



TEST REPORT

Report Number. : 13583138-E7V2

Applicant : Samsung Electronics Co., Ltd.
129 Samsung-Ro, Yeongtong-Gu,
Suwon-Si, Gyeonggi-Do, 16677, Korea

Model : SM-A526B/DS, SM-A526B

FCC ID : A3LSMA526B

EUT Description : GSM/WCDMA/LTE/5G Phablet with BT/BLE,DTS/UNII a/b/g/n/ac
and NFC

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C

Date Of Issue:
February 04, 2021

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Revision History

<u>Rev.</u>	<u>Issue Date</u>	<u>Revisions</u>	<u>Revised By</u>
V1	1/26/2021	Initial Issue	
V2	2/4/2021	Updated Section 1, 6, 8.2, 8.3 & 10	Kiya Kedida

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Samsung Electronics Co., Ltd.
129 Samsung-Ro, Yeongtong-Gu,
Suwon-Si, Gyeonggi-Do, 16677, Korea

EUT DESCRIPTION: GSM/WCDMA/LTE/5G Phablet with BT/BLE,DTS/UNII a/b/g/n/ac
and NFC

MODEL: SM-A526B/DS, SM-A526B

SERIAL NUMBER: R3CN90Q114D (Radiated)

DATE TESTED: NOVEMBE 10, 2020 – FEBRUARY 2, 2020

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	Complies

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. All samples tested were in good operating condition throughout the entire test program. Measurement Uncertainties are published for informational purposes only and were not taken into account unless noted otherwise.

This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0, for all testing performed within the scope of this report. Testing was performed at the locations noted below.

	Address	ISED CABID	ISED Company Number	FCC Registration
<input checked="" type="checkbox"/>	Building 1: 47173 Benicia Street, Fremont, California 94538, USA	US0104	2324A	208313
<input type="checkbox"/>	Building 2: 47266 Benicia Street, Fremont, California 94538, USA	US0104	22541	208313
<input type="checkbox"/>	Building 4: 47658 Kato Rd, Fremont, California 94538, USA	US0104	2324B	208313

4. DECISION RULES AND MEASUREMENT UNCERTAINTY

4.1. METROLOGICAL TRACEABILITY

All test and measuring equipment utilized to perform the tests documented in this report are calibrated on a regular basis, with a maximum time between calibrations of one year or the manufacturers' recommendation, whichever is less, and where applicable is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	U _{Lab}
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.78 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.40 dB
Worst Case Radiated Disturbance Loop, 9KHz to 30 MHz	2.84 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	4.84 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.73 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.51 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.29 dB

Uncertainty figures are valid to a confidence level of 95%.

4.3. SAMPLE CALCULATION

RADIATED EMISSIONS

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

$$36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} = 28.9 \text{ dBuV/m}$$

MAINS CONDUCTED EMISSIONS

Where relevant, the following sample calculation is provided:

Final Voltage (dBuV) = Measured Voltage (dBuV) + Cable Loss (dB) + Limiter Factor (dB) + LISN Insertion Loss.

$$36.5 \text{ dBuV} + 0 \text{ dB} + 10.1 \text{ dB} + 0 \text{ dB} = 46.6 \text{ dBuV}$$

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE/5G Phablet with BT/BLE, DTS/UNII a/b/g/n/ac and NFC. The model SM-A526B/DS was used for final testing and is representative of the test results in this report.

5.2. MAXIMUM FIELD STRENGTH

The testing was performed at 3 meters. The transmitter maximum E-field at 30 meter distance was 17.13 dBuV/m, which was converted from the 3 meter data.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes the loop antenna.

5.4. SOFTWARE AND FIRMWARE

The test utility software used during testing was A526B.001.

5.5. WORST-CASE CONFIGURATION AND MODE

The fundamental of the EUT was investigated under three orthogonal orientations X (Flatbed), Y (Landscape), and Z (Portrait). The Z (Portrait) orientation was determined to be the worst-case orientation.

Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788

NOTE: The EUT pre-scanned Tag and CE mode mode in three NFC type A, B & F. The worst type is A CE mode with data rate of 106kbps was recorded to this report.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung	EP-TA800	R37M3531XX1SE3	N/A
Earphone	Samsung	N/A	N/A	N/A

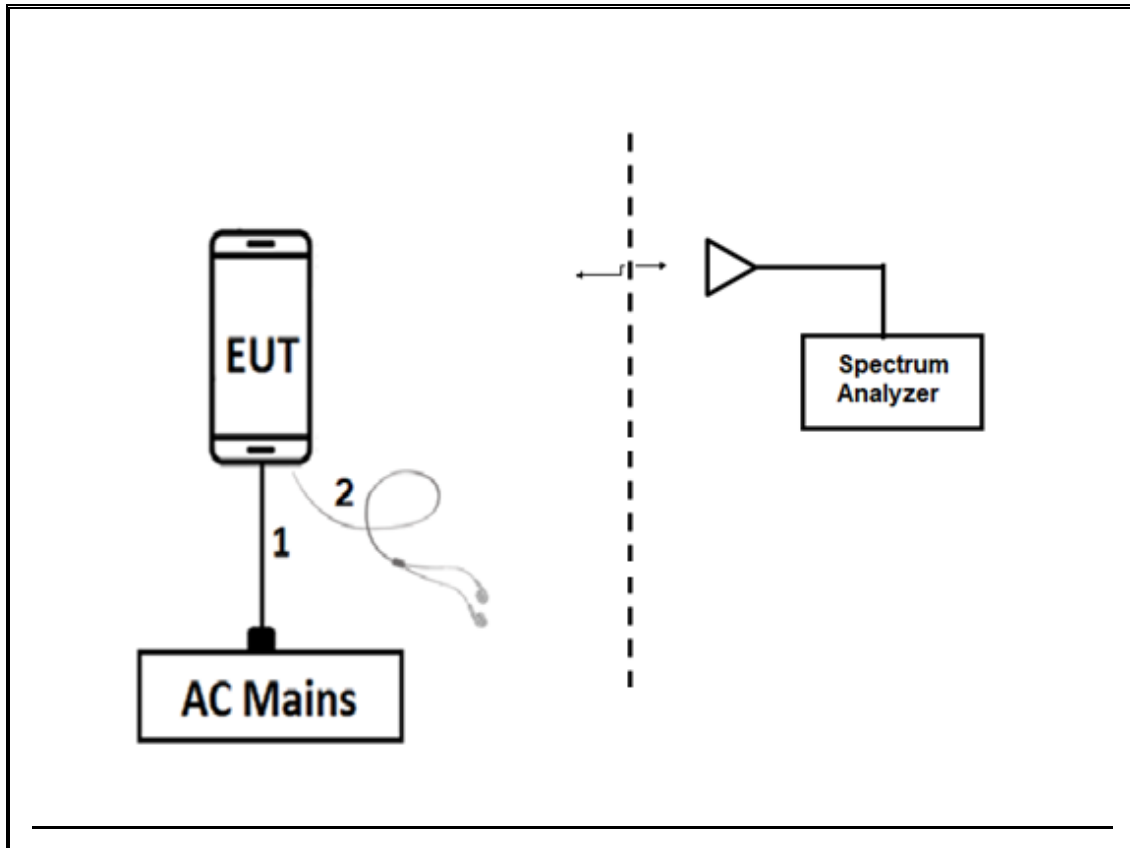
I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	RF	Shielded	0.2	To PSA and BT Tester
2	USB	1	USB	Un-shielded	1	EUT to AC Mains

I/O CABLES (RADIATED AND CONDUCTED EMISSIONS)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Shielded	1	N/A
2	earphone	1	3.5mm	Un-shielded	1	N/A

RADIATED AND AC LINE CONDUCTED EMISSIONS SETUP DIAGRAM



TEST SETUP

For radiated tests: EUT has support equipment. The test software exercises the radio.

6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Asset	Cal Due
Antenna, Broadband Hybrid, 30MHz to 3GHz	Sunol Sciences Corp	JB3	T899	09/14/2021
Amplifier, 9KHz to 1GHz, 32dB	SONOMA INSTRUMENT	310N	T300	01/23/2021
Environmental Chamber	Thermotron Industries	SE-600-10-10	T80	05/15/2021
Antenna, Active Loop 9KHz to 30MHz	ETS-Lindgren	6502	T1683	04/28/2021
Antenna, Active Loop 9KHz to 30MHz	ETS-Lindgren	6502	T757	11/12/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T907	01/22/2021
Spectrum Analyzer, PXA, 3Hz to 44GHz	Keysight Technologies Inc	N9030A	T906	07/20/2021
AC Line Conducted				
Description	Manufacturer	Model	ID Num	Cal Due
LISN	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2-01-480V	PRE0186446	1/20/2022
LISN	Fischer Custom Communications, Inc	FCC-LISN-50/250-25-2-01-480V	PRE0186446	01/21/2021
L.I.S.N	FCC INC.	FCC LISN 50/250	24	01/20/2022
L.I.S.N	FCC INC.	FCC LISN 50/250	24	01/21/2021
EMI TEST RECEIVER	Rohde & Schwarz	ESR	T1436	02/20/2021
Transient Limiter	COM-POWER	LIT-930A	PRE0129246	01/20/2022
Transient Limiter	COM-POWER	LIT-930A	PRE0129246	01/23/2021
UL AUTOMATION SOFTWARE				
Radiated Software	UL	UL EMC	Rev 9.5, 30 Apr, 2020	
Antenna Port Software	UL	UL RF	AP2020.9.1	
AC Line Conducted Software	UL	UL EMC	Rev 9.5, 07 Jul 2020	

NOTES:

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.

7. OCCUPIED BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 10kHz. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

Note: Because the measured signal is CW or CW-like adjusting the RBW per C63.10 would not be practical since measured bandwidth will always follow the RBW and the result will be approximately twice the RBW

RESULTS

99% and 20dB BW

Type A (CE Mode)

Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	21.69	25.57
212	13.56	21.66	25.55
106	13.56	21.66	25.47

TYPE B (CE Mode)

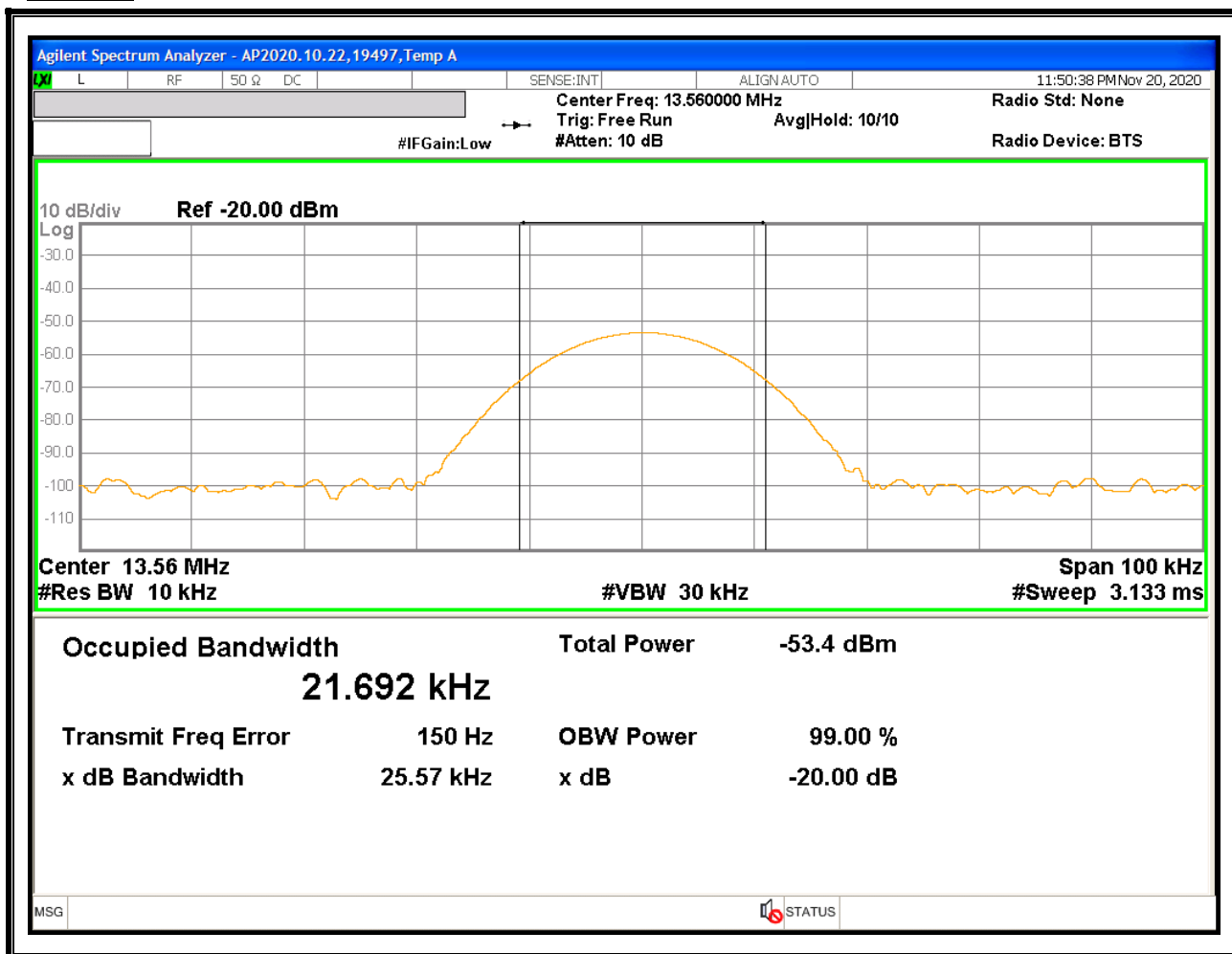
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	21.68	25.56
212	13.56	21.74	25.48
106	13.56	21.67	25.52

TYPE F (CE Mode)

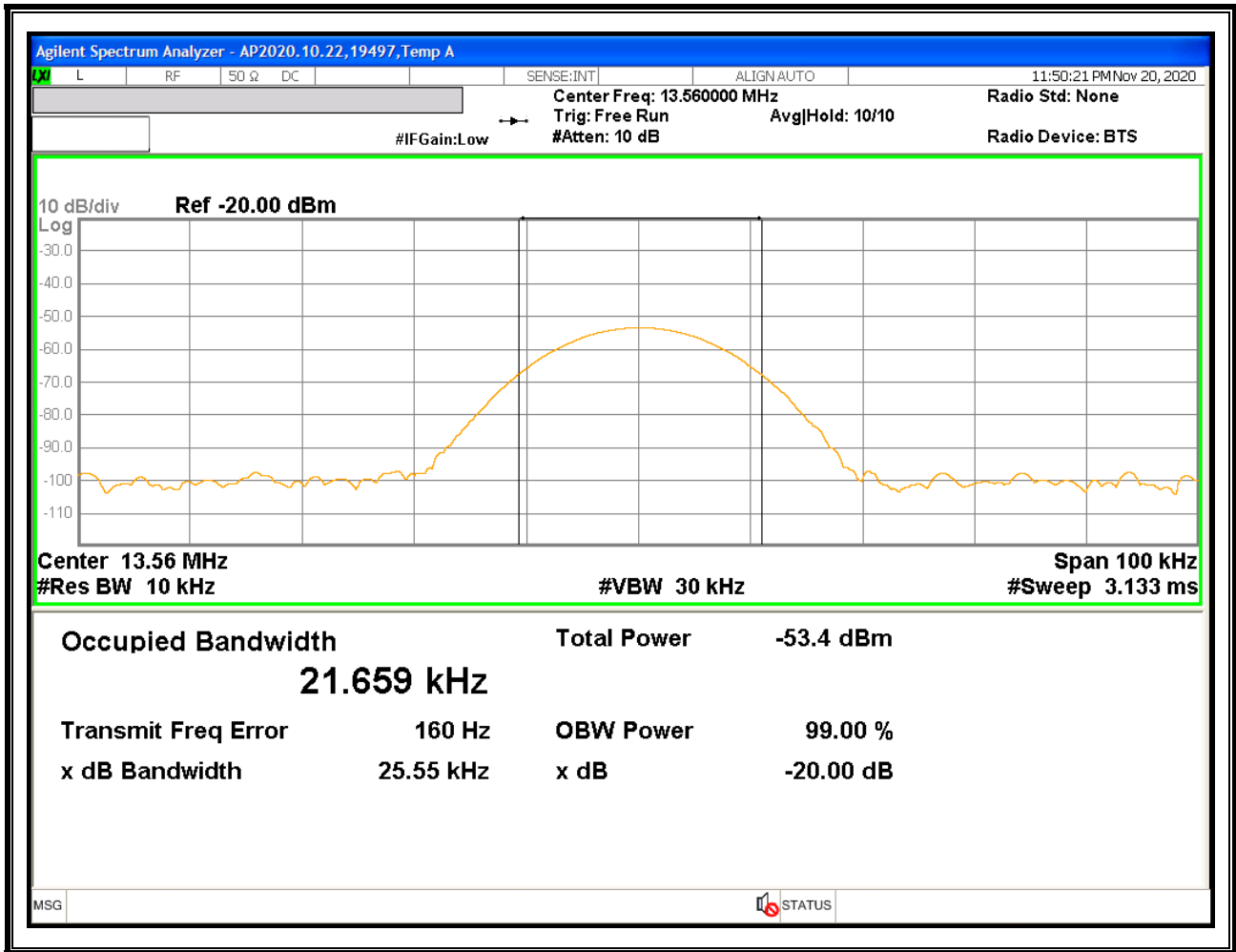
Mode Kbps	Frequency (MHz)	99% Bandwidth (KHz)	20dB Bandwidth (KHz)
424	13.56	21.67	25.53
212	13.56	21.66	25.58

7.1. Type A (CE Mode)

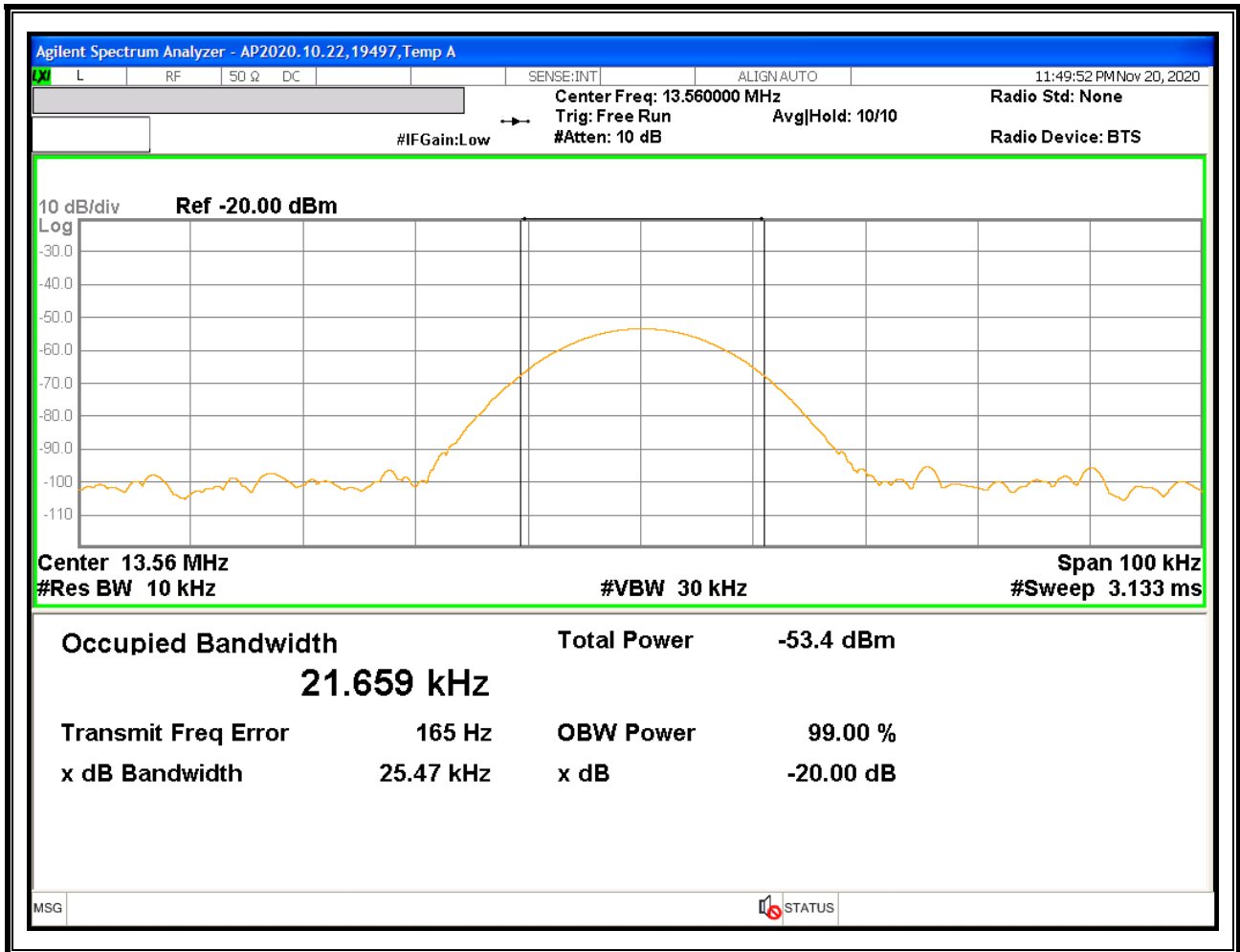
424Kbps



212Kbps

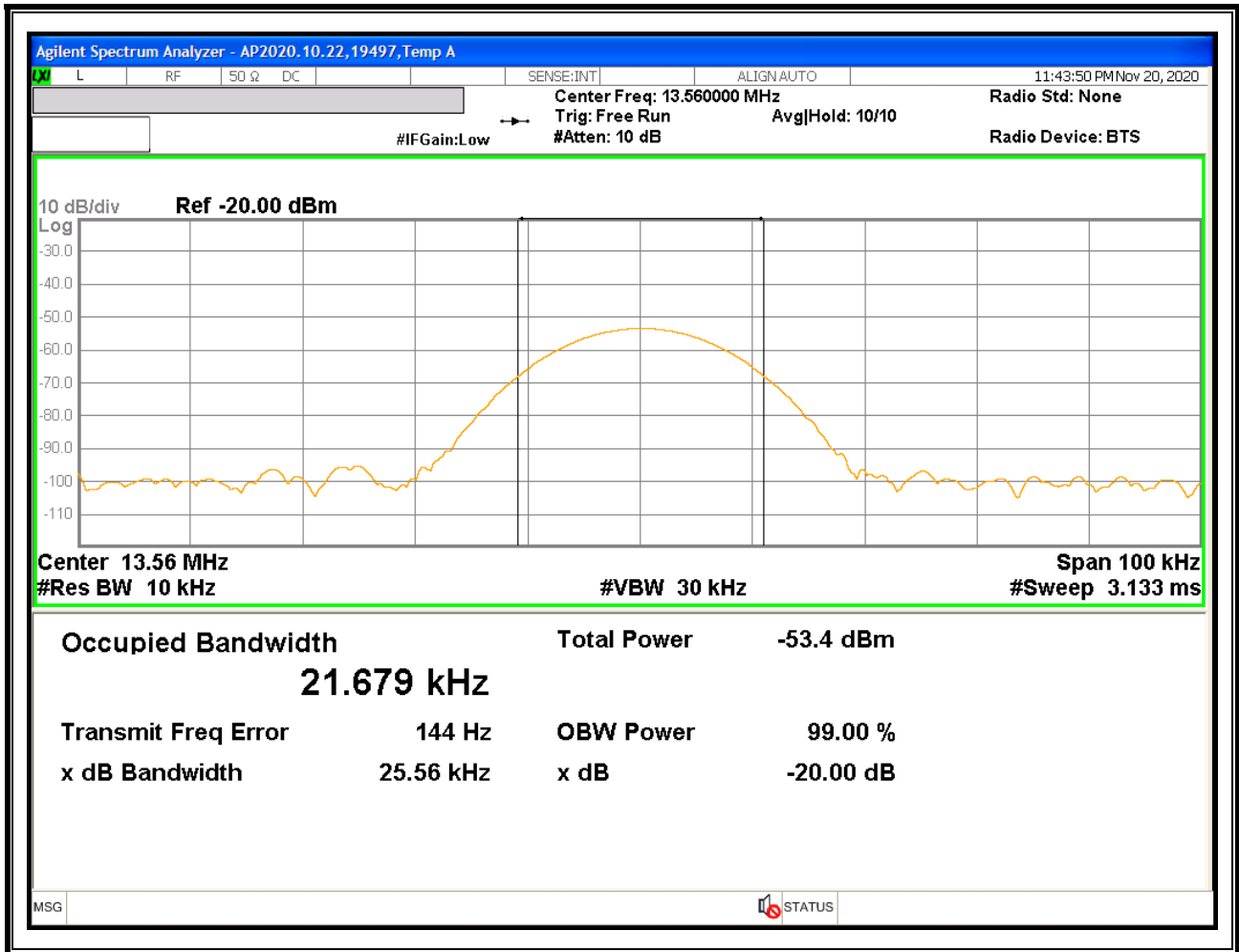


106Kbps

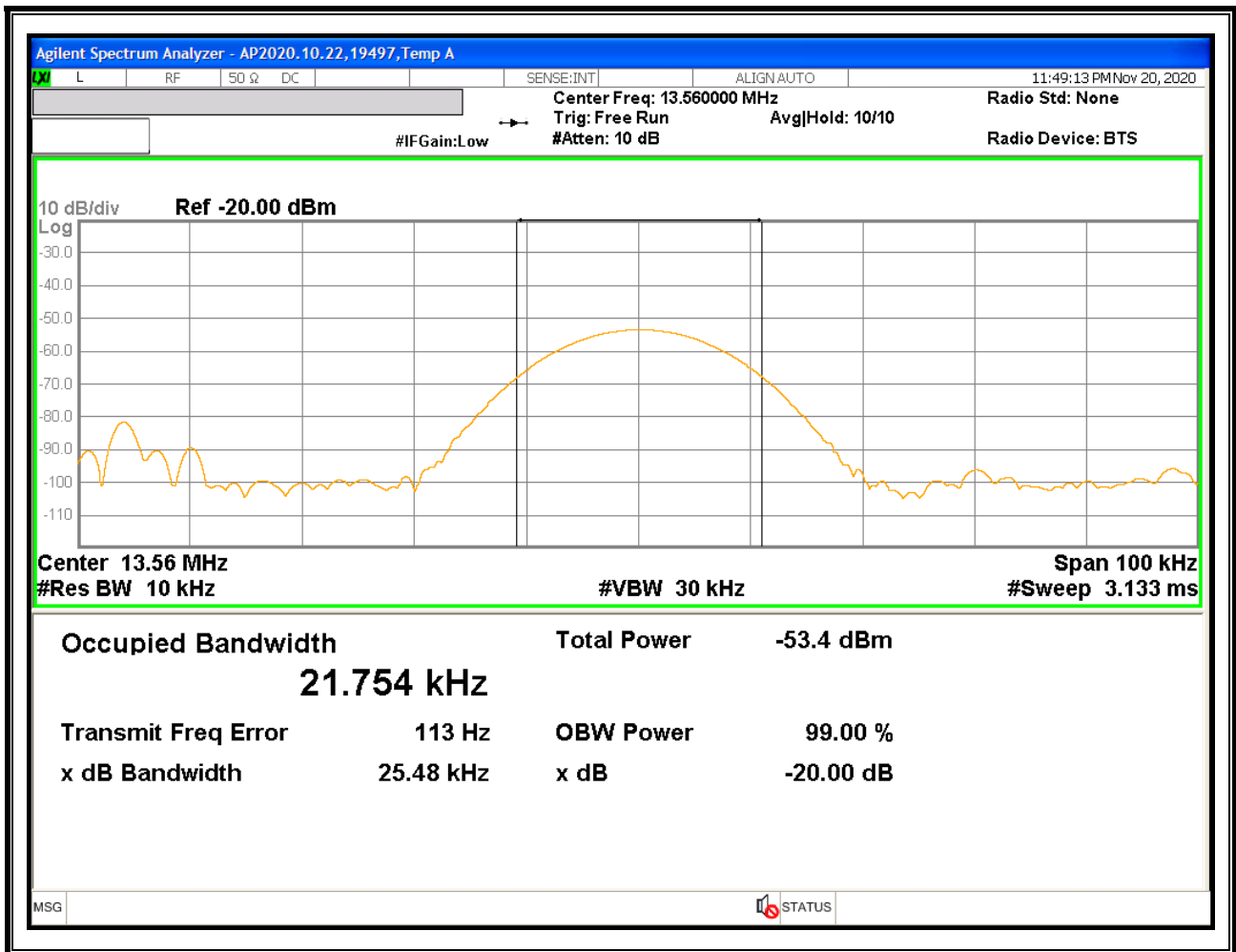


7.2. Type B (CE Mode)

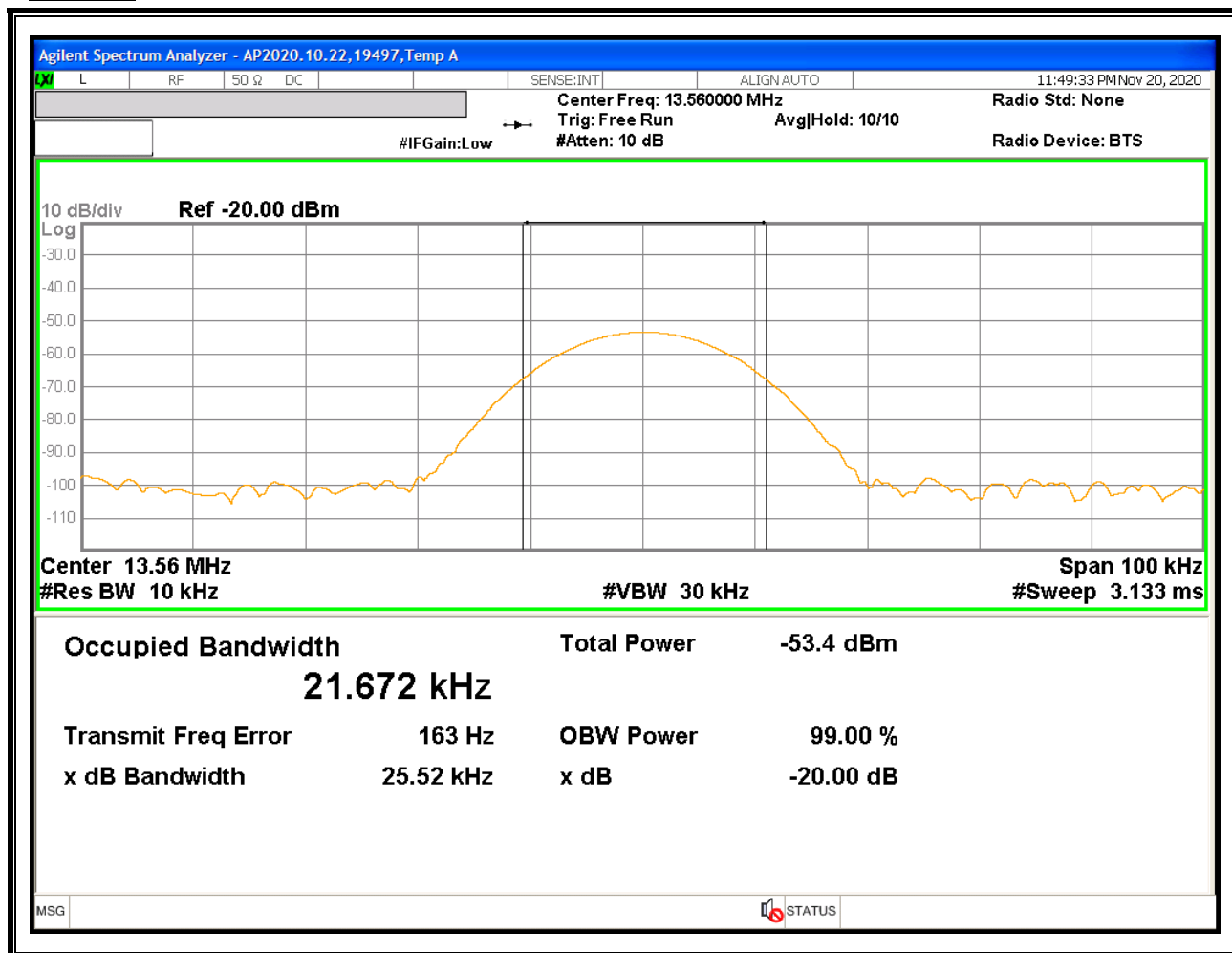
424Kbps



212Kbps

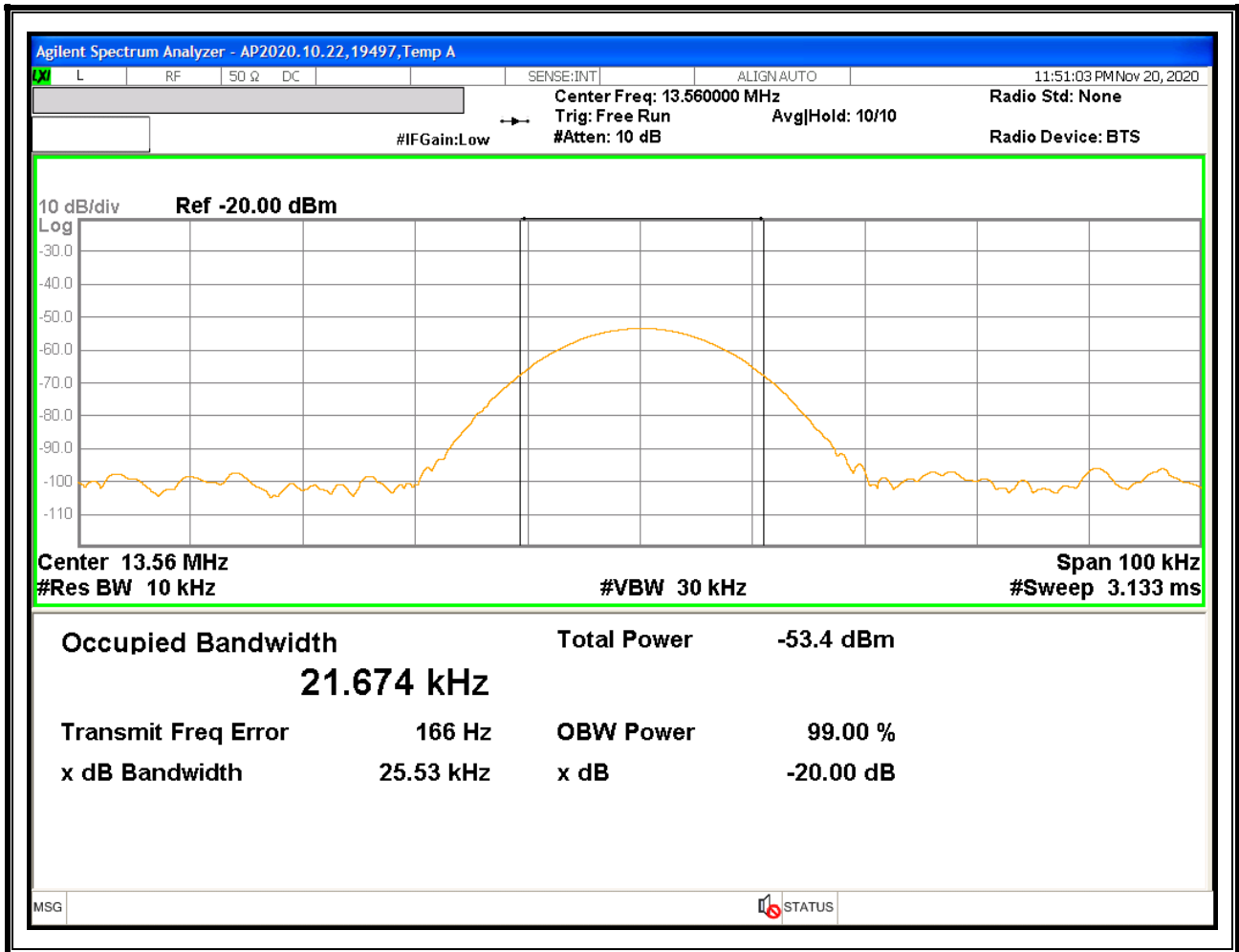


106Kbps

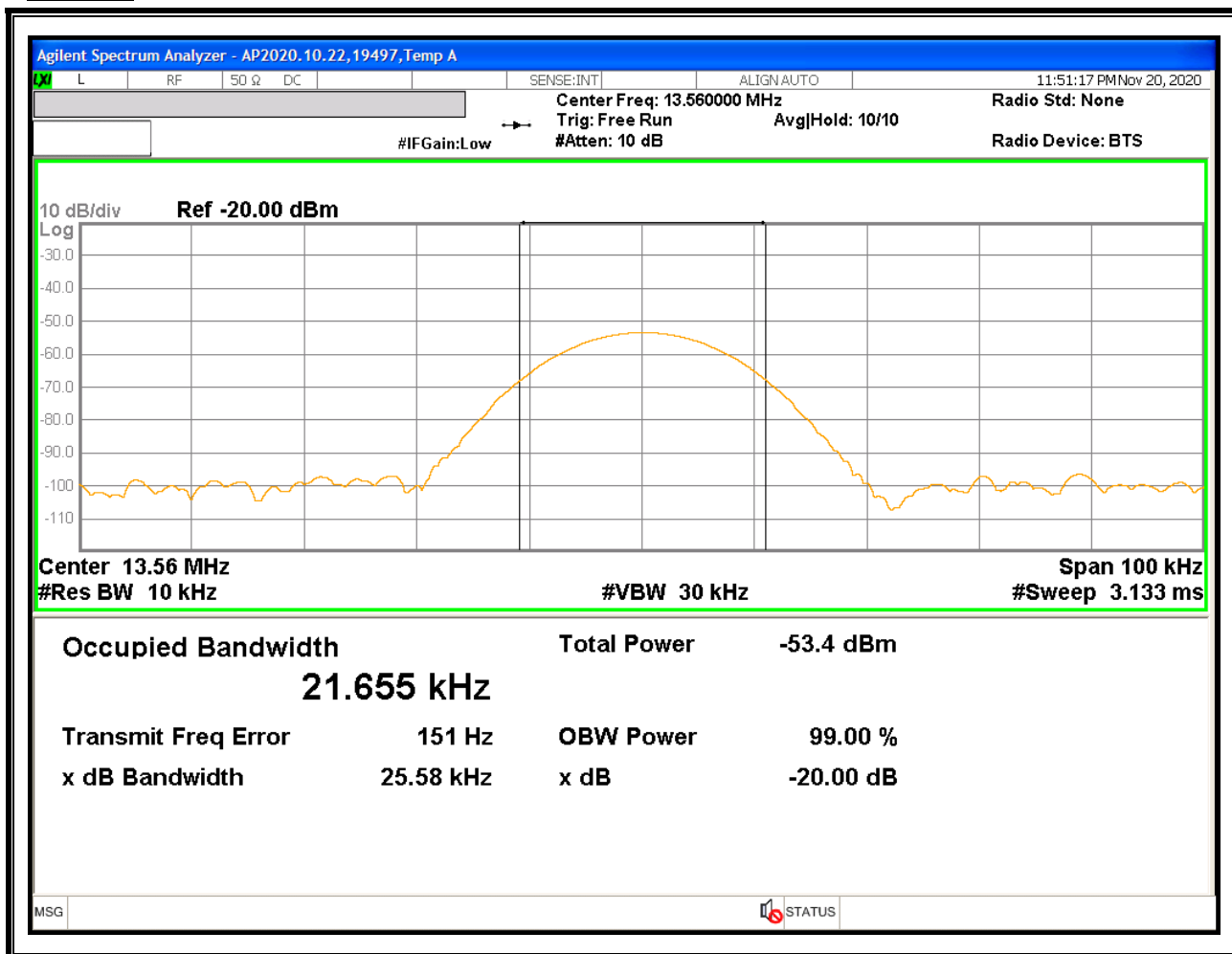


7.3. Type F (CE Mode)

424Kbps



212Kbps



8. RADIATED EMISSION TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMIT

§15.225

(a) The field strength of any emissions within the band 13.553–13.567 MHz shall not exceed 15,848 microvolts/ meter at 30 meters.

(b) Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.

(c) Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.

(d) The field strength of any emissions appearing outside of the 13.110– 14.010 MHz and shall not exceed the general radiated emission limits in § 15.209 as follows:

§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:

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (µV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

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

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

Formula for converting the filed strength from uV/m to dBuV/m is:

Limit (dBuV/m) = 20 log limit (uV/m)

In addition:

§15.209 (d) The emission limits shown the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

§15.209 (d) The provisions in §§ 15.225, measuring emissions at distances other than the distances specified in the above table, determining the frequency range over which radiated emissions are to be measured, and limiting peak emissions apply to all devices operated under this part.

TEST PROCEDURE

ANSI C63.10, 2013

The EUT is an intentional radiator that incorporates a digital device, the highest fundamental frequency generated or used in the device is 13.56 MHz; therefore, the frequency range was investigated from 0.15 MHz to the 10th harmonic of the highest fundamental frequency, or 1000 MHz, whichever is greater.

2D antenna use - For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.

KDB 414788 OATS 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.

Open field site (OFS) and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

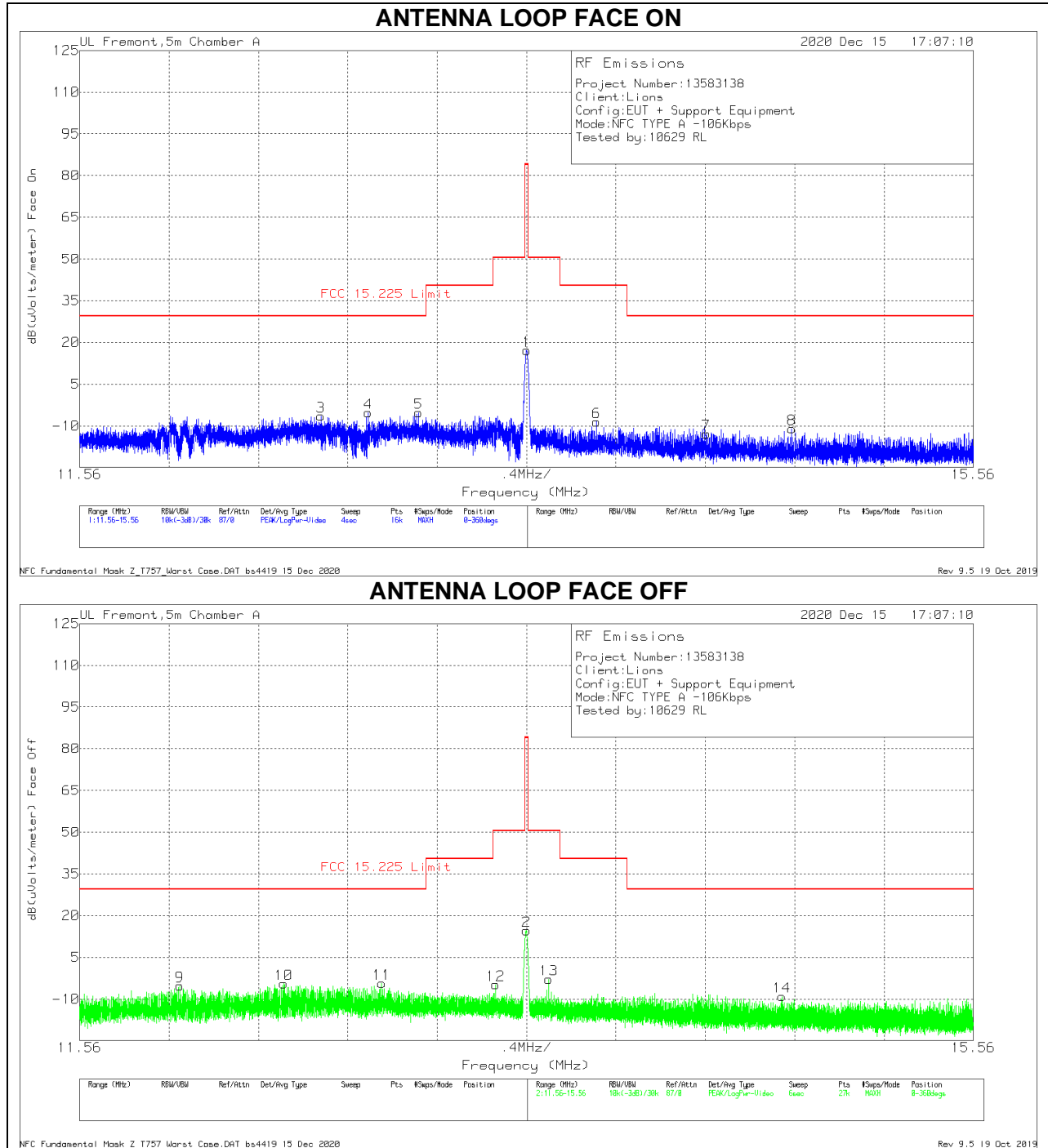
RESULTS

8.2. FUNDAMENTAL AND SPURIOUS EMISSIONS (0.15 - 30 MHz)

Type A (CE Mode), 106Kbps

DATA

FUNDAMENTAL EMISSION MASK (11.56 – 15.56 MHz)



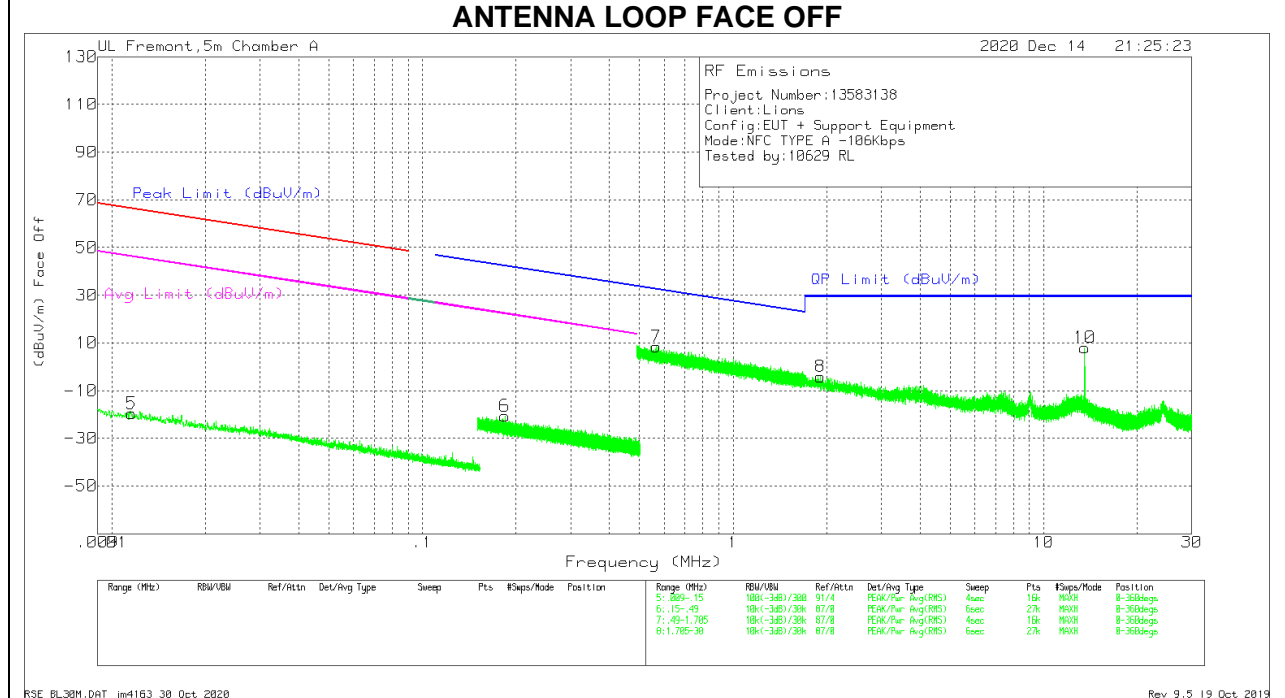
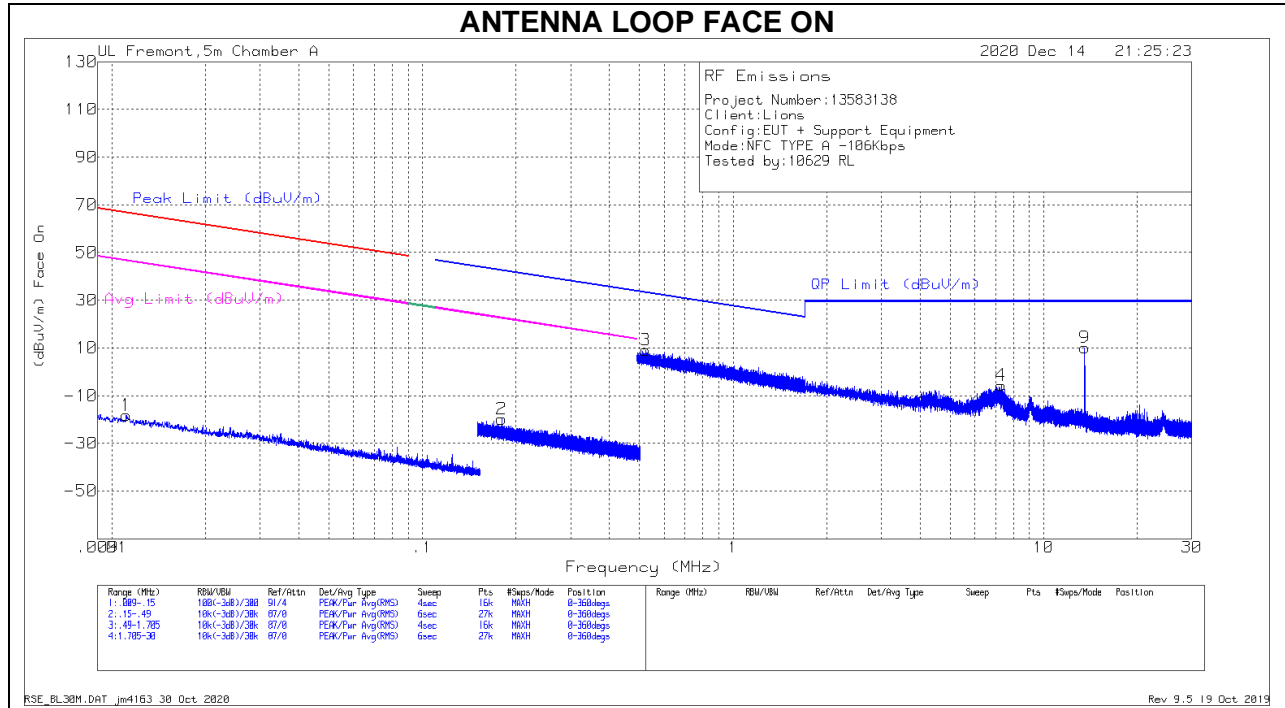
NOTE: All data rate Field Strength was investigated and Type A, 106k found to have the highest Field Strength results and represents as the worst case data rate.

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 30m	Corrected Reading dB(uVolts/meter)	FCC 15.225 Limit	PK Margin (dB)	Azimuth (Degs)
1	*13.5605	46.33	Pk	10.3	.5	-40	17.13	84	-66.87	0-360
3	12.639	22.59	Pk	10.4	.5	-40	-6.51	29.54	-36.05	0-360
4	12.85075	23.86	Pk	10.4	.5	-40	-5.24	29.54	-34.78	0-360
5	13.0765	23.89	Pk	10.4	.5	-40	-5.21	29.54	-34.75	0-360
6	13.8725	20.68	Pk	10.3	.5	-40	-8.52	40.51	-49.03	0-360
7	14.364	16.37	Pk	10.3	.5	-40	-12.83	29.54	-42.37	0-360
8	14.747	18.28	Pk	10.2	.5	-40	-11.02	29.54	-40.56	0-360
2	*13.55904	43.86	Pk	10.3	.5	-40	14.66	84	-69.34	0-360
9	12.00711	23.79	Pk	10.4	.5	-40	-5.31	29.54	-34.85	0-360
10	12.47286	24.62	Pk	10.4	.5	-40	-4.48	29.54	-34.02	0-360
11	12.91139	24.73	Pk	10.4	.5	-40	-4.37	29.54	-33.91	0-360
12	13.42154	24.37	Pk	10.3	.5	-40	-4.83	50.5	-55.33	0-360
13	13.65923	26.36	Pk	10.3	.5	-40	-2.84	50.5	-53.34	0-360
14	14.70248	20.27	Pk	10.2	.5	-40	-9.03	29.54	-38.57	0-360

* - Indicates fundamental frequency
 Pk - Peak detector

SPURIOUS EMISSIONS (0.09 – 30MHz)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.01112	43.1	Pk	18.6	0	-80	-18.3	66.66	-84.96	46.66	-64.96	-	-	0-360
5	.01158	41.9	Pk	18.4	0	-80	-19.7	66.31	-86.01	46.31	-66.01	-	-	0-360
2	.17977	48.94	Pk	11.1	.1	-80	-19.86	42.53	-62.39	22.53	-42.39	-	-	0-360
6	.18422	48.22	Pk	11	.1	-80	-20.68	42.31	-62.99	22.31	-42.99	-	-	0-360

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dBm)	Cables (dB)	Dist Corr 30m	Corrected Reading (dBuV/m)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
3	.52367	37.96	Pk	11	.1	-40	9.06	-	-	-	-	33.22	-24.16	0-360
7	.56554	37.41	Pk	11	.1	-40	8.51	-	-	-	-	32.56	-24.05	0-360
8	1.91041	24.42	Pk	11.3	.2	-40	-4.08	-	-	-	-	29.5	-33.58	0-360
4	7.30237	22.84	Pk	11	.4	-40	-5.76	-	-	-	-	29.5	-35.26	0-360
9	*13.55998	38.99	Pk	10.6	.5	-40	10.09	-	-	-	-	29.5	-19.41	0-360
10	*13.55998	36.88	Pk	10.6	.5	-40	7.98	-	-	-	-	29.5	-21.52	0-360

* - Indicates fundamental frequency

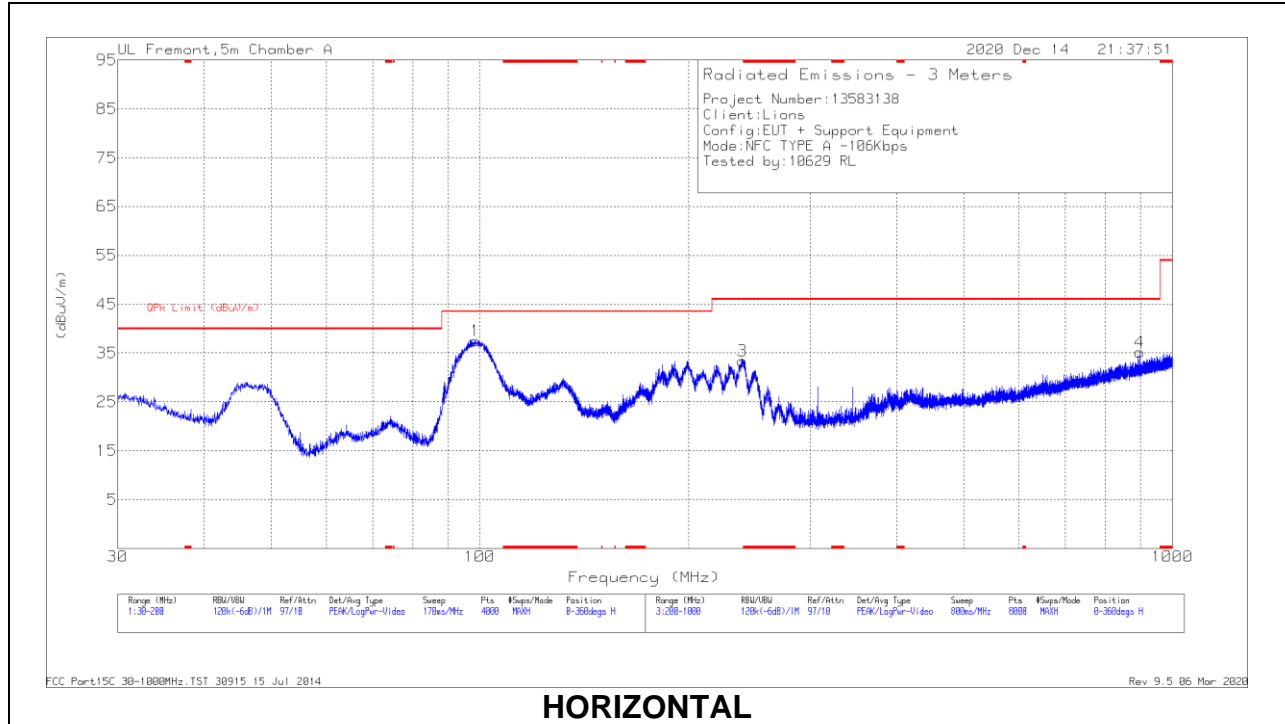
Pk - Peak detector

NOTE: The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table), using the free space impedance of 377 Ohms. For example the measurement at frequency X kHz resulted in a level of Y dBuV/m, which is equivalent to $Y - 51.5 = Z$ dBuA/m, which has the same margin, W dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

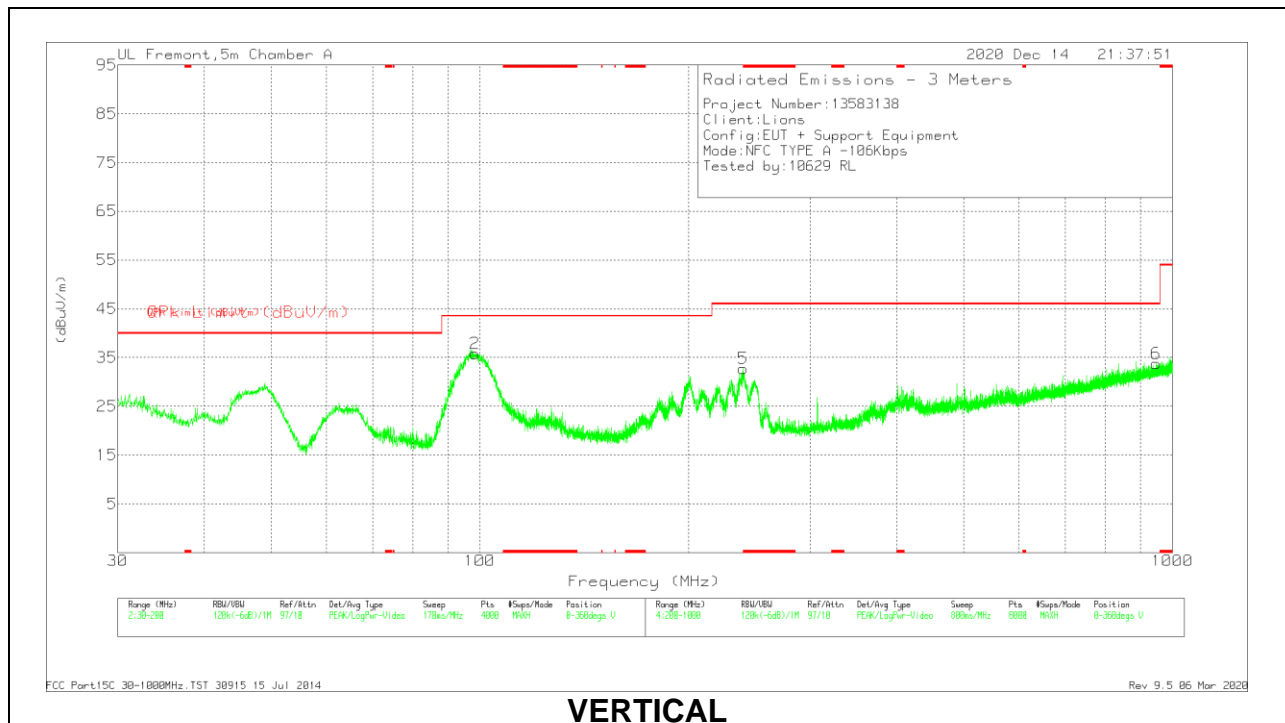
8.3. TX SPURIOUS EMISSION 30 TO 1000 MHz

Type A (CE Mode), 106Kbps

DATA



HORIZONTAL



VERTICAL

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T899 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	98.3152	46.54	Pk	15.7	-26.4	35.84	43.52	-7.68	0-360	100	V
1	98.5277	48.15	Pk	15.7	-26.4	37.45	43.52	-6.07	0-360	300	H
	96.9295	44.2	Qp	15.3	-26.4	33.1	43.52	-10.42	259	244	H
3	239.6051	40.84	Pk	17.3	-24.7	33.44	46.02	-12.58	0-360	100	H
5	239.7052	40.15	Pk	17.3	-24.7	32.75	46.02	-13.27	0-360	100	V
4	896.8906	29.95	Pk	27.9	-22.7	35.15	46.02	-10.87	0-360	300	H
6	947.0971	27.42	Pk	28.7	-22.3	33.82	46.02	-12.2	0-360	300	V

Pk - Peak detector
 Qp - Quasi-Peak detector

9. FREQUENCY STABILITY

LIMIT

§15.225 (e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency, over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

TEST PROCEDURE

ANSI C63.10-2013 Clause 6.8

RESULTS

No non-compliance noted.

Type A (CE Mode), 106Kbps

ID:	19497 AF	Date:	11/20/2020
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Reference Frequency: EUT Channel 13.56 MHz @ 20°C Limit: ± 100 ppm = 1.356 kHz										
Power Supply	Envir. Temp	Frequency Deviation Measured with Time Elapse								
(Vdc)	(°C)	Startup (MHz)	Delta (ppm)	@ 2 mins (MHz)	Delta (ppm)	@ 5 mins (MHz)	Delta (ppm)	@ 10 mins (MHz)	Delta (ppm)	Limit (ppm)
3.80	50	13.5599845	-0.003	13.5599845	-0.002	13.5599841	0.022	13.5599844	0.002	± 100
3.80	40	13.5599847	-0.021	13.5599846	-0.011	13.5599843	0.013	13.5599841	0.024	± 100
3.80	30	13.5599847	-0.020	13.5599847	-0.022	13.5599847	-0.023	13.5599848	-0.028	± 100
3.80	20	13.5599844	0.000	13.5599845	-0.003	13.5599842	0.017	13.5599840	0.032	± 100
3.80	10	13.5599843	0.010	13.5599845	-0.005	13.5599846	-0.012	13.5599846	-0.011	± 100
3.80	0	13.5599829	0.114	13.5599833	0.085	13.5599837	0.057	13.5599837	0.051	± 100
3.80	-10	13.5599838	0.049	13.5599839	0.037	13.5599839	0.037	13.5599841	0.027	± 100
3.23	20	13.5599691	1.132	13.5599737	0.791	13.5599764	0.594	13.5599775	0.514	± 100
4.37	20	13.5599778	0.492	13.5599797	0.350	13.5599810	0.256	13.5599820	0.179	± 100

10. AC MAINS LINE CONDUCTED EMISSIONS

LIMITS

§15.207

(a) Except as shown in paragraphs (b) and (c) of this section, 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 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Notes:
 1. The lower limit shall apply at the transition frequencies
 2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

TEST PROCEDURE

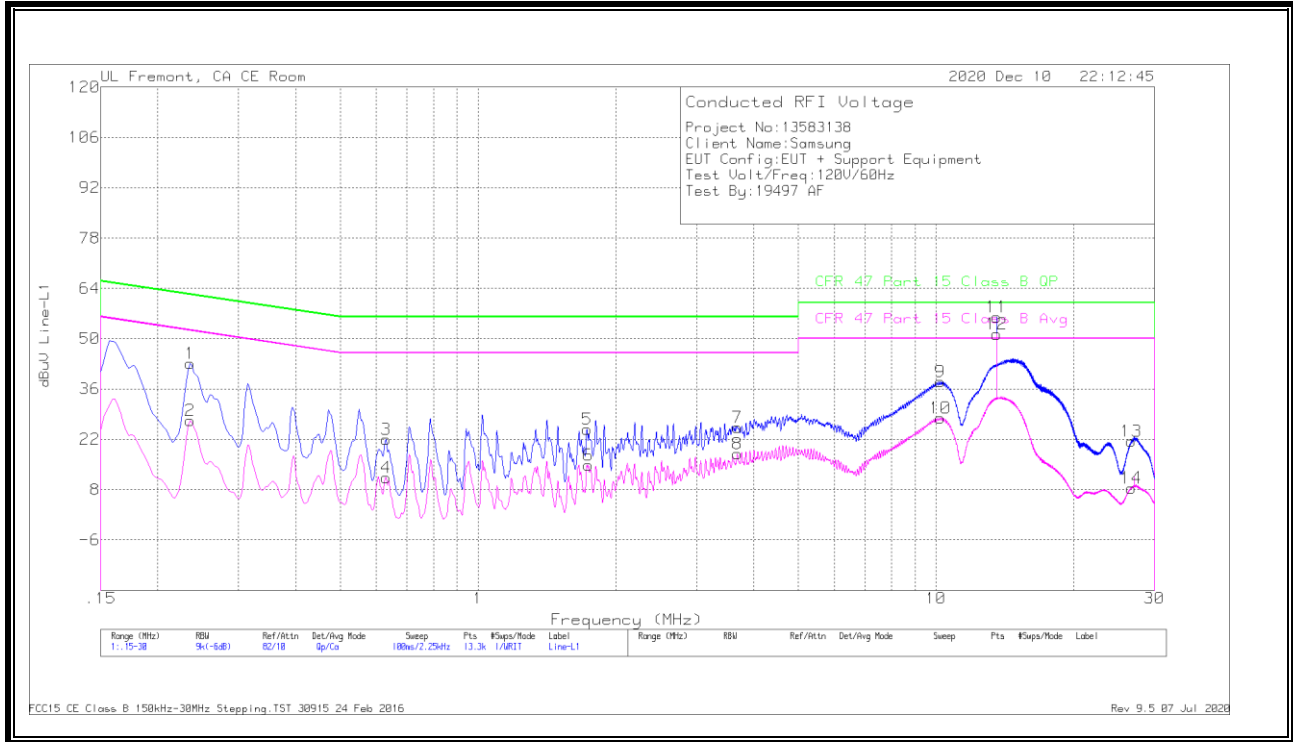
ANSI C63.10:2013

RESULTS

No non-compliance noted:

Type A (CE Mode), 106Kbps

LINE 1 RESULTS



Worst Emission

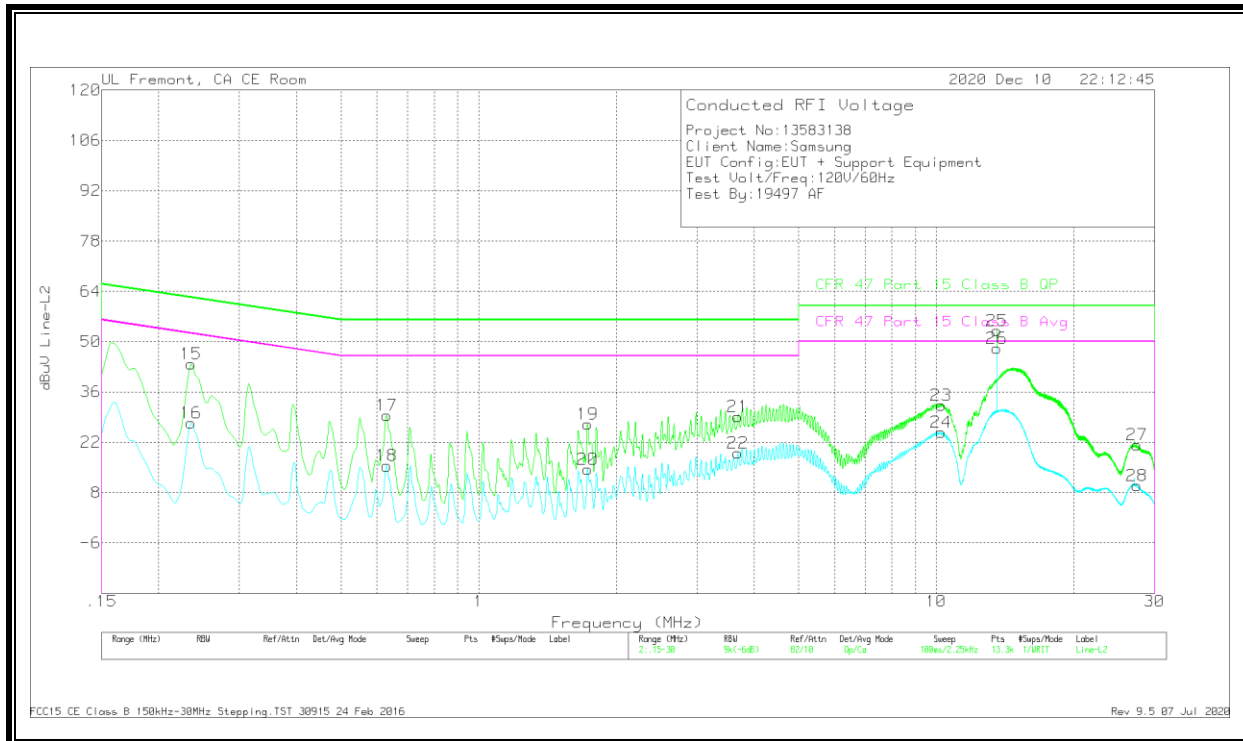
Range 1: Line-L1 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 LISN L1	LC Cables C1&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)M argin (dB)
1	.2355	32.99	Qp	0	0	10.1	43.09	62.25	-19.16	-	-
2	.2355	17.2	Ca	0	0	10.1	27.3	-	-	52.25	-24.95
3	.62925	11.83	Qp	0	0	10.1	21.93	56	-34.07	-	-
4	.62925	1.27	Ca	0	0	10.1	11.37	-	-	46	-34.63
5	1.7295	14.52	Qp	0	.1	10.1	24.72	56	-31.28	-	-
6	1.743	4.65	Ca	0	.1	10.1	14.85	-	-	46	-31.15
7	3.687	15.05	Qp	0	.1	10.2	25.35	56	-30.65	-	-
8	3.68588	7.63	Ca	0	.1	10.2	17.93	-	-	46	-28.07
9	10.22775	27.6	Qp	0	.2	10.2	38	60	-22	-	-
10	10.2255	17.57	Ca	0	.2	10.2	27.97	-	-	50	-22.03
11	13.56	45.57	Qp	.1	.2	10.2	56.07	60	-3.93	-	-
12	13.56	40.72	Ca	.1	.2	10.2	51.22	-	-	50	1.22
13	26.70225	10.68	Qp	0	.3	10.5	21.48	60	-38.52	-	-
14	26.68875	-2.34	Ca	0	.3	10.5	8.46	-	-	50	-41.54

Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: Markers 11 and 12 are the 13.56MHz NFC Fundamental

LINE 2 RESULTS



Worst Emission

Range 2: Line-L2 .15 - 30MHz											
Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 LISN L2	LC Cables C2&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
15	.2355	33.66	Qp	0	0	10.1	43.76	62.25	-18.49	-	-
16	.2355	17.37	Ca	0	0	10.1	27.47	-	-	52.25	-24.78
17	.62925	19.34	Qp	0	0	10.1	29.44	56	-26.56	-	-
18	.62925	5.35	Ca	0	0	10.1	15.45	-	-	46	-30.55
19	1.7295	16.89	Qp	0	.1	10.1	27.09	56	-28.91	-	-
20	1.7295	4.31	Ca	0	.1	10.1	14.51	-	-	46	-31.49
21	3.6825	18.84	Qp	0	.1	10.2	29.14	56	-26.86	-	-
22	3.6825	8.79	Ca	0	.1	10.2	19.09	-	-	46	-26.91
23	10.2615	21.86	Qp	0	.2	10.2	32.26	60	-27.74	-	-
24	10.24463	14.36	Ca	0	.2	10.2	24.76	-	-	50	-25.24
25	13.56	42.59	Qp	.1	.2	10.2	53.09	60	-6.91	-	-
26	13.56	37.63	Ca	.1	.2	10.2	48.13	-	-	50	-1.87
27	27.45825	10.45	Qp	.1	.3	10.5	21.35	60	-38.65	-	-
28	27.45825	-99	Ca	.1	.3	10.5	9.91	-	-	50	-40.09

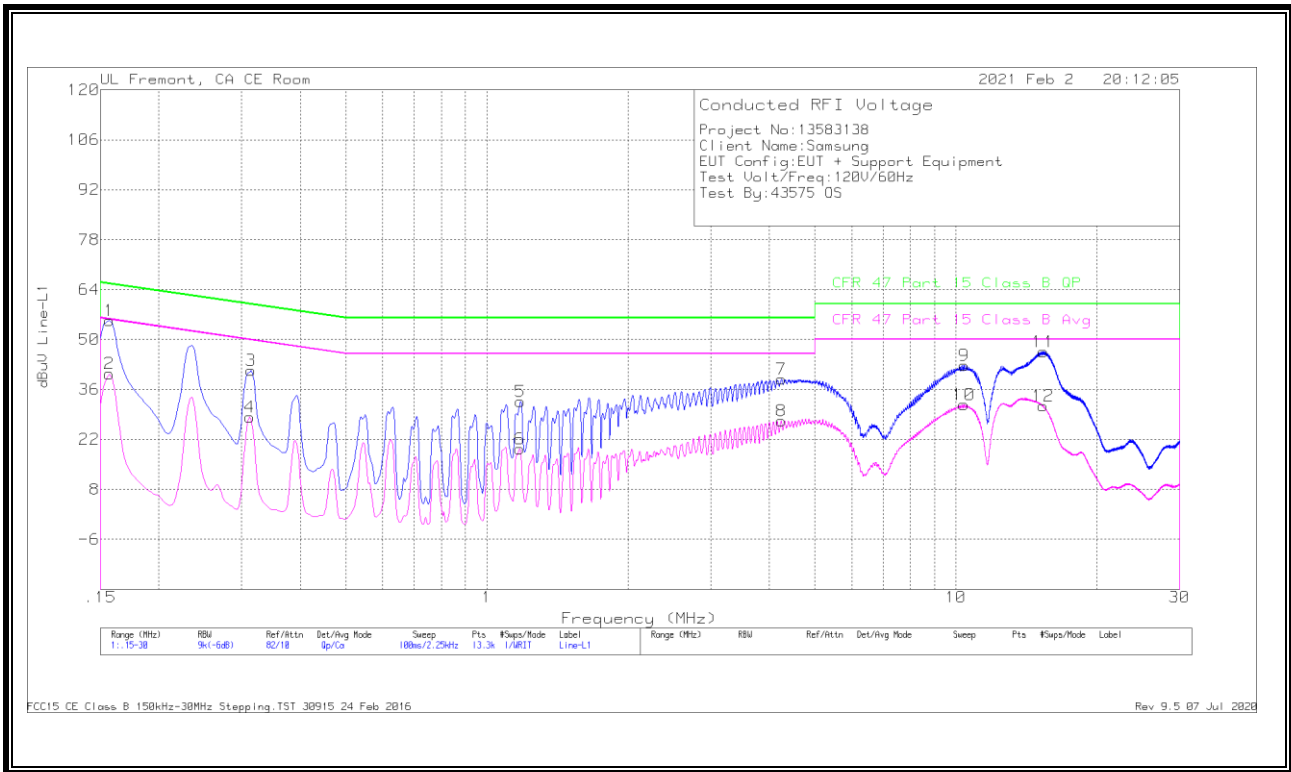
Qp - Quasi-Peak detector

Ca - CISPR average detection

Note: Markers 25 and 26 are the 13.56MHz NFC Fundamental

ANTENNA PORT TERMINATED 106Kbps

LINE 1 RESULTS



Worst Emission

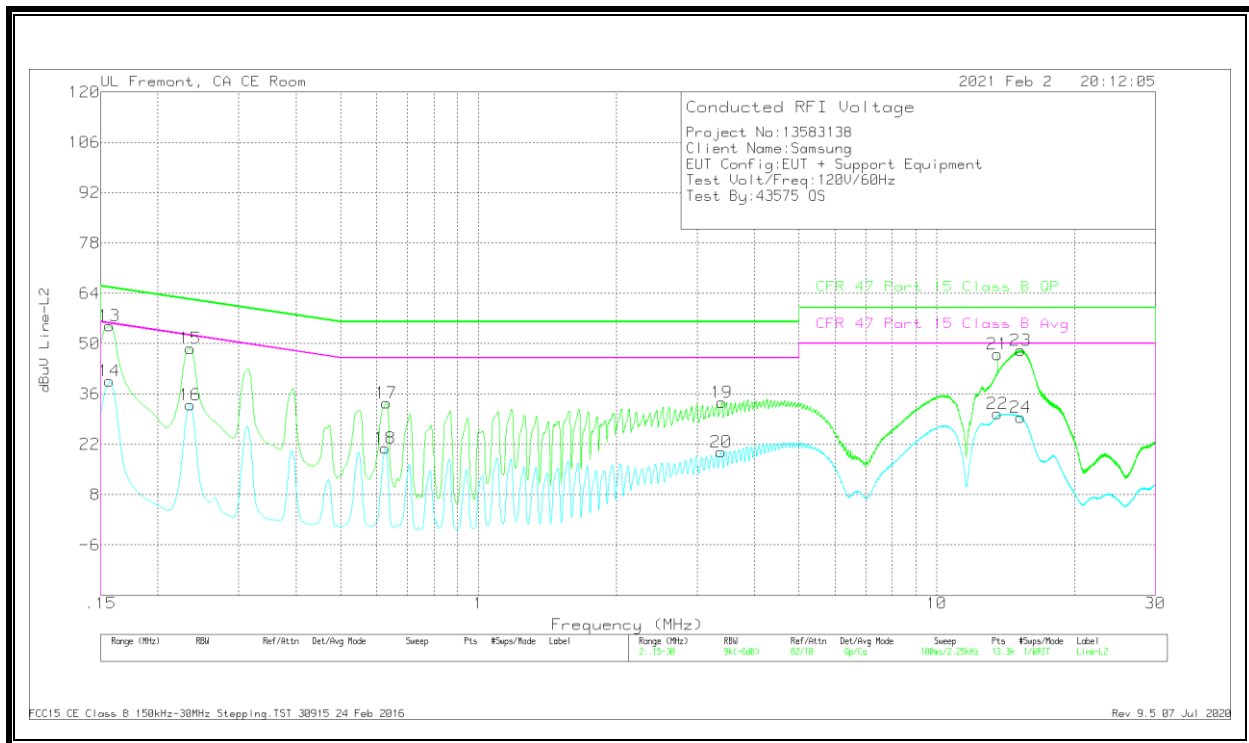
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 L1	LC Cables C1&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
1	.15675	45.07	Qp	.1	0	10.1	55.27	65.63	-10.36	-	-
2	.15675	30.2	Ca	.1	0	10.1	40.4	-	-	55.63	-15.23
3	.31425	31.2	Qp	0	0	10.1	41.3	59.86	-18.56	-	-
4	.312	18.11	Ca	0	0	10.1	28.21	-	-	49.92	-21.71
5	1.1805	22.37	Qp	0	.1	10.1	32.57	56	-23.43	-	-
6	1.176	9.19	Ca	0	.1	10.1	19.39	-	-	46	-26.61
7	4.2495	28.63	Qp	0	.1	10.2	38.93	56	-17.07	-	-
8	4.24388	16.93	Ca	0	.1	10.2	27.23	-	-	46	-18.77
9	10.401	32.4	Qp	0	.2	10.2	42.8	60	-17.2	-	-
10	10.39875	21.4	Ca	0	.2	10.2	31.8	-	-	50	-18.2
11	15.3645	36.02	Qp	0	.2	10.3	46.52	60	-13.48	-	-
12	15.34425	20.95	Ca	0	.2	10.3	31.45	-	-	50	-18.55

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Worst Emission

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	PRE018644 6 L2	LC Cables C2&C3 dB	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR)Margin (dB)
13	.15675	44.91	Qp	0	0	10.1	55.01	65.63	-10.62	-	-
14	.15675	29.59	Ca	0	0	10.1	39.69	-	-	55.63	-15.94
15	.2355	38.62	Qp	0	0	10.1	48.72	62.25	-13.53	-	-
16	.2355	22.86	Ca	0	0	10.1	32.96	-	-	52.25	-19.29
17	.62925	23.45	Qp	0	0	10.1	33.55	56	-22.45	-	-
18	.627	10.84	Ca	0	0	10.1	20.94	-	-	46	-25.06
19	3.399	23.45	Qp	0	.1	10.2	33.75	56	-22.25	-	-
20	3.38213	9.53	Ca	0	.1	10.2	19.83	-	-	46	-26.17
21	13.56	36.53	Qp	.1	.2	10.2	47.03	60	-12.97	-	-
22	13.56	19.96	Ca	.1	.2	10.2	30.46	-	-	50	-19.54
23	15.261	37.62	Qp	0	.2	10.3	48.12	60	-11.88	-	-
24	15.261	19.07	Ca	0	.2	10.3	29.57	-	-	50	-20.43

Qp - Quasi-Peak detector

Ca - CISPR average detection