

TEST REPORT

FCC Standards : FCC 47 CFR part 15 subpart C

Test Report No. : CTK-2017-00788
Date of Issue : 2017-04-29
FCC ID : 2ALVHS07
Model/Type No. : S07
Kind of Product : Android Module
Applicant : CLABSYS Co., Ltd.
Applicant Address : A-Dong, 2floor., 895-20, Sicheong-ro, Platan-myeon,
Hwaseong-si, Gyeonggi-do, Republic of Korea
Manufacturer : CLABSYS Co., Ltd.
Manufacturer Address : A-Dong, 2floor., 895-20, Sicheong-ro, Platan-myeon,
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Contact Person : Hakbum LEE
Telephone : +81-70-7464-5104
Received Date : 2017-04-07
Test period : Start : 2017-04-10 End : 2017-04-28
Test Results : ☒ In Compliance ☐ Not in Compliance

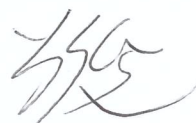
The test results presented in this report relate only to the object tested.

Tested by



Ji-Hye, Kim
Test Engineer
Date: 2017-04-29

Reviewed by



Young-Joon, Park
Technical Manager
Date: 2017-04-29

REPORT REVISION HISTORY

Date	Revision	Page No
2017-04-29	Issued (CTK-2017-00788)	All

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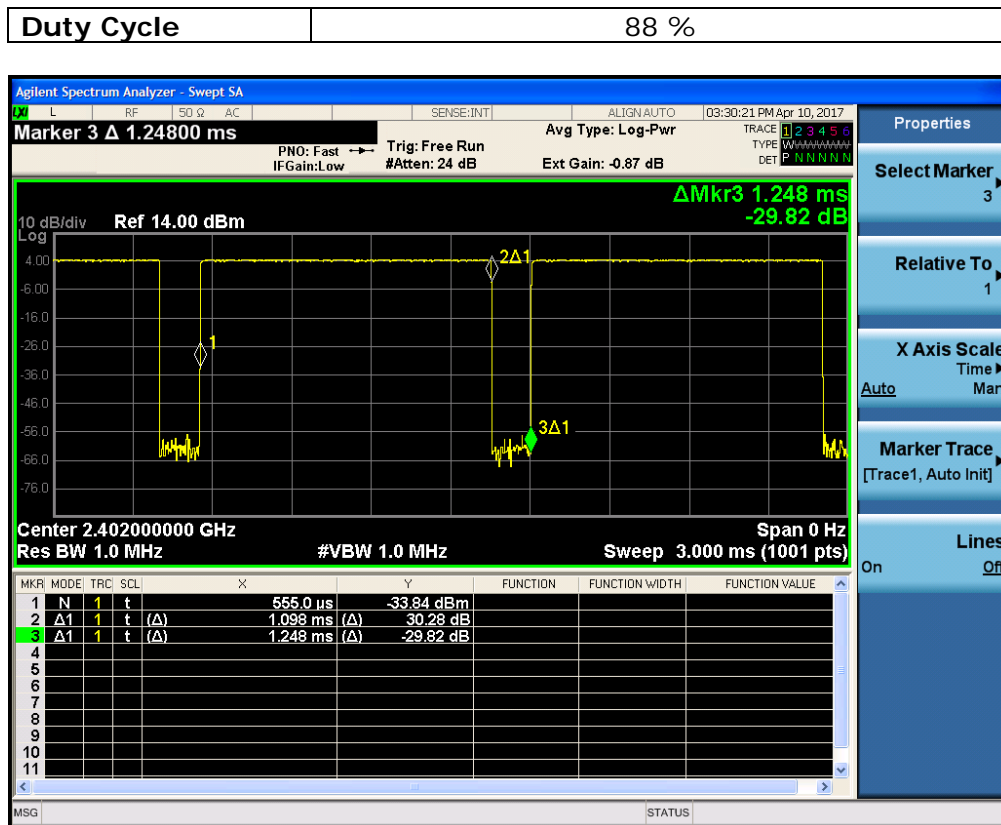
1.0 General Product Description

Basic Model/Type No.	S07
Serial number	Prototype
EUT condition	Pre-production, not damaged
Antenna type	PCB antenna Gain 2 dBi
Frequency Range	2 402 MHz - 2 480 MHz
RF power	5.307 dBm Peak Conducted
Number of channels	40
Channel Spacing	2 MHz
Type of Modulation	GFSK
Power Source	DC 12 V
Hardware Rev	V0.3
Software Rev	android-6.0.1
Firmware Rev	r2

1.1 Tested Frequency

	Low	Middle	High
Frequency (MHz)	2 402	2 440	2 480

1.2 Duty Cycle



1.3 Device Modifications

The following modifications was applied by the applicant:

Not applicable

1.4 Peripheral Devices

Device	Manufacturer	Model No.	Serial No.
Note Computer	HP	ProBook 650 G1	5CG5114KD2
AC ADAPTER	HP	PPP012D-S	-
AC / DC ADAPTER	Shenzhen Simsukian Electronics Technology CO., LTD	SK02T-1200100K	-





1.5 Calibration Details of Equipment Used for Measurement

Test equipment and test accessories are calibrated on regular basis. The maximum time between calibrations is one year or what is recommended by the manufacturer, whichever is less. All test equipment calibrations are traceable to the Korea Research Institute of Standards and Science (KRISS), therefore, all test data recorded in this report is traceable to KRISS.

1.6 Test Facility

The measurement facility is located at 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea. The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

1.7 Laboratory Accreditations and Listings

Country	Agency	Scope of Accreditation	Registration Number	Logo
USA	FCC	FCC Part 15 & 18 EMI (Electromagnetic Interference / Emission)	805871	
CANADA	IC	IC EMI (3/10m test site)	8737A-2	
JAPAN	VCCI	VCCI V-3 EMI (Electromagnetic Interference / Emission)	C-986 T-1843 R-3627 G-387	
KOREA	MSIP	EMI (Electromagnetic Interference / Emission) EMS (Electromagnetic Susceptibility / Immunity)	KR0025	

2.0 Summary of tests

FCC Part Section(s)	Parameter	Limit	Test Condition	Status (note 1)
15.247(a)	6 dB Bandwidth	> 500 kHz	Conducted	C
15.247(b)	Maximum Output Power	< 1 Watt		C
15.247(d)	Conducted Spurious emission	> 20 dBc		C
15.247(d)	Band Edge	> 20 dBc		C
15.247(e)	Transmitter Power Spectral Density	< 8 dBm @ 3 kHz		C
				C
15.209	Field Strength of Harmonics	15.209(a)	Radiated	C
15.207	AC Conducted Emissions	15.207(a)	Line Conducted	C

Note 1: C=Complies NC=Not Complies NT=Not Tested NA=Not Applicable

Note 2: The data in this test report are traceable to the national or international standards.

The sample was tested according to the following specification:
- FCC Part 15.247, ANSI C63.10-2013

The tests were performed according to the method of measurements prescribed in
KDB No.558074.

2.1 Technical Characteristic Test

2.1.1 6dB Bandwidth

Test Procedures(ANSI C63.10-2013 6.9.2)

Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Procedures(ANSI C63.10-2013 6.9.3)

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

Use the 99% power bandwidth function of the instrument and report the measured bandwidth.

Test Settings :

Center frequency = the highest, middle and the lowest channels

- a) RBW = 100 kHz
- b) VBW $\geq 3 \times$ RBW
- c) Detector = peak
- d) Trace mode = Max hold
- e) Sweep = auto couple
- f) Allow trace to fully stabilize
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Minimum Standard :

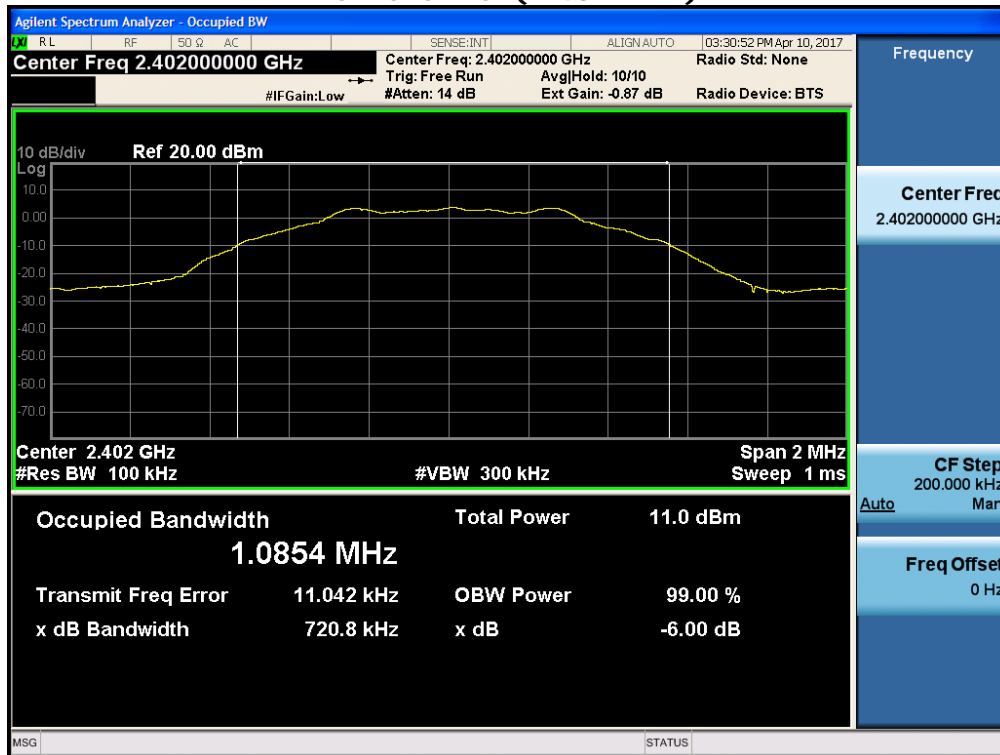
6 dB Bandwidth > 500kHz

Test Data :

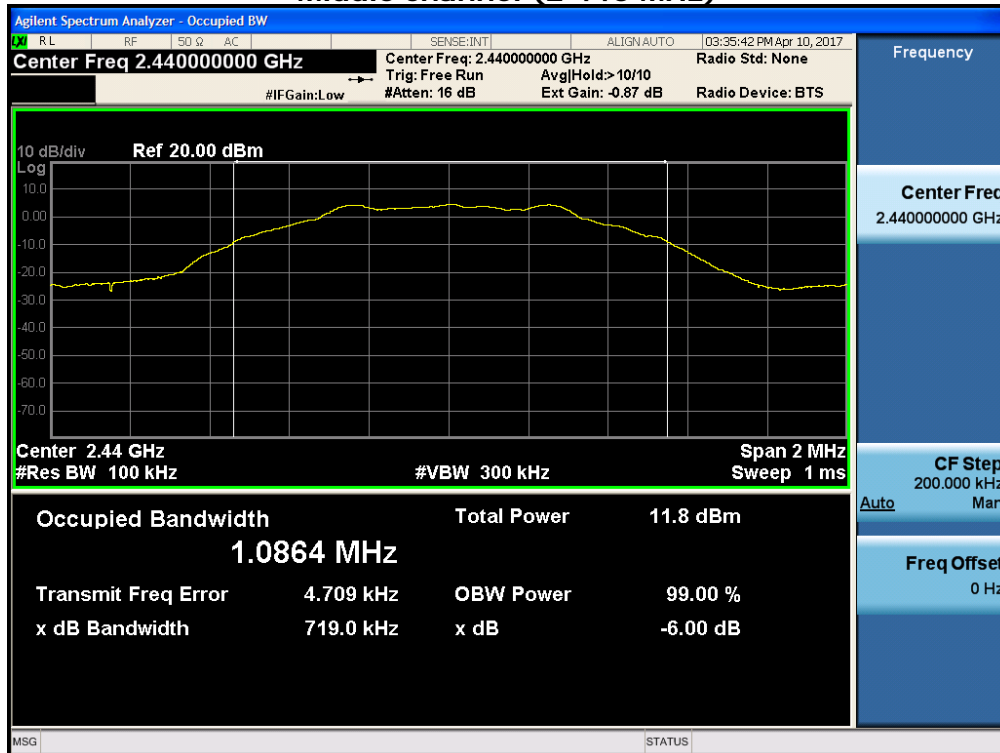
Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
2 402	0.721	1.085	Complies
2 440	0.719	1.086	Complies
2 480	0.710	1.087	Complies

See next pages for actual measured spectrum plots.

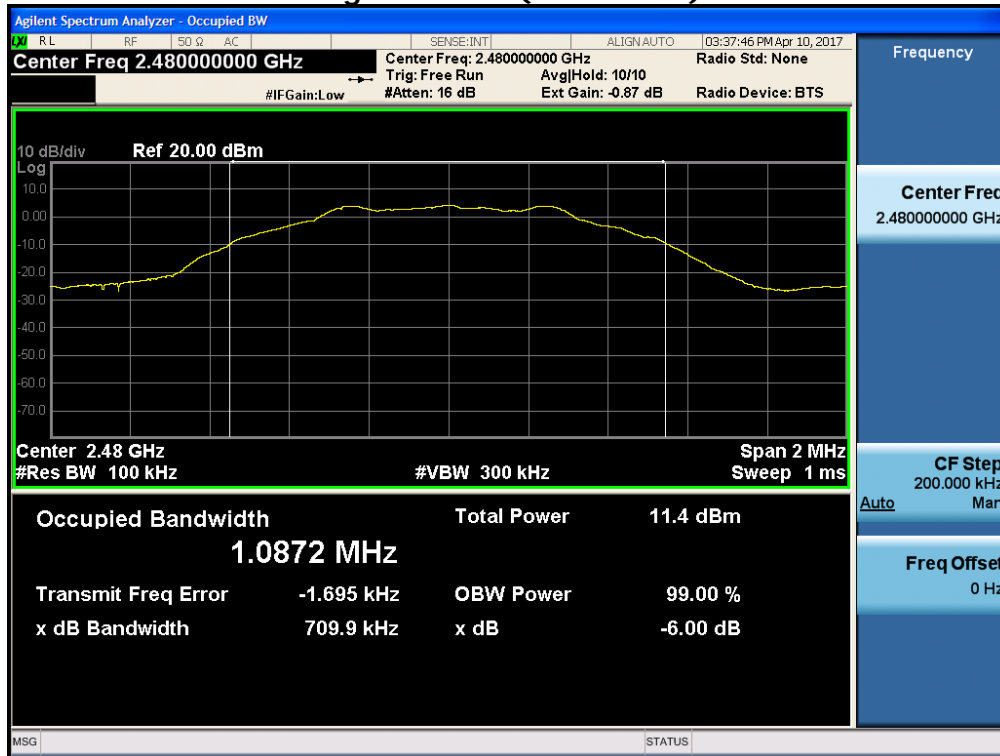
Low channel (2 402 MHz)



Middle channel (2 440 MHz)



High channel (2 480 MHz)



2.1.2 Maximum Output Power

Test Procedures(ANSI C63.10-2013 11.9.1)

Maximum Peak Output Power from the EUT were measured according to the dictates power measurement procedure in section 9.1.1 of KDB 558074.

This procedure shall be used when the measurement instrument has available a resolution bandwidth that is greater than the DTS bandwidth.

Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) RBW \geq DTS bandwidth
- b) VBW $\geq 3 \times$ RBW
- c) span $\geq 3 \times$ RBW
- d) Sweep time = auto couple
- e) Detector = peak
- f) Trace mode= max hold
- g) Allow trace to fully stabilize
- h) Use peak marker function to determine the peak amplitude level.

Limit :

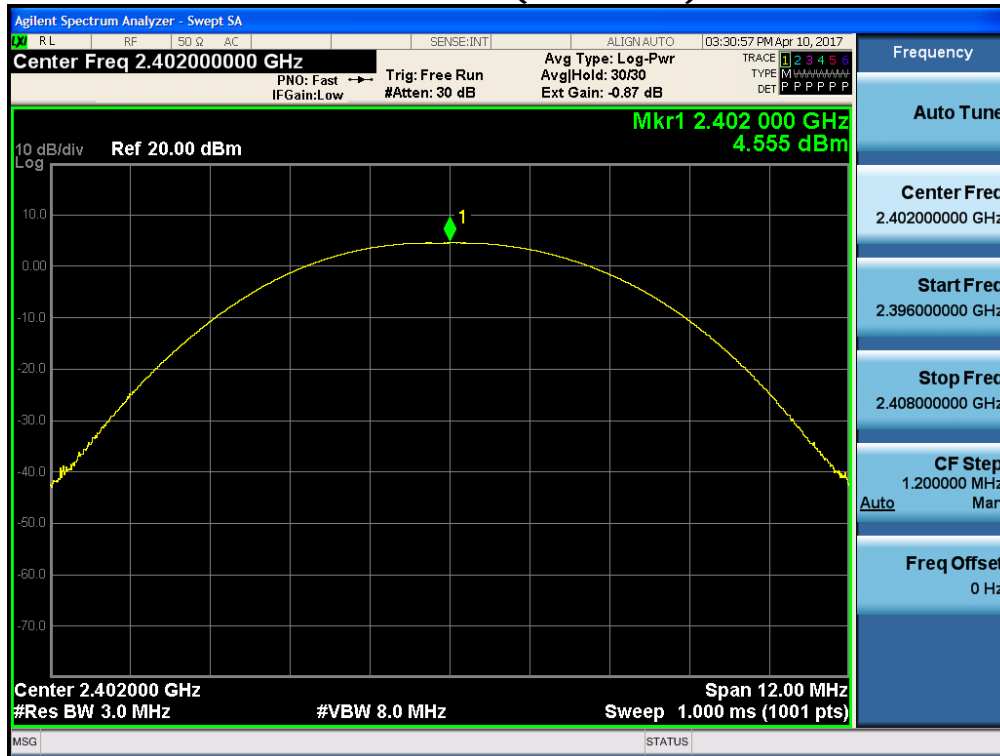
Maximum Output Power < 1 W (30 dBm)

Test Data :

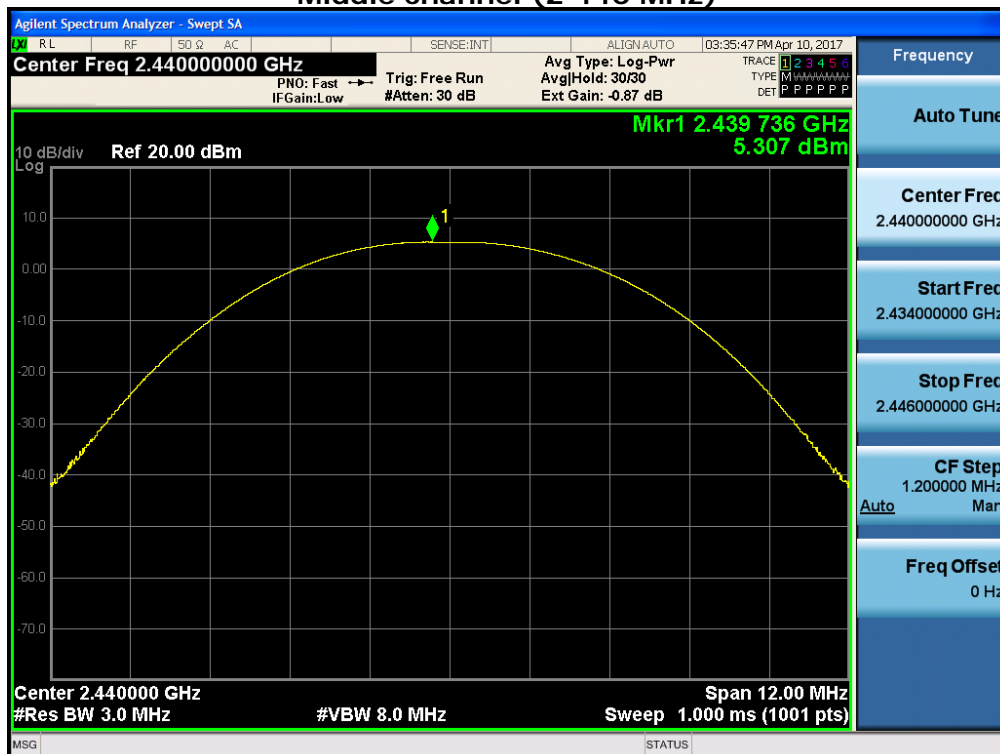
Frequency (MHz)	Maximum peak Conducted Output Power		
	Output power (dBm)	Output power (mW)	Result
2 402	4.555	2.854	Complies
2 440	5.307	3.394	Complies
2 480	5.069	3.213	Complies

See next pages for actual measured spectrum plots.

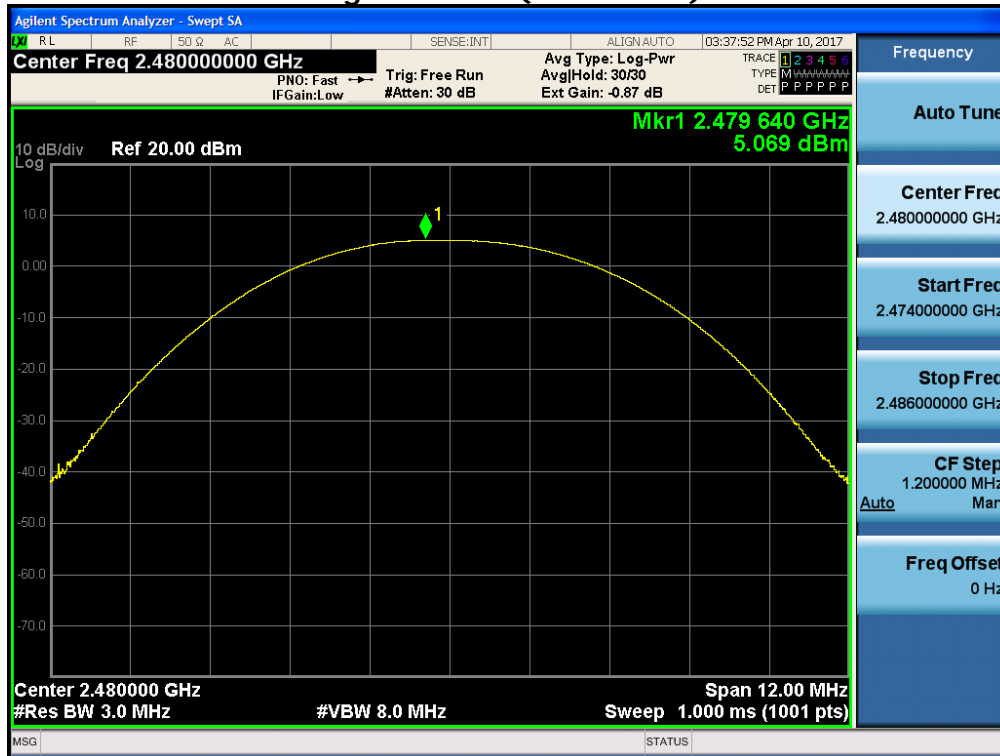
Low channel (2 402 MHz)



Middle channel (2 440 MHz)



High channel (2 480 MHz)



2.1.3 Transmitter Power Spectral Density

Test Procedures(ANSI C63.10-2013 11.10.2)

Power Spectral Density from the EUT were measured according to the dictates PKPSD measurement procedure in 10.2 of KDB 558074.

This procedure shall be used if maximum peak conducted output power was used to demonstrate compliance.

Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) RBW : $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$
- b) VBW $\geq 3 \times \text{RBW}$
- c) span $\geq 1.5 \times \text{DTS bandwidth}$
- d) Sweep time = auto couple
- e) Detector = peak
- f) Trace mode= max hold
- g) Allow trace to fully stabilize
- h) Use the peak marker function to determine the maximum amplitude level within the RBW.

Limit :

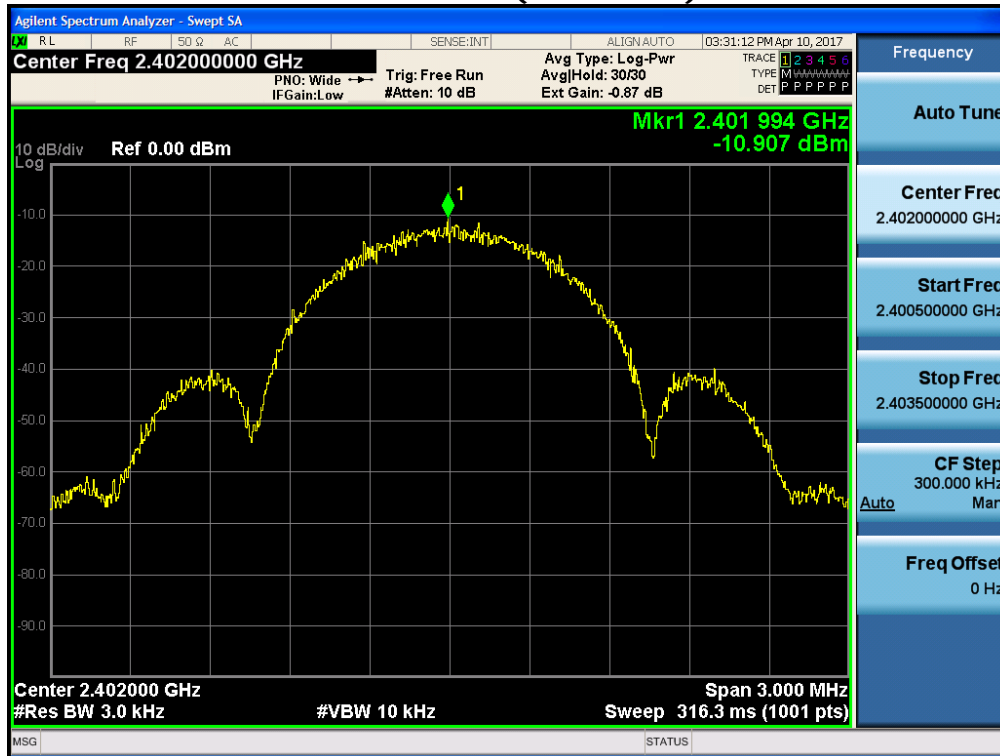
Power Spectral Density < 8dBm @ 3 kHz BW

Test Data :

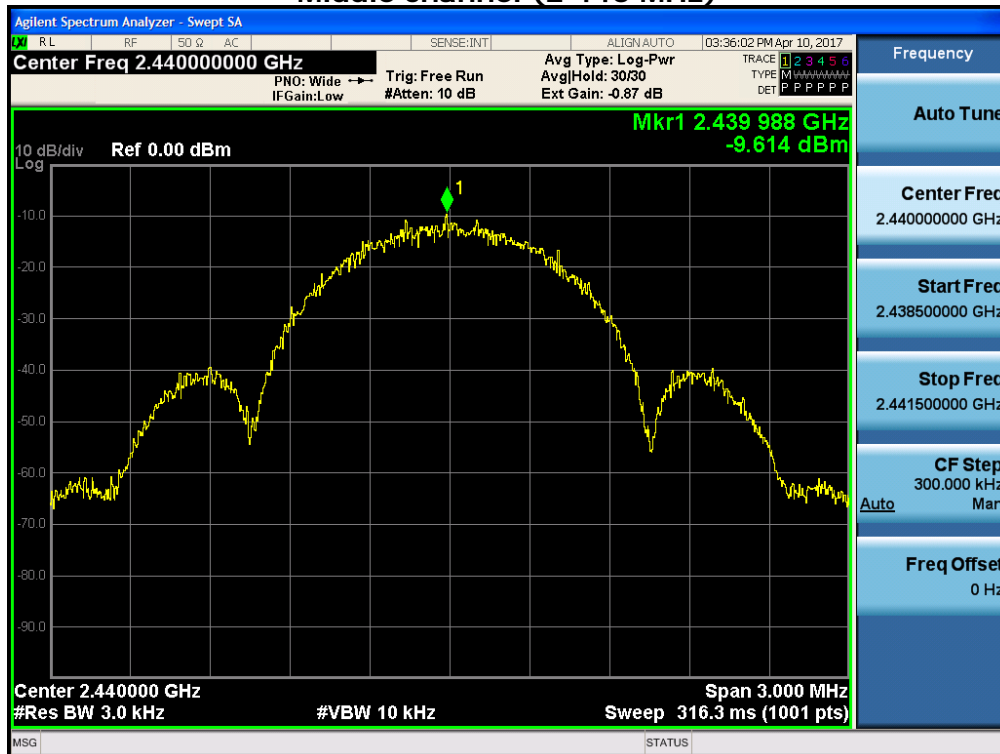
Frequency (MHz)	Power Spectral Density	
	dBm	Result
2 402	-10.907	Complies
2 440	-9.614	Complies
2 480	-9.940	Complies

See next pages for actual measured spectrum plots.

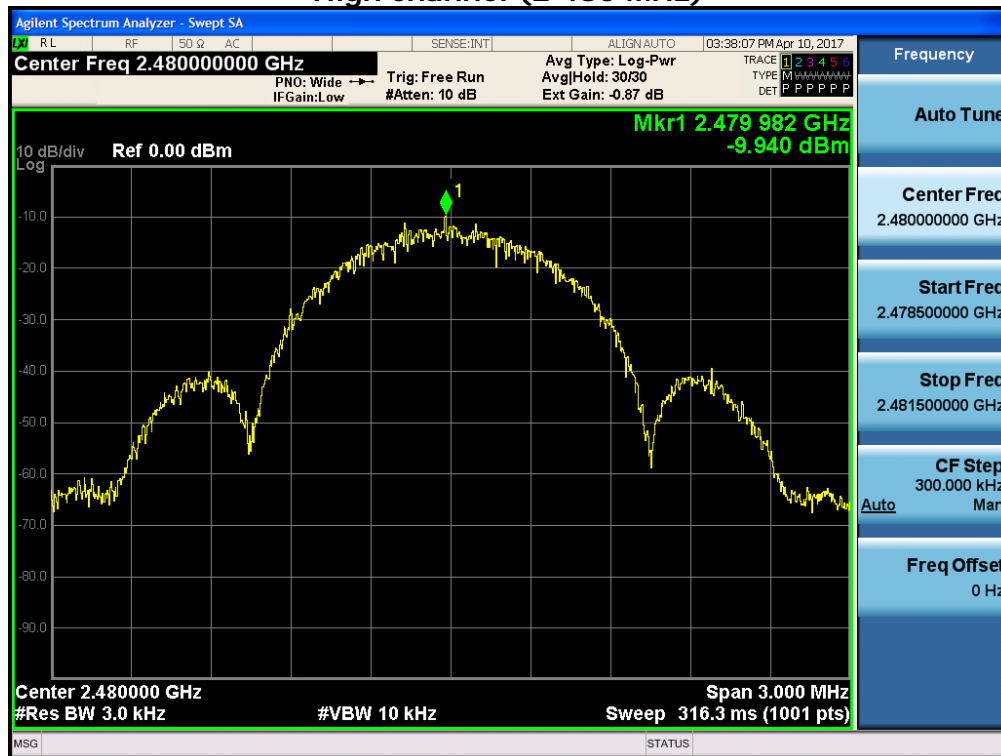
Low channel (2 402 MHz)



Middle channel (2 440 MHz)



High channel (2 480 MHz)



2.1.4 Band Edge & Conducted Spurious emission

Test Procedures(ANSI C63.10-2013 11.11.3)

The Unwanted emission from the EUT were measured according to the dictates PKPSD measurement procedure in section 11.11 of ANSI C63.10-2013.

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

Test Settings:

Center frequency = the highest, middle and the lowest channels

- a) RBW = 100 kHz
- b) VBW $\geq 3 \times$ RBW
- c) Detector = peak
- d) Sweep time = auto couple
- e) Trace mode= max hold
- f) Allow trace to fully stabilize
- g) Use the peak marker function to determine the maximum amplitude level.

Limit :

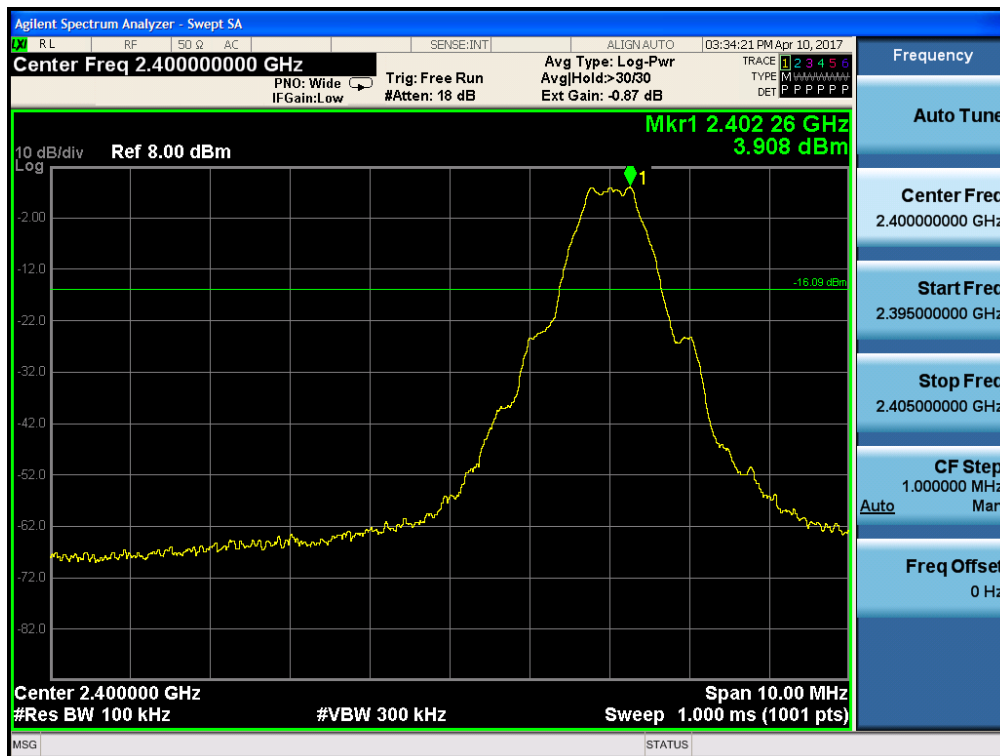
Emission level < 20 dBc

Test results: Complies

- All conducted emission in any 100kHz bandwidth outside of the spread spectrum band was at least 20dB lower than the highest in-band spectral density. Therefore the applying equipment meets the requirement.

See next pages for actual measured spectrum plots.

Band-edge



Conducted Spurious emission

Low channel (2 402 MHz)



Middle channel (2 440 MHz)



High channel (2 480 MHz)



2.1.5 Field Strength of Harmonics

Test Location

- ☒ 10 m SAC (test distance : ☐ 10 m, ☒ 3 m)
☒ 3 m SAC (test distance : 3 m)

Test Procedures

- 1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
- 2) In the frequency range above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

Test Settings:

Frequency Range = 9 kHz ~ 25 GHz (2.4 GHz 10th harmonic)

- a) RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz, 9 kHz for $f < 30$ MHz
- b) VBW \geq RBW
- c) Sweep time = auto couple

Limit :

FCC Part 15 § 15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	MHz	MHz	GHz
0.09-0.11	8.37626-8.38675	73-74.6	399.9-410	2690-2900	10.6-12.7
¹ 0.495-0.505	8.41425-8.41475	74.8-75.2	608-614	3260-3267	13.25-13.4
2.1735-2.1905	12.29-12.293	108-121.94	960-1240	3332-3339	14.47-14.5
4.125-4.128	12.51975-12.52025	123-138	1300-1427	3345.8-3358	15.35-16.2
4.17725-4.17775	12.57675-12.57725	149.9-150.05	1435-1626.5	3600-4400	17.7-21.4
4.20725-4.20775	13.36-13.41	156.52475-156.52525	1645.5-1646.5	4500-5150	22.01-23.12
6.215-6.218	16.42-16.423	156.7-156.9	1660-1710	5350-5460	23.6-24
6.26775-6.26825	16.69475-16.69525	162.0125-167.17	1718.8-1722.2	7250-7750	31.2-31.8
6.31175-6.31225	16.80425-16.80475	167.72-173.2	2200-2300	8025-8500	36.43-36.5
8.291-8.294	25.5-25.67	240-285	2310-2390	9000-9200	² Above 38.6
8.362-8.366	37.5-38.25	322-335.4	2483.5-2500	9300-9500	

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

§ 15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

FCC Part 15 § 15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table :

Frequency(MHz)	Field Strength uV/m@3m	Field Strength dBuV/m@3m	Deasurement Distance (meters)
0.009-0.490	2400/F (kHz)	-	300
0.490-1.705	24000/F(kHz)	-	30
1.705-30	30	-	30
30-88	100**	40	3
88-216	150**	43.5	3
216-960	200**	46	3
Above 960	500	54	3

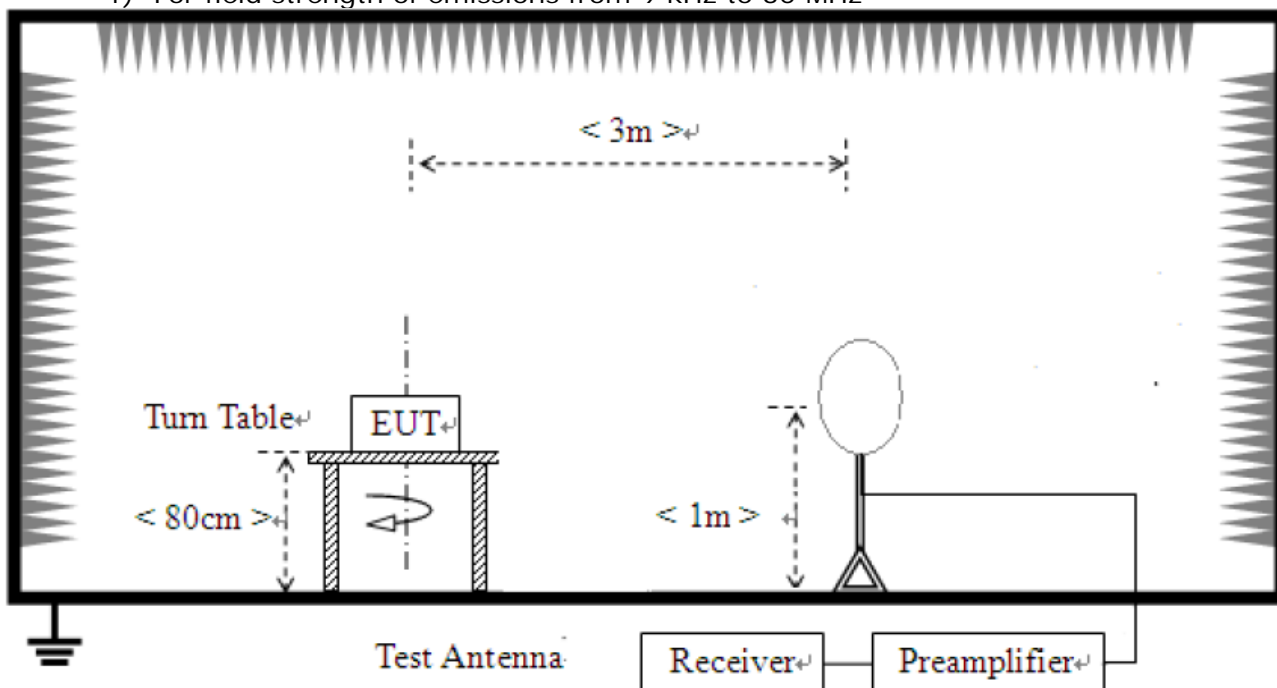
** Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

Note :

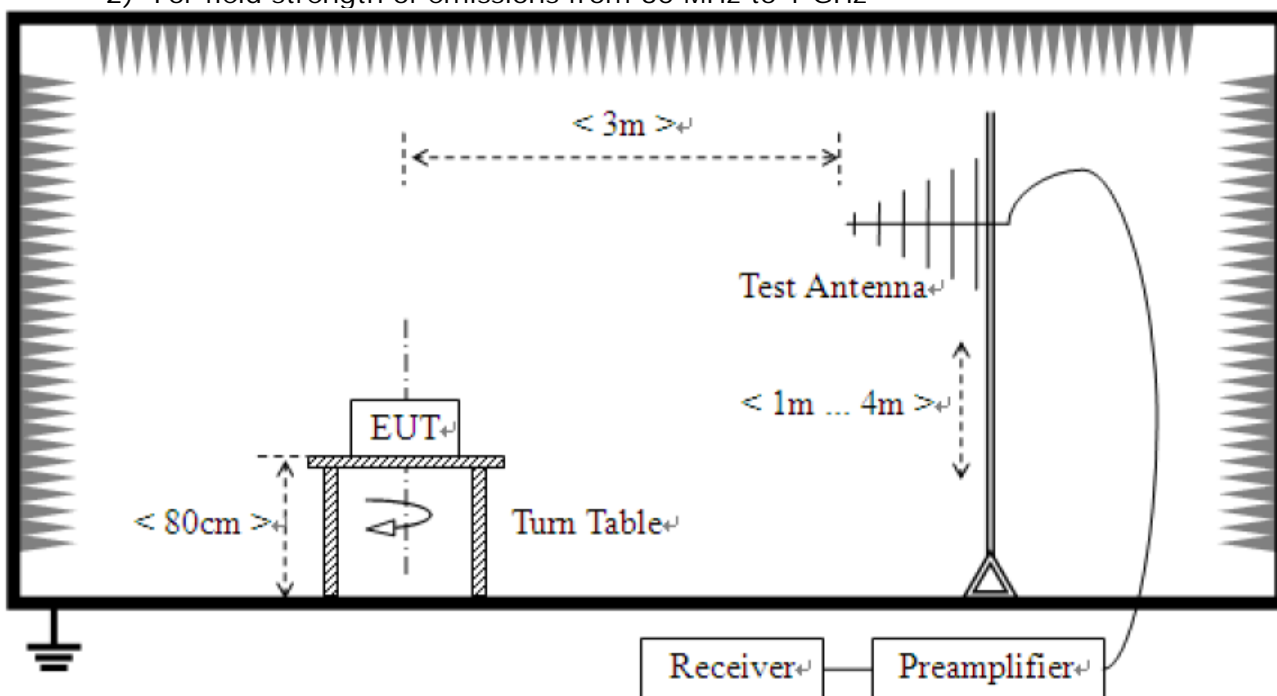
- 1) For above 1 GHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.
- 2) For above 1 GHz, limit field strength of harmonics : 54 dBuV/m@3m (AV) and 74 dBuV/m@3m (PK)
- 3) For measurement above 1GHz, the resolution bandwidth is set to 1 MHz and video bandwidth is set to 1 MHz for peak measurement and 10 Hz for average measurement.(Duty Cycle is > 98%,)
- 4) Duty Cycle is < 98%, VBW setting will need to > 1/T.

Test Setup:

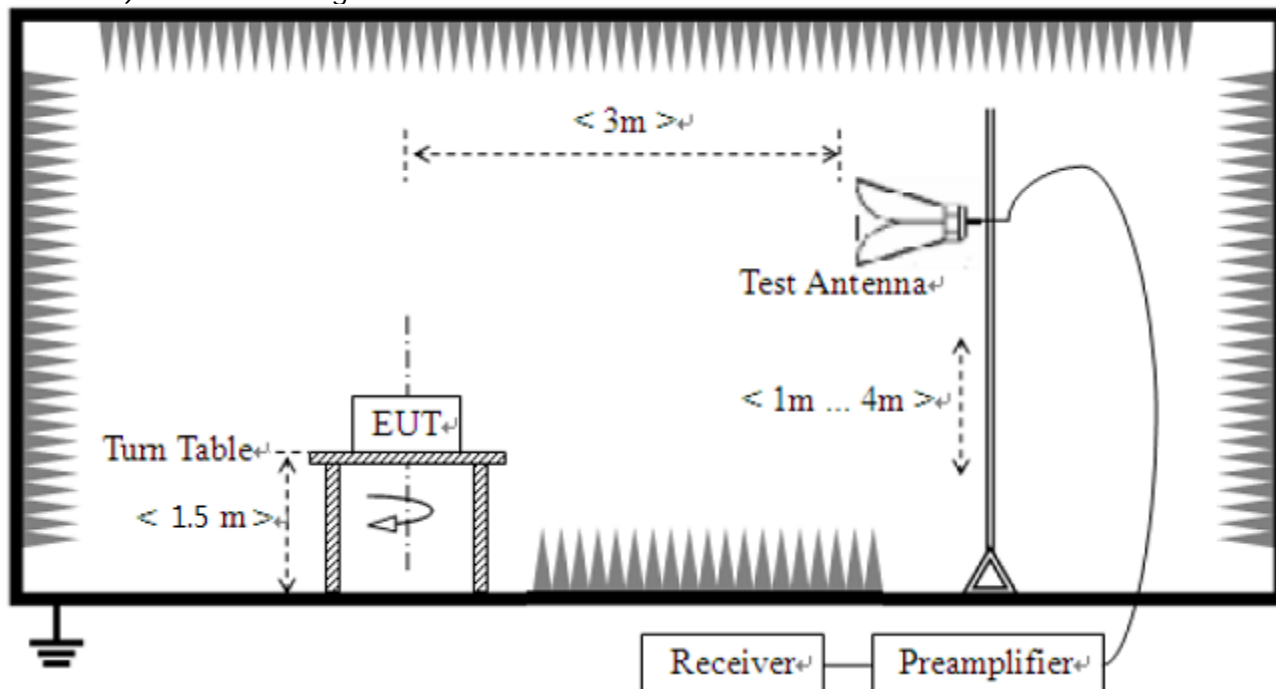
- 1) For field strength of emissions from 9 kHz to 30 MHz



- 2) For field strength of emissions from 30 MHz to 1 GHz



3) For field strength of emissions above 1 GHz



Test results

1) 9 kHz to 30 MHz

EUT	Android Module	Measurement Detail	
Model	SO7	Frequency Range	9 kHz – 30 MHz
Test mode	Continuous modulated carrier	Detector function	Quasi-Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
-	-	-	See note

Note :

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)

2) 30 MHz to 1 GHz

Test mode : Transmit, High Channel(Worst Case)

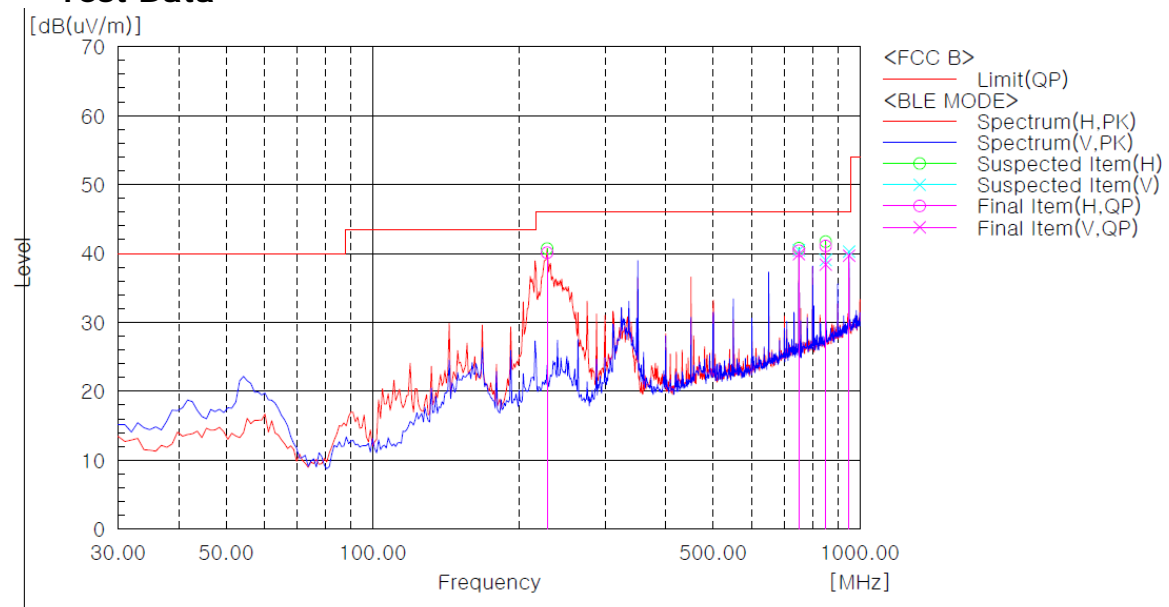
EUT	Android Module	Measurement Detail	
Model	SO7	Frequency Range	Below 1 000MHz
Mode	Transmit, High Channel	Detector function	Quasi-Peak

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
850.620	41.1	4.9	Quasi-Peak

Test Data



Final Result

No.	Frequency [MHz]	(P)	Reading QP [dB(uV)]	c.f [dB(1/m)]	Result QP [dB(uV/m)]	Limit QP [dB(uV/m)]	Margin QP [dB]	Angle [deg]
1	227.880	H	54.4	-14.3	40.1	46.0	5.9	337.5
2	749.740	H	44.4	-4.0	40.4	46.0	5.6	60.1
3	749.740	V	43.9	-4.0	39.9	46.0	6.1	202.9
4	850.620	H	43.5	-2.4	41.1	46.0	4.9	14.9
5	850.620	V	40.8	-2.4	38.4	46.0	7.6	1.4
6	950.530	V	40.2	-0.5	39.7	46.0	6.3	357.0

Remark :

1. The Unwanted emission was measured in the following position: EUT stand-up position(Z axis), lie-down position(X,Y axis). The worst emission was found in stand-up position(Z axis) and the worst case was recorded.
2. Result = Reading + Correction factor
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

3) above 1 GHz

Test mode : Transmit

EUT	Android Module	Measurement Detail	
Model	SO7	Frequency Range	1-25GHz
		Detector function	Average / Peak

Remarks

We have tested three mode (X, Y, Z). The worst mode (Z axis) for final test.

The requirements are:

☒ Complies

Frequency (MHz)	Measured Data (dBuV/m)	Margin (dB)	Remark
4880.00	47.86	6.14	Average

Test Data

Low(2402 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
4804.00	H	54.00	74.00	44.55	49.86	9.45	24.14
4804.00	V	54.00	74.00	45.98	52.26	8.02	21.75
1050.00	H	54.00	74.00	39.41	42.31	14.59	31.69
1050.00	V	54.00	74.00	39.72	42.69	14.28	31.31
1066.00	H	54.00	74.00	36.56	41.62	17.44	32.38
1066.00	V	54.00	74.00	38.85	42.43	15.15	31.57
2132.00	H	54.00	74.00	45.61	48.09	8.39	25.91
2132.00	V	54.00	74.00	44.94	47.89	9.06	26.11
3198.00	H	54.00	74.00	41.90	46.44	12.10	27.56
3198.00	V	54.00	74.00	45.78	49.46	8.22	24.54
3203.00	H	54.00	74.00	39.93	45.03	14.07	28.97
3203.00	V	54.00	74.00	40.18	45.37	13.82	28.63
5330.00	H	54.00	74.00	43.67	49.68	10.33	24.32
5330.00	V	54.00	74.00	46.09	51.08	7.91	22.92

Mid(2440 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
4880.00	H	54.00	74.00	43.46	49.42	10.54	24.58
4880.00	V	54.00	74.00	47.86	52.39	6.14	21.61
1050.00	H	54.00	74.00	39.08	42.61	14.92	31.39
1050.00	V	54.00	74.00	39.50	42.59	14.50	31.41
1066.00	H	54.00	74.00	38.42	40.53	15.58	33.47
1066.00	V	54.00	74.00	39.39	43.03	14.61	30.97
2132.00	H	54.00	74.00	45.63	48.16	8.37	25.84
2132.00	V	54.00	74.00	45.33	47.95	8.67	26.05
3198.00	H	54.00	74.00	41.92	46.87	12.08	27.13
3198.00	V	54.00	74.00	45.71	49.18	8.29	24.82
5330.00	H	54.00	74.00	43.69	49.00	10.31	25.00
5330.00	V	54.00	74.00	46.17	51.56	7.83	22.44

High(2480 MHz)

Frequency [MHz]	(P)	Limit AV [dB(uV/m)]	Limit PK [dB(uV/m)]	Level AV [dB(uV/m)]	Level PK [dB(uV/m)]	Margin AV [dB]	Margin PK [dB]
4960.00	H	54.00	74.00	38.99	46.85	15.01	27.15
4960.00	V	54.00	74.00	45.61	50.65	8.39	23.35
1050.00	H	54.00	74.00	39.09	42.86	14.91	31.14
1050.00	V	54.00	74.00	39.55	42.39	14.45	31.61
1066.00	H	54.00	74.00	38.46	41.22	15.54	32.78
1066.00	V	54.00	74.00	39.35	44.07	14.65	29.93
2132.00	H	54.00	74.00	45.69	48.30	8.31	25.70
2132.00	V	54.00	74.00	45.15	48.11	8.85	25.89
3198.00	H	54.00	74.00	42.03	46.77	11.97	27.23
3198.00	V	54.00	74.00	45.64	49.62	8.36	24.38
5330.00	H	54.00	74.00	43.64	49.46	10.36	24.54
5330.00	V	54.00	74.00	46.12	51.83	7.88	22.17

2.1.6 AC Conducted Emissions

Frequency Range of Measurement

150 kHz to 30 MHz

Instrument Settings

IF Band Width: 9 kHz

Test Procedures

Module has been tested by mounting the End product(Printer).

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.

Amplitude measurements were performed with a quasi-peak detector and an average detector.

Limit

- 15.207(a)

Frequency (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56*	56 to 46*
0.5 ~ 5	56	46
5 ~ 30	60	50

* Decreases with the logarithm of the frequency.

Test Data

The requirements are:

☒ Complies

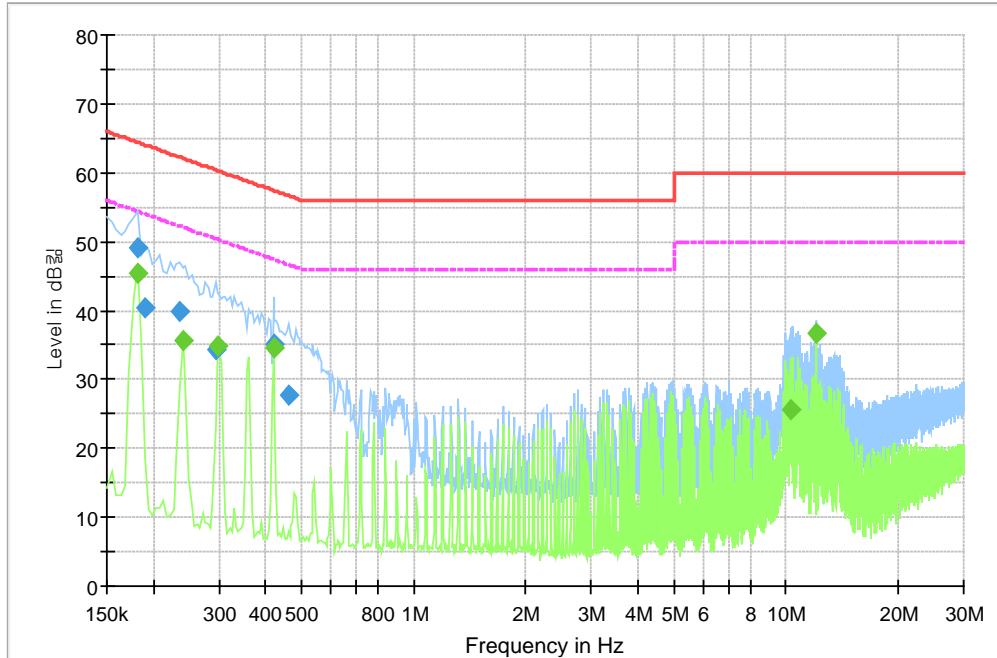
Test mode : Transmit

Frequency (MHz)	Measured Data (dBuV)	Margin (dB)	Remark
0.181 500	45.3	9.1	Quasi-Peak

Test Data

[LINE]

3CE_Class B_L1



Final Result 1

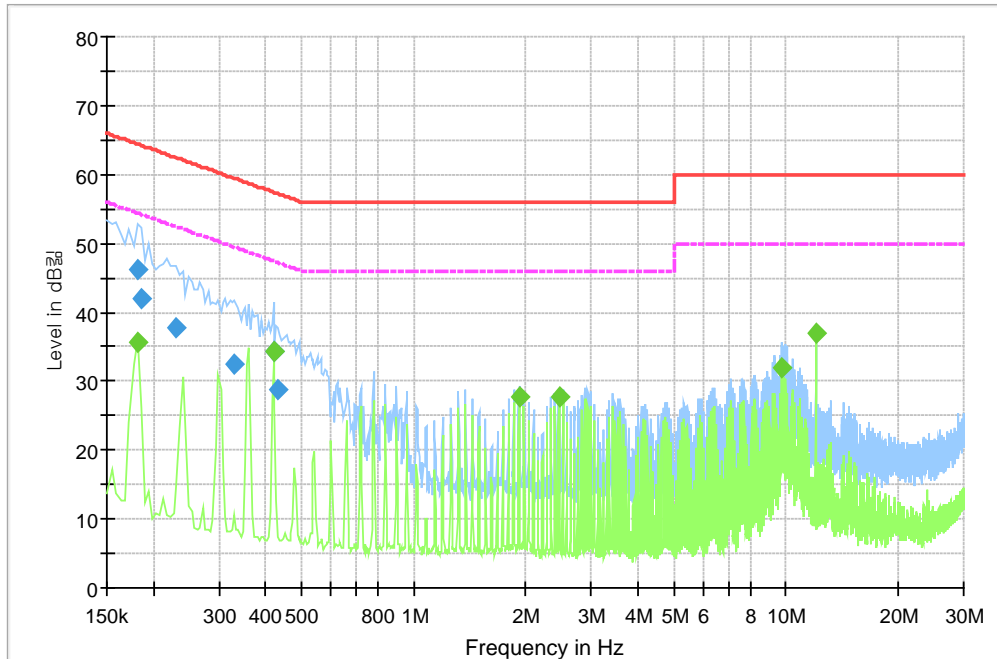
Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.181500	49.1	1000.0	9.000	On	L1	9.9	15.4	64.4
0.190500	40.4	1000.0	9.000	On	L1	9.9	23.6	64.0
0.235500	39.8	1000.0	9.000	On	L1	9.8	22.5	62.3
0.294000	34.4	1000.0	9.000	On	L1	9.9	26.0	60.4
0.420000	35.1	1000.0	9.000	On	L1	10.0	22.3	57.4
0.460500	27.8	1000.0	9.000	On	L1	10.0	28.9	56.7

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.181500	45.3	1000.0	9.000	On	L1	9.9	9.1	54.4
0.240000	35.6	1000.0	9.000	On	L1	9.8	16.5	52.1
0.298500	34.8	1000.0	9.000	On	L1	9.9	15.5	50.3
0.420000	34.6	1000.0	9.000	On	L1	10.0	12.9	47.4
10.311000	25.6	1000.0	9.000	On	L1	10.0	24.4	50.0
11.998500	36.7	1000.0	9.000	On	L1	10.0	13.3	50.0

[NEUTRAL]

3CE_Class B_N



Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.181500	46.2	1000.0	9.000	On	N	9.9	18.2	64.4
0.186000	41.9	1000.0	9.000	On	N	9.9	22.4	64.2
0.231000	37.8	1000.0	9.000	On	N	9.8	24.6	62.4
0.330000	32.5	1000.0	9.000	On	N	10.0	26.9	59.5
0.420000	34.4	1000.0	9.000	On	N	10.0	23.0	57.4
0.433500	28.9	1000.0	9.000	On	N	10.0	28.3	57.2

Final Result 2

Frequency (MHz)	CAverage (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.181500	35.7	1000.0	9.000	On	N	9.9	18.7	54.4
0.420000	34.4	1000.0	9.000	On	N	10.0	13.0	47.4
1.918500	27.7	1000.0	9.000	On	N	9.8	18.3	46.0
2.458500	27.8	1000.0	9.000	On	N	9.8	18.2	46.0
9.771000	32.0	1000.0	9.000	On	N	10.0	18.0	50.0
11.998500	37.0	1000.0	9.000	On	N	10.0	13.0	50.0

APPENDIX A – Test Equipment Used For Tests

	Name of Equipment	Manufacturer	Model No.	Serial No.	Date of Calibration	Due Date
1	Signal Analyzer	Agilent	N9020A	MY48011598	2016-11-01	2017-11-01
2	Signal Generator	Rohde & Schwarz	SMB100A	175528	2016-11-01	2017-11-01
3	EMI Test Receiver	Rohde & Schwarz	ESCI7	100032	2017-02-02	2018-02-02
4	LISN	Rohde & Schwarz	ENV216	101235	2016-05-14	2017-05-14
5	EMI Test Receiver	Rohde & Schwarz	ESCI7	100814	2016-11-01	2017-11-01
6	Bilog Antenna	Schaffner	CBL6111C	2551	2016-05-13	2018-05-13
7	Active Loop Antenna	SCHWARZBECK	FMZB 1513	1513-126	2016-05-25	2018-05-25
8	6dB Attenuator	R&S	DNF	272.4110.50-2	2016-11-01	2017-11-01
9	6dB Attenuator	R&S	DNF	272.4110.50-1	2017-02-03	2018-02-03
10	AMPLIFIER	SONOMA	310	291721	2017-02-02	2018-02-02
11	EMI Test Receiver	Rohde & Schwarz	ESU40	100336	2015-05-14	2017-05-14
12	Preamplifier	Agilent	8449B	3008A02011	2016-12-01	2017-12-01
13	Horn Antenna	ETS-Lindgren	3115	00078894	2015-09-02	2017-09-02
14	Horn Antenna	ETS-Lindgren	3116	00062504	2015-09-04	2017-09-04
15	Horn Antenna	ETS-Lindgren	3117	00154525	2015-09-02	2017-09-02
16	Signal Analyzer	Agilent	N9020A	MY48011598	2016-11-01	2017-11-01
17	Band Reject Filter	Micro Tronics	BRM50702	G233	2017-02-03	2018-02-03