 6GG**	**Contact: Mr B Fisken** **Tel: +44 (0)1252 863800** **Fax: +44 (0)1252 863814** **E-Mail: bill.fisken@samsung.com**

Testing performed by the Organisation at the locations specified below

Flexible Scope

The Flexible Scope applies to the laboratory's accreditation to ISO/IEC17025:2017 for testing activities in accordance with the standards listed in section 5 of the schedule for Digital Television Testing, carried out at the Warsaw location (Site C).

The scope may also include tests on the same or similar product types against standards, or customer-specified methods that are not specifically listed in this Schedule, 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 GEN 4.

Locations covered by the organisation and their relevant activities

Laboratory locations:

Location details	**Activity**	**Location code**
Address Samsung Electronics Quality Assurance Lab Blackbushe Business Park Saxony Way Yateley Hampshire GU46 6GG **Local contact** Mr Bill Fisken Tel: +44 (0)1252 863800 Fax: +44 (0)1252 863814 Email: bill.fisken@samsung.com	**Testing:** Telecommunications Testing OTA Testing Field Trials Interoperability testing PAL Testing	A
Address Samsung Electronics Co Ltd 129 Samsung-ro Yeongtong-Gu Suwon City Gyeonggi-Do Korea 16677 **Local contact** Mr Hansol Park Tel: +82 (0)31 8062-4363 Fax: +82 (0)31 279 7799 Email: hansol0.park@samsung.com	**Testing:** SAR/RF Exposure Testing Telecommunications Testing Radio OTA Testing EMC	B 21C – EMC, Radio, OTA R3 – Telecommunications testing R5- EMC, Telecommunications testing, SAR/RF Exposure.

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Testing performed by the Organisation at the locations specified

Location details		Activity	Location code
Address DTV Accredited Compliance Lab Pl. Europejski 1 00-844 Warszawa Poland	**Local contact** Daniel Nowicki Bartosz Kaczmarek Tel: +48 (0)22 377 8463 +48 (0)22 377 8263 +48 (0)22 377 8000 Email: d.nowicki@samsung.com b.kaczmarek@samsung.com	**Testing:** Digital Television Receiver Protocol and RF Testing	C

Site activities performed away from the location listed above:

Location details	Activity	Location code
Suitable test routes and locations providing the required network coverage, as defined in the specification or by the laboratory. The site must be suitable for the nature of the testing undertaken and will be the subject of contract review arrangements between the laboratory and the customer	**Testing:** Field Trials	D

DETAIL OF ACCREDITATION

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Terminal Devices	**1 EMC Tests**		
	1.1 Conducted emissions 150 kHz to 30 MHz	EN 55022:2010/AC:2011 EN 55032:2015 EN 55032:2015+A11:2020	B
	1.2 Radiated Emissions E-field: 30 MHz to 6 GHz	EN 55022:2010/AC:2011 EN 55032:2015 EN 55032:2015+A11:2020	B
	1.3 Electrostatic Discharge Up to 15 kV air Up to 8 kV contact	EN 61000-4-2:2009	B
	1.4 Radiated Immunity 80 MHz to 6 GHz Up to 10 V/m	EN 61000-4-3:2006 +A2:2010	B
	1.5 Harmonic current emissions Measurements up to 40th Harmonic Equipment Input Current ≤16A Per Phase	EN 61000-3-2:2006+A1:2009+A2: 2009 EN 61000-3-2:2014	B
	1.6 Voltage Fluctuations & Flicker 230V, 50Hz, 60Hz	EN 61000-3-3:2008 EN 61000-3-3:2013	B
	1.7 Electrical fast transient/burst Up to 4.0 kV	EN 61000-4-4:2004+A1:2010 EN 61000-4-4:2012	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Terminal Devices (cont'd)	**1. EMC Tests** (cont'd) 1.8 Surge Up to 2 kV 1.2/50 (8/20) µs	EN 61000-4-5:2006 EN 61000-4-5:2014 EN 61000-4-5:2014+A1:2017	B
	1.9 Conducted disturbances Induced by Radio frequency fields 150KHz ~ 80MHz Up to 10V	EN 61000-4-6:2009 EN 61000-4-6:2014	B
	1.10 Voltage dips, short Interruptions & variations AC 230V up to 16A, Inrush current: 552A Voltage dips: Up to 100% Voltage Interruptions: Up to 100%	EN 61000-4-11:2004 EN 61000-4-11:2004+A1:2017	B
	1.11 Product Specific Standards These Product Specific standards are included in this Schedule, but limited to those referred basic standards that are explicitly listed in Sections 1.1 to 1.10	EN 55024:2010 EN 55035:2017 EN 55035:2017+A11:2020 EN 301 489-1 V1.9.2 EN 301 489-1 V2.1.1 EN 301 489-1 V2.2.3 EN 301 489-3 V1.6.1 EN 301 489-3 V2.1.1 EN 301 489-3 V2.3.2 EN 301 489-7 V1.3.1 EN 301 489-17 V2.2.1 EN 301 489-17 V3.1.1 EN 301 489-17 V3.2.4 EN 301 489-19 V2.1.0 EN 301 489-19 V2.1.1 EN 301 489-19 V2.2.1 EN 301 489-24 V1.5.1 EN 301 489-52 V1.1.0 EN 301 489-52 V1.2.1	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
	Facilities for EMC: Full anechoic chambers A & B: 9.8m x 6.2m x 4.2m Shielded room A & B: 4m x 4.8m x 2.7m Shielded room C: 4.7m x 7.3m x 2.7m Semi-Anechoic Chamber: 21.1m x 13.15m x 10.2m Shielded Room A, B and C: 5.0m x 5.0m x 3.2m Semi-Anechoic Chamber: 8.0m x 4.5m x 4.0m Shielded Room A and B: 5.0m x 5.0m x 3.1m Shielded Room: 5m x 6m x 4m Semi-Anechoic Chamber: 21.1m x 13.15m x 10.2m		 B B B B B B B B B
GSM 850 mobile stations GSM 900 mobile stations GSM 1800 mobile stations GSM 1900 mobile stations WCDMA mobile stations GSM Terminal Devices WCDMA Terminal Devices LTE Terminal Devices NR Terminal Devices	**2 Telecommunications Testing** RF and Signalling Parameters	TS 51.010-1 TS 51.010-4 TS 34.121-1 TS 34.123-1 TS 36.521-1 TS 36.521-3 TS 36.523-1 TS 26.132 TS 31.121 TS 34.122 TS 31.124 TS 34.229-1 TS 34.229-5 TS 102230 TS 102 384 TS 102 694-1 TS 102 695-1 TS 37.571 TS 37.571-2 TR 37.901 3GPP TS 37.901-5 EN 301 511 EN 301 419-1 EN 301 908-2 EN 301 908-13 OMA -ETS-MMS OMA-ETS-SUPL OMA-ETS-DM OMA-ETS-LPPe TS 27 TS 35 SGP.23	 A, B B A, B B A, B A, B B B B B B B B B B B B B B B A A, B A, B A, B A, B B B B B B B B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 5	**2 Telecommunications Testing** (cont'd) 2.1 RF and Signalling Parameters (cont'd)	TS 38.521-1 TS 38.521-3 TS 38.521-4 TS 38.523-1 TS 38.533 EN 301 908-25 Verizon LTE 3GPP Band 4 and Band 66 Supplementary RF Conformance Verizon LTE 3GPP Band 13 Supplementary RRM Conformance Test Plan Verizon LTE 3GPP Band 5 Supplementary RF Conformance Verizon LTE 3GPP Band 13 Supplementary RF Conformance Test Plan Verizon LTE Interband Test Plan Verizon LTE_3GPP Band 2 Supplementary RF Conformance Verizon Wireless 5G NR Over The Air Radiated Performance Test Plan Verizon Voice Over Wifi Test Plan Verizon CDMALess Type 3 Test Plan Verizon IMS Roaming Type 3 Test Plan Verizon CMAS LTE Test Plan Verizon IMS VoIP Test Plan Verizon LTE RichCommServices Test Plan Verizon LTE Data Retry Test Plan Verizon IMS registration and Retry Test Plan Verizon LTE Band 13 Data Throughput Verizon LTE Multi- Band 13 Data Throughput Verizon E911 LTE Only or LTE Multi-Mode Device Test Plan Verizon 5G NR FR1 Supplementary RF Test Plan CTIA Speech Performance Test Plan V2.3	A, B A, B A, B B A, B A, B B B B B B B B B B B B B B B B B B B B B B B B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 5	**2 Telecommunications Testing** (cont'd)		
	2.2 Rohde & Schwarz TS8980, RF, RRM testing GSM, WCDMA, LTE terminal devices	TS 34.121-1 TS 36.521-1 EN 301 908-13 TS 36.521-3 TS 51.010-1 TS 34.122 EN 301 908-2 EN 301 511	A, B A, B A, B A, B A, B B A, B A, B
	2.3 Rohde & Schwarz CMW500, Protocol GSM, WCDMA, LTE terminal devices	TS 34.123-1 TS 36.523-1 TS 34.229-1 TS 51.010-1 Verizon Voice Over Wifi Test Plan Verizon CDMALess Type 3 Test Plan Verizon IMS Roaming Type 3 Test Plan Verizon CMAS LTE Test Plan Verizon IMS VoIP Test Plan Verizon LTE RichCommServices Test Plan Verizon LTE Data Retry Test Plan Verizon IMS registration and Retry Test Plan	B
	2.4 Comprion SIM Simulator IT3/UT3 and R&S CMW500, Anritsu MD8475A SIM, SIM Application Toolkit, USIM, USAT	TS 51.010-1 TS 51.010-4 TS 31.121 TS 31.124 TS 102 230 TS 102 384	B
	2.5 Rohde & Schwarz CRTU-ATE, CMW-ATE	OMA -ETS-MMS OMA-ETS-DM	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 5	**2 Telecommunications Testing** (cont'd)		
	2.6 Rohde & Schwarz CMW-PQA	Verizon LTE Band 13 Data Throughput Verizon LTE Multi- Band 13 Data Throughput	B
	2.7 Thermal Chamber	TS 51.010-1 EN 301 511 TS 34.121-1 EN 301 908-2 TS 36.521-1 EN 301 908-13 TS 36.521-3 TS 34.122 TS 38.521-1 TS 38.521-3 TS 38-533 Verizon LTE 3GPP Band 4 and Band 66 Supplementary RF Conformance Verizon LTE 3GPP Band 13 Supplementary RRM Conformance Test Plan Verizon LTE 3GPP Band 5 Supplementary RF Conformance Verizon LTE 3GPP Band 13 Supplementary RF Conformance Test Plan Verizon LTE Interband Test Plan Verizon LTE_3GPP Band 2 Supplementary RF Conformance	A, B A, B A, B A, B A, B A, B A, B B B B B B B B B B B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 5	**2 Telecommunications Testing** (cont'd)		
	2.8 Anite Conformance Toolset GSM WCDMA, LTE GPRS, EGPRS, AMR, Inter-RAT	TS 34.123-1 TS 51.010-1 EN 301 419-1 ETS 300 607 TBR 19/20/31/32 TS 34.229-1 TS 36.523-1 TR 37.901 TS 35	B
	2.9 Anritsu ME7873F WCDMA RF and RRM tests	TS 34.121-1 EN 301 908-2	B
	2.10 Anritsu ME7873L LTE RF and RRM tests	TS 34.121-1 TS 36.521-1 TS 36.521-3 TS 34.122 EN 301 908-13	B
	2.11 Anritsu ME7873LA WCDMA, LTE RF and RRM tests	TS 34.121-1 TS 36.521-1 TS 36.521-3 TS 34.122 EN 301 908-2 EN 301 908-13 Verizon LTE 3GPP Band 4 and Band 66 Supplementary RF Conformance Verizon LTE 3GPP Band 13 Supplementary RRM Conformance Test Plan Verizon LTE 3GPP Band 5 Supplementary RF Conformance Verizon LTE 3GPP Band 13 Supplementary RF Conformance Test Plan Verizon LTE Interband Test Plan Verizon LTE_3GPP Band 2 Supplementary RF Conformance	B B B B B B B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 5	**2 Telecommunications Testing** (cont'd)		
	2.12 Spirent ULTS A-GPS and SUPL tests	OMA-ETS-SUPL OMA-ETS-LPPe TS 51.010-1 TS 37.571-1 TS 37.571-2	B
	2.13 Spirent 8100-B500(LTS)	Verizon E911 LTE Only or LTE Multi-Mode Device Test Plan	B
	2.14 Comprion UT3 SWP and HCI Tests	TS 102 694-1 TS 102 695-1	B
	2.15 Comprion UT3 and Anritsu MD8475A UICC based NFC, USAT Conformance tests	TS 27 TS 31.124	B
	2.16 HEAD acoustics ACQUA with MFE VI.1/labCORE GSM, WCDMA, LTE Acoustic Test	TS 51.010-1 TS 26.132 CTIA Speech Performance Test Plan V2.3	B B
	2.17 Remote SIM Provisioning Comprion RSP Conformance Platform	SGP.23	B
	2.18 Anritsu ME7873NR NR RF and RRM tests	TS 38.521-3 TS 38.521-1 TS 38.521-4 TS 38.533 EN 301 908-25	A, B A, B A, B A, B A, B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
As listed on Page 5	**2 Telecommunications Testing** (cont'd)		
	2.19 Anritsu ME7874NR NR Protocol	TS 38.523-1	B
	2.20 Keysight 5G RF/RRM Conformance Toolset	TS 38.521-1 TS 38.521-3 TS 38.521-4 TS 38.533 EN 301 908-25 Verizon 5G NR FR1 Supplementary RF Test Plan	B
	2.21 Keysight 5G Protocol Conformance Toolset	3GPP TS 31.121 3GPP TS 31.124 TS 38.523-1 TS 34.229-5	B
	2.22 Keysight 5G FR2 OTA	Verizon Wireless 5G NR FR2 Over The Air Radiated Performance Test Plan	B
	2.23 Rohde & Schwarz TS8980FTA-03 NR RF and RRM	3GPP TS 38.521-1 3GPP TS 38.521-3 3GPP TS 38.521-4 3GPP TS 38.533	B
	2.24 Keysight H51-s NR RF and Signalling	3GPP TS 38.521-1 3GPP TS 38.521-3 3GPP TS 38.521-4 3GPP TS 38.533 3GPP TS 37.901-5 EN 301 908-25	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Mobile Stations Terminal Devices	**3 SAR/RF Exposure Tests** 3.1 SAR (Specific Absorption Rate) Using SPEAG DASY 5&6 Systems 300 MHz to 7.2 GHz	EN 50360:2001+A1:2012 EN 50360:2017 EN 50566:2013+AC:2014 EN 50566:2017 EN 50663:2017 EN 62209-1:2006 EN 62209-1:2016 EN 62209-2: 2010+A1:2019 EN 62311: 2008 EN 62479: 2010 IEC/IEEE 62209-1528-2020 Australian Radiocommunications (Electromagnetic Radiation - Human Exposure) Standard 2014, paragraph 9 and 10 Radiocommunications Equipment (General) Rules 2021 – Australian Communications and Media Authority, Schedule 4—Standard in relation to human exposure to electromagnetic energy, Part 3—Measurement methods and assessment methods for EME standard, Item 1, 2, 3 and 5.	B B B B B B B B B B B B B
	3.2 Power Density 6 GHz to 40 GHz Using SPEAG DASY 6 with RF Field Probes and support fixtures	PD IEC TR 63170:2018 IEC/IEEE 63195-1:2022	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Mobile Stations Terminal Devices	**3 SAR/RF Exposure Tests** (continued) 3.3 Hearing Aid Compatability - WD RF Interference potential - WD T-coil signal test 800MHz to 3950MHz Using SPEAG DASY 6 with E-Field, H-Field Probes and support fixtures	ANSI C63.19 2019	B
GSM 850 mobile stations GSM 900 mobile stations GSM 1800 mobile stations GSM 1900 mobile stations 3G mobile stations LTE Terminal Devices NR FR1 Terminal Devices	**4 Radio and Spurious Emissions Testing** 4.1 Radiated Spurious Emissions 30 MHz to 40 GHz Using Full Anechoic chamber 4.2 Control and Monitoring Functions Measuring RF power	EN 301 419-1 V4.1.1 EN 301 511 V12.5.1 TS 51.010-1 EN 301 908-1 V11.1.1 EN 301 908-1 V13.1.1 EN 301 908-1 V15.1.1 TS 34.124 TS 36.124 TS 38.124	B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders	**5 Digital Television Receiver Testing** (Section covered by Flexible Scope of accreditation) 5.1 Receiver RF Performance and Functional Testing DVB-T and DVB-T2	DTG D Book Sections 9 and 10 NorDig Unified Test Specification for Integrated Receivers/Decoders Part II Section 2.3 Unified Test Specification for HDTV DVB-C and DVB-T2 digital receiver for Finnish Market Ghana: Minimum Requirements for Reception of Digital Terrestrial and Satellite Television Services from the National Digital Television Network Telecommunication – Ghana Minimum Technical Specifications of Digital Terrestrial Television (DTT) & Direct-To-Home (DTH) Receivers for Free-To-Air Television Reception ECOWAS: ECOWAS Common Minimum Technical Specifications of DTT Receivers (starting from v 1.1) Zambia: ZS 817:2014 ICS 33.160.25 Zambian Standard – Requirements for DVB-T2 Set Top Boxes ZS 824:2014 ICS 33.160.25 Zambian Standard – Requirements for DVB-T2 iDTV	C C C C C C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.1 Receiver RF Performance and Functional Testing (cont'd) DVB-T and DVB-T2 (cont'd)	Malaysia Malaysia Specifications on Common Test Suite for Digital Terrestrial Television Broadcast Service Receiver MCMC MTSFB TC T011:2020 using Malaysia DVB-T2 RF Performance Test Suite Ver 1.0 SKMM MTSFB TC T004:2013	C
		ETSI EN 303 340 V1.2.1 (2020-09) Digital Terrestrial TV Broadcast Receivers; Harmonised Standard for access to radio spectrum	C
		Slovakia: TNI 36 7554 Technical Specification of DVB-T/-T2 Receivers Intended for the Slovak Market	C
		Czech Republic: Methodology of DVB-T2 receiver testing according to D-Book Minimum requirement for receiving device for providing services in DVB-T and DVB-T2 networks, D-Book Version 4.03 (August 2016)	C
		Croatia: Recommendation on minimum receiver technical requirements for the reception of DVB-T2 signal in the Republic of Croatia	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.1 Receiver RF Performance and Functional Testing (cont'd) DVB-T and DVB-T2 (cont'd)	Thailand: Technical standards for digital terrestrial television receivers NBTC BS 4002-2560 (2017) Singapore: IMDA TS DVB-T2 IRD Issue 1 Revision 1, November 2017 Technical Specification for Integrated Receiver Decoder for use with second generation Digital Terrestrial Television broadcasting system (DVB-T2) Vietnam: QCVN 63:2020/BTTTT National Technical Regulation on Digital Receiver Used in DVB-T2 Digital Terrestrial Television Broadcasting Germany: Minimum Requirements for DVB-T2 Devices in Germany Indonesia: Indonesia Technical requirements for telecommunications tools and/or devices for the purpose of broadcast television and radio broadcasts Samoa: Samoa OOTR Digital Broadcasting Receiver Specification	C C C C C C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.1 Receiver RF Performance and Functional Testing (cont'd)		
	DVB-T and DVB-T2 (cont'd)	UAE: UAE.S 5017 :2014 Receiver Specification Requirements for Digital Terrestrial TV Broadcasting in UAE	C
		Uganda: Minimum requirements for integrated digital televsions (IDTVs) August 2014	C
	ISDB-T	ABNT NBR 15604:2020 Sixth edition, 2020.05.20	C
		Philippines: Rules and regulations for digital Terrestrial Television (DTT) Broadcast service 07/12/2014	C
	ATSC 3.0	Korea and USA: ATSC 3.0 Recommended Practice: ATSC 3.0 PHY Lab Performance Test Plan (A/325)	C
	DTMB	Cuba: Mandatory Technical and Operative Specifications for Cuba's Digital Terrestrial Television Receivers	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.1 Receiver RF Performance and Functional Testing (cont'd)		
	DVB-C	Ficom Finnish CATV Test Specification for Digital Receivers version 2, Cable Tuner and Demodulator	C
		NorDig Unified Test Specification for Integrated Receivers/Decoders Part II Section 2.2 Unified Test Specification for HDTV DVB-C and DVB-T2 digital receiver for Finnish Market Using RF Test Procedures	C
	DVB-S DVB-S2/2X	Freesat RF Conformance testing to Using in-house test procedure	C
		ETSI EN 303 372-2 V1.1.1 (2016-04) Satellite Earth Stations and Systems (SES); Satellite broadcast reception equipment; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU Part 2: Indoor unit	C
		NorDig Unified Test Specification for Integrated Receivers/Decoders Part II Section 2.1	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.1 Receiver RF Performance and Functional Testing (cont'd) DVB-S DVB-S2	Ghana: Minimum Requirements for Reception of Digital Terrestrial and Satellite Television Services from the National Digital Television Network Telecommunication – Ghana Minimum Technical Specifications of Digital Terrestrial Television (DTT) & Direct-To-Home (DTH) Receivers for Free-To-Air Television Reception	C C
	5.2 Service Information Testing DVB-T, DVB-T2	DTG D-Book Section 8 Using DTG SI Test Suite Freeview New Zealand Digital Television Receiver Specification Using DTG Testing SI Test Suite Ghana: Minimum Requirements for Reception of Digital Terrestrial and Satellite Television Services from the National Digital Television Network Telecommunication – Ghana Minimum Technical Specifications of Digital Terrestrial Television (DTT) & Direct-To-Home (DTH) Receivers for Free-To-Air Television Reception Using Ghana SI/PSI Test Suite	C C C C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.2 Service Information Testing (cont'd) DVB-T, DVB-T2 (cont'd)	Zambia: ZS 817:2014 ICS 33.160.25 Zambian Standard – Requirements for DVB-T2 Set Top Boxes	C
		ECOWAS: ECOWAS Common Minimum Technical Specifications of DTT Receivers (starting from v 1.1)	C
		Malaysia: Malaysia Specifications on Common Rest Suite for Digital Terrestrial Television Broadcast Service Receiver MCMC MTSFB TC T011:2020 using Malaysia Using Malaysia SI/PSI Test Suite DVB-T2 SI/PSI Conformance Test Suite Ver1.0. SKMM MTSFB TC T004:2013.	C
		Slovakia: TNI 36 7554 Technical Specification of DVB-T/-T2 Receivers Intended for the Slovak Market	C
		Czech Republic: Methodology of DVB-T2 receiver testing according to D-Book Minimum requirement for receiving device for providing services in DVB-T and DVB-T2 networks, D-Book Version 4.03 (August 2016)	C
		Croatia: Recommendation on minimum receiver technical requirements for the reception of DVB-T2 signal in the Republic of Croatia	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd)		
	5.2 Service Information Testing (cont'd)		
	DVB-T, DVB-T2 (cont'd)	Indonesia: Indonesia Technical requirements for telecommunications tools and/or devices for the purpose of broadcast television and radio Technical standards for digital terrestrial television receivers NBTC BS 4002-2560 (2017)	C
		Singapore: IMDA TS DVB-T2 IRD Issue 1 Revision 1, November 2017 Digital Receiver Used in DVB-T2 Digital Terrestrial Television Broadcasting	C
		Samoa: Samoa OOTR Digital Broadcasting Receiver Specification	C
		Uganda: Minimum requirements for integrated digital televisions (IDTVs) August 2014	
	DVB-S, DVB-S2	Freesat Requirements for Interoperability Part 3 Using DTG Testing SI Test Suite	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd)		
	5.3 Active Format Description Testing	DTG D-Book sections 3 and 24 Using DTG Testing AFD Test Suite	C
	5.4 Time-exclusive Service Testing DVB-T, DVB-T2	DTG D-Book Section 7 Using DTG Testing Timex Test suite	C
	5.5 Linear Service DVB-T2	DTG D-Book Section 22 Using Linear Services Test suite	C
	DVB-S, DVB-S2	Freesat Requirements for Interoperability Part 3 Using DTG Testing Linear Services Test suite	
	5.6 MPEG2 Demultiplexer and Video/Audio Decoder Testing		
	DVB-T, DVB-T2	NorDig Unified Test Specification for Integrated Receivers/Decoders section 2.5 Using Labwise Streamwise Suite and in-home Test Suite	C
	DVB-T, DVB-T2, DVB-C	Unified Test Specification for HDTV DVB-C and DVB-T2 digital receiver for finnish Market using Labwise test suite and Internal Validation Procedure	C
	DVB-C	Ficom Finnish CATV Test Specification for Digital Receivers version 2 Using Labwise Streamwise Suite and Internal Validation Procedure	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd) 5.7 SI and Navigator		
	DVB-T, DVB-T2	NorDig Unified Test Specification for Integrated Receivers/Decoders section 2.5 Using Labwise Streamwise Suite and Internal Validation Procedure RiksTV Test Specification for Integrated Receiver Decoders Sections 9, 10, 11, 15, 18, C Using Internal Validation Procedure	C
	DVB-T, DVB-T2, DVB-C	Unified Test Specification for HDTV DVB-C and DVB-T2 digital receiver for Finnish Market Using Labwise test suite and Internal Validation Procedure	C
	DVB-C	Ficom Finnish CATV Test Specification for Digital Receivers version 2 Using Labwise Streamwise Suite and Internal Validation Procedure	C
	DVB-C	Ficom Finnish CATV Test Specification for Digital Receivers version 2 Using Internal Validation Procedure	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Digital Terrestrial and Cable Television Receivers and Recorders (cont'd)	**5. Digital Television Receiver Testing** (cont'd)		
	5.8 Teletext and subtitling, RCU, User preferences	NorDig Unified Test Specification For Integrated Receivers/Decoders sections 9, 10 ,11, 16	C
	DVB-T, DVB-T2	RiksTV Test Specification for Integrated Receiver Decoders Sections 5, 8, 17, 19, 20, 21, C Using Labwise test Suite and Internal Validation Procedure	
	DVB-T, DVB-T2, DVB-C	Unified Test Specification for HDTV DVB-C and DVB-T2 digital receiver for Finnish Market Using Labwise test suite and Internal Validation Procedure	C
	5.9 HbbTV conformance testing	Test specification for HbbTV using HbbTV test suites, Ligada iSuite test harness and Internal validation procedure	C
		ECOWAS Common Minimum Technical Specifications of DTT Receivers (starting from v 1.1)	
		Malaysia Specifications on Common Test Suite for Digital Terrestrial Television Broadcast Service Receiver MCMC MTSFB TC T011:2020 using Malaysia Hybrid Broadcast TV (HBBTV) Test Suite Ver1.0. SKMM MTSFB TC T004:2013. SKMM MTSFB TC G002:2020.	C

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
GSM 850 Mobile stations, GSM 900 Mobile stations, GSM 1800 Mobile stations, GSM 1900 Mobile stations, 3G mobile stations LTE Mobile Stations NR FR1 mobile stations Wi-Fi mobile devices Notebook PC devices Wrist worn Devices	**6 OTA Testing** 6.1 OTA TRP and TIS Testing Frequency Range 600 MHz to 6000 MHz Site A 600 MHz to 7125 MHz Site B 850, 900, 1800, 1900 Bands For GSM WCDMA FDD I, II, IV, V, VI, VII, VIII, IX, XIX CDMA* 850, 1700, 1900, 2100 Bands AGPS for GSM/WCDMA (Site B) AGPS for LTE (Site B) Wi-Fi 2.4 GHz, 5GHz and 6 GHz Bands 802.11a/b/g 802.11n/ac/ax LTE FDD1-26 Bands LTE FDD Band 27-31 LTE TDD 33-44 Bands LTE FDD Band 66 TD-SCDMA A, F (Site B) LTE Carrier Aggregation (2DN, 1TX) (3DN, 1TX) LTE LAA (2CC and 3CC)	 CTIA Test Plan for Wireless Device Over the Air Performance Revision 4.0 CTIA 01.20 Test Methodology SISO Anechoic Chamber v4.0.0 CTIA 01.40 Test Methodology MIMO Static Channel Model Multi-Probe Anechoic Chamber v4.0.0 CTIA Test Plan for RF Performance Evaluation of Wi-Fi Mobile Converged Devices v4.0.0 Vodafone Specification for Terminals on Over the Air RF Performance v5.2 (Except MIMO OTA) 3GPP TS 25.144 3GPP TS 34.114 3GPP TS 37.114 3GPP TS 37.544 ETSI 301 908-2 v13.1.1 ETSI 301 908-13 v13.2.1	 A, B A, B A A, B A A, B A, B A A, B A, B A, B

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Terminal Devices	**7. 3GPP Cellular Field Trials** 5G-NR E-UTRAN UTRAN GERAN	As required by GCF-CC Annex F5.1 **GSMA TS 11** 5G-NR, E-UTRAN, UTRAN, GERAN, SMS, SIM, NI **GSMA TS.42** NI (DualSIM)	A, D
	8. 3GPP IMS subsystem Field Trials VoLTE VoWiFi RCS	As required by GCF-CC Annex F5.2 **GSMA TS.11** IP-CANI, VoLTE, VoWiFi RCS (CPR), RCS (UP)	A, D
	9. Application Enabler Interoperability testing MMS UICC based NFC services	As required by GCF-CC Annex F5.3 **OMA-ETS-MMS_INT_V1.3** OMA MMS **GSMA TS27, TS26:** UICC based NFC	A

Materials/Products tested	Type of test/Properties measured/Range of measurement	Standard specifications/ Equipment/Techniques used	Location Code
Terminal Devices	**10. Product Analysis** CT Radiography testing using low energy X-ray equipment up to 160 kV Digital Radiograpy testing using low energy X Ray equipment up to 160 kV Visual testing using digital Photography Visual testing using Micro photography	Testing carried out to internal procedures: PAL 04 Issue 1: Product Analysis Laboratory Inspection Procedure PAL 02 Issue 1: Visual Records Procedure	A
END			