

TEST REPORT

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-31-285-0894 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR22-SRF0132-B Page (1) of (25)	 eurofins KCTL
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1. Client

- Name : Ceres Tag LTD
- Address : 58-62 Gilbert Road, Lutwyche, QLD, Australia 4030
- Date of Receipt : 2022-05-17

2. Use of Report : Certification

3. Name of Product / Model : Animal Traceability Device / LX700W

4. Manufacturer / Country of Origin : Ceres Tag LTD / Australia

5. FCC ID : 2A2O3-LX700W

6. IC Certificate No. : 27547-LX700W

5. Date of Test : 2022-05-25 to 2022-07-06

6. Location of Test : Permanent Testing Lab On Site Testing
(Address:65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

7. Test method used : FCC Part 25 Subpart C, 25.202

RSS-170 Issue 3 November 2020

RSS-Gen Issue 5 February 2021

8. Test Result : Refer to the test result in the test report

Affirmation	<p>Tested by</p> <p>Name : Euijung Kim</p> 	<p>Technical Manager</p> <p>Name : Heesu Ahn</p> 
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2022-09-22

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REPORT REVISION HISTORY

Date	Revision	Page No
2022-08-09	Originally issued	-
2022-08-30	Updated	5,10,17,25
2022-09-22	Updated	14

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Note. The report No. KR22-SRF0132-A is superseded by the report No. KR22-SRF0132-B

General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

Statement not required by the standard or client used for type testing

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1. General information

Client : Ceres Tag LTD
Address : 58-62 Gilbert Road, Lutwyche, QLD, Australia 4030
Manufacturer : Ceres Tag LTD
Address : 58-62 Gilbert Road, Lutwyche, QLD, Australia 4030
Factory : Yomura Technologies INC
Address : No. 2-3號, Gongba Rd, Linkou District, New Taipei City, Taiwan 244
Laboratory : KCTL Inc.
Address : 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
Accreditations : FCC Site Designation No: KR0040, FCC Site Registration No: 687132
VCCI Registration No. : R-20080, G-20078, C-20059, T-20056
CAB Identifier: KR0040, ISED Number: 8035A
KOLAS No.: KT231

2. Device information

Equipment under test : Animal Traceability Device
Model : LX700W
Frequency range : 1 611.25 MHz ~ 1 618.75 MHz (Satellite)
Modulation technique : BPSK
Number of channels : 4ch
Power source : DC 3.3 V
Antenna type : PCB pattern antenna
Antenna Gain : 1.06 dBi (AX50324)
Software version : 64.3.1
Hardware version : 2202
Test device serial No. : N/A
Operation temperature : -20 °C ~ 50 °C

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2.1. Accessory information

Equipment	Manufacturer	Model	Serial No.	Power source
-	-	-	-	-

2.2. Frequency/channel operations

This device contains the following capabilities:

Satellite

Ch.	Frequency (MHz)
A	1 611.25
B	1 613.75
C	1 616.25
D	1 618.75

Table 2.2.1. Satellite

3. Antenna requirement

Requirement of FCC part section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Requirement of RSS-Gen Section 6.8:

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dB_i) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dB_i) and the required impedance for each antenna type.

-The transmitter has permanently attached PCB pattern antenna (internal antenna) on board.

4. Summary of tests

FCC Part section(s)	IC Rule reference	Parameter	Test Condition	Test results
2.1049	RSS-Gen Issue 5 (6.7)	Occupied bandwidth.	C	Pass
25.204	RSS-170 5.3.2	Power limits	C	Pass
25.202(d)	RSS-170 5.2	Frequency tolerance	C	Pass
25.216	RSS-170 5.4.3	Limits for emissions from mobile earth stations for protection of aeronautical radionavigation satellite service	C	Pass
25.202(f)	RSS-170 5.4.3	Emission limits	R/C	Pass

Notes: (N/T: Not Tested, N/A: Not Applicable, R: Radiated, C: Conducted)

1. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
2. These tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
3. The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z. It was determined that Z orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in Z orientation
4. The test procedure(s) in this report were performed in accordance as following.
 - ◆ ANSI C63.10-2013
 - ◆ ANSI C63.26-2015
 - ◆ KDB 971168 D01 Power Meas License Digital Systems v03r01

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2013.

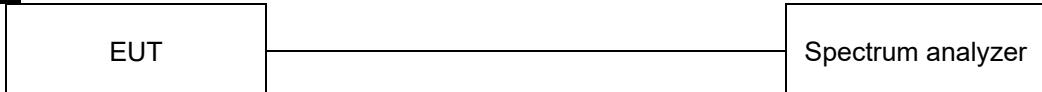
All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicated a 95 % level of confidence. The measurement data shown herein meets of exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded uncertainty (\pm)	
Radiated spurious emissions	9 kHz ~ 30 MHz	2.4 dB
	30 MHz ~ 1 000 MHz	2.3 dB
	1 000 MHz ~ 18 000 MHz	5.6 dB
Conducted emissions	9 kHz ~ 150 kHz	1.6 dB
	150 kHz ~ 30 MHz	1.7 dB

6. Test results

6.1. Occupied bandwidth

Test setup



Limit

According to 2.1049(c), the occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission

According to RSS-Gen Issue 5 (6.7), the emission bandwidth (x dB) is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated x dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth in the range of 1% to 5% of the anticipated emission bandwidth, and a video bandwidth at least 3x the resolution bandwidth.

When the occupied bandwidth limit is not stated in the applicable RSS or reference measurement method, the transmitted signal bandwidth shall be reported as the 99% emission bandwidth, as calculated or measured.

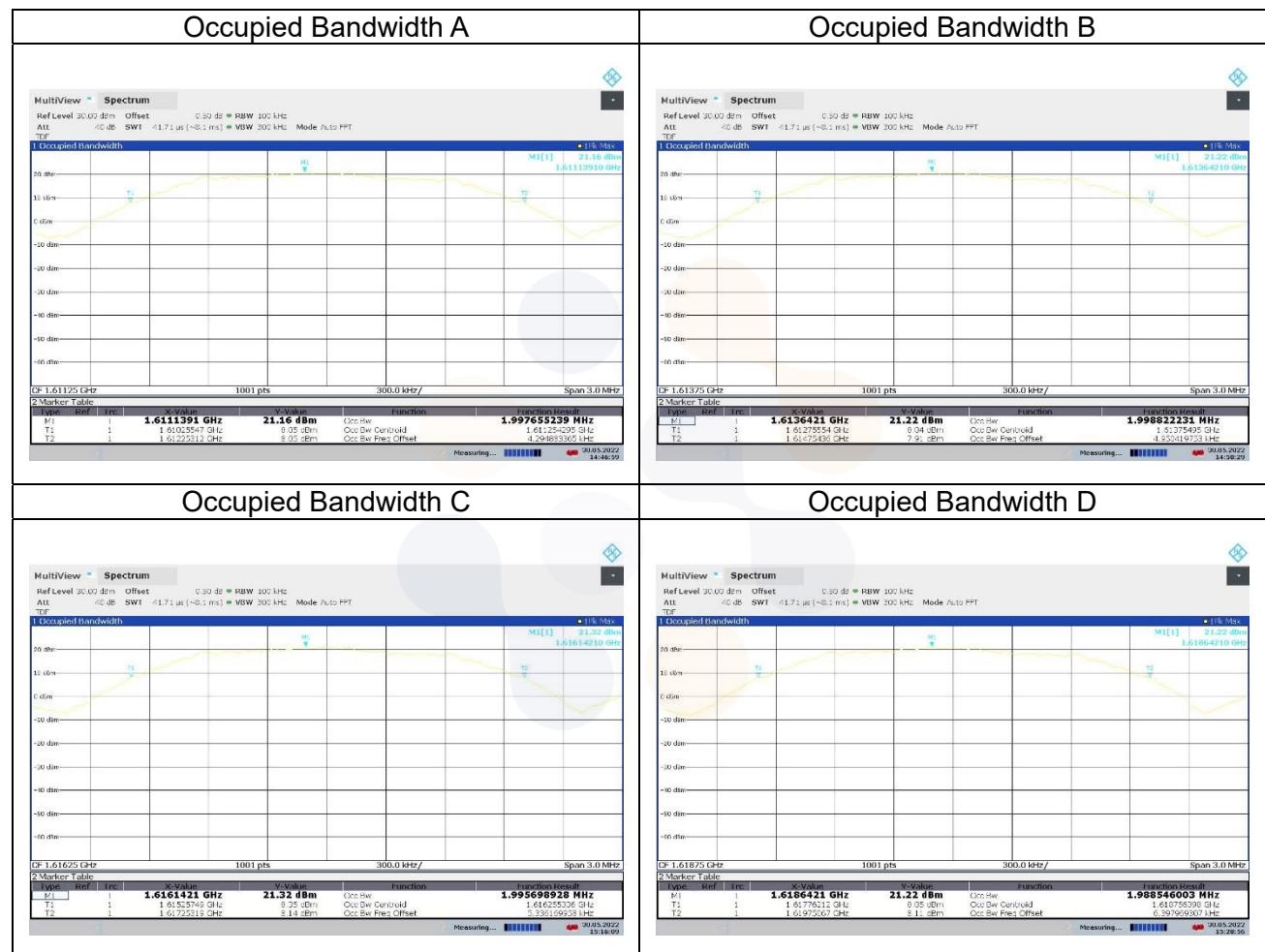
Test settings

The occupied bandwidth is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). Typical ratios, expressed in dB, are -6 dB, -20 dB, and -26 dB, corresponding to 6 dB BW, 20 dB BW, and 26 dB BW, respectively. In this subclause, the ratio is designated by “-xx dB.” The reference value is either the level of the unmodulated carrier or the highest level of the spectral envelope of the modulated signal, as stated by the applicable requirement. Some requirements might specify a specific maximum or minimum value for the “-xx dB” bandwidth; other requirements might specify that the “-xx dB” bandwidth be entirely contained within the authorized or designated frequency band.

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
- b) Span: Two times and five times the OBW.
- c) RBW = 1 % to 5 % of the OBW and VBW $\geq 3 \times$ RBW
- d) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation.
- e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- f) Detector: peak
- g) Trace mode: max hold.
- h) Allow the trace to stabilize.
- i) Determine the “-xx dB down amplitude” using ((reference value) - xx). Alternatively, this calculation may be made by using the marker-delta function of the instrument.
- j) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j)
- k) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

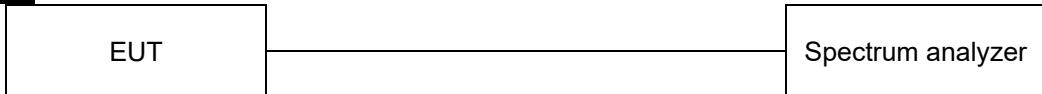
Test results

Test Mode	Frequency [MHz]	Occupied Bandwidth (99 % BW) [MHz]
A	1 611.25	1.998
B	1 613.75	1.999
C	1 616.25	1.996
D	1 618.75	1.989



6.2. Frequency tolerance

Test setup



Limit

According to 25.202(d), Frequency tolerance, Earth stations. The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001 percent of the reference frequency.

According to RSS-170 5.2, For mobile earth station equipment, the carrier frequency shall not depart from the reference frequency by more than ± 10 ppm.



Test results**[Temperature]****1 613.75 MHz**

Voltage [%]	Voltage [V]	TEMP [°C]	Measure frequency	Frequency deviation	
			[Hz]	[ppm]	[%]
100	3.30	20(Ref.)	1 613 745 404	-2.85	-0.000 29
		-20	1 613 744 156	-3.62	-0.000 36
		-10	1 613 743 704	-3.90	-0.000 39
		0	1 613 744 055	-3.68	-0.000 37
		10	1 613 745 122	-3.02	-0.000 30
		25	1 613 745 089	-3.04	-0.000 30
		30	1 613 745 074	-3.05	-0.000 31
		40	1 613 745 663	-2.69	-0.000 27
		50	1 613 746 425	-2.22	-0.000 22

1 616.25 MHz

Voltage [%]	Voltage [V]	TEMP [°C]	Measure frequency	Frequency deviation	
			[Hz]	[ppm]	[%]
100	3.30	20(Ref.)	1 616 245 424	-2.83	-0.000 28
		-20	1 616 244 036	-3.69	-0.000 37
		-10	1 616 243 856	-3.80	-0.000 38
		0	1 616 244 555	-3.37	-0.000 34
		10	1 616 245 441	-2.82	-0.000 28
		25	1 616 245 174	-2.99	-0.000 30
		30	1 616 245 078	-3.05	-0.000 31
		40	1 616 245 373	-2.86	-0.000 29
		50	1 616 246 305	-2.29	-0.000 23

[Voltage]**1 613.75 MHz**

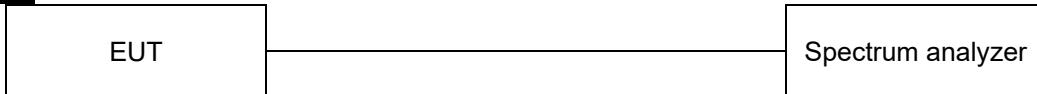
Voltage [%]	Voltage [V]	TEMP [°C]	Measure frequency	Frequency deviation	
			[Hz]	[ppm]	[%]
85.00	2.81	20.00	1 613 747 989	-1.25	-0.000 13
115.00	3.80	20.00	1 613 747 185	-1.74	-0.000 17

1 616.25 MHz

Voltage [%]	Voltage [V]	TEMP [°C]	Measure frequency	Frequency deviation	
			[Hz]	[ppm]	[%]
85.00	2.81	20.00	1 616 248 032	-1.22	-0.000 12
115.00	3.80	20.00	1 616 247 264	-1.69	-0.000 17

6.3. Power limits

Test setup



Limit

According to 25.204, (a) In bands shared coequally with terrestrial radio communication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station, other than an ESV, operating in frequency bands between 1 and 15 GHz, shall not exceed the following limits except as provided for in paragraph (c) of this section:

- + 40 dBW in any 4 kHz band for $\theta \leq 0^\circ$
- + 40 + 3 θ dBW in any 4 kHz band for $0^\circ < \theta \leq 5^\circ$

where θ is the angle of elevation of the horizon viewed from the center of radiation of the antenna of the earth station and measured in degrees as positive above the horizontal plane and negative below it.

(b) In bands shared coequally with terrestrial radiocommunication services, the equivalent isotropically radiated power transmitted in any direction towards the horizon by an earth station operating in frequency bands above 15 GHz shall not exceed the following limits except as provided for in paragraph (c) of this section:

- + 64 dBW in any 1 MHz band for $\theta \leq 0^\circ$
- + 64 + 3 θ dBW in any 1 MHz band for $0^\circ < \theta \leq 5^\circ$

where θ is as defined in paragraph (a) of this section.

(c) For angles of elevation of the horizon greater than 5° there shall be no restriction as to the equivalent isotropically radiated power transmitted by an earth station towards the horizon.

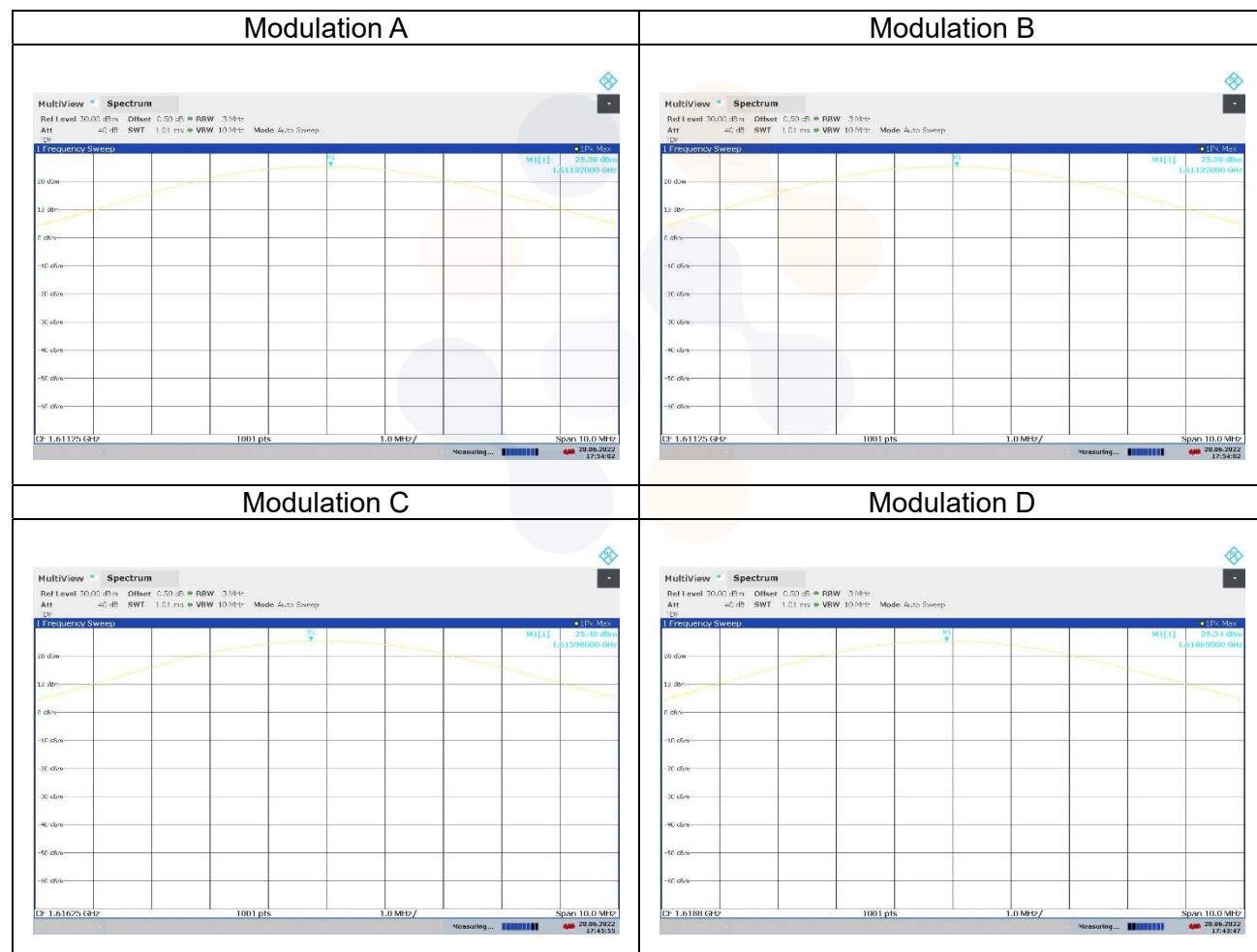
(d) Notwithstanding the e.i.r.p. and e.i.r.p. density limits specified in the station authorization, each earth station transmission shall be conducted at the lowest power level that will provide the required signal quality as indicated in the application and further amended by coordination agreements.

According to RSS-170 5.3.2, The application for MES certification shall state the MES e.i.r.p. that is necessary for satisfactory communication. The maximum permissible e.i.r.p. will be the stated e.i.r.p. plus a 2 dB margin. If a detachable antenna is used, the certification application shall state the recommended antenna type and manufacturer, the antenna gain and the maximum transmitter output power at the antenna terminal.

Test results

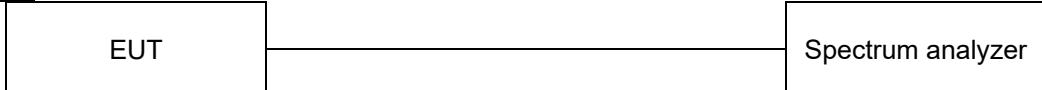
Test Mode	Frequency [MHz]	Output power [dB m]	ANT. Gain [dB i]	Result e.i.r.p. [dB m]	Stated e.i.r.p. [dB m]	Maximum permissible e.i.r.p. [dB m]
A	1 611.25	25.38	1.06	26.44	27.00	29.00
B	1 613.75	25.49	1.06	26.55	27.00	29.00
C	1 616.25	25.40	1.06	26.46	27.00	29.00
D	1 618.75	25.34	1.06	26.40	27.00	29.00

Note. The power measurements were found to comply with 25.204, due to the equivalent isotropically radiated power transmitted in any direction towards the horizon by the EUT is far below the limit.



6.4. Limits on emissions from mobile earth stations for protection of aeronautical radionavigation-satellite service

Test setup



Limit

According to 25.216(c), The e.i.r.p. density of emissions from mobile earth stations with assigned uplink frequencies between 1610 MHz and 1660.5 MHz shall not exceed -70 dB W /MHz , averaged over any 2 millisecond active transmission interval, in the band 1559-1605 MHz. The e.i.r.p. of discrete emissions of less than 700 Hz bandwidth from such stations shall not exceed -80 dB W , averaged over any 2 millisecond active transmission interval, in the 1559-1605 MHz band.

(f) Mobile earth stations with assigned uplink frequencies in the 1610–1660.5 MHz band shall suppress the power density of emissions in the 1605–1610 MHz band to an extent determined by linear interpolation from -70 dB W /MHz (-40 dB m/MHz) at 1605 MHz to -10 dB W /MHz (20 dB m/MHz) at 1610 MHz.

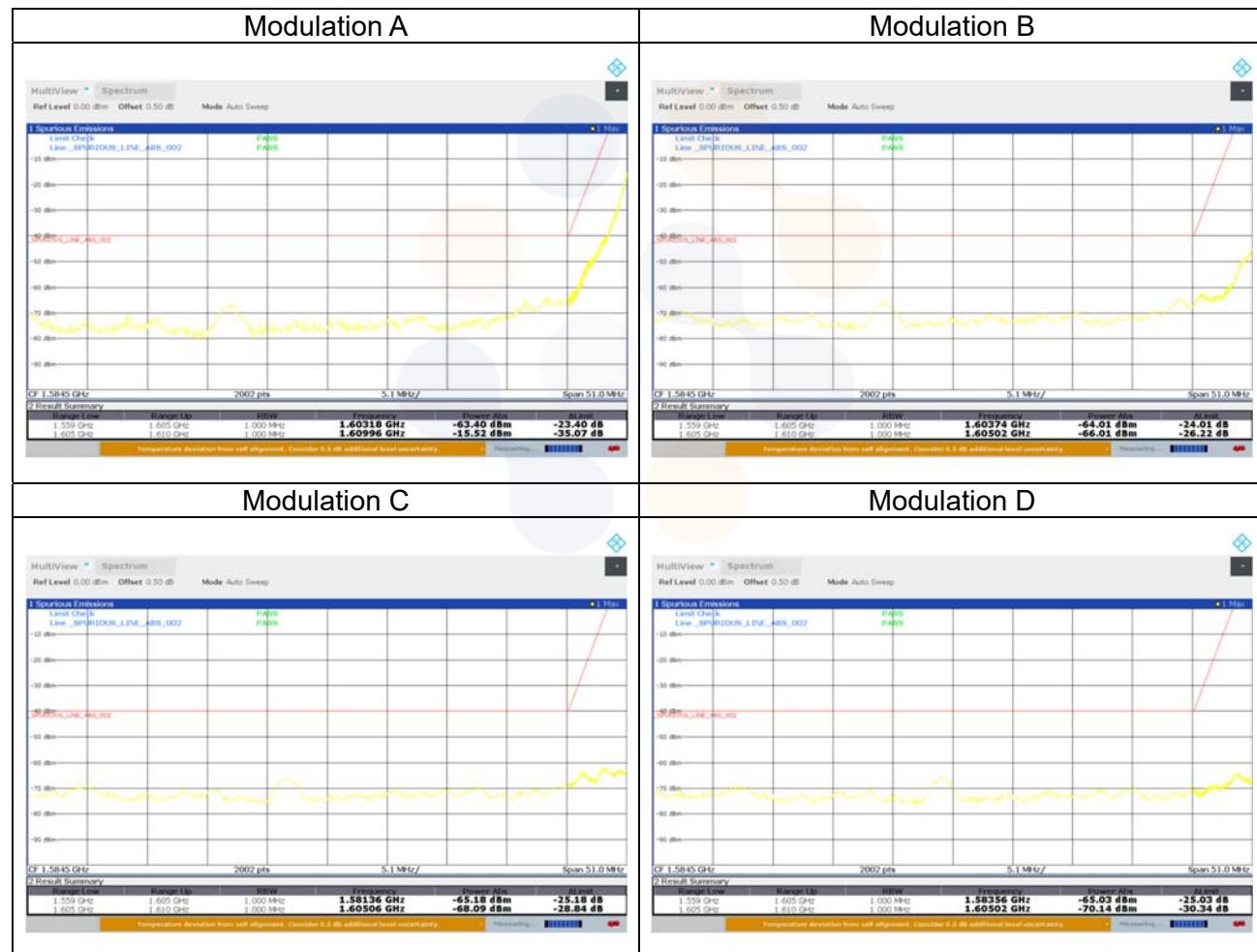
(i) The e.i.r.p density of carrier-off state emissions from mobile earth stations manufactured more than six months after Federal Register publication of the rule changes adopted in FCC 03-283 with assigned uplink frequencies between 1 and 3 GHz shall not exceed -80 dB W /MHz in the 1559-1610 MHz band averaged over any two millisecond interval.

According to RSS-170 5.4.3, Mobile earth stations with transmitting frequencies between 1610 MHz and 1626.5 MHz shall have the e.i.r.p. density of unwanted emissions in the band 1605-1610 MHz, averaged over any 2-ms active transmission interval, not exceed the following limits:

- (1) -70 dB W /MHz at 1605 MHz, linearly interpolated to -10 dB W /MHz at 1610 MHz for broadband emissions; and
- (2) -80 dB W /kHz at 1605 MHz, linearly interpolated to -20 dB W /kHz at 1610 MHz for discrete emissions.

Test results

Test Mode	Frequency [MHz]	Measured Frequency [MHz]	Result [dB m/MHz]	Limit [dB m/MHz]
A	1 611.25	1 603.18	-63.40	-40.00
		1 609.96	-15.52	20.00
B	1 613.75	1 603.74	-64.01	-40.00
		1 605.02	-66.01	20.00
C	1 616.25	1 581.36	-65.18	-40.00
		1 605.06	-68.09	20.00
D	1 618.75	1 583.56	-65.03	-40.00
		1 605.02	-70.14	20.00



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6.5. Field strength of spurious emissions

Limit

According to 25.202(f), the mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the schedule

- (1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB;
- (2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB;
- (3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts;
- (4) In any event, when an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in paragraphs (f) (1), (2) and (3) of this section.

According to RSS-170 5.4, The transmitter unwanted emissions shall be measured for all channel bandwidths with the carrier frequency set at both the highest and lowest channels in which the equipment is designed to operate.

The e.i.r.p. density of unwanted and carrier-off state emissions outlined in this section (Section 5.4) shall be averaged over any 2-ms active transmission using an RMS detector with a resolution bandwidth of 1 MHz for broadband emissions and a resolution bandwidth of 1 kHz for discrete emissions, unless stated otherwise.

5.4.3.1 Mobile Earth Stations in All Frequency Bands

The average power of unwanted emissions shall be attenuated below the average output power, P (dB W), of the transmitter, as specified below:

- (1) 25 dB in any 4 kHz band, the centre frequency of which is offset from the channel frequency by more than 50%, up to and including 100% of the occupied bandwidth or necessary bandwidth, whichever is greater;
- (2) 35 dB in any 4 kHz band, the centre frequency of which is offset from the channel frequency by more than 100%, up to and including 250% of the occupied bandwidth or necessary bandwidth, whichever is greater; and
- (3) $43 + 10 \log p$ (watts) in any 4 kHz band, the centre frequency of which is offset from the channel frequency by more than 250% of the occupied bandwidth or necessary bandwidth, whichever is greater.

5.4.4 Carrier-off State Emissions

Mobile equipment with transmitting frequencies between 1 GHz and 3 GHz shall have the e.i.r.p. density of carrier-off state emissions in the band 1559-1610 MHz not exceed -80 dB W /MHz.

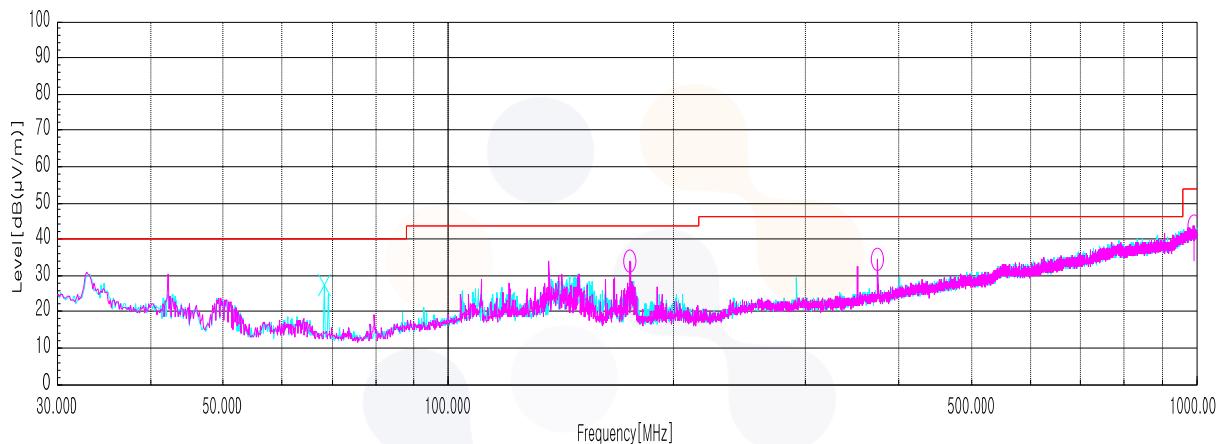
Test results (Emission Mask)

Test Mode	Frequency [MHz]	Measured Frequency [MHz]	Result [dB m]
A	1 611.25	1 612.26	-9.21
		1 613.32	-16.96
B	1 613.75	1 614.76	-8.40
		1 615.77	-15.18
C	1 616.25	1 617.26	-8.99
		1 618.27	-16.46
D	1 618.75	1 619.76	-8.29
		1 620.77	-15.84



Test results (Below 1 000 MHz)- Worst case: Modulation B 1 613.75 MHz

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ N))	(dB)	(dB)	(dB(μ N/m))	(dB(μ N/m))	(dB)
Peak data							
68.32	V	44.10	12.50	-29.38	27.22	40.00	12.78
175.02	H	45.80	15.90	-27.38	34.32	43.50	9.18
375.08	H	38.20	22.70	-24.80	36.10	46.00	9.90
992.73	H	32.90	30.10	-17.90	45.10	54.00	8.90

Horizontal/Vertical

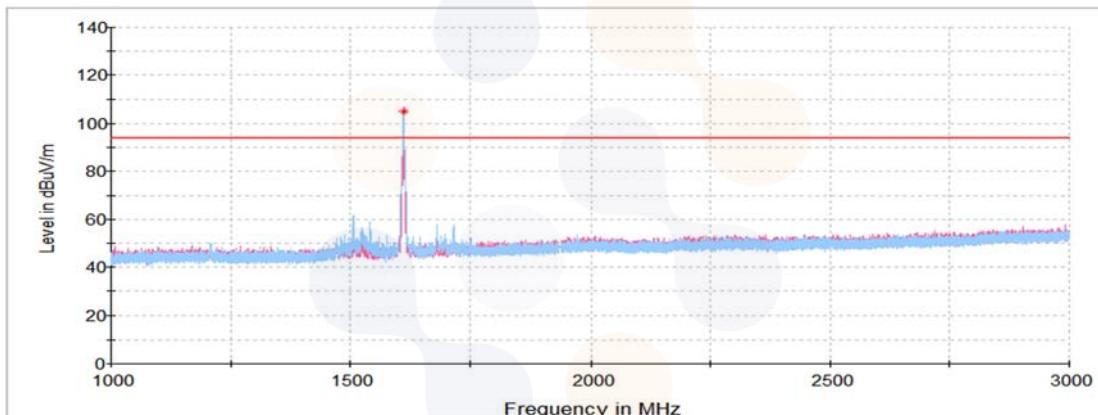
Test results (Above 1 000 MHz)

Modulation A

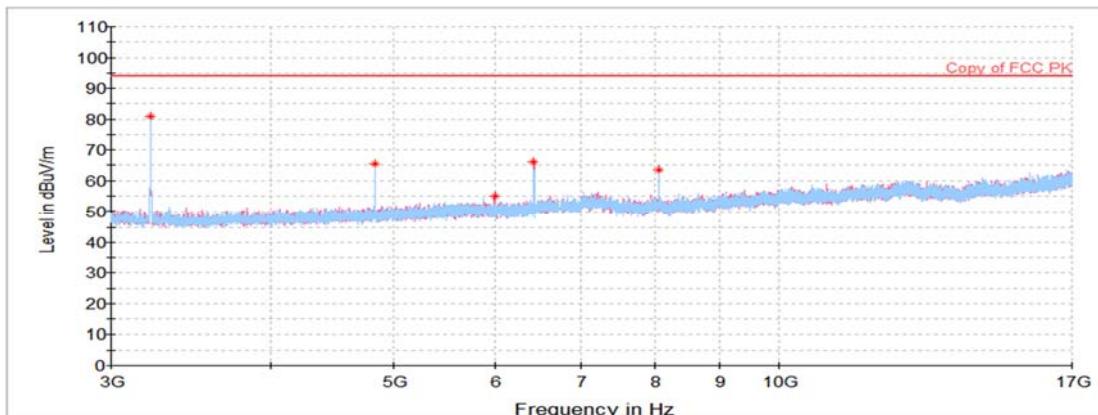
Frequency (MHz)	Pol. (V/H)	Reading (dB(μV))	Ant. Factor (dB)	Amp. + Cable (dB)	Result (dB(μV/m))	Limit (dB(μV/m))	Margin (dB)
Peak data							
1 611.25*	H	124.30	28.46	-47.75	105.01	94.00	-
3 221.69	H	94.48	33.04	-46.50	81.02	94.00	12.98
4 834.03	H	76.03	33.63	-44.30	65.36	94.00	28.64
6 000.13	V	62.42	35.20	-42.47	55.15	94.00	38.85
6 444.78	V	73.02	35.29	-42.05	66.26	94.00	27.74
8 056.59	H	70.97	35.50	-42.99	63.48	94.00	30.52

*Fundamental

Horizontal/Vertical for Fundamental



Horizontal/Vertical for Spurious

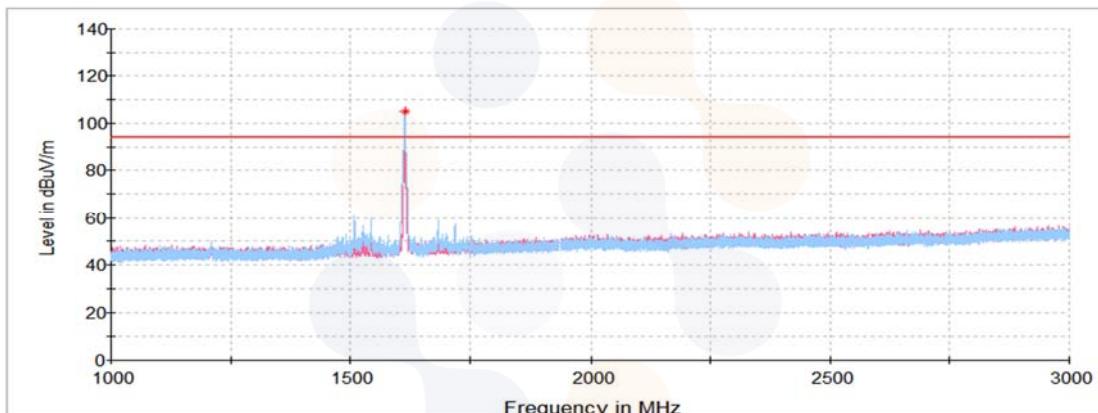


Modulation B

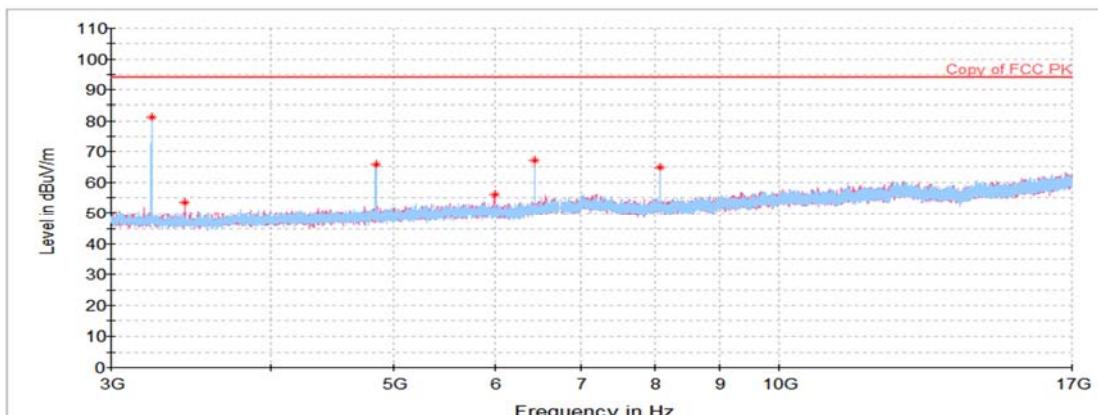
Frequency (MHz)	Pol.	Reading (dB(μ N))	Ant. Factor (dB)	Amp. + Cable (dB)	Result (dB(μ N/m))	Limit (dB(μ N/m))	Margin (dB)
Peak data							
1 613.81*	H	124.30	28.47	-47.75	105.02	94.00	-
3 227.53	H	94.59	33.05	-46.49	81.15	94.00	12.85
3 426.75	V	66.50	33.09	-46.15	53.44	94.00	40.56
4 840.94	H	76.58	33.63	-44.29	65.92	94.00	28.08
6 000.13	V	63.12	35.20	-42.47	55.85	94.00	38.15
6 454.88	V	73.92	35.29	-42.04	67.17	94.00	26.83
8 069.34	H	72.29	35.50	-42.98	64.81	94.00	29.19

*Fundamental

Horizontal/Vertical for Fundamental



Horizontal/Vertical for Spurious

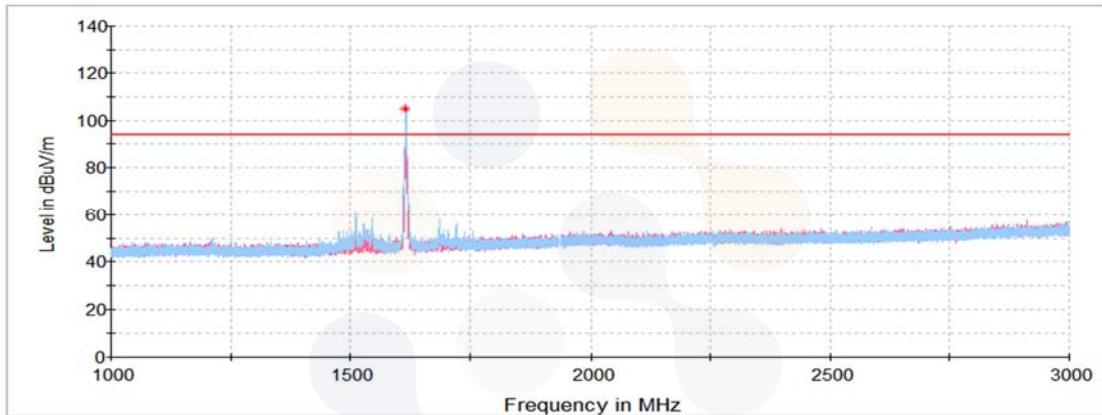


Modulation C

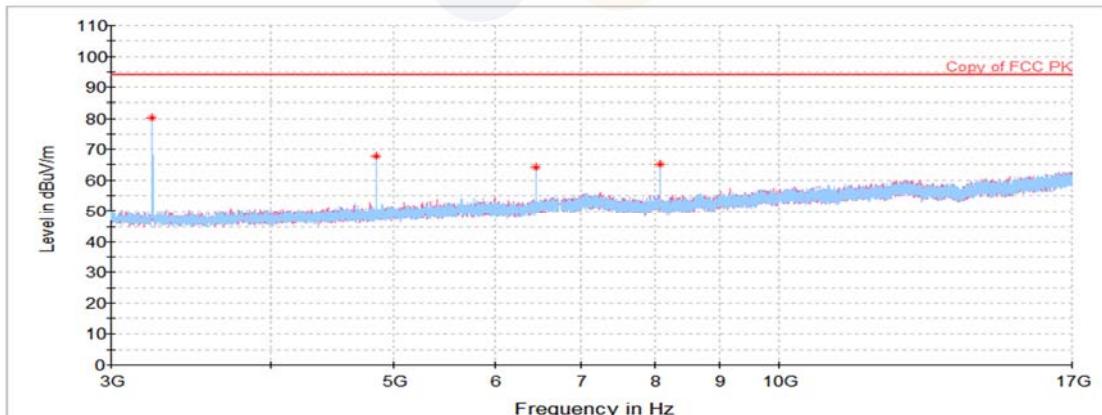
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ N))	(dB)	(dB)	(dB(μ N/m))	(dB(μ N/m))	(dB)
Peak data							
1 616.25*	H	124.29	28.49	-47.74	105.04	94.00	-
3 232.84	H	93.50	33.05	-46.48	80.07	94.00	13.93
4 848.91	H	78.35	33.63	-44.28	67.70	94.00	26.30
6 464.97	V	70.84	35.29	-42.03	64.10	94.00	29.90
8 081.03	H	72.65	35.50	-42.98	65.17	94.00	28.83

*Fundamental

Horizontal/Vertical for Fundamental



Horizontal/Vertical for Spurious

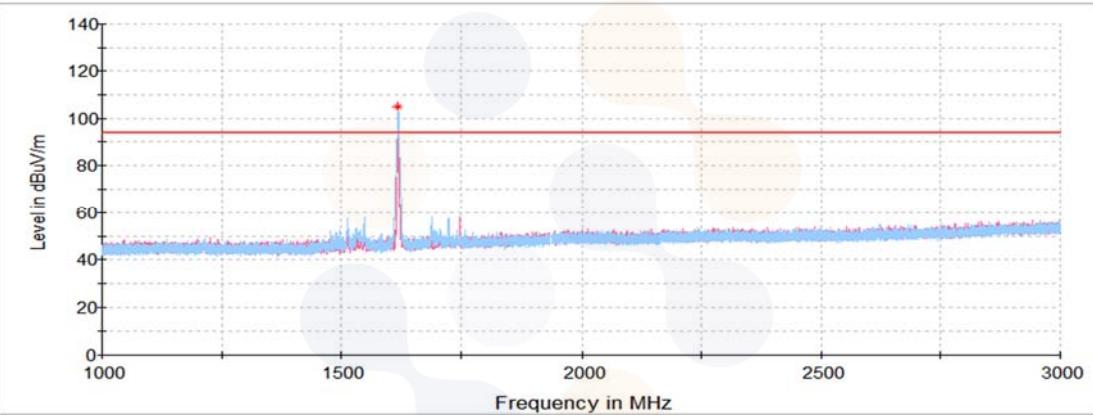


Modulation D

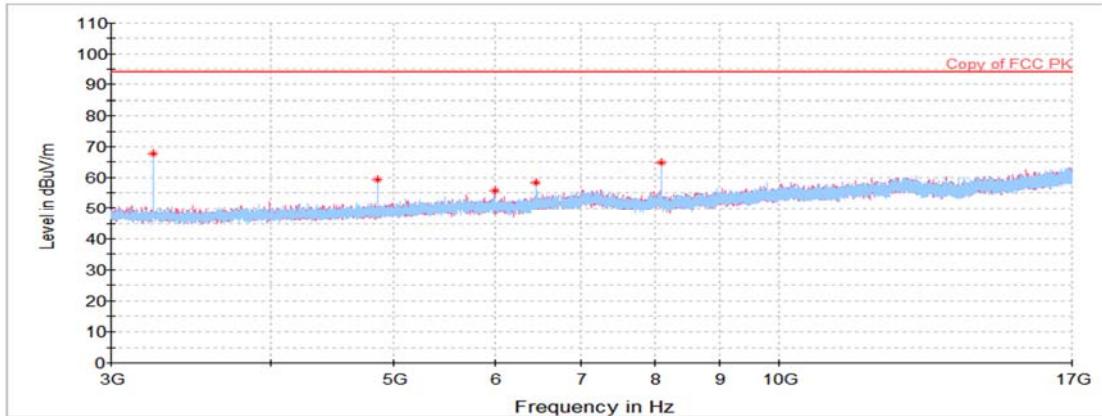
Frequency (MHz)	Pol.	Reading (dB(μ N))	Ant. Factor (dB)	Amp. + Cable (dB)	Result (dB(μ N/m))	Limit (dB(μ N/m))	Margin (dB)
Peak data							
1 618.81*	H	124.26	28.51	-47.74	105.03	94.00	-
3 237.09	H	81.01	33.05	-46.47	67.59	94.00	26.41
4 856.34	H	69.86	33.63	-44.27	59.22	94.00	34.78
6 000.13	V	62.82	35.20	-42.47	55.55	94.00	38.45
6 475.06	H	65.01	35.30	-42.02	58.29	94.00	35.71
8 093.78	H	72.38	35.50	-42.97	64.91	94.00	29.09

*Fundamental

Horizontal/Vertical for Fundamental

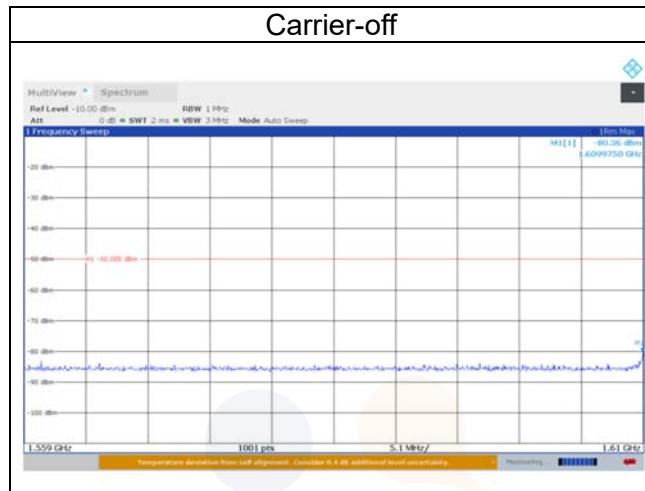


Horizontal/Vertical for Spurious



Test results (Carrier-off state emission)

Measured Frequency [MHz]	Result [dB m/MHz]	Limit [dB m/MHz]
1 609.98	-80.36	-50.00



7. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Vector Signal Generator	R&S	SMBV100A	257566	23.07.04
Signal Generator	R&S	SMB100A	176206	23.01.19
Spectrum Analyzer	R&S	FSW26	101353	22.12.21
Spectrum Analyzer	R&S	FSV40	100989	22.12.21
Horn antenna	ETS.lindgren	3117	155787	22.10.05
Attenuator	API Inmet	40AH2W-10	12	23.05.03
AMPLIFIER	LTC Microwave	LLA01185522Q-B	141	23.06.23
Antenna Mast	Innco Systems	MA4640-XP-ET	-	-
Turn Table	Innco Systems	CO3000	1175/45850319/P	-
Attenuator	Aeroflex/Weinschel	WA-48-30-34	-	22.12.21
EMI TEST RECEIVER	R&S	ESCI7	100732	23.03.04
Bi-Log Antenna	TESEQ	CBL 6112D	55545	23.01.14
Amplifier	SONOMA INSTRUMENT	310N	284608	22.08.19
ATTENUATOR	KEYSIGHT	8491B-6dB	MY39271060	23.01.14
ISOLATION TRANSFORMER	ONETECH CO., LTD	OT-IT500VA	OTR1-16026	23.03.28
Antenna Mast	Innco Systems	MA4000-EP	303	-
Turn Table	Innco Systems	DT2000	79	-
Temperature Chamber	ESPEC CORP.	SU-221	92005736	23.06.22

End of test report