Variant FCC RF Test Report

APPLICANT	:	HTC Corporation
EQUIPMENT	:	Smartphone
MODEL NAME	:	PG05100
FCC ID	:	NM8PG05100
STANDARD	:	47 CFR Part 2, 27
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)
TX FREQUENCY RANGE	:	777 MHz ~ 787 MHz (LTE Band 13)
RX FREQUENCY RANGE	:	746 MHz ~ 756 MHz (LTE Band 13)
MAX. ERP POWER	:	0.04 W (QPSK, BW 10MHz) 0.03 W (16QAM, BW 10MHz)

This is a variant report which is only valid together with the original test report. The product was received on Feb. 22, 2011 and completely tested on Mar. 25, 2011. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI / TIA / EIA-603-C-2004 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

Roy Wu

Roy Wu / Manager

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG0O1550-01B	Rev. 01	This is a variant report by adding extend battery (battery 5), extend battery cover, and wireless charging cover. All the test cases were performed on original report which can be referred to Sporton Report No. FG0O1550-03B. Based on original report, only the ERP/EIRP and Radiated Emission were verified.	Mar. 29, 2011

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§27.50(b)(10)	Effective Radiated Power	< 3 Watts	PASS	-
3.2	§2.1053 §27.53(c)(2) §27.53(c)(4)	Undesirable Out of Band Emissions	< $43+10\log_{10}$(P[Watts])	PASS	Under limit 26.71 dB at 2346 MHz

1 General Description

1.1 Applicant

HTC Corporation
No. 23, Xinghua Rd., Taoyuan City, Taiwan

1.2 Manufacturer

HTC Corporation
No. 23, Xinghua Rd., Taoyuan City, Taiwan

1.3 Feature of Equipment Under Test

Product Feature & Specification	
Equipment	Smartphone
Model Name	PG05100
FCC ID	NM8PG05100
Sample 1	EUT with LCM1, Camera1, Filter1 ,and PA1
Sample 2	EUT with LCM2, Camera2, Filter2 ,and PA2
Tx Frequency	LTE Band 13 : 777 MHz ~ 787 MHz
Rx Frequency	LTE Band 13 : 746 MHz ~ 756 MHz
Maximum ERP	0.04 W (16.06 dBm) (QPSK, BW 10MHz) 0.03 W (15.38 dBm) (16QAM, BW 10MHz)
Antenna Type	PIFA Antenna
Type of Modulation	QPSK/16QAM
EUT Stage	Production Unit

Remark:

1. For other wireless features of this EUT, the test report will be issued separately.
2. This test report recorded only product characteristics and test results of PCS Licensed Transmitter Held to Ear (PCE).

1.4 Testing Site

Test Site	SPORTON INTERNATIONAL INC.	
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978	
Test Site No.	**Sporton Site No.**	**FCC/IC Registration No.**
	03CH05-HY	TW1022/4086B-1

1.5 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 27
- ANSI / TIA / EIA-603-C-2004

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.

2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B (DoC), recorded in a separate test report.

1.6 Ancillary Equipment List

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMW500	N/A	N/A	Unshielded, 1.8 m

2 Test Configuration of Equipment Under Test

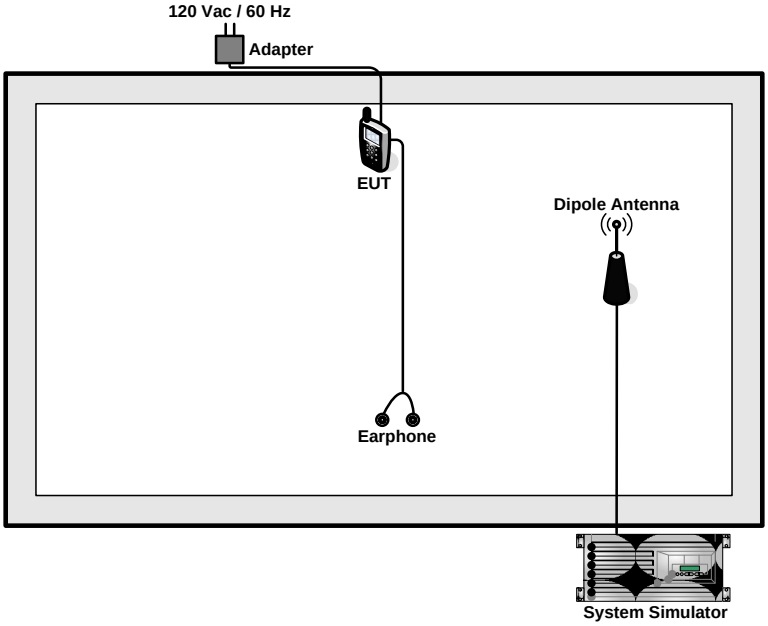
2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission: 30MHz to 8000 MHz.

Test Modes		
Band		**Radiated TCs**
LTE Band 13	**QPSK**	■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 2 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 2 ■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2 ■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 1 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 1 ■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1
	16QAM	■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 2 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 2 ■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2 ■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 1 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 1 ■ LTE (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1 ■ LTE (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1
Remark: TC stands for Test Configuration, and consists of USB Cable1, and Adapter 1.		

2.2 Connection Diagram of Test System



3 Test Result

3.1 Effective Radiated Power Measurement

3.1.1 Description of the ERP Measurement

Effective radiated power output measurements by substitution method according to ANSI / TIA / EIA-603-C-2004. Mobile and portable (hand-held) stations operating in the 782 MHz band are limited to a peak ERP of 3 watt.

3.1.2 Measuring Instruments

See list of measuring instruments of this test report.

3.1.3 Test Procedures

1. The EUT was placed on a turntable with 1.0 meter height in a fully anechoic chamber.
2. The EUT was set 1.2 meters from the receiving antenna which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest radiated power.
4. The height of the receiving antenna is adjusted to look for the maximum EIRP.
5. Taking the record of maximum EIRP.
6. A dipole antenna was substituted in place of the EUT and was driven by a signal generator.
7. The conducted power at the terminal of the dipole antenna is measured.
8. Repeat step 3 to step 5 to get the maximum EIRP of the substitution antenna.
9. EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs

   Ps (dBm)：Input power to substitution antenna.

   Gs (dBi or dBd)：Substitution antenna Gain.

   Et = Rt + AF

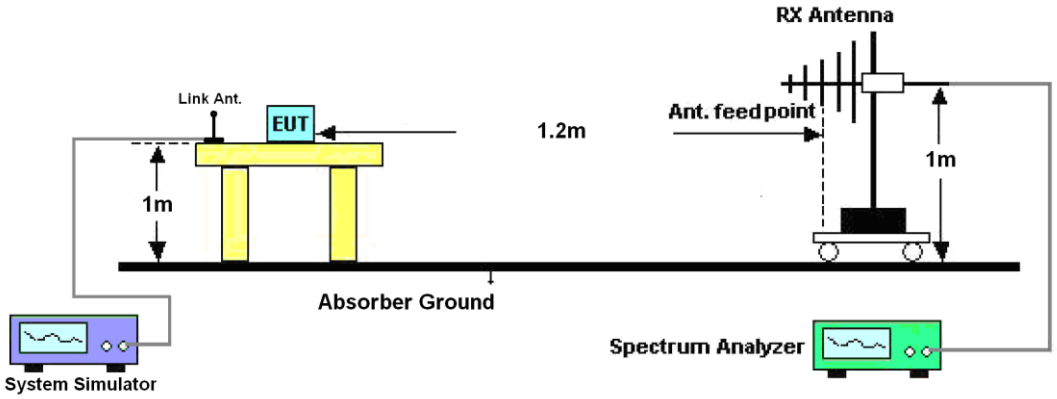
   Es = Rs + AF

   AF (dB/m)：Receive antenna factor

   Rt：The highest received signal in spectrum analyzer for EUT.

   Rs：The highest received signal in spectrum analyzer for substitution antenna.

3.1.4 Test Setup



3.1.5 Test Result of ERP

LTE Band 13 Radiated Power ERP for QPSK (Sample 2 + Battery 5)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-32.60	-48.12	0.00	-1.08	14.44	0.03
23230	RB Size 1, RB Offset 49	-32.58	-48.28	0.00	-0.93	14.77	0.03
23230	RB Size 25, RB Offset 13	-34.07	-48.28	0.00	-0.93	13.28	0.02
23230	RB Size 50, RB Offset 0	-34.62	-48.35	0.00	-0.76	12.97	0.02
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-37.04	-47.97	0.00	-1.08	9.85	0.01
23230	RB Size 1, RB Offset 49	-36.73	-47.97	0.00	-1.08	10.16	0.010
23230	RB Size 25, RB Offset 13	-38.36	-48.01	0.00	-0.93	8.72	0.007
23230	RB Size 50, RB Offset 0	-38.81	-48.05	0.00	-0.76	8.48	0.007

LTE Band 13 Radiated Power ERP for QPSK (Sample 2 + Wireless Charging Cover)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-33.74	-48.12	0.00	-1.08	13.30	0.02
23230	RB Size 1, RB Offset 49	-33.64	-48.28	0.00	-0.93	13.71	0.02
23230	RB Size 25, RB Offset 13	-35.10	-48.28	0.00	-0.93	12.25	0.02
23230	RB Size 50, RB Offset 0	-35.66	-48.35	0.00	-0.76	11.93	0.02
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-38.96	-47.97	0.00	-1.08	7.93	0.01
23230	RB Size 1, RB Offset 49	-38.71	-47.97	0.00	-1.08	8.18	0.007
23230	RB Size 25, RB Offset 13	-40.28	-48.01	0.00	-0.93	6.80	0.005
23230	RB Size 50, RB Offset 0	-40.66	-48.05	0.00	-0.76	6.63	0.005

LTE Band 13 Radiated Power ERP for QPSK (Sample 1 + Battery 5)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-31.70	-48.12	0.00	-1.08	15.34	0.03
23230	RB Size 1, RB Offset 49	-31.29	-48.28	0.00	-0.93	16.06	0.04
23230	RB Size 25, RB Offset 13	-32.92	-48.28	0.00	-0.93	14.43	0.03
23230	RB Size 50, RB Offset 0	-33.20	-48.35	0.00	-0.76	14.39	0.03
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-37.28	-47.97	0.00	-1.08	9.61	0.01
23230	RB Size 1, RB Offset 49	-36.73	-47.97	0.00	-1.08	10.16	0.010
23230	RB Size 25, RB Offset 13	-38.75	-48.01	0.00	-0.93	8.33	0.007
23230	RB Size 50, RB Offset 0	-38.77	-48.05	0.00	-0.76	8.52	0.007

LTE Band 13 Radiated Power ERP for QPSK (Sample 1 + Wireless Charging Cover)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-37.32	-48.12	0.00	-1.08	9.72	0.01
23230	RB Size 1, RB Offset 49	-36.19	-48.28	0.00	-0.93	11.16	0.01
23230	RB Size 25, RB Offset 13	-37.71	-48.28	0.00	-0.93	9.64	0.01
23230	RB Size 50, RB Offset 0	-38.10	-48.35	0.00	-0.76	9.49	0.01
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-41.70	-47.97	0.00	-1.08	5.19	0.00
23230	RB Size 1, RB Offset 49	-40.75	-47.97	0.00	-1.08	6.14	0.004
23230	RB Size 25, RB Offset 13	-42.24	-48.01	0.00	-0.93	4.84	0.003
23230	RB Size 50, RB Offset 0	-42.51	-48.05	0.00	-0.76	4.78	0.003

LTE Band 13 Radiated Power ERP for 16QAM (Sample 2 + Battery 5)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-33.36	-48.12	0.00	-1.08	13.68	0.02
23230	RB Size 1, RB Offset 49	-33.23	-48.28	0.00	-0.93	14.12	0.03
23230	RB Size 25, RB Offset 13	-34.68	-48.28	0.00	-0.93	12.67	0.02
23230	RB Size 50, RB Offset 0	-35.47	-48.35	0.00	-0.76	12.12	0.02
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-37.77	-47.97	0.00	-1.08	9.12	0.01
23230	RB Size 1, RB Offset 49	-37.39	-47.97	0.00	-1.08	9.50	0.009
23230	RB Size 25, RB Offset 13	-38.98	-48.01	0.00	-0.93	8.10	0.006
23230	RB Size 50, RB Offset 0	-39.76	-48.05	0.00	-0.76	7.53	0.006

LTE Band 13 Radiated Power ERP for 16QAM (Sample 2 + Wireless Charging Cover)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-34.55	-48.12	0.00	-1.08	12.49	0.02
23230	RB Size 1, RB Offset 49	-34.45	-48.28	0.00	-0.93	12.90	0.02
23230	RB Size 25, RB Offset 13	-35.80	-48.28	0.00	-0.93	11.55	0.01
23230	RB Size 50, RB Offset 0	-36.73	-48.35	0.00	-0.76	10.86	0.01
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-39.71	-47.97	0.00	-1.08	7.18	0.01
23230	RB Size 1, RB Offset 49	-39.39	-47.97	0.00	-1.08	7.50	0.006
23230	RB Size 25, RB Offset 13	-40.92	-48.01	0.00	-0.93	6.16	0.004
23230	RB Size 50, RB Offset 0	-41.57	-48.05	0.00	-0.76	5.72	0.004

LTE Band 13 Radiated Power ERP for 16QAM (Sample 1 + Battery 5)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-32.97	-48.12	0.00	-1.08	14.07	0.03
23230	RB Size 1, RB Offset 49	-31.97	-48.28	0.00	-0.93	15.38	0.03
23230	RB Size 25, RB Offset 13	-33.56	-48.28	0.00	-0.93	13.79	0.02
23230	RB Size 50, RB Offset 0	-34.27	-48.35	0.00	-0.76	13.32	0.02
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-38.79	-47.97	0.00	-1.08	8.10	0.01
23230	RB Size 1, RB Offset 49	-37.36	-47.97	0.00	-1.08	9.53	0.009
23230	RB Size 25, RB Offset 13	-39.25	-48.01	0.00	-0.93	7.83	0.006
23230	RB Size 50, RB Offset 0	-39.86	-48.05	0.00	-0.76	7.43	0.006

LTE Band 13 Radiated Power ERP for 16QAM (Sample 1 + Wireless Charging Cover)							
Horizontal Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-37.99	-48.12	0.00	-1.08	9.05	0.01
23230	RB Size 1, RB Offset 49	-37.05	-48.28	0.00	-0.93	10.30	0.01
23230	RB Size 25, RB Offset 13	-38.29	-48.28	0.00	-0.93	9.06	0.01
23230	RB Size 50, RB Offset 0	-39.07	-48.35	0.00	-0.76	8.52	0.01
Vertical Polarization							
Channel	**Communication System**	**Rt (dBm)**	**Rs (dBm)**	**Ps (dBm)**	**Gs (dBd)**	**ERP (dBm)**	**ERP (W)**
23230	RB Size 1, RB Offset 0	-42.46	-47.97	0.00	-1.08	4.43	0.00
23230	RB Size 1, RB Offset 49	-41.52	-47.97	0.00	-1.08	5.37	0.003
23230	RB Size 25, RB Offset 13	-42.75	-48.01	0.00	-0.93	4.33	0.003
23230	RB Size 50, RB Offset 0	-43.41	-48.05	0.00	-0.76	3.88	0.002

3.2 Field Strength of Spurious Radiation Measurement

3.2.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

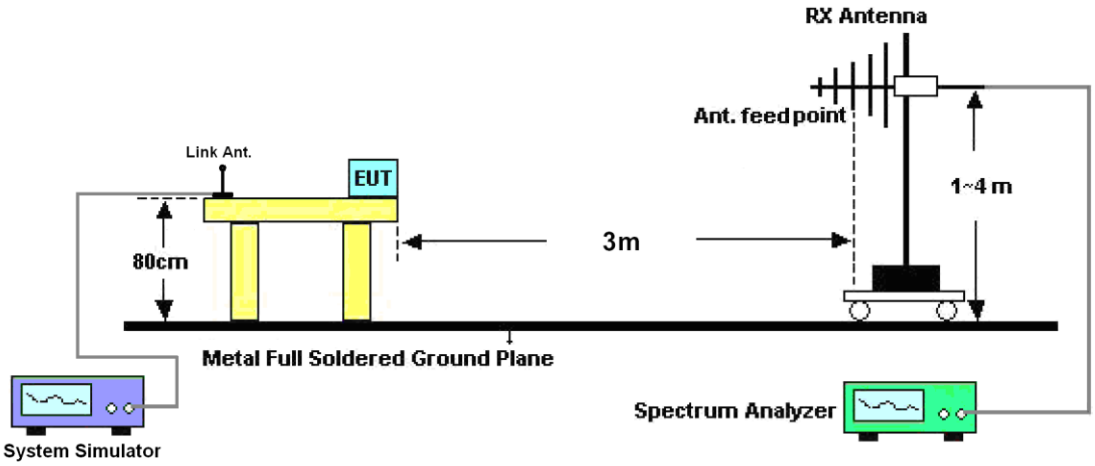
3.2.2 Measuring Instruments

See list of measuring instruments of this test report.

3.2.3 Test Procedures

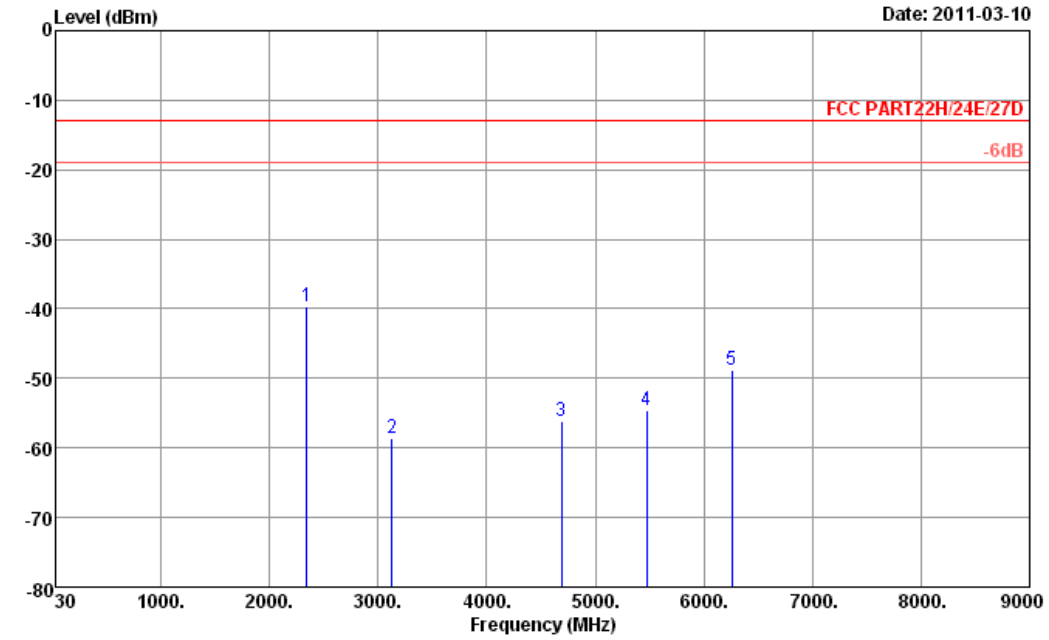
1. The EUT was placed on a rotatable wooden table with 0.8 meter about ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. Emission level (dBm) = output power + substitution Gain.

3.2.4 Test Setup



3.2.5 Test Result of Field Strength of Spurious Radiated

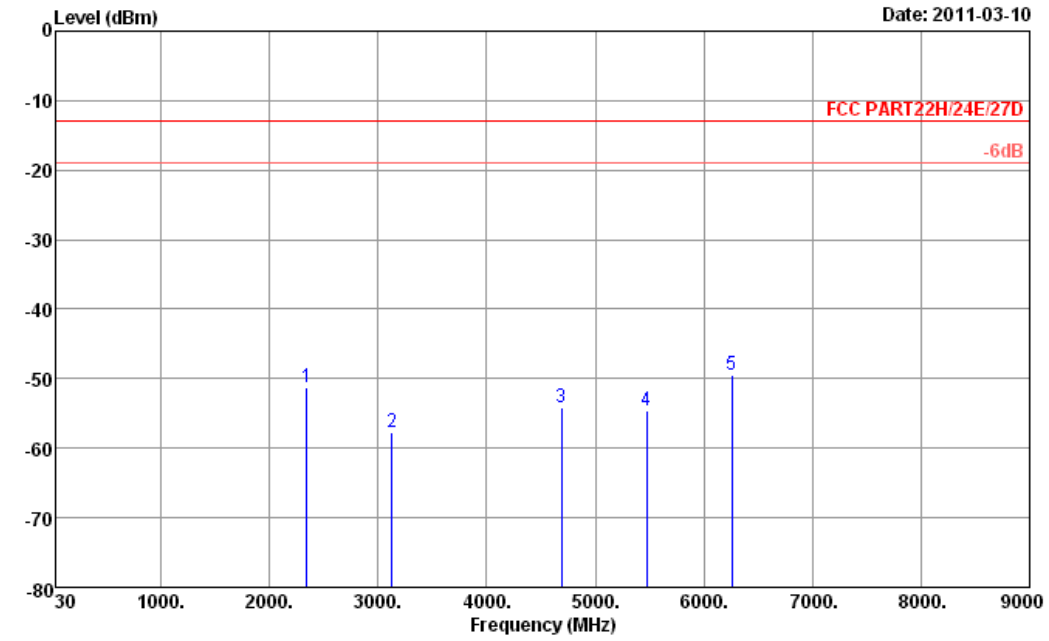
Band :	LTE Band 13	**Temperature :**	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 2	**Relative Humidity :**	43~48%
Test Engineer :	David Yang	**Polarization :**	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-39.71	-13	-26.71	-49.46	-41.47	2.32	6.23	H	Pass
3128	-58.64	-13	-45.64	-71.54	-61.55	2.74	7.80	H	Pass
4692	-56.09	-13	-43.09	-72.97	-60.58	3.47	10.11	H	Pass
5474	-54.64	-13	-41.64	-73.59	-59.39	3.81	10.71	H	Pass
6256	-48.71	-13	-35.71	-69.37	-53.45	4.18	11.07	H	Pass

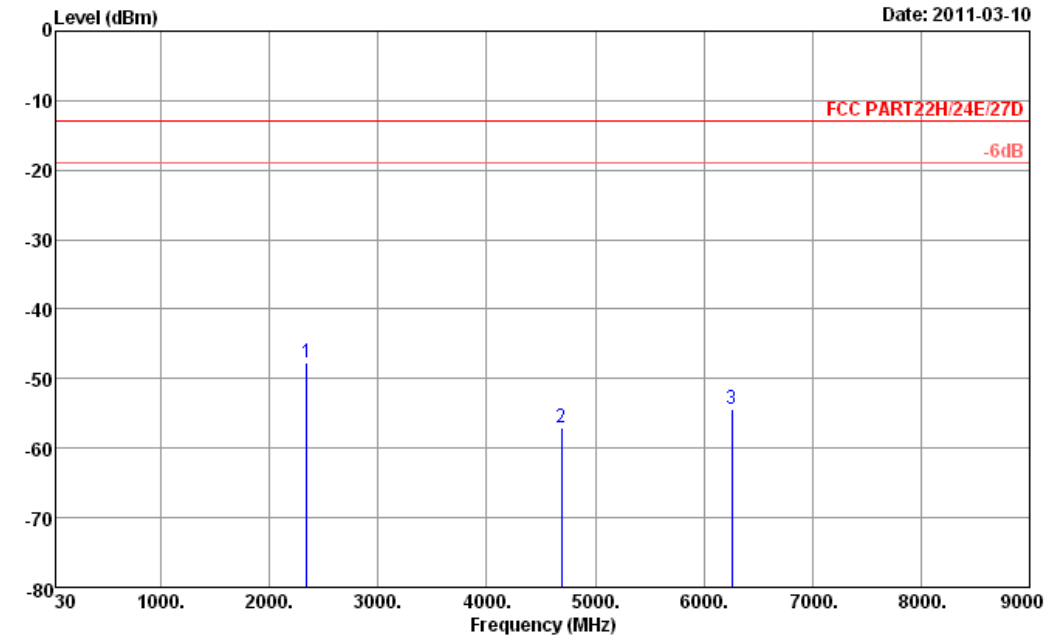
Band :	LTE Band 13	**Temperature :**	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 2	**Relative Humidity :**	43~48%
Test Engineer :	David Yang	**Polarization :**	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-51.36	-13	-38.36	-60.02	-53.12	2.32	6.23	V	Pass
3128	-57.77	-13	-44.77	-69.73	-60.68	2.74	7.80	V	Pass
4692	-54.22	-13	-41.22	-70.85	-58.71	3.47	10.11	V	Pass
5474	-54.58	-13	-41.58	-74.2	-59.33	3.81	10.71	V	Pass
6256	-49.54	-13	-36.54	-70.77	-54.28	4.18	11.07	V	Pass

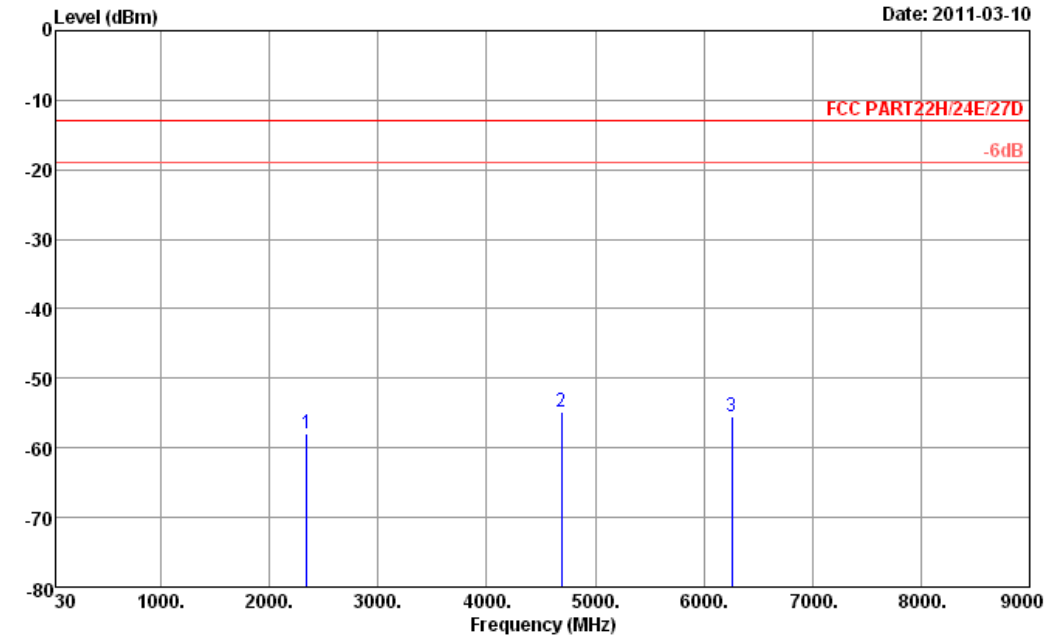
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-47.79	-13	-34.79	-56.86	-49.55	2.32	6.23	H	Pass
4692	-56.98	-13	-43.98	-73.93	-61.47	3.47	10.11	H	Pass
6256	-54.45	-13	-41.45	-75.75	-59.19	4.18	11.07	H	Pass

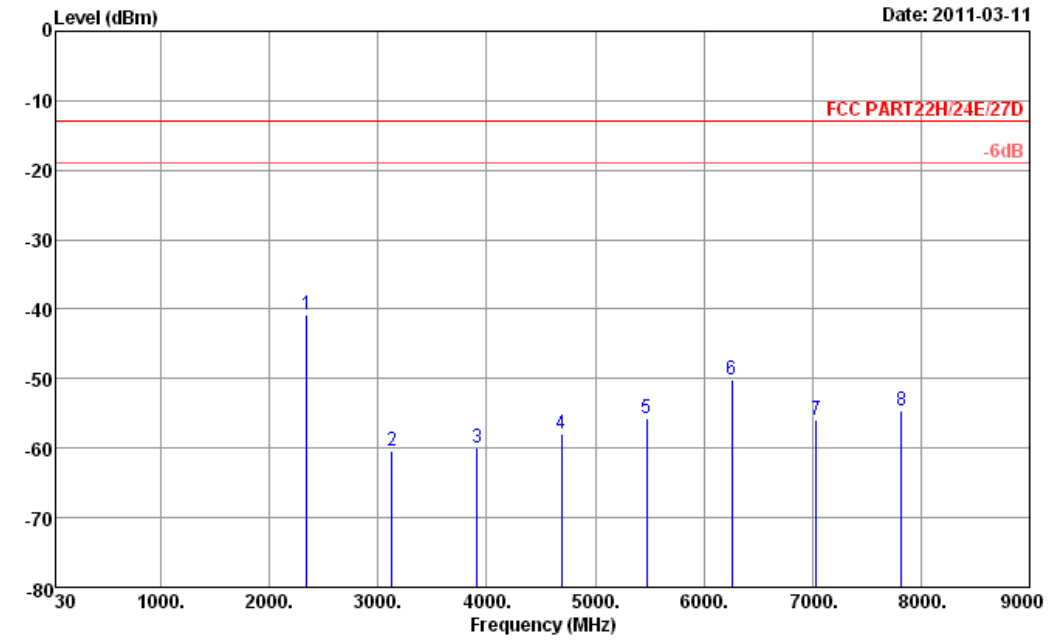
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-57.87	-13	-44.87	-67.12	-59.63	2.32	6.23	V	Pass
4692	-54.79	-13	-41.79	-71.08	-59.28	3.47	10.11	V	Pass
6256	-55.44	-13	-42.44	-76.21	-60.18	4.18	11.07	V	Pass

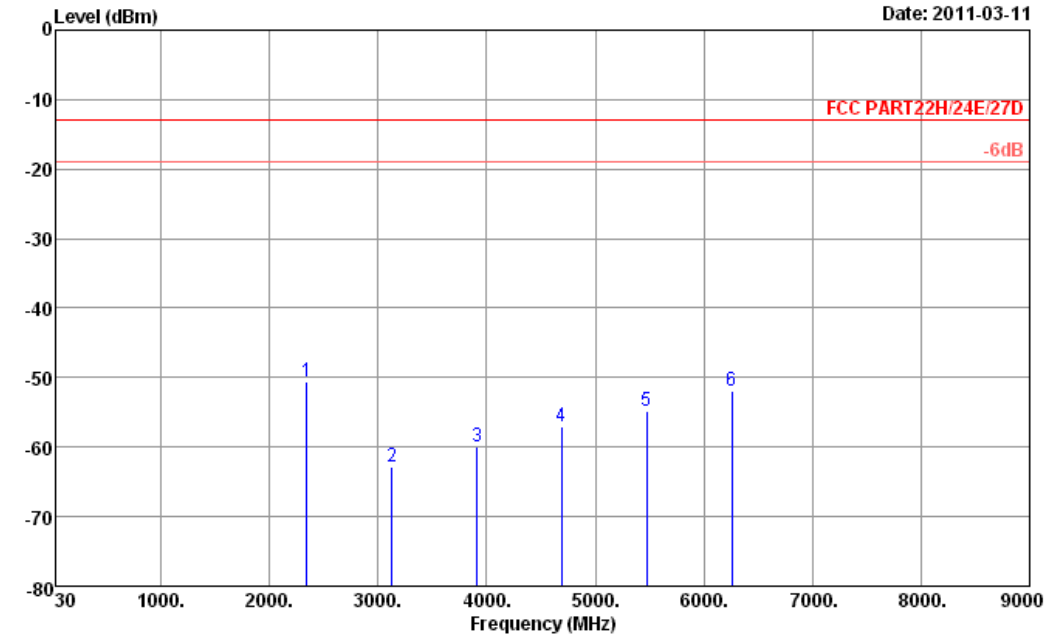
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-40.80	-13	-27.80	-49.84	-42.56	2.32	6.23	H	Pass
3128	-60.28	-13	-47.28	-72.47	-63.19	2.74	7.80	H	Pass
3910	-59.93	-13	-46.93	-75.43	-63.67	3.12	9.01	H	Pass
4692	-57.99	-13	-44.99	-75.99	-62.48	3.47	10.11	H	Pass
5474	-55.63	-13	-42.63	-75.53	-60.38	3.81	10.71	H	Pass
6256	-50.17	-13	-37.17	-71.23	-54.91	4.18	11.07	H	Pass
7038	-55.95	-13	-42.95	-77.08	-61.27	4.46	11.93	H	Pass
7820	-54.58	-13	-41.58	-77.26	-60.73	4.75	13.05	H	Pass

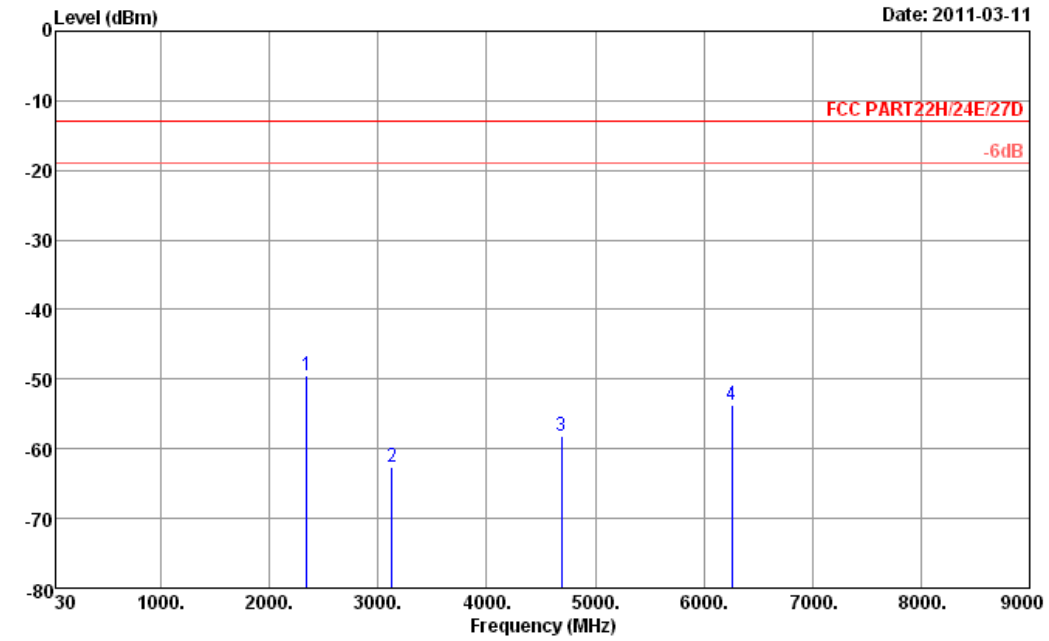
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-50.66	-13	-37.66	-60.65	-52.42	2.32	6.23	V	Pass
3128	-62.92	-13	-49.92	-74.58	-65.83	2.74	7.80	V	Pass
3910	-60.00	-13	-47.00	-75.11	-63.74	3.12	9.01	V	Pass
4692	-57.06	-13	-44.06	-73.56	-61.55	3.47	10.11	V	Pass
5474	-54.73	-13	-41.73	-73.61	-59.48	3.81	10.71	V	Pass
6256	-51.89	-13	-38.89	-72.73	-56.63	4.18	11.07	V	Pass

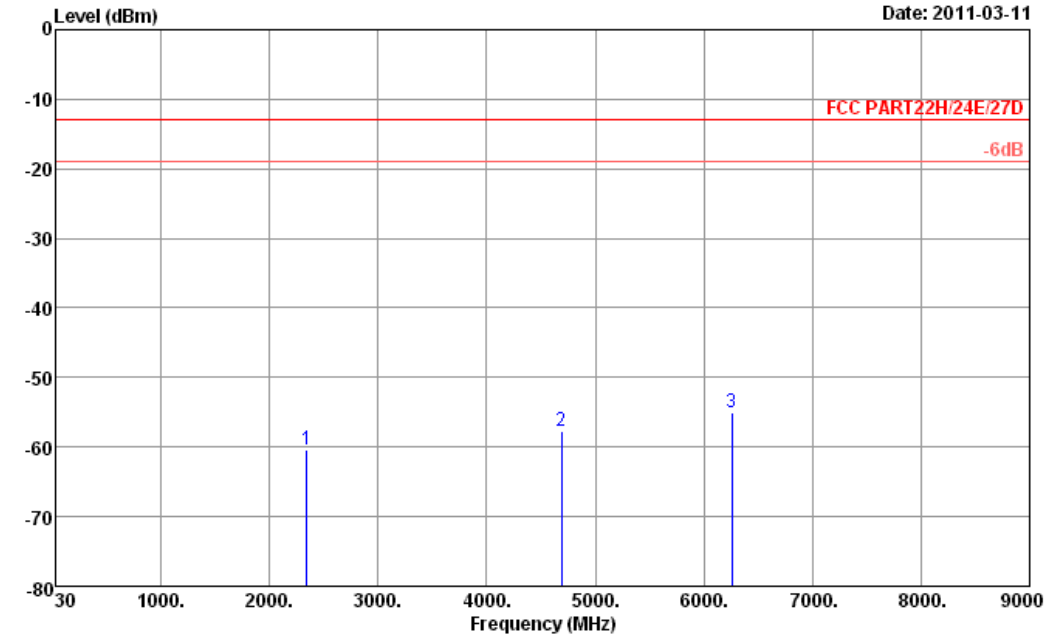
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-49.46	-13	-36.46	-59.04	-51.22	2.32	6.23	H	Pass
3128	-62.57	-13	-49.57	-74.43	-65.48	2.74	7.80	H	Pass
4692	-58.10	-13	-45.10	-74.71	-62.59	3.47	10.11	H	Pass
6256	-53.61	-13	-40.61	-74.53	-58.35	4.18	11.07	H	Pass

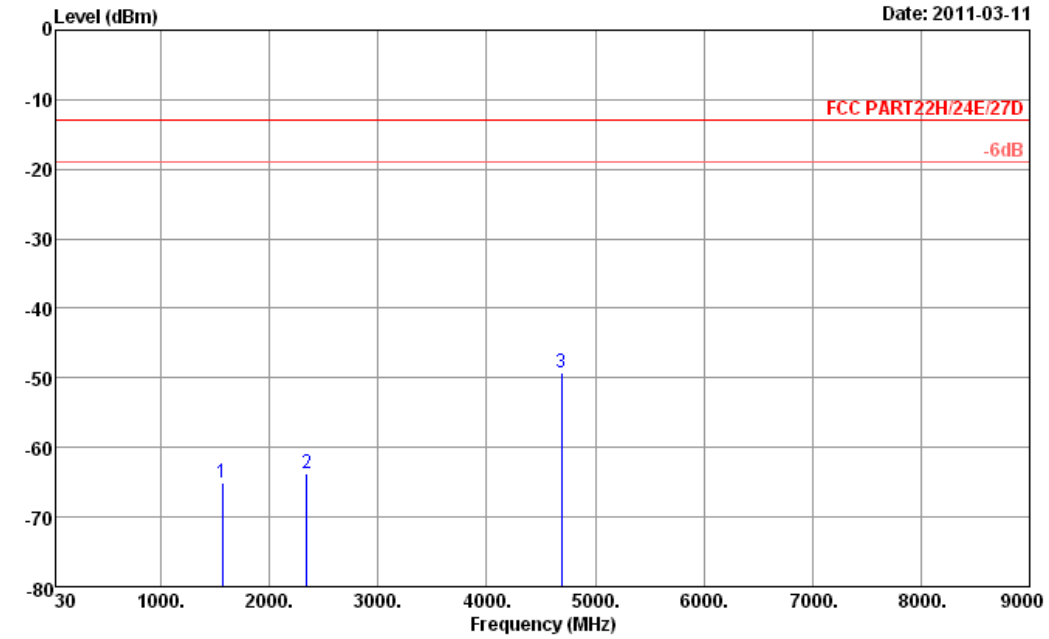
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-60.48	-13	-47.48	-69.97	-62.24	2.32	6.23	V	Pass
4692	-57.62	-13	-44.62	-74.34	-62.11	3.47	10.11	V	Pass
6256	-54.98	-13	-41.98	-75.79	-59.72	4.18	11.07	V	Pass

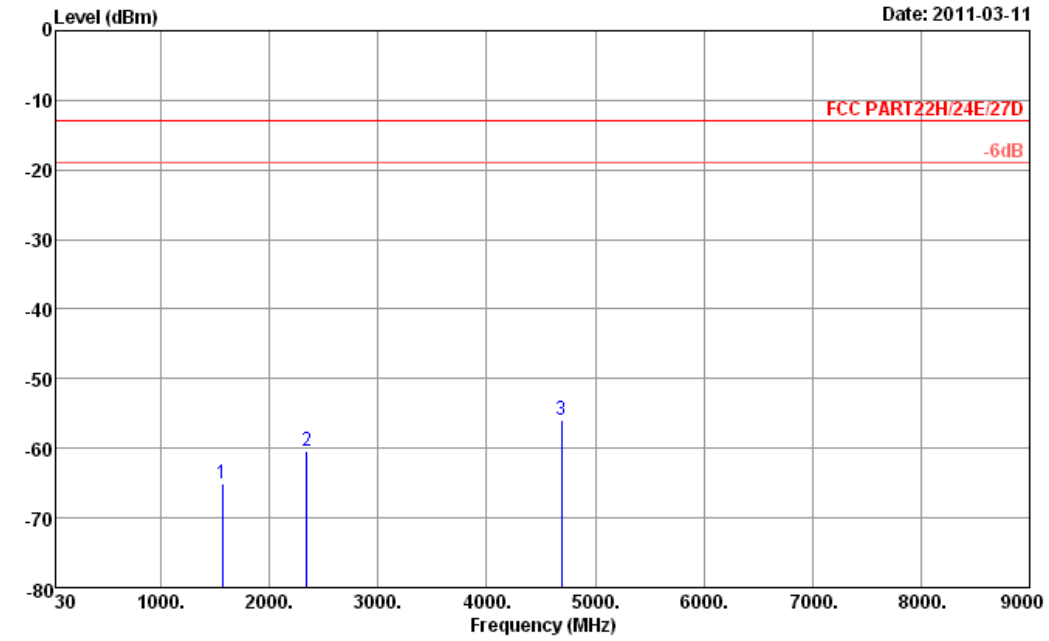
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-64.97	-13	-51.97	-71.09	-66.25	2.15	5.58	H	Pass
2346	-63.71	-13	-50.71	-73.4	-65.47	2.32	6.23	H	Pass
4692	-49.18	-13	-36.18	-65.71	-53.67	3.47	10.11	H	Pass

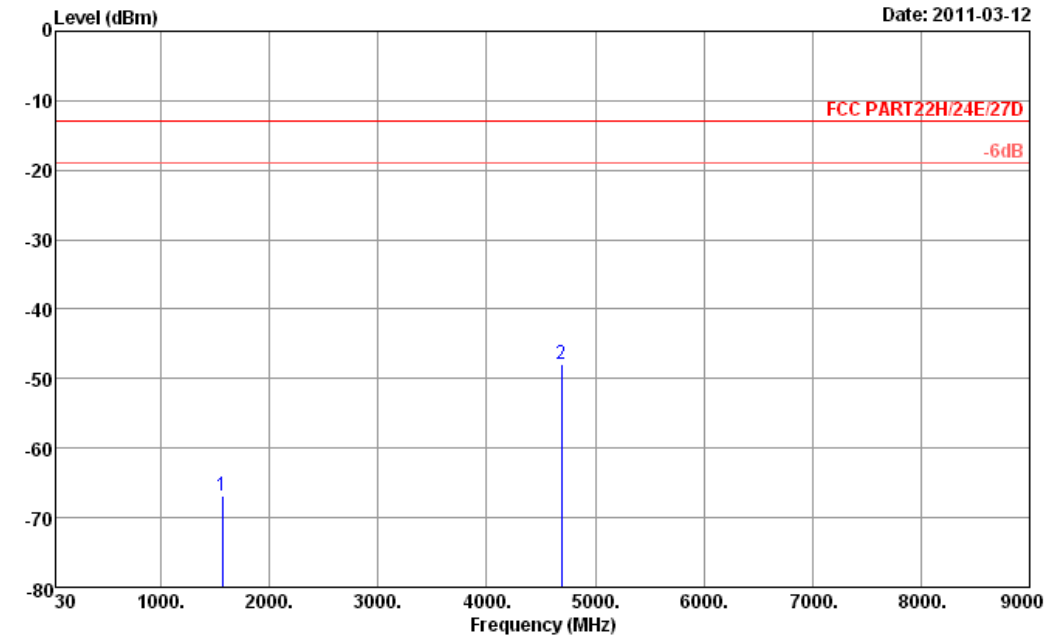
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-65.10	-13	-52.10	-70.99	-66.38	2.15	5.58	V	Pass
2346	-60.40	-13	-47.40	-70.17	-62.16	2.32	6.23	V	Pass
4692	-56.03	-13	-43.03	-73.19	-60.52	3.47	10.11	V	Pass

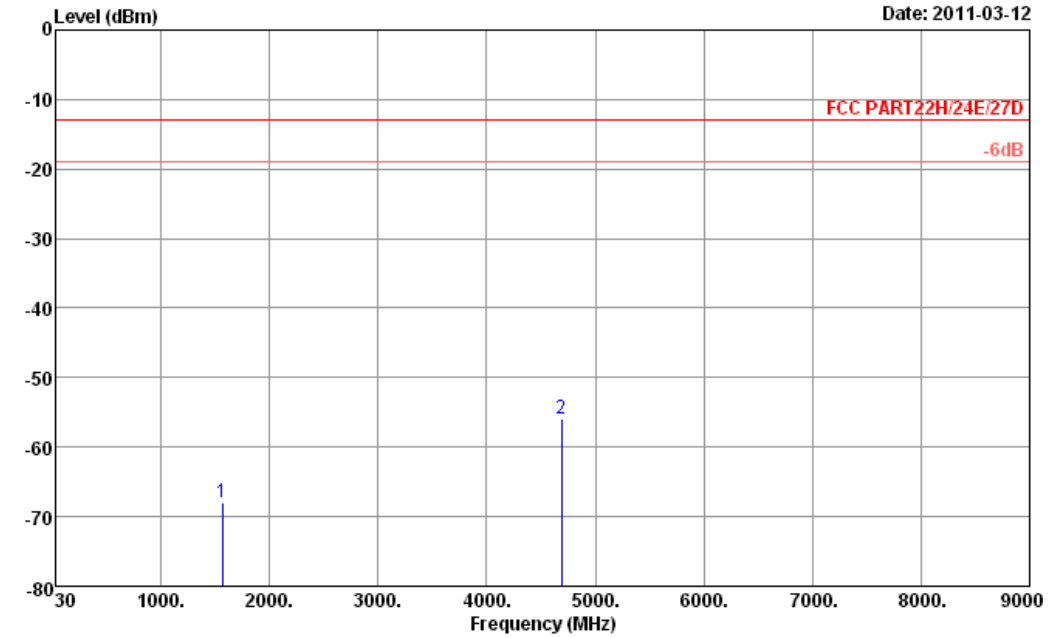
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-66.94	-13	-53.94	-73.25	-68.22	2.15	5.58	H	Pass
4692	-47.85	-13	-34.85	-64.36	-52.34	3.47	10.11	H	Pass

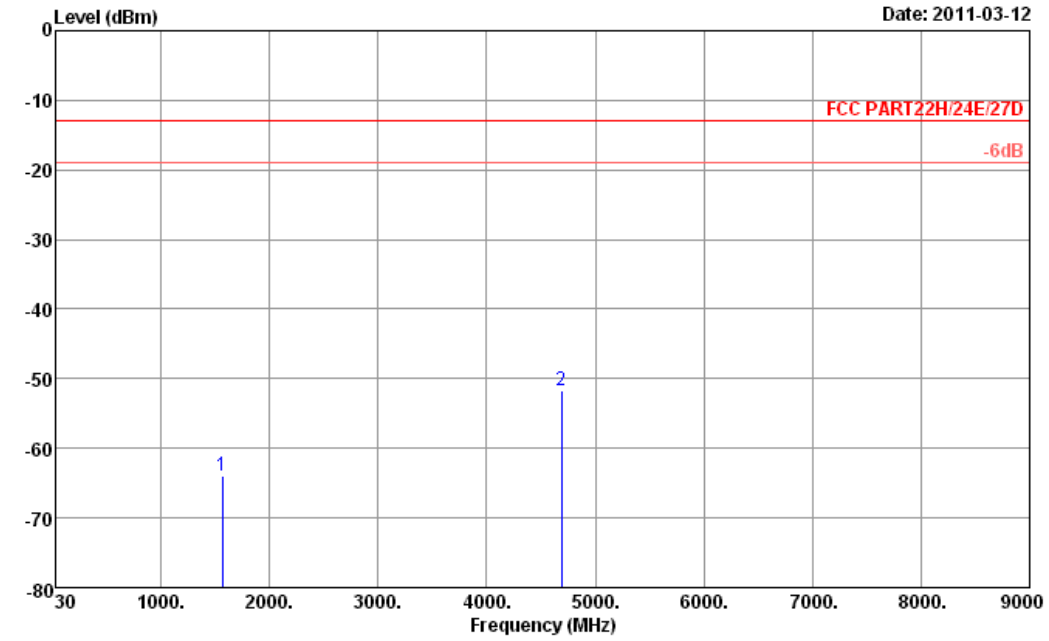
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-67.89	-13	-54.89	-73.31	-69.17	2.15	5.58	V	Pass
4692	-55.99	-13	-42.99	-73.1	-60.48	3.47	10.11	V	Pass

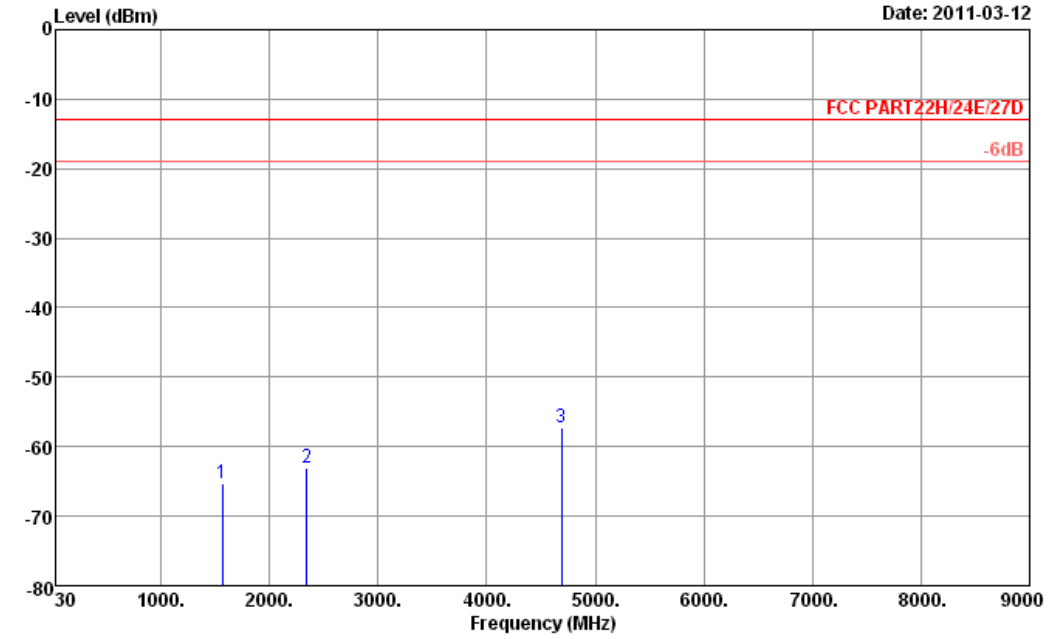
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-63.91	-13	-50.91	-70.3	-65.19	2.15	5.58	H	Pass
4692	-51.75	-13	-38.75	-68.5	-56.24	3.47	10.11	H	Pass

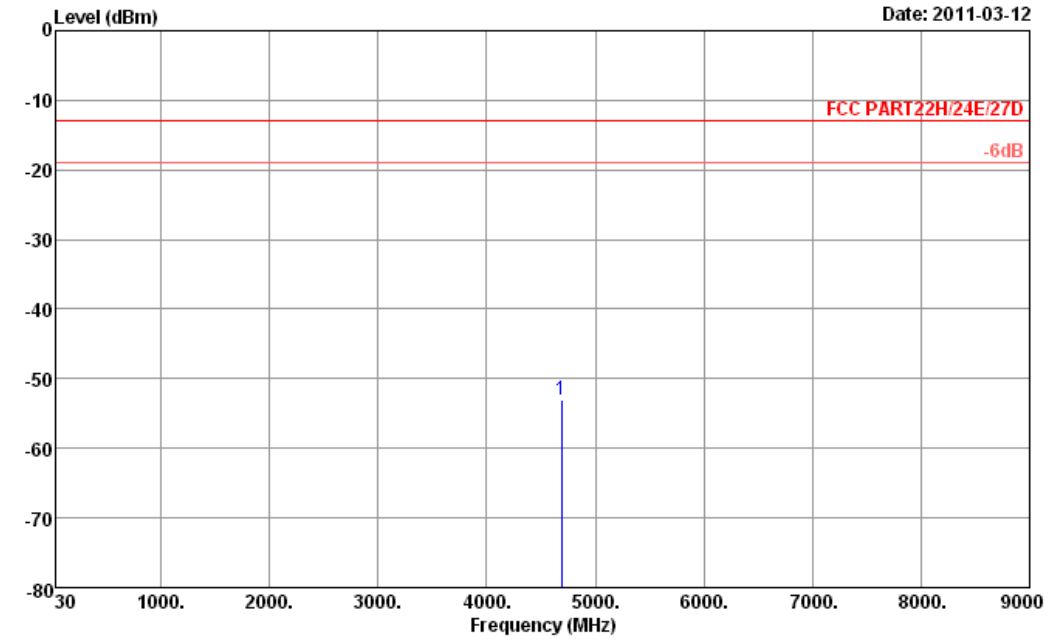
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-65.25	-13	-52.25	-71.36	-66.53	2.15	5.58	V	Pass
2346	-63.02	-13	-50.02	-72.2	-64.78	2.32	6.23	V	Pass
4692	-57.35	-13	-44.35	-73.83	-61.84	3.47	10.11	V	Pass

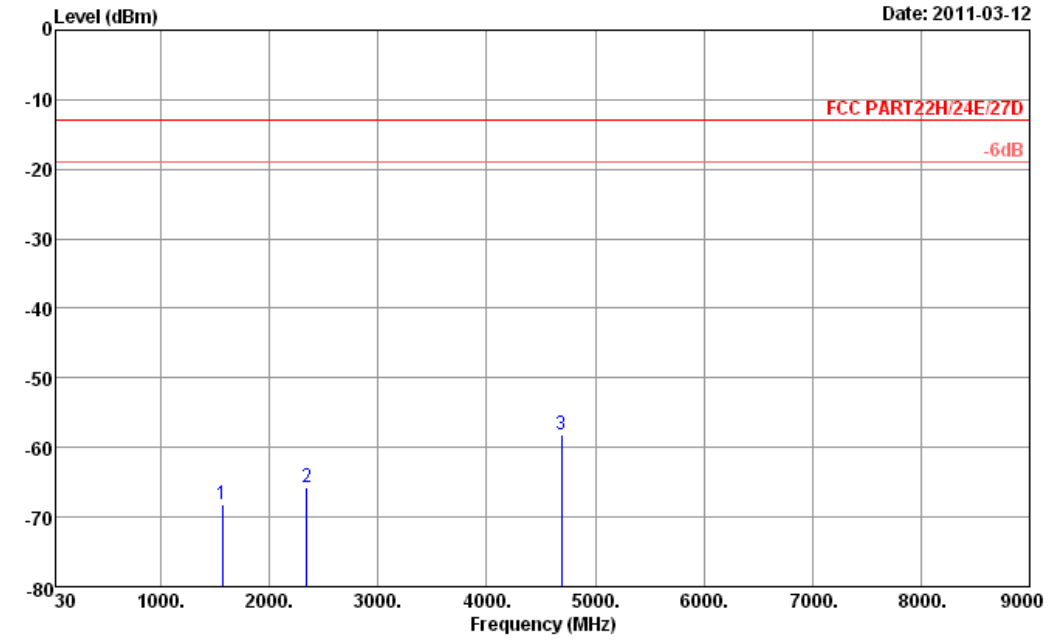
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
4692	-52.93	-13	-39.93	-69.71	-57.42	3.47	10.11	H	Pass

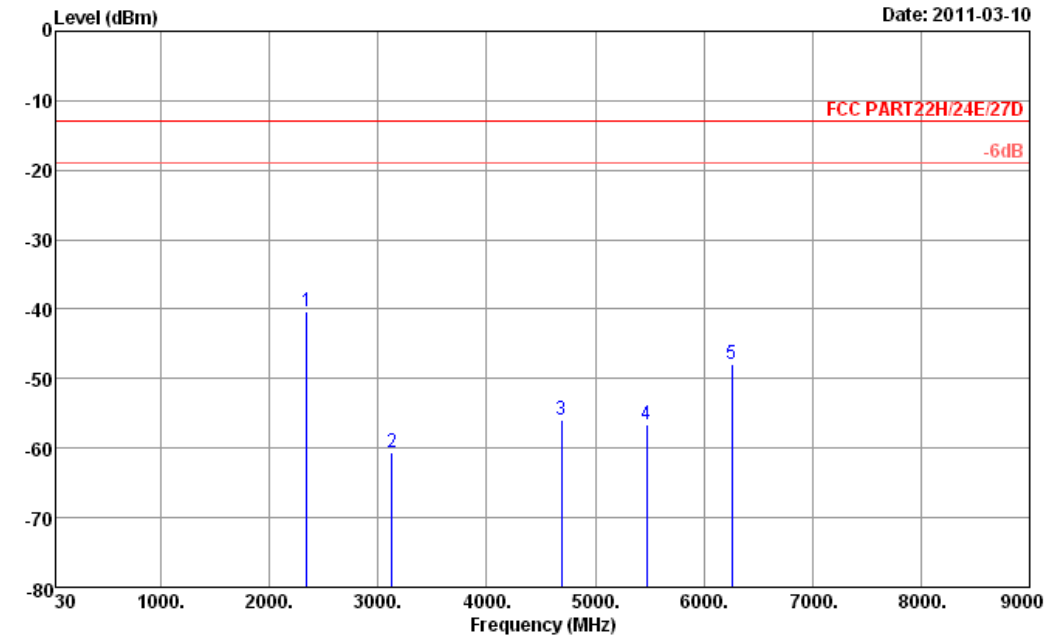
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	QPSK (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-68.08	-13	-55.08	-73.65	-69.36	2.15	5.58	V	Pass
2346	-65.75	-13	-52.75	-74.75	-67.51	2.32	6.23	V	Pass
4692	-58.24	-13	-45.24	-74.39	-62.73	3.47	10.11	V	Pass

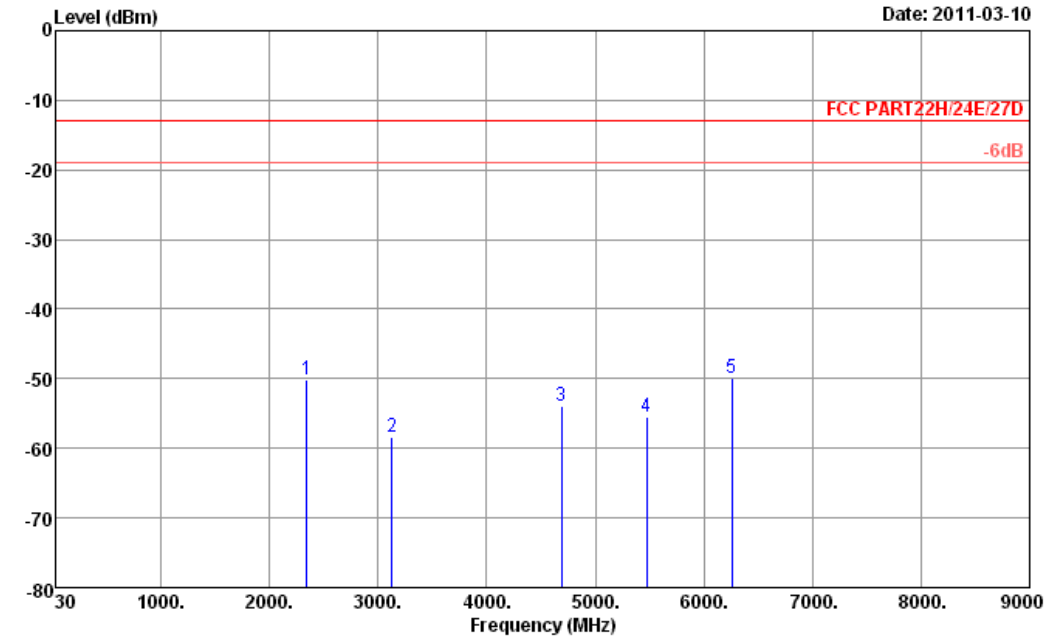
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-40.39	-13	-27.39	-49.79	-42.15	2.32	6.23	H	Pass
3128	-60.56	-13	-47.56	-72.3	-63.47	2.74	7.80	H	Pass
4692	-55.90	-13	-42.90	-73.32	-60.39	3.47	10.11	H	Pass
5474	-56.67	-13	-43.67	-75.22	-61.42	3.81	10.71	H	Pass
6256	-47.94	-13	-34.94	-69.33	-52.68	4.18	11.07	H	Pass

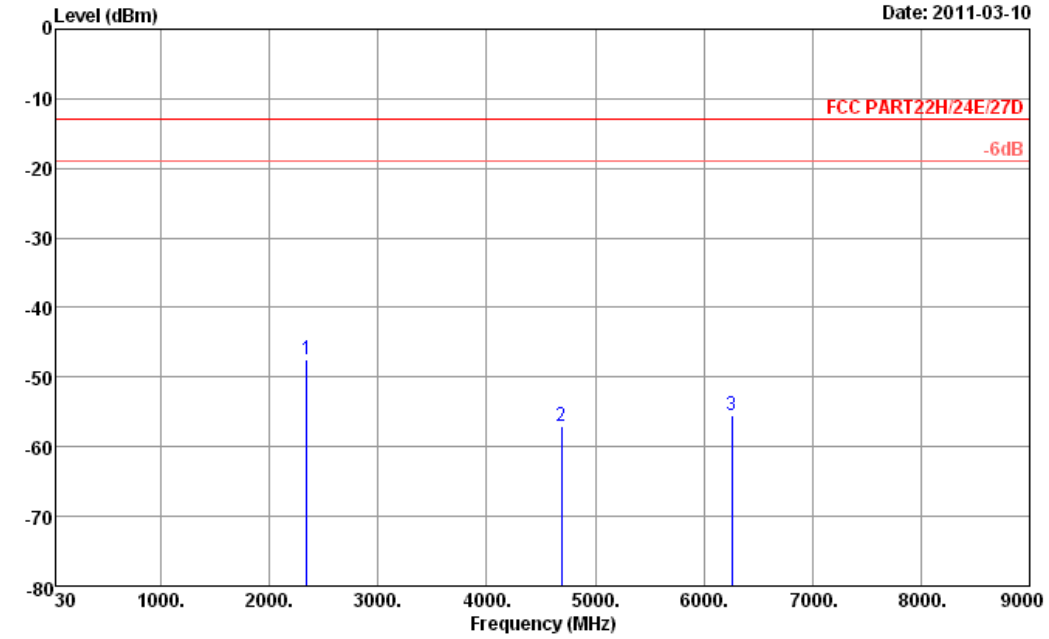
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-50.03	-13	-37.03	-60.05	-51.79	2.32	6.23	V	Pass
3128	-58.37	-13	-45.37	-70.46	-61.28	2.74	7.80	V	Pass
4692	-53.93	-13	-40.93	-70.75	-58.42	3.47	10.11	V	Pass
5474	-55.58	-13	-42.58	-74.9	-60.33	3.81	10.71	V	Pass
6256	-49.82	-13	-36.82	-71.24	-54.56	4.18	11.07	V	Pass

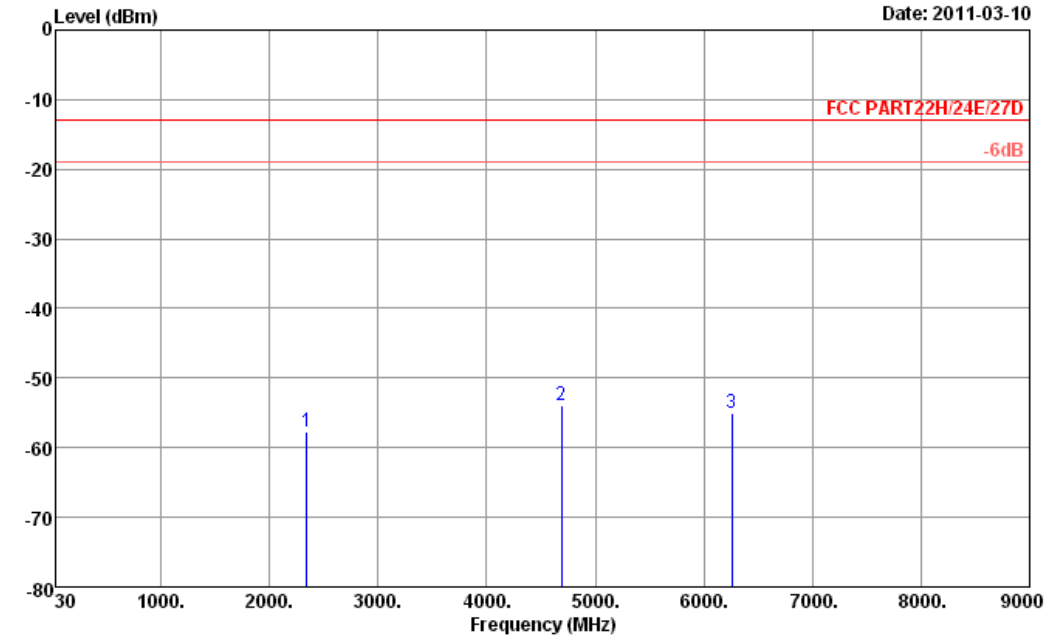
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-47.39	-13	-34.39	-57.5	-49.15	2.32	6.23	H	Pass
4692	-57.04	-13	-44.04	-74.02	-61.53	3.47	10.11	H	Pass
6256	-55.59	-13	-42.59	-76.5	-60.33	4.18	11.07	H	Pass

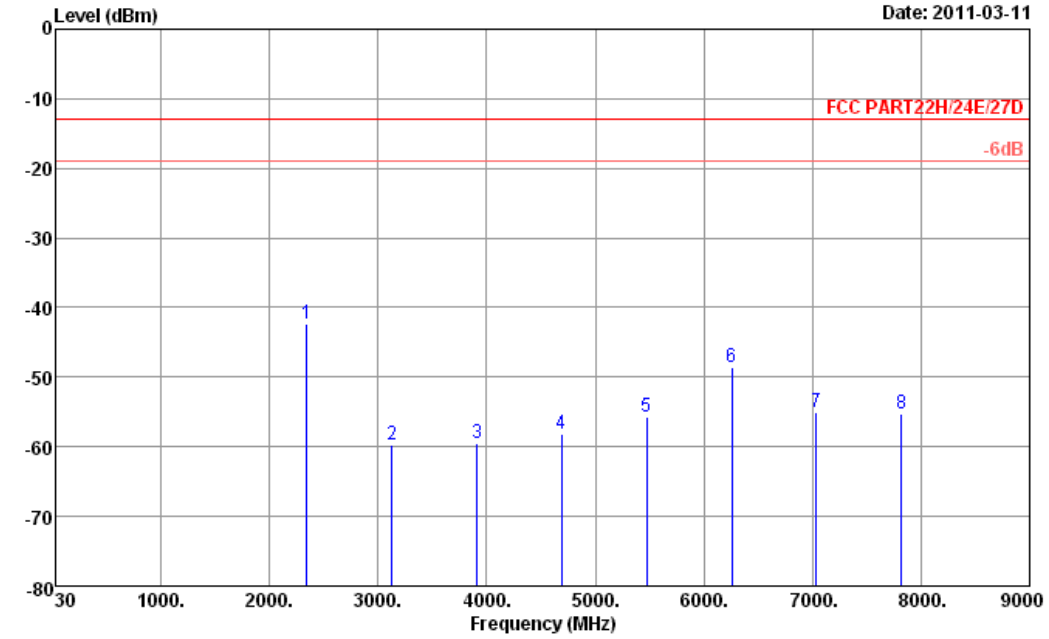
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-57.62	-13	-44.62	-67.57	-59.38	2.32	6.23	V	Pass
4692	-54.00	-13	-41.00	-70.83	-58.49	3.47	10.11	V	Pass
6256	-55.08	-13	-42.08	-76.89	-59.82	4.18	11.07	V	Pass

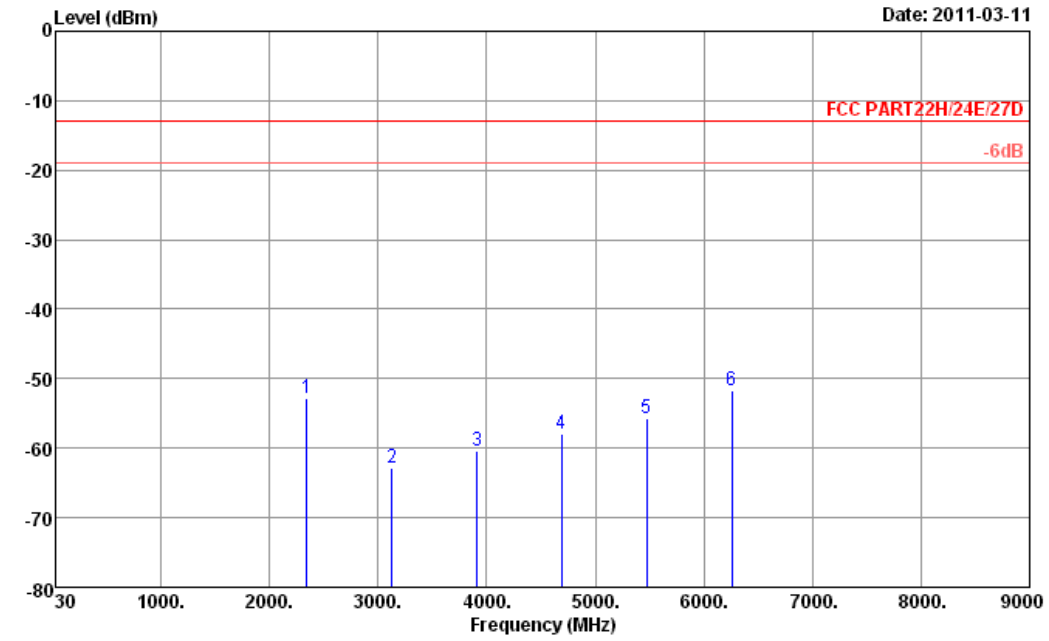
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-42.45	-13	-29.45	-51.99	-44.21	2.32	6.23	H	Pass
3128	-59.66	-13	-46.66	-72.2	-62.57	2.74	7.80	H	Pass
3910	-59.44	-13	-46.44	-74.89	-63.18	3.12	9.01	H	Pass
4692	-58.20	-13	-45.20	-75.14	-62.69	3.47	10.11	H	Pass
5474	-55.66	-13	-42.66	-75.38	-60.41	3.81	10.71	H	Pass
6256	-48.54	-13	-35.54	-69.76	-53.28	4.18	11.07	H	Pass
7038	-54.99	-13	-41.99	-77.2	-60.31	4.46	11.93	H	Pass
7820	-55.34	-13	-42.34	-77.59	-61.49	4.75	13.05	H	Pass

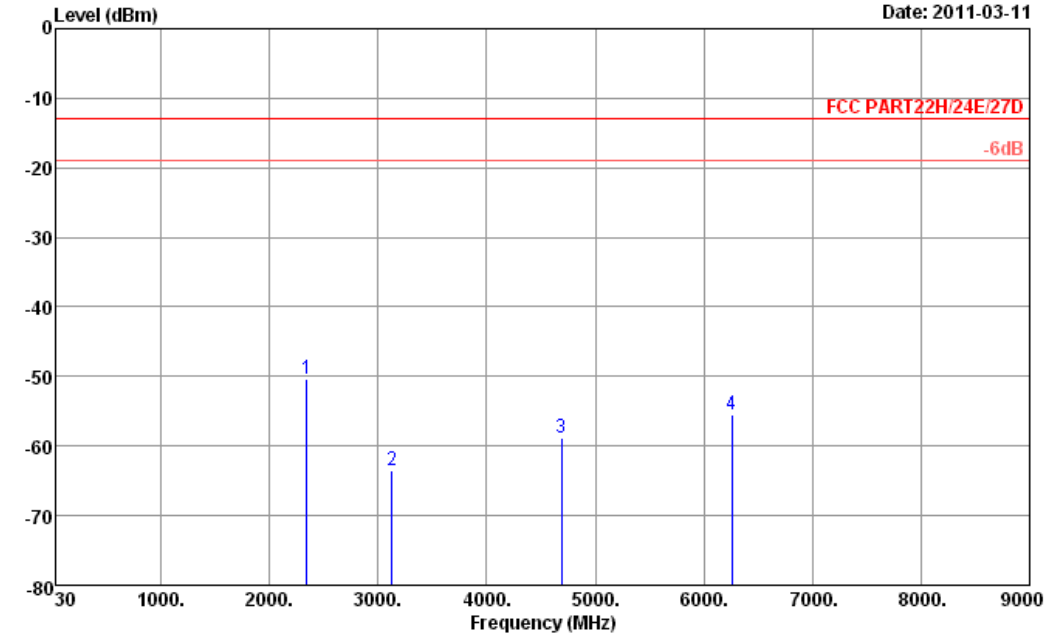
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-52.86	-13	-39.86	-62.52	-54.62	2.32	6.23	V	Pass
3128	-62.88	-13	-49.88	-74.68	-65.79	2.74	7.80	V	Pass
3910	-60.39	-13	-47.39	-75.53	-64.13	3.12	9.01	V	Pass
4692	-57.86	-13	-44.86	-74.47	-62.35	3.47	10.11	V	Pass
5474	-55.71	-13	-42.71	-75.18	-60.46	3.81	10.71	V	Pass
6256	-51.63	-13	-38.63	-72.37	-56.37	4.18	11.07	V	Pass

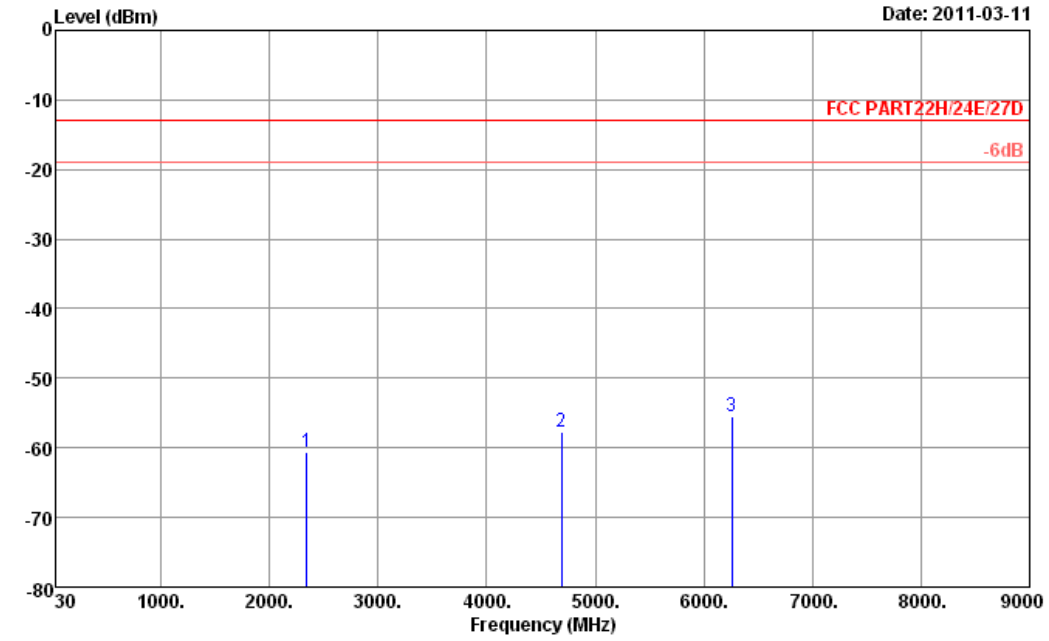
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-50.40	-13	-37.40	-59.89	-52.16	2.32	6.23	H	Pass
3128	-63.57	-13	-50.57	-75.36	-66.48	2.74	7.80	H	Pass
4692	-58.80	-13	-45.80	-75.95	-63.29	3.47	10.11	H	Pass
6256	-55.57	-13	-42.57	-76.29	-60.31	4.18	11.07	H	Pass

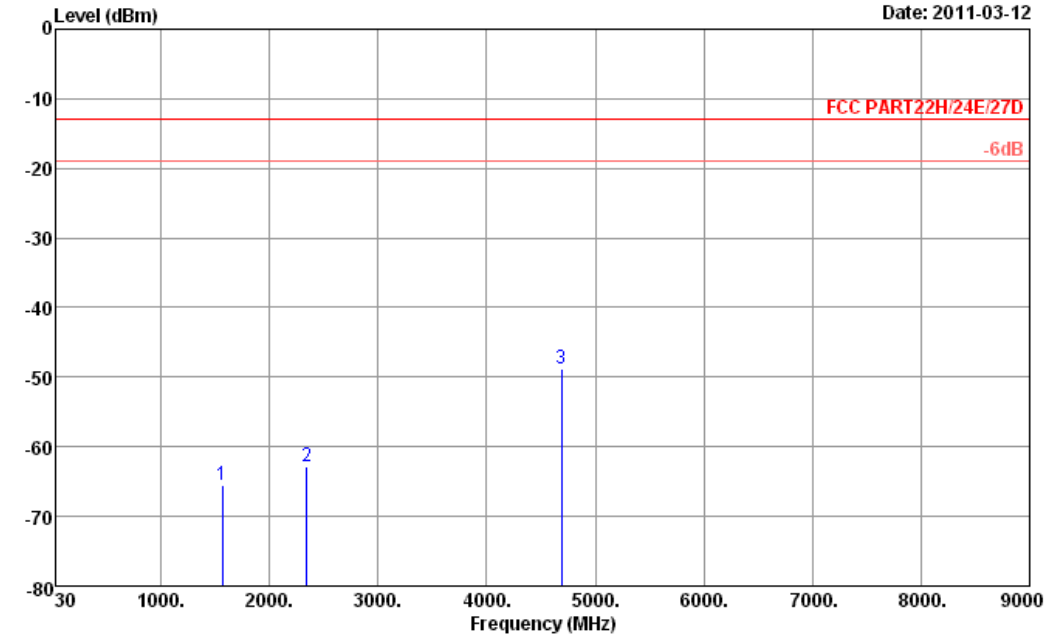
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 2	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
2346	-60.69	-13	-47.69	-70.38	-62.45	2.32	6.23	V	Pass
4692	-57.63	-13	-44.63	-74.55	-62.12	3.47	10.11	V	Pass
6256	-55.53	-13	-42.53	-76.79	-60.27	4.18	11.07	V	Pass

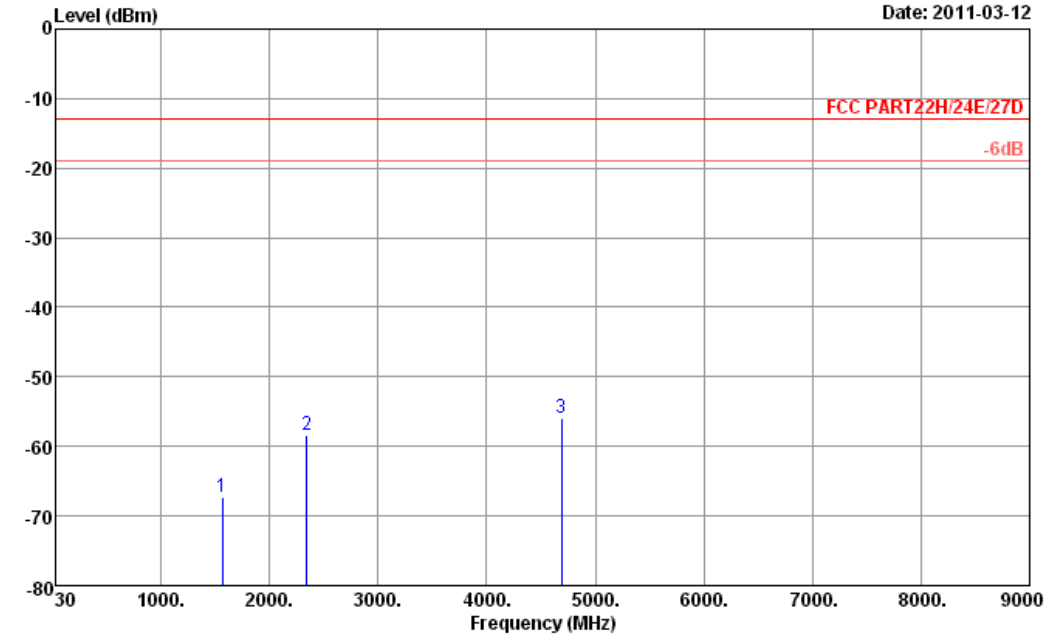
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-65.44	-13	-52.44	-70.72	-66.72	2.15	5.58	H	Pass
2346	-62.77	-13	-49.77	-72.59	-64.53	2.32	6.23	H	Pass
4692	-48.87	-13	-35.87	-65.01	-53.36	3.47	10.11	H	Pass

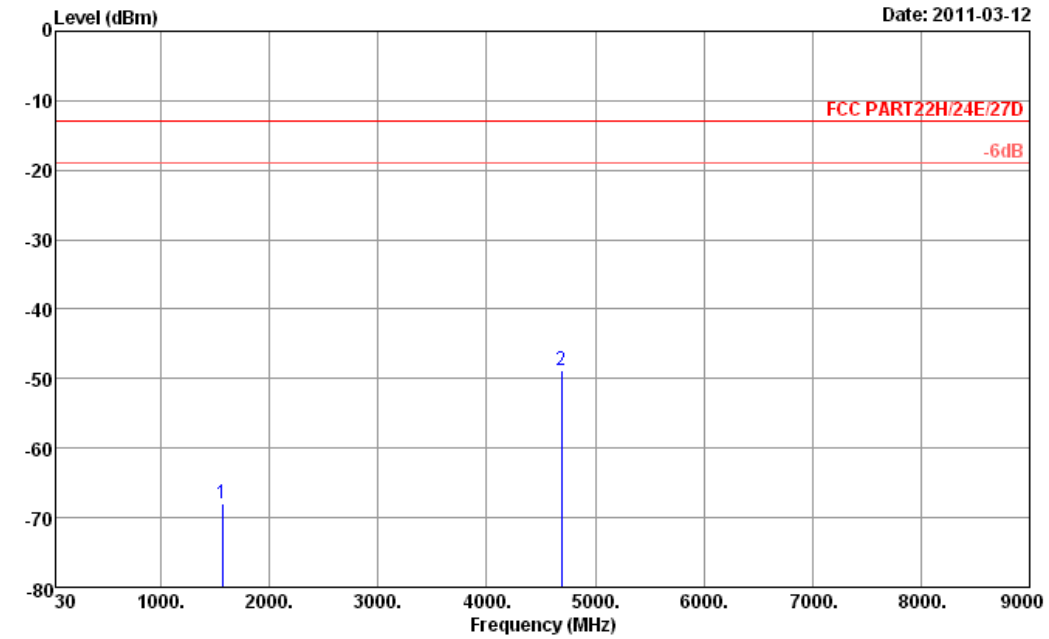
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-67.21	-13	-54.21	-72.99	-68.49	2.15	5.58	V	Pass
2346	-58.49	-13	-45.49	-68.23	-60.25	2.32	6.23	V	Pass
4692	-55.92	-13	-42.92	-73.06	-60.41	3.47	10.11	V	Pass

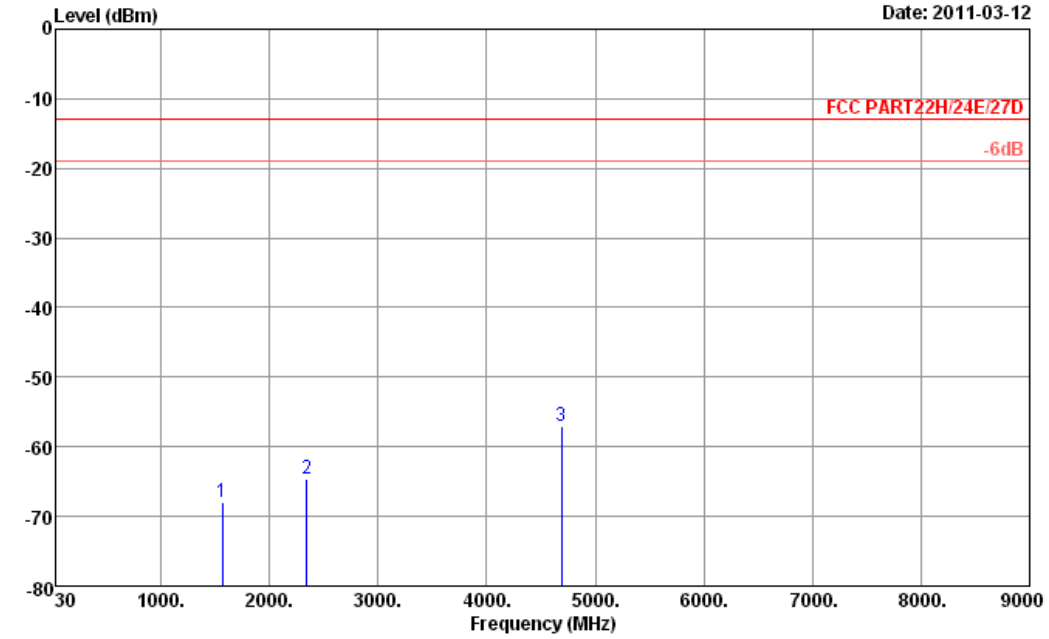
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-67.90	-13	-54.90	-73.49	-69.18	2.15	5.58	H	Pass
4692	-48.78	-13	-35.78	-65.42	-53.27	3.47	10.11	H	Pass

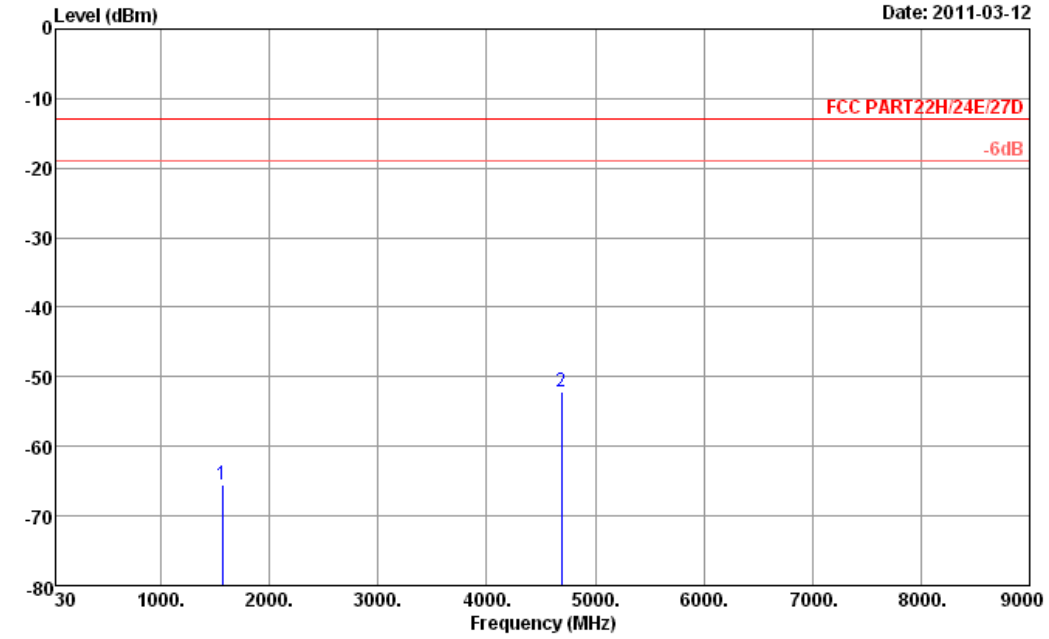
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 5 for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-68.03	-13	-55.03	-73.46	-69.31	2.15	5.58	V	Pass
2346	-64.69	-13	-51.69	-74.05	-66.45	2.32	6.23	V	Pass
4692	-57.08	-13	-44.08	-73.51	-61.57	3.47	10.11	V	Pass

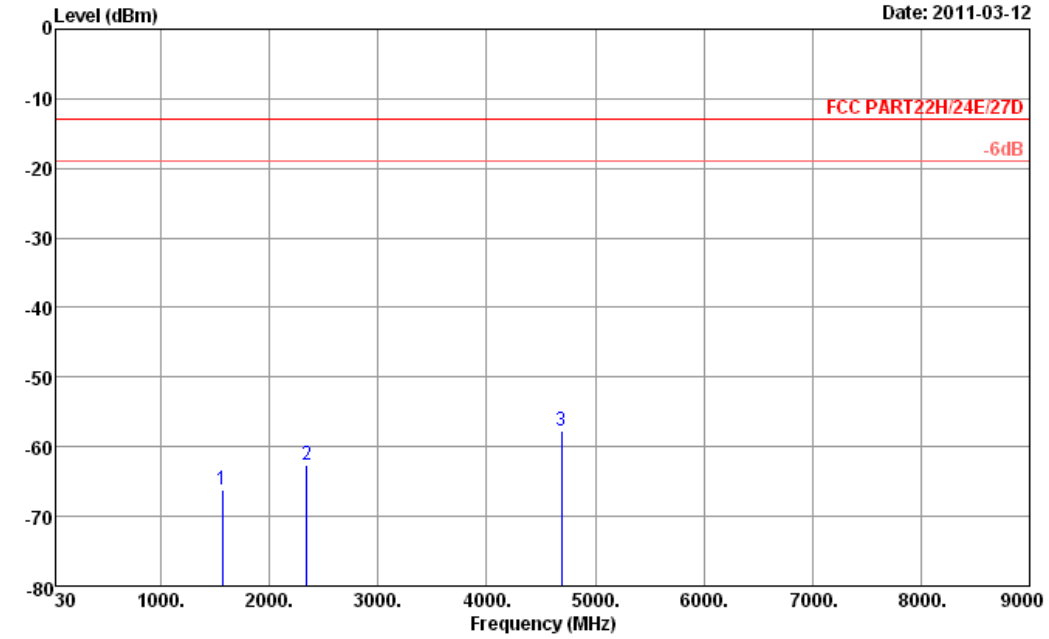
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-65.56	-13	-52.56	-71.6	-66.84	2.15	5.58	H	Pass
4692	-52.23	-13	-39.23	-69.14	-56.72	3.47	10.11	H	Pass

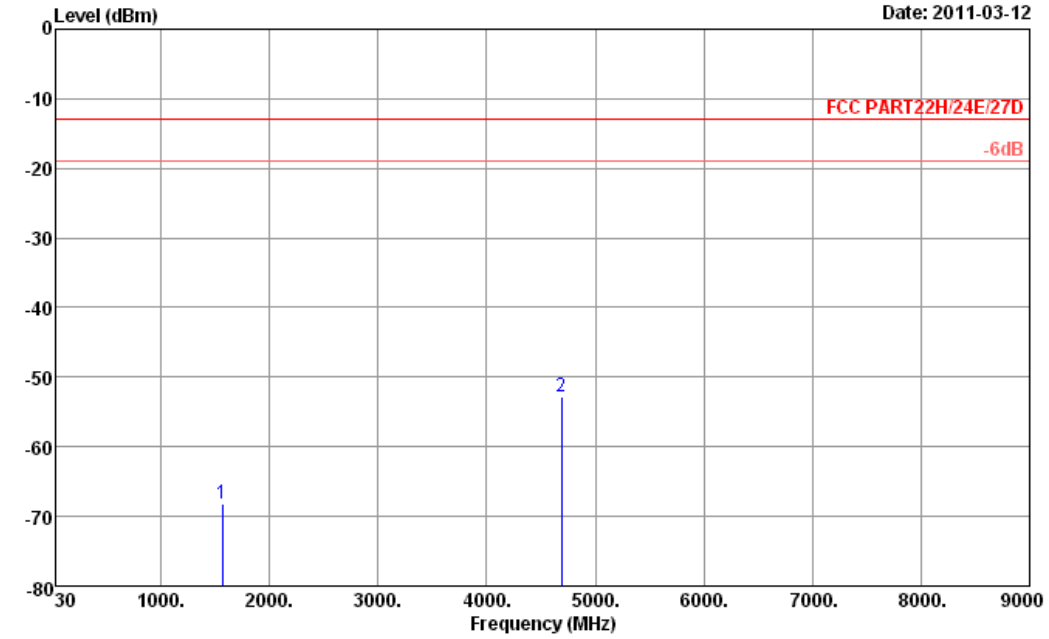
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 1, RB Offset 49) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-66.18	-13	-53.18	-72.19	-67.46	2.15	5.58	V	Pass
2346	-62.57	-13	-49.57	-72.26	-64.33	2.32	6.23	V	Pass
4692	-57.68	-13	-44.68	-74.73	-62.17	3.47	10.11	V	Pass

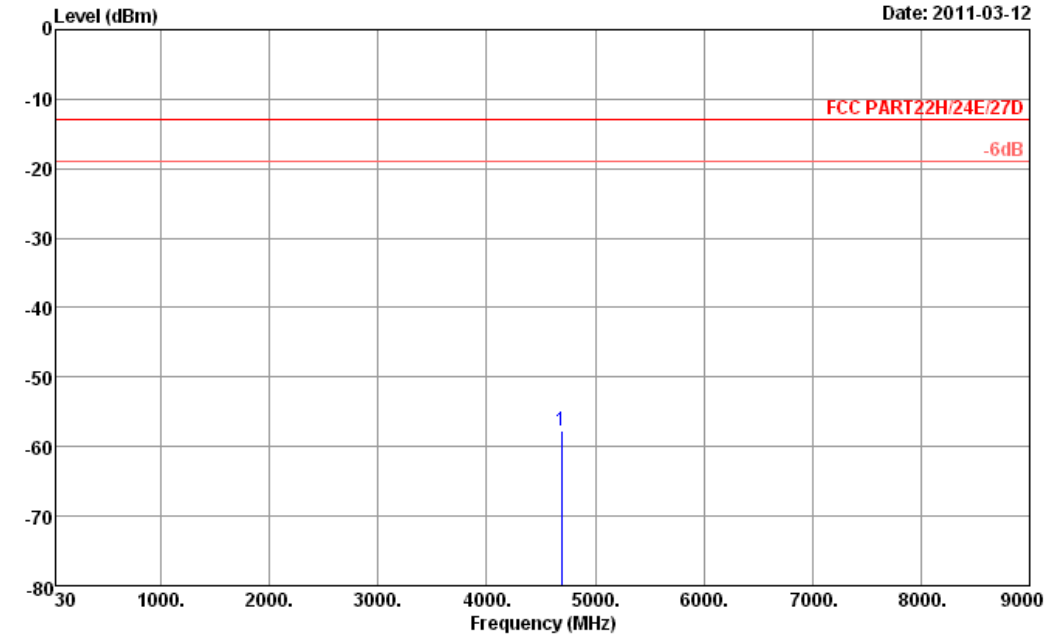
Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 HORIZONTAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1564	-68.20	-13	-55.20	-74.01	-69.48	2.15	5.58	H	Pass
4692	-52.83	-13	-39.83	-69.51	-57.32	3.47	10.11	H	Pass

Band :	LTE Band 13	Temperature :	21~24°C
Test Mode :	16QAM (RB Size 50, RB Offset 0) Link + TC + Battery 3 + Wireless Charging Cover for Sample 1	Relative Humidity :	43~48%
Test Engineer :	David Yang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		



Site : 03CH05-HY
Condition : FCC PART22H/24E/27D HF_EIRP_101221 VERTICAL
Project : FG 0O1550-01

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
4692	-57.72	-13	-44.72	-74.57	-62.21	3.47	10.11	V	Pass

4 List of Measuring Equipments

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101352	9KHz-40GHz	Nov. 03, 2010	Nov. 02, 2011	Radiation (03CH05-HY)
Amplifier	COM-POWER	PA-103	161069	1KHz - 1GHz	Mar. 29, 2010	Mar. 28, 2011	Radiation (03CH05-HY)
Bilog Antenna	SCHAFFNER	CBL6111C	2725	30MHz ~ 1GHz	Nov. 06, 2010	Nov. 05, 2011	Radiation (03CH05-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 18, 2010	Oct. 17, 2011	Radiation (03CH05-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1GHz- 26.5GHz	Apr. 15, 2010	Apr. 14, 2011	Radiation (03CH05-HY)
Turn Table	HD	Deis HD 2000	420/611	0 - 360 degree	N/A	N/A	Radiation (03CH05-HY)
Antenna Mast	HD	MA 240	240/666	1 m - 4 m	N/A	N/A	Radiation (03CH05-HY)
Horn Antenna	ESCO	3117	00066584	1GHz ~ 18GHz	Aug. 05, 2010	Aug. 04, 2011	Radiation (03CH05-HY)
Loop Antenna	R&S	HFH2-Z2	860004/001	9 kHz~30 MHz	Jul. 29, 2010	Jul. 28, 2011	Radiation (03CH05-HY)
CMW500 WIDEB. RADIO COMM. TESTER	R&S	CMW500	102159	N/A	Sep. 09, 2010	Sep. 08, 2011	Radiation (03CH05-HY)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Contribution	Uncertainty of X_i		$u(X_i)$
	dB	Probability Distribution	
Receiver Reading	0.41	Normal (k=2)	0.21
Antenna Factor Calibration	0.83	Normal (k=2)	0.42
Cable Loss Calibration	0.25	Normal (k=2)	0.13
Pre-Amplifier Gain Calibration	0.27	Normal (k=2)	0.14
RCV/SPA Specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site Imperfection	1.43	Rectangular	0.83
Mismatch	+0.39 / -0.41	U-Shape	0.28
Combined Standard Uncertainty Uc(y)	**1.27**		
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**2.54**		

Uncertainty of Radiated Emission Measurement (1 GHz ~ 40 GHz)

Contribution	Uncertainty of X_i		$u(X_i)$	C_i	$C_i * u(X_i)$
	dB	Probability Distribution			
Receiver Reading	±0.10	Normal (k=2)	0.10	1	0.10
Antenna Factor Calibration	±1.70	Normal (k=2)	0.85	1	0.85
Cable Loss Calibration	±0.50	Normal (k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site Imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR Γ1 = 0.197 Antenna VSWR Γ2 = 0.194 Uncertainty = 20Log(1-Γ1*Γ2)	+0.34 / -0.35	U-Shape	0.244	1	0.244
Combined Standard Uncertainty Uc(y)	**2.36**				
Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.72**				

Appendix B. Product Equality Declaration

htc quietly brilliant

宏達國際電子股份有限公司
HTC Corporation

1F, No. 6-3, Baoqiang Rd.,
Xindian City, Taipei County
231, Taiwan

Mar. 14, 2011

Federal Communication Commission
Equipment Authorization Division, Application Processing Branch
7435 Oakland Mills Road
Columbia, MD 21048

TO WHOM IT MAY CONCERN :

SUBJECT: Class II Permissive Change for FCC ID: NM8PG05100

The product, Smartphone, has been granted by FCC dated 02/07/2011, FCC ID: NM8PG05100.
Now we, HTC Corporation, would like to modify the authorized equipment for below changes:

- Extend Battery
- Extend Battery cover
- Wireless Charging cover

We would like to certify the additional of certified FCC ID: NM8PG05100 as a Class II Permissive Change in this device.

Sincerely yours,

Ray Wang

Ray Wang
HTC Corporation
TEL.:+ 886-2-89124138
FAX:+ 886-2-89126307

Appendix C. Original Report

Please refer to Sporton report number FG0O1550-03B as below.