TEST REPORT

KCTL Inc.
65, Sinwon-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16677, Korea
TEL: 82-31-285-0894 FAX: 82-505-299-8311
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1. Client

- Name : DASH COMPANY Inc.
- Address : 109, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
- Date of Receipt : 2021-05-31

2. Use of Report : Certification

3. Name of Product / Model : IoT(Internet of Things) terminal / DC-20A

4. Manufacturer / Country of Origin : DASH COMPANY Inc. / Korea

5. FCC ID : 2A2H7-DC-20A

6. Date of Test : 2021-07-13 to 2021-07-27

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

8. Test method used : FCC Part 2
FCC Part 24 subpart E
FCC Part 27 subpart C

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

Affirmation	Tested by Name : Sumin Kim (Signature)	Technical Manager Name : Hyeonsu Jang (Signature)

2021-07-28

KCTL Inc.

REPORT REVISION HISTORY

Date	Revision	Page No
2021-07-28	Originally issued	-

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**

CONTENTS

1. General information

Client	:	DASH COMPANY Inc.
Address	:	109, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
Manufacturer	:	DASH COMPANY Inc.
Address	:	109, Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
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	:	IoT(Internet of Things) terminal
Model	:	DC-20A
Frequency range	:	2 402 ㎒ ~ 2 480 ㎒ (Bluetooth Low Energy)
		2 412 ㎒ ~ 2 472 ㎒ (WIFI 802.11b/g/n(HT20))
		2 422 ㎒ ~ 2 462 ㎒ (WIFI 802.11n(HT40))
		1 559 ㎒ ~ 1 610 ㎒ (GNSS)
		1 710 ㎒ ~ 1 755 ㎒ (LTE Band 4)
		1 850 ㎒ ~ 1 910 ㎒ (LTE Band 2)
Modulation technique	:	GFSK (Bluetooth Low Energy)
		DSSS, OFDM (WIFI 802.11b/g/n(HT20/40))
		QPSK, 16-QAM (LTE)
Number of channels	:	40 ch (Bluetooth Low Energy)
		13 ch (WIFI 802.11b/g/n(HT20))
		9 ch (WIFI 802.11n(HT40))
Power source	:	DC 36 ㅤV, DC 3.6 ㅤV(Built-in battery)
Antenna specification	:	Pattern Antenna (LTE)
Antenna gain	:	0.39 ㅤdBi (LTE Band 4)
		1.07 ㅤdBi (LTE Band 2)
Software version	:	VER1.02
Hardware version	:	VER1.0
Operation temperature	:	-20℃ ~ 60℃

2.1. Frequency/channel operations

This device contains the following capabilities:
LTE Band 4, LTE Band 2

LTE Band 4

Ch.	Frequency (MHz)
19957	1 710.7
20175	1 732.5
20393	1 754.3

Table 2.1.1. 1.4M BW

Ch.	Frequency (MHz)
19965	1 711.5
20175	1 732.5
20385	1 753.5

Table 2.1.2. 3M BW

Ch.	Frequency (MHz)
19975	1 712.5
20175	1 732.5
20375	1 752.5

Table 2.1.3. 5M BW

Ch.	Frequency (MHz)
20000	1 715.0
20175	1 732.5
20350	1 750.0

Table 2.1.4. 10M BW

Ch.	Frequency (MHz)
20025	1 717.5
20175	1 732.5
20325	1 747.5

Table 2.1.5. 15M BW

Ch.	Frequency (MHz)
20050	1 720.0
20175	1 732.5
20300	1 745.0

Table 2.1.6. 20M BW

LTE Band 2

Ch.	Frequency (MHz)
18607	1 850.7
18900	1 880.0
19193	1 909.3

Table 2.1.7. 1.4M BW

Ch.	Frequency (MHz)
18615	1 851.5
18900	1 880.0
19185	1 908.5

Table 2.1.8. 3M BW

Ch.	Frequency (MHz)
18625	1 852.5
18900	1 880.0
19175	1 907.5

Table 2.1.9. 5M BW

Ch.	Frequency (MHz)
18650	1 855.0
18900	1 880.0
19150	1 905.0

Table 2.1.10. 10M BW

Ch.	Frequency (MHz)
18675	1 857.5
18900	1 880.0
19125	1 902.5

Table 2.1.11. 15M BW

Ch.	Frequency (MHz)
18700	1 860.0
18900	1 880.0
19100	1 900.0

Table 2.1.12. 20M BW

3. Summary of tests

FCC Part section(s)	Parameter	Test Limit	Test Condition	Test results
27.50(b)(10) 27.50(c)(10)	Effective Radiated Power	< 3 Watts max. ERP	Radiated	Pass
24.232(c) 27.50(h)(2)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP	Radiated	Pass
2.1053 24.238(a) 27.53(c),(f), (g),(h), (m)	Radiated Spurious Emissions	<43 + 10Log$_{10}$(P) ㏈ <55 + 10Log$_{10}$(P) ㏈ <-70 ㏈W/㎒ EIRP - Wideband <-80 ㏈W/㎒ EIRP- Narrowband	Radiated	Pass

Notes: (N/T: Not Tested, N/A: Not Applicable)

1. The test results shown in the following sections represent the worst case emissions.
2. The test procedure(s) in this report were performed in accordance as following.
   - ANSI C63.26-2015
   - ANSI/TIA-603-E-2016
   - KDB 971168 D01 v03r01
3. Built-in battery(DC 3.6 Ⅴ) only works with GPS.

4. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.4-2014.

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.

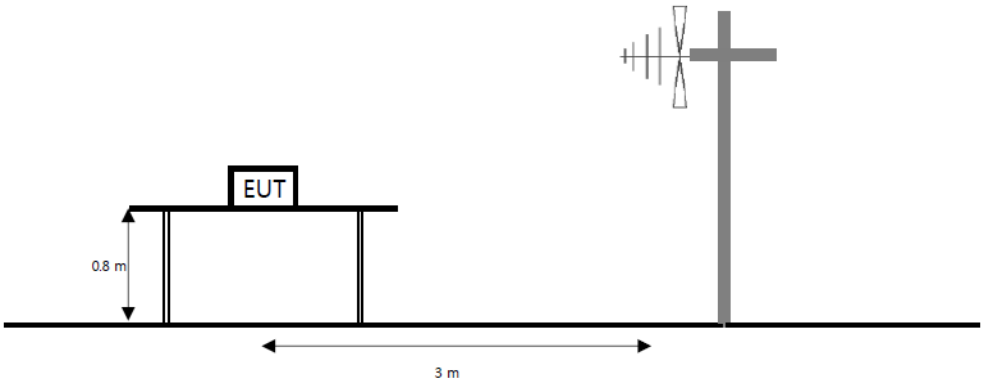
Parameter	Expanded uncertainty(±)	
Radiated spurious emissions	Below 1 000 ㎒	4.3 dB
	1 000 ㎒ ~ 18 000 ㎒	3.8 dB
	Above 1 8000 ㎒	3.8 dB

5. Test results

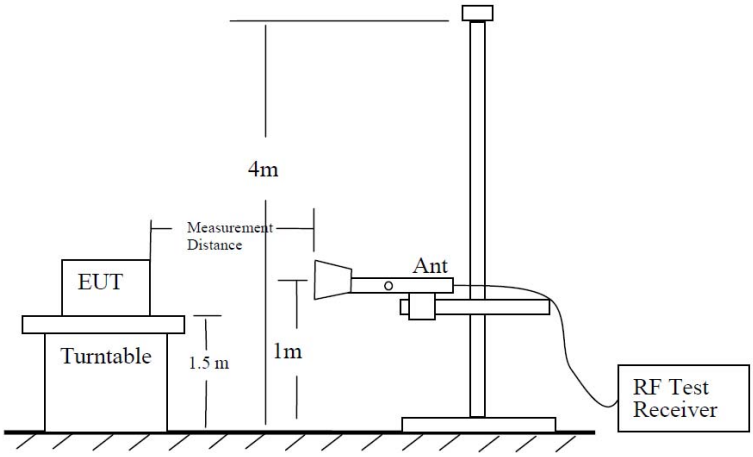
5.1. Radiated Power (ERP/EIRP)

Test setup

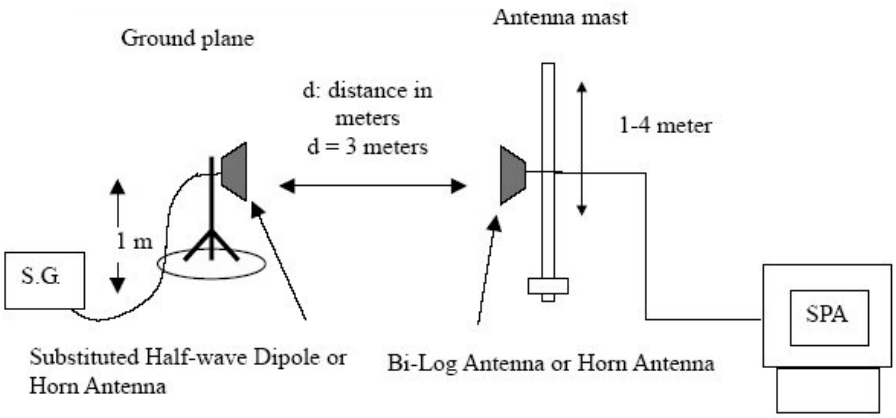
The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 ㎓ to the tenth harmonic of the highest fundamental frequency or to 40 ㎓ emissions, whichever is lower.



The diagram below shows the test setup for substituted method.



Limit

According to §24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to §27.50(h)(2), mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

Test procedure

971168 D01 v03r01 - Section 5.2.2
ANSI 63.26-2015 – Section 5.2.4.4.1
ANSI/TIA-603-E-2016 - Section 2.2.17

Test settings

1) RBW = 1 % to 5 % of the OBW.
2) VBW ≥ 3 × RBW.
3) SPAN = 2 × to 3 × the OBW.
4) Number of measurement points in sweep ≥ 2 × span / RBW.
5) Sweep time :
   1) Auto couple, or
   2) ≥ [10 × (number of points in sweep) × (transmission period)] for single sweep (automation-compatible) measurement. Transmission period is the on and off time of the transmitter.
6) Detector = RMS
7) If the EUT can be configured to transmit continuously, then set the trigger to free run.
8) If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints (i.e., configured such that measurement data is collected only during active full -power transmissions).
9) Trace mode = trace averaging (RMS) over 100 sweeps.
10) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
11) Allow trace to fully stabilize.

Notes:

1. On a test site, the EUT shall be placed at 80 cm height on a turn table, and in the position close To normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to Correspond to the fundamental frequency of the transmitter.
3. The turntable is rotated through 360°, and the receiving antenna scans in order to determine the Level of the maximized emission.
4. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
5. The maximum signal level detected by the measuring receiver shall be noted.
6. The EUT was replaced by half-wave dipole (1 ㎓ below) or horn antenna (1 ㎓ above) connected to a signal generator.
   The power is calculated by the following formula;
   Pd(㏈m) = Pg(㏈m) – Cable loss (㏈) + Antenna gain (㏈)
   Note. Pd is the dipole equivalent power and Pg is the generator output power into the substitution antenna.
7. The test antenna shall be raised and lowered through the specified range of height to ensure that The maximum signal is received.
8. The input signal to the substitution antenna shall be adjusted to the level that produces a level Detected by the measuring corrected for the change of input attenuator setting of the measuring Receiver.
9. The input level to the substitution antenna shall be recorded as power level in ㏈m, corrected for Any change of input attenuator setting of the measuring receiver.
10. The measurement shall be repeated with the test antenna and the substitution antenna Orientated for horizontal polarization.

Test results

Test mode: LTE Band 4

Bandwidth	Modulation	Frequency	Pol.	Antenna Gain	C.L	Substitute Level	EIRP	
		[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[W]
1.4 M	QPSK	1 710.70	H	5.79	5.40	22.38	22.77	0.19
		1 732.50	H	5.74	5.45	22.26	22.55	0.18
		1 754.30	H	5.69	5.48	21.67	21.88	0.15
	16QAM	1 710.70	H	5.79	5.40	20.76	21.15	0.13
		1 732.50	H	5.74	5.45	21.28	21.57	0.14
		1 754.30	H	5.69	5.48	21.15	21.36	0.14
3 M	QPSK	1 711.50	H	5.79	5.40	22.08	22.47	0.18
		1 732.50	H	5.74	5.45	22.35	22.64	0.18
		1 753.50	H	5.69	5.48	21.71	21.92	0.16
	16QAM	1 711.50	H	5.79	5.40	21.16	21.55	0.14
		1 732.50	H	5.74	5.45	21.58	21.87	0.15
		1 753.50	H	5.69	5.48	20.56	20.77	0.12
5 M	QPSK	1 712.50	H	5.79	5.41	22.17	22.55	0.18
		1 732.50	H	5.74	5.45	22.02	22.31	0.17
		1 752.50	H	5.69	5.47	21.94	22.16	0.16
	16QAM	1 712.50	H	5.79	5.41	20.50	20.88	0.12
		1 732.50	H	5.74	5.45	21.54	21.83	0.15
		1 752.50	H	5.69	5.47	20.76	20.98	0.13
10 M	QPSK	1 715.00	H	5.78	5.41	22.27	22.64	0.18
		1 732.50	H	5.74	5.45	22.62	22.91	0.20
		1 750.00	H	5.70	5.48	22.20	22.42	0.17
	16QAM	1 715.00	H	5.78	5.41	21.05	21.42	0.14
		1 732.50	H	5.74	5.45	22.28	22.57	0.18
		1 750.00	H	5.70	5.48	21.11	21.33	0.14
15 M	QPSK	1 717.50	H	5.78	5.42	22.54	22.90	0.19
		1 732.50	H	5.74	5.45	22.34	22.63	0.18
		1 747.50	H	5.71	5.49	22.11	22.33	0.17
	16QAM	1 717.50	H	5.78	5.42	21.49	21.85	0.15
		1 732.50	H	5.74	5.45	21.69	21.98	0.16
		1 747.50	H	5.71	5.49	20.49	20.71	0.12
20 M	QPSK	1 720.00	H	5.77	5.42	22.48	22.83	0.19
		1 732.50	H	5.74	5.45	22.44	22.73	0.19
		1 745.00	H	5.71	5.46	22.43	22.68	0.19
	16QAM	1 720.00	H	5.77	5.42	21.58	21.93	0.16
		1 732.50	H	5.74	5.45	21.55	21.84	0.15
		1 745.00	H	5.71	5.46	21.76	22.01	0.16

Note.
1. E.R.P & E.I.R.P(dBm) = Substitute Level(dB) + Antenna gain(dBi) - C.L(Cable loss) (dB)

Test mode: LTE Band 2

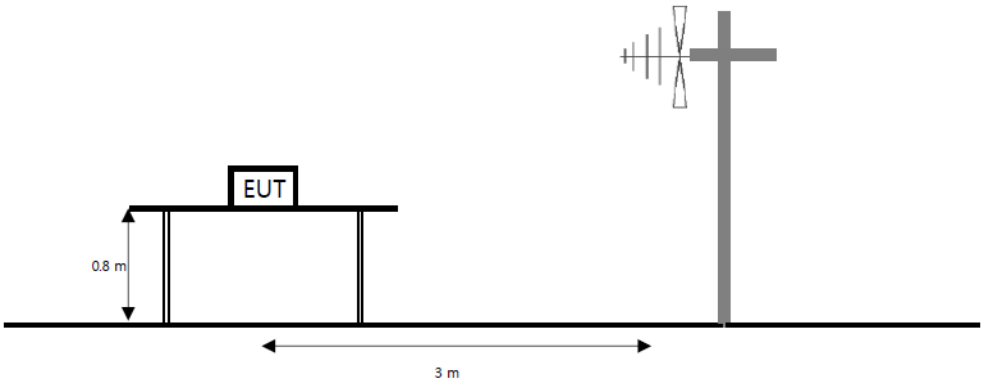
Bandwidth	Modulation	Frequency	Pol.	Antenna Gain	C.L	Substitute Level	EIRP	
		[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[W]
1.4 M	QPSK	1850.70	H	5.55	5.63	20.42	20.34	0.11
		1880.00	H	5.46	5.70	19.68	19.44	0.09
		1909.30	H	5.37	5.78	17.88	17.47	0.06
	16QAM	1850.70	H	5.55	5.63	19.03	18.95	0.08
		1880.00	H	5.46	5.70	16.21	15.97	0.04
		1909.30	H	5.37	5.78	16.91	16.50	0.04
3 M	QPSK	1851.50	H	5.55	5.63	18.36	18.28	0.07
		1880.00	H	5.46	5.70	16.65	16.41	0.04
		1908.50	H	5.37	5.78	17.87	17.46	0.06
	16QAM	1851.50	H	5.55	5.63	17.74	17.66	0.06
		1880.00	H	5.46	5.70	15.36	15.12	0.03
		1908.50	H	5.37	5.78	17.22	16.81	0.05
5 M	QPSK	1852.50	H	5.54	5.62	18.30	18.22	0.07
		1880.00	H	5.46	5.70	16.56	16.32	0.04
		1907.50	H	5.38	5.76	17.62	17.24	0.05
	16QAM	1852.50	H	5.54	5.62	17.34	17.26	0.05
		1880.00	H	5.46	5.70	15.31	15.07	0.03
		1907.50	H	5.38	5.76	16.79	16.41	0.04
10 M	QPSK	1855.00	H	5.54	5.61	18.48	18.40	0.07
		1880.00	H	5.46	5.70	17.05	16.81	0.05
		1905.00	H	5.39	5.75	17.71	17.34	0.05
	16QAM	1855.00	H	5.54	5.61	18.04	17.96	0.06
		1880.00	H	5.46	5.70	15.66	15.42	0.03
		1905.00	H	5.39	5.75	16.49	16.12	0.04
15 M	QPSK	1857.50	H	5.53	5.63	18.44	18.34	0.07
		1880.00	H	5.46	5.70	17.12	16.88	0.05
		1902.50	H	5.39	5.74	17.63	17.28	0.05
	16QAM	1857.50	H	5.53	5.63	17.82	17.72	0.06
		1880.00	H	5.46	5.70	15.79	15.55	0.04
		1902.50	H	5.39	5.74	16.54	16.19	0.04
20 M	QPSK	1860.00	H	5.52	5.63	18.36	18.25	0.07
		1880.00	H	5.46	5.70	16.98	16.74	0.05
		1900.00	H	5.40	5.75	17.34	16.99	0.05
	16QAM	1860.00	H	5.52	5.63	17.13	17.02	0.05
		1880.00	H	5.46	5.70	16.94	16.70	0.05
		1900.00	H	5.40	5.75	16.27	15.92	0.04

Note.
1. E.R.P & E.I.R.P(dBm) = Substitute Level(dB) + Antenna gain(dBi) - C.L(Cable loss) (dB)

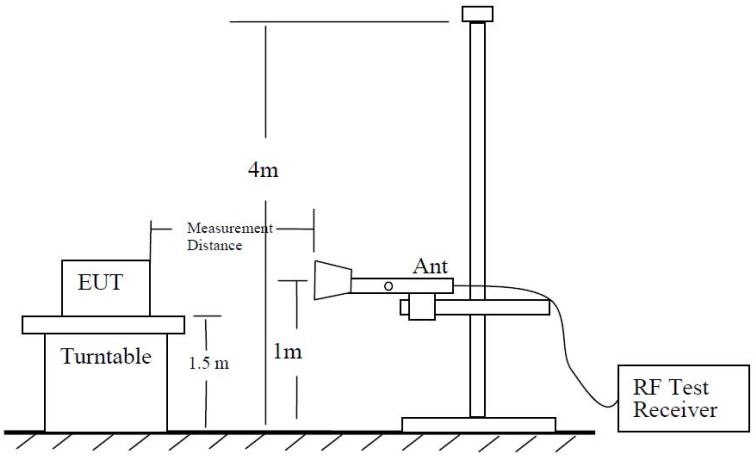
5.2. Radiated Spurious Emissions

Test setup

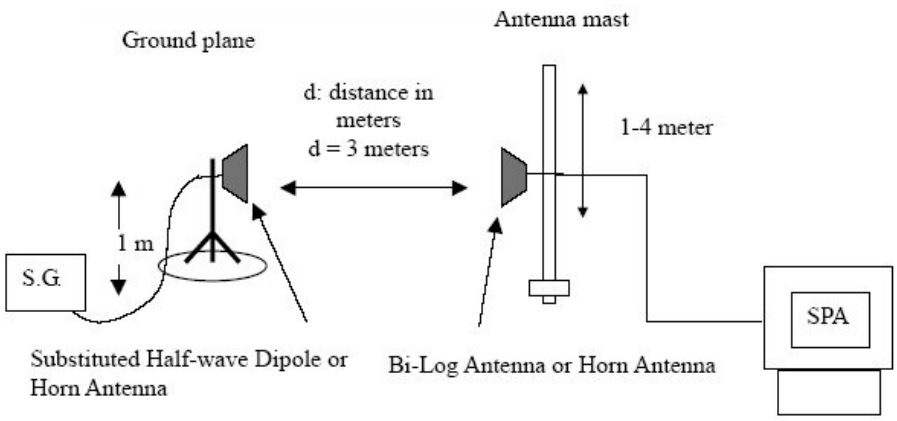
The diagram below shows the test setup that is utilized to make the measurements for emission from 30 ㎒ to 1 ㎓ emissions.



The diagram below shows the test setup that is utilized to make the measurements for emission from 1 ㎓ to the tenth harmonic of the highest fundamental frequency or to 40 ㎓ emissions, whichever is lower.



The diagram below shows the test setup for substituted method.



Limit

According to §24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 +10log($P_{[Watts]}$) ㏈.

According to §27.53(m)(4), the minimum permissible attenuation level of any spurious emission is 55 + 10log($P_{[Watts]}$) ㏈.

Test procedure

971168 D01 v03r01 - Section 5.8
ANSI 63.26-2015 – Section 5.5
ANSI/TIA-603-E-2016 - Section 2.2.12

Test settings

1) RBW = 1 ㎑ for below 1 ㎓ and 1 ㎒ for above 1 ㎓.
2) VBW ≥ 3 × RBW.
3) Detector = RMS
4) Trace mode = Max hold
5) Sweep time = Auto couple
6) Number of sweep points ≥ 2 × span / RBW
7) Allow trace to fully stabilize.

Notes:

1. On a test site, the EUT shall be placed at 80 cm height on a turn table, and in the position close To normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to Correspond to the fundamental frequency of the transmitter.
3. The turntable is rotated through 360°, and the receiving antenna scans in order to determine the Level of the maximized emission.
4. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
5. The maximum signal level detected by the measuring receiver shall be noted.
6. The EUT was replaced by half-wave dipole (1 ㎓ below) or horn antenna (1 ㎓ above) connected to a signal generator.
7. The test antenna shall be raised and lowered through the specified range of height to ensure that The maximum signal is received.
8. The input signal to the substitution antenna shall be adjusted to the level that produces a level Detected by the measuring corrected for the change of input attenuator setting of the measuring Receiver.
9. The input level to the substitution antenna shall be recorded as power level in ㏈m, corrected for Any change of input attenuator setting of the measuring receiver.
10. The measurement shall be repeated with the test antenna and the substitution antenna Orientated for horizontal polarization.

Test results

Test mode : LTE Band 4
Frequency(㎒) : 1 715.0
Channel : 20000
Bandwidth(㎒) 10

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 005.50	H	3.34	4.13	-33.61	-34.40	-13.00	21.40
	2 117.50	H	5.17	6.02	-32.05	-32.90	-13.00	19.90
	5 145.09	V	10.29	11.40	-45.49	-46.60	-13.00	33.60
	7 237.37	H	11.68	13.97	-39.61	-41.90	-13.00	28.90
	7 327.97	H	11.82	14.20	-34.92	-37.30	-13.00	24.30
	10 290.29	H	13.00	15.46	-33.84	-36.30	-13.00	23.30
	13 720.63	V	14.33	17.57	-33.66	-36.90	-13.00	23.90

Test mode : LTE Band 4
Frequency(㎒) : 1 732.5
Channel : 20175
Bandwidth(㎒) 10

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 042.50	H	3.58	4.20	-27.18	-27.80	-13.00	14.80
	2 133.00	H	5.18	6.04	-30.24	-31.10	-13.00	18.10
	8 640.23	H	13.13	14.61	-38.02	-39.50	-13.00	26.50
	10 368.89	H	13.00	15.62	-32.98	-35.60	-13.00	22.60
	12 096.36	H	13.04	16.80	-36.44	-40.20	-13.00	27.20
	13 824.43	H	14.39	17.91	-34.48	-38.00	-13.00	25.00

Test mode : LTE Band 4
Frequency(㎒) : 1 750.0
Channel : 20350
Bandwidth(㎒) 10

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 017.50	H	3.42	4.15	-31.67	-32.40	-13.00	19.40
	2 149.00	H	5.19	6.06	-31.03	-31.90	-13.00	18.90
	5 236.89	H	10.34	11.04	-45.50	-46.20	-13.00	33.20
	10 473.30	H	13.00	15.78	-33.22	-36.00	-13.00	23.00
	12 218.77	V	13.09	16.99	-34.90	-38.80	-13.00	25.80

Note.
1. Limit Calculation(㏈m)= 43 + 10log(P[Watts])

Test mode : LTE Band 2
Frequency(㎒) : 1 850.7
Channel : 18607
Bandwidth(㎒) 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 263.00	H	5.04	4.66	-39.28	-38.90	-13.00	25.90
	1 464.50	V	6.37	4.97	-47.70	-46.30	-13.00	33.30
	1 930.50	H	5.31	5.76	-31.65	-32.10	-13.00	19.10
	2 973.50	H	7.67	7.51	-35.56	-35.40	-13.00	22.40
	5 552.50	H	10.51	11.93	-44.28	-45.70	-13.00	32.70
	7 402.98	V	11.94	14.11	-43.43	-45.60	-13.00	32.60
	9 253.45	H	13.20	14.77	-40.33	-41.90	-13.00	28.90
	12 955.00	H	13.38	17.78	-34.70	-39.10	-13.00	26.10

Test mode : LTE Band 2
Frequency(㎒) : 1 880.0
Channel : 18900
Bandwidth(㎒) 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 960.50	H	5.22	5.81	-30.11	-30.70	-13.00	17.70
	1 338.00	H	5.53	4.76	-40.47	-39.70	-13.00	26.70
	2 984.50	H	7.73	7.54	-35.19	-35.00	-13.00	22.00
	3 759.03	H	8.50	9.19	-46.11	-46.80	-13.00	33.80
	7 342.37	H	11.85	14.21	-40.34	-42.70	-13.00	29.70
	9 398.06	V	13.20	15.12	-39.28	-41.20	-13.00	28.20
	13 156.61	H	13.65	17.69	-34.26	-38.30	-13.00	25.30
	15 036.48	H	14.01	18.99	-34.22	-39.20	-13.00	26.20

Note.
1. Limit Calculation(dBm)= 43 + 10log(P[Watts])

Test mode : LTE Band 2
Frequency(㎒) : 1 909.3
Channel : 19193
Bandwidth(㎒) 1.4

Mode	Frequency	Pol.	Antenna Gain	Cable loss	Substitute Level	Level	Limit	Margin
	[㎒]	[V/H]	[dBi]	[dB]	[dBm]	[dBm]	[dBm]	[dB]
QPSK	1 388.00	H	5.86	4.87	-39.69	-38.70	-13.00	25.70
	1 989.50	H	5.13	5.85	-30.48	-31.20	-13.00	18.20
	3 818.43	H	8.53	9.31	-45.82	-46.60	-13.00	33.60
	4 873.88	H	9.70	10.69	-44.71	-45.70	-13.00	32.70
	9 546.86	V	13.18	15.14	-40.04	-42.00	-13.00	29.00
	13 365.41	V	13.98	17.38	-36.10	-39.50	-13.00	26.50

Note.
1. Limit Calculation(㏈m)= 43 + 10log(P[Watts])

6. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Biconical VHF-UHF Broadband Antenna	SCHWARZBECK	VUBA9117	275	22.04.09
Bilog Antenna	Teseq GmbH	CBL 6143A	35039	23.05.13
Horn Antenna	ETS.lindgren	3117	00227509	21.09.23
Horn Antenna	ETS.lindgren	3117	161225	22.05.11
Horn Antenna	ETS.lindgren	3116	00086632	22.01.29
Horn Antenna	ETS.lindgren	3116	00086635	22.05.17
High pass Filter	Wainwright Instruments GmbH	WHKX3.0/18G-12SS	44	22.01.20
AC/DC Power Supply	KIKUSUI	PCR2000W	GB001619	21.07.28
Wideband Radio Communication Tester	R&S	CMW500	106840	22.01.20
Attenuator	Weinschel ENGINEERING	10	AJ1239	22.05.11
Broadband Amplifier	SONOMA INSTRUMENT	310N	185799	22.01.20
Amplifier	L-3 Narda-MITEQ	AFS5-00101800-25-S-5	2054570	22.05.10
Amplifier	L-3 Narda-MITEQ	JS44-18004000-33-8P	2000996	22.01.21
Signal Generator	R&S	SMB100A	176206	22.01.20
Spectrum Analyzer	AGILENT	N9040B	MY57010132	21.07.29
Antenna Mast	MATURO	EAS 1.5	042/8941211	N/A
Antenna Mast	MATURO	EAS 1.5	043/8941211	N/A
Turn Table	MATURO	TT 0.8 PF	041/8941211	N/A
Cable Assembly	Radiall	R286303620	1649.241	-
Cable Assembly	Radiall	TESTPRO 3	-	-

End of test report