FCC Part 22H & 24E

Measurement And Test Report

For

NEAREX PTE LTD.

80B Bencoolen Street, #12-05 The Bencoolen, Singapore 189648

FCC ID: 2AFM3XIPPOS

May 25, 2015

This Report Concerns: ☒ Original Report	**Equipment Type:** XipPos
Report Number:	MTI150504001RF-1
Test Engineer:	Bill Chen
Reviewed By:	Jason Zheng
Approved & Authorized By:	Hebe Lee
Test Date:	May 08, 2015 – May 25, 2015
Prepared By:	**Shenzhen Microtest Technology Co.,Ltd** 6F, Zhongbao Building, Gushu, Bao'an District, Shenzhen, P.R.China Tel: +86-755-8885 0135 Fax: +86-755-8885 0136

TEST RESULT CERTIFICATION	
Applicant's name ..... :	**NEAREX PTE LTD.**
Address..... :	80B Bencoolen Street, #12-05 The Bencoolen, Singapore 189648
Manufacture's Name..... :	**NEAREX PTE LTD.**
Address..... :	80B Bencoolen Street, #12-05 The Bencoolen, Singapore 189648
Product description	
Product name .....:	XipPos
Model and/or type reference :	XipPos
Serial Model.....:	N/A
Standards..... :	FCC Part 22H & 24E
Test procedure.....	ANSI C63.4-2009

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

Description of Test Item	Standard	Results
Conducted Output power	FCC PART 2: 2.1046 FCC PART 22H: 22.913 (a) FCC PART 24E: 24.232 (c)	PASS
Radiated Output power(erp/eirp)	FCC PART 22H:22.913 (a) FCC PART 24E:24.232(c)	PASS
Occupied bandwidth	FCC PART 2: 2.1049 FCC PART 22H: 22.917 (b) FCC PART 24E: 24.238 (b)	PASS
Frequency stability	FCC PART 2: 2.1055 FCC PART 22H: 22.355 FCC PART 24E: 24.235	PASS
Conducted spurious emission (Antenna terminal)	FCC PART 2: 2.1051 FCC PART 22H: 22.917 FCC PART 24E: 24.238	PASS
Radiated spurious emissions	FCC PART 2: 2.1053 FCC PART 22H: 22.917 FCC PART 24E: 24.238	PASS
Band edge compliance	FCC PART 22H: 22.917 (b) FCC PART 24E: 24.238 (b)	PASS
Power Line Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2014	PASS

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

1.1 TEST FACILITY

Shenzhen Toby Technology Co., Ltd.
Add.: 10/F.,A Block,Jiada R&D Bldg.,No.5 Songpingshan, Road, Science&Technology Park, Shenzhen, 518057
FCC Registration No.:811562

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>XipPos</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>XipPos</td></tr>
<tr><td>Serial Model</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a XipPos
<table>
<tr><td>Operation Frequency:</td><td>GPRS 850/ GPRS 1900</td></tr>
<tr><td>Modulation Type:</td><td>GMSK</td></tr>
<tr><td>Antenna Designation:</td><td>Please see Note 3.</td></tr>
<tr><td>Output Power(Conducted):</td><td>32.81dBm</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>1.5dbi</td></tr>
</table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Channel List</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Adapter</td><td>Model: K-T50501000U1
Input: 100-240V~50-60Hz 0.15A Max
Output: 5V⎓1000mA</td></tr>
<tr><td>Battery</td><td>DC 3.7V, 600mAh</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.
2. Test Mode

Mode	Channel	Frequency(MHz)
GPRS 850	128	824.2
	190	836.6
	251	848.8
GPRS 1900	512	1850.2
	661	1880.0
	810	1909.8

3. Table for Filed Antenna

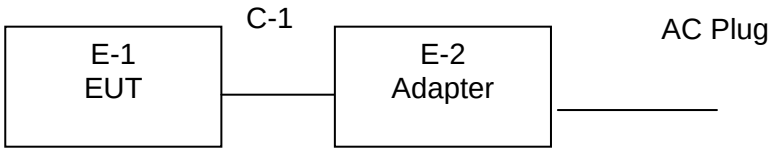
Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	Internal antenna	Internal antenna	1.5dbi	Antenna

2.2 DESCRIPTION OF TEST MODES

Mode	Description
TM1	GPRS 1 UP Slot
TM2	GPRS 4 UP Slots

Note:
(1) The measurements are performed at the highest, middle, lowest available channels.
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	XipPos	N/A	XipPos	N/A	EUT
E-2	Adapter	N/A	K-T50501000U1	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	0.8m	
C-2	NO	NO	0.8m	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal	Cal.Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Mar. 20, 2015	Mar. 19, 2016
Spectrum Analyzer	ROHDE&SCHWARZ	FSP30	DE25181	Aug. 10, 2014	Aug. 09, 2015
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	101165	Aug. 10, 2014	Aug. 09, 2015
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 07, 2015	Mar. 06, 2016
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 07, 2015	Mar. 06, 2016
Hom Antenna	ETS-LINDGREN	3117	00143207	Mar. 07, 2015	Mar. 06, 2016
Hom Antenna	ETS-LINDGREN	3117	00143209	Mar. 07, 2015	Mar. 06, 2016
Pre-anplifier	HP	11909A	185903	Mar. 07, 2015	Mar. 06, 2016
Pre-anplifier	HP	8447B	3008A00849	Mar. 07, 2015	Mar. 06, 2016
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 07, 2015	Mar. 06, 2016
Signal Generator	ROHDE&SCHWARZ	SML03	IKW682-054	Feb. 11, 2015	Feb. 10, 2016
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A

Conduction Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal	Cal.Due Date
EMI Test Receiver	ROHDE&SCHWARZ	ESCI	1000321	2014-08-10	2015-08-09
50Ω Coaxial Switch	Anntsu	MP59B	X10321	2014-08-10	2015-08-09
LISN	ROHDE&SCHWARZ	ENV216	101131	2014-08-10	2015-08-09
LISN	SCHWARZBECK	NNBL 8226-2	8226-2/164	2014-08-10	2015-08-09

3. CONDUCTED OUTPUT POWER

3.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.913 (a) 24.232 (c)	Conducted Output power	38.5dBm(ERP) for GPRS850 33dBm for GPRS1900	PASS

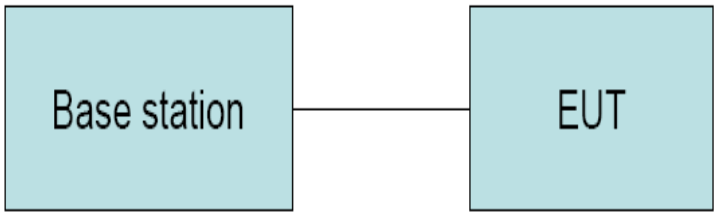
3.1.1 TEST PROCEDURE

(1) The EUT's RF output port was connected to base station.
(2) A call is set up by the SS according to the generic call set up procedure
(3) Set EUT at maximum power level through base station by power level command
(4) Measure the maximum output power of EUT at each frequency band and mode by base station.

3.1.2 DEVIATION FROM STANDARD

No deviation.

3.1.3 TEST SETUP



3.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.1.5 TEST RESULTS

EUT：	XipPos	Model Name ：	XipPos
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V from battery
Test Mode ：	GPRS850/GPRS1900		

Mode	Channel	PK Output Power(dBm)	Limit	
			ERP(dBm)	EIRP(dBm)
GPRS 850 TM1	128	32.81	38.5	/
	190	32.67	38.5	/
	251	32.77	38.5	/
GPRS 850 TM2	128	26.98	38.5	/
	190	26.65	38.5	/
	251	26.69	38.5	/
GPRS1900TM1	512	29.85	/	33
	661	29.82	/	33
	810	29.83	/	33
GPRS1900 TM2	512	25.80	/	33
	661	25.77	/	33
	810	25.78	/	33

4. RADIATED OUTPUT POWER

4.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.913 (a) 24.232 (c)	Conducted Output power	38.5dBm(ERP) for GPRS850 33dBm for GPRS1900	PASS

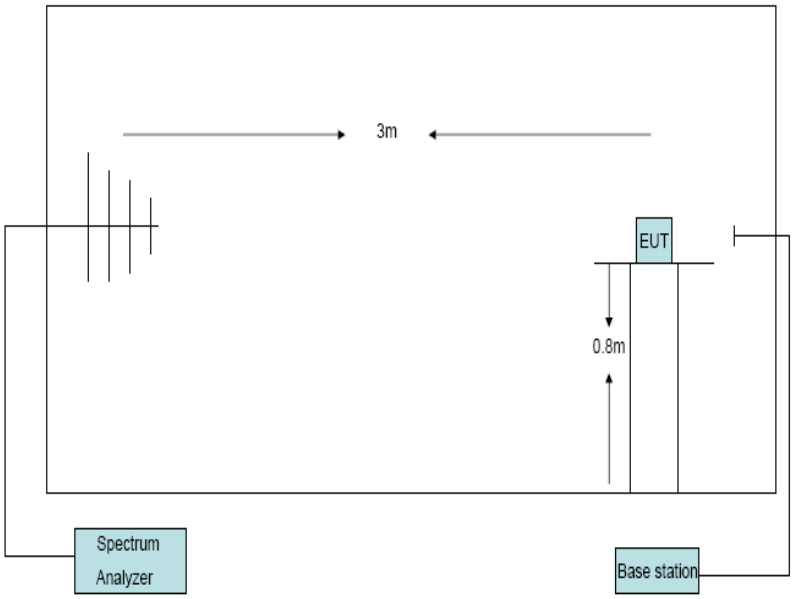
4.1.1 TEST PROCEDURE

1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in an anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RBW= 3MHz,VBW= 3MHz and peak detector settings.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. The highest emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations
3. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (for frequency lelow 1GHz) or Horn antenna(for frequecny above 1GHz) at same location with same polarize of reveiver antenna and then a known power of each measure frequency from S.G. was applied into the dipole antenna or Horn antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain –Substitution antenna Loss(only for Dipole antenna) - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

EUT：	XipPos	Model Name ：	XipPos
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 3.7V from battery
Test Mode ：	GPRS850/GPRS1900		

Mode	Channel	LVL (dBm)	Correction factor(dB)	ERP (dBm)	EIRP (dBm)	Limit	
						ERP(dBm)	EIRP(dBm)
GPRS 850 TM1	128	2.5	26.27	28.77	/	38.5	/
	190	2.7	26.28	28.98	/	38.5	/
	251	2.7	26.31	29.01	/	38.5	/
GPRS 850 TM2	128	-0.6	26.27	25.67	/	38.5	/
	190	-0.8	26.28	25.48	/	38.5	/
	251	-0.6	26.31	25.71	/	38.5	/
GPRS1900 TM1	512	3.5	22.58	/	26.08	/	33
	661	3.7	22.6	/	26.3	/	33
	810	3.7	22.62	/	26.32	/	33
GPRS1900 TM2	512	-1.2	22.58	/	21.38	/	33
	661	-1.4	22.6	/	21.2	/	33
	810	-1.7	22.62	/	20.92	/	33
Note: EIRP=LVL+Correction factor							

5. OCCUPY BANDWIDTH

5.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.917 (b) 24.238 (b)	Occupied bandwidth	/	PASS

5.1.1 TEST PROCEDURE

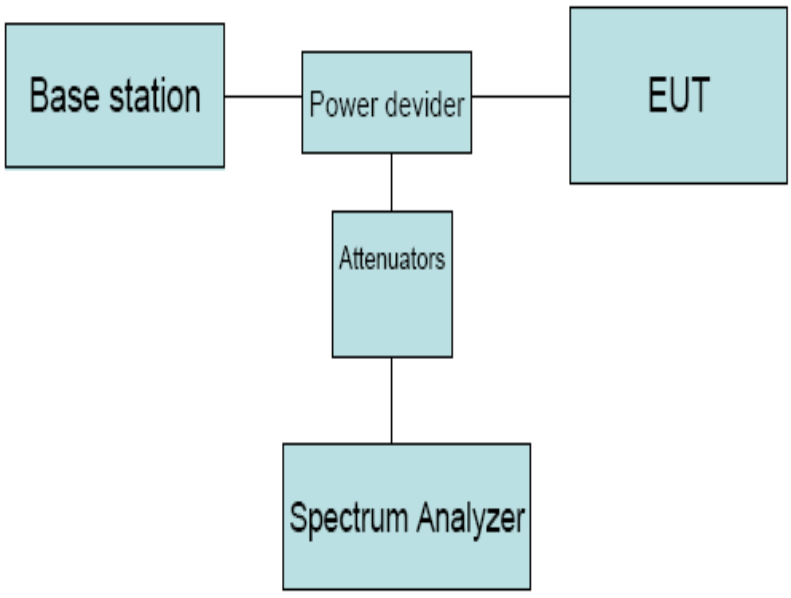
1. The EUT' RF output port was connected to Spectrum Analyzer and Base Station via power divider.

2. Spectrum analyzer's occupied bandwidth measure function was used to measure 99% bandwidth and -26dBc bandwidth

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

EUT：	XipPos	Model Name ：	XipPos
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 3.7V from battery
Test Mode ：	GPRS 850/GPRS 1900		

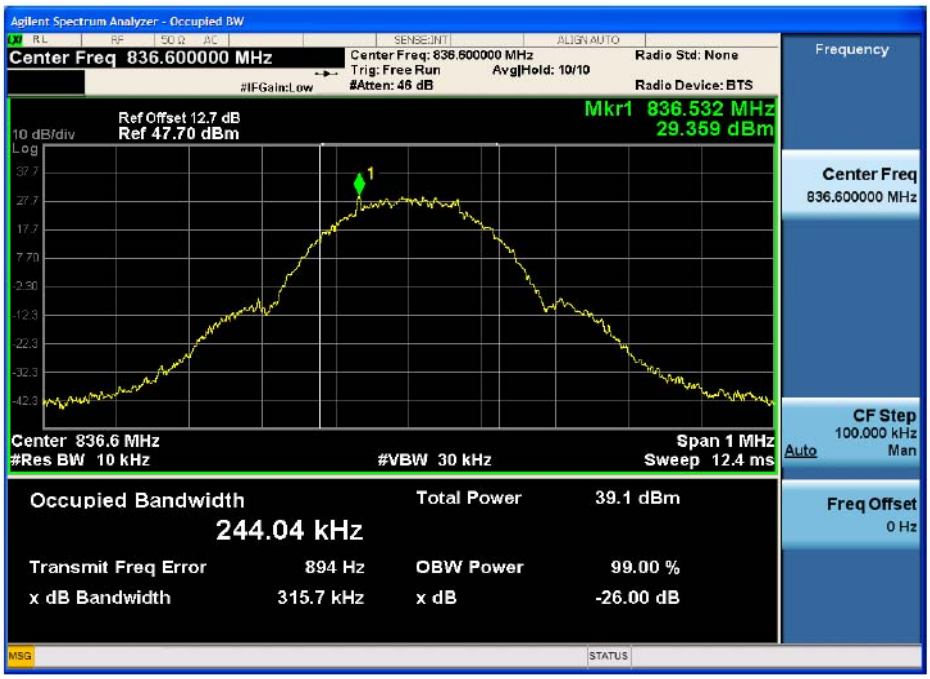
Mode	Channel	-26dBc bandwidth (KHz)	99% bandwidth (KHz)	Limit
GPRS 850 TM1	128	314.8	246.73	/
	190	315.7	244.04	/
	251	320.4	245.64	/
GPRS1900 TM1	512	314.6	243.51	/
	661	317.4	244.55	/
	810	320.0	243.56	/
Note: All mode has been tested, only worst data shown in this report.				

Mode	Channel	-26dBc bandwidth (KHz)	99% bandwidth (KHz)	Limit
GPRS 850 TM2	128	315.3	246.36	/
	190	315.8	245.55	/
	251	301.9	241.72	/
GPRS1900 TM2	512	318.6	239.95	/
	661	314.5	244.09	/
	810	307.2	241.76	/
Note: All mode has been tested, only worst data shown in this report.				

TM1

GPRS 850 CH128

GPRS 850 CH190



GPRS 850 CH251

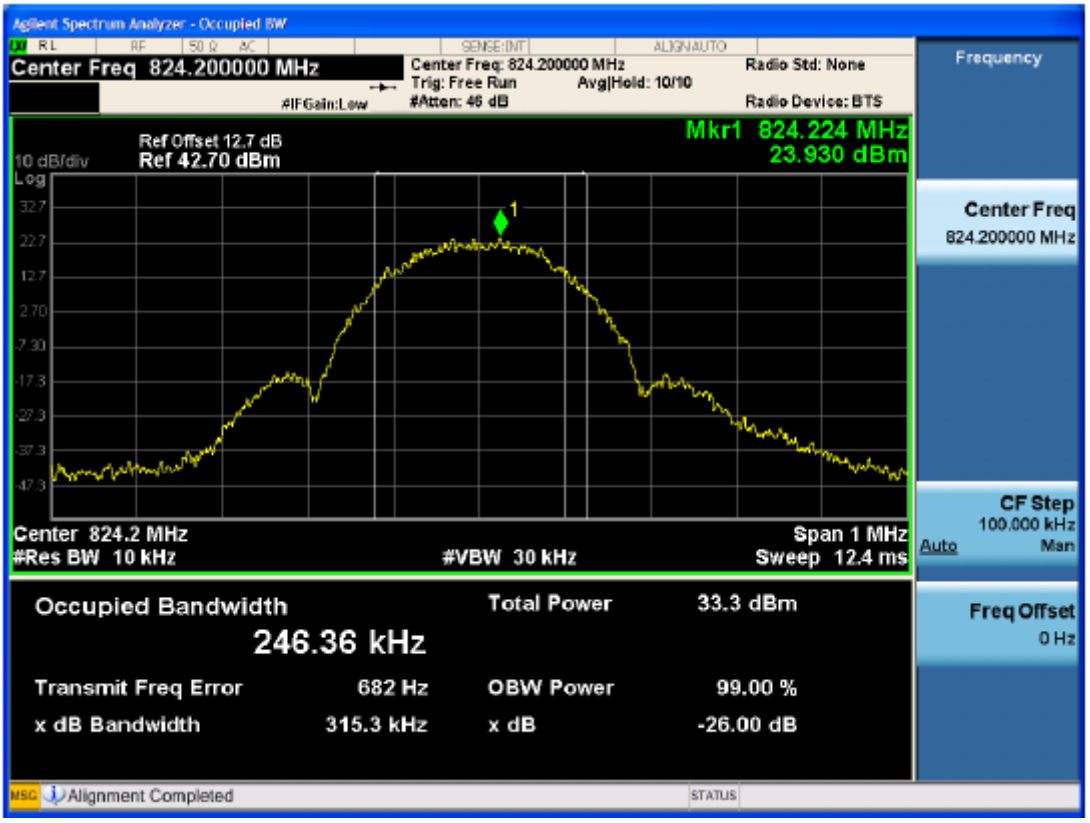
PCS 1900 CH512

PCS 1900 CH661

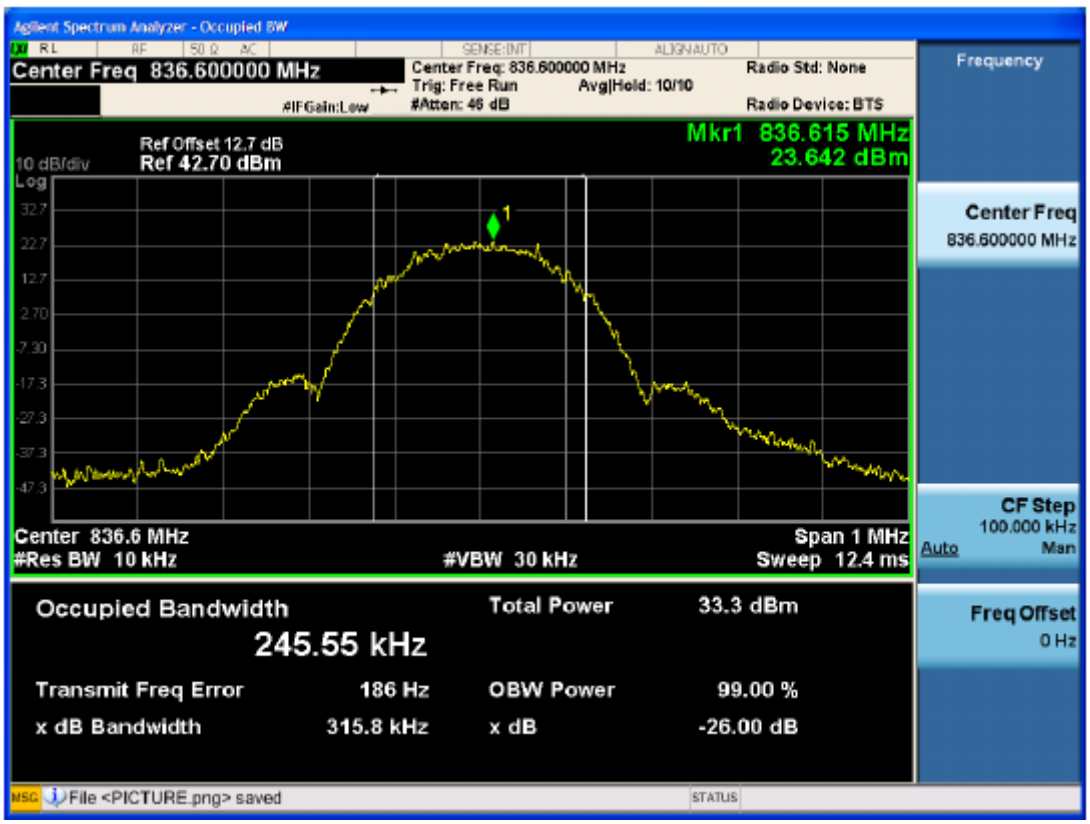
PCS 1900 CH810

TM2

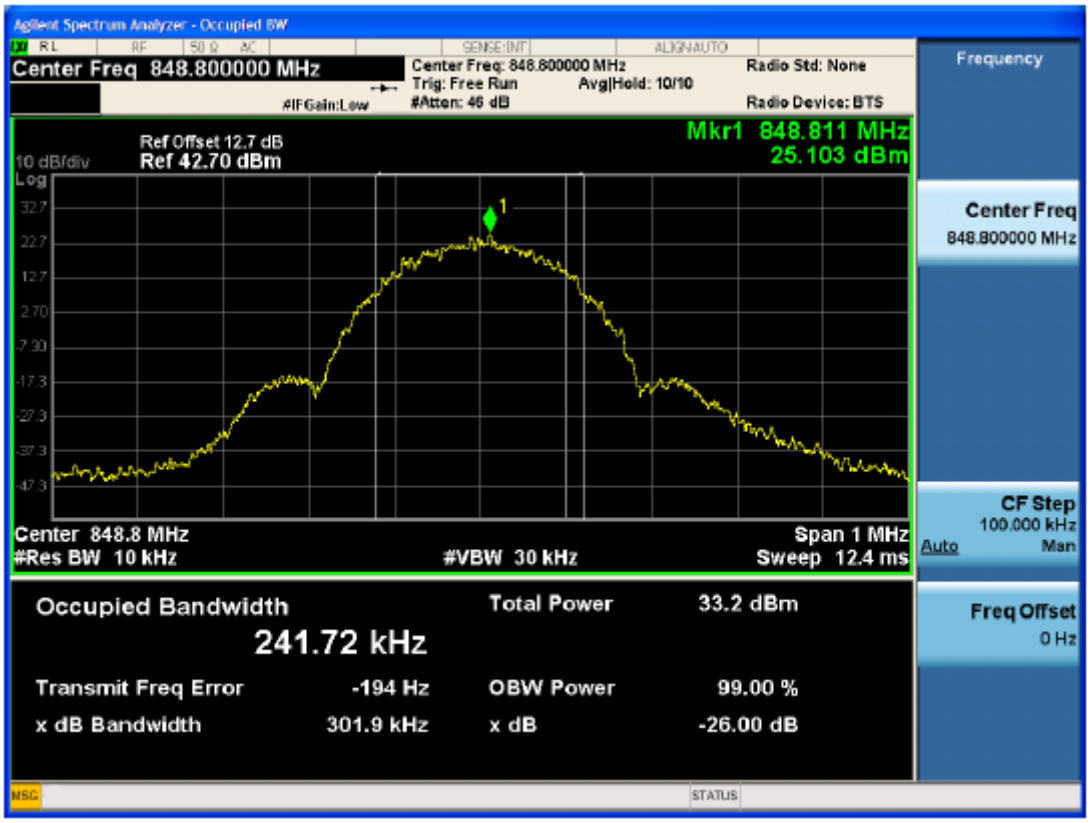
GPRS 850 CH128



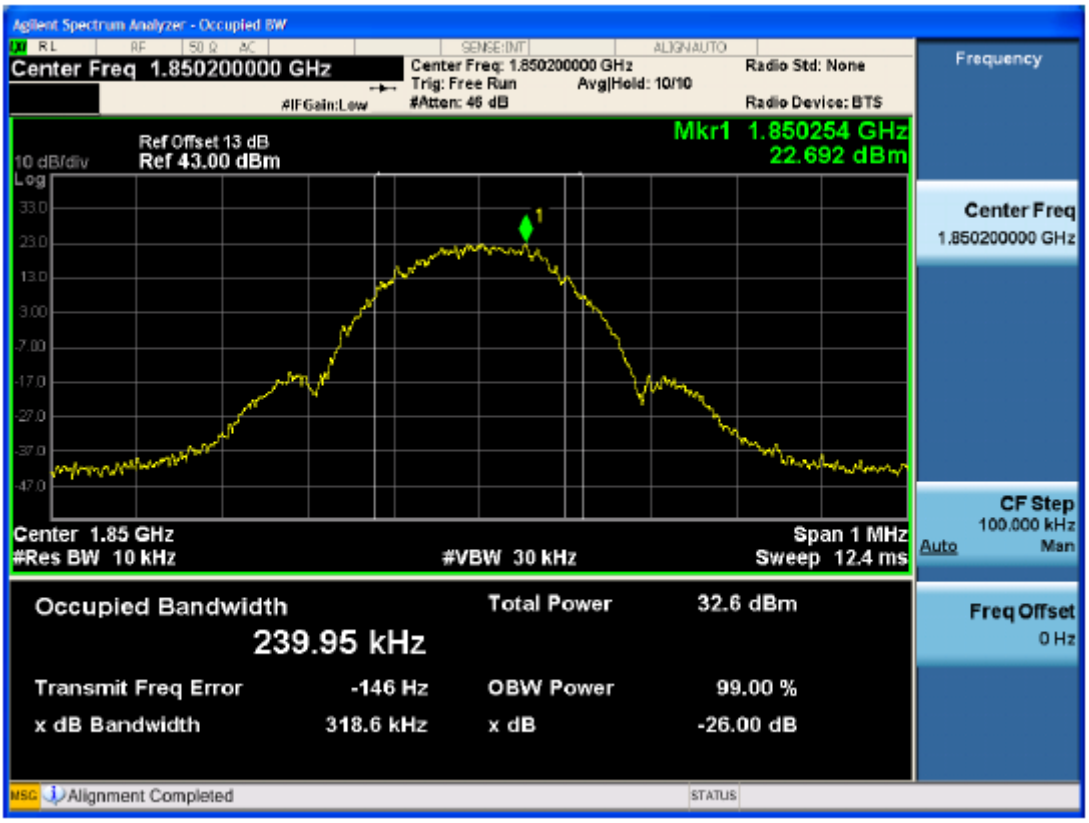
GPRS 850 CH190



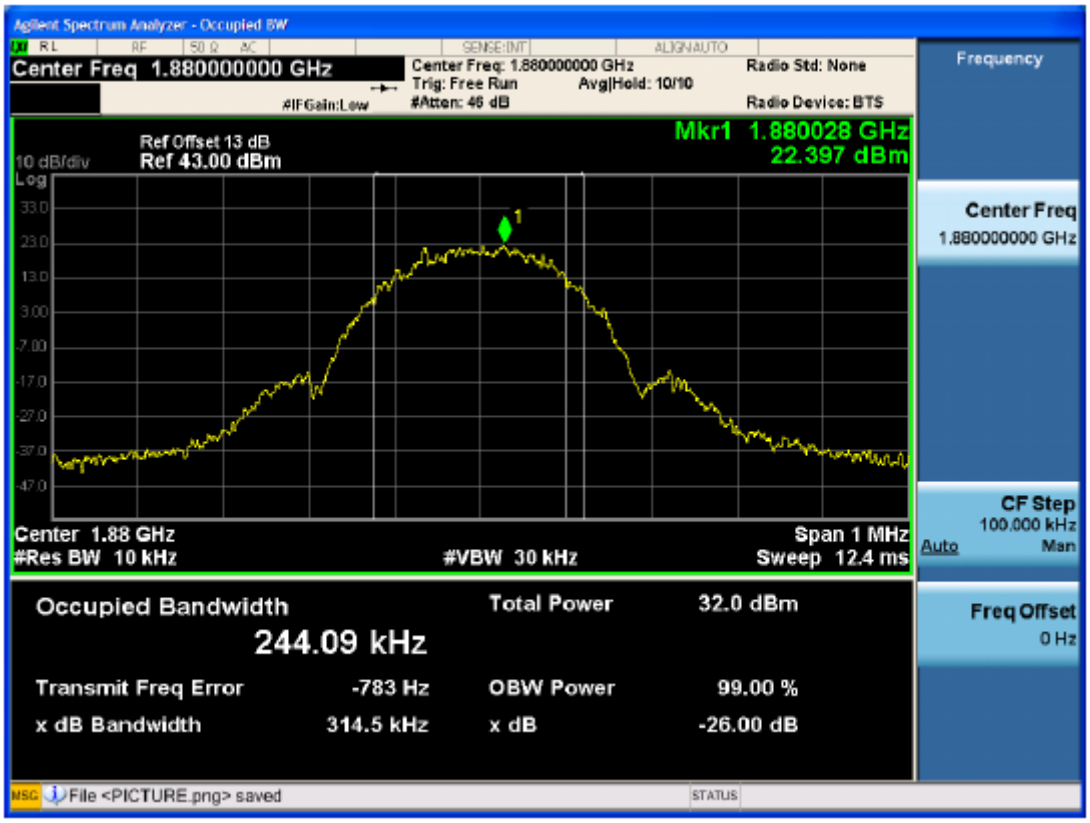
GPRS 850 CH251



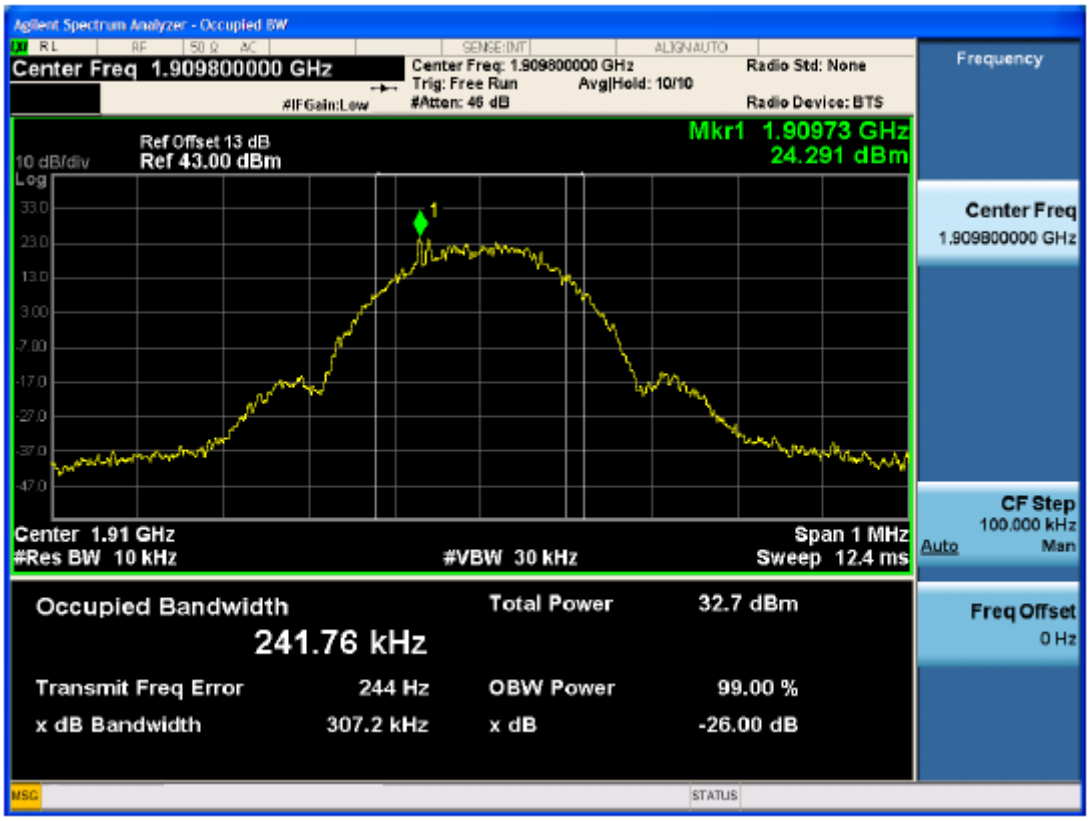
PCS 1900 CH512



PCS 1900 CH661



PCS 1900 CH810



6. FREQUENCY STABLITY

6.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.355 24.235	Frequency stability	± 2.5 ppm	PASS

6.1.1 TEST PROCEDURE

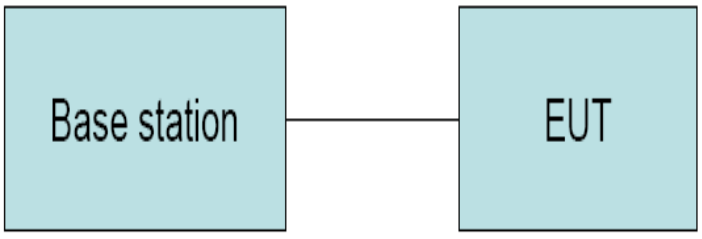
Test Procedures for Temperature Variation:
1. The EUT was set up in the thermal chamber and connected with the base station.
2. With power OFF, the temperature was decreased to -10°C and the EUT was stabilized for three hours. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 45°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.
4. If the EUT can not be turned on at -10°C, the testing lowest temperature will be raised in 10°C step until the EUT can be turned on.

Test Procedures for Voltage Variation
1. The EUT was placed in a temperature chamber at 25±5° C and connected with the base station.
2. The power supply voltage to the EUT was varied from DC 5V to 3.5V
3. The variation in frequency was measured for the worst case.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT：	XipPos	Model Name ：	XipPos
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 3.7V from battery
Test Mode ：	GPRS 850/GPRS 1900		

TM1
Frequency Stability VS Voltage

Mode	Voltage (V)	Frequency error (Hz)	frequency error (ppm)
GPRS 850 CH 190	4.2	-9.82	-0.01
	3.7	-11.68	-0.01
	3.5	-10.75	-0.01
PCS 1900 CH661	4.2	15.47	0.01
	3.7	16.99	0.01
	3.5	18.22	0.01
Note: All mode has been tested, only worst data shown in this report.			

Frequency Stability VS Temperature

Mode	Temperature (℃)	Frequency error (Hz)	frequency error (ppm)
GSM 850 CH 190	-30	11.32	0.01
	-20	9.29	0.01
	-10	-10.68	-0.01
	0	-9.59	-0.01
	10	9.72	0.01
	20	7.58	0.01
	30	6.77	0.01
	40	9.93	0.01
	50	8.12	0.01
PCS 1900 CH661	-30	-18.35	-0.01
	-20	16.22	0.01
	-10	-16.38	-0.01
	0	17.54	0.01
	10	15.42	0.01
	20	17.33	0.01
	30	20.16	0.01
	40	18.72	0.01
	50	-16.48	-0.01

TM2
Frequency Stability VS Voltage

Mode	Voltage (V)	Frequency error (Hz)	frequency error (ppm)
GPRS 850 CH 190	4.2	9.77	-0.01
	3.7	12.14	-0.01
	3.5	-11.58	-0.01
PCS 1900 CH661	4.2	17.22	0.01
	3.7	18.59	0.01
	3.5	14.91	0.01
Note: All mode has been tested, only worst data shown in this report.			

Frequency Stability VS Temperature

Mode	Temperature (℃)	Frequency error (Hz)	frequency error (ppm)
GSM 850 CH 190	-30	-11.32	-0.01
	-20	11.72	0.01
	-10	-8.43	-0.01
	0	-9.27	-0.01
	10	7.65	0.01
	20	-7.92	-0.01
	30	8.73	0.01
	40	-9.29	-0.01
	50	8.75	0.01
PCS 1900 CH661	-30	-21.35	-0.01
	-20	18.46	0.01
	-10	-18.46	-0.01
	0	12.28	0.01
	10	14.29	0.01
	20	17.52	0.01
	30	13.04	0.01
	40	10.28	0.01
	50	-9.79	-0.01

7. CONDUCTED SPURIOUS EMISSIONS

7.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.917 24.238	Conducted spurious emissions	-13dBm	PASS

7.1.1 TEST PROCEDURE

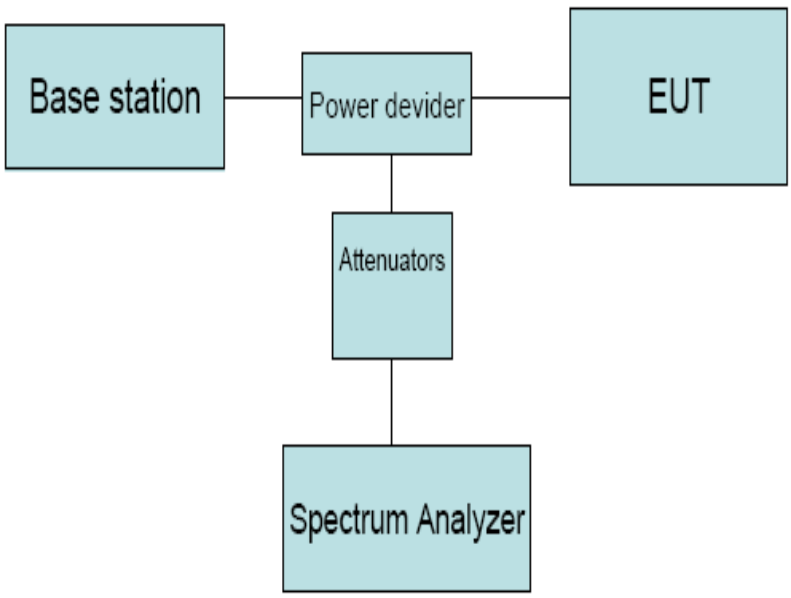
1. The EUT was connected to spectrum analyzer and base station via power divider.

2. The low, middle and high channels of each band and mode's spurious emissions for 30MHz to 10th Harmonic were measured by Spectrum analyzer.

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



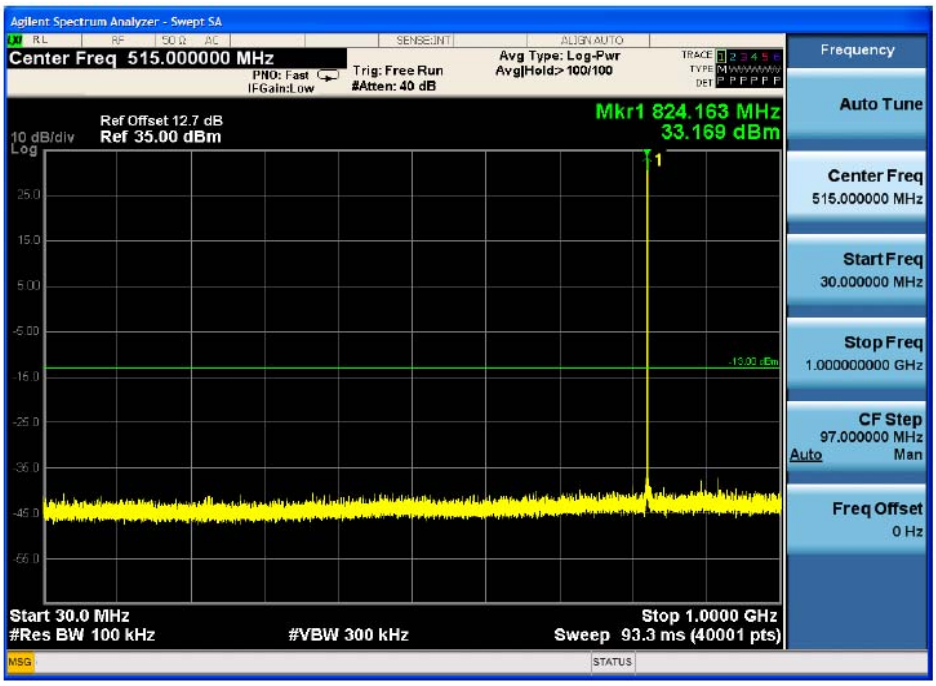
7.1.4 EUT OPERATION CONDITIONS

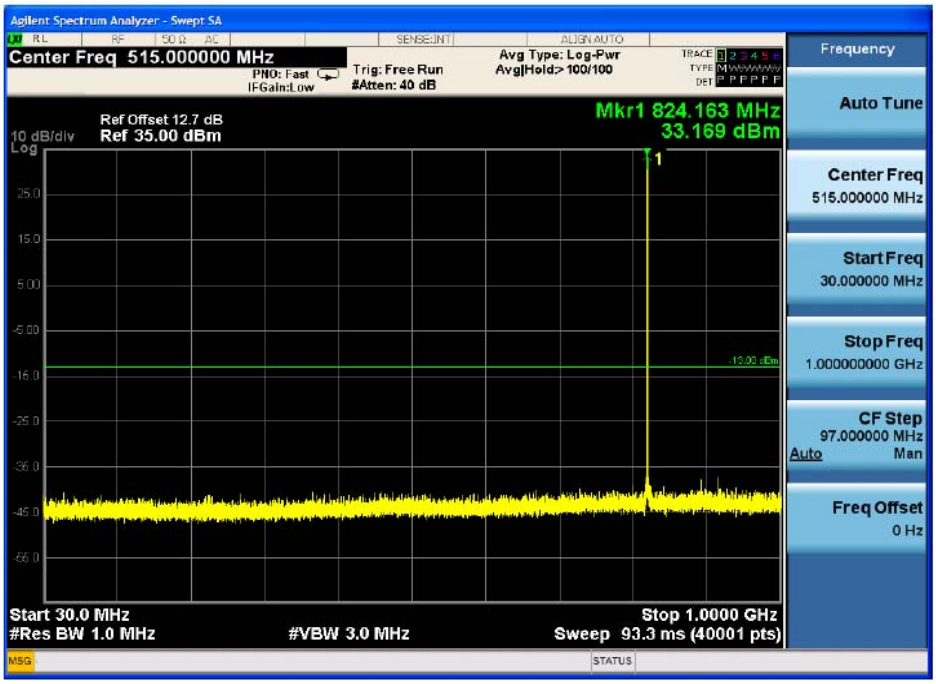
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

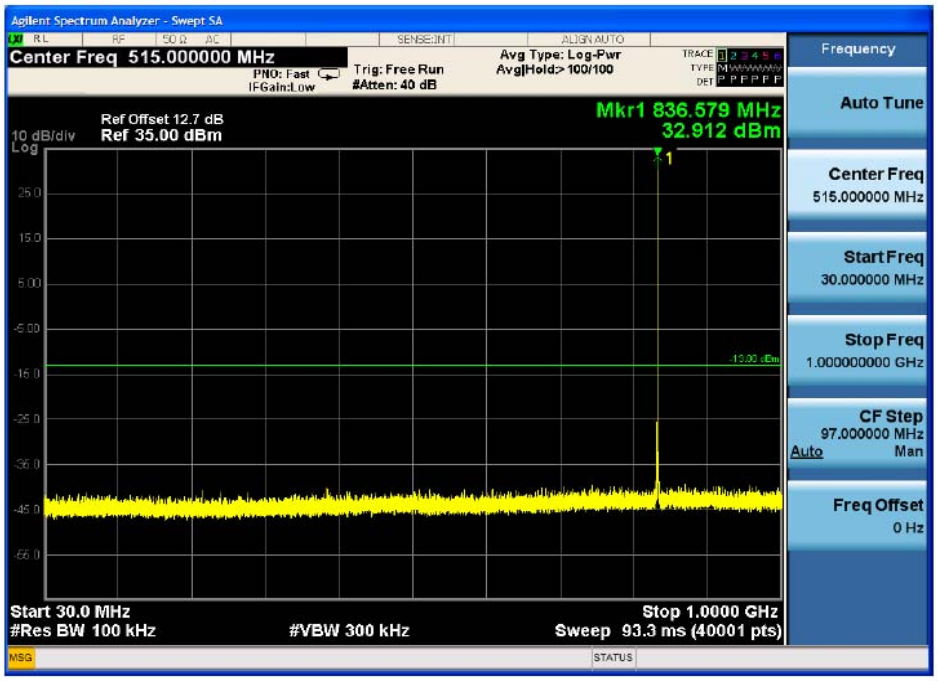
NOTE: ALL MODE HAS BEEN TESTED, ONLY WORST DATA SHOWN IN THIS REPORT.

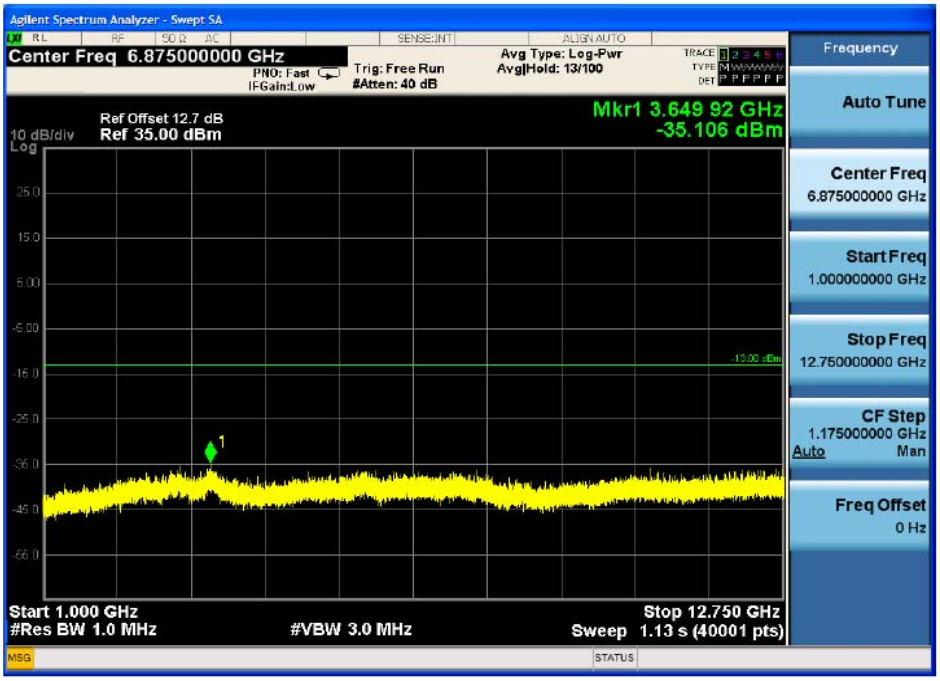
Test Mode: GPRS 850 CH 128



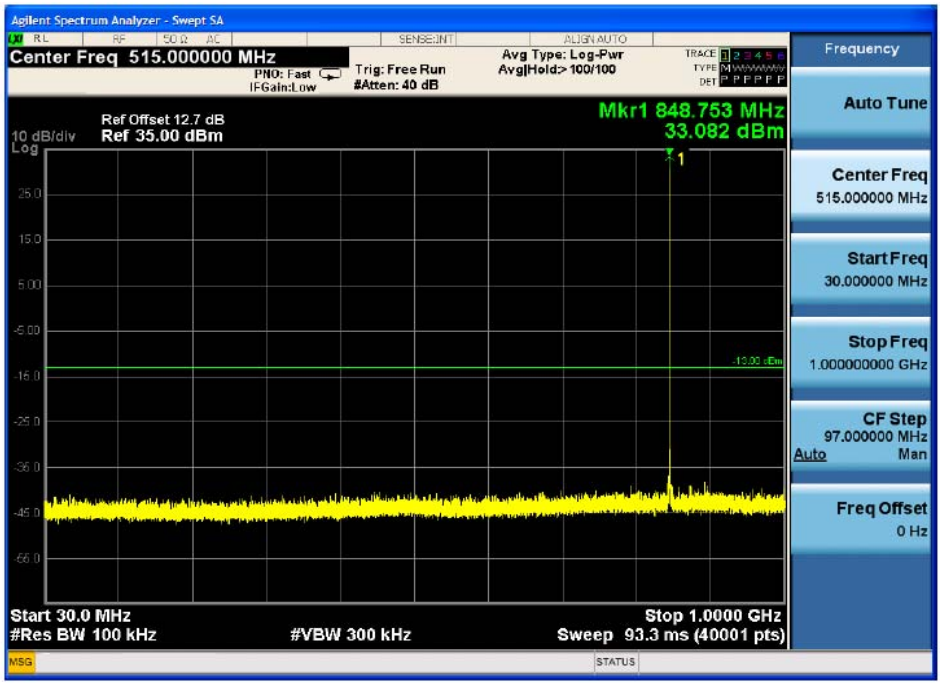


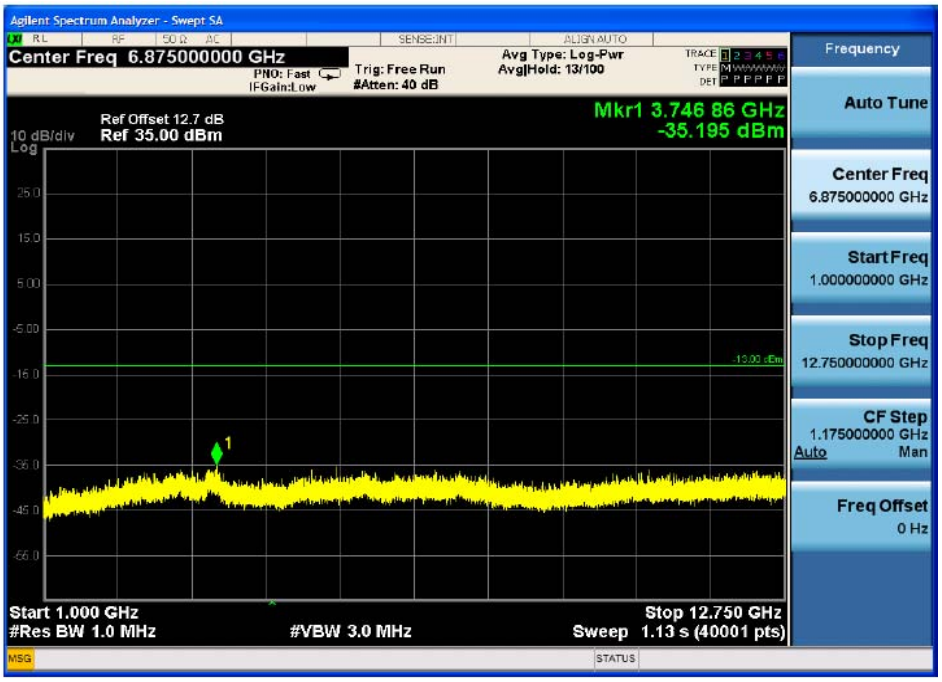
Test Mode: GPRS 850 CH 190



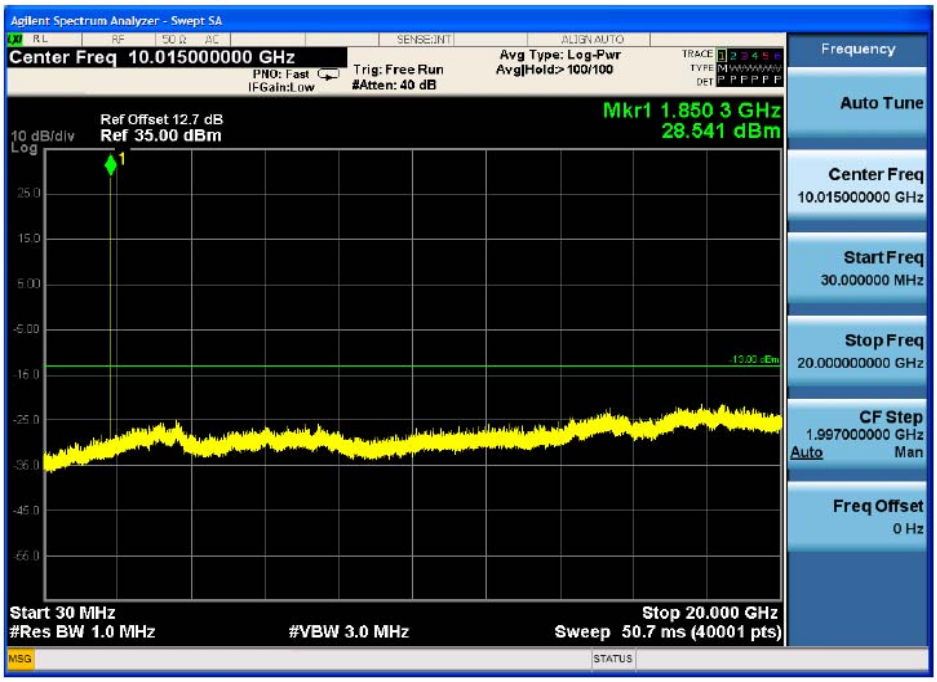


Test Mode: GPRS 850 CH 251

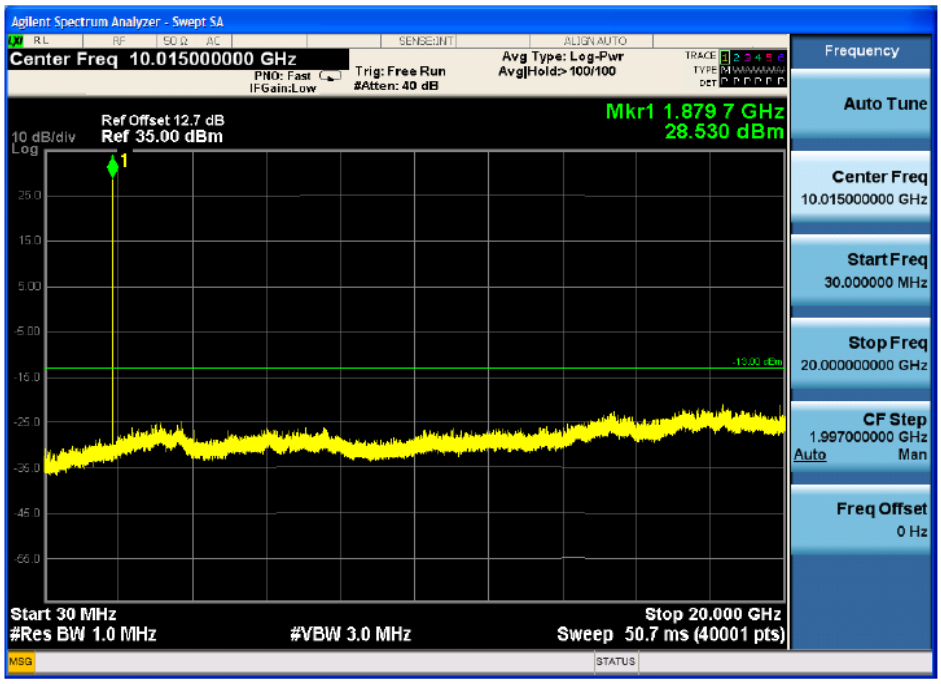




Test Mode: GPRS 1900 CH 512



Test Mode: GPRS 1900 CH 661



Test Mode: GPRS 1900 CH 810

8. RADIATED SPURIOUS EMISSIONS

8.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.917 24.238	Radiated Spurious emissions	-13dBm	PASS

8.1.1 TEST PROCEDURE

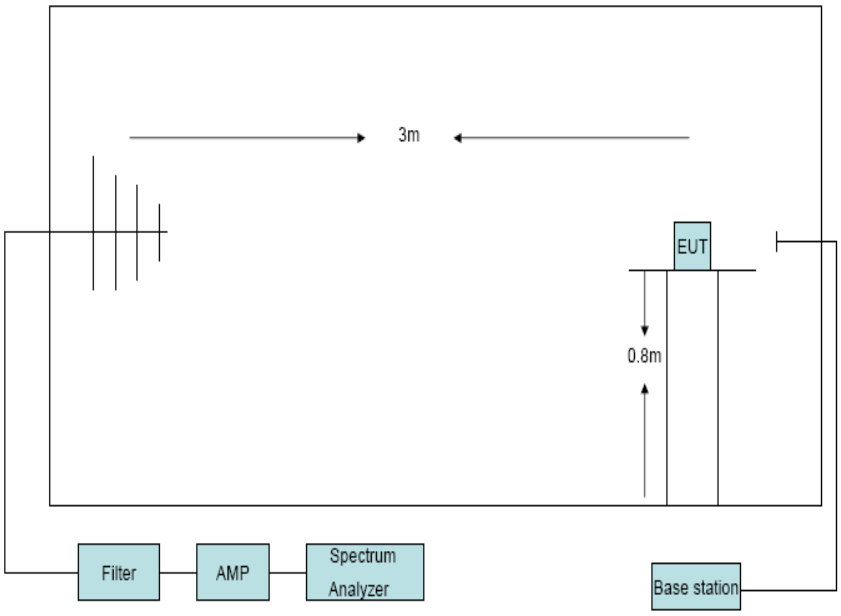
1. The EUT was placed on an non-conductive rotating platform with 0.8 meter height in an anechoic chamber. The radiated spurious emissions from 30MHz to 10th harmonious of fundamental frequency were measured at 3m with a test antenna and a spectrum analyzer with RBW= 1MHz,VBW= 1MHz ,peak detector settings.
2. During the measurement, the EUT was enforced in maximum power and linked with a base station. All the spurious emissions (record as LVL) at 3m were measured by rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
3. Final spurious emissions levels were measured by substitution method according to TIA/EIA-603-C. The EUT was replaced by dipole antenna (for frequency below 1GHz) or Horn antenna (for frequency above 1GHz) at same location with same polarize of receiver antenna and then a known power of each measure frequency from S.G. was applied into the dipole antenna or Horn antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain –Substitution antenna Loss(only for Dipole antenna) - Analyzer reading. Then final

   spurious emissions were calculated with the correction factor, EIRP= LVL + Correction factor and ERP = EIRP – 2.15

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 TEST RESULTS

NOTE: ALL MODE HAS BEEN TESTED, ONLY WORST DATA SHOWN IN THIS REPORT.

Test Mode：GPRS 850 CH128						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (ERP)(dBm)	Limit (dBm)	Margin (dB)
578.12	H	-61.43	-7.13	-68.56	-13	55.56
578.12	V	-53.14	-7.13	-60.27	-13	47.27
1648.4	H	-55.12	11.5	-43.62	-13	30.62
1648.4	V	-46.47	10.56	-35.91	-13	22.91
Test Mode： GPRS 850 CH190						
1673.2	H	-55.46	10.94	-44.52	-13	31.52
1673.2	V	-47.23	10.9	-36.33	-13	23.33
Test mode: GPRS 850 CH251						
1697.6	H	-53.12	11.67	-41.45	-13	28.45
1697.6	V	-47.17	11.13	-36.04	-13	23.04

Test Mode：GPRS 1900 CH512						
Frequency (MHz)	Antenna polarization	LVL (dBm)	Correction factor(dB)	Result (ERP)(dBm)	Limit (dBm)	Margin (dB)
578.12	H	-59.13	-7.13	-66.26	-13	53.26
578.12	V	-57.25	-7.13	-64.38	-13	51.38
3700.4	H	-55.09	8.57	-46.52	-13	33.52
3700.4	V	-53.87	8.37	-45.5	-13	32.5
Test Mode：GPRS 1900 CH661						
3760	H	-55.82	8.75	-47.07	-13	34.07
3760	V	-53.71	8.55	-45.16	-13	32.16
Test mode: GPRS 1900 CH810						
3819.6	H	-55.67	8.94	-46.73	-13	33.73
3819.6	V	-54.03	8.72	-45.31	-13	32.31

9. BAND EDGE

9.1 APPLIED PROCEDURES / LIMIT

Section	Test Item	Limit	Result
22.917 (b) 24.238 (b)	Band edge	-13dBm	PASS

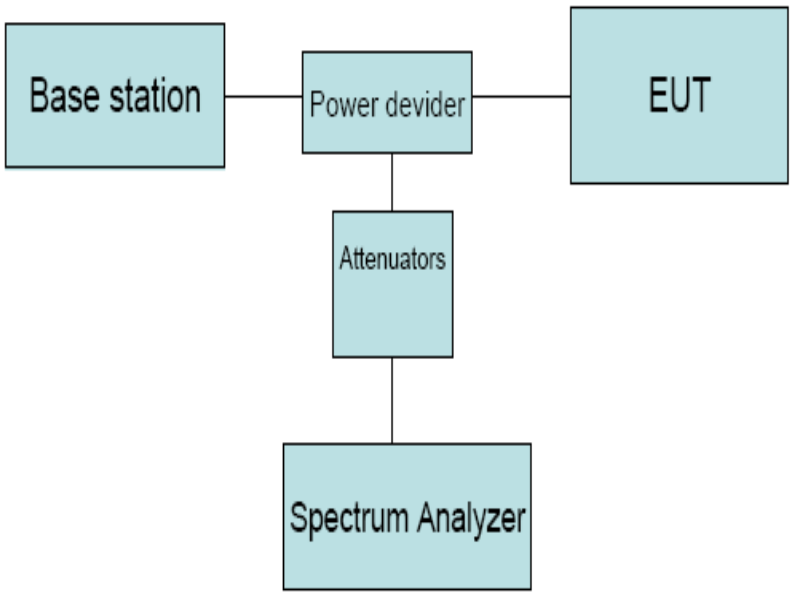
9.1.1 TEST PROCEDURE

1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The band edges of low and high channels for the highest RF powers were measured.

9.1.2 DEVIATION FROM STANDARD

No deviation.

9.1.3 TEST SETUP



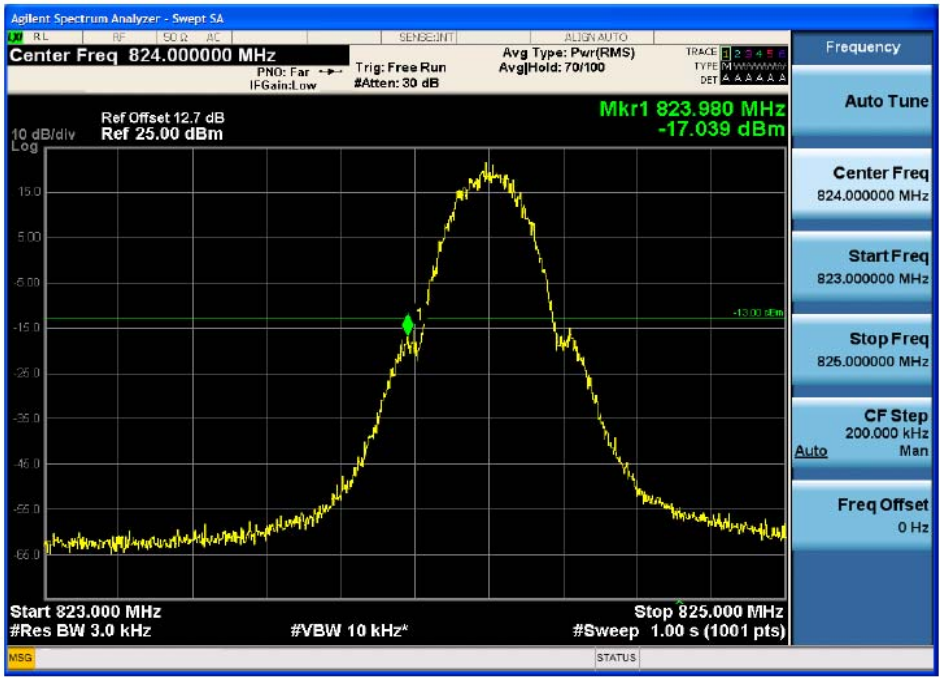
9.1.4 EUT OPERATION CONDITIONS

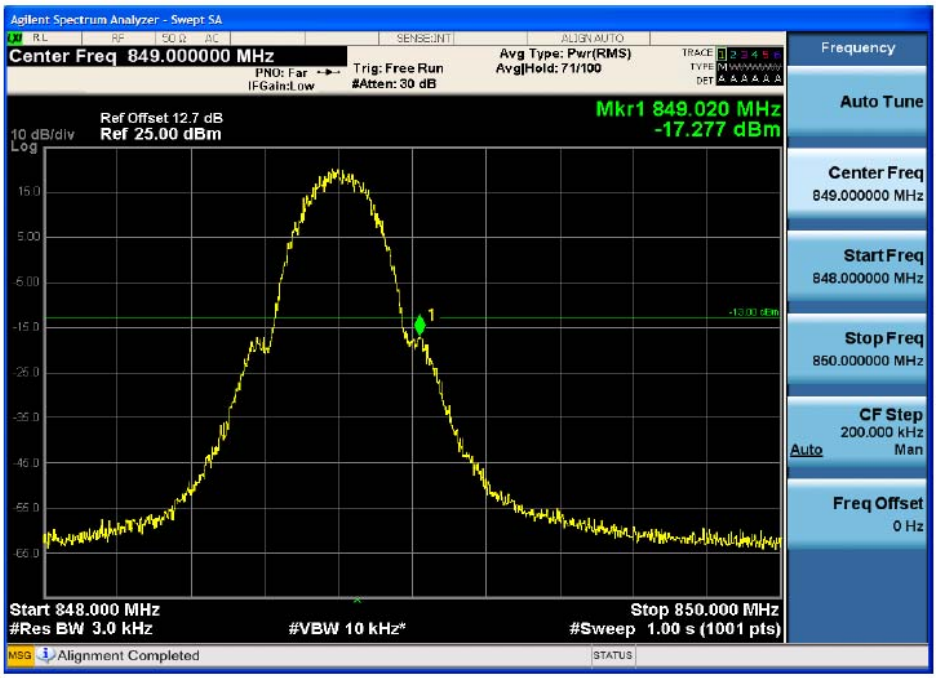
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

9.1.5 TEST RESULTS

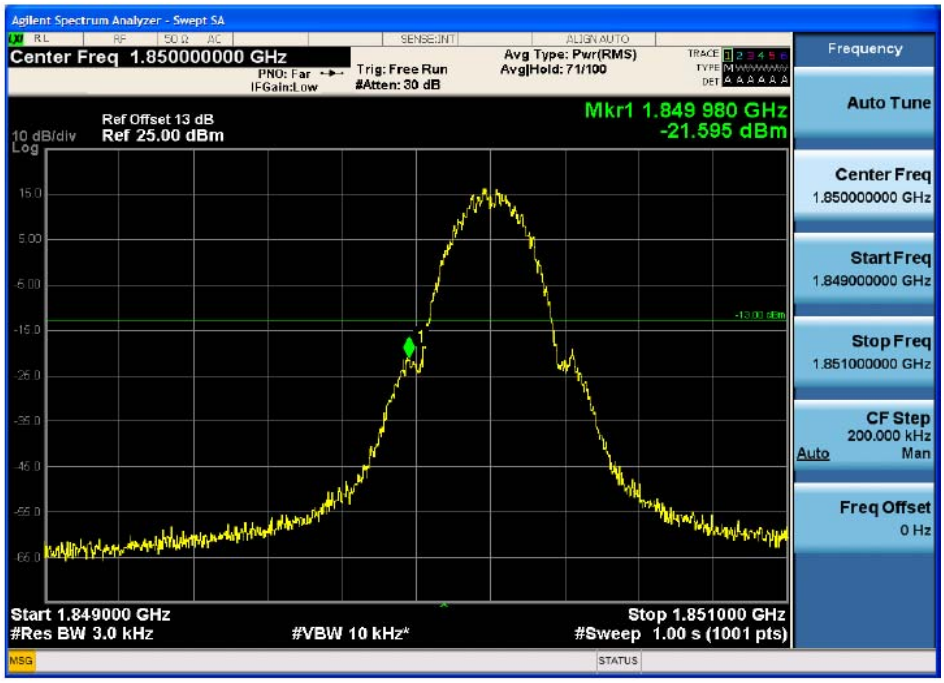
NOTE: ALL MODE HAS BEEN TESTED, ONLY WORST DATA SHOWN IN THIS REPORT.

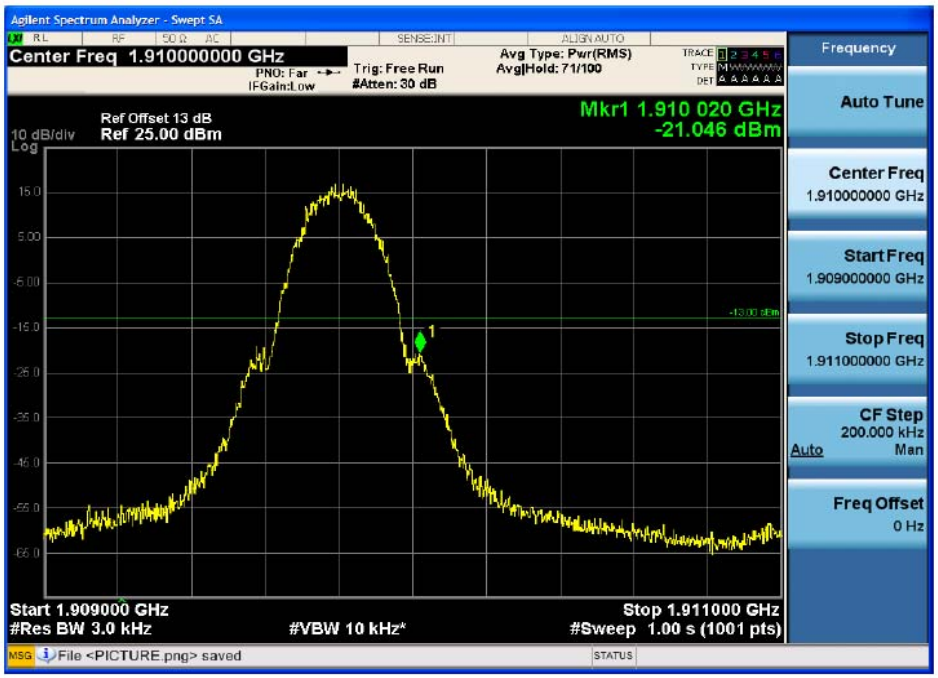
Test Mode: GPRS 850





Test Mode: GPRS 1900





10. CONDUCTED EMISSION MEASUREMENT

10.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

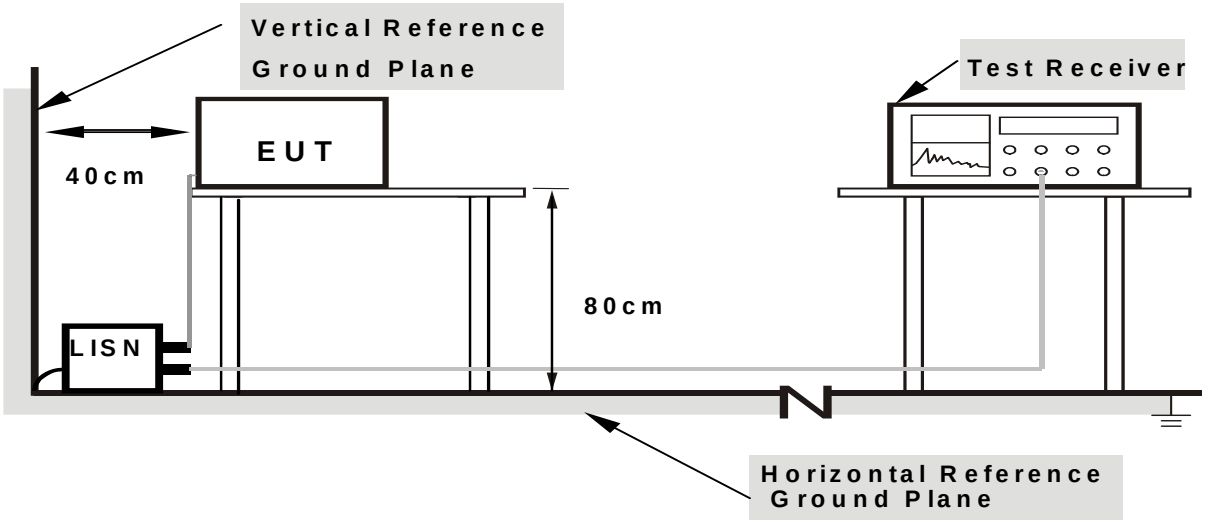
10.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

10.3 DEVIATION FROM TEST STANDARD

No deviation

10.4 TEST SETUP



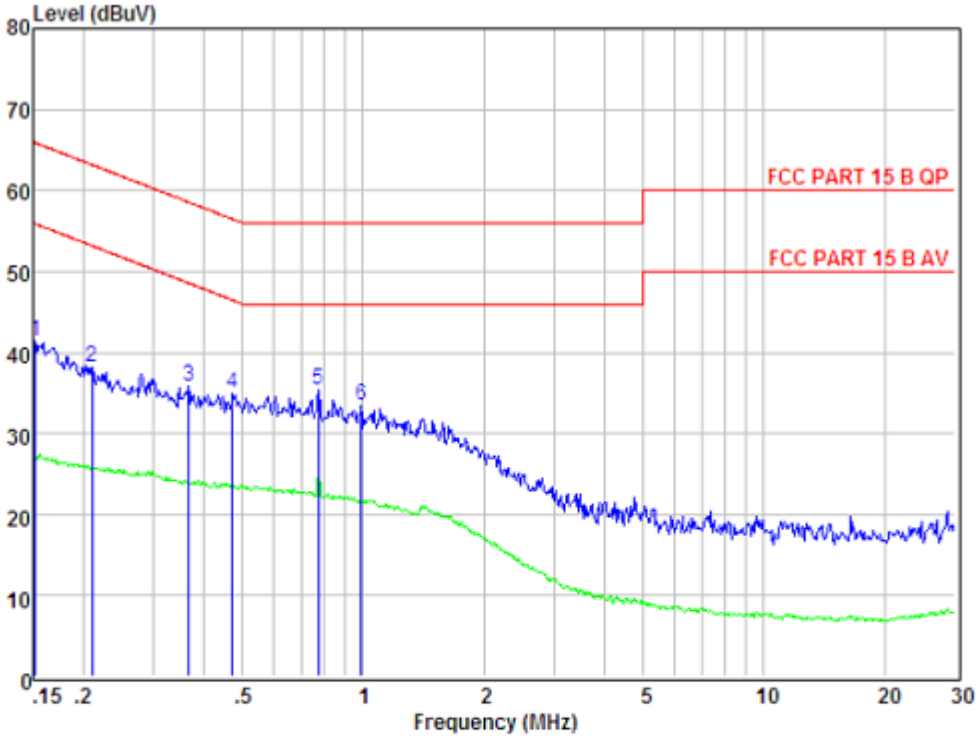
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

10.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

10.6 TEST RESULTS

EUT：	XipPos	Model Name. ：	XipPos
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 3.7V from battery AC 120V/60Hz	Test Mode：	TX

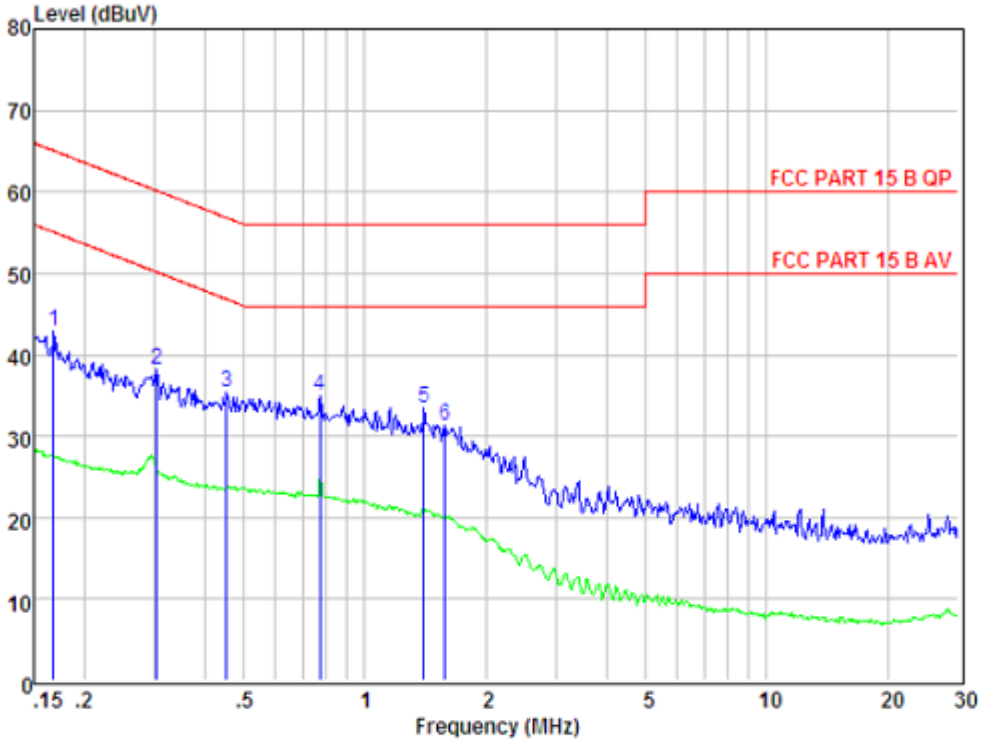


Condition : FCC PART 15 B QP POL: LINE Temp: Hum:

Item	Freq	Read	LISN Factor	Preamp Factor	Cable Lose	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.152	31.51	0.03	-9.72	0.10	41.36	65.91	-24.55	QP
2	0.211	28.29	0.03	-9.72	0.10	38.14	63.18	-25.04	QP
3	0.367	25.87	0.03	-9.72	0.10	35.72	58.56	-22.84	QP
4	0.471	25.12	0.03	-9.72	0.10	34.97	56.49	-21.52	QP
5	0.775	25.53	0.00	-9.71	0.10	35.34	56.00	-20.66	QP
6	0.989	23.69	0.04	-9.71	0.10	33.54	56.00	-22.46	QP

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

EUT：	XipPos	Model Name. ：	XipPos
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 3.7V from battery AC 120V/60Hz	Test Mode：	TX



Condition : FCC PART 15 B QP POL: NEUTRAL Temp: Hum:

Item	Freq	Read	LISN Factor	Preamp Factor	Cable Lose	Level	Limit	Margin	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dBuV	
1	0.168	33.04	0.03	-9.72	0.10	42.89	65.08	-22.19	QP
2	0.303	28.30	0.03	-9.72	0.10	38.15	60.15	-22.00	QP
3	0.452	25.44	0.03	-9.72	0.10	35.29	56.85	-21.56	QP
4	0.775	25.18	0.00	-9.71	0.10	34.99	56.00	-21.01	QP
5	1.403	23.65	0.05	-9.71	0.10	33.51	56.00	-22.49	QP
6	1.585	21.35	0.05	-9.71	0.10	31.21	56.00	-24.79	QP

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss