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TEST REPORT

FCC BT LE Test for SOM605
Certification

APPLICANT
MOTOV. Co.,Ltd.

REPORT NO.
HCT-RF-2310-FC007

DATE OF ISSUE
October 11, 2023

Tested by
Woong Jin Kim

Technical Manager
Jong Seok Lee

Accredited by KOLAS, Republic of KOREA

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BongJai Huh / CEO

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Additional Model
-

Applicant	**MOTOV. Co.,Ltd.** B1F-B1023, Inchoen Global Campus, 119, Songdomunhwa-ro, Yeonsu-gu, Incheon, Republic of Korea
Eut Type Model Name	EDGE_SOM SOM605
FCC ID	2BC3TSOM605
Max. RF Output Power	5.257 dBm (3.36 mW)
Modulation type	GFSK
FCC Classification	Digital Transmission System(DTS)
FCC Rule Part(s)	Part 15.247
Brand	MOTOV. Co.,Ltd.

The result shown in this test report refer only to the sample(s) tested unless otherwise stated.
This test results were applied only to the test methods required by the standard.
This laboratory is not accredited for the test results marked *

REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	October 11, 2023	Initial Release

Engineering Statement:
The measurements shown in this report were made in accordance with the procedures indicated, and the emissions from this equipment were found to be within the limits applicable. I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them. It is further stated that upon the basis of the measurements made, the equipment tested is capable of operation in accordance with the requirements of the FCC Rules under normal use and maintenance.

KOLAS Statement:
The above Test Report is the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS(Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA. (KOLAS Accreditation No. KT197)

If this report is required to confirmation of authenticity, please contact to www.hct.co.kr

CONTENTS

1. EUT DESCRIPTION

Model	SOM605		
Additional Model	-		
EUT Type	EDGE_SOM		
Power Supply	DC 5.0 V		
Frequency Range	2 402 MHz – 2 480 MHz		
Max. RF Output Power	Peak	1 M Bit/s:	5.014 dBm (3.17 mW)
		2 M Bit/s:	5.257 dBm (3.36 mW)
	Average	1 M Bit/s:	4.93 dBm (3.11 mW)
		2 M Bit/s:	4.92 dBm (3.10 mW)
Modulation Type	GFSK		
Bluetooth Version	5.0		
Number of Channels	40 Channels		
Antenna Specification	Pattern Antenna Peak Gain : 1.95 dBi		
Date(s) of Tests	August 29, 2023 ~ October 10, 2023		
EUT serial numbers	Radiated : MOTOV-VRD-0 Conducted : MOTOV-VRD-1		
Manufaucturer	MOTOV. Co.,Ltd. B1F-B1023, Inchoen Global Campus, 119, Songdomunhwa-ro, Yeonsu-gu, Incheon, Republic of Korea		

2. TEST METHODOLOGY

FCC KDB 558074 D01 15.247 Meas Guidance v05r02 dated April 02, 2019 entitled “guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices and the measurement procedure described in ANSI C63.10(Version : 2013) ‘the American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices’.

EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 6.2 of ANSI C63.10. (Version :2013) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane below 1 GHz. Above 1 GHz with 1.5 m using absorbers between the EUT and receive antenna. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 6.6.5 of ANSI C63.10. (Version: 2013)

DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

3. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment's, which is traceable to recognized national standards.
Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5 (Version : 2017).

4. FACILITIES AND ACCREDITATIONS

FACILITIES

The SAC(Semi-Anechoic Chamber) and conducted measurement facility used to collect the radiated data are located at the 74, Seoicheon-ro 578beon-gil,
Majang-myeon, Icheon-si, Gyeonggi-do, 17383, Rep. of KOREA.
The site is constructed in conformance with the requirements of ANSI C63.4. (Version :2014) and CISPR Publication 22.
Detailed description of test facility was submitted to the Commission and accepted dated March 31, 2022 (Registration Number: KR0032).

EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.
All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5. ANTENNA REQUIREMENTS

According to FCC 47 CFR § 15.203:

"An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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."

(1) The antennas of this E.U.T are unique coupling.

(2) The E.U.T Complies with the requirement of § 15.203

6. 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 indicate a 95 % level of confidence.

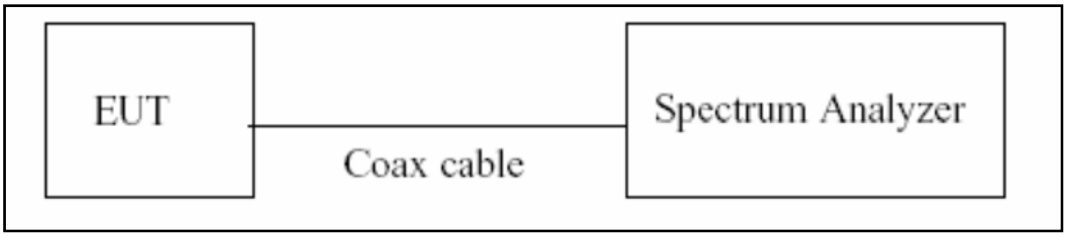
The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and, thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded Uncertainty (dB)
Conducted Disturbance (150 kHz ~ 30 MHz)	1.90 (Confidence level about 95 %, k=2)
Radiated Disturbance (9 kHz ~ 30 MHz)	4.14 (Confidence level about 95 %, k=2)
Radiated Disturbance (30 MHz ~ 1 GHz)	5.82 (Confidence level about 95 %, k=2)
Radiated Disturbance (1 GHz ~ 18 GHz)	5.74 (Confidence level about 95 %, k=2)
Radiated Disturbance (18 GHz ~ 40 GHz)	5.76 (Confidence level about 95 %, k=2)
Radiated Disturbance (Above 40 GHz)	5.52 (Confidence level about 95 %, k=2)

7. DESCRIPTION OF TESTS

7.1. Duty Cycle

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.

We tested according to the zero-span measurement method, 6.0)b) in KDB 558074 v05r02.

The largest available value of RBW is 8 MHz and VBW is 8 MHz.

The zero-span method of measuring duty cycle shall not be used if T ≤ 6.25 microseconds. (50/6.25 = 8)

The zero-span method was used because all measured T data are > 6.25 microseconds and both RBW and VBW are > 50/ *T*.

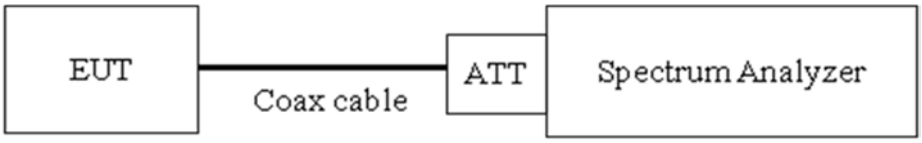
1. RBW = 8 MHz (the largest available value)
2. VBW = 8 MHz (≥ RBW)
3. SPAN = 0 Hz
4. Detector = Peak
5. Number of points in sweep > 100
6. Trace mode = Clear write
7. Measure T_{total} and T_{on}
8. Calculate Duty Cycle = T_{on}/ T_{total} and Duty Cycle Factor = 10log(1/Duty Cycle)

7.2. 6 dB Bandwidth

Limit

The minimum permissible 6 dB bandwidth is 500 kHz.

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to

(Procedure 8.2 in KDB 558074 v05r02, Procedure 11.8.1 in ANSI 63.10-2013)

1) RBW = 100 kHz
2) VBW ≥ 3 x RBW
3) Detector = Peak
4) Trace mode = max hold
5) Sweep = auto couple
6) Allow the trace to stabilize
7) We tested 6 dB bandwidth using the automatic bandwidth measurement capability of a spectrum analyzer. X dB is set 6 dB.

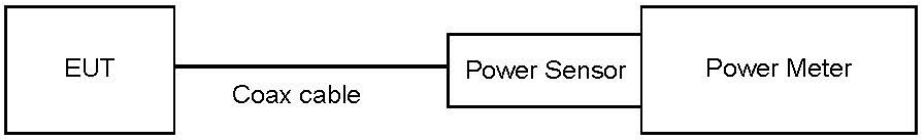
Note : We tested OBW using the automatic bandwidth measurement capability of a spectrum analyzer.

7.3. Output Power

Limit

The maximum permissible conducted output power is 1 Watt.

Test Configuration



Test Procedure

The transmitter output is connected to the Power Meter.

▪ Peak Power (Procedure 11.9.1.3 in ANSI 63.10-2013)

: Measure the peak power of the transmitter.

▪ Average Power (Procedure 8.3.2.3 in KDB 558074 v05r02, Procedure 11.9.2.3 in ANSI 63.10-2013)

1) Measure the duty cycle.
2) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Sample Calculation

▪ Conducted Output Power(Peak) = Measured Value + ATT loss + Cable loss

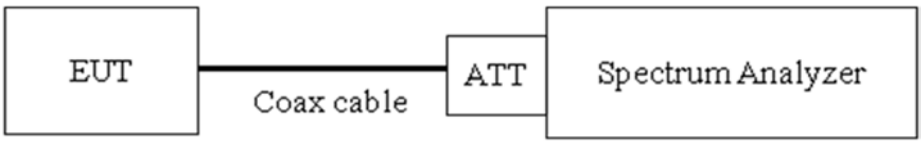
▪ Conducted Output Power(Average) = Measured Value + ATT loss + Cable loss + Duty Cycle Factor

7.4. Power Spectral Density

Limit

The transmitter power density average over 1-second interval shall not be greater than 8 dBm in any 3 kHz BW.

Test Configuration



Test Procedure

The transmitter output is connected to the Spectrum Analyzer.

We tested according to Procedure 8.4 in KDB 558074 v05r02, Procedure 11.10 in ANSI 63.10-2013.

The spectrum analyzer is set to :

1) Set analyzer center frequency to DTS channel center frequency.
2) Set span to at least 1.5 times the OBW.
3) RBW = 3 kHz ≤ RBW ≤ 100 kHz.
4) VBW ≥ 3 x RBW.
5) Sweep = auto couple
6) Detector = power averaging (rms) or sample detector (when rms not available).
7) Ensure that the number of measurement points in the sweep ≥ [2 ×span / RBW].
8) Employ trace averaging (rms) mode over a minimum of 100 traces
9) Use the peak marker function to determine the maximum amplitude level.
10) Use the peak marker function to determine the maximum amplitude level within the RBW.
    If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.
11) If then duty factor shall be added to adjust the result if the duty cycle is less than 98 %

Sample Calculation

▪ Power Spectral Density = Measured Level + ATT loss + Cable loss

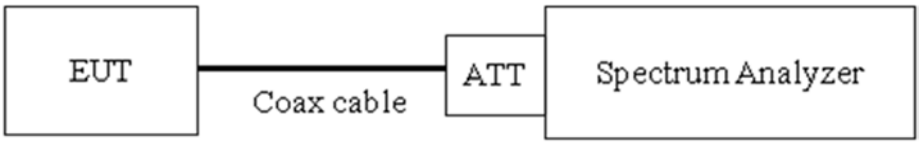
7.5. Conducted Band Edge(Out of Band Emissions) & Conducted Spurious Emissions

Limit

The maximum conducted (Peak) output power was used to demonstrate compliance, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.

[Conducted > 20 dBc]

Test Configuration



Test Procedure

The transmitter output is connected to the spectrum analyzer.

(Procedure 8.5 in KDB 558074 v05r02, Procedure 11.11 in ANSI 63.10-2013)

1) RBW = 100 kHz
2) VBW ≥ 3 x RBW
3) Set span to encompass the spectrum to be examined
4) Detector = Peak
5) Trace Mode = Max hold
6) Sweep time = auto couple
7) Ensure that the number of measurement points ≥ 2 x Span/VBW
8) Allow trace to fully stabilize.
9) Use peak marker function to determine the maximum amplitude level.

Measurements are made over the 30 MHz to 25 GHz range with the transmitter set to the lowest, middle, and highest channels.

Factors for frequency

Freq(MHz)	Factor(dB)
30	20.04
100	20.13
200	20.17
300	20.20
400	20.25
500	20.25
600	20.25
700	20.26
800	20.28
900	20.31
1000	20.34
2000	20.50
2400	20.56
3000	20.63
4000	20.67
5000	20.76
5850	20.84
6000	20.82
7000	20.87
8000	20.93
9000	21.04
10000	21.06
11000	21.20
12000	21.25
13000	21.22
14000	21.26
15000	21.34
16000	21.35
17000	21.42
18000	21.43
19000	21.54
20000	21.65
21000	21.77
22000	21.76
23000	21.81
24000	21.89
25000	21.89
26000	22.28

Note : 1. 2400 ~ 2500 MHz is fundamental frequency range.

2. Factor = Attenuator loss + Cable loss

3. Spectrum offset Loss = Attenuator loss + Cable loss + EUT Cable loss(0.25 dB) = 20.81 dB

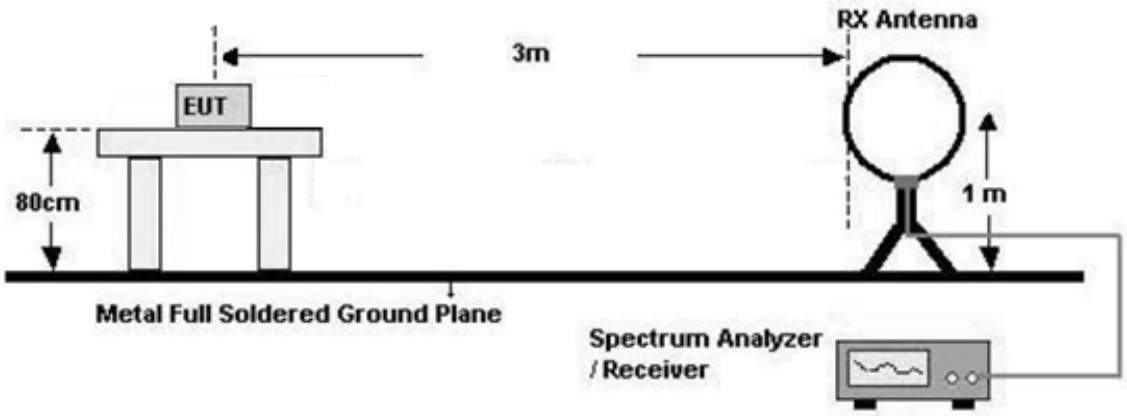
7.6. Radiated Test

Limit

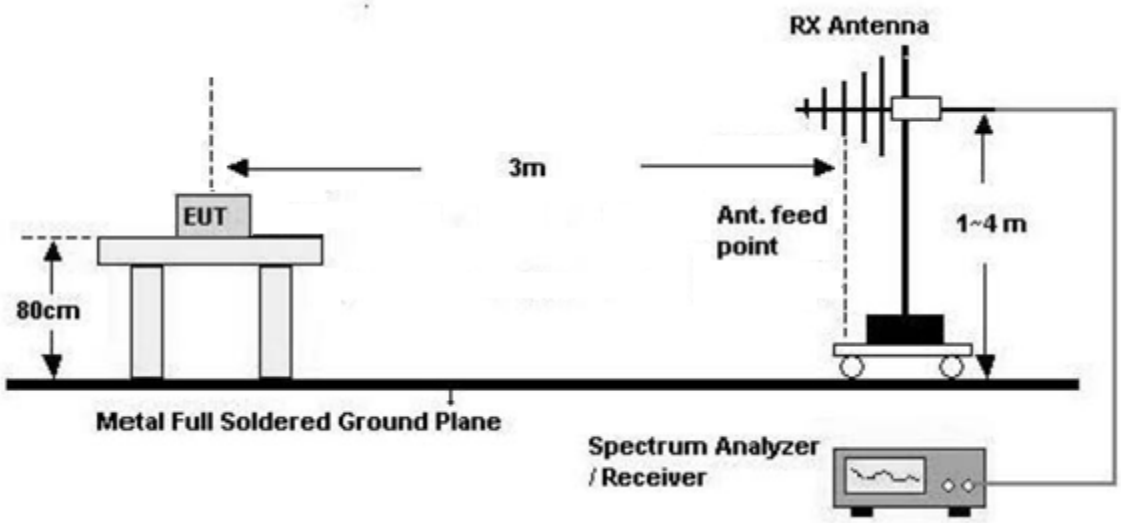
Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

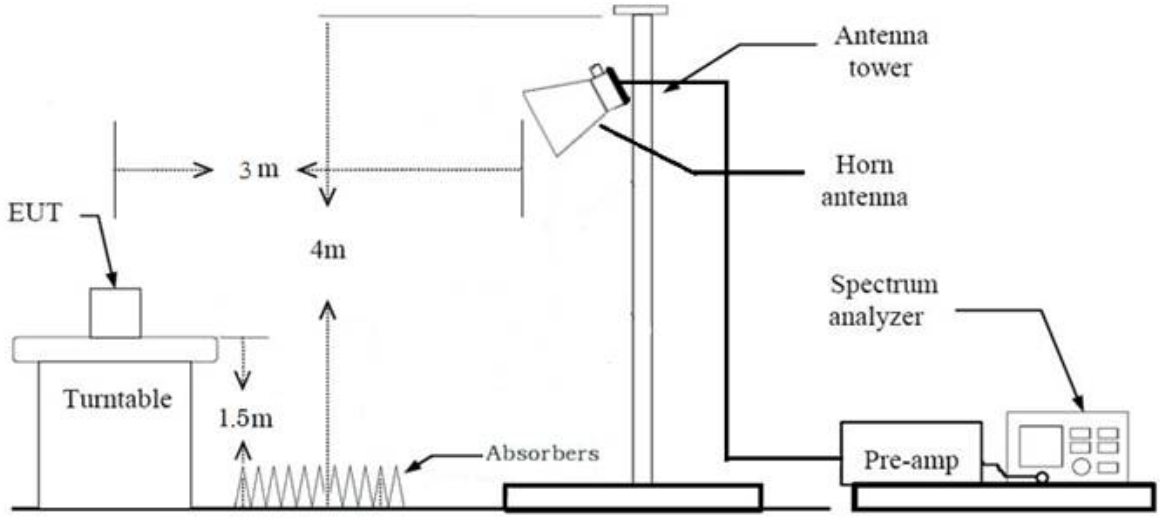
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



Test Procedure of Radiated spurious emissions(Below 30 MHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The loop antenna was placed at a location 3 m from the EUT
3. The EUT is placed on a turntable, which is 0.8 m above ground plane.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization and Parallel to the ground plane in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Distance Correction Factor(0.009 MHz – 0.490 MHz) = 40log(3 m/300 m) = - 80 dB
   Measurement Distance : 3 m
7. Distance Correction Factor(0.490 MHz – 30 MHz) = 40log(3 m/30 m) = - 40 dB
   Measurement Distance : 3 m
8. Spectrum Setting
   - Frequency Range = 9 kHz ~ 30 MHz
   - Detector = Peak
   - Trace = Maxhold
   - RBW = 9 kHz
   - VBW ≥ 3 x RBW
9. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) + Distance Factor(D.F)
10. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

KDB 414788 OFS and Chamber Correlation Justification

Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

OFS and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Test Procedure of Radiated spurious emissions(Below 1 GHz)

1. The EUT was placed on a non-conductive table located on semi-anechoic chamber.
2. The EUT is placed on a turntable, which is 0.8 m above ground plane.
3. The Hybrid antenna was placed at a location 3 m from the EUT, which is varied from 1m to 4 m to find out the highest emissions.
4. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
5. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
6. Spectrum Setting
   (1) Measurement Type(Peak):
      - Measured Frequency Range : 30 MHz – 1 GHz
      - Detector = Peak
      - Trace = Maxhold
      - RBW = 100 kHz
      - VBW ≥ 3 x RBW
   (2) Measurement Type(Quasi-peak):
      - Measured Frequency Range : 30 MHz – 1 GHz
      - Detector = Quasi-Peak
      - RBW = 120 kHz

   In general, (1) is used mainly
7. Total = Measured Value + Antenna Factor(A.F) + Cable Loss(C.L)
8. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

Test Procedure of Radiated spurious emissions (Above 1 GHz)

1. The EUT is placed on a turntable, which is 1.5 m above ground plane.
2. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
4. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. The unit was tested with its standard battery.
8. Spectrum Setting (Method 8.6 in KDB 558074 v05r02, Procedure 11.12 in ANSI 63.10-2013)
   (1) Measurement Type(Peak):
      - Measured Frequency Range : 1 GHz – 25 GHz
      - Detector = Peak
      - Trace = Max hold
      - RBW = 1 MHz
      - VBW ≥ 3 x RBW
   (2) Measurement Type(Average):
      - Duty cycle < 98 %, duty cycle variations are less than ±2 %
      - Measured Frequency Range : 1 GHz – 25 GHz
      - Detector = RMS
      - Averaging type = power (*i.e.*, RMS)
      - RBW = 1 MHz
      - VBW ≥ 3 x RBW
      - Sweep time = auto.
      - Trace mode = average (at least 100 traces).
      - Correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle.

- Duty Cycle Factor (dB) : Please refer to the please refer to section 9.1

9. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
10. Distance extrapolation factor = 20log (test distance / specific distance) (dB)
11. Total (Measurement Type : Peak)
    = Peak Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G)

+ Distance Factor(D.F)

Total (Measurement Type : Average)

= Average Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G)

+ Distance Factor(D.F)

#Note : Used Average measurement method according to KDB 558074 Section11 Q3

Test Procedure of Radiated Restricted Band Edge

1. The EUT is placed on a turntable, which is 1.5 m above ground plane.
2. We have done x, y, z planes in EUT and horizontal and vertical polarization in detecting antenna.
3. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
4. EUT is set 3 m away from the receiving antenna, which is varied from 1 m to 4 m to find out the highest emissions.
5. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
6. Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
7. The unit was tested with its standard battery.
8. Spectrum Setting
   (1) Measurement Type(Peak):
   - Measured Frequency Range : 2310 MHz ~ 2390 MHz/ 2483.5 MHz ~ 2500 MHz
   - Detector = Peak
   - Trace = Max hold
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW

   (2) Measurement Type(Average):
   - Duty cycle < 98 %, duty cycle variations are less than ±2 %
   - Measured Frequency Range : 2310 MHz ~ 2390 MHz/ 2483.5 MHz ~ 2500 MHz
   - Detector = RMS
   - Averaging type = power (*i.e.*, RMS)
   - RBW = 1 MHz
   - VBW ≥ 3 x RBW
   - Sweep time = auto.
   - Trace mode = average (at least 100 traces).
   - Correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100 percent duty cycle.
   - Duty Cycle Factor (dB) : Please refer to the please refer to section 9.1.
9. Measurement value only up to 6 maximum emissions noted, or would be lesser if no specific

emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.

10. Distance extrapolation factor = 20log (test distance / specific distance) (dB)

11. Total(Measurement Type : Peak)

= Peak Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G) +

+ Distance Factor(D.F)

Total(Measurement Type : Average)

= Average Measured Value + Antenna Factor(A.F) + Cable Loss(C.L) - Amp Gain(A.G)

+ Distance Factor(D.F)

#Note : Used Average measurement method according to KDB 558074 Section11 Q3

7.7. AC Power line Conducted Emissions

Limit

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN).

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56[a]	56 to 46[a]
0.50 to 5	56	46
5 to 30	60	50

[a]Decreases with the logarithm of the frequency.

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Annex A for the actual connections between EUT and support equipment.

Test Procedure

1. The EUT is placed on a wooden table 80 cm above the reference ground plane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors : Quasi Peak and Average Detector.

Sample Calculation

Quasi-peak(Final Result) = Measured Value + Correction Factor

7.8. Worst case configuration and mode

Radiated Test

1. All modes of operation were investigated and the worst case configuration results are reported.
   - Mode : Stand alone
   - Worstcase : Stand alone
2. EUT Axis:
   - Radiated Spurious Emissions : Z
   - Radiated Restricted Band Edge : Z
3. All packet length of operation were investigated and the test results are worst case in lowest packet length.
   Worst case : 1 M, 2 M
4. All position of loop antenna were investigated and the test result is a no critical peak found at all positions.
   - Position : Horizontal, Vertical, Parallel to the ground plane

AC Power line Conducted Emissions

1. All modes of operation were investigated and the worst case configuration results are reported.
   - Mode : Stand alone
   - Worstcase : Stand alone

Conducted test

1. The EUT was configured with packet length of highest power.
   - ALL supported mode tested.
   - Worst Results refer to Notes for each test item

8. SUMMARY TEST OF RESULTS

Test Description	FCC Part Section(s)	Test Limit	Test Condition	Test Result
6 dB Bandwidth	§ 15.247(a)(2)	> 500 kHz	Conducted	PASS
Conducted Maximum Output Power	§ 15.247(b)(3)	< 1 Watt		PASS
Power Spectral Density	§ 15.247(e)	< 8 dBm / 3 kHz Band		PASS
Band Edge (Out of Band Emissions)	§ 15.247(d)	Conducted > 20 dBc		PASS
AC Power line Conducted Emissions	§ 15.207	cf. Section 7.7		PASS
Radiated Spurious Emissions	§ 15.247(d), 15.205, 15.209	cf. Section 7.6	Radiated	PASS
Radiated Restricted Band Edge	§ 15.247(d), 15.205, 15.209	cf. Section 7.6		PASS

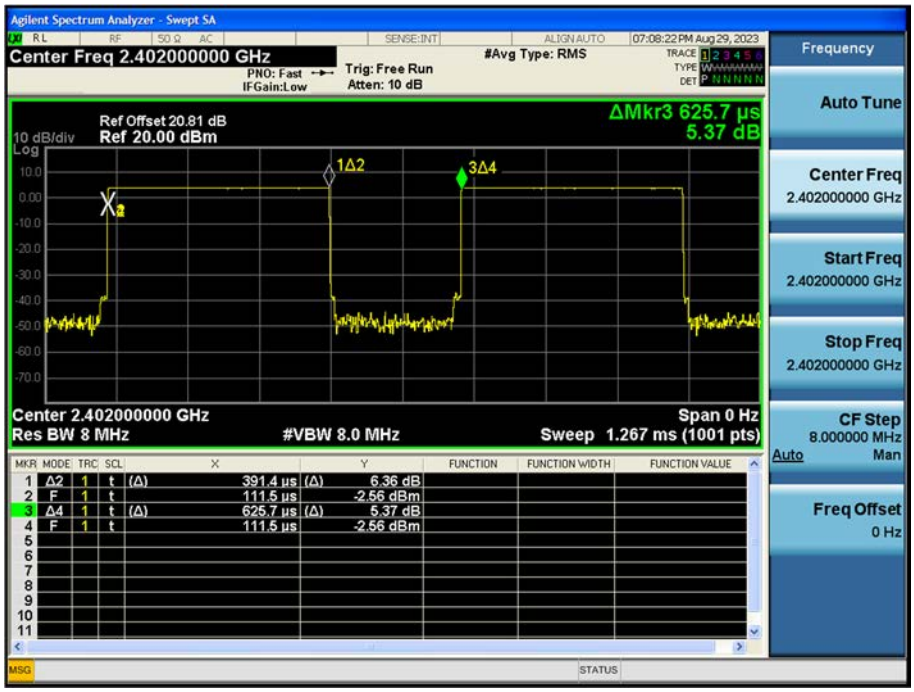
9. TEST RESULT

9.1 DUTY CYCLE

Data rate (Bit/s)	Packet length (Byte)	T_{on} (ms)	T_{total} (ms)	Duty Cycle	Duty Cycle Factor (dB)
1M	37	0.391	0.626	0.626	2.038
	255	2.140	2.500	0.856	0.675
2M	37	0.206	0.624	0.331	4.807
	255	1.078	1.874	0.575	2.401

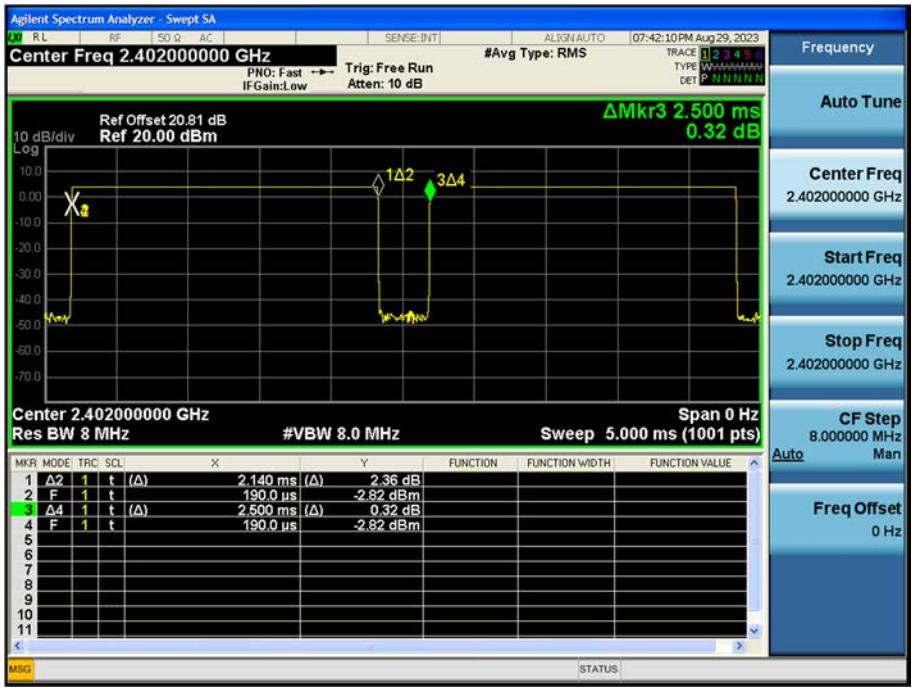
▣ 1 M Bit/s (37 Byte) Test Plots

Duty Cycle (Low-CH 0)



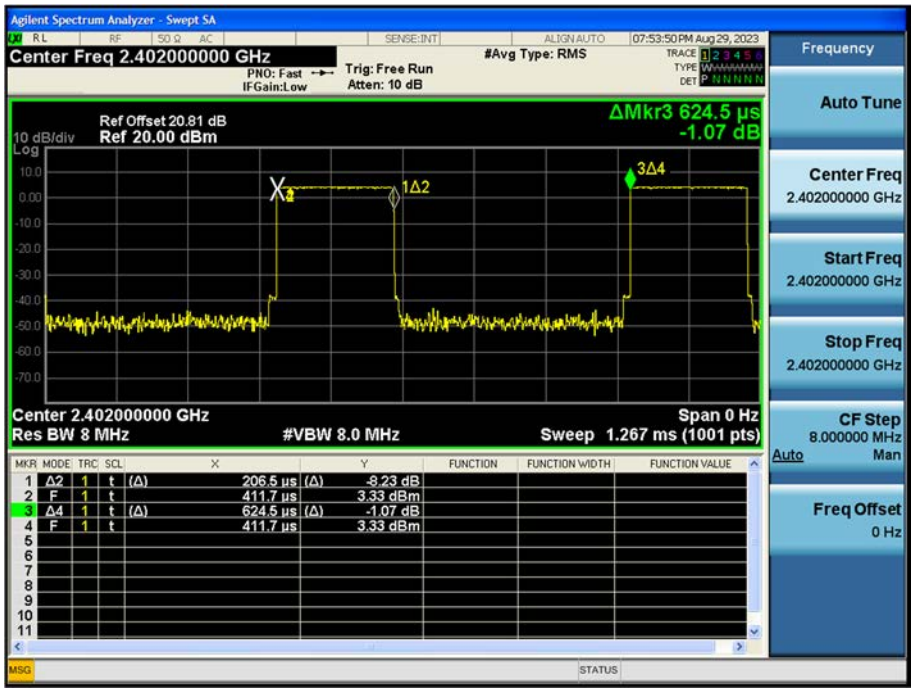
▣ 1 M Bit/s (255 Byte) Test Plots

Duty Cycle (Low-CH 0)



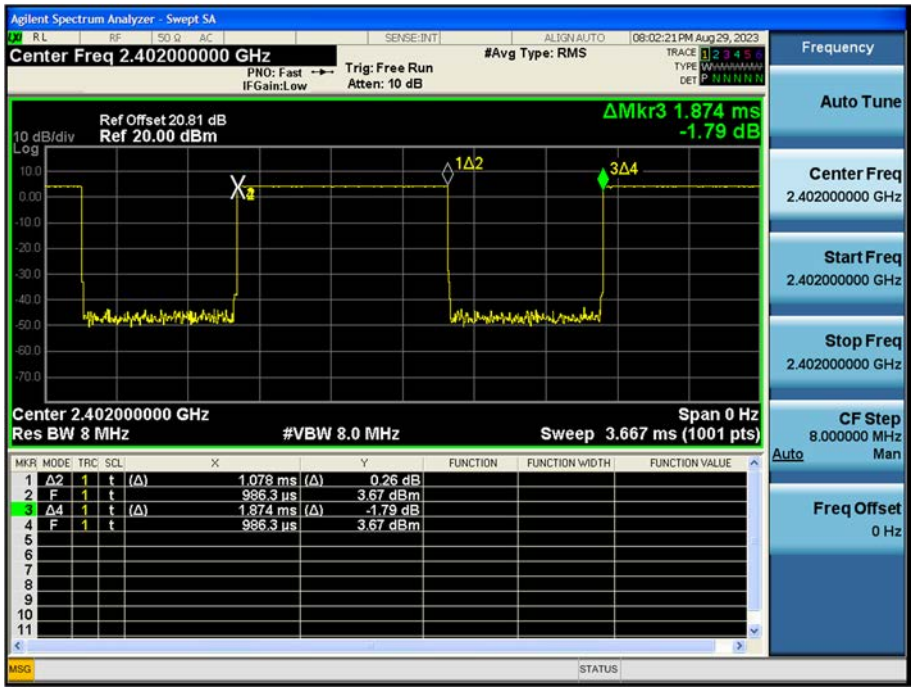
▣ 2 M Bit/s (37 Byte) Test Plots

Duty Cycle (Low-CH 0)



▣ 2 M Bit/s (255 Byte) Test Plots

Duty Cycle (Low-CH 0)



9.2 6 dB BANDWIDTH

Mode (Bit/s)	Channel	6 dB Bandwidth (kHz)	Limit (kHz)
1M(37)	0	670.6	> 500
	19	671.8	
	39	669.6	
1M(255)	0	666.6	> 500
	19	668.7	
	39	668.7	
2M(37)	0	1141	> 500
	19	1149	
	39	1143	
2M(255)	0	1145	> 500
	19	1152	
	39	1147	

Note:

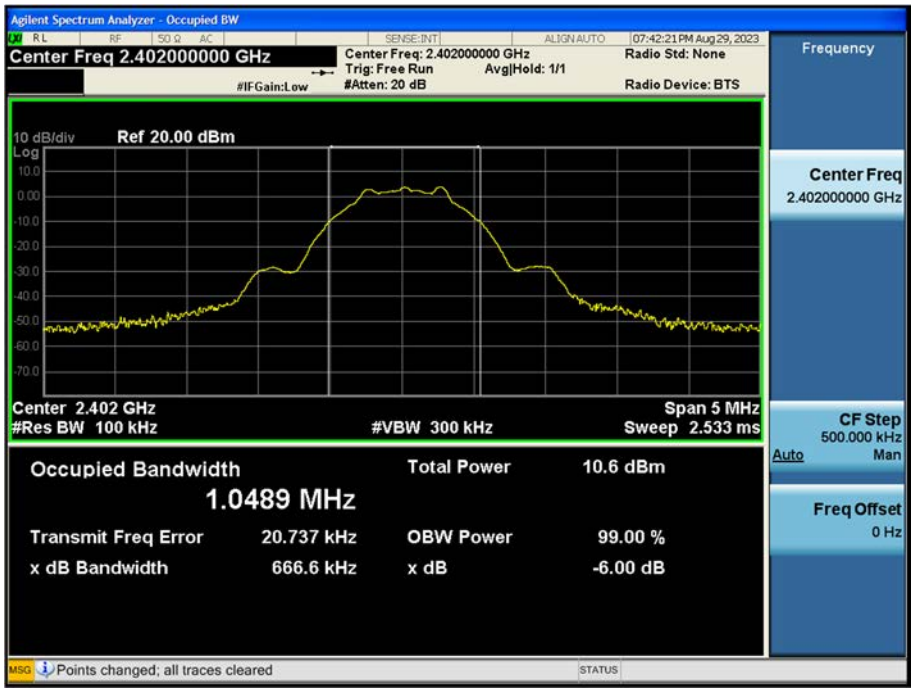
In order to simplify the report, attached plots were only the narrowest 6 dB BW Channel.

1M Bit/s: 255 Byte

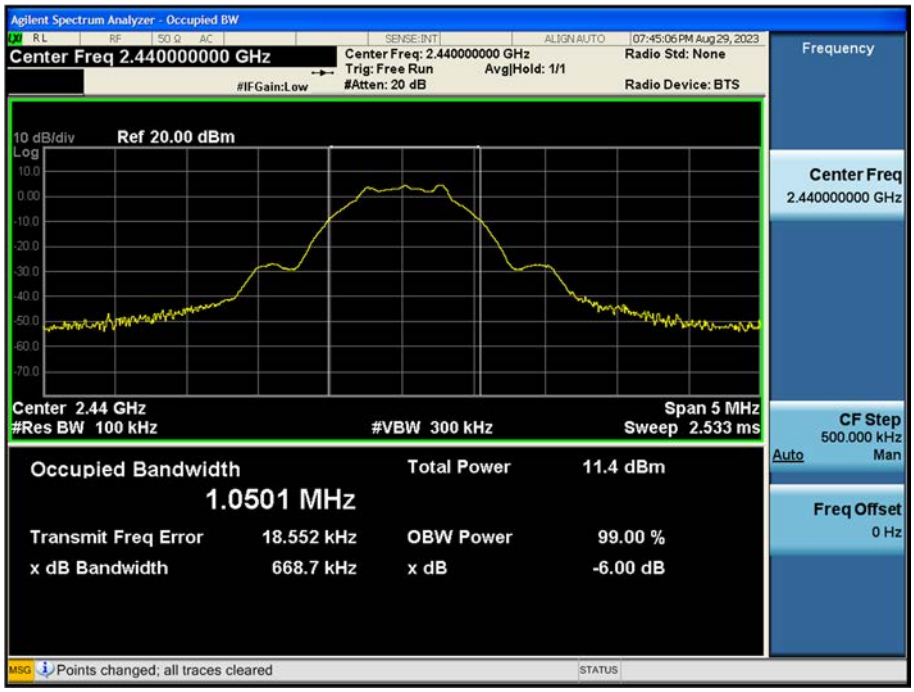
2M Bit/s: 37 Byte

▣ 1 MBit/s (255 Byte) Test Plots

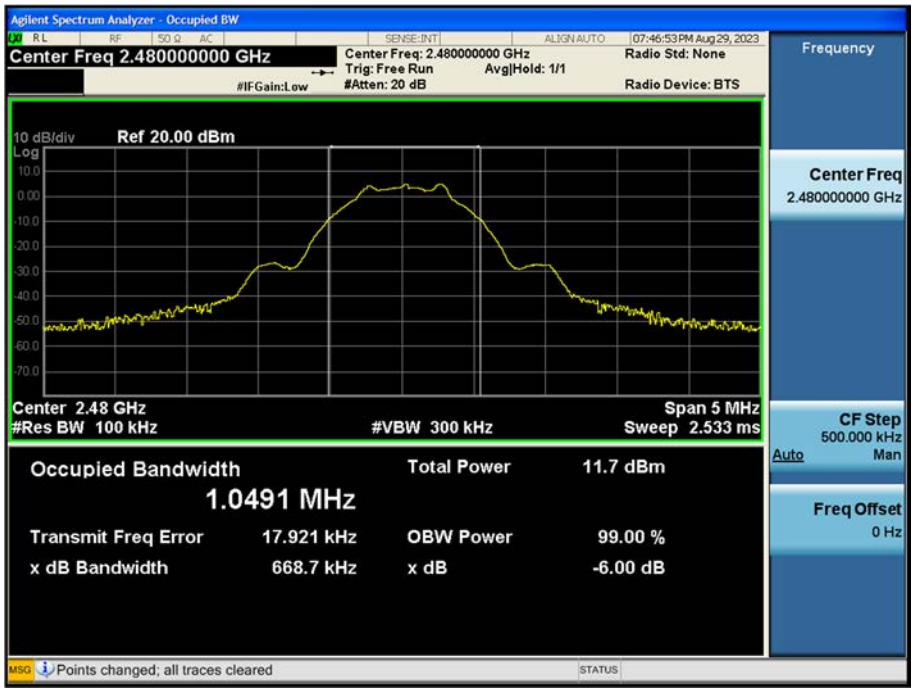
6 dB Bandwidth plot (Low-CH 0)



6 dB Bandwidth plot (Mid-CH 19)



6 dB Bandwidth plot (High-CH 39)



▣ 2 MBit/s (37 Byte) Test Plots

6 dB Bandwidth plot (Low-CH 0)

6 dB Bandwidth plot (Mid-CH 19)

6 dB Bandwidth plot (High-CH 39)

9.3 OUTPUT POWER

Peak Power

Data rate	Packet length	LE Mode		Measured Power(dBm)	Limit (dBm)
(Bit/s)	(Byte)	Frequency [MHz]	Channel		
1M	37	2402	0	3.927	30
		2440	19	4.709	
		2480	39	5.014	
	255	2402	0	3.923	
		2440	19	4.710	
		2480	39	4.935	
2M	37	2402	0	4.075	
		2440	19	4.963	
		2480	39	5.257	
	255	2402	0	4.051	
		2440	19	4.895	
		2480	39	5.180	

Average Power

Data rate	Packet length	LE Mode		Measured Power (dBm)	Duty Cycle Factor	Result	Limit (dBm)
(Bit/s)	(Byte)	Frequency [MHz]	Channel		(dB)	(dBm)	
1M	37	2402	0	1.71	2.04	3.75	30
		2440	19	2.51	2.04	4.55	
		2480	39	2.89	2.04	4.93	
	255	2402	0	3.08	0.68	3.76	
		2440	19	3.91	0.68	4.59	
		2480	39	4.09	0.68	4.77	
2M	37	2402	0	-1.20	4.81	3.61	
		2440	19	-0.24	4.81	4.57	
		2480	39	0.11	4.81	4.92	
	255	2402	0	1.25	2.40	3.65	
		2440	19	2.16	2.40	4.56	
		2480	39	2.48	2.40	4.88	

9.4 POWER SPECTRAL DENSITY

Frequency (MHz)	Channel No.	Mode	Test Result	
			Measured PSD (dBm)	Limit (dBm/3 kHz)
2402	0	1 M Bit/s 37 Byte	3.692	8
2440	19		4.455	
2480	39		4.881	
2402	0	1 M Bit/s 255 Byte	3.869	
2440	19		4.635	
2480	39		4.902	
2402	0	2 M Bit/s 37 Byte	3.688	
2440	19		4.512	
2480	39		4.905	
2402	0	2 M Bit/s 255 Byte	3.594	
2440	19		4.461	
2480	39		4.814	

Note :

1. The PSD measured results in plot is already including the actual values of loss for the attenuator and cable combination.
2. Worst case test Plot Only : 2 M Bit/s (37 Byte)

▣ 2 M Bit/s (37 Byte) Test Plots

Power Spectral Density (Low-CH 0)

Power Spectral Density (Mid-CH 19)

Power Spectral Density (High-CH 39)

9.5 BAND EDGE/ CONDUCTED SPURIOUS EMISSIONS

Test Result : please refer to the plot below.
In order to simplify the report, attached plots were only the worst case channel and data rate.

[BAND EDGE]

Frequency (MHz)	Mode	Channel No.	Position	Test Result	
				Measured Level (dB)	Limit (dBc)
2402	1M Bit/s 37 Byte	0	Lower	56.201	30
2480		39	Upper	64.307	30
2402	1M Bit/s 255 Byte	0	Lower	56.761	30
2480		39	Upper	64.527	30
2402	2M Bit/s 37 Byte	0	Lower	42.642	30
2480		39	Upper	62.712	30
2402	2M Bit/s 255 Byte	0	Lower	43.689	30
2480		39	Upper	63.415	30

Note :

1. In order to simplify the report, attached plots were only the worst case channel and data rate.
   [Lower: Worst case : 2M Bit/s (37 Byte)]
   [Upper: Worst case : 2M Bit/s (37 Byte)]

[CONDUCTED SPURIOUS EMISSIONS]

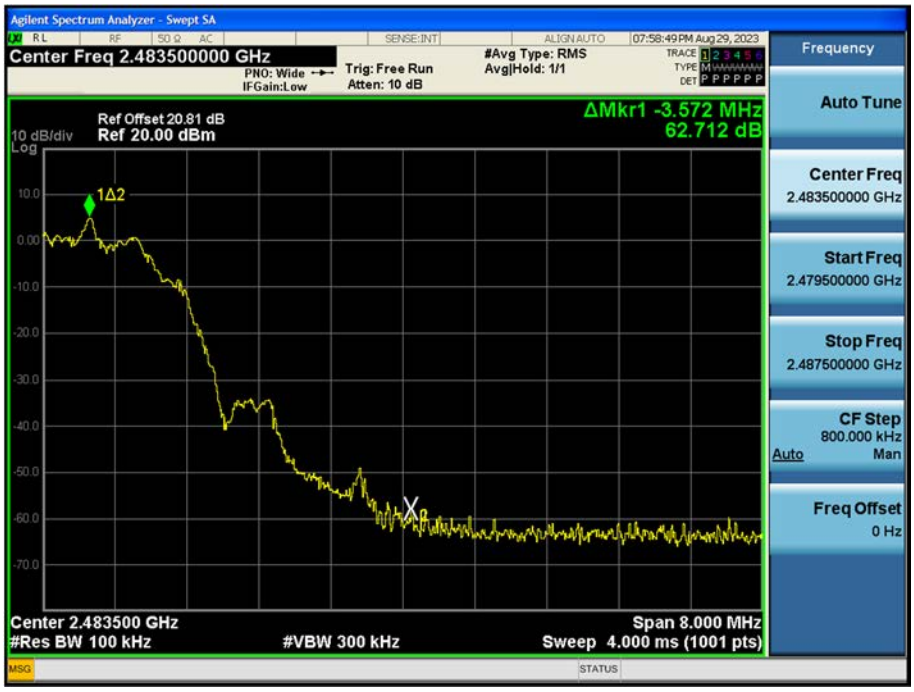
Note :

1. In order to simplify the report, attached plots were only the worst case channel and data rate.
   Worst case : 2M Bit/s (37 Byte)

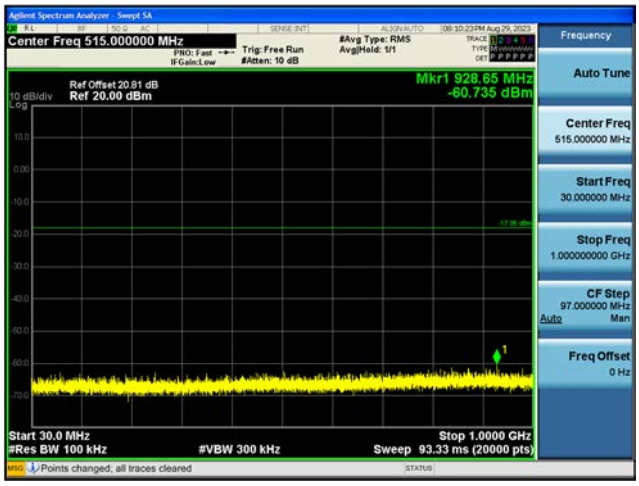
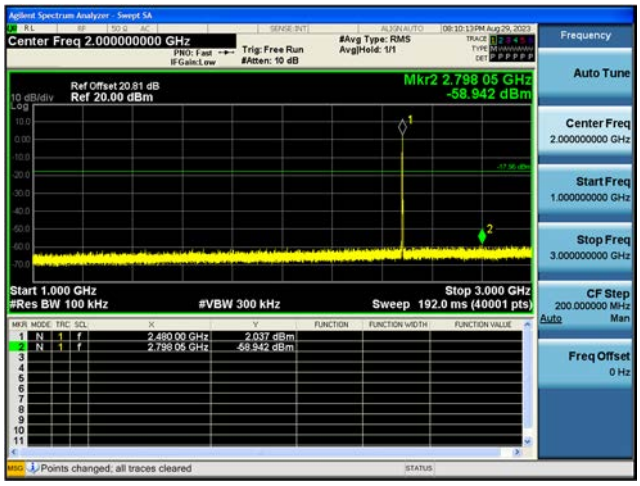
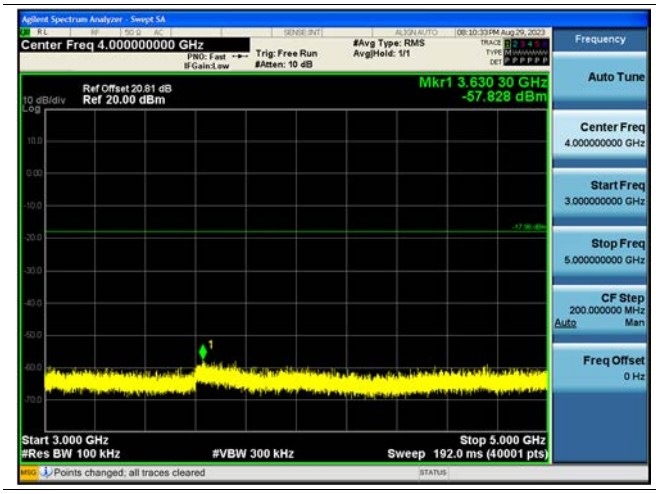
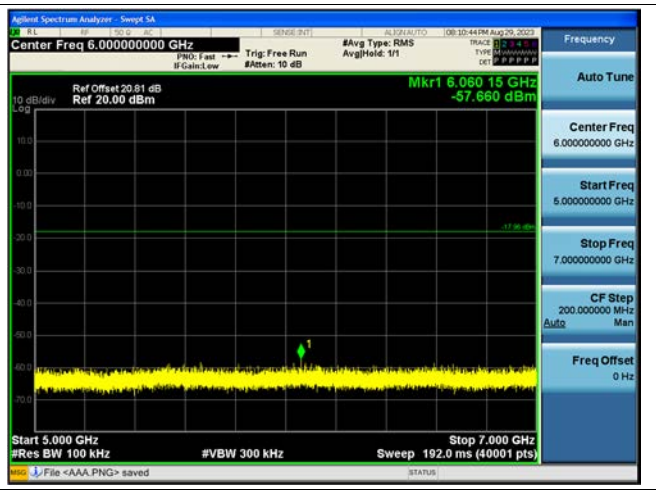
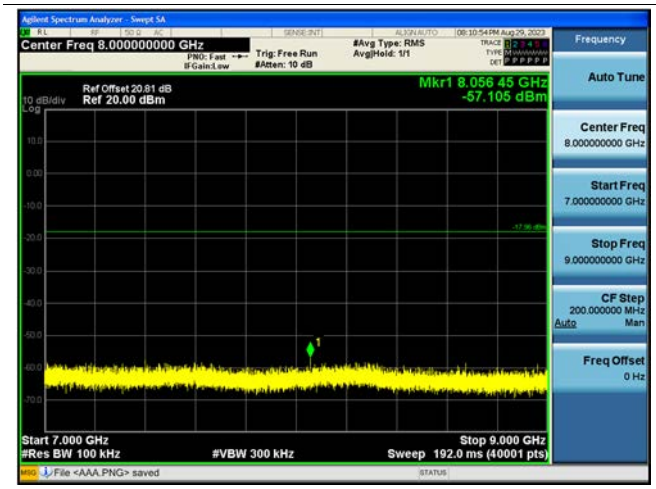
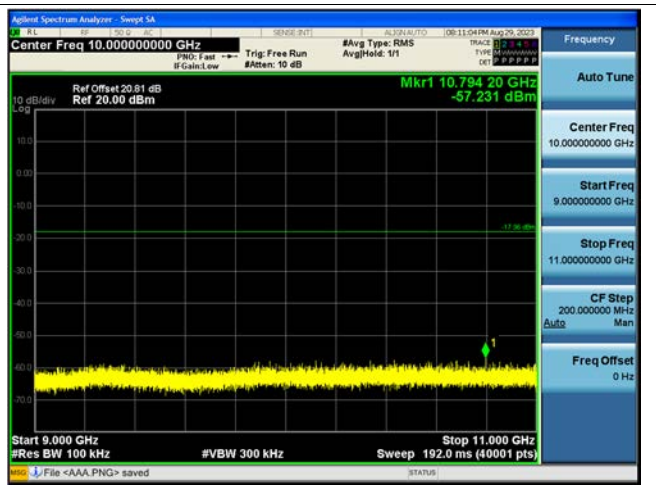
▣ 2M Bit/s (37 Byte) Test Plots –Band Edge

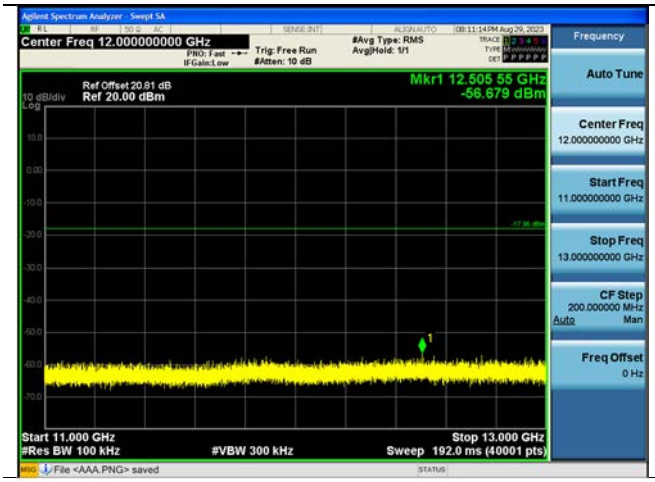
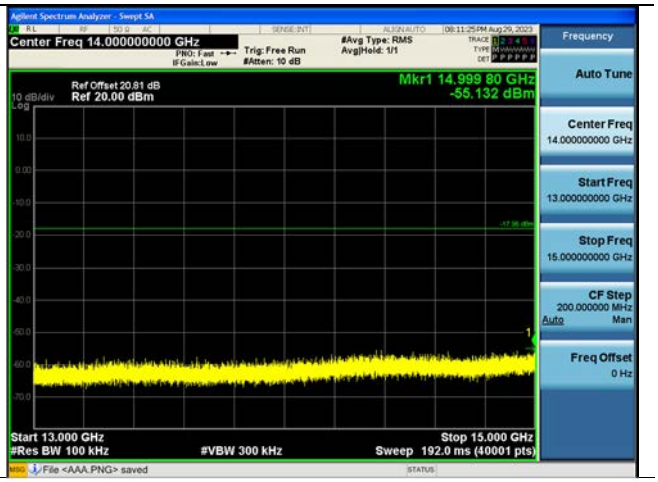
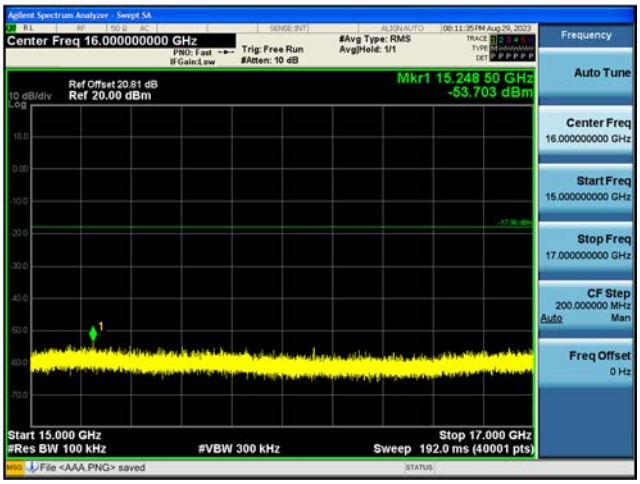
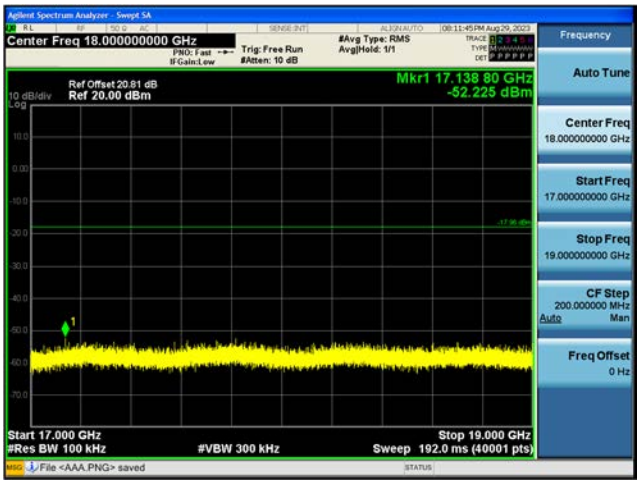
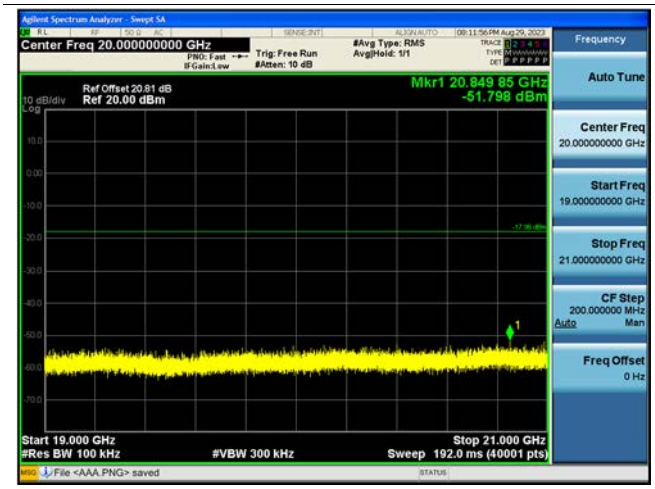
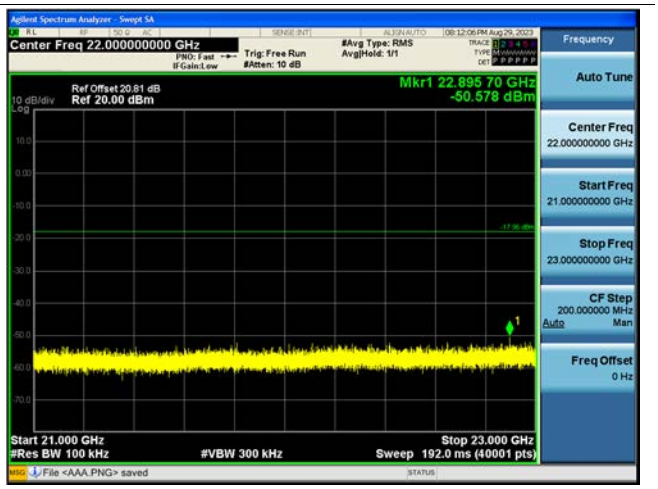
Low-CH 0

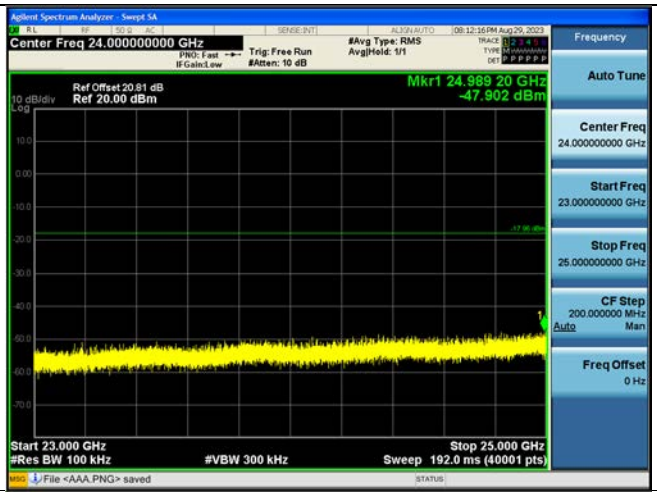
High-CH 39



▣ 2M Bit/s (37 Byte) Test Plots -Conducted Spurious Emission
(Worst case : High-CH 39)

Spurious Emission (30 MHz – 1 GHz)	Spurious Emission (1 GHz – 3 GHz)
	
Spurious Emission (3 GHz – 5 GHz)	**Spurious Emission (5 GHz – 7 GHz)**
	
Spurious Emission (7 GHz – 9 GHz)	**Spurious Emission (9 GHz – 11 GHz)**
	

Spurious Emission (11 GHz – 13 GHz)	Spurious Emission (13 GHz – 15 GHz)
	
Spurious Emission (15 GHz – 17 GHz)	**Spurious Emission (17 GHz – 19 GHz)**
	
Spurious Emission (19 GHz – 21 GHz)	**Spurious Emission (21 GHz – 23 GHz)**
	

Spurious Emission (23 GHz – 25 GHz)


9.6 RADIATED SPURIOUS EMISSIONS

Frequency Range : 9 kHz – 30 MHz

Frequency	Measured Value	A.F+C.L+D.F	POL	Total	Limit	Margin
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]
No Critical peaks found						

Note:

1. The Measured of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.
2. Distance extrapolation factor = 40log (specific distance / test distance) (dB)
3. Limit line = specific Limits (dBμV) + Distance extrapolation factor

Frequency Range : Below 1 GHz

Frequency	Measured Value	A.F+C.L	POL	Total	Limit	Margin
[MHz]	[dBμV]	[dB/m]	[H/V]	[dBμV/m]	[dBμV/m]	[dB]
No Critical peaks found						

Note:

1. Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Quasi peak detector mode.

Frequency Range : Above 1 GHz

Mode : 1 M Bit/s (37 Bytes)

Operation Mode: CH Low

Frequency	Measured Value	A.F + C.L - A.G + D.F	Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
4804	47.06	3.09	V	50.15	73.98	23.83	PK
4804	39.19	3.09	V	42.28	53.98	11.70	AV
7206	43.02	11.43	V	54.45	73.98	19.53	PK
7206	32.71	11.43	V	44.14	53.98	9.84	AV
4804	49.04	3.09	H	52.13	73.98	21.85	PK
4804	42.33	3.09	H	45.42	53.98	8.56	AV
7206	43.26	11.43	H	54.69	73.98	19.29	PK
7206	32.94	11.43	H	44.37	53.98	9.61	AV

Operation Mode: CH Mid

Frequency	Measured Value	A.F + C.L - A.G + D.F	Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
4880	46.81	3.50	V	50.31	73.98	23.67	PK
4880	39.00	3.50	V	42.50	53.98	11.48	AV
7320	41.10	11.95	V	53.05	73.98	20.93	PK
7320	29.43	11.95	V	41.38	53.98	12.60	AV
4880	47.68	3.50	H	51.18	73.98	22.80	PK
4880	41.16	3.50	H	44.66	53.98	9.32	AV
7320	41.39	11.95	H	53.34	73.98	20.64	PK
7320	29.62	11.95	H	41.57	53.98	12.41	AV

Operation Mode: CH High

Frequency	Measured Value	A.F + C.L - A.G + D.F	Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
4960	47.87	3.82	V	51.69	73.98	22.29	PK
4960	41.88	3.82	V	45.70	53.98	8.28	AV
7440	42.06	11.98	V	54.04	73.98	19.94	PK
7440	32.12	11.98	V	44.10	53.98	9.88	AV
4960	49.65	3.82	H	53.47	73.98	20.51	PK
4960	43.08	3.82	H	46.90	53.98	7.08	AV
7440	42.22	11.98	H	54.20	73.98	19.78	PK
7440	32.35	11.98	H	44.33	53.98	9.65	AV

Mode : 2 M Bit/s (37 Bytes)

Operation Mode: CH Low

Frequency	Measured Value	A.F + C.L - A.G + D.F	Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
4804	46.84	3.09	V	49.93	73.98	24.05	PK
4804	35.65	3.09	V	38.74	53.98	15.24	AV
7206	42.51	11.43	V	53.94	73.98	20.04	PK
7206	29.88	11.43	V	41.31	53.98	12.67	AV
4804	48.92	3.09	H	52.01	73.98	21.97	PK
4804	37.76	3.09	H	40.85	53.98	13.13	AV
7206	42.88	11.43	H	54.31	73.98	19.67	PK
7206	30.04	11.43	H	41.47	53.98	12.51	AV

Operation Mode: CH Mid

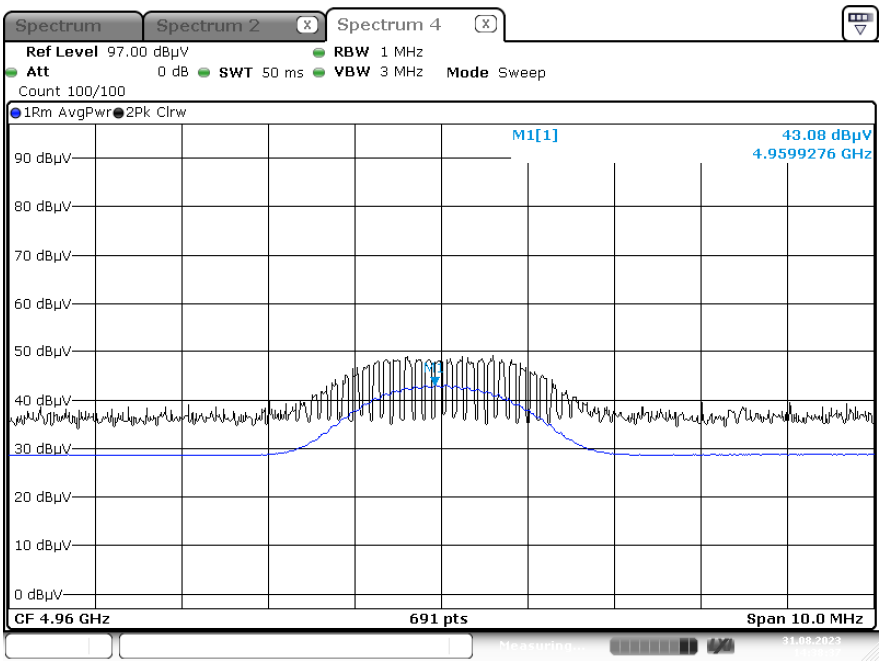
Frequency	Measured Value	A.F + C.L - A.G + D.F	Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
4880	45.54	3.50	V	49.04	73.98	24.94	PK
4880	34.82	3.50	V	38.32	53.98	15.66	AV
7320	40.76	11.95	V	52.71	73.98	21.27	PK
7320	28.09	11.95	V	40.04	53.98	13.94	AV
4880	47.29	3.50	H	50.79	73.98	23.19	PK
4880	36.74	3.50	H	40.24	53.98	13.74	AV
7320	40.99	11.95	H	52.94	73.98	21.04	PK
7320	28.35	11.95	H	40.30	53.98	13.68	AV

Operation Mode: CH High

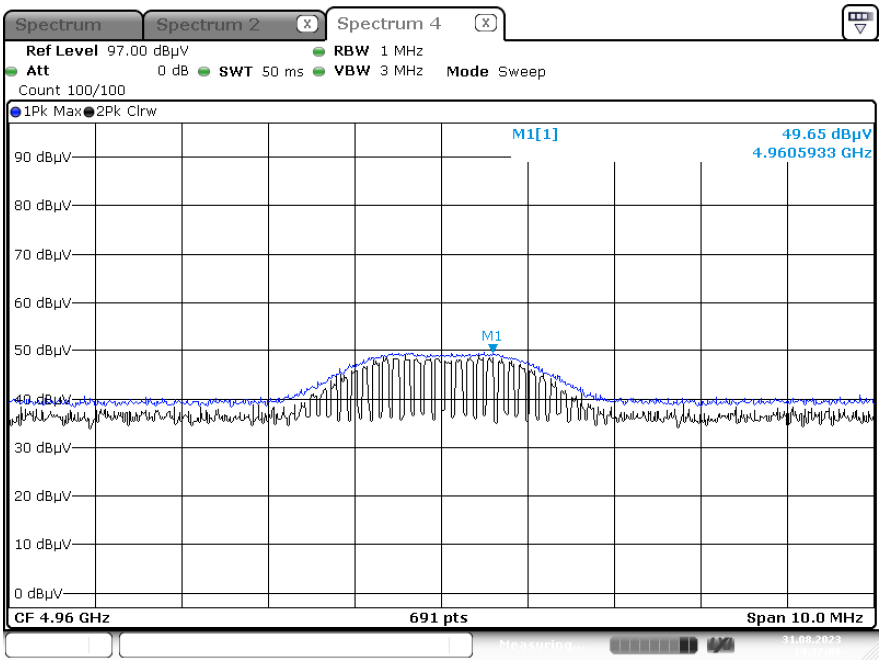
Frequency	Measured Value	A.F + C.L - A.G + D.F	Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
4960	47.92	3.82	V	51.74	73.98	22.24	PK
4960	36.67	3.82	V	40.49	53.98	13.49	AV
7440	42.18	11.98	V	54.16	73.98	19.82	PK
7440	29.66	11.98	V	41.64	53.98	12.34	AV
4960	49.63	3.82	H	53.45	73.98	20.53	PK
4960	38.41	3.82	H	42.23	53.98	11.75	AV
7440	42.48	11.98	H	54.46	73.98	19.52	PK
7440	29.78	11.98	H	41.76	53.98	12.22	AV

▣ 1 M Bit/s 37 Bytes Test Plots (Worst case : Z-H)

Radiated Spurious Emissions plot – Average Result (Ch.39 2nd Harmonic)



Radiated Spurious Emissions plot – Peak Result (Ch.39 2nd Harmonic)



Note:

Plot of worst case are only reported.

9.7 RADIATED RESTRICTED BAND EDGES

Mode : 1 M Bit/s (37 Bytes)

Operating Frequency: 2402 MHz, 2480 MHz

Channel No.: 0 CH, 39 CH

Frequency	Measured Value	A.F+C.L+ATT -A.G+D.F	Ant. Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
2390.0	48.12	2.44	H	50.56	73.98	23.42	PK
2390.0	35.24	2.44	H	37.68	53.98	16.30	AV
2390.0	48.02	2.44	V	50.46	73.98	23.52	PK
2390.0	35.12	2.44	V	37.56	53.98	16.42	AV
2483.5	55.05	2.51	H	57.56	73.98	16.42	PK
2483.5	36.25	2.51	H	38.76	53.98	15.22	AV
2483.5	54.98	2.51	V	57.49	73.98	16.49	PK
2483.5	36.02	2.51	V	38.53	53.98	15.45	AV

Mode : 1 M Bit/s (255 Bytes)

Operating Frequency: 2402 MHz, 2480 MHz

Channel No.: 0 CH, 39 CH

Frequency	Measured Value	A.F+C.L+ATT -A.G+D.F	Ant. Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
2390.0	47.65	2.44	H	50.09	73.98	23.89	PK
2390.0	35.25	2.44	H	37.69	53.98	16.29	AV
2390.0	47.48	2.44	V	49.92	73.98	24.06	PK
2390.0	35.02	2.44	V	37.46	53.98	16.52	AV
2483.5	54.95	2.51	H	57.46	73.98	16.52	PK
2483.5	36.51	2.51	H	39.02	53.98	14.96	AV
2483.5	54.65	2.51	V	57.16	73.98	16.82	PK
2483.5	36.32	2.51	V	38.83	53.98	15.15	AV

Mode : 2 M Bit/s (37 Bytes)

Operating Frequency 2402 MHz, 2480 MHz

Channel No. 0 CH, 39 CH

Frequency	Measured Value	A.F+C.L+ATT -A.G+D.F	Ant. Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
2390.0	48.28	2.44	H	50.72	73.98	23.26	PK
2390.0	35.22	2.44	H	37.66	53.98	16.32	AV
2390.0	48.11	2.44	V	50.55	73.98	23.43	PK
2390.0	35.18	2.44	V	37.62	53.98	16.36	AV
2483.5	58.12	2.51	H	60.63	73.98	13.35	PK
2483.5	38.29	2.51	H	40.80	53.98	13.18	AV
2483.5	58.01	2.51	V	60.52	73.98	13.46	PK
2483.5	38.15	2.51	V	40.66	53.98	13.32	AV

Mode : 2 M Bit/s (255 Bytes)

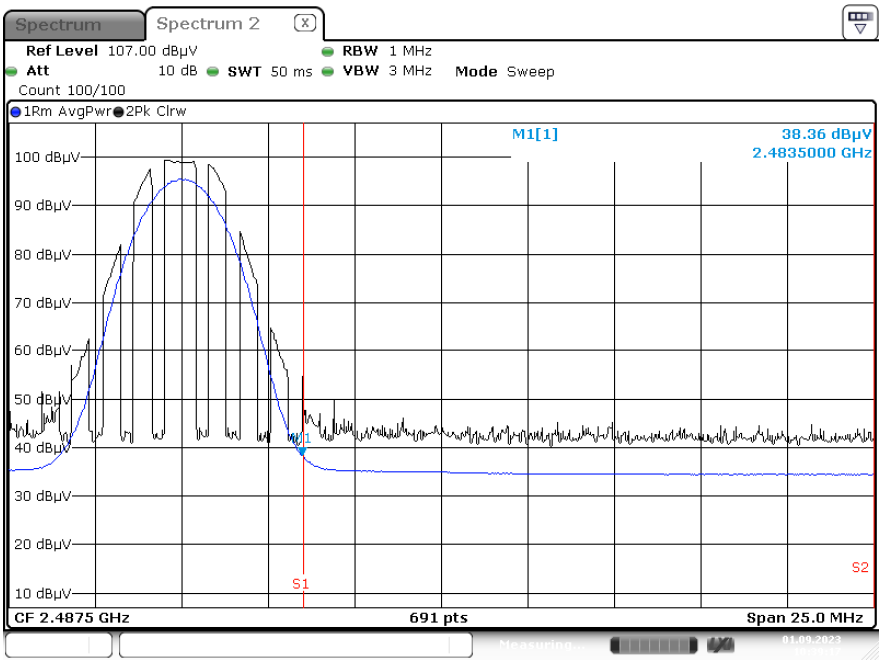
Operating Frequency 2402 MHz, 2480 MHz

Channel No. 0 CH, 39 CH

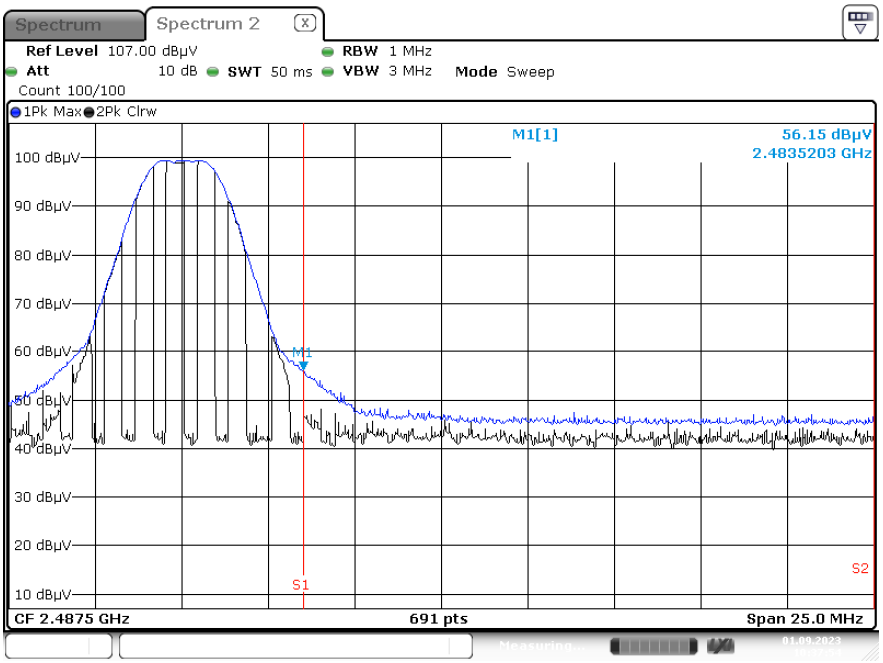
Frequency	Measured Value	A.F+C.L+ATT -A.G+D.F	Ant. Pol.	Total	Limit	Margin	Measurement Type
[MHz]	[dBµV]	[dB/m]	[H/V]	[dBµV/m]	[dBµV/m]	[dB]	
2390.0	48.06	2.44	H	50.50	73.98	23.48	PK
2390.0	35.26	2.44	H	37.70	53.98	16.28	AV
2390.0	48.02	2.44	V	50.46	73.98	23.52	PK
2390.0	35.02	2.44	V	37.46	53.98	16.52	AV
2483.5	56.15	2.51	H	58.66	73.98	15.32	PK
2483.5	38.36	2.51	H	40.87	53.98	13.11	AV
2483.5	56.02	2.51	V	58.53	73.98	15.45	PK
2483.5	38.22	2.51	V	40.73	53.98	13.25	AV

▣ Mode : 2 M Bit/s (255 Bytes) Test Plots

Radiated Restricted Band Edges plot – Average Result (Ch.39, Z-H)



Radiated Restricted Band Edges plot – Peak Result (Ch.39, Z-H)



Note:

Plot of worst case are only reported.

9.8 POWERLINE CONDUCTED EMISSIONS

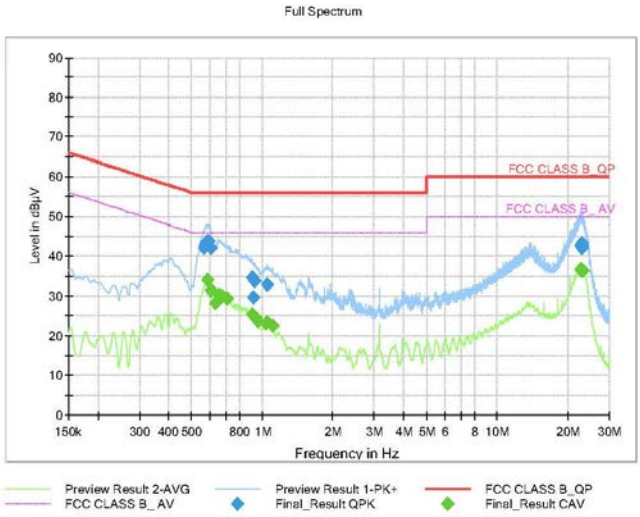
BTLE MODE 1 / 2

Test Report

Common Information

EUT : SOM605

Operating Conditions : BTLE MODE



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.5630	42.17	56.00	13.83	9.000	L1	9.6
0.5743	43.07	56.00	12.93	9.000	L1	9.6
0.5788	43.46	56.00	12.54	9.000	L1	9.6
0.5855	43.99	56.00	12.01	9.000	L1	9.6
0.5900	43.77	56.00	12.23	9.000	L1	9.6
0.6035	42.17	56.00	13.83	9.000	L1	9.6
0.9028	34.64	56.00	21.36	9.000	L1	9.6
0.9118	34.64	56.00	21.36	9.000	L1	9.6
0.9185	29.69	56.00	26.31	9.000	N	9.7
0.9253	33.89	56.00	22.11	9.000	L1	9.6
0.9298	33.76	56.00	22.24	9.000	L1	9.6
1.0558	32.85	56.00	23.15	9.000	L1	9.7
22.6130	42.58	60.00	17.42	9.000	N	10.6
22.6288	42.74	60.00	17.26	9.000	N	10.6
22.8043	43.13	60.00	16.87	9.000	N	10.6
22.8605	42.44	60.00	17.56	9.000	L1	10.4
22.9235	42.23	60.00	17.77	9.000	L1	10.4
22.9483	42.83	60.00	17.17	9.000	N	10.6

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BTLE MODE 2 / 2

Final_Result_CAV

Frequency (MHz)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Bandwidth (kHz)	Line	Corr. (dB)
0.5855	34.00	46.00	12.00	9.000	L1	9.6
0.6058	31.30	46.00	14.70	9.000	L1	9.6
0.6328	28.18	46.00	17.82	9.000	L1	9.6
0.6575	30.36	46.00	15.64	9.000	L1	9.6
0.6800	30.11	46.00	15.89	9.000	L1	9.6
0.7093	29.30	46.00	16.70	9.000	L1	9.6
0.9118	25.40	46.00	20.60	9.000	L1	9.6
0.9388	24.58	46.00	21.42	9.000	L1	9.6
0.9613	23.56	46.00	22.44	9.000	L1	9.6
1.0355	23.17	46.00	22.83	9.000	L1	9.7
1.0535	23.45	46.00	22.55	9.000	L1	9.7
1.1098	22.41	46.00	23.59	9.000	L1	9.7
22.6288	36.52	50.00	13.48	9.000	N	10.6
22.6535	36.57	50.00	13.43	9.000	N	10.6
22.6940	36.63	50.00	13.37	9.000	N	10.6
22.8538	36.67	50.00	13.33	9.000	N	10.6
22.9348	36.40	50.00	13.60	9.000	N	10.6
23.1148	36.31	50.00	13.69	9.000	N	10.6

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10. LIST OF TEST EQUIPMENT

Conducted Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
LISN	ENV216	Rohde & Schwarz	102245	08/02/2024	Annual
EMI Test Receiver	ESR	Rohde & Schwarz	101910	05/26/2024	Annual
Temperature Chamber	SU-642	ESPEC	0093008124	02/22/2024	Annual
Signal Analyzer	N9030A	Agilent	MY49432108	03/02/2024	Annual
Power Measurement Set	OSP 120	Rohde & Schwarz	101231	06/09/2024	Annual
Power Meter	N1911A	Agilent	MY45100523	03/06/2024	Annual
Power Sensor	N1921A	Agilent	MY57820067	03/06/2024	Annual
Directional Coupler	87300B	Agilent	3116A03621	11/02/2023	Annual
Power Splitter	11667B	Hewlett Packard	10545	02/06/2024	Annual
DC Power Supply	E3632A	Agilent	KR75303243	04/24/2024	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C	HP	07560	06/12/2024	Annual
Attenuator(10 dB)(DC-26.5 GHz)	8493C	HP	08285	06/02/2024	Annual
Attenuator(20 dB)	18N-20dB	Rohde & Schwarz	8	03/08/2024	Annual
Software	EMC32	Rohde & Schwarz	N/A	N/A	N/A
FCC WLAN&BT&BLE Conducted Test Software v3.0	N/A	HCT CO., LTD.	N/A	N/A	N/A
Bluetooth Tester	CBT	Rohde & Schwarz	100808	02/16/2024	Annual

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.

Radiated Test

Equipment	Model	Manufacturer	Serial No.	Due to Calibration	Calibration Interval
Controller(Antenna mast)	CO3000	Innco system	CO3000-4p	N/A	N/A
Antenna Position Tower	MA4640/800-XP-EP	Innco system	N/A	N/A	N/A
EM1000 / Controller	EM1000	Audix	060520	N/A	N/A
Turn Table	N/A	Audix	N/A	N/A	N/A
Amp & Filter Bank Switch Controller	FBSM-01B	T&M system	TM19050002	N/A	N/A
Loop Antenna	1513	Schwarzbeck	1513-333	03/17/2024	Biennial
Hybrid Antenna	VULB 9168	Schwarzbeck	9168-0895	08/16/2024	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-1300	01/18/2024	Biennial
Horn Antenna	BBHA 9120D	Schwarzbeck	9120D-2296	05/18/2024	Biennial
Horn Antenna(15 GHz ~ 40 GHz)	BBHA9170	Schwarzbeck	BBHA9170342	09/29/2024	Biennial
Spectrum Analyzer	FSV(10 Hz ~ 40 GHz)	Rohde & Schwarz	101055	05/12/2024	Annual
Band Reject Filter	WRCJV2400/2483.5-2370/2520-60/12SS	Wainwright Instruments	2	01/05/2024	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	5	06/12/2024	Annual
Band Reject Filter	WRCJV12-4900-5100-5900-6100-50SS	Wainwright Instruments	6	06/12/2024	Annual
High Pass Filter(7 GHz ~ 18 GHz)	WHKX10-7150-8000-18000-50SS	Wainwright Instruments	1	03/02/2024	Annual
Power Amplifier	CBL18265035	CERNEX	22966	12/01/2023	Annual
Power Amplifier	CBL26405040	CERNEX	25956	03/02/2024	Annual
Bluetooth Tester	TC-3000C	TESCOM	3000C000175	03/28/2024	Annual
RF Switching System	FMSR-05B (HPF(3~18GHz) + LNA1(1~18GHz))	T&M system	S1L1	01/17/2024	Annual
RF Switching System	FMSR -05B (ATT(10dB) + LNA1(1~18GHz))	T&M system	S1L2	01/17/2024	Annual
RF Switching System	FMSR -05B (ATT(3dB) + LNA1(1~18GHz))	T&M system	S1L3	01/17/2024	Annual
RF Switching System	FMSR -05B (LNA1(1~18GHz))	T&M system	S1L4	01/17/2024	Annual
RF Switching System	FMSR -05B (HPF(7~18GHz) + LNA2(6~18GHz))	T&M system	S1L5	01/17/2024	Annual
RF Switching System	FMSR -05B (Thru(30MHz ~ 18GHz))	T&M system	S1L6	01/17/2024	Annual

Note:

1. Equipment listed above that calibrated during the testing period was set for test after the calibration.
2. Equipment listed above that has a calibration due date during the testing period, the testing is completed before equipment expiration date.
3. Especially, all antenna for measurement is calibrated in accordance with the requirements of C63.5(Version : 2017).

11. ANNEX A_ TEST SETUP PHOTO

Please refer to test setup photo file no. as follows;

No.	Description
1	HCT-RF-2310-FC007-P