



FCC CFR47 PART 15 SUBPART C

**ANT+
CERTIFICATION TEST REPORT
FOR**

GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, NFC and ANT+

MODEL NUMBER: SM-A800S

FCC ID: A3LSMA800S

REPORT NUMBER: 15I20931-E5

ISSUE DATE: JUNE 19,2015

**Prepared for
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	6/19/15	Initial Issue	P. Zhang

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, NFC
and ANT+
MODEL: SM-A800S
SERIAL NUMBER: 2138045 (Conducted), 2140998 (Radiated)
DATE TESTED: JUNE 14 – 19, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

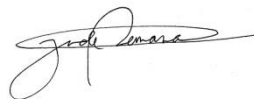
Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. 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 any government.

Approved & Released For
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CONSUMER TECHNOLOGY DIVISION
LAB TECHNICIAN
UL Verification Services Inc.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

47173 Benicia Street	47266 Benicia Street
☒ Chamber A(IC: 2324B-1)	☐ Chamber D(IC: 2324B-4)
☐ Chamber B(IC: 2324B-2)	☐ Chamber E(IC: 2324B-5)
☐ Chamber C(IC: 2324B-3)	☐ Chamber F(IC: 2324B-6)
	☐ Chamber G(IC: 2324B-7)
	☐ Chamber H(IC: 2324B-8)

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

$$\begin{aligned}\text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m}\end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 18000 MHz	4.94 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac, NFC and ANT+.

5.2. MAXIMUM OUTPUT FUNDAMENTAL FIELD STRENGTH

The ANT+ mode has maximum output fundamental field strength as follows:

Frequency Range (MHz)	Mode	Peak E-field Strength (dBuV/m)	Avg E-field Strength (dBuV/m)	Distance (m)
2402 - 2480	ANT +	105.22	56.82	3.00

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -11.99 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	Samsung	ETA0U83KWK	DK1FB05HS	N/A
Earphone	Samsung	N/A	N/A	N/A

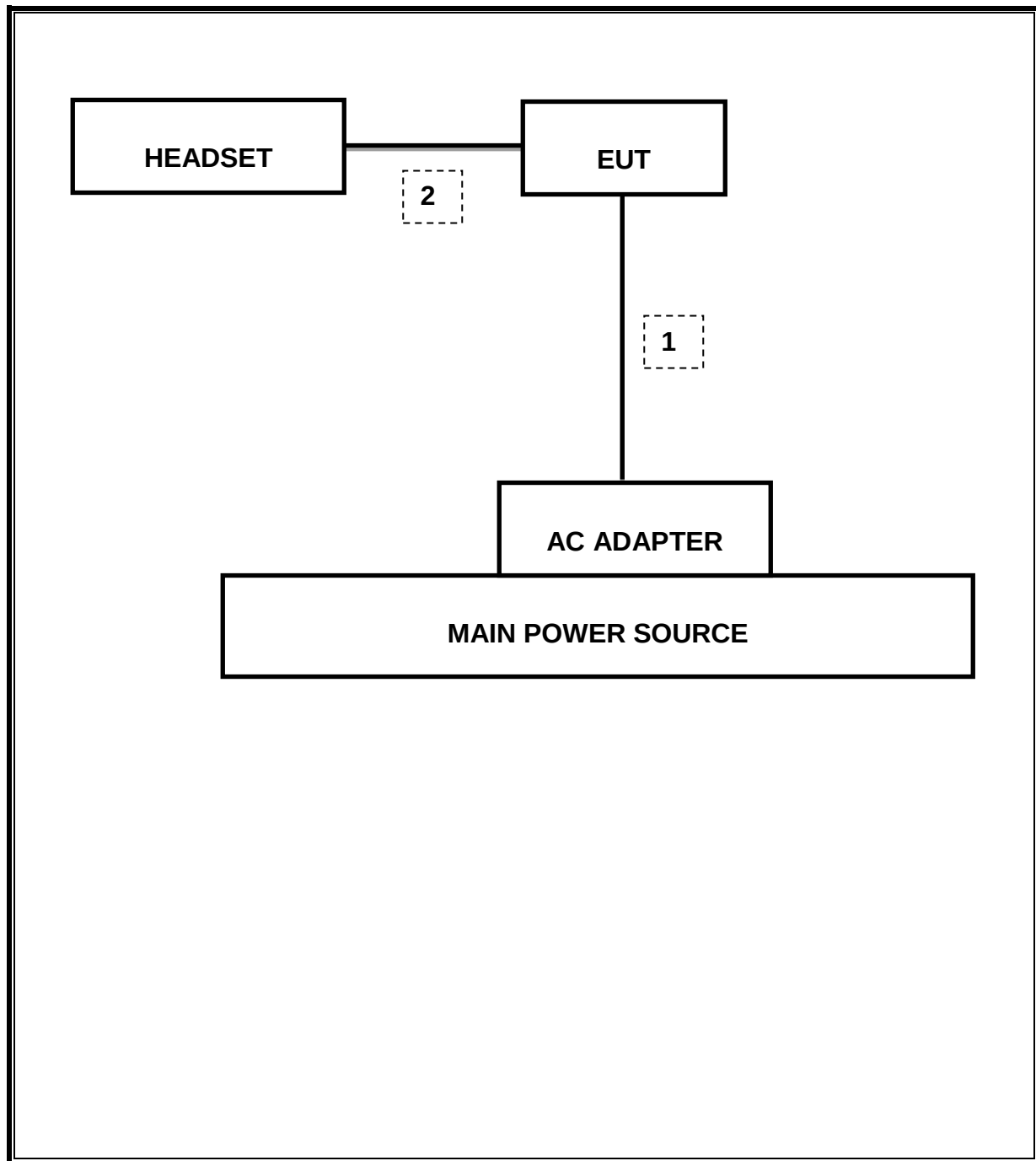
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1.2m	N/A
2	Audio	1	Mini-Jack	Unshielded	1m	N/A

TEST SETUP

The EUT is set to continuously transmit in ANT + test mode

SETUP DIAGRAM FOR TESTS



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
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01069	12/20/15
Spectrum Analyzer, 9KHz-40GHz	HP	8564E	C00986	04/01/16
EMI Test Receiver, 9 kHz-7 GHz	R & S	ESCI 7	1000741	08/13/15
EMI Test Receiver, 30 MHz	R & S	ESHS 20	N02396	08/18/15
Peak Power Meter	Agilent / HP	E4416A	C00963	12/13/15
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	12/13/15
Antenna, Horn, 1-18 GHz	ETS	3117	C01022	02/21/16
Antenna, Horn, 18- 26 GHz	ARA	MWH-1826/B	C00946	11/12/15
Antenna, Horn, 26-40 GHz	ARA	MWH-2640	C00891	06/28/15
Antenna, Bilog, 30MHz-1 GHz	Sunol Sciences	JB1	T243	03/06/16
RF Preamplifier, 1GHz - 18GHz	Miteq	NSP4000-SP2	924343	03/23/16
RF Preamplifier, 1GHz - 26.5GHz	HP	8449B	F00351	06/27/15
AC Power Supply, 2,500VA 45-500Hz	Elgar-Ametek	CW2501M	F00013	CNR
RF Preamplifier, 1GHz - 40GHz	Miteq	NSP4000-SP2	C00990	08/20/15
Attenuator / Switch driver	HP	11713A	F00204	CNR
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	F00219	05/23/16
High Pass Filter 6GHz	Micro-Tronics	HPS17542	F00222	05/22/16
High Pass Filter 3GHz	Micro-Tronics	HPM17543	F00224	05/22/16

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Version 9.5, 07/22/14
Conducted Software	UL	UL EMC	Version 9.5, 05/17/14
CLT Software	UL	UL RF	Version 1.0, 02/02/15
Antenna Port Software	UL	UL RF	Version 2.1.1.1, 1/20/15

7. LIMITS AND RESULTS

7.1. 99% BANDWIDTH

LIMIT

None; for reporting purposes only.

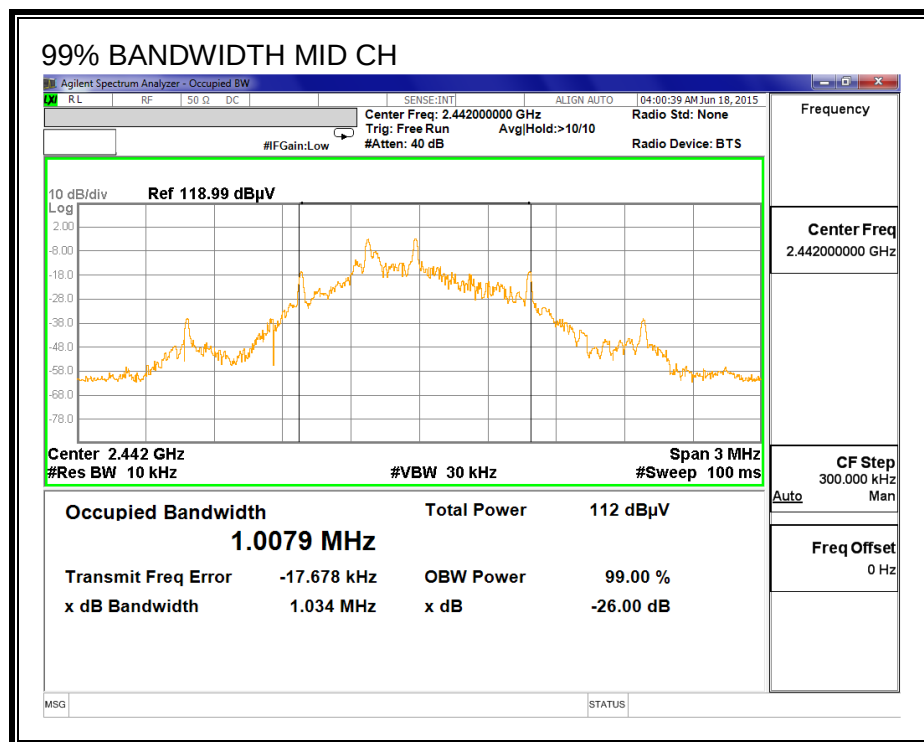
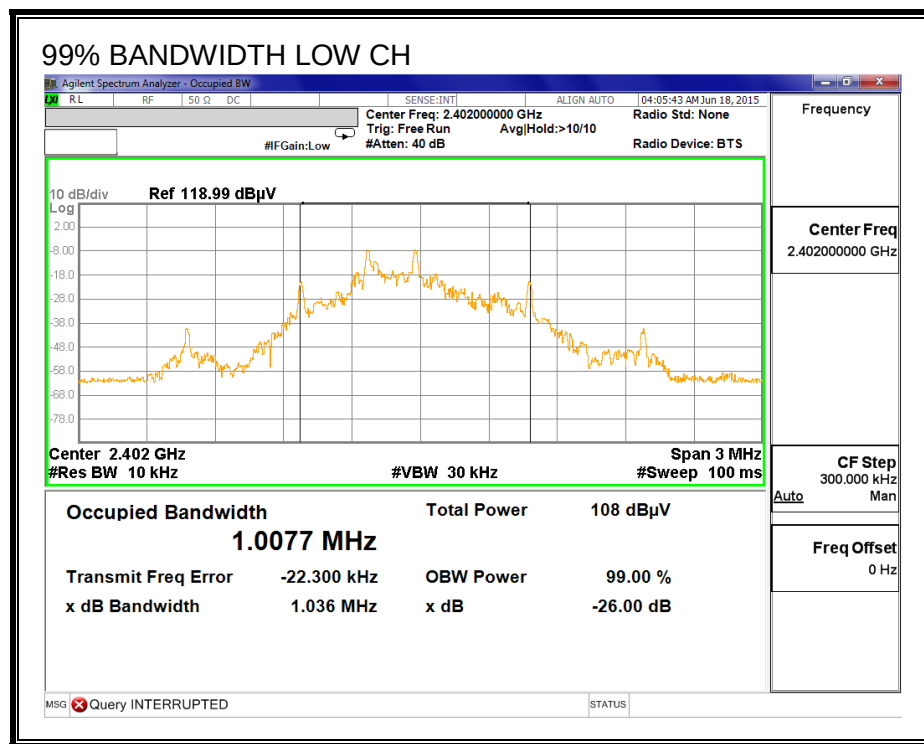
TEST PROCEDURE

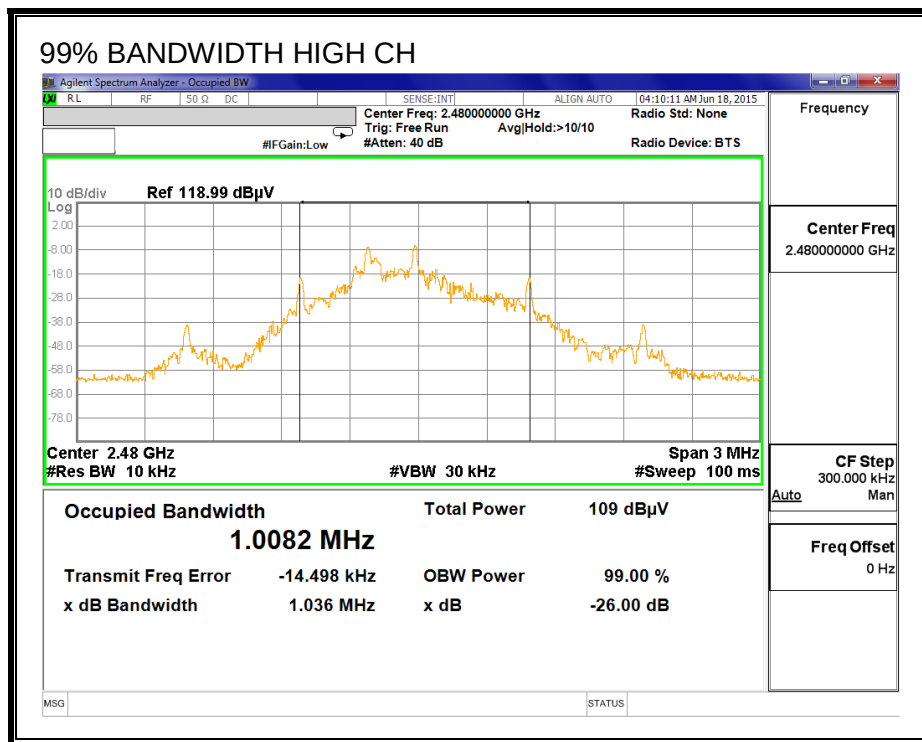
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0077
Middle	2442	1.0079
High	2480	1.0082

99% BANDWIDTH





7.2. TRANSMITTER RADIATED EMISSIONS

TEST PROCEDURE

ANSI C63.10

LIMIT

FCC 15.249

Operation within the bands 902–928 MHz, 2400–2483.5 MHz, 5725–5875 MHz, and 24.0–24.25 GHz.

(a) Except as provided in paragraph (b) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency	Field strength of fundamental (millivolts/ meter)	Field strength of harmonics (microvolts/ meter)
902–928 MHz	50	500
2400–2483.5 MHz	50	500
5725–5875 MHz	50	500
24.0–24.25 GHz	250	2500

(d) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation.

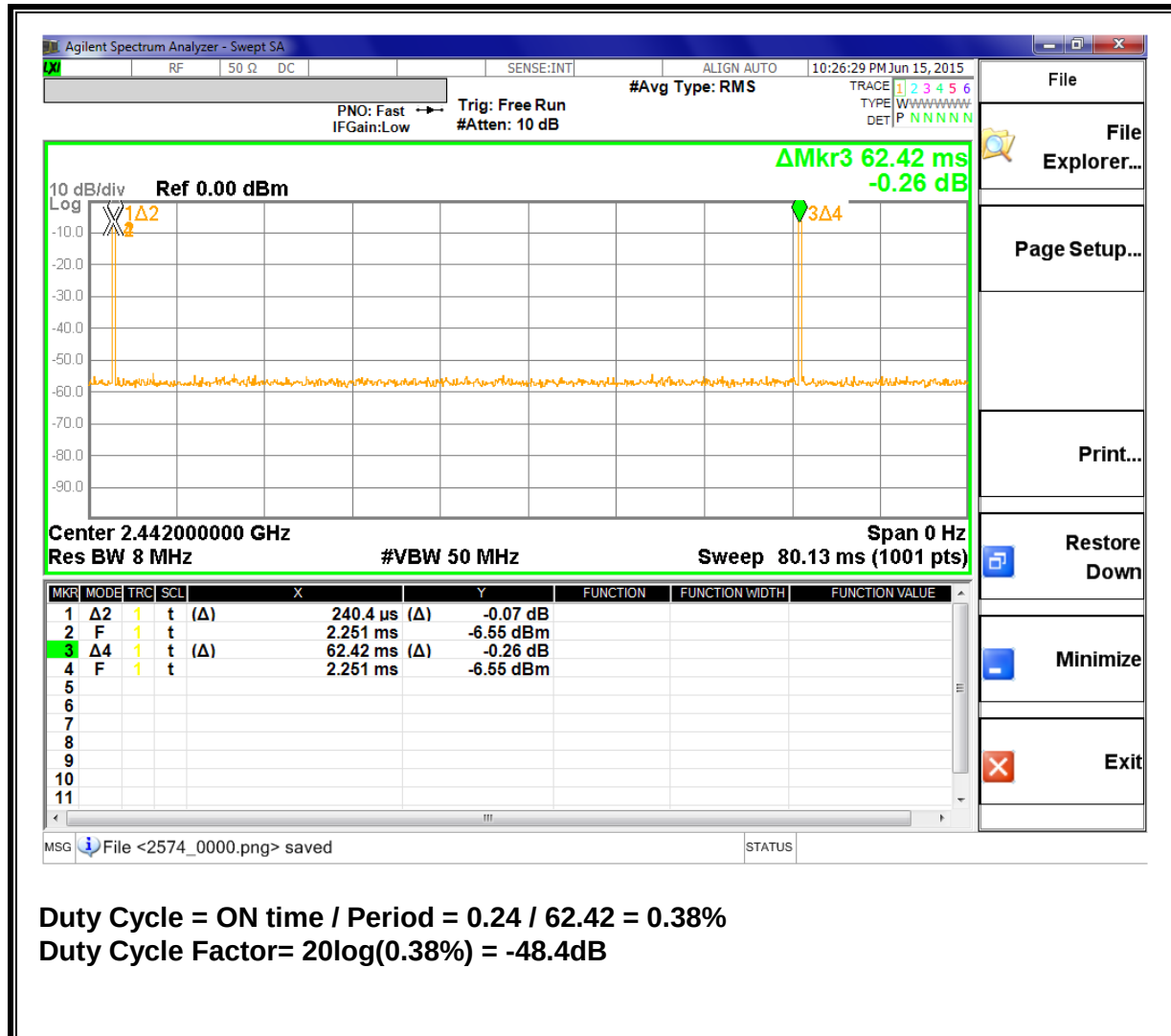
(e) As shown in Sec. 15.35(b), for frequencies above 1000 MHz, the field strength limits in paragraphs (a) and (b) of this section are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

Frequency (MHz)	Field strength (microvolts/meter)	Measure- ment dis- tance (meters)
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.

RESULTS

7.2.1. DUTY CYCLE

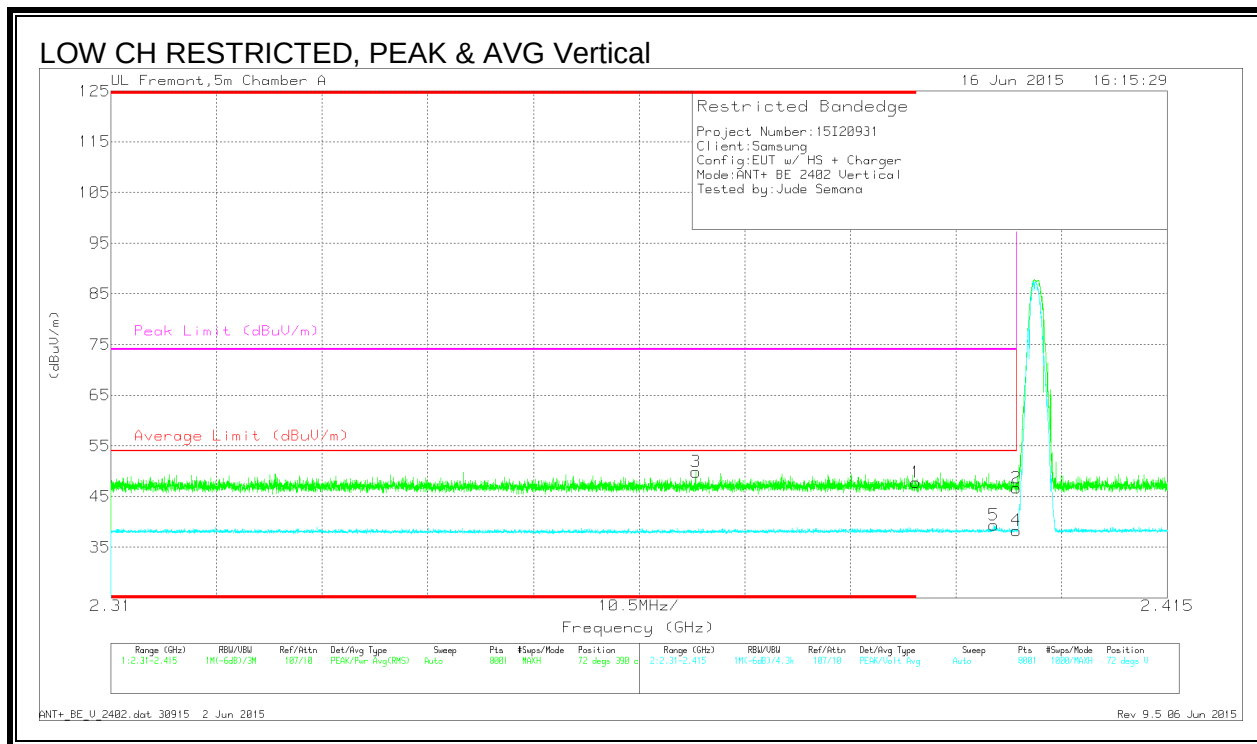


7.2.2. FUNDAMENTAL FREQUENCY RADIATED EMISSION

 FCC, VCCI, CISPR, CE, AUSTEL, NZ UL, CSA, TUV, BSMI, DHHS, NVLAP 47173 BENICIA STREET, FREMONT, CA 94538, USA	Project #: 15I20931 Report #: 15I20931-5 Date & Time: 06/15/15 Test Engr: David Mun	
	Company: Samsung EUT Description: GSM/WCDMA/LTE Phone with Bluetooth, DTS/UNII a/b/g/n, ANT+ & NFC Test Configuration: X POSITION Type of Test: FCC Mode of Operation: Transmitting : ANT+ mode	
	$M\% = ((t1+t2+t3+...)/T) * 66.8 = 0.38\%$	
	<table border="1"> <tr> <td>Av Reading = Pk Reading + 20*log(M%)</td> </tr> <tr> <td>20 * log (M%) = -48.40</td> </tr> </table>	Av Reading = Pk Reading + 20*log(M%)
Av Reading = Pk Reading + 20*log(M%)		
20 * log (M%) = -48.40		

Freq. (MHz)	Pk Rdg (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Pk Level (dBuV/m)	Av Level (dBuV/m)	Pk Limit FCC_B	Av Limit FCC_B	Pk Margin (dB)	Avg Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)
Low channel													
2402.00	89.31	32.05	-21.73	0.00	99.63	51.23	114.00	94.00	-14.37	-42.77	3mV	0.00	1.00
2402.00	94.07	32.05	-21.73	0.00	104.39	55.98	114.00	94.00	-9.61	-38.02	3mH	0.00	2.00
Mid channel													
2442.00	93.10	32.05	-21.73	0.00	103.42	55.01	114.00	94.00	-10.58	-38.99	3mV	0.00	1.00
2442.00	94.19	32.05	-21.73	0.00	104.51	56.10	114.00	94.00	-9.49	-37.90	3mH	0.00	2.00
High channel													
2480.00	94.45	32.05	-21.73	0.00	104.77	56.37	114.00	94.00	-9.23	-37.63	3mV	0.00	1.00
2480.00	94.90	32.05	-21.73	0.00	105.22	56.82	114.00	94.00	-8.78	-37.18	3mH	0.00	2.00

RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)



Trace Markers

Marker	Frequenc y (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.75	Pk	32	-24.9	47.85	-	-	74	-26.15	72	390	V
3	* 2.368	42.96	Pk	31.9	-25	49.86	-	-	74	-24.14	72	390	V
5	2.398	32.23	V1TV	32	-24.9	39.33	54	-14.67	-	-	72	390	V
2	2.4	39.61	Pk	32	-24.9	46.71	-	-	74	-27.29	72	390	V
4	2.4	31.21	V1TV	32	-24.9	38.31	54	-15.69	-	-	72	390	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

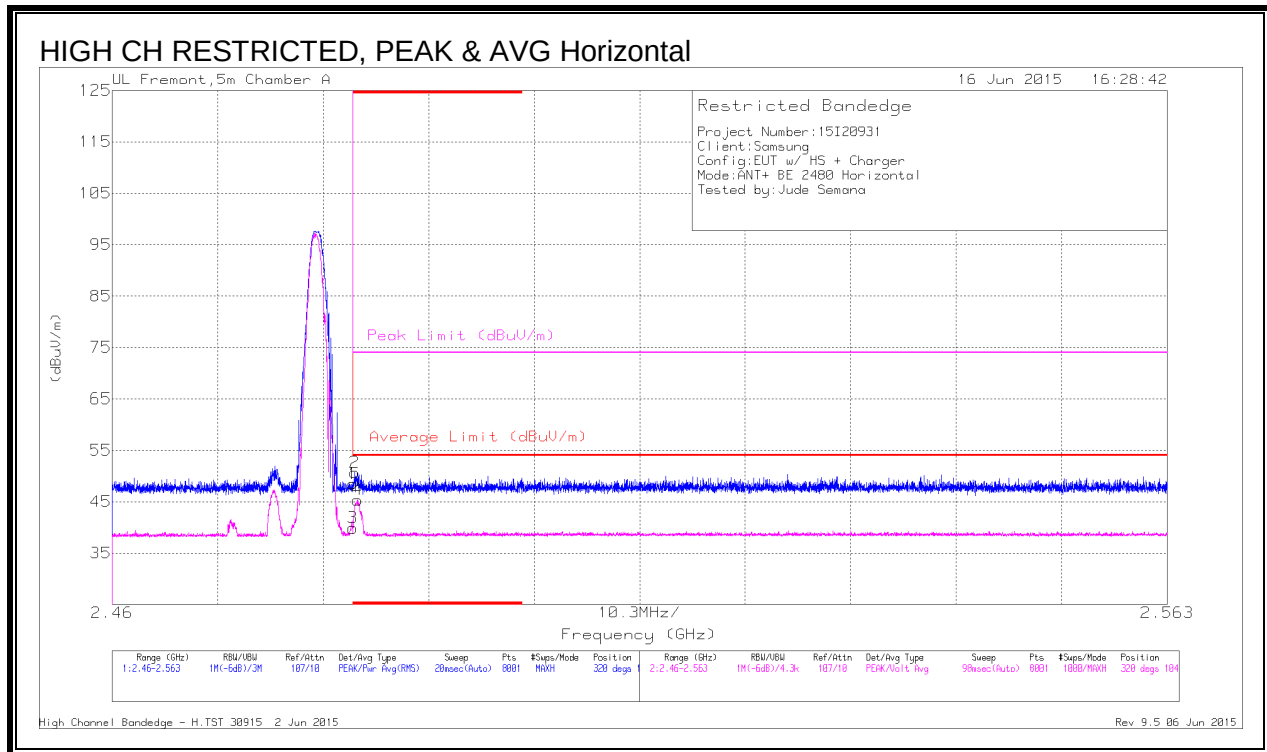
Pk - Peak detector

V1TV - U-NII: VB-A VB=1/Ton, Linear Voltage Average where: Ton is packet duration

ANT+_BE_V_2402.dat 30915 2 Jun 2015

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RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cbl/Filtr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.17	Pk	32.1	-24.8	48.47	-	-	74	-25.53	320	104	H
2	* 2.484	43.37	Pk	32.1	-24.8	50.67	-	-	74	-23.33	320	104	H
3	* 2.484	32.59	V1TV	32.1	-24.8	39.89	54	-14.11	-	-	320	104	H
4	* 2.484	38.07	V1TV	32.1	-24.8	45.37	54	-8.63	-	-	320	104	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

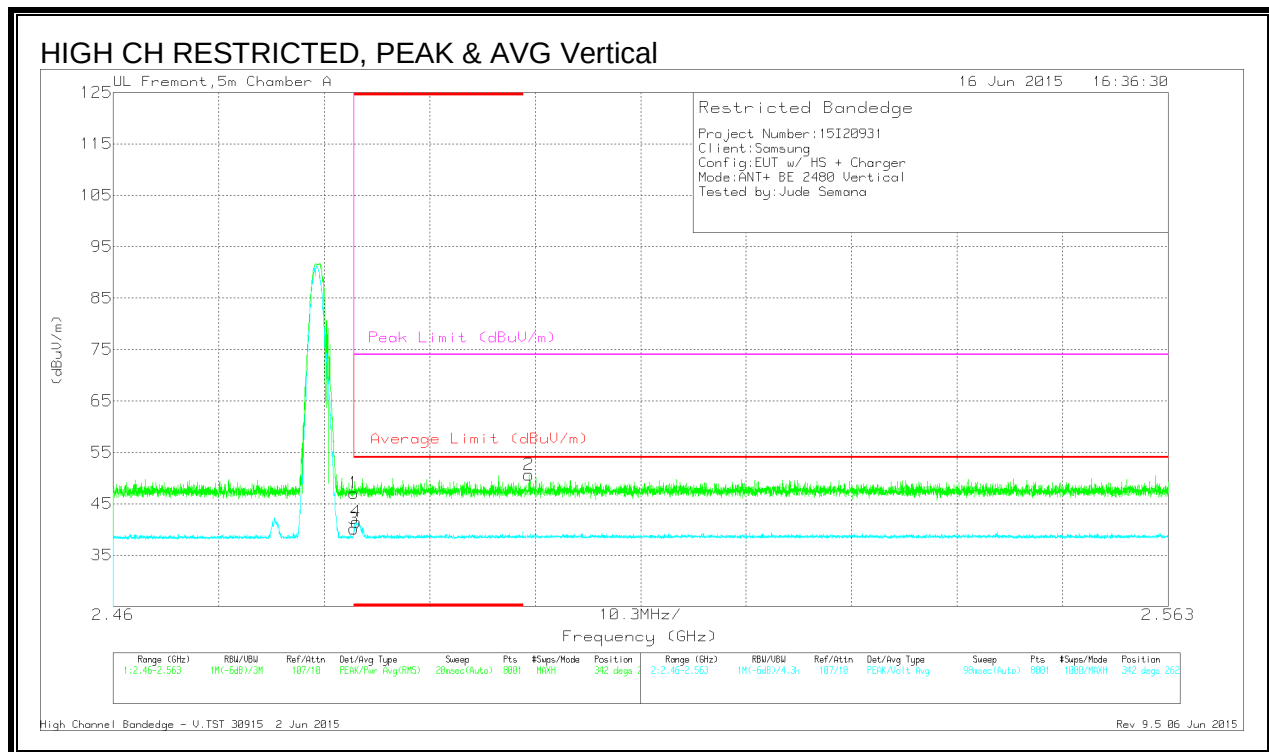
Pk - Peak detector

V1TV - U-NII: VB-A VB=1/Ton, Linear Voltage Average where: Ton is packet duration

High Channel Bandedge - H.TST 30915 2 Jun 2015

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RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T136 (dB/m)	Amp/Cb/ Fltr/Pad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.77	Pk	32.1	-24.8	47.07	-	-	74	-26.93	342	262	V
3	* 2.484	32.85	V1TV	32.1	-24.8	40.15	54	-13.85	-	-	342	262	V
4	* 2.484	34.19	V1TV	32.1	-24.8	41.49	54	-12.51	-	-	342	262	V
2	2.501	43.24	Pk	32.1	-24.7	50.64	-	-	74	-23.36	342	262	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

V1TV - U-NII: VB-A VB=1/Ton, Linear Voltage Average where: Ton is packet duration

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HARMONICS AND SPURIOUS EMISSIONS ABOVE 1GHz



FCC, VCCI, CISPR, CE, AUSTEL, NZ
UL, CSA, TUV, BSMI, DHHS, NVLAP

47173 BENICIA STREET, FREMONT, CA 94538, USA

Project #: 15I20931 **SAMPLE #** 2140999

Report #: 15I20931

Date & Time: 06/15/15

Test Engr: D. Mun

Company:

EUT Description: GSM/WCDMA/LTE PHONE + BLUETOOTH + DTS/UNII a/b/g/n/ac + ANT+ & NFC

Test Configuration: X POSITION

Type of Test: FCC

Mode of Operation: Transmitting : ANT+ mode

M% = ((t1+t2+t3+...)/T) * 66.83% = 0.38%

Av Reading = Pk Reading + 20*log(M%)

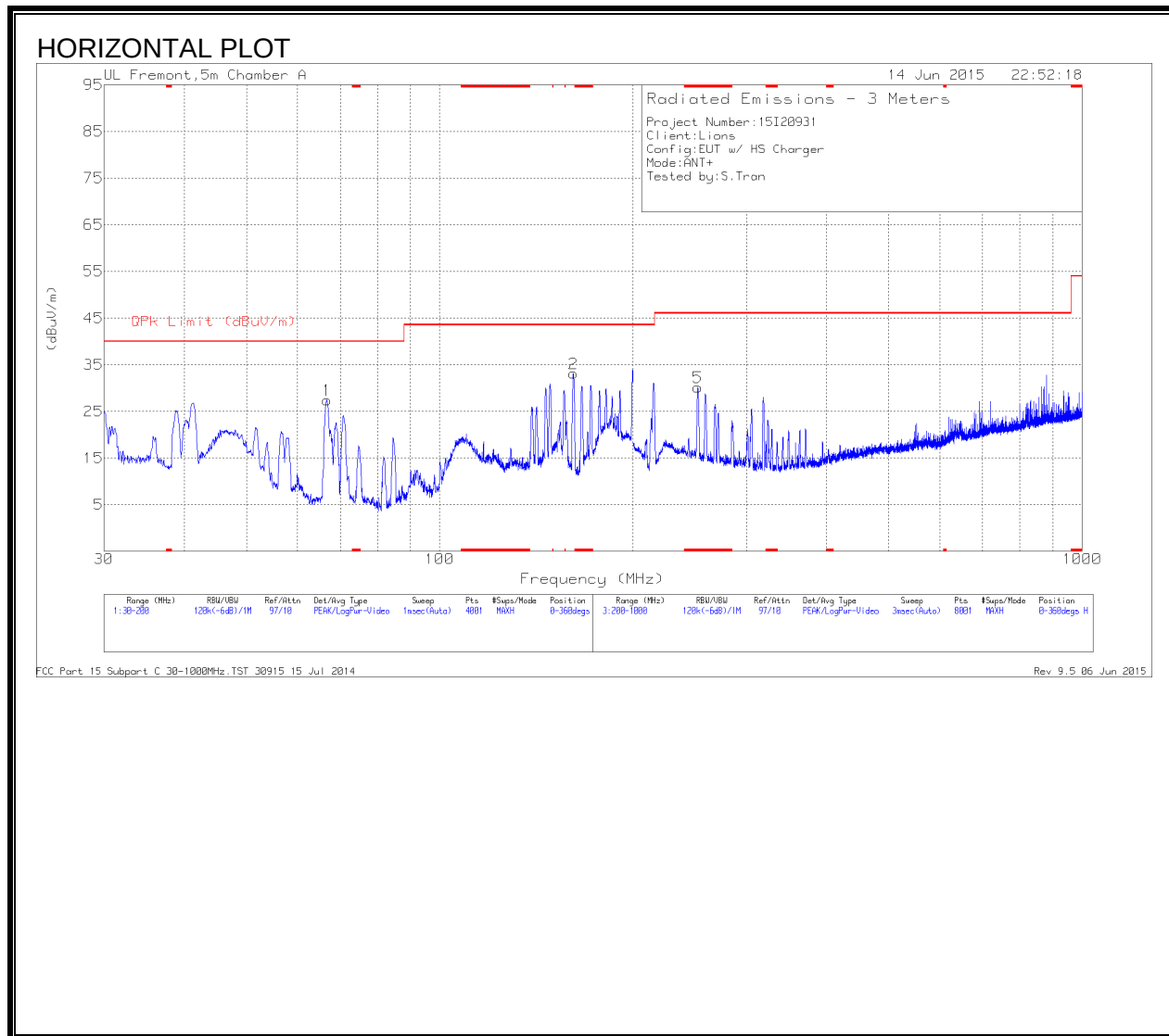
20 * log (M%) = -48.40

Freq (MHz)	Pk Rdg (dBuV)	Av Rdg (dBuV)	AF (dB)	Closs (dB)	Pre-amp (dB)	Pk Level (dBuV/m)	Av Level (dBuV/m)	Pk Limit FCC B	Av Limit FCC B	Pk Margin (dB)	Avg Margin (dB)	Pol (H/V)	Az (Deg)	Height (Meter)
Low channel														
4804.00	43.18	33.70	34.31	-19.78	0.00	57.71	48.23	74.00	54.00	-16.29	-5.77	3mV	0.00	1.00
4804.00	43.26	33.55	34.31	-19.78	0.00	57.79	48.08	74.00	54.00	-16.21	-5.92	3mH	0.00	2.00
Mid channel														
4884.00	42.84	31.49	34.31	-19.78	0.00	57.37	46.02	74.00	54.00	-16.63	-7.98	3mV	0.00	1.00
4884.00	42.38	31.39	34.31	-19.78	0.00	56.91	45.92	74.00	54.00	-17.09	-8.08	3mH	0.00	2.00
High channel														
4960.00	42.65	33.22	34.31	-19.78	0.00	57.18	47.75	74.00	54.00	-16.82	-6.25	3mV	0.00	1.00
4960.00	42.90	32.83	34.31	-19.78	0.00	57.43	47.36	74.00	54.00	-16.57	-6.64	3mH	0.00	2.00

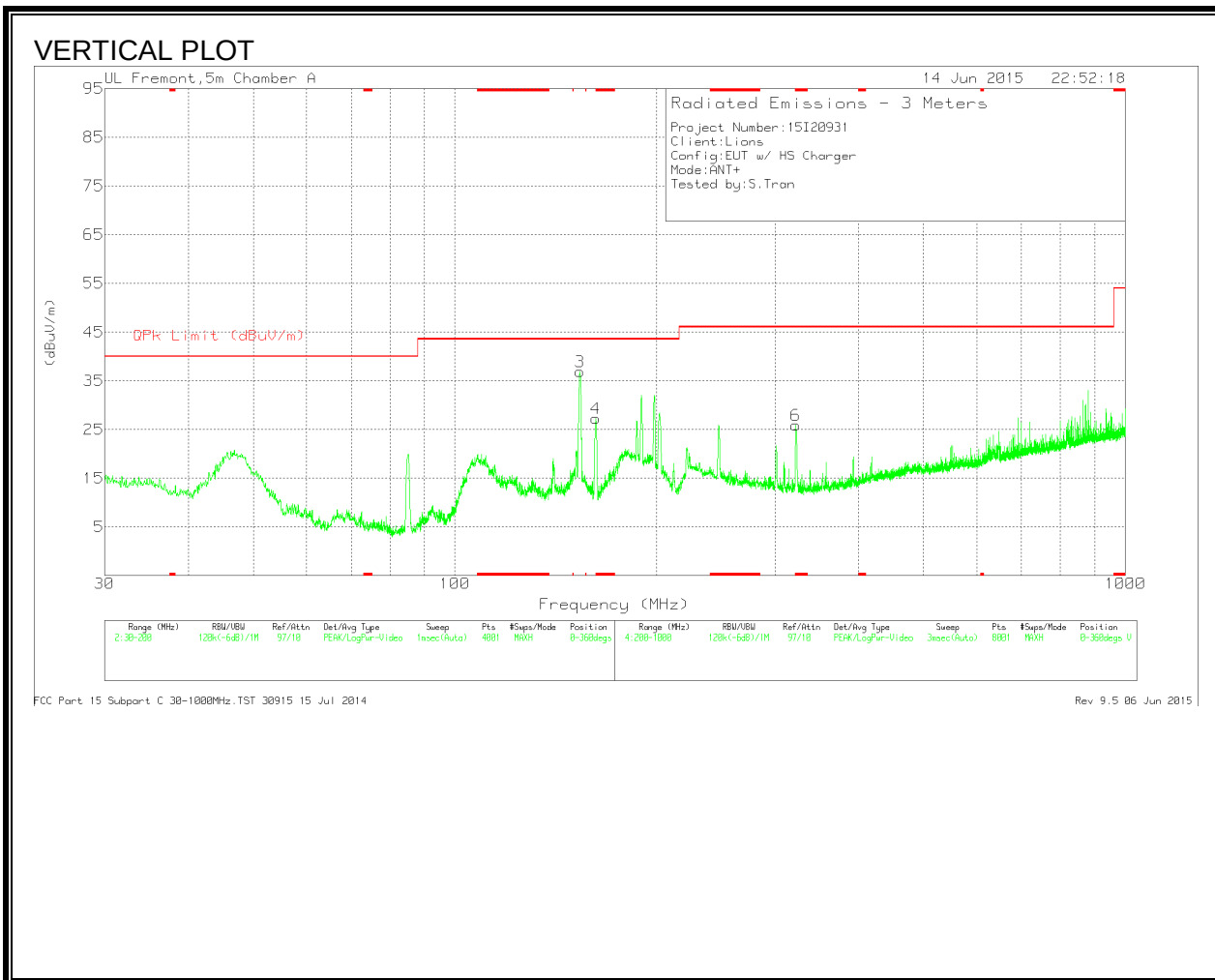
Note: Average reading get from max hold with reduce VBW method.

7.2.4. SPURIOUS BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (HORIZONTAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (VERTICAL)



Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	* 162.2175	45.58	Pk	11.9	-30.2	27.28	43.52	-16.24	0-360
5	* 252.2	48.3	Pk	11.5	-29.6	30.2	46.02	-15.82	0-360
6	* 322.6	41.08	Pk	14	-29.2	25.88	46.02	-20.14	0-360
1	66.72	50.23	Pk	8.1	-30.9	27.43	40	-12.57	0-360
3	153.59	54.66	Pk	12.4	-30.2	36.86	43.52	-6.66	0-360
2	161.41	51.33	Pk	11.9	-30.1	33.13	43.52	-10.39	0-360

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

Radiated Emissions

Frequency (MHz)	Meter Reading (dBuV)	Det	AF T130 (dB/m)	Amp/Cbl (dB/m)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
153.607	23.71	Qp	12.4	-30.2	5.91	43.52	-37.61	1

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Qp - Quasi-Peak detector

FCC Part 15 Subpart C 30-1000MHz.TST 30915 15 Jul 2014

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8. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (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.

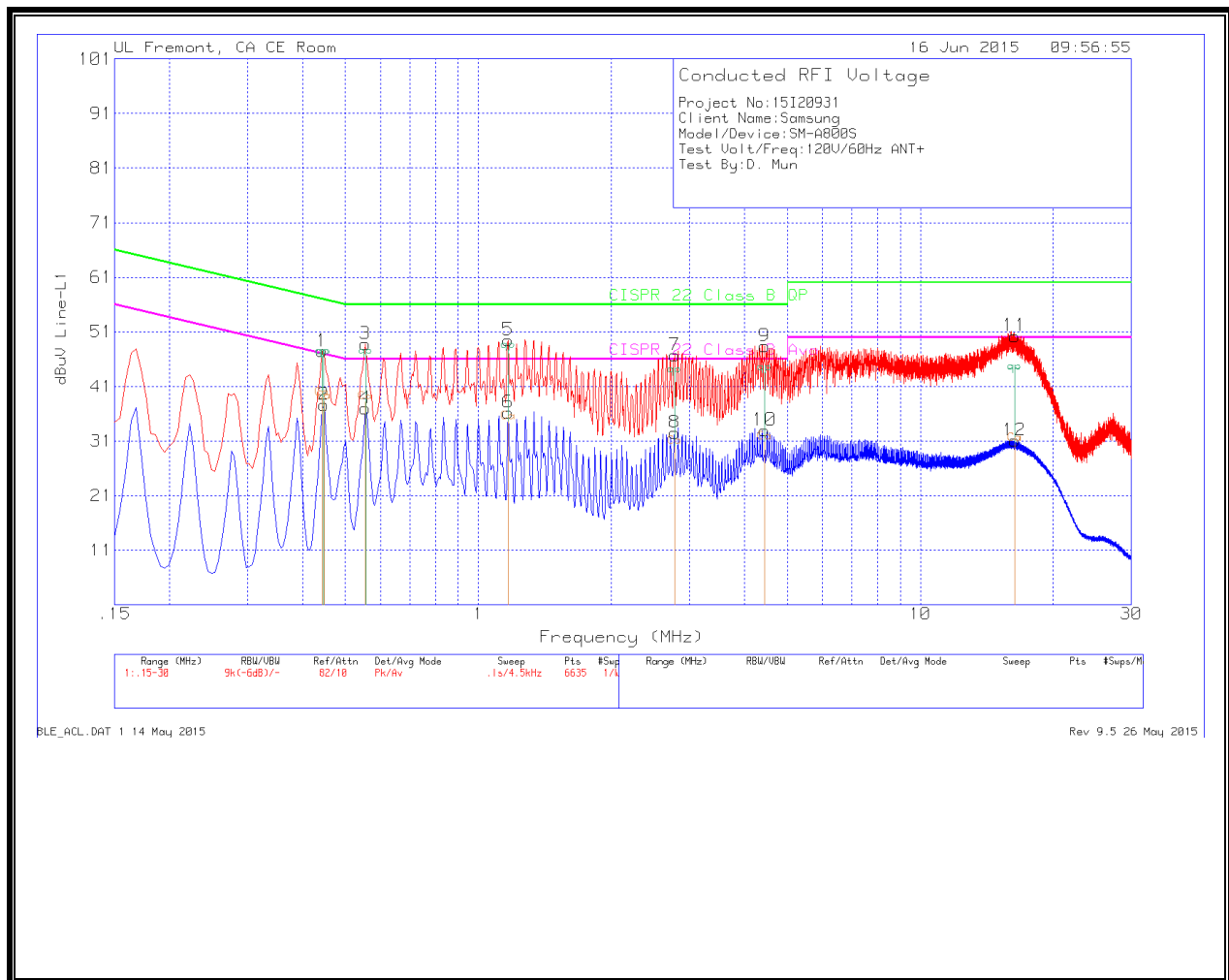
TEST PROCEDURE

ANSI C63.10 - 2009

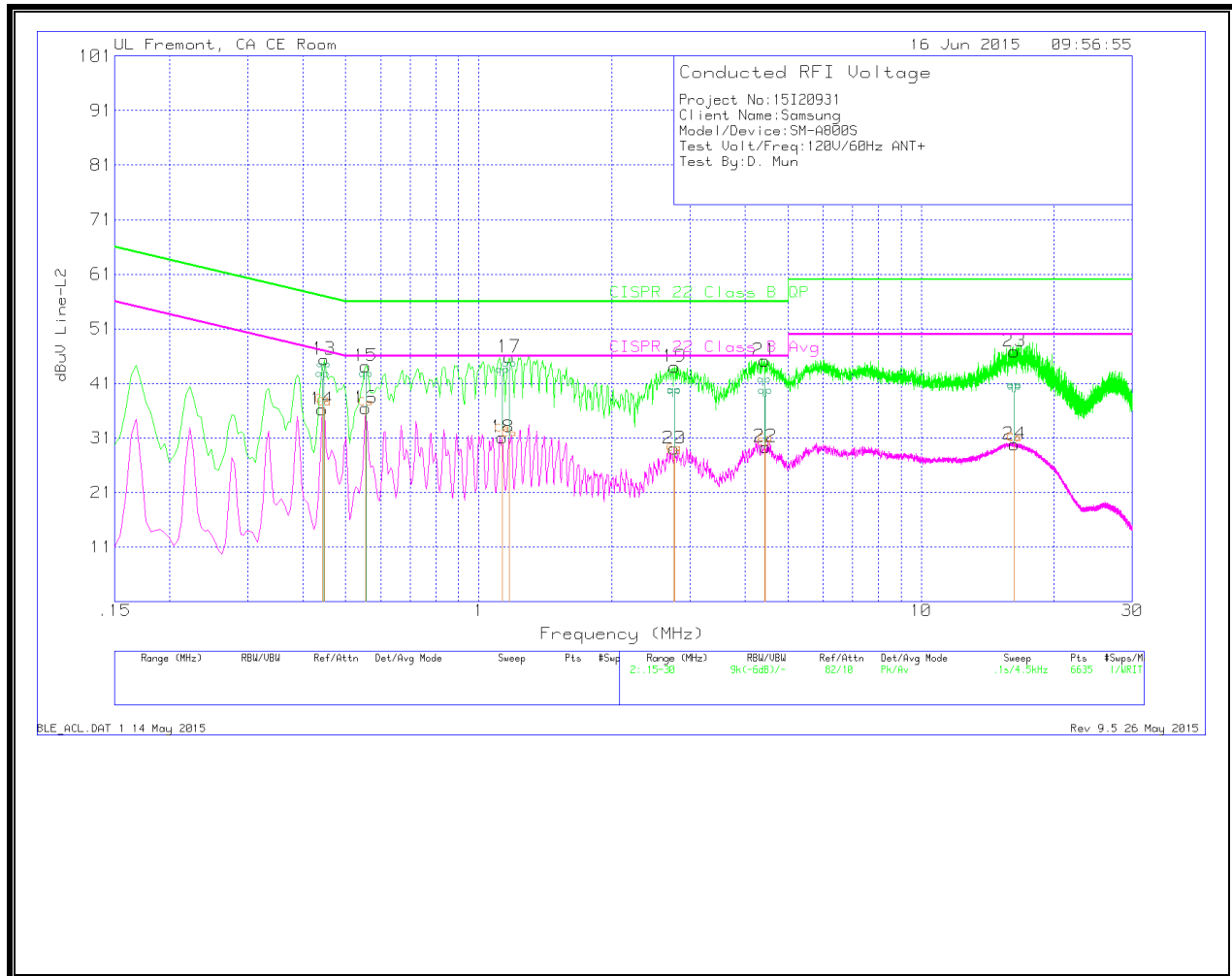
RESULTS

6 WORST EMISSIONS

LINE 1 RESULTS



LINE 2 RESULTS



Trace Markers

Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
1	.4425	47.05	Pk	.4	0	47.45	57.01	-9.56		
2	.447	37.22	Av	.4	0	37.62	-	-	46.93	-9.31
3	.555	48.48	Pk	.3	0	48.78	56	-7.22		
4	.555	36.71	Av	.3	0	37.01	-	-	46	-8.99
5	1.167	49.18	Pk	.2	.1	49.48	56	-6.52		
6	1.167	35.91	Av	.2	.1	36.21	-	-	46	-9.79
7	2.778	46.45	Pk	.2	.1	46.75	56	-9.25		
8	2.778	32.23	Av	.2	.1	32.53	-	-	46	-13.47
9	4.443	48.07	Pk	.2	.1	48.37	56	-7.63		
10	4.443	32.65	Av	.2	.1	32.95	-	-	46	-13.05
11	16.3455	49.72	Pk	.3	.2	50.22	60	-9.78		
12	16.341	30.59	Av	.3	.2	31.09	-	-	50	-18.91

Pk - Peak detector

Av - Average detection

Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
13	.447	44.98	Pk	.4	0	45.38	56.93	-11.55	46.93	-1.55
14	.4425	35.84	Av	.4	0	36.24	-	-		
15	.555	43.89	Pk	.3	0	44.19	56	-11.81	46	-1.81
16	.555	36.17	Av	.3	0	36.47	-	-		
17	1.1715	45.36	Pk	.3	.1	45.76	56	-10.24		
18	1.131	30.7	Av	.3	.1	31.1	-	-	46	-14.9
19	2.769	43.74	Pk	.2	.1	44.04	56	-11.96		
20	2.7645	28.73	Av	.2	.1	29.03	-	-	46	-16.97
21	4.4205	44.89	Pk	.2	.1	45.19	56	-10.81		
22	4.4475	29.05	Av	.2	.1	29.35	-	-	46	-16.65
23	16.242	46.34	Pk	.3	.2	46.84	60	-13.16		
24	16.2555	29.32	Av	.3	.2	29.82	-	-	50	-20.18

Pk - Peak detector

Av - Average detection

Peak/Average/RMS Emissions

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44363	38.48	Ca	.4	0	38.88	-	-	46.99	-8.11
.44588	37.84	Ca	.4	0	38.24	-	-	46.95	-8.71
.55568	37.84	Ca	.3	0	38.14	-	-	46	-7.86
1.16768	34.24	Ca	.2	.1	34.54	-	-	46	-11.46
2.77913	29.7	Ca	.2	.1	30	-	-	46	-16
4.44413	30.5	Ca	.2	.1	30.8	-	-	46	-15.2
16.3444	30.02	Ca	.3	.2	30.52	-	-	50	-19.48
16.3408	30.03	Ca	.3	.2	30.53	-	-	50	-19.47

Ca - CISPR average detection

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44678	36.05	Ca	.4	0	36.45	-	-	46.93	-10.48
.44363	36.65	Ca	.4	0	37.05	-	-	46.99	-9.94
.55613	36.15	Ca	.3	0	36.45	-	-	46	-9.55
1.17263	30.32	Ca	.3	.1	30.72	-	-	46	-15.28
1.13168	31.24	Ca	.3	.1	31.64	-	-	46	-14.36
2.76788	27.15	Ca	.2	.1	27.45	-	-	46	-18.55
2.76563	27.73	Ca	.2	.1	28.03	-	-	46	-17.97
4.41938	28.77	Ca	.2	.1	29.07	-	-	46	-16.93
4.44638	29.57	Ca	.2	.1	29.87	-	-	46	-16.13
16.2409	29.49	Ca	.3	.2	29.99	-	-	50	-20.01
16.2553	29.34	Ca	.3	.2	29.84	-	-	50	-20.16

Ca - CISPR average detection

Quasi-Peak Emissions

Range 1: Line-L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L1	LC Cables 1&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44363	46.03	Qp	.4	0	46.43	56.99	-10.56	-	-
.44588	45.99	Qp	.4	0	46.39	56.95	-10.56	-	-
.55568	46.16	Qp	.3	0	46.46	56	-9.54	-	-
1.16768	47.27	Qp	.2	.1	47.57	56	-8.43	-	-
2.77913	42.73	Qp	.2	.1	43.03	56	-12.97	-	-
4.44413	43.17	Qp	.2	.1	43.47	56	-12.53	-	-
16.3444	43.09	Qp	.3	.2	43.59	60	-16.41	-	-
16.3408	43.15	Qp	.3	.2	43.65	60	-16.35	-	-

Qp - Quasi-Peak detector

Range 2: Line-L2 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	T24 IL L2	LC Cables 2&3	Corrected Reading dBuV	CISPR 22 Class B QP	Margin (dB)	CISPR 22 Class B Avg	Margin (dB)
.44678	42.98	Qp	.4	0	43.38	56.93	-13.55	-	-
.44363	41.28	Qp	.4	0	41.68	56.99	-15.31	-	-
.55613	41.41	Qp	.3	0	41.71	56	-14.29	-	-
1.17263	43.18	Qp	.3	.1	43.58	56	-12.42	-	-
1.13168	42	Qp	.3	.1	42.4	56	-13.6	-	-
2.76788	38.29	Qp	.2	.1	38.59	56	-17.41	-	-
2.76563	38.42	Qp	.2	.1	38.72	56	-17.28	-	-
4.41938	40.31	Qp	.2	.1	40.61	56	-15.39	-	-
4.44638	38.31	Qp	.2	.1	38.61	56	-17.39	-	-
16.2409	39.08	Qp	.3	.2	39.58	60	-20.42	-	-
16.2553	38.89	Qp	.3	.2	39.39	60	-20.61	-	-

Qp - Quasi-Peak detector

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