Radio Test Report

Flashnet SA

FRE-220-NEMA-TW-NB1-M1-G

47 CFR Part 27:2024 Effective Date 1st October 2024
PCB: PCS Licensed Transmitter
Test Date: 8th October 2025 to 10th October 2025
Report Number: 10-15092-3-25 Issue 01

The testing was carried out by Kiwa Ltd trading as Kiwa Electrical Compliance, an independent test house, at their test facility located at:

Kiwa Ltd, Kiwa Electrical Compliance
Arnolds Court
Arnolds Farm Lane
Mountnessing
Essex
CM13 1UT
U.K.

www.Kiwa.com

Telephone: +44 (0) 1277 352219
Email: uk.enquiries@kiwa.com

This laboratory is accredited in accordance with the recognised International Standard ISO/IEC 17025. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer joint ISO-ILAC-IAF communiqué dated April 2017).

This report is not to be reproduced by any means except in full and in any case not without the written approval of Kiwa Electrical Compliance.

ALL RIGHTS RESERVED

Arnolds Court, Arnolds Farm Lane, Mountnessing, Brentwood Essex, CM13 1UT

Certificate of Test 15092-3

The equipment noted below has been partially tested by Kiwa Electrical Compliance and, where appropriate, conforms to the relevant subpart of 47 CFR Part 27. This is a certificate of test only and should not be confused with an equipment authorisation. Other standards may also apply.

Equipment:	FRE-220-NEMA-TW-NB1-M1-G
Model Number:	NEMA_ME310G1-WW_v4
Unique Serial Number:	269101892
Applicant:	Flashnet SA Fundatura Harmanului Street, No 4A Brasov Romania
Full measurement results are detailed in Report Number:	10-15092-3-25 Issue 01
Test Standards:	47 CFR Part 27:2024 Effective Date 1st October 2024 PCB: PCS Licensed Transmitter

NOTE:
With reference to the Rule part detailed, not all tests within the Rule part have been applied at the request of the applicant. The following tests have not been performed at the request of Flashnet SA:- Frequency stability, Occupied bandwidth, Band edge / spectrum mask additional emissions limitations. Certain tests were not performed based upon applicant's declarations. Certain other requirements are subject to applicant's declaration only and have not been tested/verified. For details refer to section 3 of this report. Note: EUT contains FCC ID: RI7ME310G1WW.

DEVIATIONS:
Deviations have been applied, refer to section 4.2.

This certificate relates only to the unit tested as identified by a unique serial number and in the condition at the time it was tested. It does not relate to any other similar equipment and performance of the product before or after the test cannot be guaranteed. Whilst every effort is made to assure quality of testing, type tests are not exhaustive and although no non-conformances may be found, this doesn't exclude the possibility of unit not meeting the intentions of the standard or the requirements of the Federal Regulations, particularly under different conditions to those during testing. Any compliance statements are made reliant on (a) the application of the product and use of the assigned band being acceptable to the FCC and (b) the modes of operation as instructed to us by the Customer based on their specific knowledge of the application and functionality of the EUT. Statements of compliance, where measurements were made, do not include the measurement uncertainty. The measurement uncertainty, where stated, is the expanded uncertainty based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Date of Test: 8th October 2025 to 10th October 2025

Test Engineer:
Graham Blake

Graham Blake
Digitally signed by: Graham Blake
DN: CN = Graham Blake email = graham.blake@kiwa.com C = GB OU = Kiwa Electrical Compliance
Date: 2025.11.20 10:40:08 Z

Approved By:
Radio Approvals Manager

Digitally signed by: Daniel Sims
DN: CN = Daniel Sims email = Daniel.Sims@kiwa.com C = GB O = Kiwa Electrical Compliance - Brentwood
Date: 2025.11.20 10:37:06 Z

Customer Representative:

ilac-MRA UKAS TESTING 2360

ALL RIGHTS RESERVED

1 Contents

1 Contents 3
2 Equipment under test (EUT) 4
2.1 Equipment specification 4
2.2 Applicant declarations for testing 5
2.3 Functional description 5
2.4 Modes of operation 5
2.5 Emissions configuration 6
3 Summary of test results 8
4 Specifications 9
4.1 Relevant standards 9
4.2 Deviations 9
4.3 Test fixtures 9
5 Tests, methods and results 10
5.1 Spurious emissions at antenna terminals 10
5.2 RF Power Output 11
5.3 Frequency stability 12
5.4 Occupied bandwidth 12
5.5 Field strength of spurious radiations 13
5.6 Band edge / spectrum mask additional emissions limitations 15
5.7 Modulation characteristics 15
6 Plots/Graphical results 16
6.1 RF Power Output (EIRP) 16
7 Photographs 18
7.1 EUT Front View 18
7.2 EUT Reverse Angle 19
7.3 EUT Left side View 19
7.4 EUT Right side View 20
7.5 EUT Antenna 21
7.6 EUT Display & Controls 22
7.7 EUT Internal photos 22
7.8 EUT ID Label 24
7.9 30-1000MHz Spurious emissions test set-up 25
7.10 Above 1GHz Spurious emissions test set-up 27
7.12 Radiated emission diagrams 29
8 Test equipment calibration list 30
9 Auxiliary and peripheral equipment 31
9.1 Customer supplied equipment 31
9.2 Kiwa Electrical Compliance supplied equipment 31
10 Condition of the equipment tested 32
10.1 Modifications before test 32
10.2 Modifications during test 32
11 Description of test sites 33
12 Abbreviations and units 34
13 Revision History 36

2 Equipment under test (EUT)

2.1 Equipment specification

Applicant	Flashnet SA Fundatura Harmanului Street, No 4A Brasov Romania	
Manufacturer of EUT	Flashnet SA	
Full Name of EUT	FRE-220-NEMA-TW-NB1-M1-G	
Model Number of EUT (HVIN)	NEMA_ME310G1-WW_v4	
Serial Number of EUT	269101892	
Date Received	3rd October 2025	
Date of Test:	8th October 2025 to 10th October 2025	
Date Report Issued	20th November 2025	
Main Function	The product is a street light management and control device that can remotely turn on/off and dim a luminaire, while measuring a wide range of electrical parameters and capable of sending alarms in case of fault detection.	
EUT Specification	Height	70 mm
	Width	80 mm
	Depth	80 mm
	Weight	0.115 kg
	Voltage	85 - 275V AC 50 / 60 Hz
	Power Consumption	2 Watts (230 V AC)

2.2 Applicant declarations for testing

General Parameters	
EUT Normal use position	Mounted in a luminaire
Choice of model(s) for type tests	Sample
Antenna details	Quectel YFCA002 4.47 dBi Gain (maximum)
Antenna port	Internal UFL connector
Baseband Data port (yes/no)?	No
Highest Signal generated in EUT	1914.3 MHz (upper cellular band & highest channel)
Lowest Signal generated in EUT	Not declared
Hardware Version (HVIN)	NEMA_ME310G1-WW_v4
Firmware Version (FVIN)	App: 4941, RF: 4811, modem: 37.00.217-POC.210001
Type of Equipment	Multi-radio
Technology Type	Cellular / GPS
Geo-location (yes/no)	Yes
TX Parameters	
Alignment range – transmitter	814.7 – 1914.3 MHz
EUT Declared Modulation Parameters	QPSK, BPSK, 16QAM
EUT Declared Power level	23dBm (LTE)
EUT Declared Signal Bandwidths	1.4MHz
EUT Declared Channel Spacing's	1.4 MHz
EUT Declared Duty Cycle	Not declared
Unmodulated carrier available?	Yes
Declared frequency stability	15 ppm
RX Parameters	
Alignment range – receiver	729.1 MHz - 2154.9 MHz
EUT Declared RX Signal Bandwidth	1.4 MHz
FCC Parameters	
FCC Transmitter Class	PCB: PCS Licensed Transmitter

2.3 Functional description

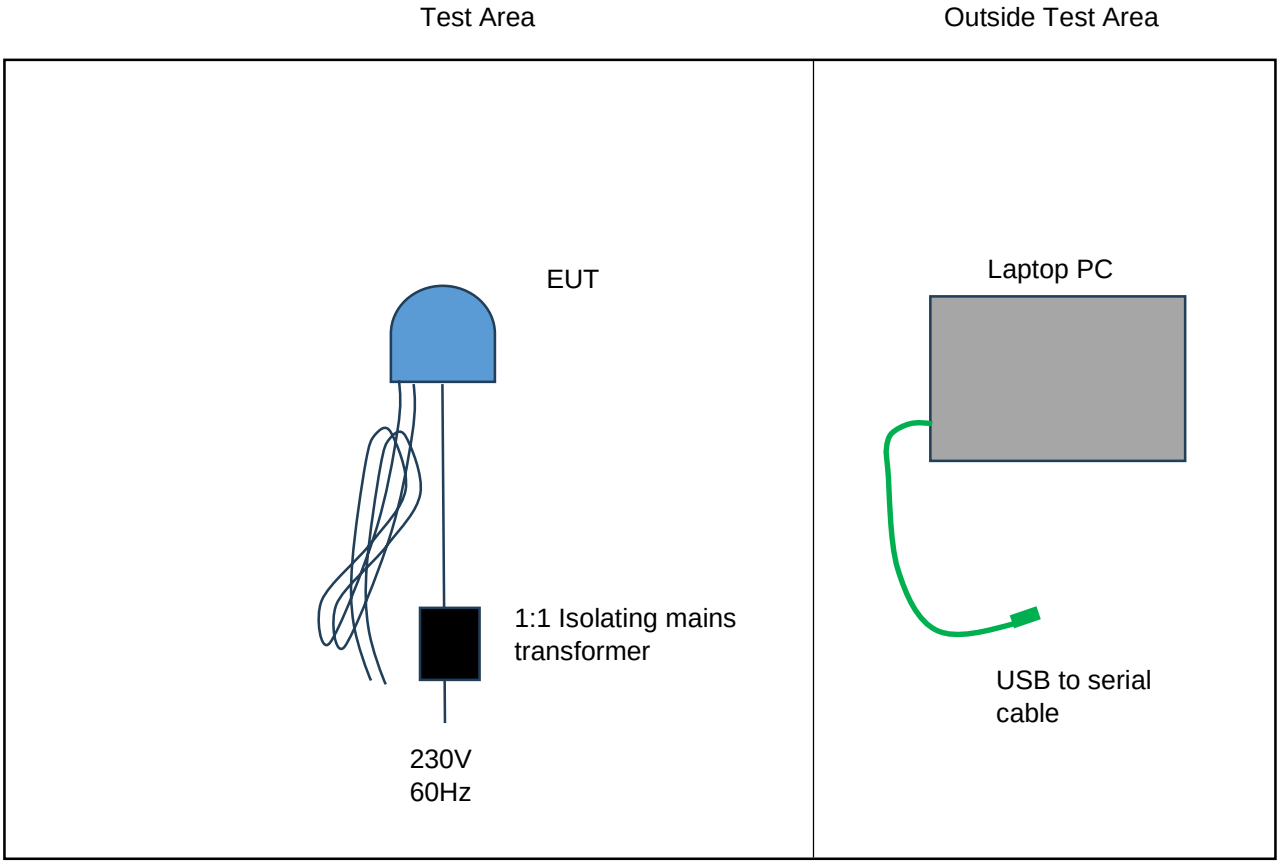
The product is connected to the public mains supply via an ANSI C136.41 compliant socket and its outputs are connected directly to the driver of the luminaire. It communicates wirelessly with the central management software, using an embedded LTE CatM1/NB2/EGPRS modem.
The purpose of the controller is to turn the luminaire ON/OFF, as well as dim it to a preferred light level, either by direct commands from the user, by using the pre-loaded modifiable scheduler, or as a result of the integrated light sensor. Besides controlling the luminaire, the product measures a wide range of electrical parameters [ex. voltage, current, energies] and transmits them to the central management software and additionally is capable of sending alarms in case of various faults detected [ex. overcurrent, overvoltage, device fault].

2.4 Modes of operation

Mode Reference	Description	Used for testing
TX LOW	Transmitting continuously at 1710.7 MHz, 1.4 MHz channel bandwidth. QPSK modulation.	Yes
TX MID	Transmitting continuously at 1745.0 MHz, 1.4 MHz channel bandwidth. QPSK modulation.	Yes
TX HIGH	Transmitting continuously at 1779.3 MHz, 1.4 MHz channel bandwidth. QPSK modulation.	Yes

Note: This test report pertains to the frequency band 1710 MHz – 1780 MHz. At the request of the applicant only 1.4MHz channel bandwidth and QPSK modulation scheme has been assessed.

2.5 Emissions configuration



The unit was powered from a 230V 60Hz AC mains supply via an isolating mains transformer. The voltage used for test was declared by the applicant as that used by the device in operation. For conducted tests the internal antenna was disconnected, and measurements were made directly at the EUTs onboard UFL connector. The unit was configured using a laptop PC running QCOM software. To configure the EUT into the relevant test mode “AT” commands were sent to the EUT using a USB to serial cable. The unit was configured to transmit on the top, middle and bottom channels as stated within section 2.4 of this report. A single channel bandwidth of 1.4 MHz was assessed along with QPSK modulation. The transmit mode was 100% continuous with modulation and the power settings for each channel were as stated below:-

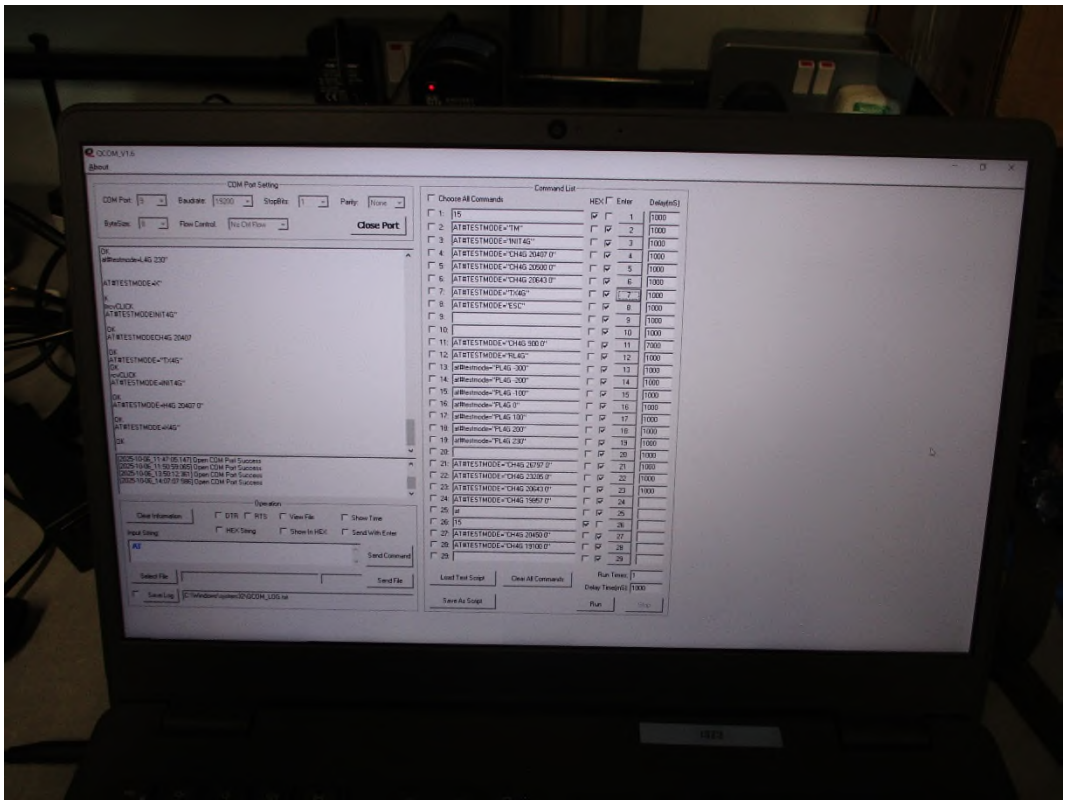
Low Channel (1710.7 MHz) = level 23dBm
Mid Channel (1745.0 MHz) only = level 23dBm
High Channel (1779.3 MHz) only = level 23dBm

Note: Host EUT contains FCC ID: RI7ME310G1WW module.

Following the manufacturer’s instructions the following commands were set:

15	(Initialises cellular module)
AT#TESTMODE=”TM”	(Sets the EUT into TEST MODE)
AT#TESTMODE=”INIT4G”	(Initialises 4G cellular radio)
AT#TESTMODE=”CH4G 19207 0”	(Sets Low channel, 19550 for Mid 19893 for high)
AT#TESTMODE=”PL4G 230”	(Set the TX power level to 23dBm – Maximum)
AT#TESTMODE=”TX4G”	(Starts transmission)

ALL RIGHTS RESERVED



Photograph shows the QCOM software used to configure the EUT.

2.5.1 Signal leads

Port Name	Cable Type	Connected
Mains	2-core	Yes

3 Summary of test results

The FRE-220-NEMA-TW-NB1-M1-G was tested for compliance to the following standard(s):

47 CFR Part 27:2024 Effective Date 1st October 2024
PCB: PCS Licensed Transmitter

Any compliance statements are made reliant on (a) the application of the product and use of the assigned band being acceptable to the FCC and (b) the modes of operation as instructed to us by the Customer based on their specific knowledge of the application and functionality of the EUT. Whilst every effort is made to assure quality of testing, type tests are not exhaustive and although no non-conformances may be found, this doesn't exclude the possibility of equipment not meeting the intentions of the standard or the essential requirements of the directive, particularly under different conditions to those during testing. Statements of compliance, where measurements were made, do not include the measurement uncertainty. The measurement uncertainty, where stated, is the expanded uncertainty based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95%.

Title	References	Results
Transmitter Tests		
1. Spurious emissions at antenna terminals	47 CFR Part 27 27.53 (a) 47 CFR Part 2J 2.1051	NOT APPLICABLE[1]
2. RF Power Output	47 CFR Part 27 27.50(d)(1)(ii) 47 CFR Part 2J 2.1046	PASSED
3. Frequency stability	47 CFR Part 27 24.54 47 CFR Part 2J 2.1055	NOT TESTED[3]
4. Occupied bandwidth	47 CFR Part 2J 2.1049	NOT TESTED[3]
5. Field strength of spurious radiations	47 CFR Part 27 53 (h)(1) 47 CFR Part 2J 2.1053	PASSED[4]
6. Band edge / spectrum mask additional emissions limitations	47 CFR Part 27 27.53 47 CFR Part 2J 2.1053	NOT TESTED[3]
7. Modulation characteristics	FCC Part 27 Clause 2.1047	NOT APPLICABLE[4]

[1] The EUT has an integral antenna and field strength emissions were performed with the antenna in place.

[2] Not tested at request of applicant

[3] Not applicable for EUTs using digital modulation

[4] Spectrum investigated up to a frequency of 18GHz based on 10 times the highest channel/ signal generated in equipment of 1779.3 MHz.

4 Specifications

The tests were performed and operated in accordance with Kiwa Electrical Compliance procedures and the relevant standards listed below.

4.1 Relevant standards

Ref.	Standard Number	Version	Description
4.1.1	47 CFR Part 27	2024	Miscellaneous Wireless Communications Services
4.1.2	KDB 971168 D01 v03	2017	Federal Communications Commission Office of Engineering and Technology Laboratory Division; Measurement Guidance for Certification of Licensed Digital Transmitters
4.1.3	ANSI C63.26	2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
4.1.4	KDB 442401		Radiated emissions measurements for licenced radio service equipment.
4.1.5	TIA-603-E	2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards, Telecommunications Industry Association, June 2010
4.1.6	47 CFR Part 2J	2024	Part 2 – Frequency Allocations and radio treaty matters; General rules and regulations

4.2 Deviations

Deviation applied: Only a single modulation test mode was used during testing as requested by the applicant.

4.3 Test fixtures

To measure Conducted Power an internal RF port was used for testing.

ALL RIGHTS RESERVED

5 Tests, methods and results

5.1 Spurious emissions at antenna terminals

NOT APPLICABLE: The EUT has an integral antenna and field strength emissions were performed with the antenna in place.

ALL RIGHTS RESERVED

5.2 RF Power Output

5.2.1 Test methods

Test Requirements: 47 CFR Part 27, Part 27.50(d)(4) [Reference 4.1.1 of this report], 47 CFR Part 2J, Part 2.1046 [Reference 4.1.6 of this report]
Test Method: ANSI C63.26 Clause 5.2 [Reference 4.1.3 of this report]
Limits: 47 CFR Part 27, Part 27.50(d)(4) [Reference 4.1.1 of this report]

5.2.2 Configuration of EUT

The EUT was measured on a bench using a spectrum analyser connected to the internal RF port. The EUT was set to each mode in turn (see section 2.4) and highest power levels recorded.
The EUT was operated in TX LOW, TX MID and TX HIGH modes for this test.

5.2.3 Test procedure

Tests were made in accordance with the Test Method noted above using the measuring equipment listed in the 'Test Equipment' Section. The spectrum analyser was tuned to the centre frequency of each channel and an RMS detector and trace averaging was used. Since measurements were made directly at the onboard connector the declared gain of the antenna used within the EUT was added to the final measurement.

Measurements were made in site k.

5.2.4 Test equipment

E073-1, E533, E624, F128, F130

See Section 8 for more details

5.2.5 Test results

Temperature of test environment 20°C
Humidity of test environment 50%
Pressure of test environment 101kPa

Band	1710-1780 MHz
Power Level	23 dBm
Channel Spacing	1.4 MHz
Mod Scheme	QPSK
Low channel	1710.7 MHz
Mid channel	1745 MHz
High channel	1779.3 MHz

Test conditions		Carrier Power (dBm) Low channel	Carrier Power (dBm) Mid channel	Carrier Power (dBm) High channel
Temp Ambient	Volts Nominal	20.68	21.72	20.92
Manufacturers declared Antenna gain (dBi)		4.47	4.47	4.47
Maximum TX Power EIRP (dBm)		25.15	26.19	25.39
Margin from Limit (dB)		-4.85	-3.81	-4.61

Analyser plots may be found in section 6.

LIMITS:

Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1-watt EIRP (30dBm).

These results show that the EUT has PASSED this test.

The uncertainty gives a 95% confidence interval in the measurement. Expanded uncertainty (K=2) is as follows:
<± 1.0 dB

5.3 Frequency stability

NOT TESTED: Not tested at request of applicant

5.4 Occupied bandwidth

NOT TESTED: Not tested at request of applicant

5.5 Field strength of spurious radiations

5.6.1 Test methods

Test Requirements:	47 CFR Part 27 53 (h)(1) [Reference 4.1.1 of this report]
	47 CFR Part 2J 2.1053 [Reference 4.1.6 of this report]
Test Method:	ANSI C63.26 5.5 [Reference 4.1.3 of this report]
Limits:	47 CFR Part 27 27.53 [Reference 4.1.1 of this report]

5.6.2 Configuration of EUT

The EUT was tested in an ALSE and ambient conditions were monitored. Three orthogonal planes were examined. The EUT was operated in TX LOW, TX MID and TX HIGH modes for this test.

5.6.3 Test procedure

Tests were made in accordance with the Test Method noted above using the measuring equipment listed in the 'Test Equipment' Section. Peak field strength from the EUT was maximised by rotating it 360 degrees. Appropriate band-pass filters were used to ensure the fundamental did not distort the results. An RMS detector was used for final measurements.

30MHz - 1GHz.
The measuring antenna was scanned 1 - 4m in both Horizontal and Vertical polarisations. Substitution method was performed using tuned dipoles / a calibrated bi-conical antenna.

1GHz – 18GHz.
Horn antennas were used at heights where the whole of the EUT was contained within the main beam in both horizontal and vertical polarisations. Emissions pre-scans were performed, including antenna height scanning (1-4m) to determine any worst-case maximised emissions for final test. Final tests were performed with the antenna in worst case position. The EUT was rotated in all three orthogonal planes. Substitution method was performed using standard gain horn antennas.

Tests were performed in site M.

5.6.4 Test equipment

E005, E007-2, E136, E268, E411, E429, E533, E624, E743, F230, LPE364, TMS812, TMS82

See Section 8 for more details

5.6.5 Test results

Temperature of test environment	20°C
Humidity of test environment	50%
Pressure of test environment	101kPa

Setup Table

Band	1710-1780 MHz
Power Level	23 dBm
Channel Spacing	1.4 MHz
Mod Scheme	QPSK
Low channel	1710.7 MHz

Spurious Frequency (MHz)	Measured Spurious Level (dBm)	Difference to Limit (dB)	Antenna Polarisation	EUT Polarisation
3421.4	-32.5	-19.5	Horizontal	Upright

ALL RIGHTS RESERVED

Setup Table

Band	1710-1780 MHz
Power Level	23 dBm
Channel Spacing	1.4 MHz
Mod Scheme	QPSK
Mid channel	1745.0 MHz

Spurious Frequency (MHz)	Measured Spurious Level (dBm)	Difference to Limit (dB)	Antenna Polarisation	EUT Polarisation
No spurious emissions found within 20 dB of limits				

Setup Table

Band	1710-1780 MHz
Power Level	23 dBm
Channel Spacing	1.4 MHz
Mod Scheme	QPSK
High channel	1779.3 MHz

Spurious Frequency (MHz)	Measured Spurious Level (dBm)	Difference to Limit (dB)	Antenna Polarisation	EUT Polarisation
No spurious emissions found within 20 dB of limits				

LIMITS:
Part 27.53(h)(1) -13 dBm.

These results show that the EUT has PASSED this test.

The uncertainty gives a 95% confidence interval in the measurement. Expanded uncertainty (K=2) is as follows: ± 3.9 dB (UR09A)

ALL RIGHTS RESERVED

5.6 Band edge / spectrum mask additional emissions limitations

NOT TESTED: Not tested at request of applicant.

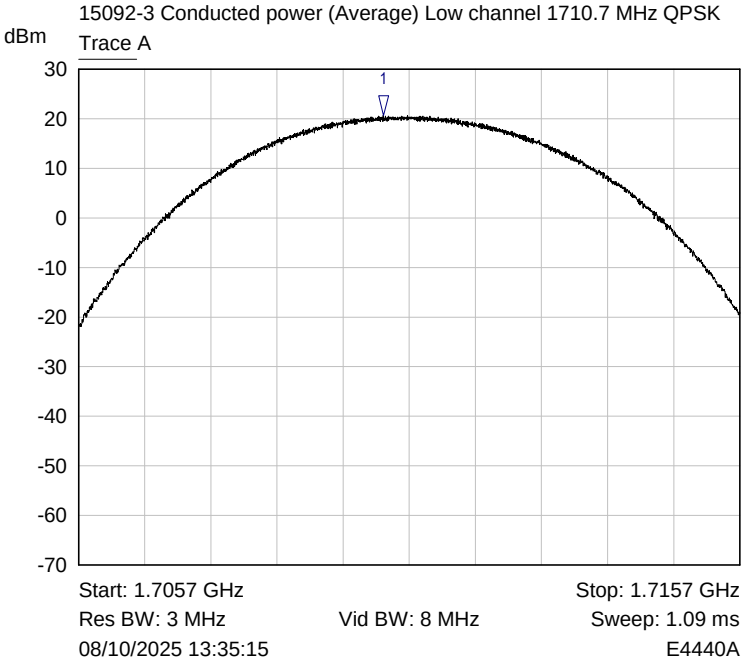
5.7 Modulation characteristics

NOT APPLICABLE: Not applicable for EUTs using digital modulation.

6 Plots/Graphical results

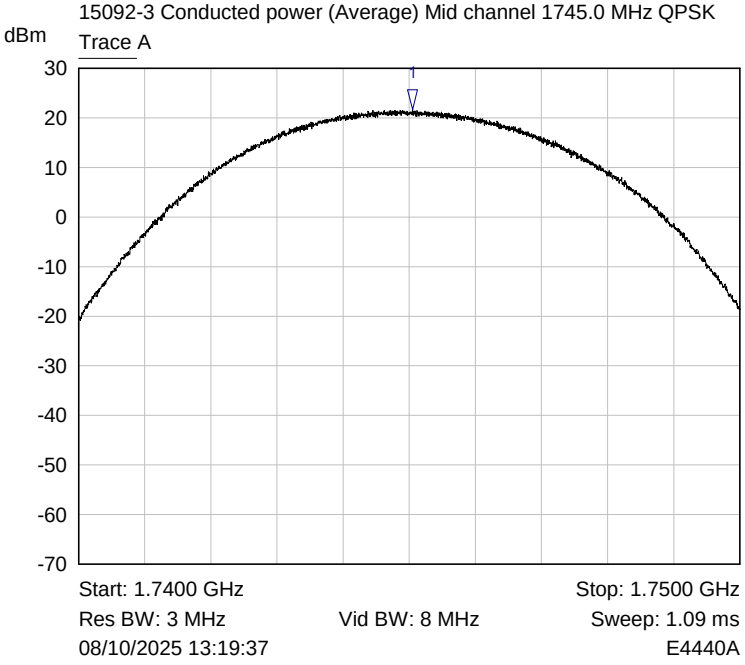
6.1 RF Power Output (EIRP)

RF Parameters: Band 1710 – 1779.3 MHz, Power Maximum, Channel Spacing 1.4 MHz, Modulation QPSK



Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	1.7103 GHz	20.68 dBm	

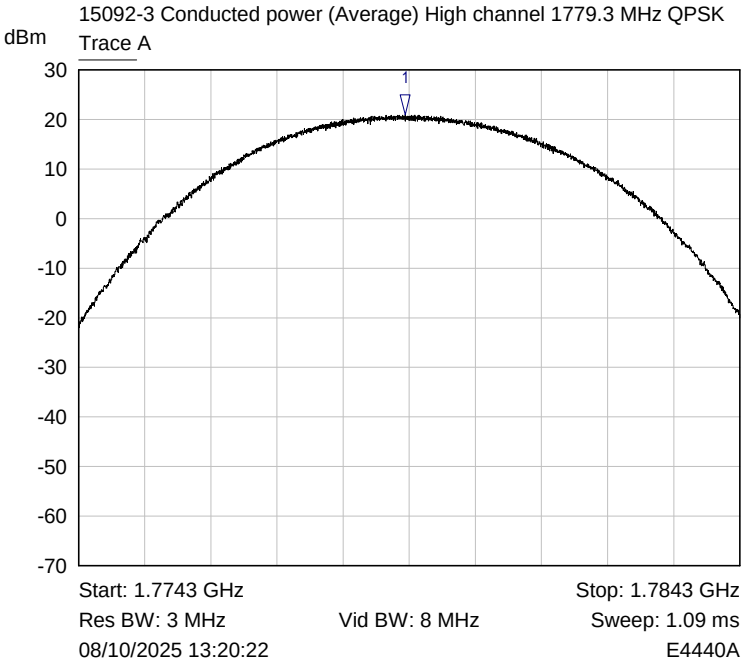
RF Parameters: Band 1710 – 1779.3 MHz, Power Maximum, Channel Spacing 1.4 MHz, Modulation QPSK



Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	1.7451 GHz	21.72 dBm	

ALL RIGHTS RESERVED

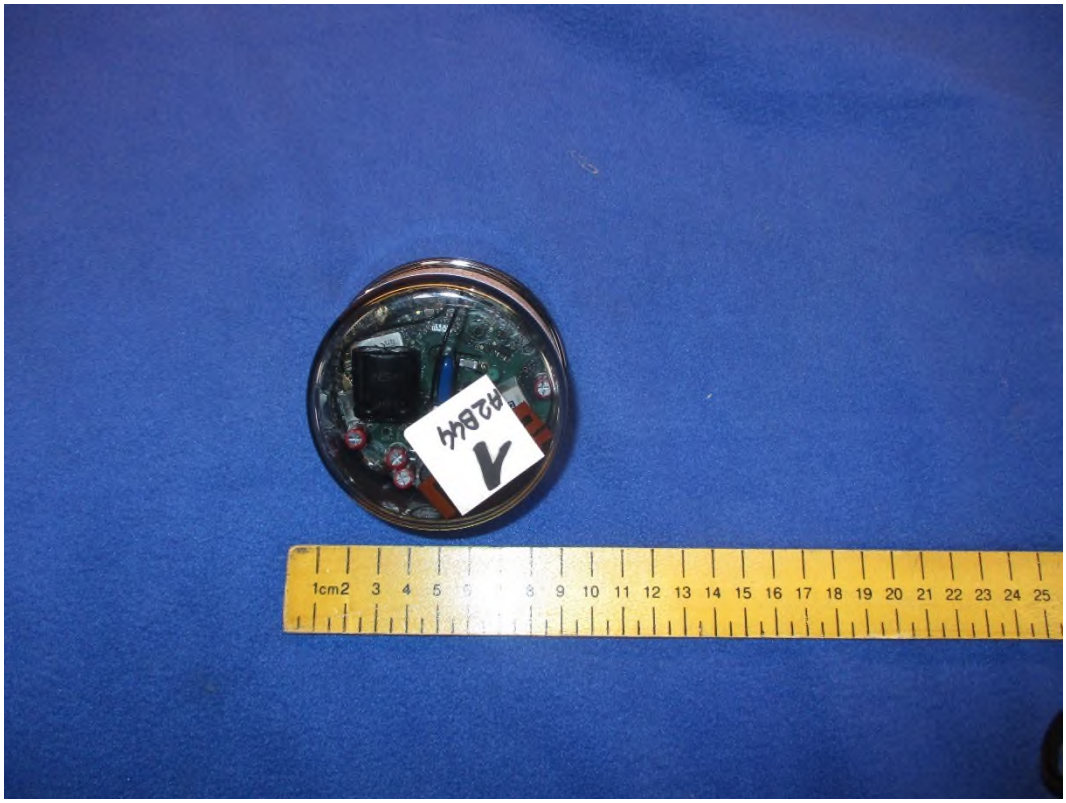
RF Parameters: Band 1710 – 1779.3 MHz, Power Maximum, Channel Spacing 1.4 MHz, Modulation QPSK



Mkr	Trace	X-Axis	Value	Notes
1 ▽	Trace A	1.7792 GHz	20.92 dBm	

7 Photographs

7.1 EUT Front View



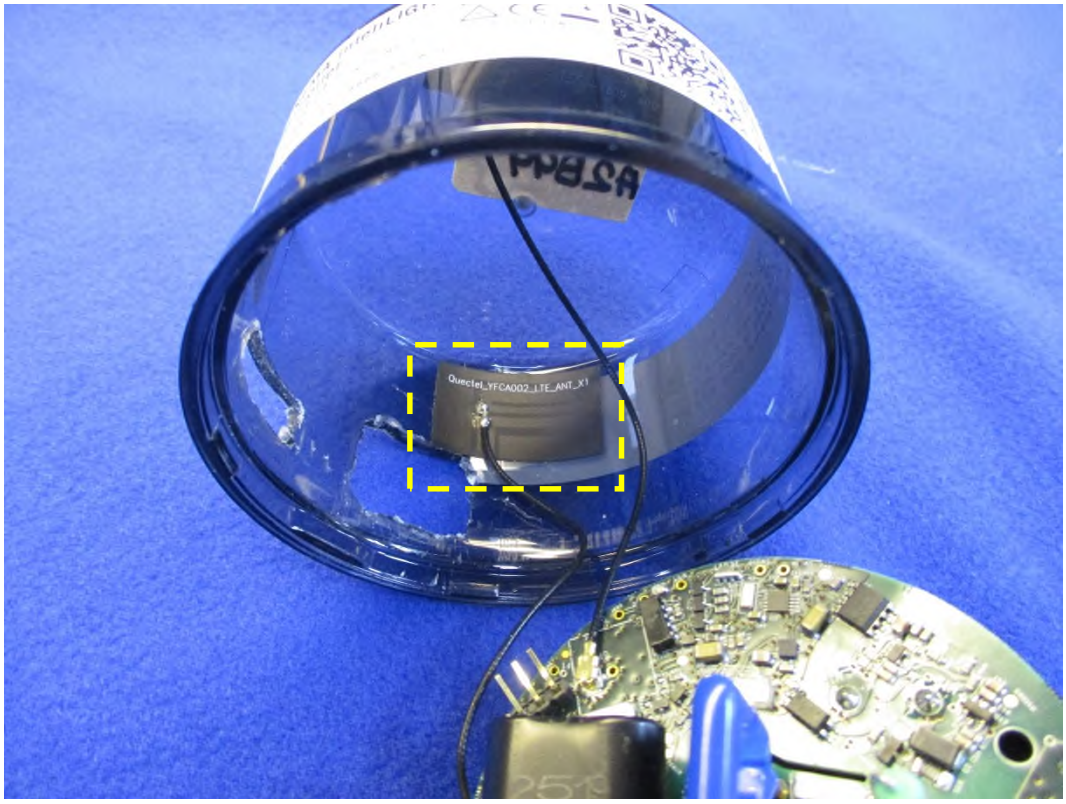
7.2 EUT Reverse Angle

7.3 EUT Left side View

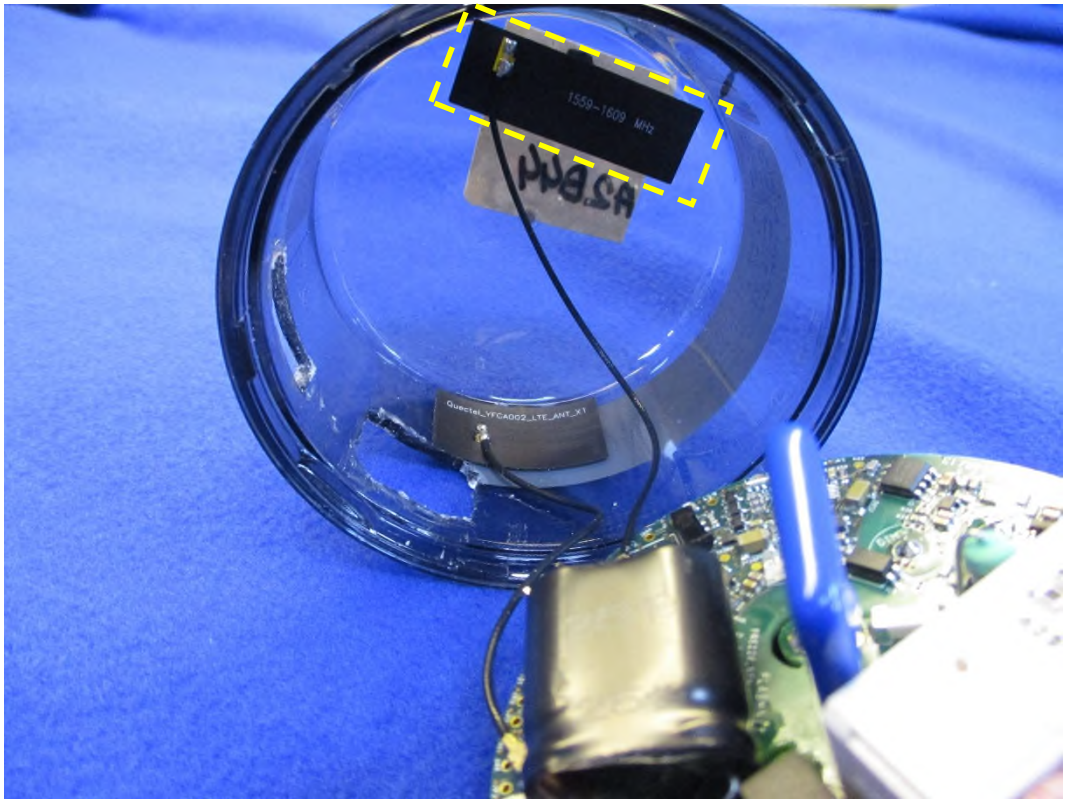
ALL RIGHTS RESERVED

7.4 EUT Right side View

7.5 EUT Antenna



Photograph shows the EUTs cellular antenna (highlighted)

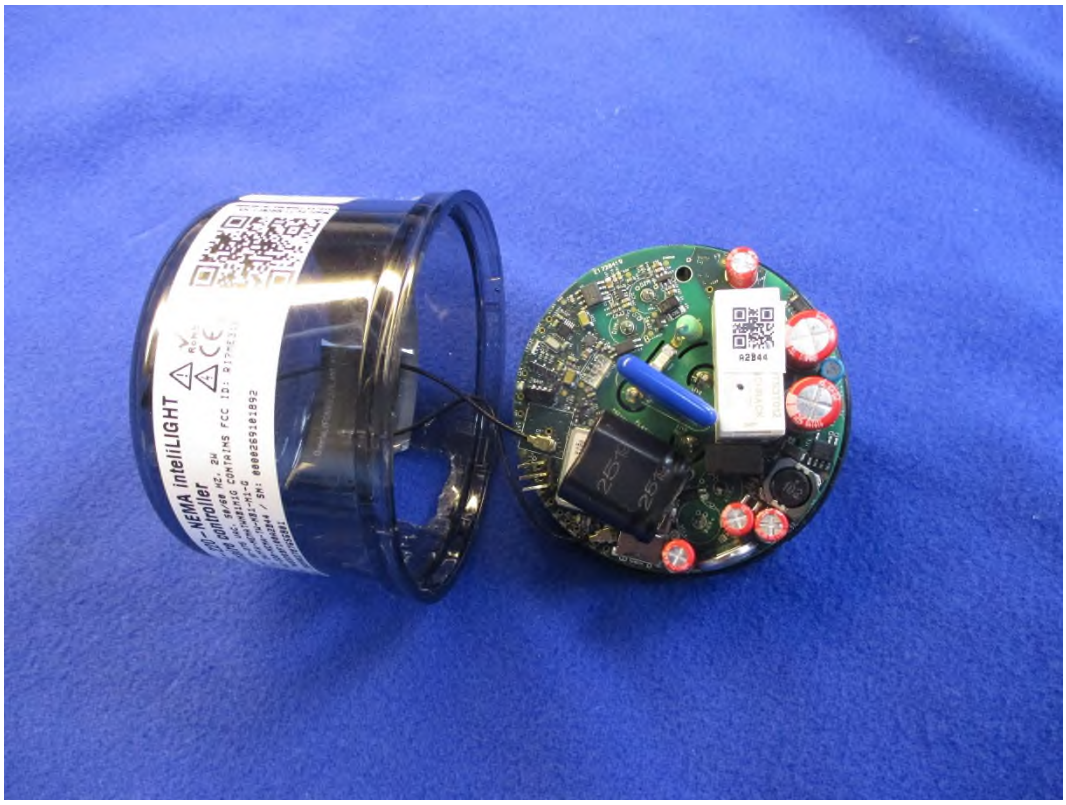


Photograph shows the EUTs GPS antenna (highlighted)

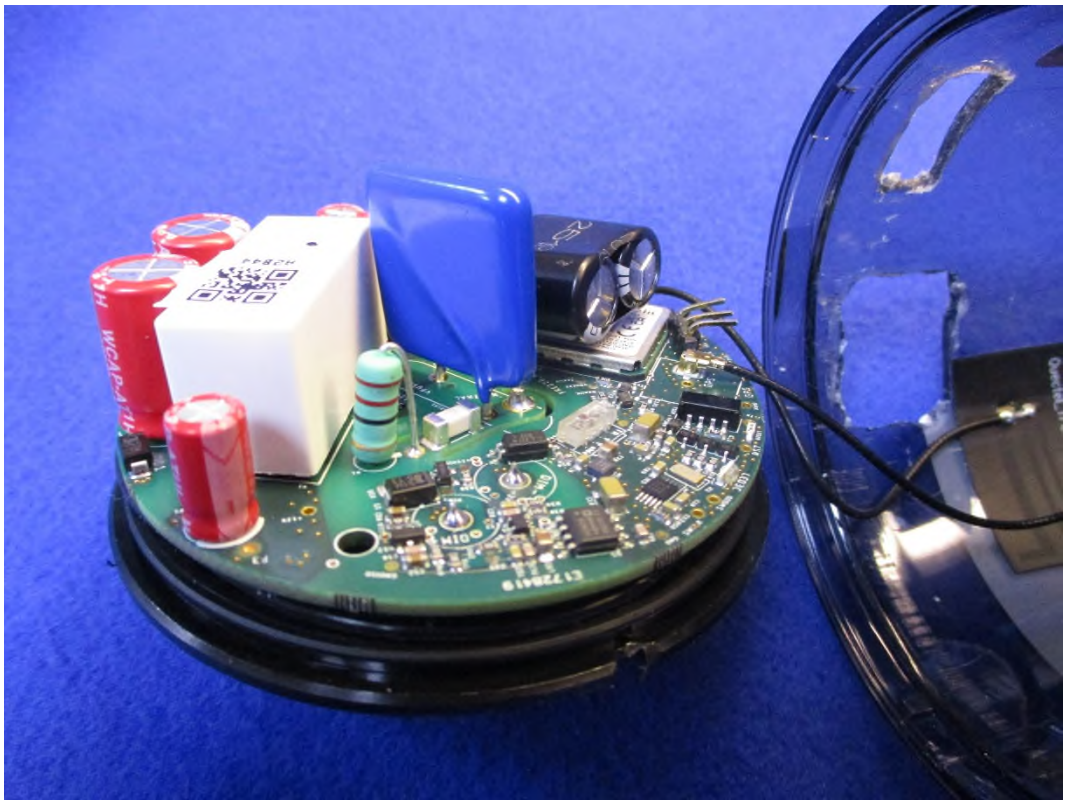
7.6 EUT Display & Controls

The EUT has no display or controls

7.7 EUT Internal photos

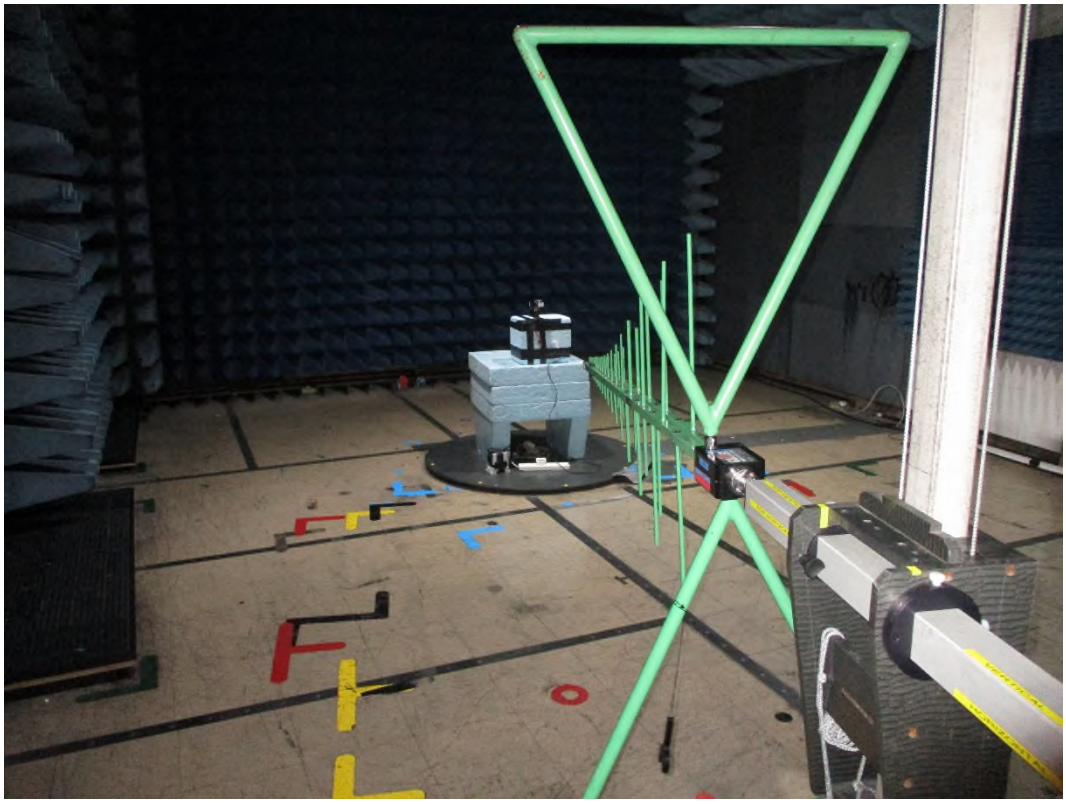


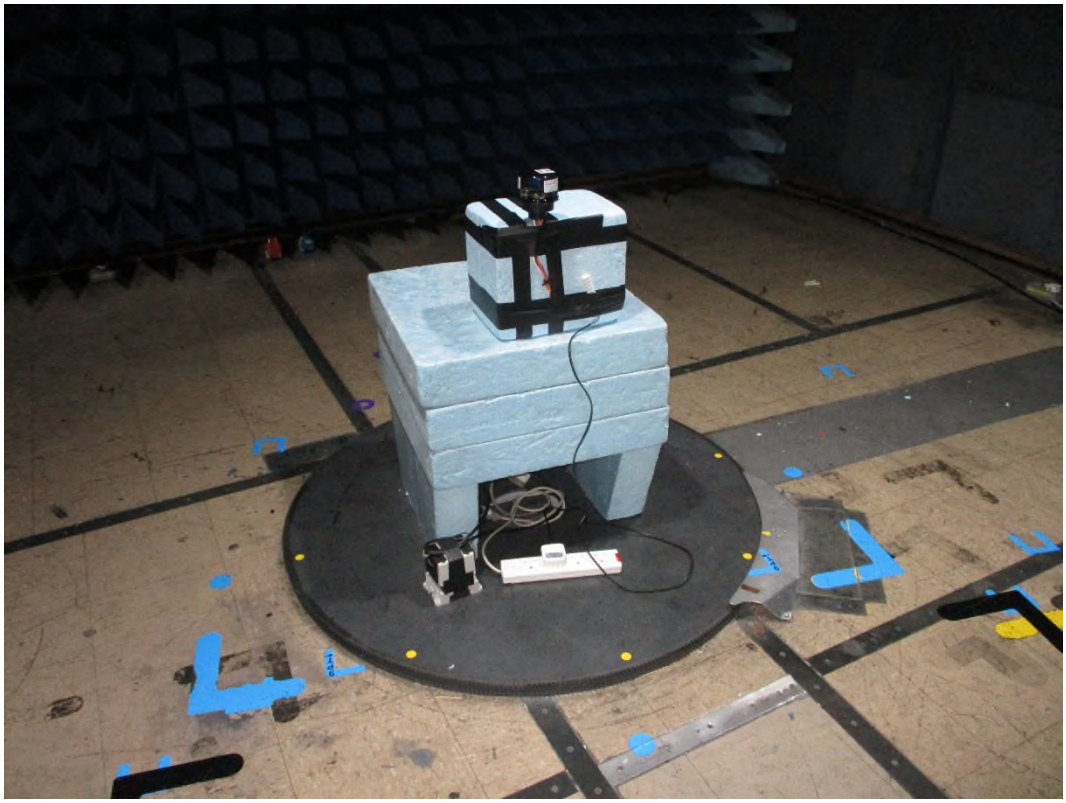
ALL RIGHTS RESERVED



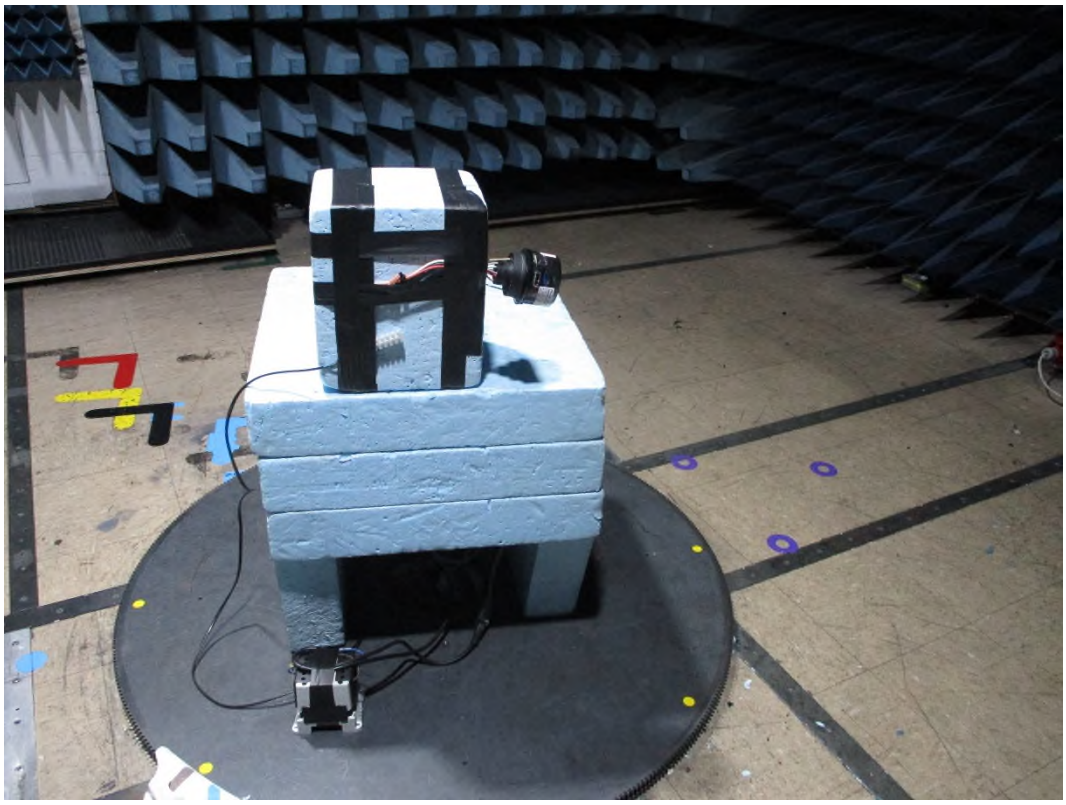
7.8 EUT ID Label

7.9 30-1000MHz Spurious emissions test set-up

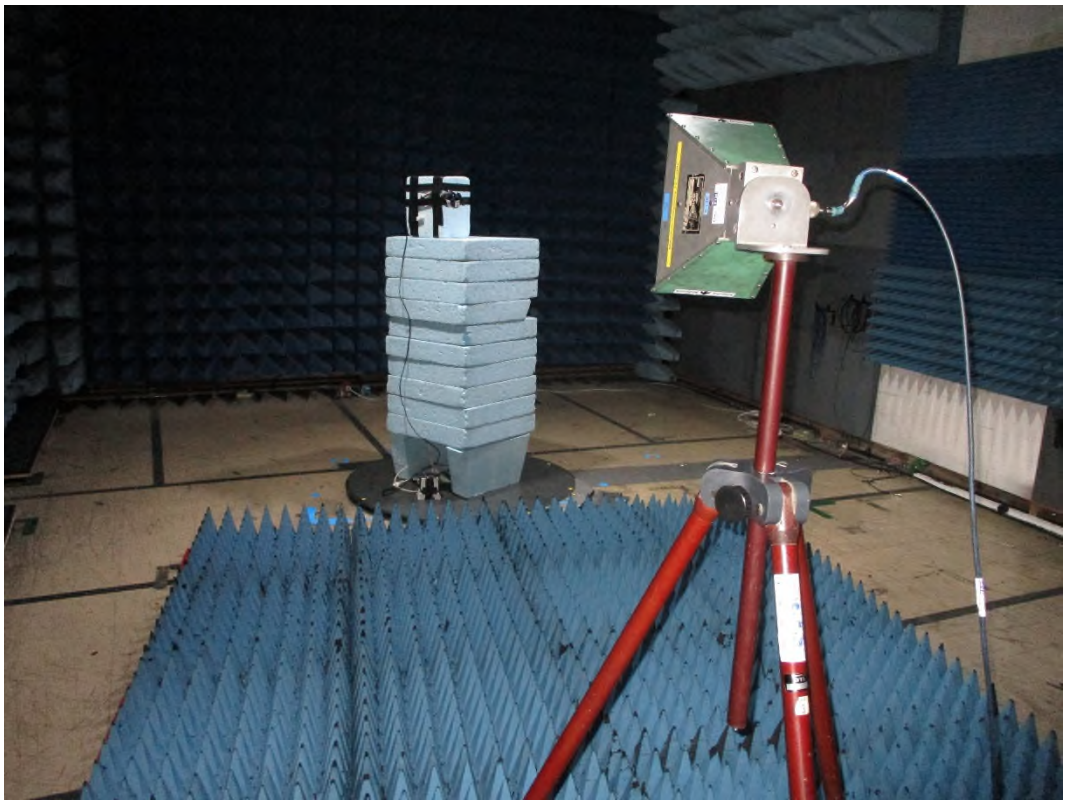


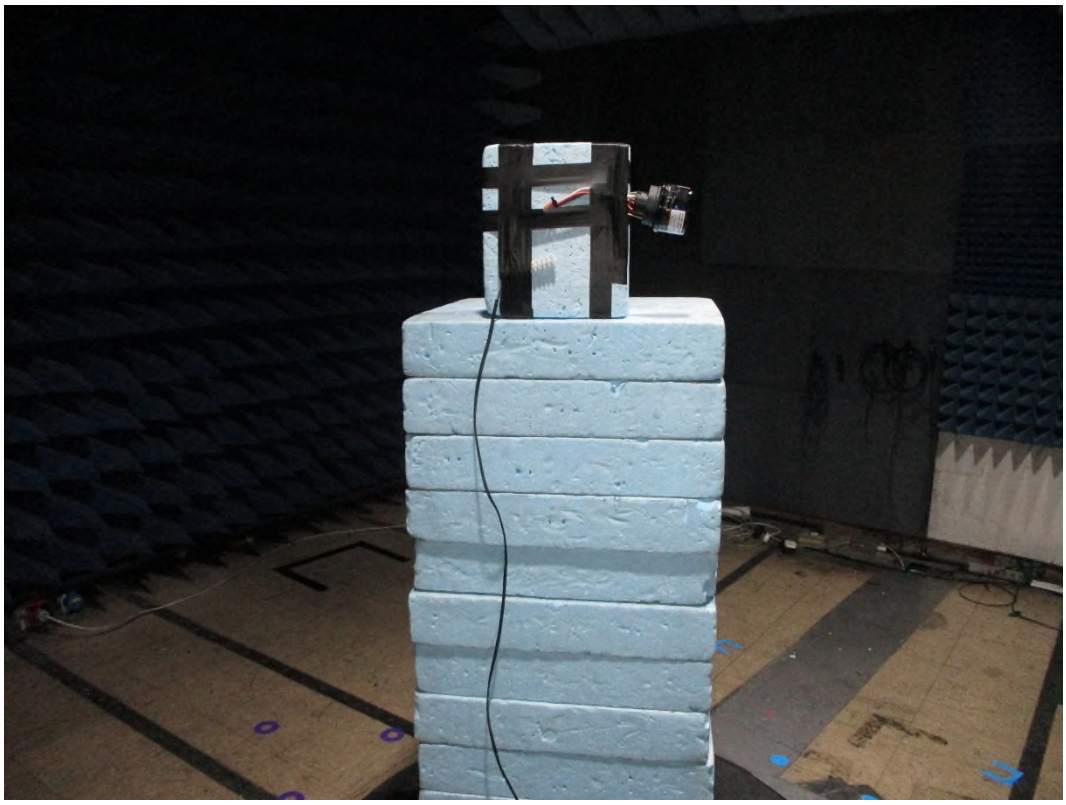


ALL RIGHTS RESERVED

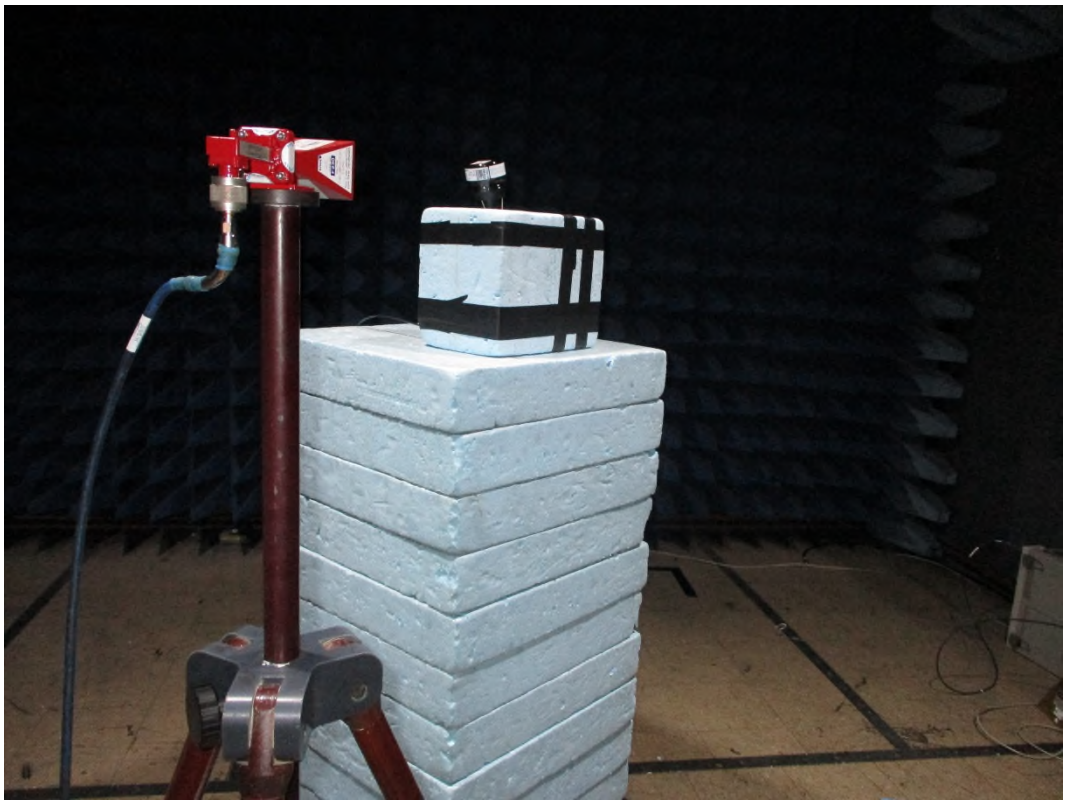


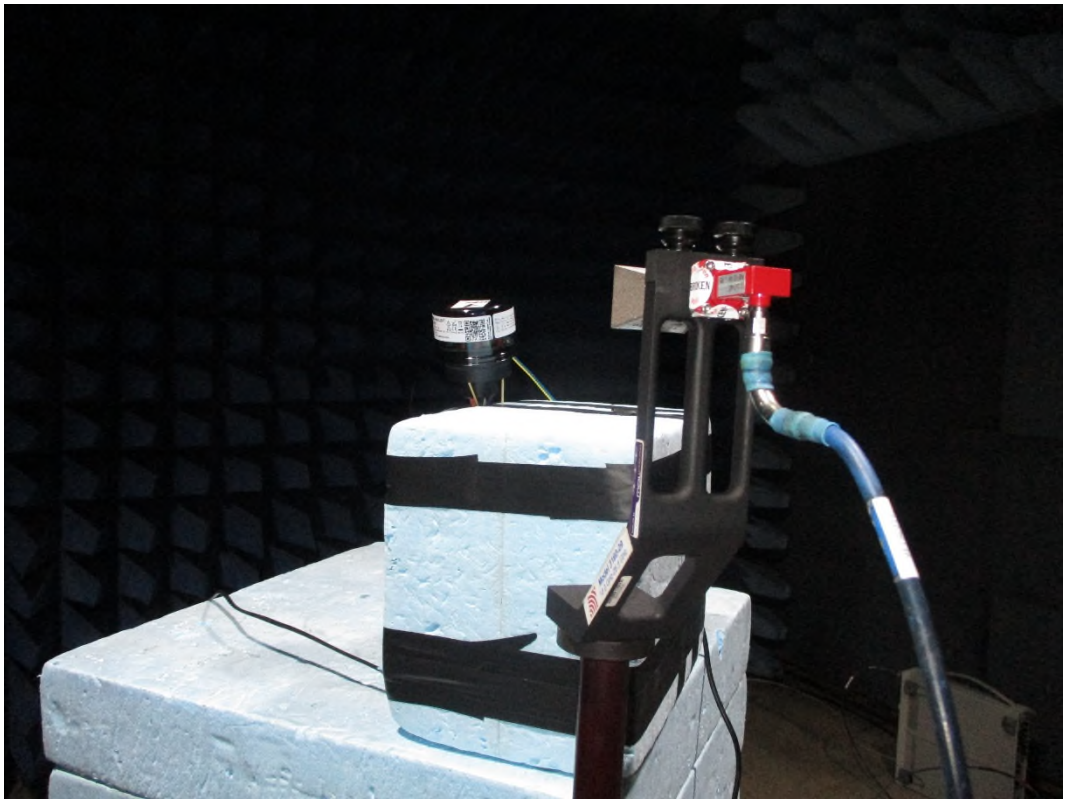
7.10 Above 1GHz Spurious emissions test set-up





ALL RIGHTS RESERVED





7.12 Radiated emission diagrams

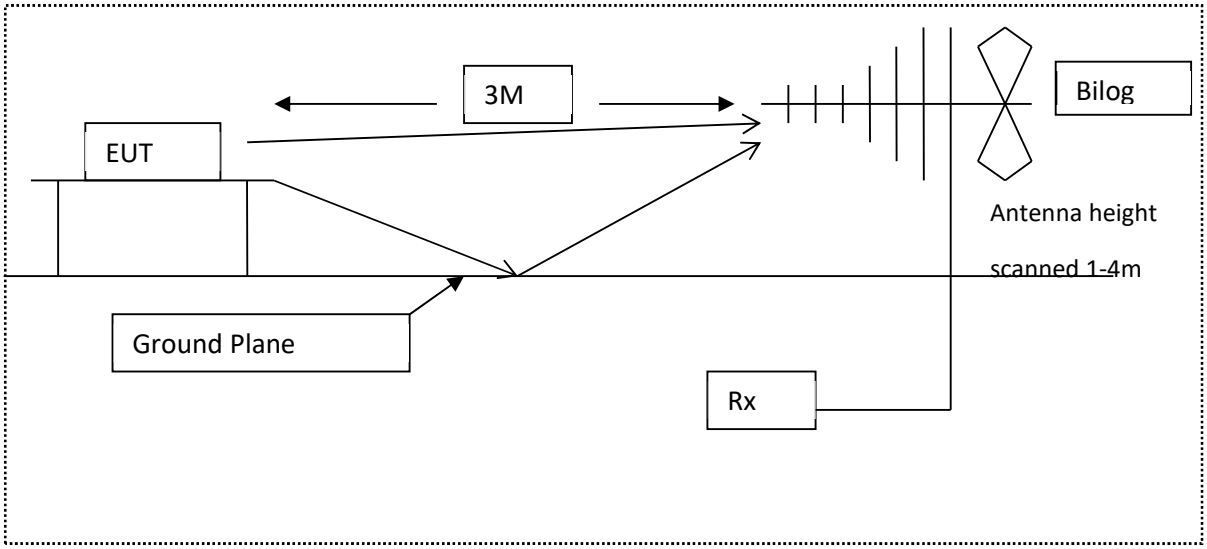


Diagram of the radiated emissions test setup 30 - 1000 MHz

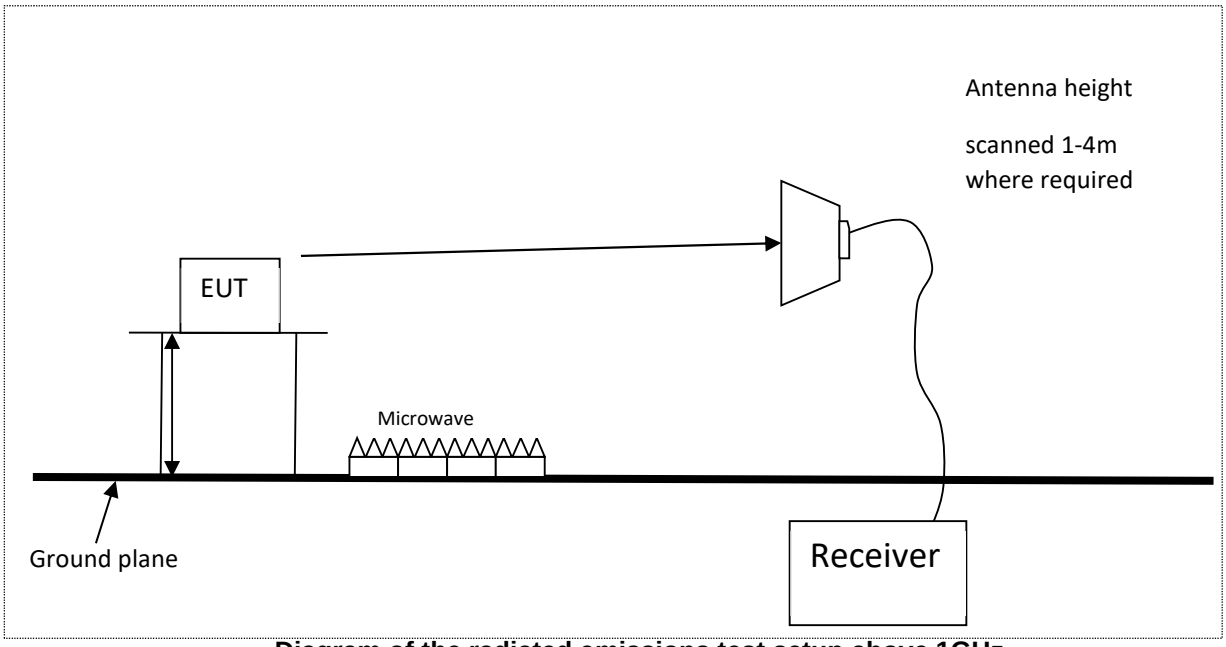


Diagram of the radiated emissions test setup above 1GHz

8 Test equipment calibration list

The following is a list of the test equipment used by Kiwa Electrical Compliance to test the unit detailed within this report. In line with our procedures, the equipment was within calibration for the period during which testing was carried out.

KEC No	Model	Description	Manufacturer	Calibrated Date	Period
E005	8447F	Pre-Amplifier 10MHz to 1000MHz	MCL Microwave+Mini-circuits	20/06/2025	12 months
E007-2	VHA9103	Antenna Bi-con	Schwarzbeck	15/05/2023	36 months
E136	3105	Horn Antenna 1 - 12.5 GHz	EMCO	15/03/2025	12 months
E268	BHA 9118	Horn Antenna 1 - 18 GHz	Schaffner	06/01/2025	12 months
E411	N9039A	9 kHz - 1 GHz RF Filter Section	Agilent Technologies	10/07/2025	12 months
E429	-	Filter Box 5 Switch Filters 0.91 GHz - 16.3 GHz	RN Electronics	28/08/2025	12 months
E533	N5182A	Signal Generator 6 GHz MXG	Agilent Technologies	07/12/2022	36 months
E624	E4440A	PSA 3 Hz - 26.5 GHz	Agilent Technologies	10/07/2025	24 months
E743	2017 4/2dB	Attenuator 4/2dB 30-1000MHz	KEC	17/02/2025	12 months
F128	AA18-10H	Attenuator SMA 10dB 18GHz	AtlanTecRF	02/10/2025	12 months
F130	AA18-20H	Attenuator SMA 20dB 18GHz	AtlanTecRF	02/10/2025	12 months
F230	3160-08	Horn Std Gain 12.4 - 18 GHz	ETS-Lindgren	#30/10/2025	12 months
LPE364	CBL6112A	Antenna BiLog 30MHz - 2GHz	Chase Electronics Ltd	04/08/2025	36 months
TMS812	MP534A MP651A	Dipole Set 200 - 1700 MHz	Anritsu	#27/10/2025	12 months
TMS82	8449B	Pre-Amplifier 1GHz - 26.5GHz	Agilent Technologies	14/01/2025	12 months

Equipment items marked # have been re-calibrated since/during date of tests.

9 Auxiliary and peripheral equipment

9.1 Customer supplied equipment

Item No.	Model No.	Description	Manufacturer	Serial No.
1	Not stated	USB to serial cable	Generic	Not stated
2	TR28	1:1 Isolating mains transformer	RF Electric S.A.	680100029

9.2 Kiwa Electrical Compliance supplied equipment

Item No	Model	Description	Manufacturer	Serial No
E465	PCR2000LA	AC Power Source 2kVA	Kikusui	HJ000995
I323	Vostro I5 3000	Laptop Computer	Dell	Not stated

ALL RIGHTS RESERVED

10 Condition of the equipment tested

In order for the EUT to produce the results shown within this report the following modifications, if any, were implemented.

10.1 Modifications before test

No modifications were made before test by Kiwa Electrical Compliance.

10.2 Modifications during test

No modifications were made during test by Kiwa Electrical Compliance.

11 Description of test sites

Site A Radio Laboratory and Anechoic Chamber

Site B Semi-Anechoic Chamber and Control Room
FCC Registration No. 654321, ISED Registration No. 5612A-4

Site C Transient Laboratory

Site D Screened Room (Conducted Immunity)

Site E Screened Room (Control Room for Site D)

Site F Screened Room (Conducted Emissions)

Site G Screened Room (Control Room for Site H)

Site H 3m Semi-Anechoic Chamber (indoor OATS)
FCC Registration No. 654321, ISED Registration No. 5612A-2, VCCI Registration No. 4065

Site J Transient Laboratory

Site K Screened Room (Control Room for Site M)

Site M 3m Semi-Anechoic Chamber (indoor OATS)
FCC Registration No. 654321, ISED Registration No. 5612A-3

Site N Radio Laboratory

Site Q Fully-Anechoic Chamber

Site OATS 3m and 10m Open Area Test Site
FCC Registration No. 654321, ISED Registration No. 5612A-1

Site R Screened Room (Conducted Immunity)

Site S Safety Laboratory

Site T Transient Laboratory

CAB identifier as issued by Innovation, Science and Economic Development Canada is UK0002
CAB identifier as issued by FCC is UK2015

12 Abbreviations and units

%	Percent
λ	Wavelength
µA/m	microAmps per metre
µV	microVolts
µW	microWatts
AC	Alternating Current
ACK	ACKnowledgement
ACP	Adjacent Channel Power
AFA	Adaptive Frequency Agility
ALSE	Absorber Lined Screened Enclosure
AM	Amplitude Modulation
Amb	Ambient
ANSI	American National Standards Institute
ATPC	Automatic Transmit Power Control
AVG	Average
AWGN	Additive White Gaussian Noise
BER	Bit Error Rate
BPSK	Binary Phase Shift Keying
BT	BlueTooth
BLE	BlueTooth Low Energy
BW	Bandwidth
ºC	Degrees Celsius
C/I	Carrier / Interferer
CAC	Channel Availability Check
CCA	Clear Channel Assessment
CEPT	European Conference of Postal and Telecommunications Administrations
CFR	Code of Federal Regulations
CISPR	Comité International Spécial des Perturbations Radioélectriques
cm	centimetre
COFDM	Coherent OFDM
COT	Channel Occupancy Time
CS	Channel Spacing
CW	Continuous Wave
DAA	Detect And Avoid
dB	deciBels
dBµA/m	deciBels relative to 1µA/m
dBµV	deciBels relative to 1µV
dBµV/m	deciBels relative to 1µV/m
dBc	deciBels relative to Carrier
dBd	deciBels relative to dipole gain
dBi	deciBels relative to isotropic gain
dBm	deciBels relative to 1mW
dBr	deciBels relative to a maximum value
dBW	deciBels relative to 1W
DC	Direct Current
DFS	Dynamic Frequency Selection
DMO	Dynamic Modulation Order
DSSS	Direct Sequence Spread Spectrum
DTA	Digital Transmission Analyser
EIRP	Equivalent Isotropic Radiated Power
emf	electromotive force
ERC	European Radiocommunications Committee
ERP	Effective Radiated Power
ETSI	European Telecommunications Standards Institute
EU	European Union
EUT	Equipment Under Test
FCC	Federal Communications Commission
FER	Frame Error Rate
FHSS	Frequency Hopping Spread Spectrum
FM	Frequency Modulation
FSK	Frequency Shift Keying
FSS	Fixed Satellite Service
g	Grams
GHz	GigaHertz
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
Hz	Hertz
IEEE	Institute of Electrical and Electronics Engineers
IF	Intermediate Frequency
ISED	Innovation Science and Economic Development
ITU	International Telecommunications Union
KDB	Knowledge DataBase

ALL RIGHTS RESERVED

kg	kilogram
kHz	kiloHertz
kPa	Kilopascal
LBT	Listen Before Talk
LISN	Line Impedance Stabilisation Network
LNA	Low Noise Amplifier
LNB	Low Noise Block
LO	Local Oscillator
m	metre
mA	milliAmps
max	maximum
Mbit/s	MegaBits per second
MCS	Modulation and Coding Scheme
MHz	MegaHertz
mic	Microphone
MIMO	Multiple Input, Multiple Output
min	minimum
mm	millimetres
ms	milliseconds
mW	milliWatts
NA	Not Applicable
NFC	Near Field Communications
nom	Nominal
nW	nanoWatt
OATS	Open Area Test Site
OBW	Occupied Band Width
OCW	Occupied Channel Width
OFDM	Orthogonal Frequency Division Multiplexing
OOB	Out Of Band
ppm	Parts per million
PER	Packet Error Rate
PK	Peak
PMR	Private Mobile Radio
PRBS	Pseudo Random Bit Sequence
PRF	Pulse Repetition Frequency
PSD	Power Spectral Density
PSU	Power Supply Unit
pW	picoWatts
QAM	Quadrature Amplitude Modulation
QP	Quasi Peak
QPSK	Quadrature Phase Shift Keying
RBW	Resolution Band Width
RED	Radio Equipment Directive
R&TTE	Radio and Telecommunication Terminal Equipment
Ref	Reference
RF	Radio Frequency
RFC	Remote Frequency Control
RFID	Radio Frequency IDentification
RLAN	Radio Local Area Network
RMS	Root Mean Square
RNSS	Radio Navigation Satellite Service
RSL	Received Signal Level
RSSI	Received Signal Strength Indicator
RTP	Room Temperature and Pressure
RTPC	Remote Transmit Power Control
Rx	Receiver
s	Seconds
SINAD	Signal to Noise And Distortion
SRD	Short Range Device
Tx	Transmitter
UKAS	United Kingdom Accreditation Service
UKCA	United Kingdom Conformity Assessed
UKRER	United Kingdom Radio Equipment Regulations
UHF	Ultra High Frequency
U-NII	Unlicensed National Information Infrastructure
USB	Universal Serial Bus
UWB	Ultra Wide Band
V	Volts
V/m	Volts per metre
VBW	Video Band Width
VHF	Very High Frequency
VSAT	Very Small Aperture Terminal
W	Watts

13 Revision History

Issue Number	Revision History	Page Reference(s)
01	First Issue	-

====== END OF TEST REPORT ======