

FCC 47 CFR PART 22H and 24E**RF Test Report**

Product Type : Wireless module
Applicant : Telit Communications S.p.A.
Address : Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy
Trade Name : Telit
Model Number : GE866-QUAD
Test Specification : FCC 47 CFR PART 22H: Oct, 2012
FCC 47 CFR PART 24E: Oct, 2012
CANADA RSS-132 ISSUE 3: Jan. 2013
CANADA RSS-133 ISSUE 6: Jan. 2013
Canada RSS-Gen ISSUE 3: Dec., 2010
ANSI/TIA-603-C-2004
Application Purpose : Original
Receive Date : Jan. 24, 2014
Test Period : Jan. 29 ~ Feb. 07, 2014
Issue Date : Apr. 16, 2014

Issue by

A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Feb. 24, 2014	Initial Issue	
01	Apr. 03, 2014	Revised report information	Peggy Chang
02	Apr. 16, 2014	Revised antenna gain and field strength of spurious radiation (RX) plots.	Joyce Liao

Verification of Compliance

Issued Date: 04/16/2014

Product Type : Wireless module

Applicant : Telit Communications S.p.A.

Address : Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy

Trade Name : Telit

Model Number : GE866-QUAD

FCC ID : RI7GE866

IC : 5131A-GE866

EUT Rated Voltage : DC 3.8V

Test Voltage : DC 3.4V / 3.8V / 4.2V

Applicable Standard : FCC 47 CFR PART 22H: Oct, 2012
FCC 47 CFR PART 24E: Oct, 2012
CANADA RSS-132 ISSUE 3: Jan. 2013
CANADA RSS-133 ISSUE 6: Jan. 2013
Canada RSS-Gen ISSUE 3: Dec., 2010
ANSI/TIA-603-C-2004

Application Purpose : Original

Test Result : Complied

Performing Lab. : A Test Lab Techno Corp.
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Taiwan Accreditation Foundation accreditation number: 1330
<http://www.atl-lab.com.tw/e-index.htm>



The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2009 and the energy emitted by the sample tested as described in this report is in compliance with the requirements of FCC Rules Part 22H, Part 24E.

The test results of this report relate only to the tested sample identified in this report.

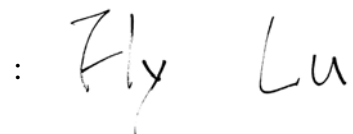
Approved By :



(Manager)

(Eric Chan)

Reviewed By :



(Testing Engineer)

(Fly Lu)

TABLE OF CONTENTS

1	General Information	6
1.1.	EUT Description	6
1.2.	Mode of Operation.....	7
1.3.	EUT Exercise Software	7
1.4.	Configuration of Test System Details	7
1.5.	Test Site Environment	8
1.6.	Summary of Test Result	8
2	RF Output Power Test	9
2.1.	Limit	9
2.2.	Test Instruments	9
2.3.	Test Setup.....	9
2.4.	Test Procedure	9
2.5.	Uncertainty	9
2.6.	Test Result.....	10
3	Effective Radiated Power / Equivalent Isotropic Radiated Power Test.....	11
3.1.	Limit	11
3.2.	Test Instruments	11
3.3.	Test Setup.....	11
3.4.	Test Procedure	11
3.5.	Uncertainty	11
3.6.	Test Result.....	12
4	Occupied Bandwidth Test.....	13
4.1.	Limit	13
4.2.	Test Instruments	13
4.3.	Setup	13
4.4.	Test Procedure	14
4.5.	Uncertainty	14
4.6.	Test Result.....	14
4.7.	Test Graphs	15
5	Band Edge Test	17
5.1.	Limit	17
5.2.	Test Instruments	17
5.3.	Setup	17
5.4.	Test Procedure	18
5.5.	Uncertainty	18
5.6.	Test Result.....	18
5.7.	Test Graphs	19

6	Conducted Spurious Emission Test	21
6.1.	Limit	21
6.2.	Test Instruments	21
6.3.	Setup	21
6.4.	Test Procedure	22
6.5.	Uncertainty	22
6.6.	Test Result.....	22
7	Field Strength of Spurious Radiation Test	57
7.1.	Limit	57
7.2.	Test Instruments	57
7.3.	Setup	58
7.4.	Test Procedure	58
7.5.	Uncertainty	59
7.6.	Test Result.....	60
8	Frequency Stability (Temperature & Voltage Variation) Test	82
8.1.	Limit	82
8.2.	Test Instruments	82
8.3.	Setup	82
8.4.	Test Procedure	83
8.5.	Uncertainty	83
8.6.	Test Result.....	84

1 General Information

1.1. EUT Description

Applicant		Telit Communications S.p.A.			
Applicant Address		Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy			
Manufacturer		Telit Communications S.p.A.			
Manufacturer Address		Viale Stazione di Prosecco 5/b, 34010, Trieste, Italy			
Product Type		Wireless module			
Trade Name		Telit			
Model Number		GE866-QUAD			
Hardware Version		0			
Software Version		16.01.200			
FCC ID		RI7GE866			
IC		5131A-GE866			
Mode	GSM/GPRS	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		850	824.2 ~ 848.8	869.2 ~ 893.8	GMSK
		1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8	GMSK
Channel Control		Auto			
Type of Antenna		1/4 λ Mobile Antenna			
Antenna Gain (dBi)		GSM/GPRS 850 : 6.42 dBi GSM/GPRS 1900 : 1.99 dBi			
Max. RF Output power		GSM/GPRS 850 : 33.28 dBm / 2.128 W GSM/GPRS 1900 : 30.09 dBm / 1.021 W			
Max. ERP/EIRP		GSM/GPRS 850 : 38.05 dBm / 6.38 W GSM/GPRS 1900 : 32.59 dBm / 1.82 W			
Emission Designator		GSM/GPRS 850 : 245KGXW GSM/GPRS 1900 : 246KGXW			

1.2. Mode of Operation

ATL has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

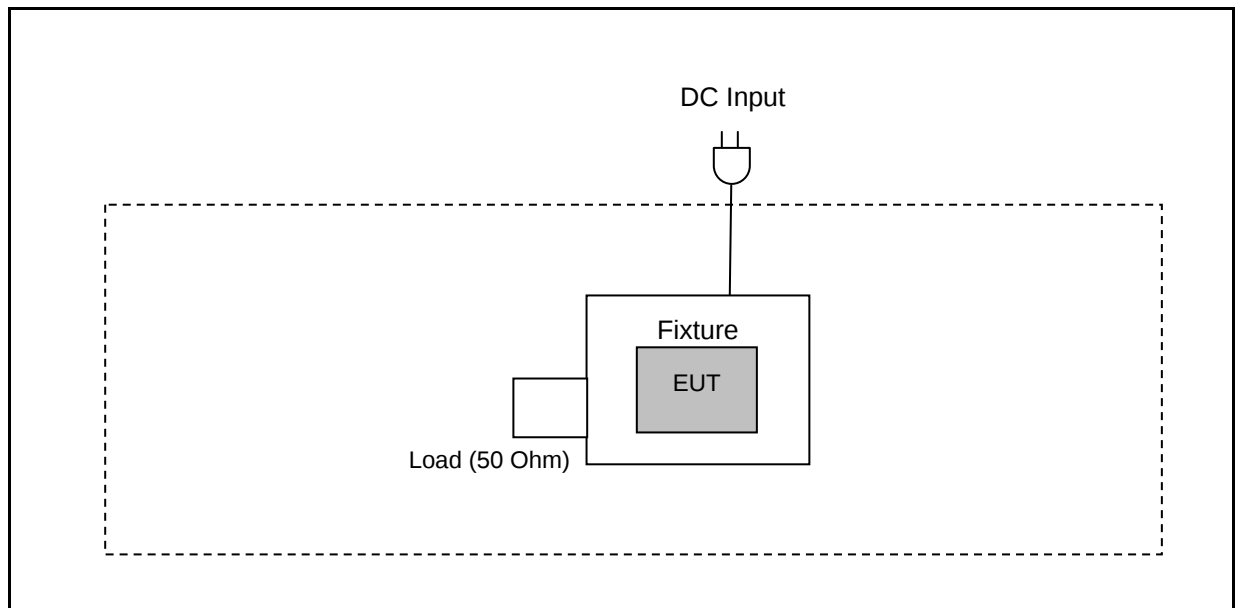
Test Mode
Mode 1: GSM 850 Link Mode
Mode 2: GSM 1900 Link Mode
Mode 3: Receive Mode

Note: Regards to the frequency band operation: the lowest, middle and highest frequency of channel were selected to perform the test, then shown on this report.

1.3. EUT Exercise Software

1	Setup the EUT and Base Station (CMU200) as shown on 1.4.
2	Turn on the power of all equipment.

1.4. Configuration of Test System Details



1.5. Test Site Environment

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	26
Humidity (%RH)	25-75	60
Barometric pressure (mbar)	860-1060	950

1.6. Summary of Test Result

Description	FCC Rule	IC Rule	Limit	Result
Conducted Output Power	§2.1046	N/A	N/A	Pass
Effective Radiated Power	§22.913(a)(2)	RSS-132(4.4) SRSP-503(5.1.3)	< 7 Watts for FCC (<6.3 Watts for IC)	Pass
Equivalent Isotropic Radiated Power	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	< 2 Watts	Pass
Occupied Bandwidth	§2.1049 §22.917(a) §24.238(a)	RSS-Gen (4.6.1)	N/A	Pass
Band Edge Measurement	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1)RSS-133 (6.5.1)	< 43+10log ₁₀ (P[Watts])	Pass
Conducted Spurious Emission	§2.1051 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1)	< 43+10log ₁₀ (P[Watts])	Pass
Field Strength of Spurious Radiation	§2.1053 §22.917(a) §24.238(a)	RSS-132 (4.5.1) RSS-133 (6.5.1) RSS-Gen (4.10)	< 43+10log ₁₀ (P[Watts])	Pass
Frequency Stability for Temperature & Voltage	§2.1055 §22.355 §24.235	RSS-132(4.3) RSS-133(6.3)	< 2.5 ppm	Pass

2 RF Output Power Test

2.1. Limit

N/A

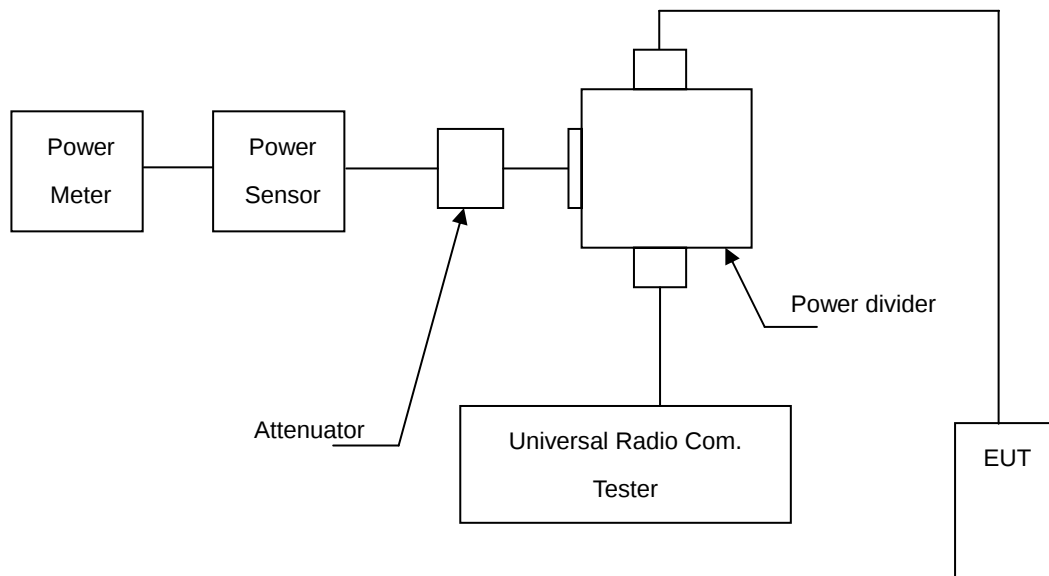
2.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Single Channel PK Power Sensor	Agilent	N1911A	MY45101619	12/21/2013	(1)
Wideband Power Meter	Agilent	N1921A	MY45241957	12/21/2013	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

2.3. Test Setup



2.4. Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

1. The transmitter output was connected to power meter and base station through Power Divider.
2. Set base station for EUT at GSM 850: PCL=5 and PCS 1900: PCL=0.
3. Set base station for EUT at WCDMA Band V and WCDMA Band II, power level was set to maximum.
4. Select lowest, middle, and highest channels for each band.

2.5. Uncertainty

The measurement uncertainty is defined as for RF output power measurement is 1.2 dB.

2.6. Test Result

Model Number	GE866-QUAD						
Test Item	RF Output Power						
Date of Test	01/29/2014			Test Site		TE05	
Bands	Modulation Type	Data Rate	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
GSM 850	GMSK	-----	824.2	33.09	2.037	33.28	2.128
			836.6	33.07	2.028	33.24	2.109
			848.8	32.96	1.977	33.16	2.070
GRRS 850 Multi Class :10 Max Up:2 Max Down:4 Sum:5	GMSK	4Down1Up (Duty Factor 1/8)	824.2	33.06	2.023	33.22	2.099
			836.6	33.01	2.000	33.18	2.080
			848.8	32.91	1.954	33.10	2.042
		3Down2Up (Duty Factor 2/8)	824.2	33.02	2.004	33.17	2.075
			836.6	32.97	1.982	33.13	2.056
			848.8	32.87	1.936	33.05	2.018

Note: The peak power testing result was used peak detector.

Model Number	GE866-QUAD						
Test Item	RF Output Power						
Date of Test	01/29/2014			Test Site		TE05	
Bands	Modulation Type	Data Rate	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
GSM 1900	GMSK	-----	1850.20	29.95	0.989	30.09	1.021
			1880.00	29.79	0.953	29.96	0.991
			1909.80	29.67	0.927	29.81	0.957
GRRS 1900 Multi Class :10 Max Up:2 Max Down:4 Sum:5	GMSK	4Down1Up (Duty Factor 1/8)	1850.20	29.88	0.973	30.03	1.007
			1880.00	29.78	0.951	29.92	0.982
			1909.80	29.64	0.920	29.74	0.942
		3Down2Up (Duty Factor 2/8)	1850.20	29.85	0.966	30.00	1.000
			1880.00	29.75	0.944	29.89	0.975
			1909.80	29.62	0.916	29.71	0.935

Note: The peak power testing result was used peak detector.

3 Effective Radiated Power / Equivalent Isotropic Radiated Power Test

3.1. Limit

For FCC Part 22.913(a)(2): The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

For FCC Part 24.232(b): The EIRP of mobile transmitters and auxiliary test transmitters must not exceed 2 Watts.

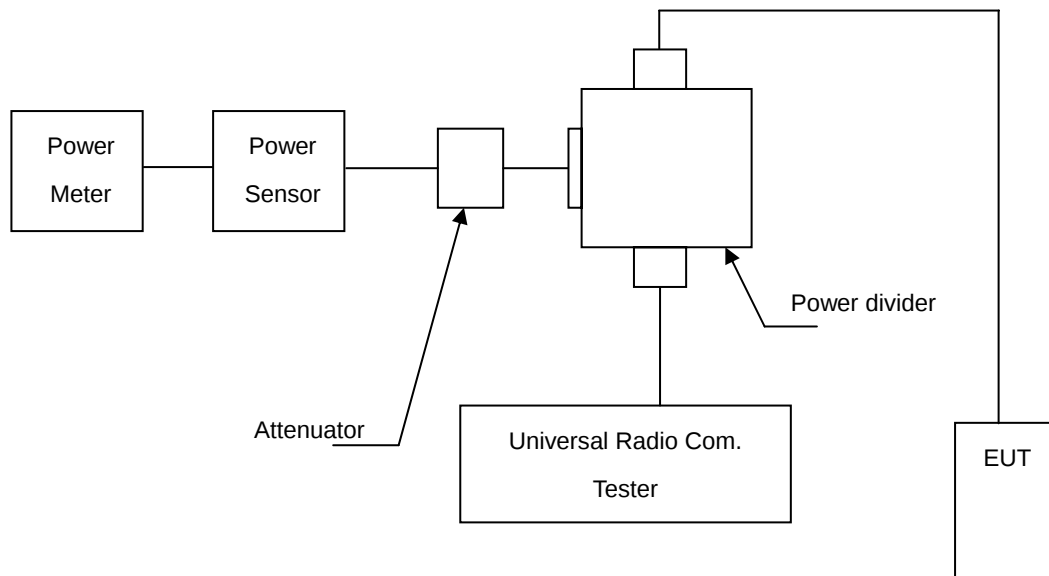
3.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Single Channel PK Power Sensor	Agilent	N1911A	MY45101619	12/21/2013	(1)
Wideband Power Meter	Agilent	N1921A	MY45241957	12/21/2013	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

3.3. Test Setup



3.4. Test Procedure

The measurement is made according to ANSI/TIA-603-C-2004 as follows:

1. The transmitter output was connected to power meter and base station through Power Divider.
2. Set base station for EUT at GSM 850: PCL=5 and PCS 1900: PCL=0.
3. Set base station for EUT at WCDMA Band V and WCDMA Band II, power level was set to maximum.
4. Select lowest, middle, and highest channels for each band.

3.5. Uncertainty

The measurement uncertainty is defined as for RF output power measurement is 1.2 dB.

3.6. Test Result

Model Number	GE866-QUAD						
Test Item	ERP/EIRP						
Date of Test	01/29/2014				Test Site	TE01	
Bands	Modulation Type	Frequency (MHz)	Peak Conducted power (dBm)	Antenna Gain (dBi)	ERP		Limit
					(dBm)	(W)	
GSM 850	GMSK	824.2	33.28	6.92	38.05	6.38	< 7W
		836.6	33.24	6.92	38.01	6.32	< 7W
		848.8	33.16	6.92	37.93	6.21	< 7W

Model Number	GE866-QUAD						
Test Item	ERP/EIRP						
Date of Test	01/18/2014				Test Site	TE01	
Bands	Modulation Type	Frequency (MHz)	Peak Conducted power (dBm)	Antenna Gain (dBi)	EIRP		Limit
					(dBm)	(W)	
GSM 1900	GMSK	1850.20	30.09	2.50	32.59	1.82	< 2W
		1880.00	29.96	2.50	32.46	1.76	< 2W
		1909.80	29.81	2.50	32.31	1.70	< 2W

Note: ERP = Peak Conducted power + Antenna Gain - 2.15, EIRP = Peak Conducted power + Antenna Gain

4 Occupied Bandwidth Test

4.1. Limit

The Occupied Bandwidth Limit:

N/A.

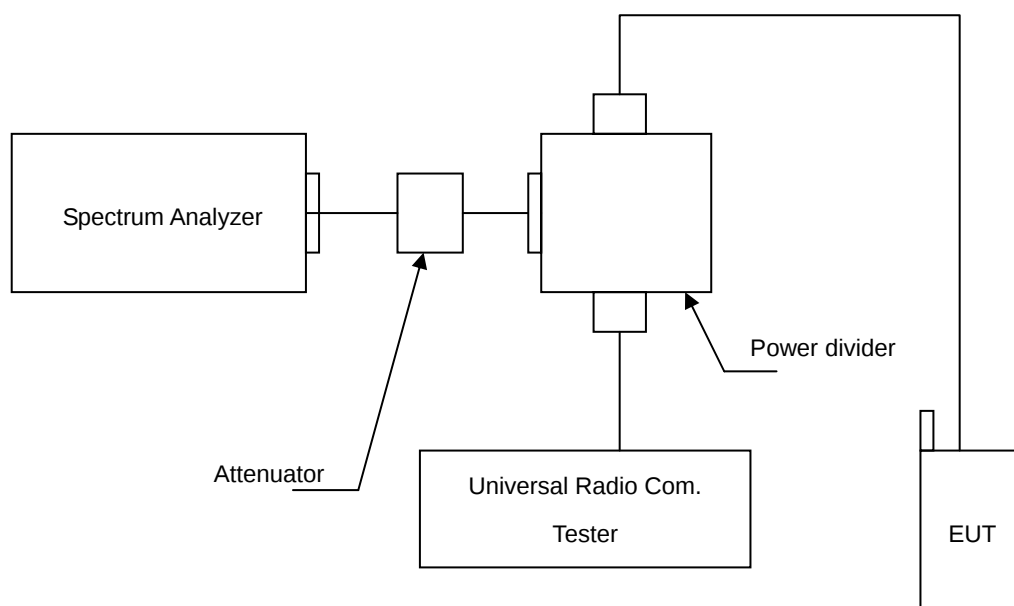
4.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/16/2013	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power Divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

4.3. Setup



4.4. Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT was connected to Spectrum Analyzer and Base Station via Power Divider.
2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.

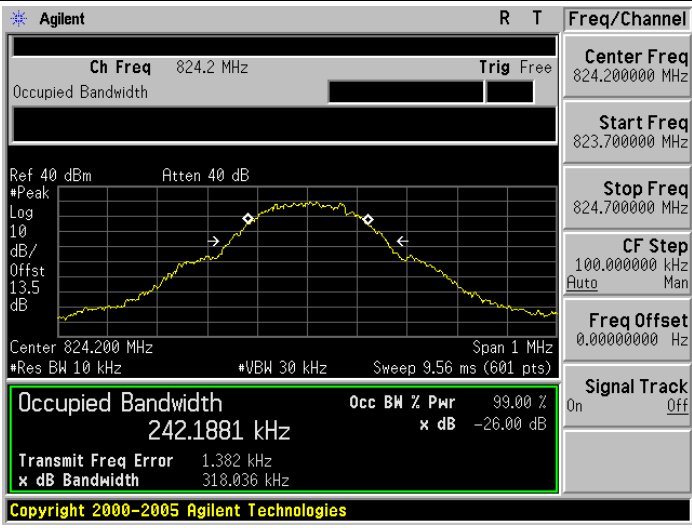
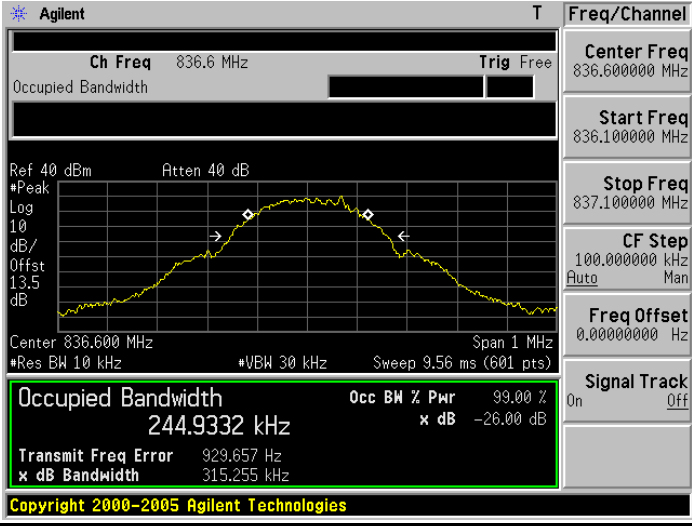
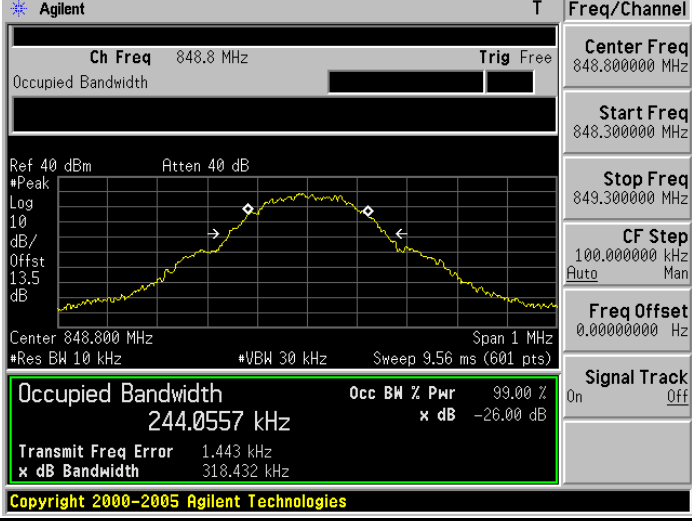
4.5. Uncertainty

The measurement uncertainty is defined as $\pm 10\text{Hz}$

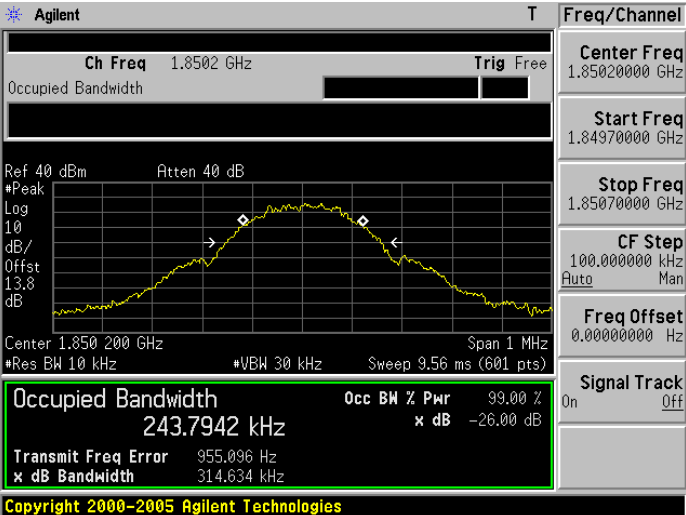
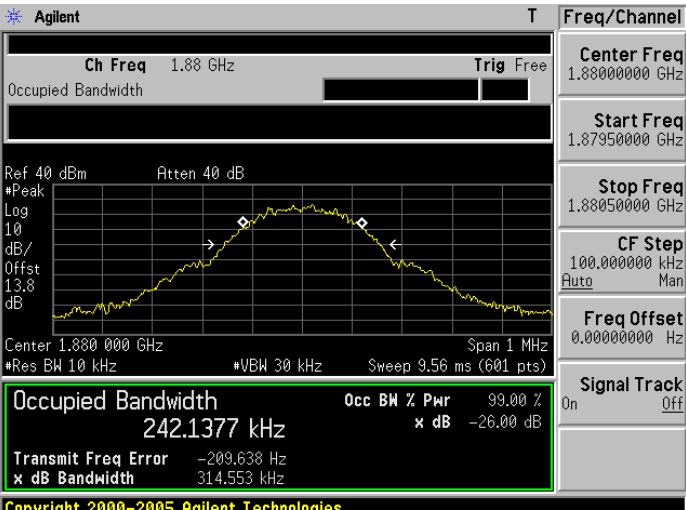
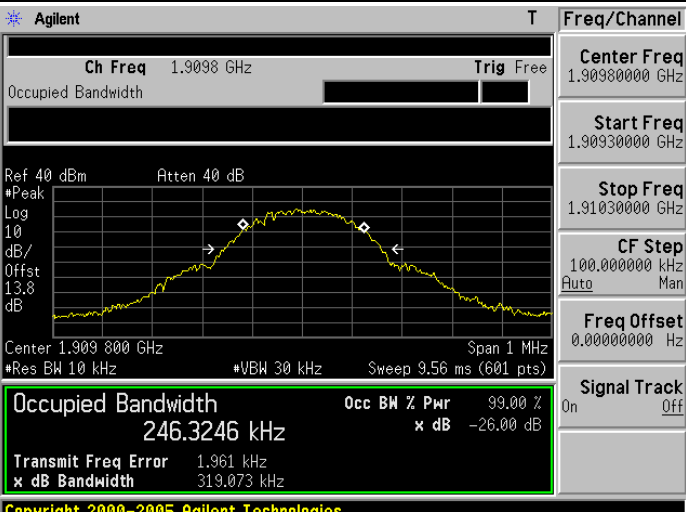
4.6. Test Result

Model Number	GE866-QUAD			
Test Item	Occupied Bandwidth			
Date of Test	01/29/2014			Test Site TE05
Bands	Channel	Frequency (MHz)	99% Bandwidth (kHz)	Note
GSM 850	128	824.2	242.1881	RBW:10KHz , VBW:30KHz
	190	836.6	244.9332	RBW:10KHz , VBW:30KHz
	251	848.8	244.0557	RBW:10KHz , VBW:30KHz
GSM 1900	512	1850.20	243.7942	RBW:10KHz , VBW:30KHz
	661	1880.00	242.1377	RBW:10KHz , VBW:30KHz
	810	1909.80	246.3246	RBW:10KHz , VBW:30KHz

4.7. Test Graphs

Mode 1: GSM 850 Link Mode	
824.2 MHz	 Copyright 2000-2005 Agilent Technologies
836.6 MHz	 Copyright 2000-2005 Agilent Technologies
848.8 MHz	 Copyright 2000-2005 Agilent Technologies

Mode 2: GSM 1900 Link Mode

1850.20 MHz	 Agilent T Freq/Channel Ch Freq 1.8502 GHz Trig Free Center Freq 1.85020000 GHz Start Freq 1.84970000 GHz Stop Freq 1.85070000 GHz CF Step 100.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 40 dBm Atten 40 dB #Peak Log 10 dB/ Offst 13.8 dB Center 1.850 200 GHz Span 1 MHz #Res BW 10 kHz #VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 243.7942 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 955.096 Hz x dB Bandwidth 314.634 kHz Copyright 2000-2005 Agilent Technologies
1880.00 MHz	 Agilent T Freq/Channel Ch Freq 1.88 GHz Trig Free Center Freq 1.88000000 GHz Start Freq 1.87950000 GHz Stop Freq 1.88050000 GHz CF Step 100.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 40 dBm Atten 40 dB #Peak Log 10 dB/ Offst 13.8 dB Center 1.880 000 GHz Span 1 MHz #Res BW 10 kHz #VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 242.1377 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -209.638 Hz x dB Bandwidth 314.553 kHz Copyright 2000-2005 Agilent Technologies
1909.80 MHz	 Agilent T Freq/Channel Ch Freq 1.9098 GHz Trig Free Center Freq 1.90980000 GHz Start Freq 1.90930000 GHz Stop Freq 1.91030000 GHz CF Step 100.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off Ref 40 dBm Atten 40 dB #Peak Log 10 dB/ Offst 13.8 dB Center 1.909 800 GHz Span 1 MHz #Res BW 10 kHz #VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 246.3246 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.961 kHz x dB Bandwidth 319.073 kHz Copyright 2000-2005 Agilent Technologies

5 Band Edge Test

5.1. Limit

The Band Edge Limit:

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

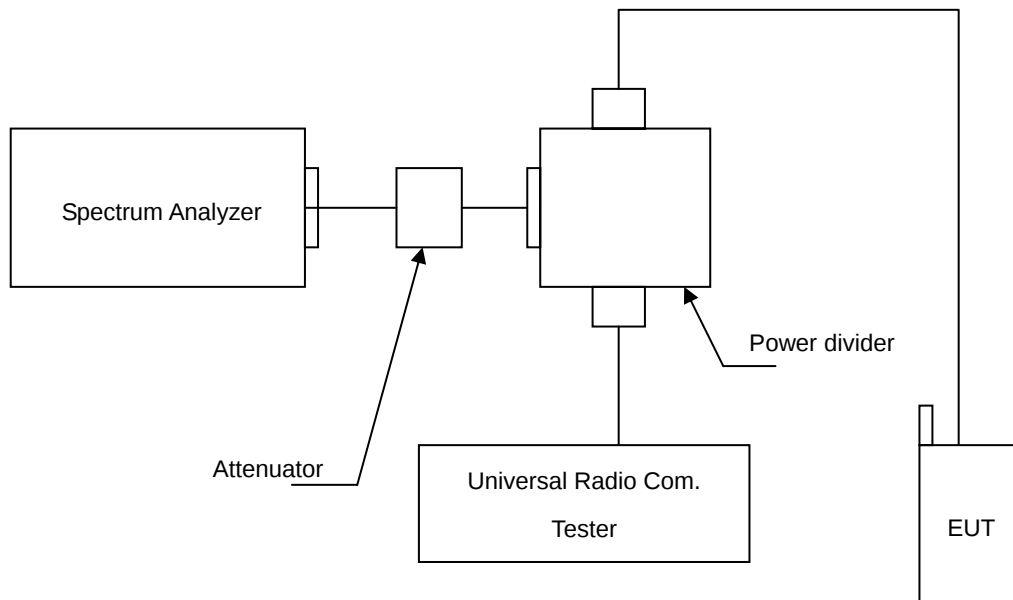
5.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/16/2013	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power Divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

5.3. Setup



5.4. Test Procedure

The measurement is made according to FCC rules part 22 and 24:

3. The EUT was connected to Spectrum Analyzer and Base Station via Power Divider.
4. The band edge of low and high channels for the highest RF powers within the transmitting frequency band were measured. Setting RBW as roughly BW/100.
5. The band edge setting:
 - a. RB=10 kHz; VB=30 kHz for GSM 850 and PCS 1900.
 - b. RB=100 kHz; VB=300 kHz for WCDMA Band V and WCDMA Band II.

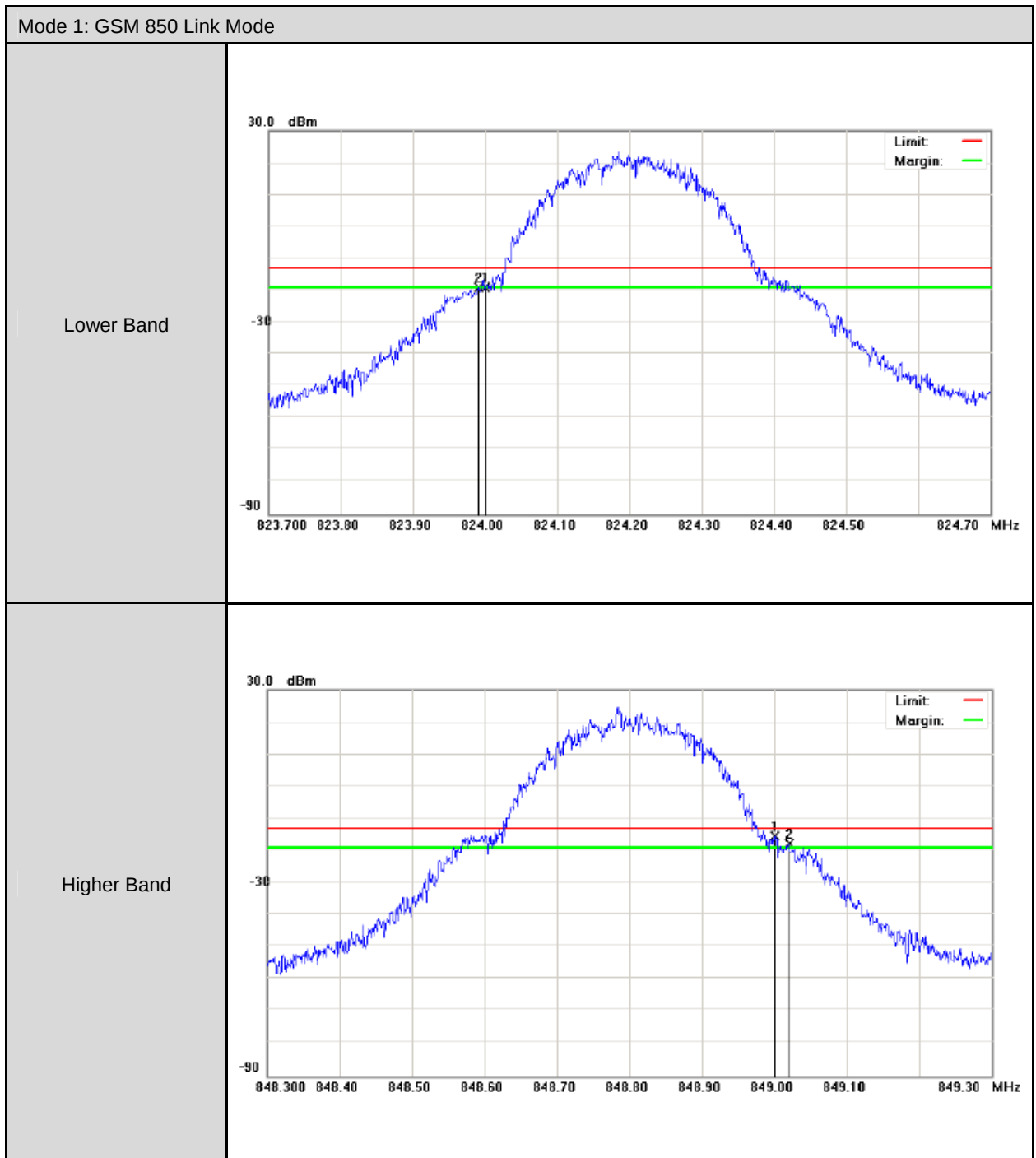
5.5. Uncertainty

The measurement uncertainty is defined as $\pm 10\text{Hz}$

5.6. Test Result

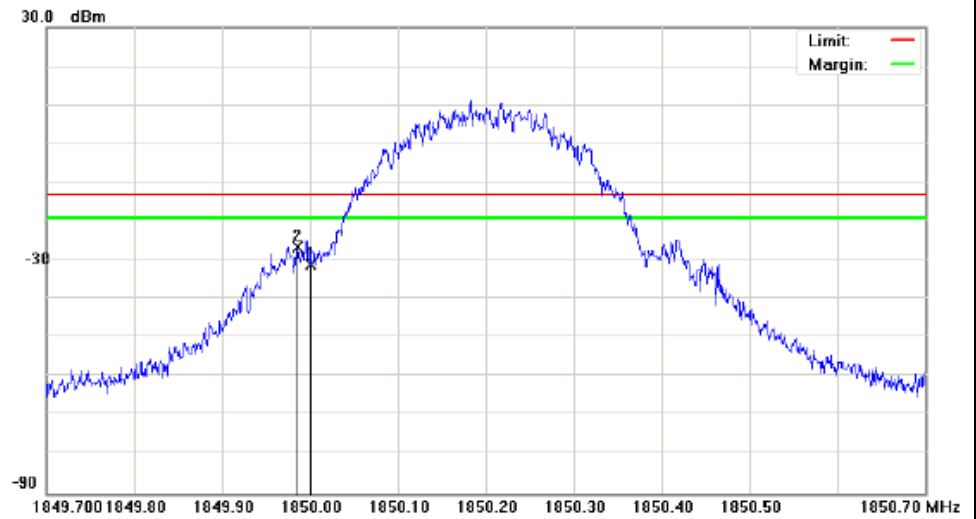
Model Number		GE866-QUAD				
Test Item		Band Edge				
Date of Test		01/29/2014			Test Site	TE05
Bands		Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
GSM 850	Lower	128	824.0000	-19.17	-13	Pass
	Higher	251	849.0000	-15.57	-13	Pass
GSM 1900	Lower	512	1850.000	-26.66	-13	Pass
	Higher	810	1910.000	-24.32	-13	Pass

5.7. Test Graphs

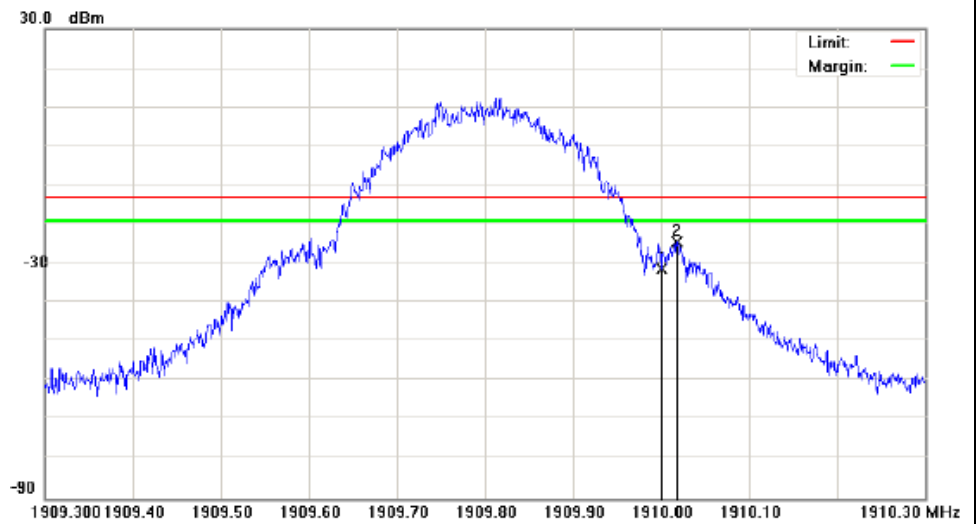


Mode 2: GSM 1900 Link Mode

Lower Band



Higher Band



6 Conducted Spurious Emission Test

6.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

6.2. Test Instruments

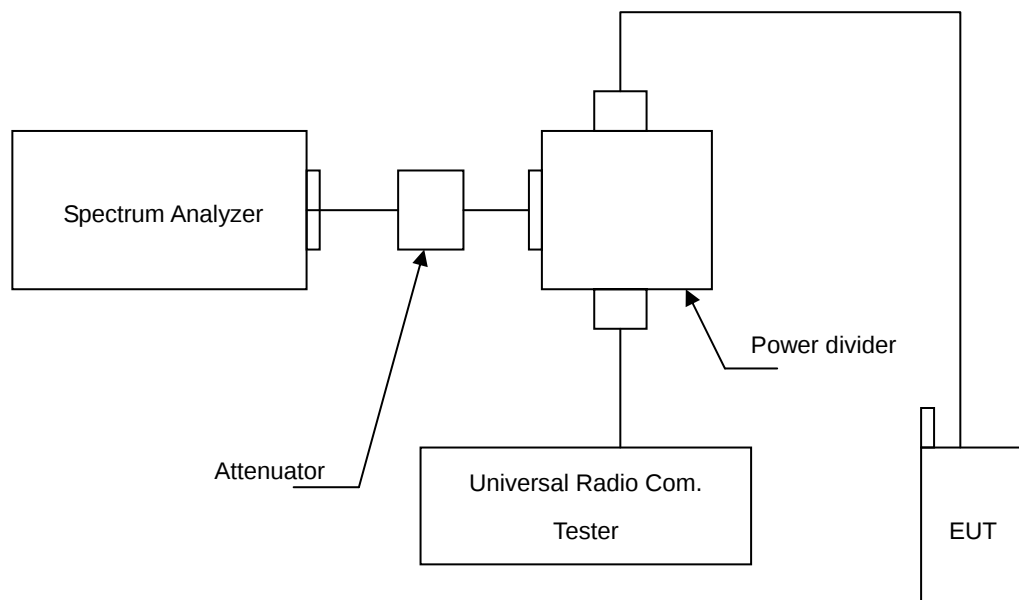
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/16/2013	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power Divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

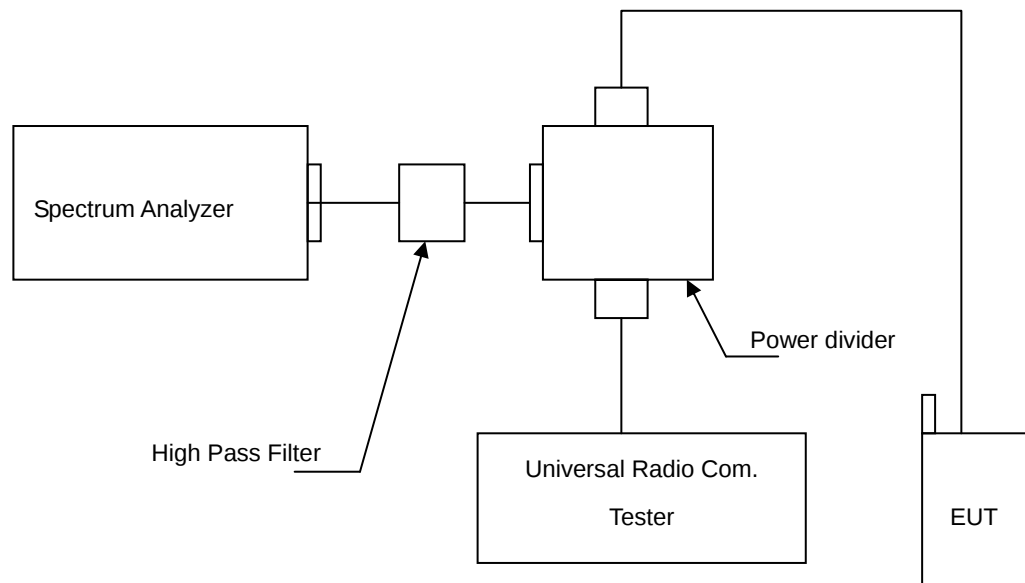
Note: N.C.R. = No Calibration Request.

6.3. Setup

Below 2.8GHz



Above 2.8GHz



6.4. Test Procedure

1. The EUT was connected to Spectrum Analyzer and Base Station via Power Divider.
2. The middle channel for the highest RF power within the transmitting frequency was measured.
3. The conducted spurious emission for the whole frequency range was taken.
4. Test setting at GSM 850 RB>100 kHz, VB>100 kHz; PCS 1900 RB>1MHz, VB>1MHz.

6.5. Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

6.6. Test Result

Model Number	GE866-QUAD		
Test Item	Conducted Emission		
Test Mode	Mode 1 / Mode 2		
Date of Test	01/29/2014	Test Site	TE05

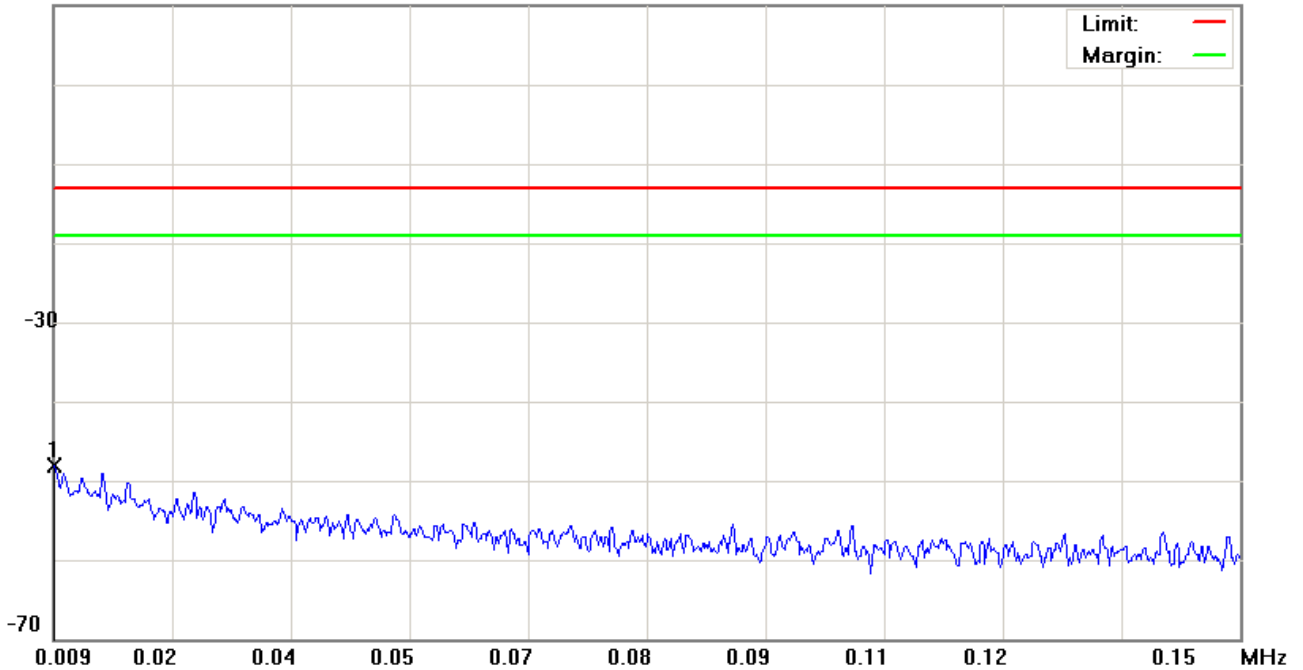
File :GE866-QUAD(CH128)

Data :#1

Date: 2014/1/29

Time: 下午 01:50:57

10.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.0091	-78.67	30.58	-48.09	-13.00	-35.09	peak		

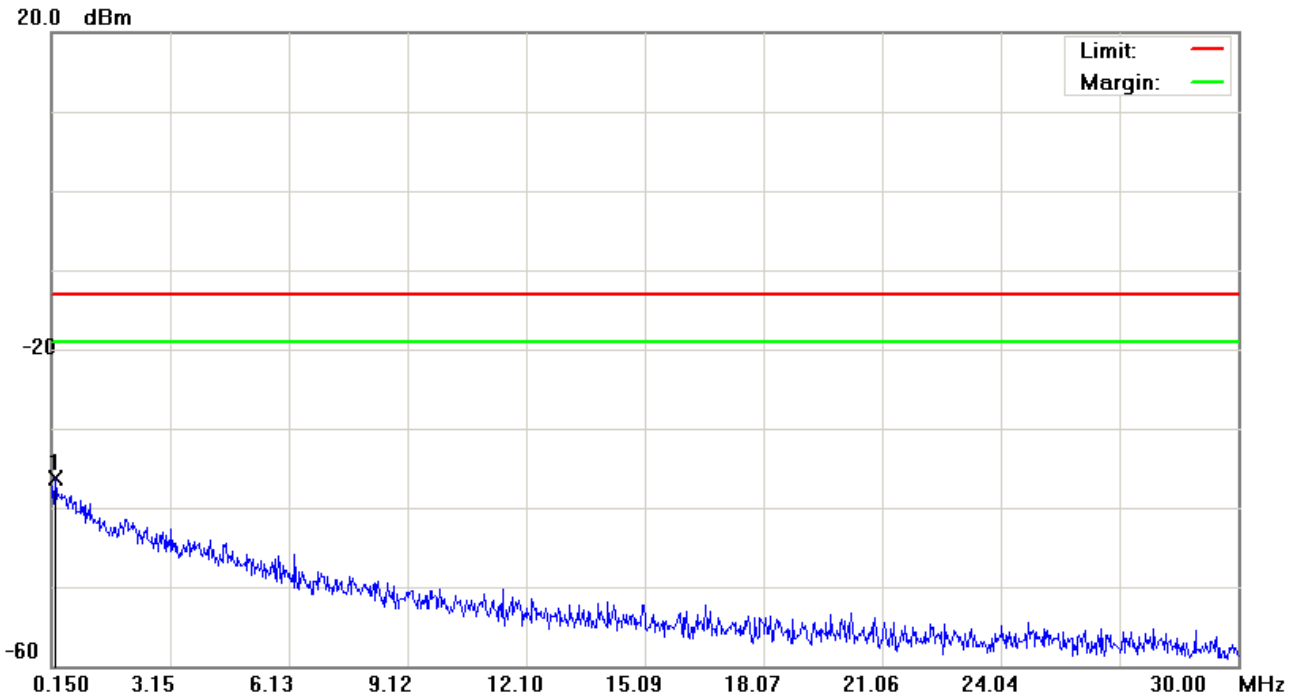
*:Maximum data x:Over limit !:over margin

File :GE866-QUAD(CH128)

Data :#2

Date: 2014/1/29

Time: 下午 01:51:21



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.2395	-67.51	31.24	-36.27	-13.00	-23.27	peak		

*:Maximum data x:Over limit !:over margin

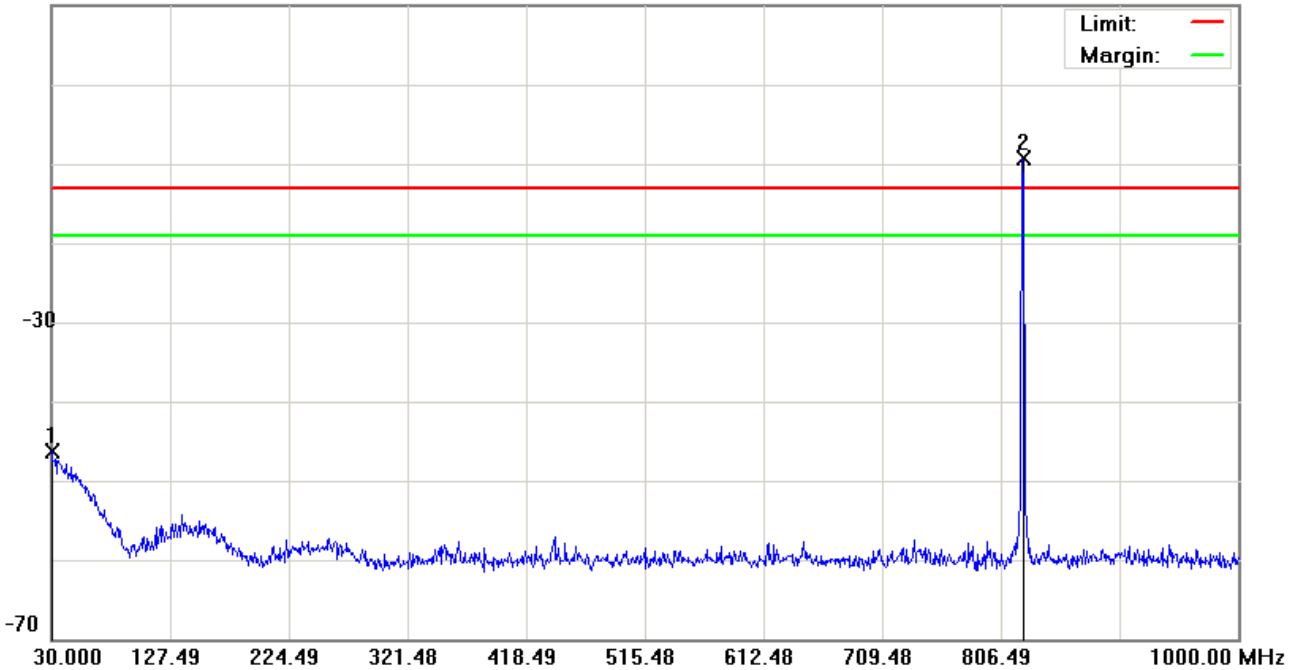
File :GE866-QUAD(CH128)

Data :#3

Date: 2014/1/29

Time: 下午 01:51:45

10.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		30.4850	-63.40	17.16	-46.24	-13.00	-33.24	peak		
2	*	823.9450	-13.22	3.83	-9.39	-13.00	3.61	peak		Tx

*:Maximum data x:Over limit !:over margin

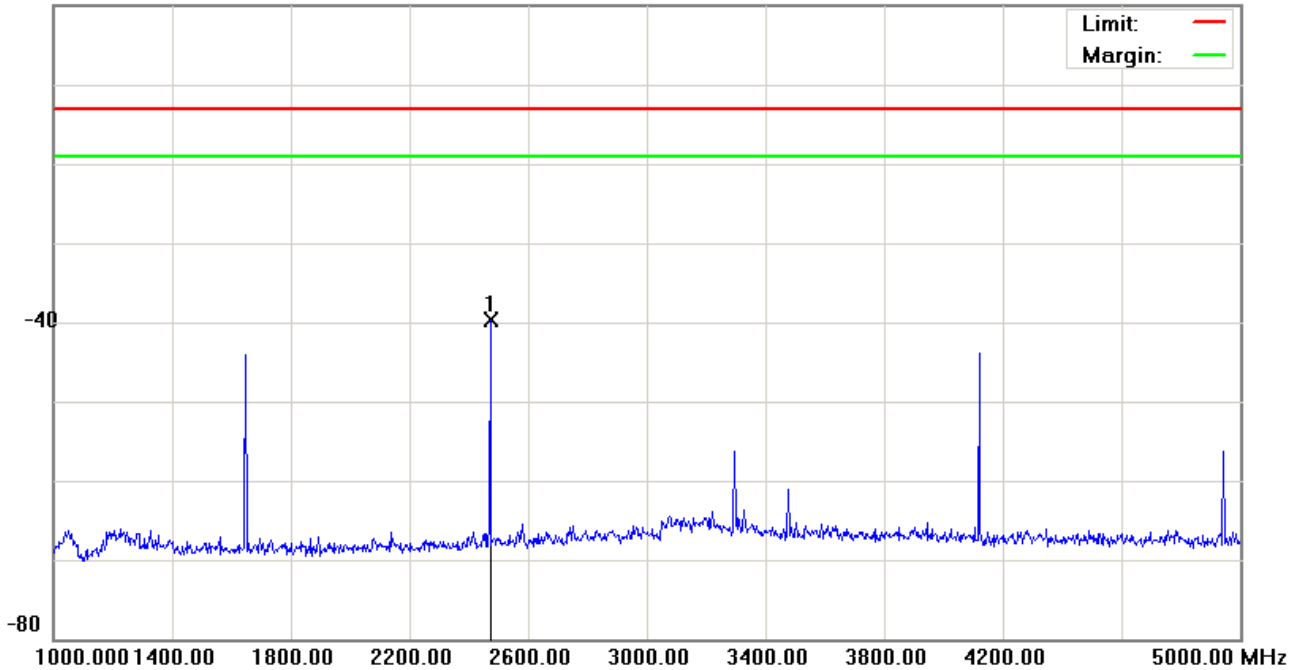
File :GE866-QUAD(CH128)

Data :#4

Date: 2014/1/29

Time: 下午 02:05:51

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	2472.000	-44.20	4.45	-39.75	-13.00	-26.75	peak		

*:Maximum data x:Over limit !:over margin

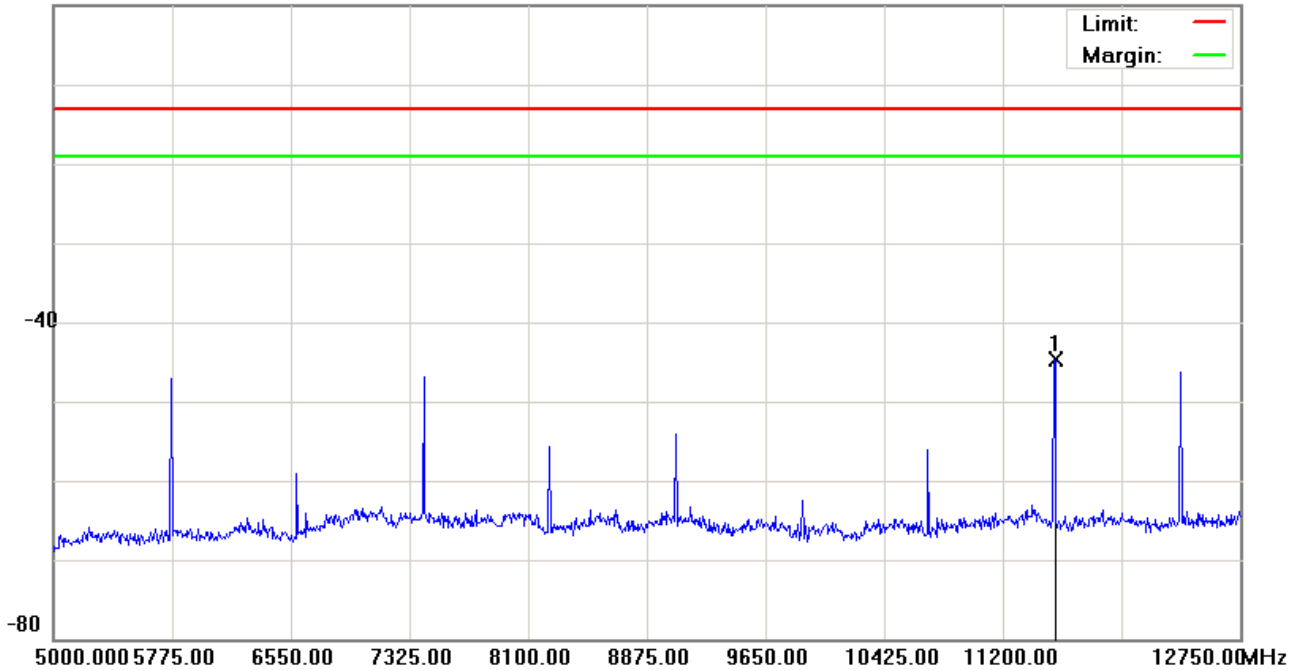
File :GE866-QUAD(CH128)

Data :#5

Date: 2014/1/29

Time: 下午 02:06:14

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	11537.125	-49.60	4.94	-44.66	-13.00	-31.66	peak		

*:Maximum data x:Over limit !:over margin

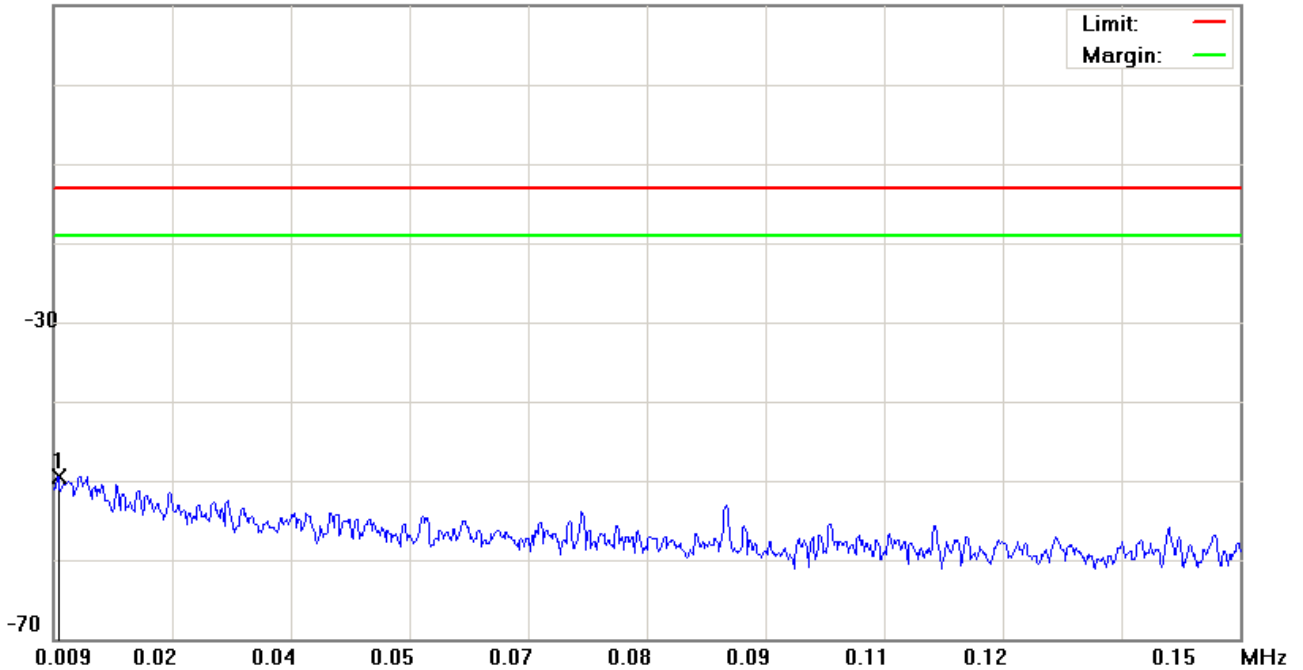
File :GE866-QUAD(CH190)

Data :#1

Date: 2014/1/29

Time: 下午 01:53:35

10.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.0095	-79.99	30.58	-49.41	-13.00	-36.41	peak		

*:Maximum data x:Over limit !:over margin

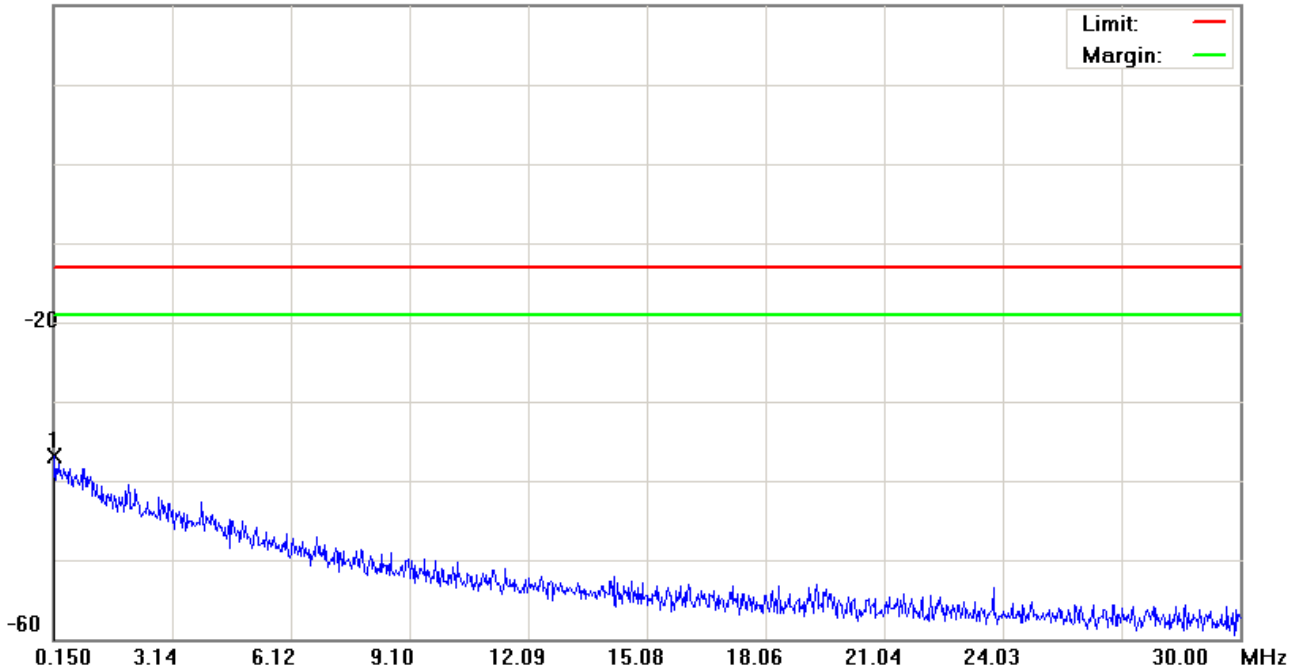
File :GE866-QUAD(CH190)

Data :#2

Date: 2014/1/29

Time: 下午 01:53:59

20.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.1798	-67.61	30.75	-36.86	-13.00	-23.86	peak		

*:Maximum data x:Over limit !:over margin

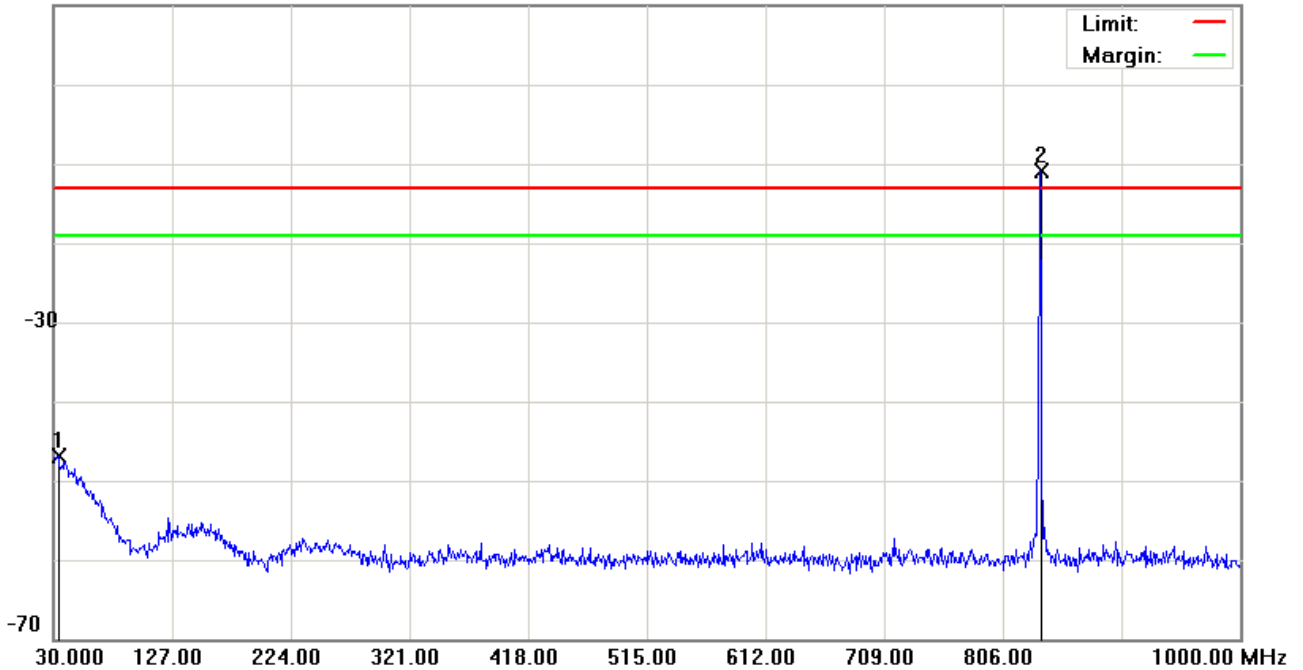
File :GE866-QUAD(CH190)

Data :#3

Date: 2014/1/29

Time: 下午 01:54:23

10.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		33.8800	-63.73	16.77	-46.96	-13.00	-33.96	peak		
2	*	836.5550	-14.88	3.96	-10.92	-13.00	2.08	peak		Tx

*:Maximum data x:Over limit !:over margin

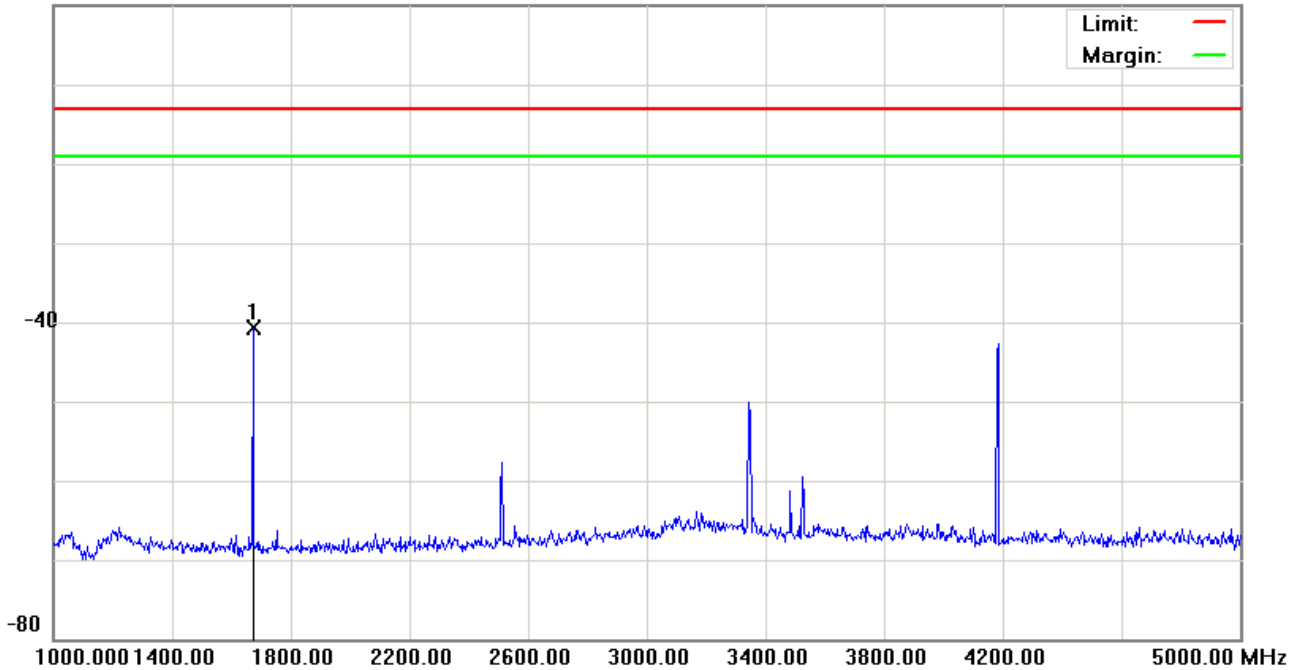
File :GE866-QUAD(CH190)

Data :#4

Date: 2014/1/29

Time: 下午 02:07:03

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	1674.000	-45.07	4.46	-40.61	-13.00	-27.61	peak		

*:Maximum data x:Over limit !:over margin

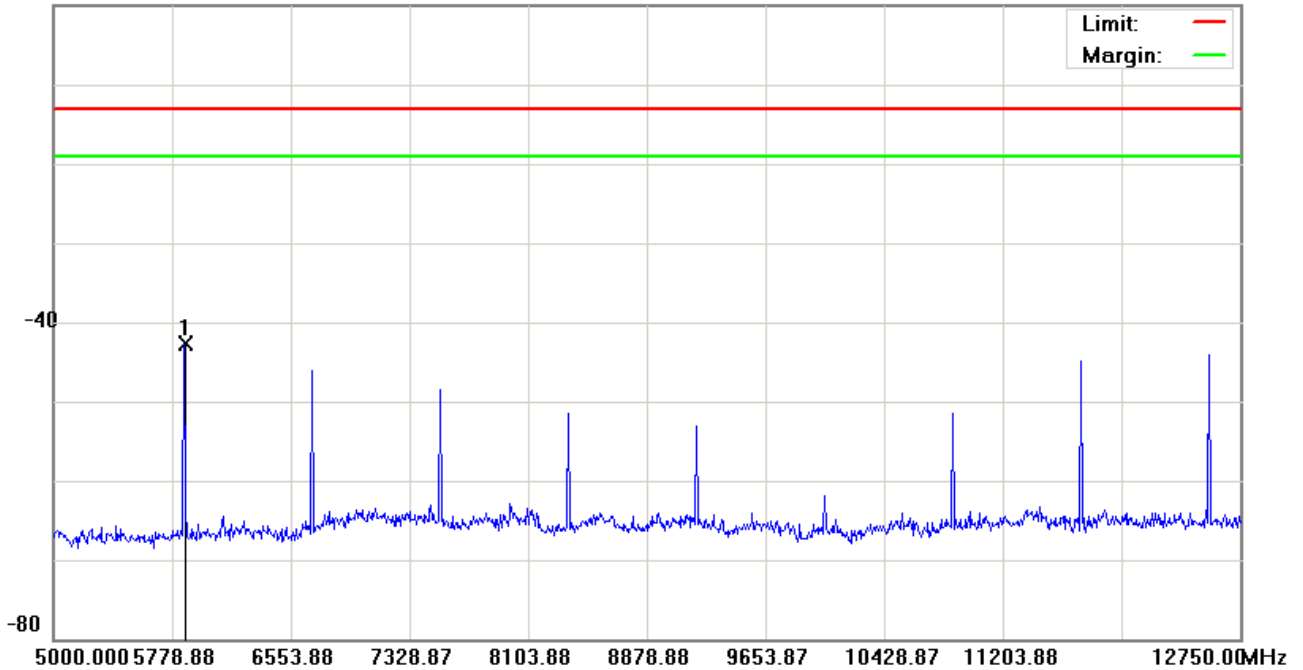
File :GE866-QUAD(CH190)

Data :#5

Date: 2014/1/29

Time: 下午 02:07:26

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	5856.375	-47.64	4.88	-42.76	-13.00	-29.76	peak		

*:Maximum data x:Over limit !:over margin

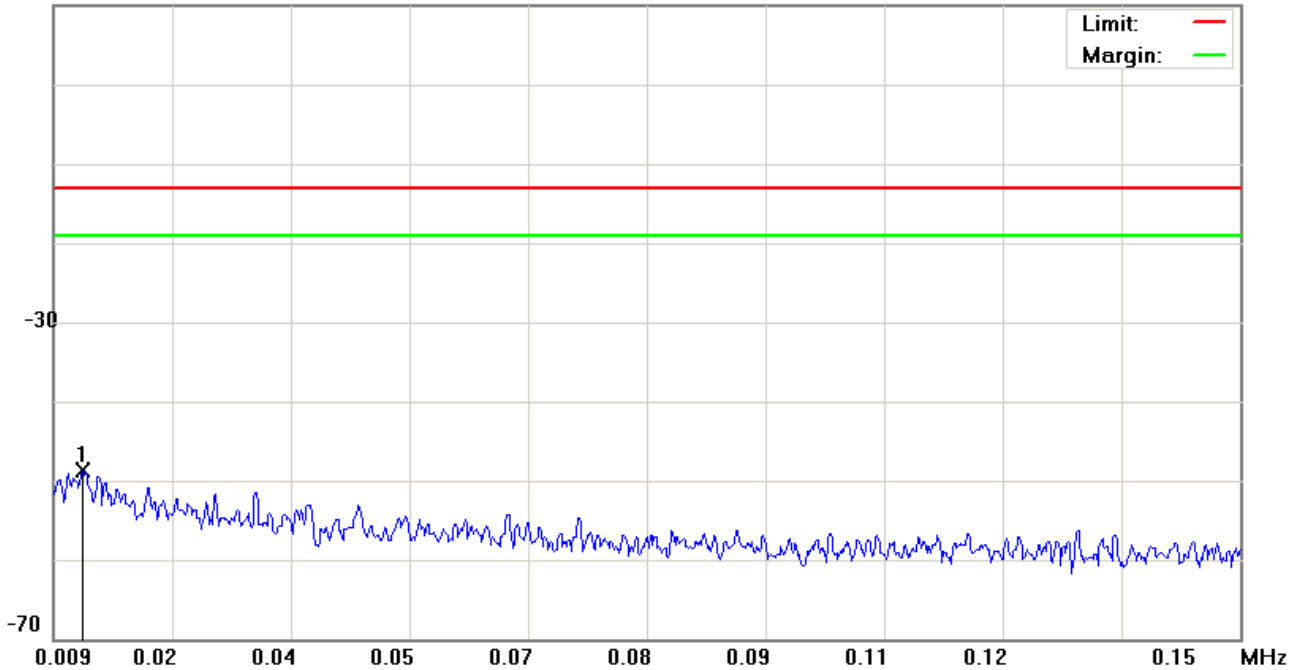
File :GE866-QUAD(CH251)

Data :#1

Date: 2014/1/29

Time: 下午 01:56:01

10.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.0125	-79.36	30.56	-48.80	-13.00	-35.80	peak		

*:Maximum data x:Over limit !:over margin

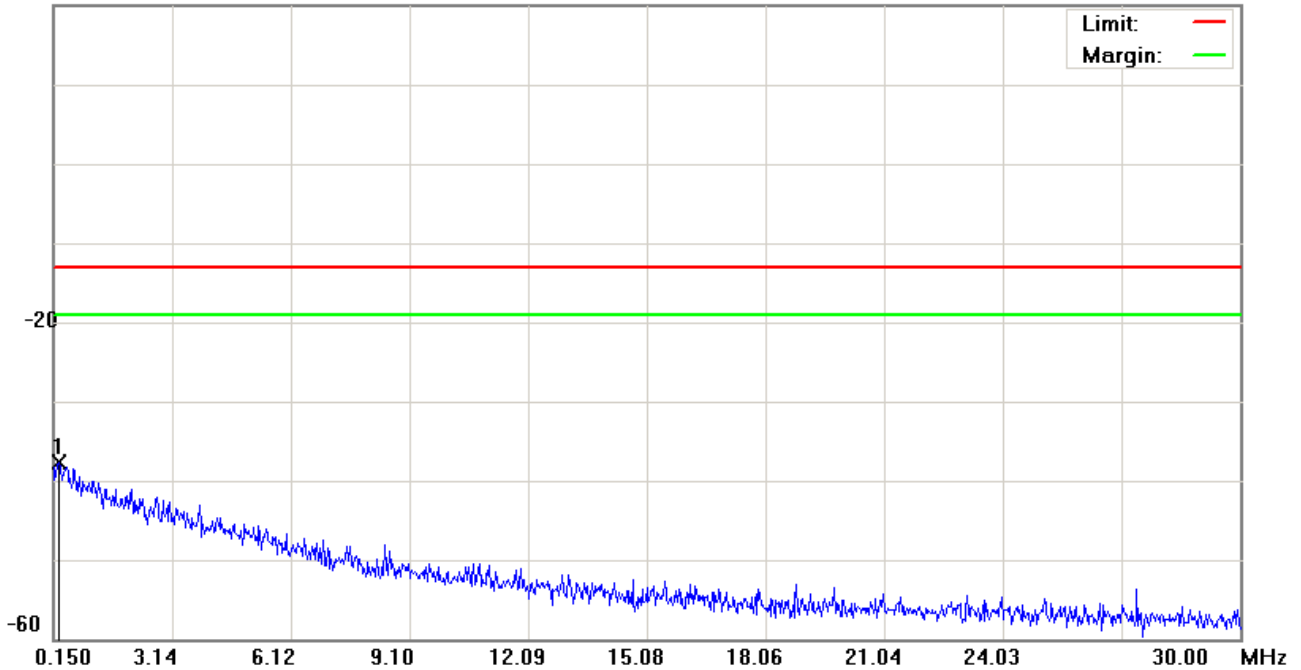
File :GE866-QUAD(CH251)

Data :#2

Date: 2014/1/29

Time: 下午 01:56:25

20.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.2993	-69.36	31.73	-37.63	-13.00	-24.63	peak		

*:Maximum data x:Over limit !:over margin

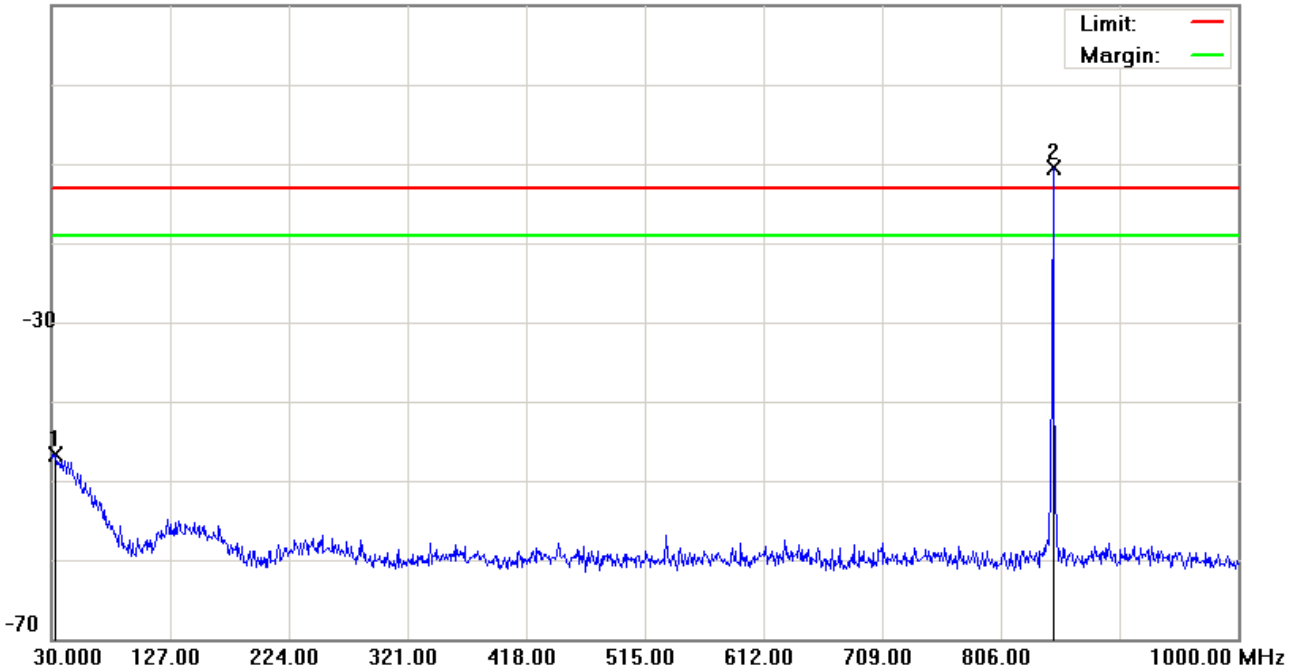
File :GE866-QUAD(CH251)

Data :#3

Date: 2014/1/29

Time: 下午 01:56:48

10.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1		32.9100	-63.59	16.88	-46.71	-13.00	-33.71	peak		
2	*	848.6800	-14.53	3.98	-10.55	-13.00	2.45	peak		Tx

*:Maximum data x:Over limit !:over margin

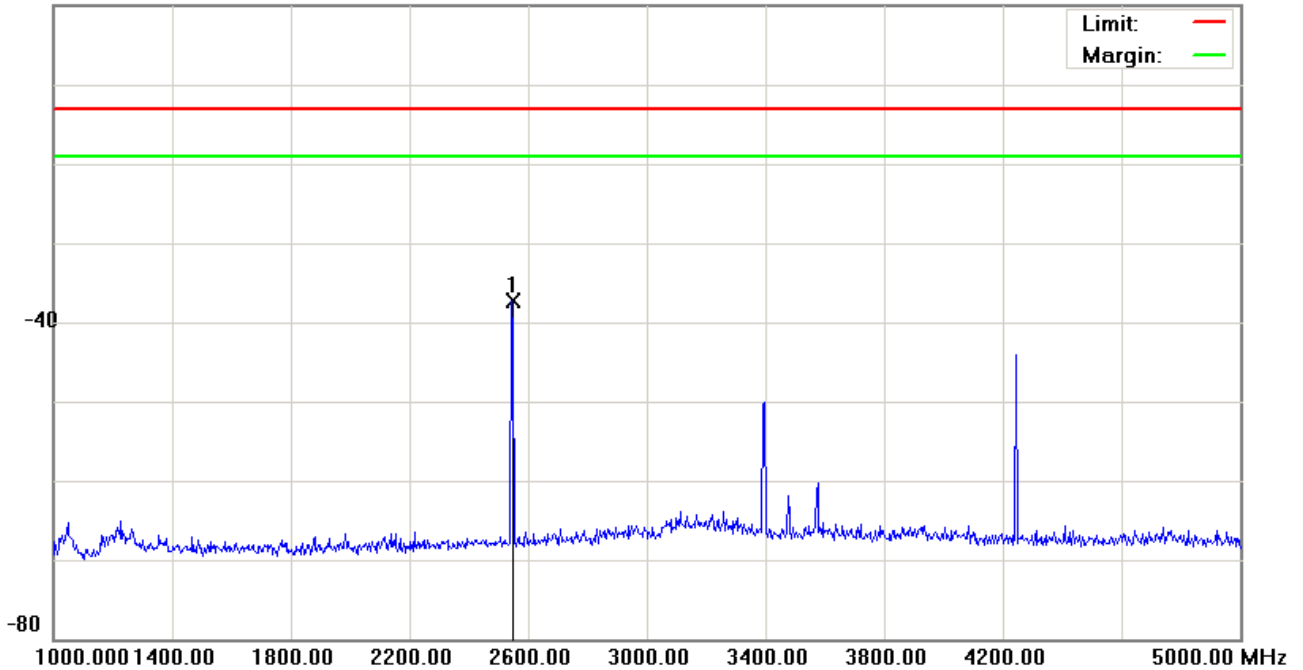
File :GE866-QUAD(CH251)

Data :#4

Date: 2014/1/29

Time: 下午 02:10:10

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	2546.000	-41.84	4.45	-37.39	-13.00	-24.39	peak		

*:Maximum data x:Over limit !:over margin

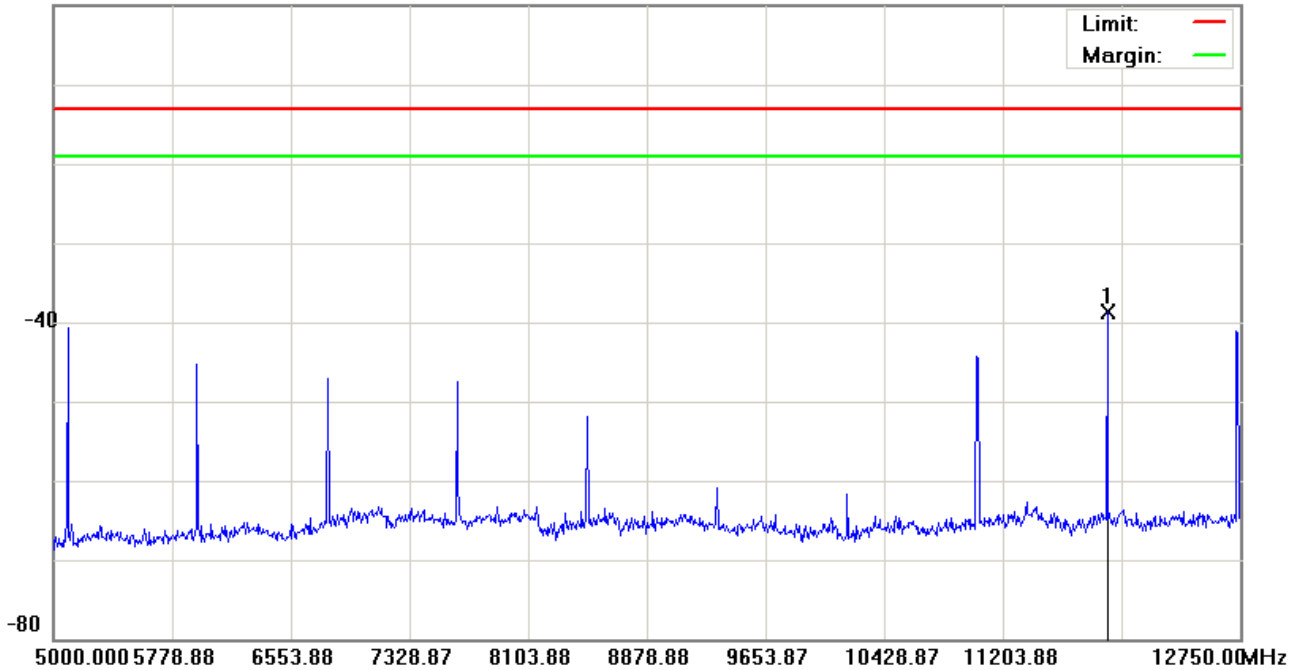
File :GE866-QUAD(CH251)

Data :#5

Date: 2014/1/29

Time: 下午 02:10:33

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 22 conducted(9k-12.75G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 850

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	11882.000	-44.10	5.44	-38.66	-13.00	-25.66	peak		

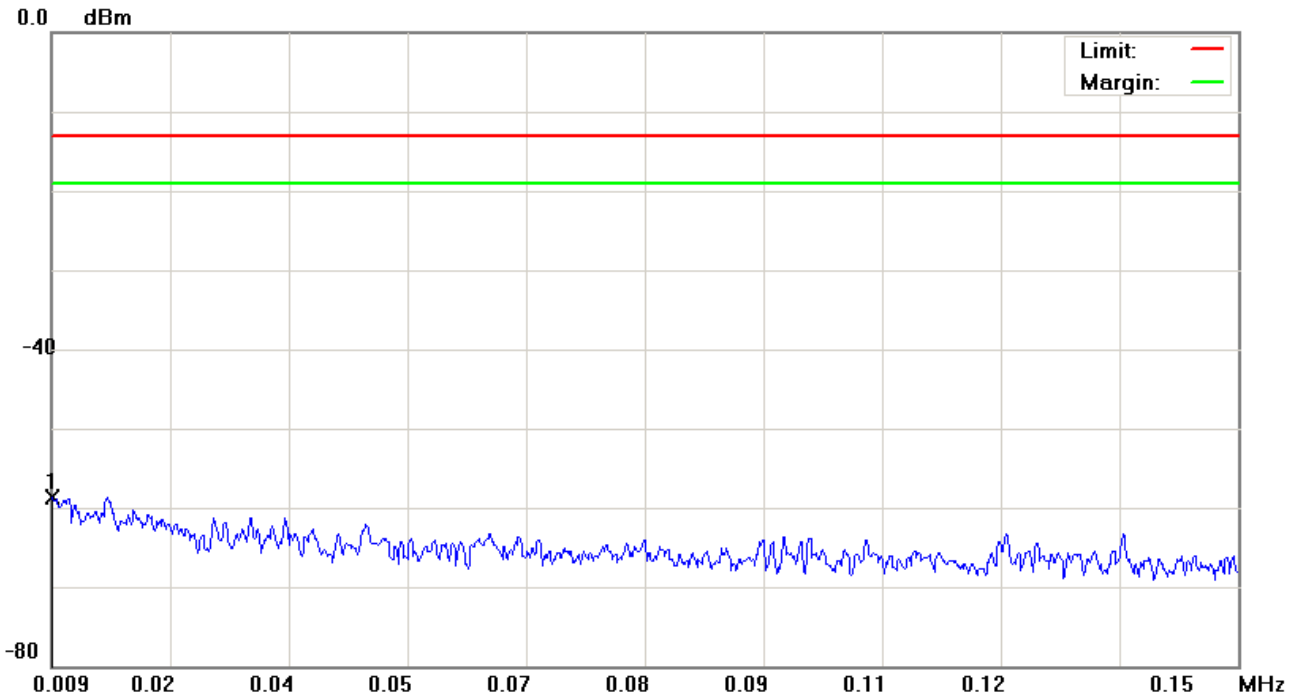
*:Maximum data x:Over limit !:over margin

File :GE866-QUAD(CH512)

Data :#1

Date: 2014/1/29

Time: 下午 01:35:08



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.0090	-69.98	11.32	-58.66	-13.00	-45.66	peak		

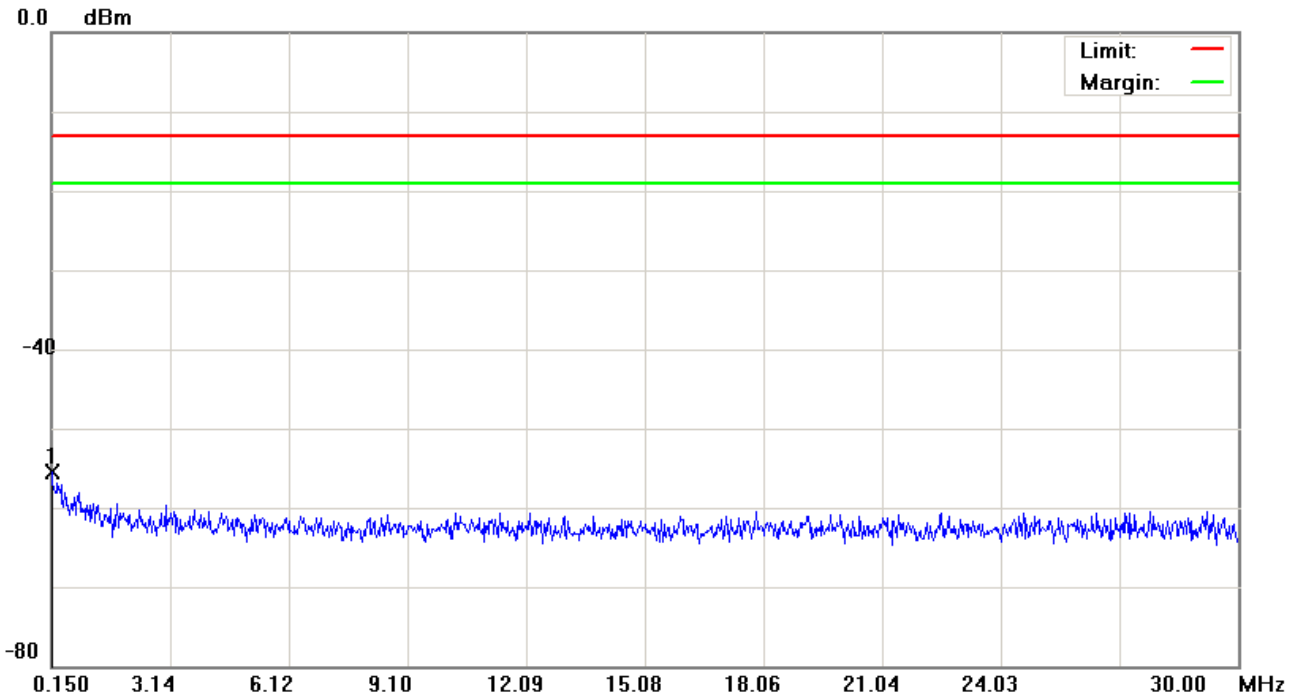
*:Maximum data x:Over limit !:over margin

File :GE866-QUAD(CH512)

Data :#2

Date: 2014/1/29

Time: 下午 01:35:32



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.1500	-67.90	12.47	-55.43	-13.00	-42.43	peak		

*:Maximum data x:Over limit !:over margin

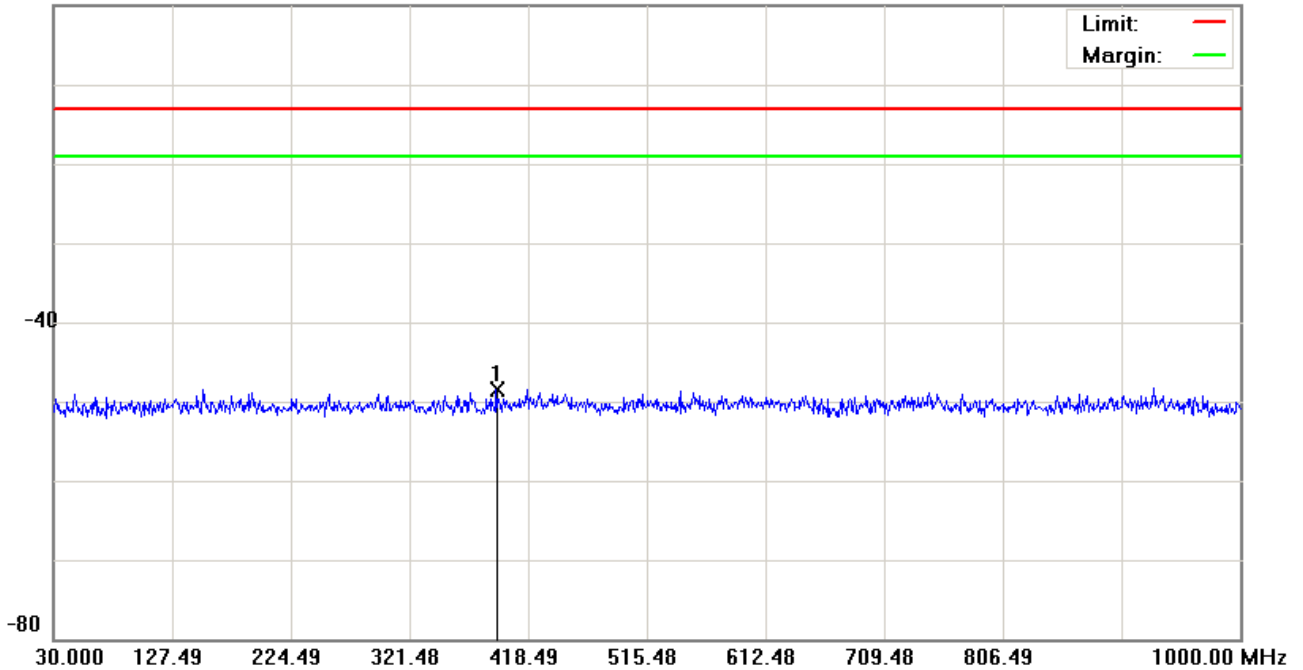
File :GE866-QUAD(CH512)

Data :#3

Date: 2014/1/29

Time: 下午 01:35:56

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	392.2950	-61.72	13.22	-48.50	-13.00	-35.50	peak		

*:Maximum data x:Over limit !:over margin

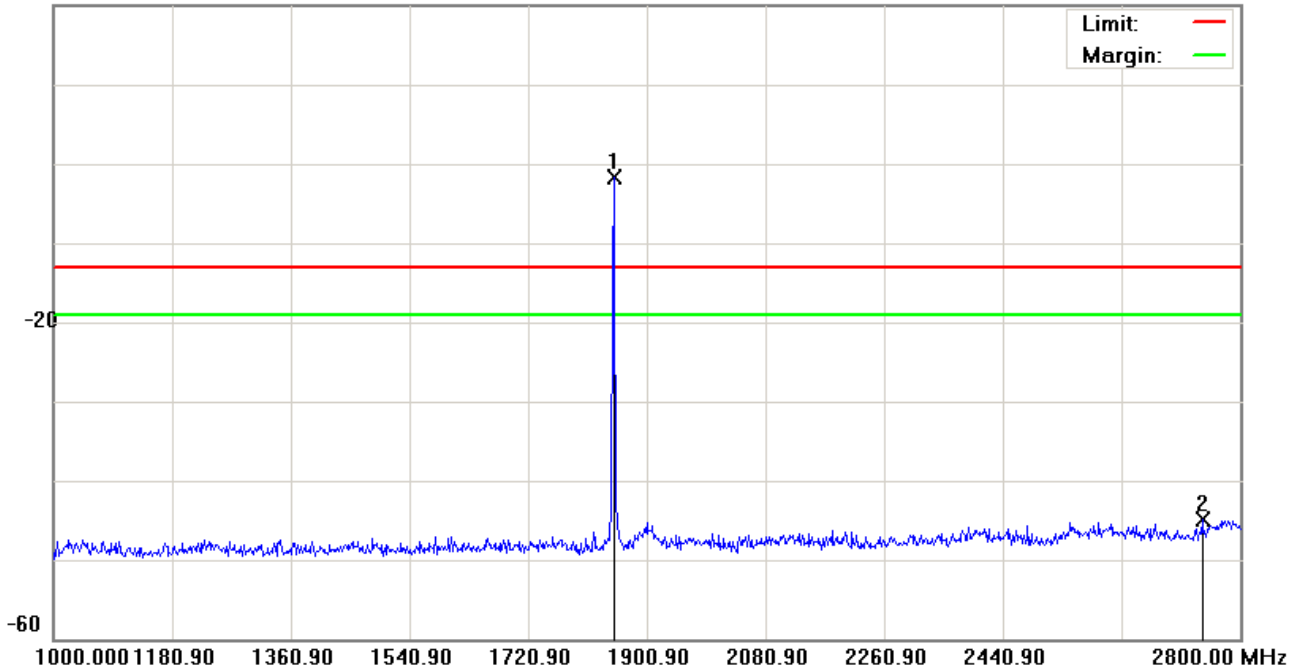
File :GE866-QUAD(CH512)

Data :#4

Date: 2014/1/29

Time: 下午 01:46:11

20.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	1850.500	-5.94	4.26	-1.68	-13.00	11.32	peak		Tx
2		2743.300	-50.16	5.22	-44.94	-13.00	-31.94	peak		

*:Maximum data x:Over limit !:over margin

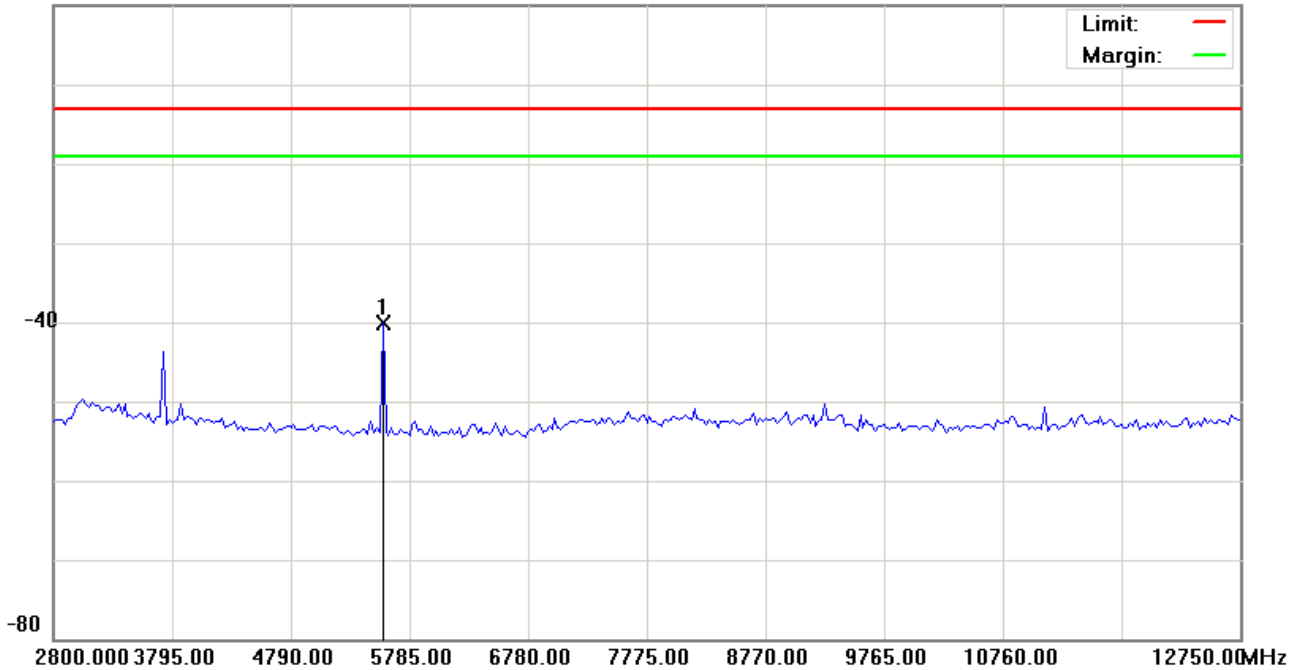
File :GE866-QUAD(CH512)

Data :#5

Date: 2014/1/29

Time: 下午 02:28:45

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	5561.125	-44.96	4.89	-40.07	-13.00	-27.07	peak		

*:Maximum data x:Over limit !:over margin

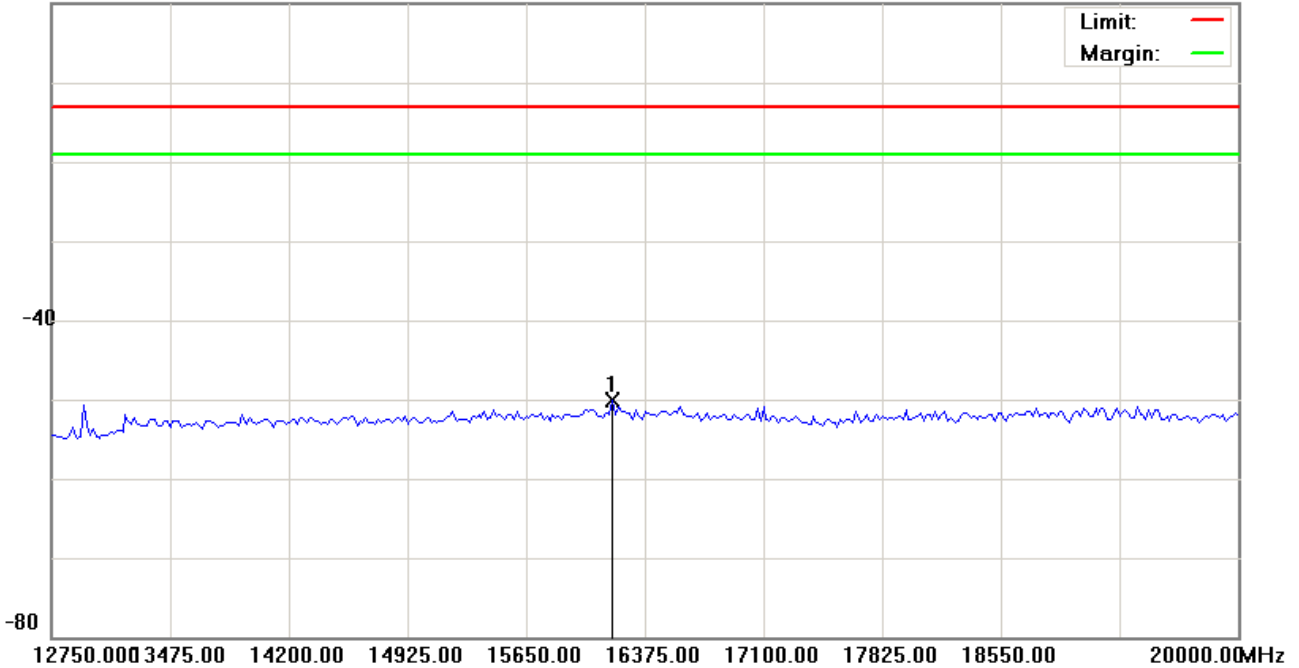
File :GE866-QUAD(CH512)

Data :#6

Date: 2014/1/29

Time: 下午 02:29:05

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	16175.625	-56.46	6.35	-50.11	-13.00	-37.11	peak		

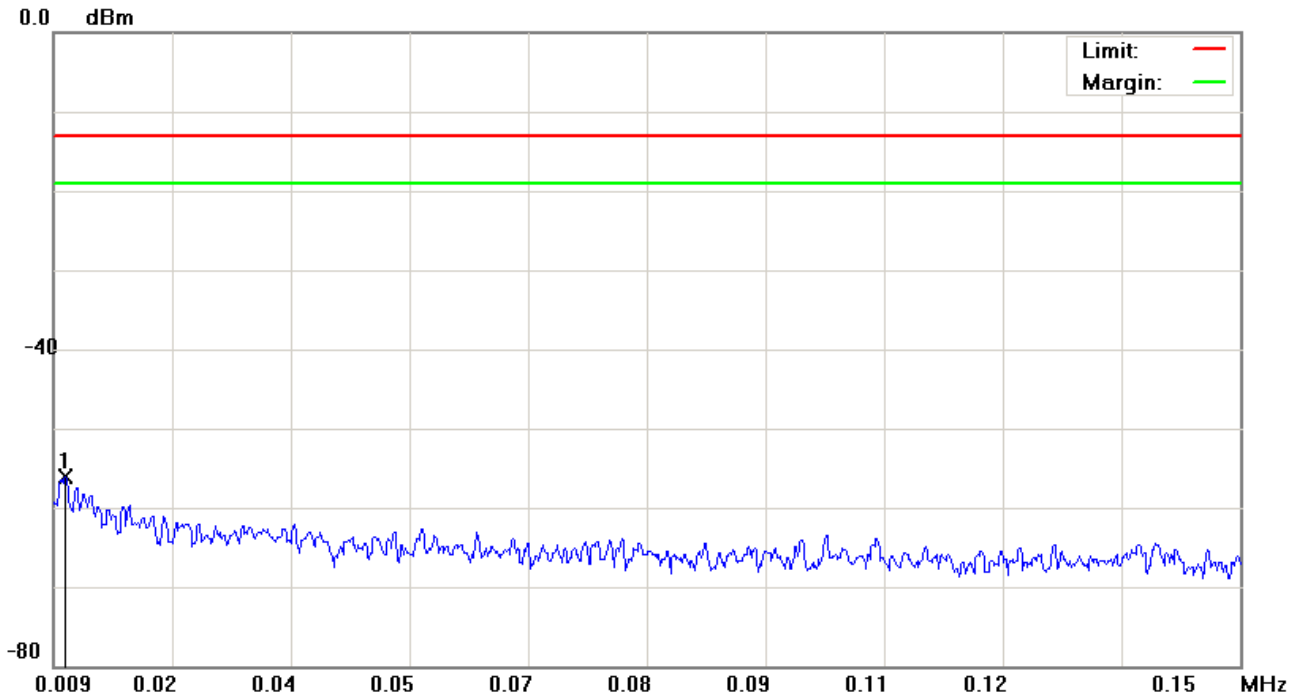
*:Maximum data x:Over limit !:over margin

File :GE866-QUAD(CH661)

Data :#1

Date: 2014/1/29

Time: 下午 01:36:41



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.0104	-67.47	11.34	-56.13	-13.00	-43.13	peak		

*:Maximum data x:Over limit !:over margin

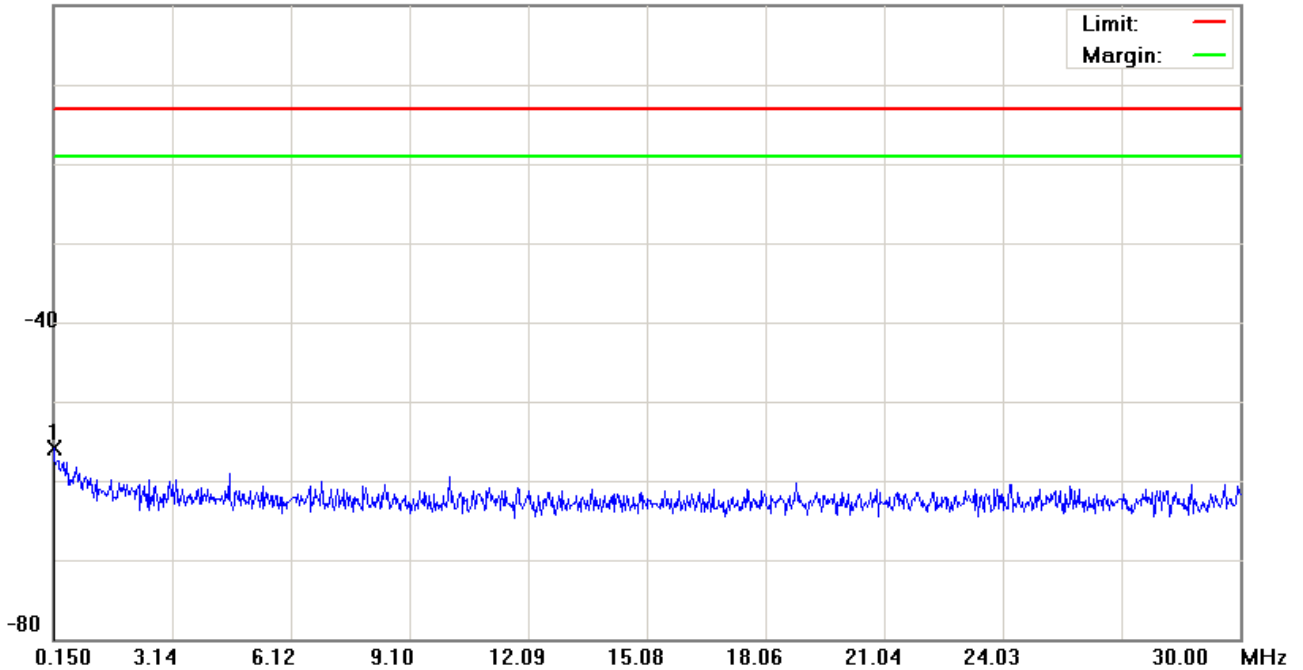
File :GE866-QUAD(CH661)

Data :#2

Date: 2014/1/29

Time: 下午 01:37:05

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.1500	-68.28	12.47	-55.81	-13.00	-42.81	peak		

*:Maximum data x:Over limit !:over margin

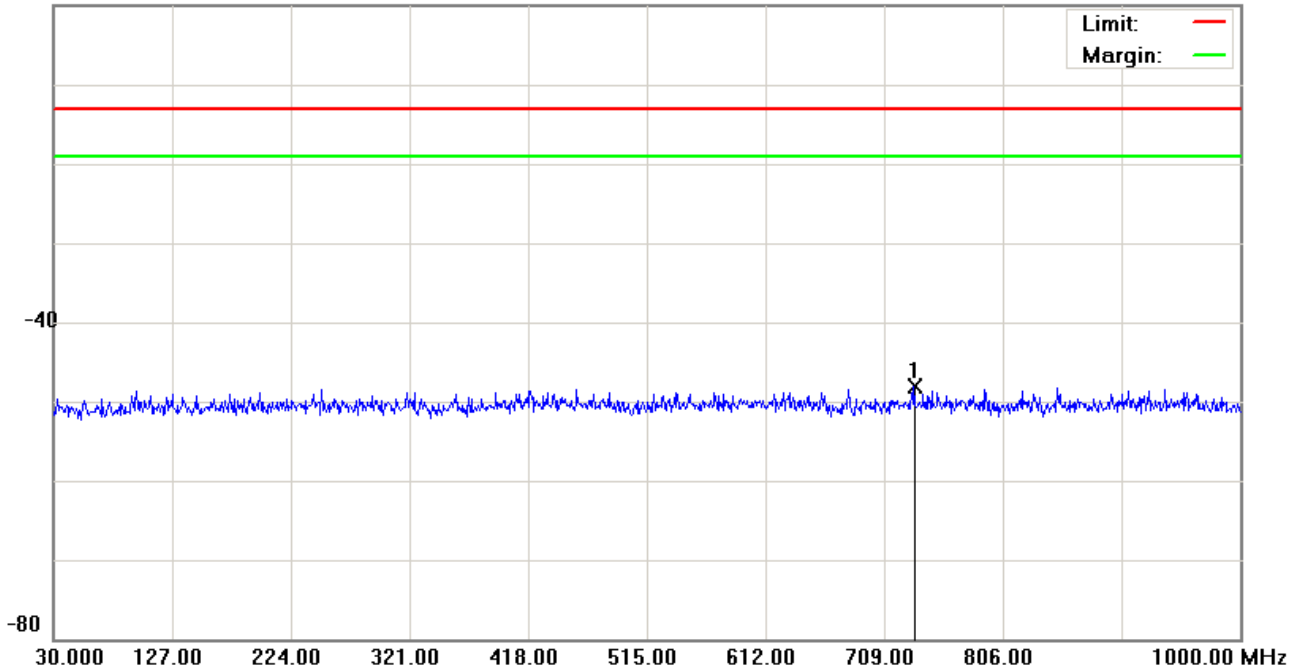
File :GE866-QUAD(CH661)

Data :#3

Date: 2014/1/29

Time: 下午 01:37:29

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	733.7350	-61.12	13.10	-48.02	-13.00	-35.02	peak		

*:Maximum data x:Over limit !:over margin

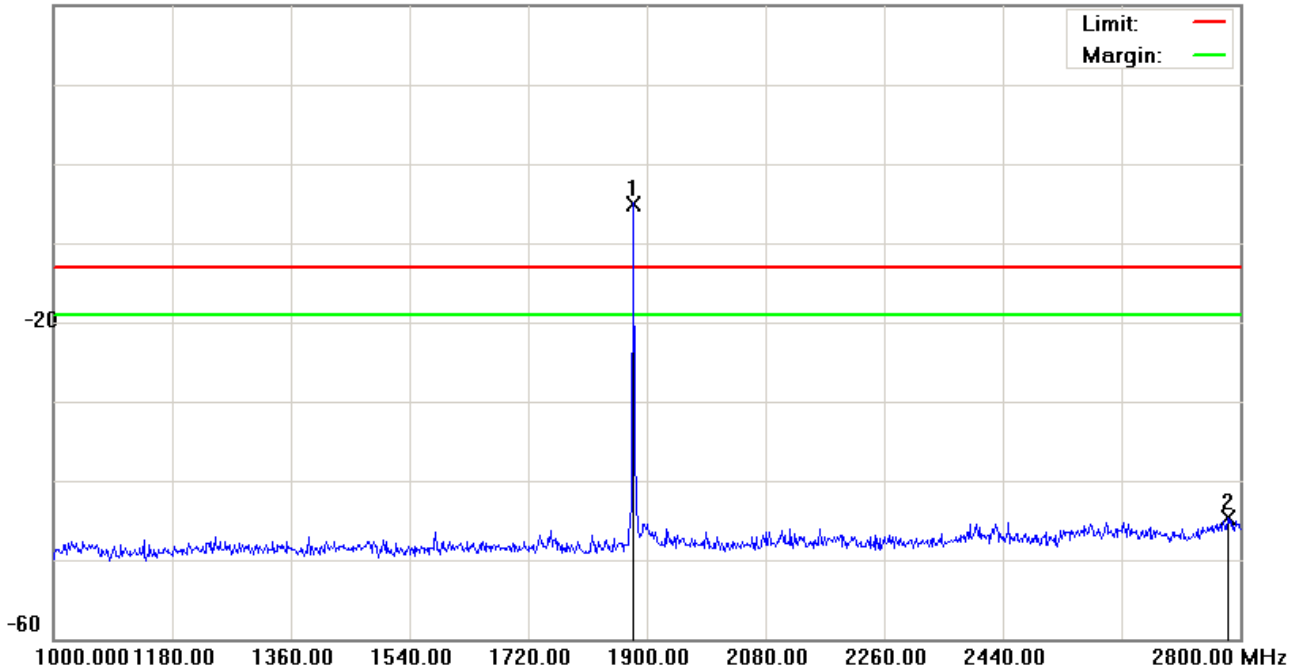
File :GE866-QUAD(CH661)

Data :#4

Date: 2014/1/29

Time: 下午 01:47:36

20.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	1880.200	-9.65	4.65	-5.00	-13.00	8.00	peak		Tx
2		2782.000	-50.52	5.88	-44.64	-13.00	-31.64	peak		

*:Maximum data x:Over limit !:over margin

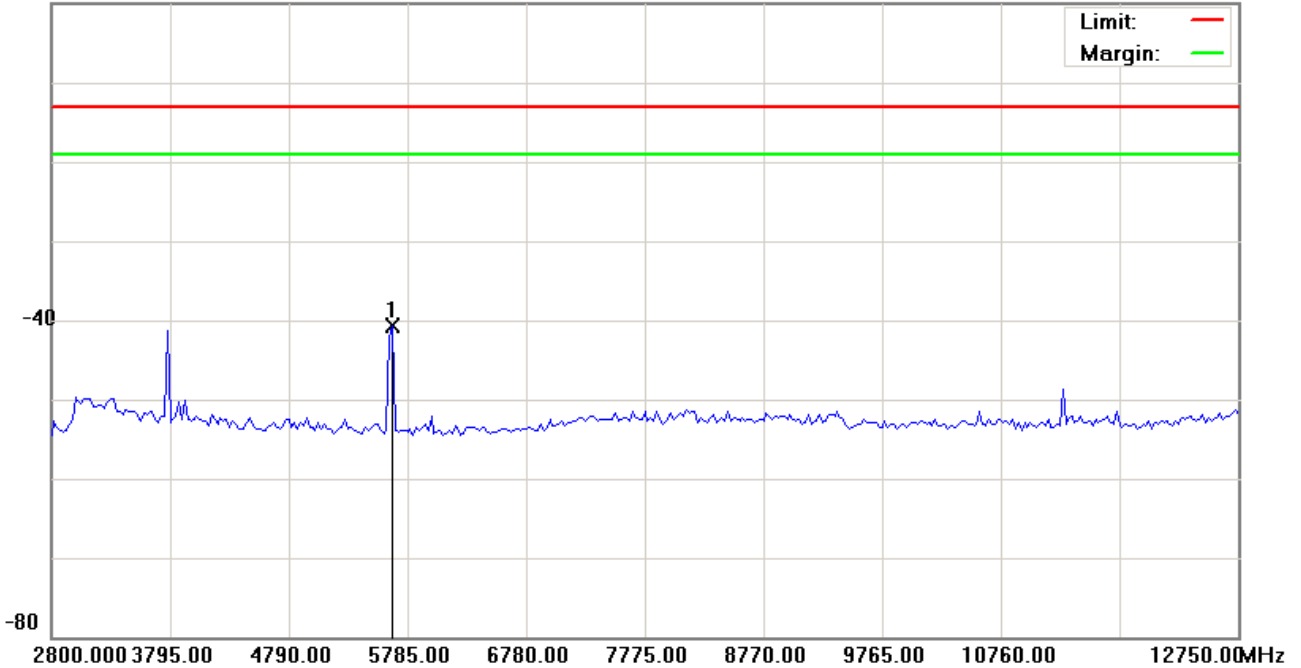
File :GE866-QUAD(CH661)

Data :#5

Date: 2014/1/29

Time: 下午 02:30:58

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	5660.625	-45.63	4.84	-40.79	-13.00	-27.79	peak		

*:Maximum data x:Over limit !:over margin

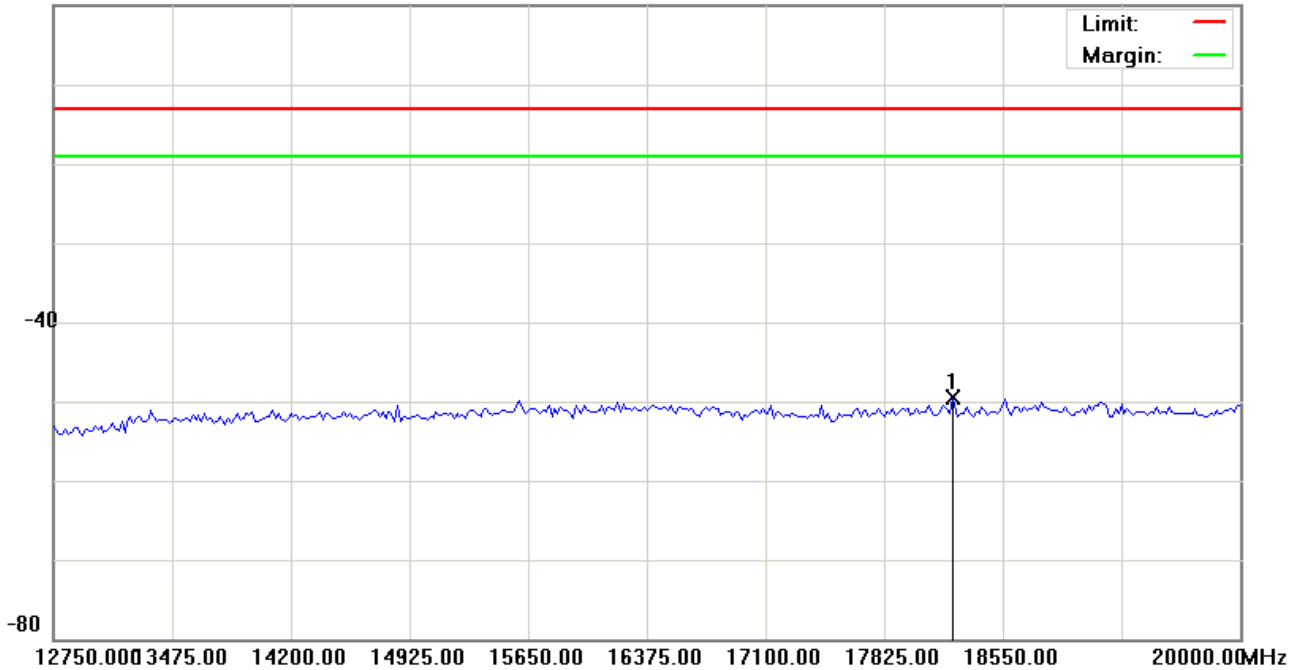
File :GE866-QUAD(CH661)

Data :#6

Date: 2014/1/29

Time: 下午 02:31:17

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	18241.875	-56.51	6.94	-49.57	-13.00	-36.57	peak		

*:Maximum data x:Over limit !:over margin

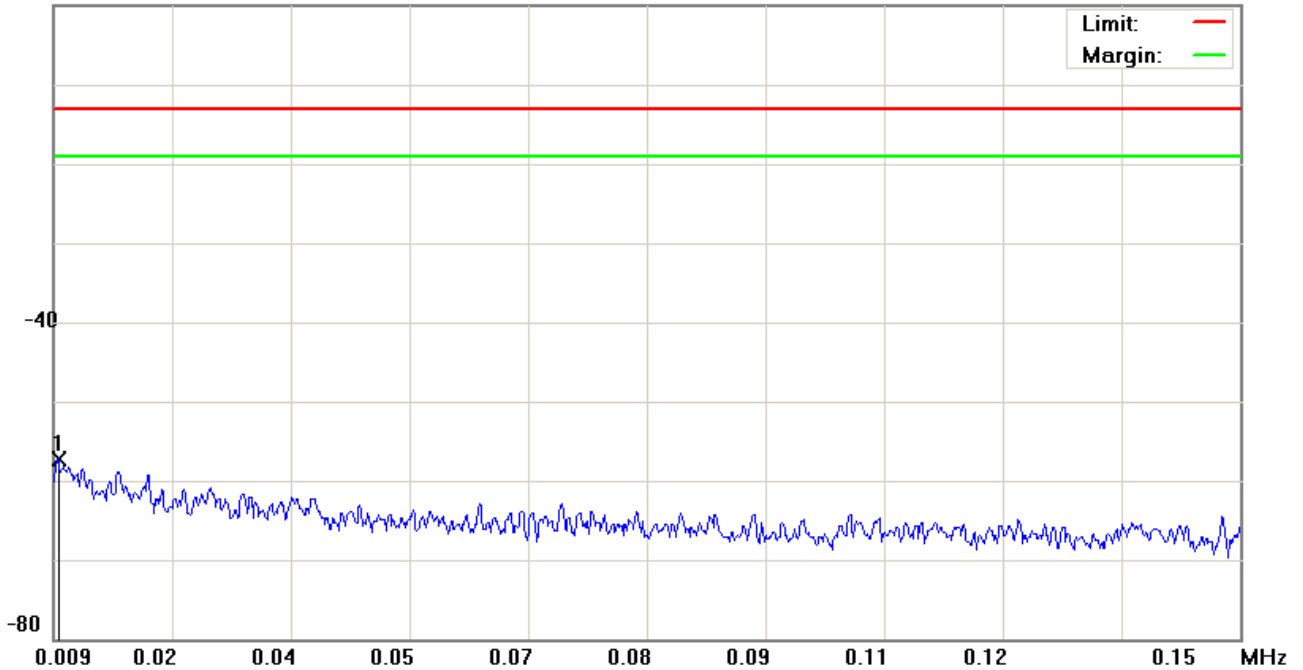
File :GE866-QUAD(CH810)

Data :#1

Date: 2014/1/29

Time: 下午 01:40:14

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.0095	-68.62	11.33	-57.29	-13.00	-44.29	peak		

*:Maximum data x:Over limit !:over margin

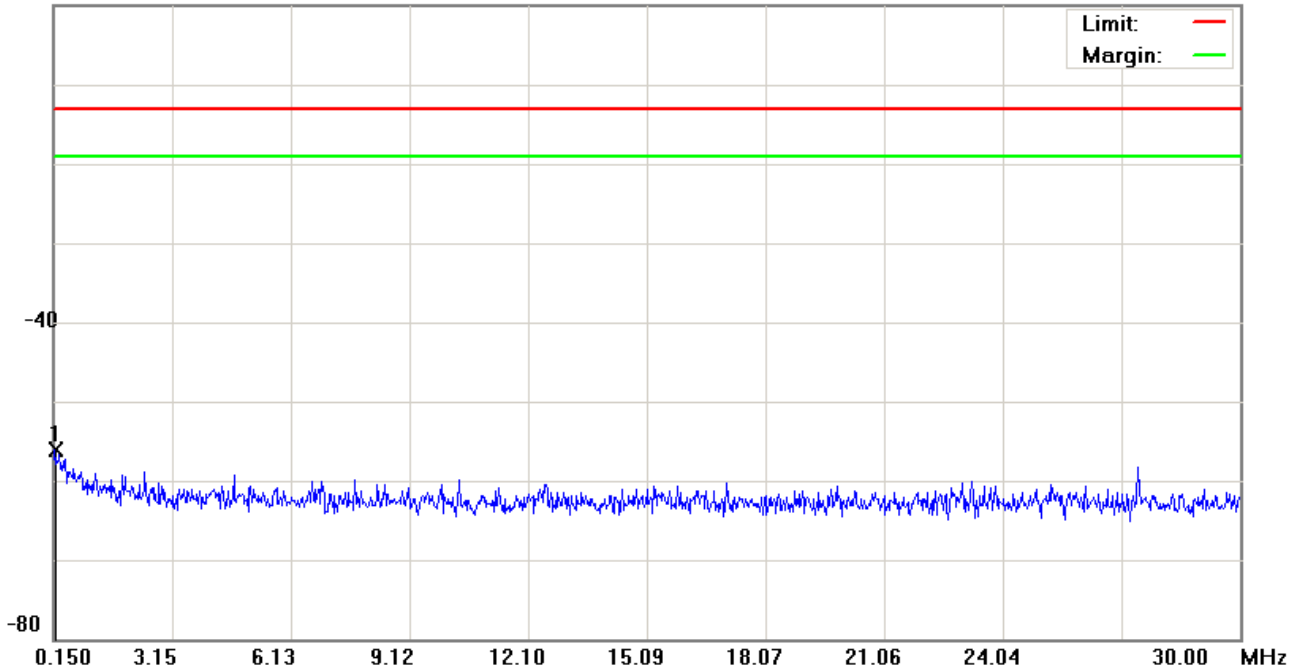
File :GE866-QUAD(CH810)

Data :#2

Date: 2014/1/29

Time: 下午 01:40:38

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	0.1948	-68.62	12.45	-56.17	-13.00	-43.17	peak		

*:Maximum data x:Over limit !:over margin

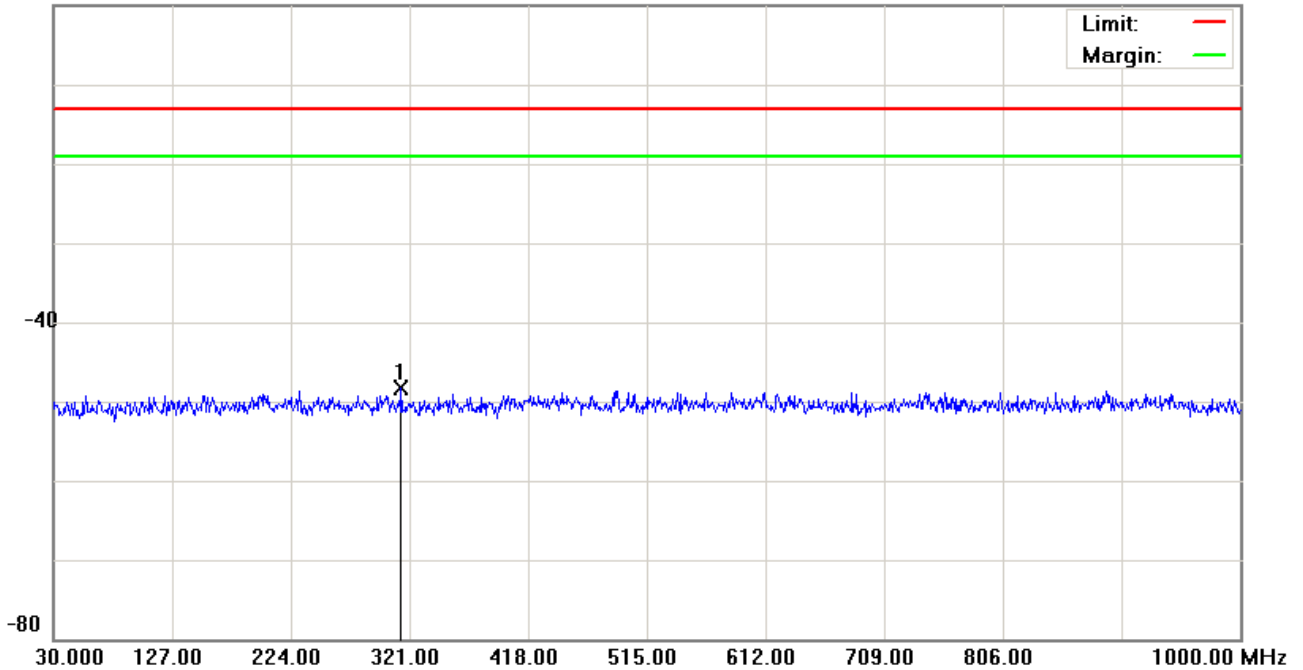
File :GE866-QUAD(CH810)

Data :#3

Date: 2014/1/29

Time: 下午 01:41:03

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	cm	degree	Comment
1	*	314.2100	-61.45	13.20	-48.25	-13.00	-35.25	peak		

*:Maximum data x:Over limit !:over margin

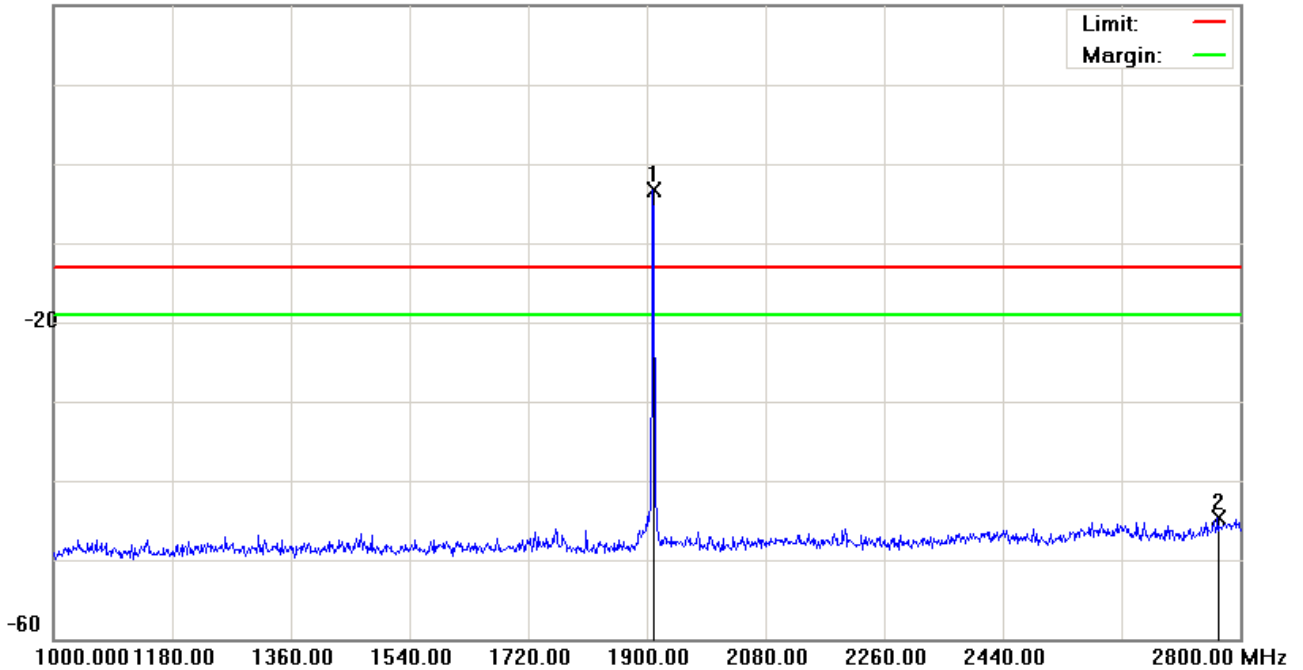
File :GE866-QUAD(CH810)

Data :#4

Date: 2014/1/29

Time: 下午 01:48:44

20.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	1909.900	-8.93	5.71	-3.22	-13.00	9.78	peak		Tx
2		2766.700	-50.39	5.69	-44.70	-13.00	-31.70	peak		

*:Maximum data x:Over limit !:over margin

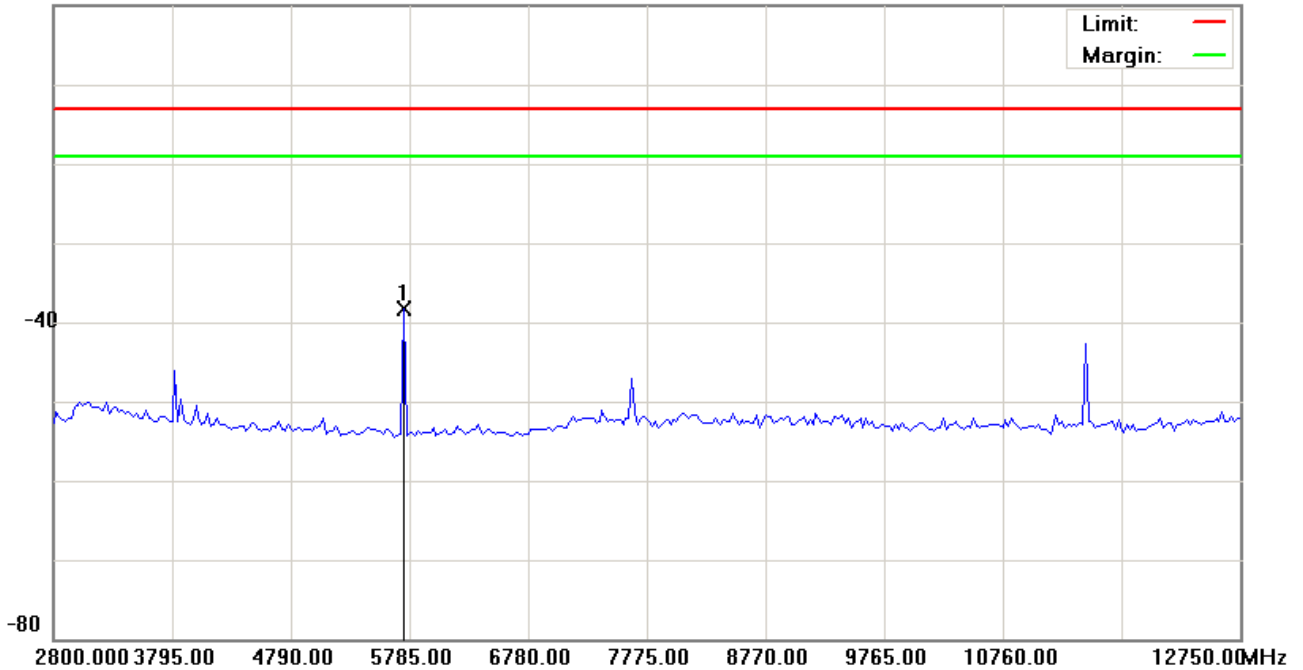
File :GE866-QUAD(CH810)

Data :#5

Date: 2014/1/29

Time: 下午 02:32:16

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	5735.250	-43.13	4.89	-38.24	-13.00	-25.24	peak		

*:Maximum data x:Over limit !:over margin

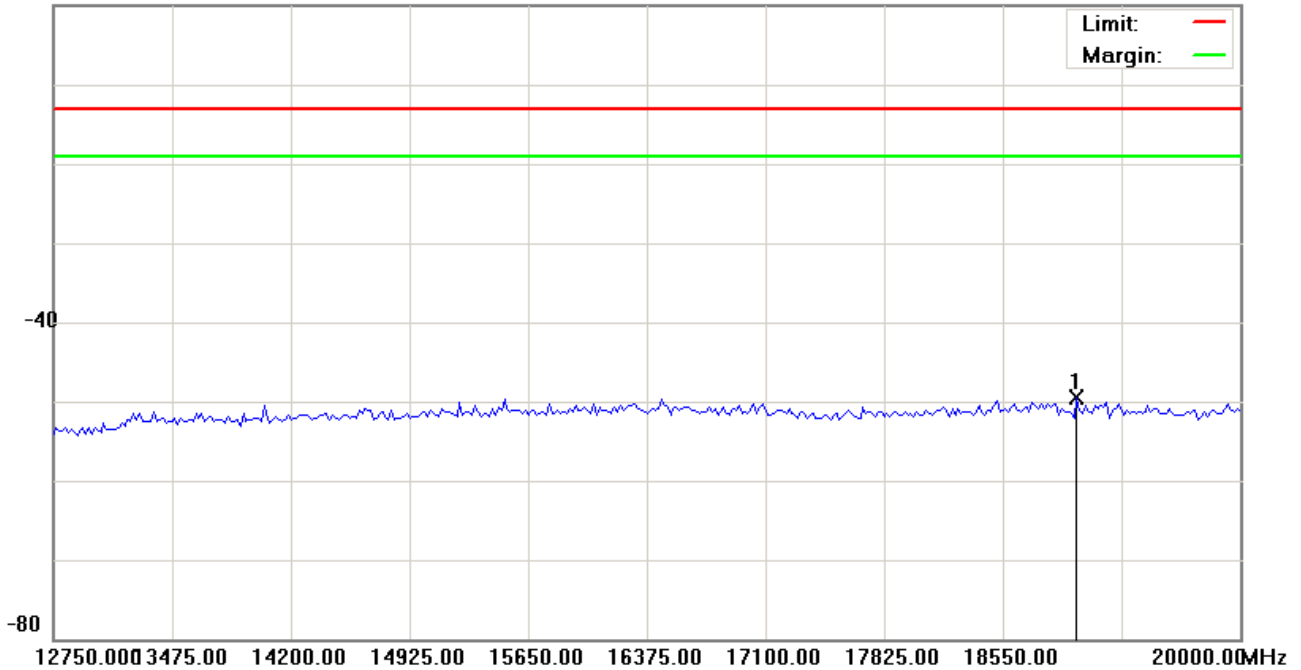
File :GE866-QUAD(CH810)

Data :#6

Date: 2014/1/29

Time: 下午 02:32:35

0.0 dBm



Site: site #1

Polarization: **Conducted Power**

Temperature: 26 °C

Limit: FCC Part 24 conducted(9k-26.5G)

Power: DC 3.8V

Humidity: 55 %

EUT: Wireless module

Distance:

RBW: 1000 KHz VBW: 3000KHz

M/N: GE866-QUAD

Mode: GSM 1900

Note:

No.	Mk.	Freq. MHz	Reading Level dBm	Correct Factor dB	Measure- ment dBm	Limit dBm	Over dB	Antenna Height cm	Table Degree	Comment
1	*	19003.125	-56.71	7.16	-49.55	-13.00	-36.55	peak		

*:Maximum data x:Over limit !:over margin

Band	CH	Frequency (MHz)	Measurement (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over (dB)
GSM850	128	0.0091	-48.09	6.92	-41.17	-43.32	-13.00	-30.32
		0.2395	-36.27	6.92	-29.35	-31.50	-13.00	-18.50
		30.4850	-46.24	6.92	-39.32	-41.47	-13.00	-28.47
		2472.0000	-39.75	6.92	-32.83		-13.00	-19.83
		11537.1250	-44.66	6.92	-37.74		-13.00	-24.74
	190	0.0095	-49.41	6.92	-42.49	-44.64	-13.00	-31.64
		0.1798	-36.86	6.92	-29.94	-32.09	-13.00	-19.09
		33.8800	-46.96	6.92	-40.04	-42.19	-13.00	-29.19
		1674.0000	-40.61	6.92	-33.69		-13.00	-20.69
		5856.3750	-42.76	6.92	-35.84		-13.00	-22.84
	251	0.0125	-48.80	6.92	-41.88	-44.03	-13.00	-31.03
		0.2993	-37.63	6.92	-30.71	-32.86	-13.00	-19.86
		32.9100	-46.71	6.92	-39.79	-41.94	-13.00	-28.94
		2546.0000	-37.39	6.92	-30.47		-13.00	-17.47
		11882.0000	-38.66	6.92	-31.74		-13.00	-18.74

Band	CH	Frequency (MHz)	Measurement (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	Limit (dBm)	Over (dB)
GSM1900	512	0.0090	-69.98	2.50	-67.48	-69.63	-13.00	-56.63
		0.1500	-67.90	2.50	-65.40	-67.55	-13.00	-54.55
		392.2950	-61.72	2.50	-59.22	-61.37	-13.00	-48.37
		2743.3000	-50.16	2.50	-47.66		-13.00	-34.66
		5561.1250	-44.96	2.50	-42.46		-13.00	-29.46
		16175.6250	-56.46	2.50	-53.96		-13.00	-40.96
	661	0.0104	-67.47	2.50	-64.97	-67.12	-13.00	-54.12
		0.1500	-68.28	2.50	-65.78	-67.93	-13.00	-54.93
		733.7350	-61.12	2.50	-58.62	-60.77	-13.00	-47.77
		2782.0000	-50.52	2.50	-48.02		-13.00	-35.02
		5660.6250	-45.63	2.50	-43.13		-13.00	-30.13
		18241.8750	-56.51	2.50	-54.01		-13.00	-41.01
	810	0.0095	-68.62	2.50	-66.12	-68.27	-13.00	-55.27
		0.1948	-68.62	2.50	-66.12	-68.27	-13.00	-55.27
		314.2100	-61.45	2.50	-58.95	-61.10	-13.00	-48.10
		2766.7000	-50.39	2.50	-47.89		-13.00	-34.89
		5735.2500	-43.13	2.50	-40.63		-13.00	-27.63
		19003.1250	-56.71	2.50	-54.21		-13.00	-41.21

7 Field Strength of Spurious Radiation Test

7.1. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10\log(P)$ dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

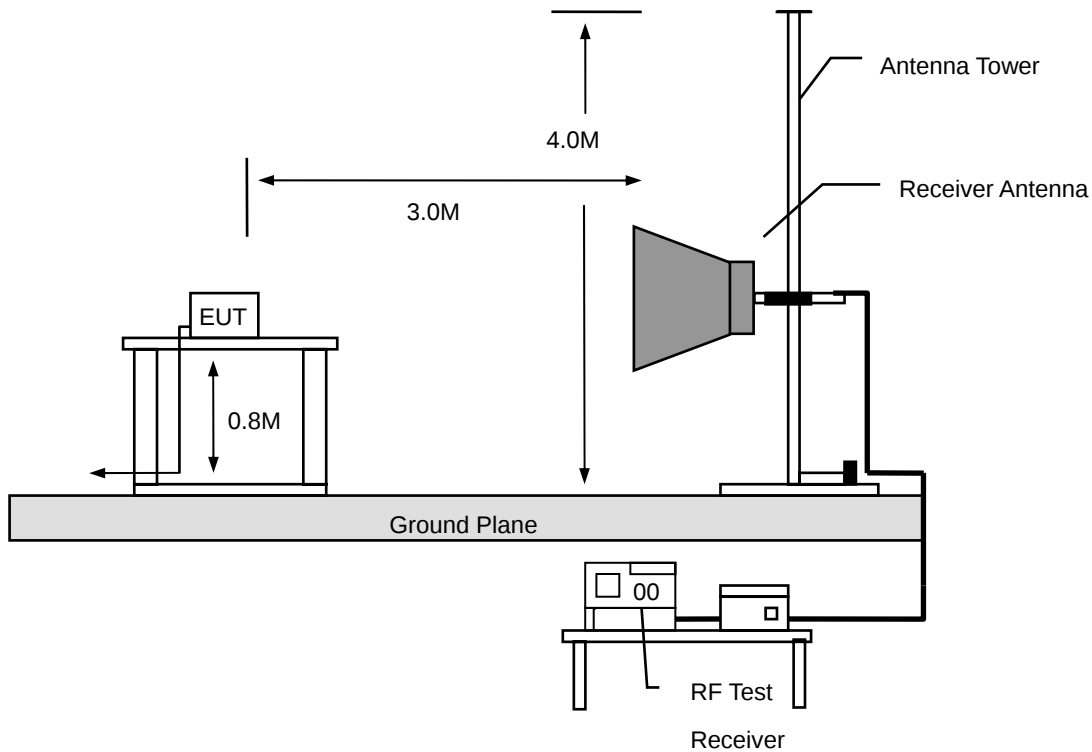
7.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/21/2013	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/10/2014	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/21/2013	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/21/2013	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/01/2013	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/10/2013	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	06/13/2013	(1)
Test Site	ATL	TE01	888001	08/28/2013	(1)

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

7.3. Setup



7.4. Test Procedure

Final radiation measurements were made on a three-meter, Semi Anechoic Chamber. The EUT system was placed on a nonconductive turntable which is 0.8 meters height, top surface 1.0 x 1.5 meter. The spectrum was examined from 250 MHz to 2.5 GHz in order to cover the whole spectrum below 10th harmonic which could generate from the EUT. During the test, EUT was set to transmit continuously & Measurements spectrum range from 30 MHz to 26.5 GHz is investigated.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, and then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

A nonconductive material surrounded the EUT to supporting the EUT for standing on three orthogonal planes. At each condition, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters to find the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarization.

SCHWARZBECK MESS-ELEKTRONIK Biconilog Antenna (mode VULB9163) at 3 Meter and the SCHWARZBECK Double Ridged Guide Antenna (model BBHA9120D&9170) was used in frequencies 1 – 26.5 GHz at a distance of 1 meter. All test results were extrapolated to equivalent signal at 3 meters utilizing an inverse linear distance extrapolation Factor (20dB/decade).

For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

Appropriate preamplifiers were used for improving sensitivity and precautions were taken to avoid overloading or desensitizing the spectrum analyzer. No post – detector video filters were used in the test.

The spectrum analyzer's 6 dB bandwidth was set to 1 MHz, and the analyzer was operated in the peak detection mode, for frequencies both below and up 1 GHz. The average levels were obtained by subtracting the duty cycle correction factor from the peak readings.

The following procedures were used to convert the emission levels measured in decibels referenced to 1 microvolt (dBuV) into field intensity in micro volts pre meter (uV/m).

The actual field intensity in decibels referenced to 1 microvolt in to field intensity in micro volts per meter (dBuV/m).

The actual field intensity in decibels referenced to 1 microvolt per meter (dBuV/m) is determined by algebraically adding the measured reading in dBuV, the antenna factor (dB), and cable loss (dB) and Subtracting the gain of preamplifier (dB) is auto calculate in spectrum analyzer.

(1) $\text{Amplitude (dBuV/m)} = \text{FI (dBuV)} + \text{AF (dBuV)} + \text{CL (dBuV)} - \text{Gain (dB)}$

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2) $\text{Actual Amplitude (dBuV/m)} = \text{Amplitude (dBuV)} - \text{Dis(dB)}$

The FCC specified emission limits were calculated according the EUT operating frequency and by following linear interpolation equations:

(a) For fundamental frequency : Transmitter Output < +30dBm

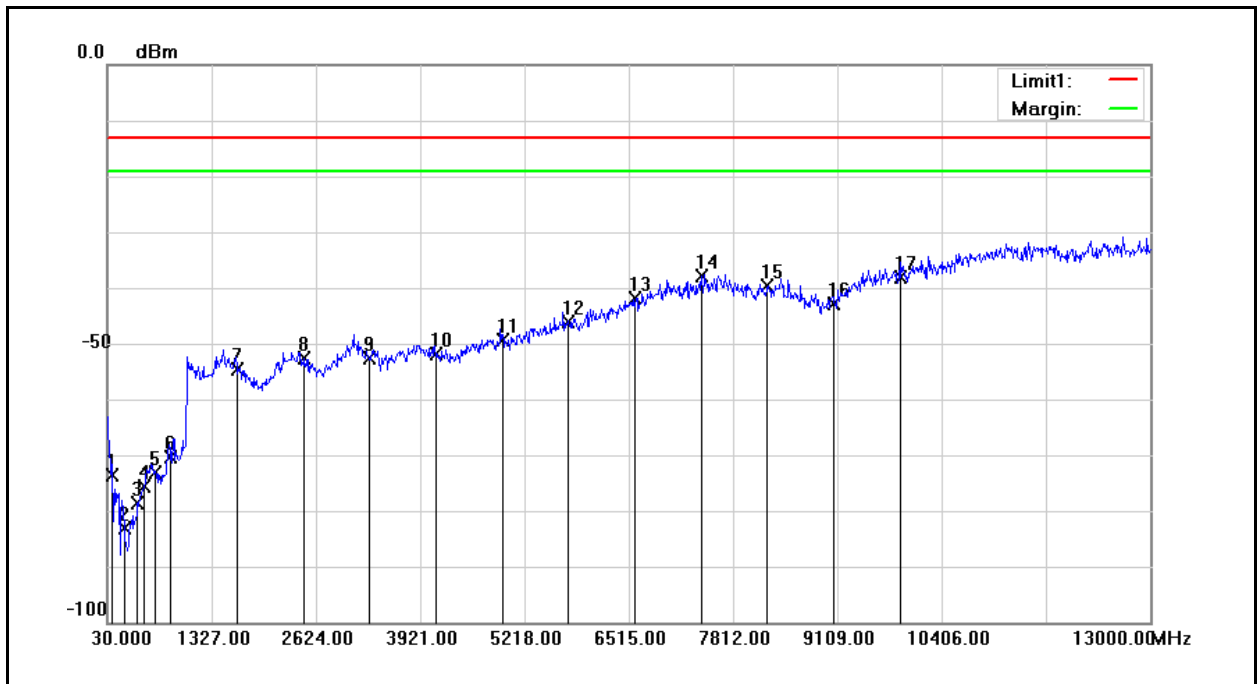
(b) For spurious frequency : Spurious emission limits = fundamental emission limit /10

7.5. Uncertainty

The measurement uncertainty is defined as for Field Strength of Spurious Radiation measurement is ± 3.072 dB.

7.6. Test Result

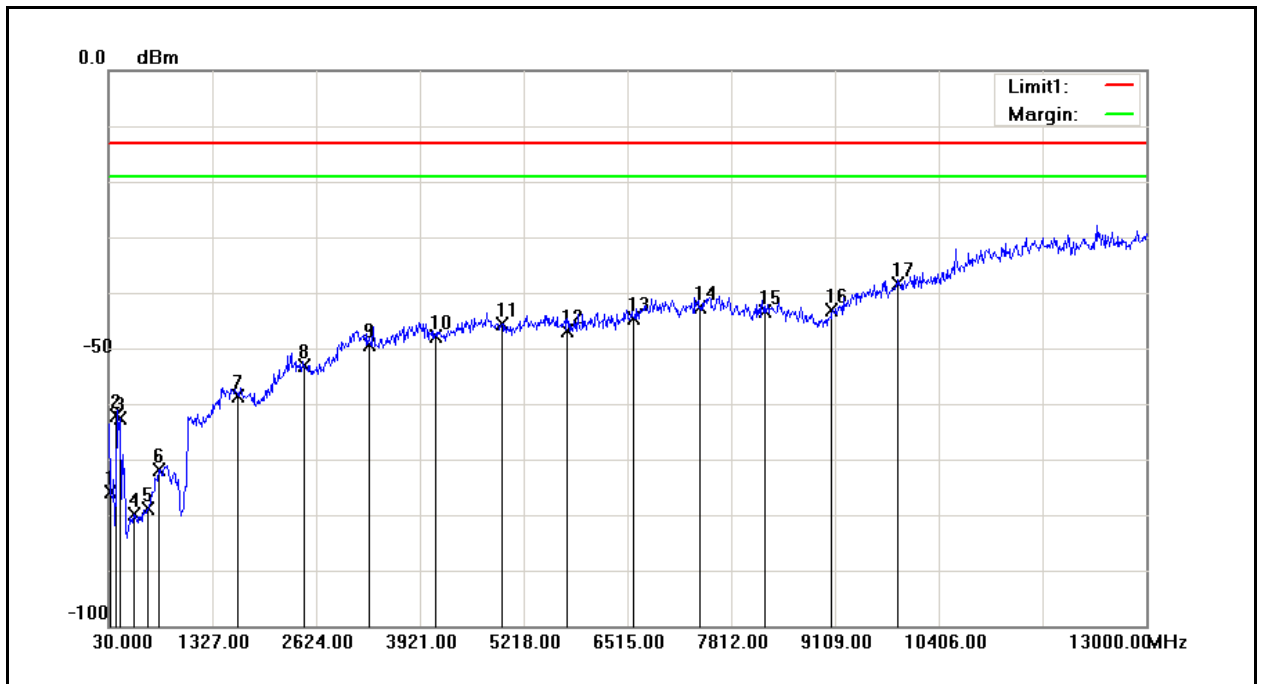
Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	824.2 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	824.2 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	81.5000	-70.63	-2.94	-73.57	-13.00	-60.57	peak
2	232.5000	-82.01	-1.21	-83.22	-13.00	-70.22	peak
3	406.5000	-81.51	2.83	-78.68	-13.00	-65.68	peak
4	483.5000	-81.49	5.95	-75.54	-13.00	-62.54	peak
5	620.5000	-80.80	7.68	-73.12	-13.00	-60.12	peak
6	796.5000	-81.48	11.06	-70.42	-13.00	-57.42	peak
7	1648.400	-68.23	13.64	-54.59	-13.00	-41.59	peak
8	2472.600	-68.79	16.14	-52.65	-13.00	-39.65	peak
9	3296.800	-71.14	18.58	-52.56	-13.00	-39.56	peak
10	4121.000	-72.87	20.94	-51.93	-13.00	-38.93	peak
11	4945.200	-72.68	23.38	-49.30	-13.00	-36.30	peak
12	5769.400	-73.01	26.84	-46.17	-13.00	-33.17	peak
13	6593.600	-72.29	30.30	-41.99	-13.00	-28.99	peak
14	7417.800	-71.53	33.59	-37.94	-13.00	-24.94	peak
15	8242.000	-72.99	33.47	-39.52	-13.00	-26.52	peak
16	9066.200	-74.78	31.94	-42.84	-13.00	-29.84	peak
17	9890.400	-75.46	37.30	-38.16	-13.00	-25.16	peak

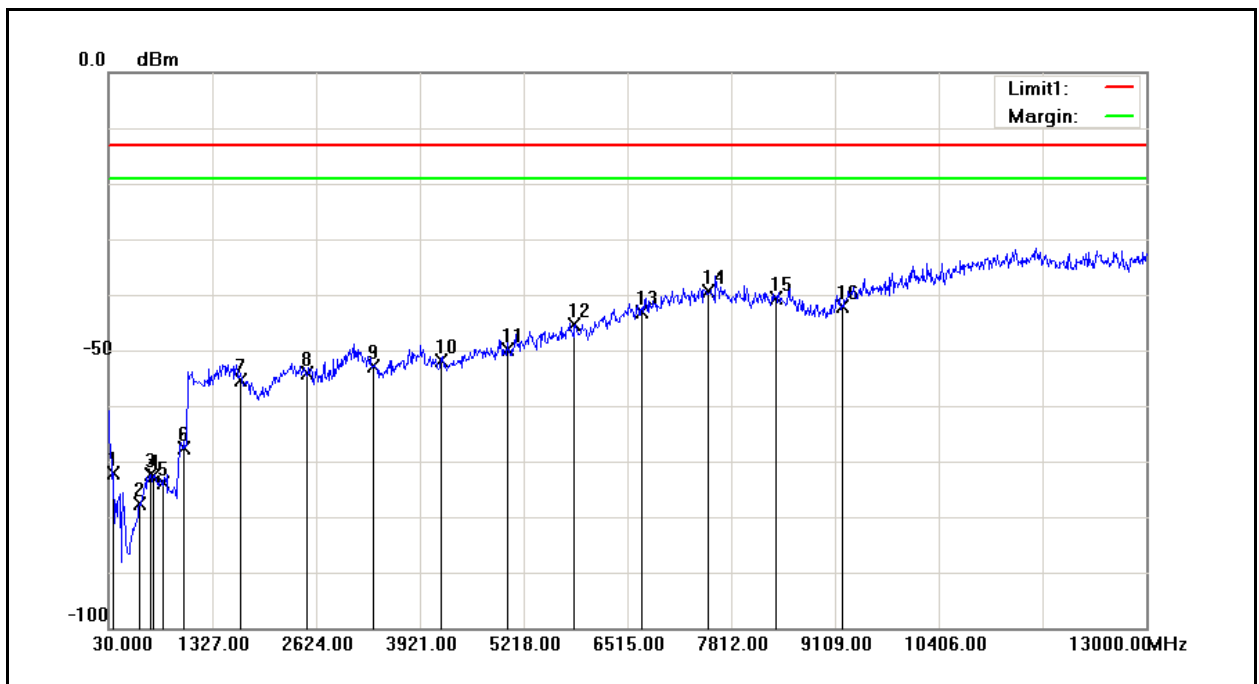
Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	824.2 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	824.2 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	55.0000	-70.14	-5.76	-75.90	-13.00	-62.90	peak
2	131.5000	-75.77	13.57	-62.20	-13.00	-49.20	peak
3	162.5000	-72.99	10.32	-62.67	-13.00	-49.67	peak
4	331.5000	-80.95	1.13	-79.82	-13.00	-66.82	peak
5	524.0000	-82.19	3.34	-78.85	-13.00	-65.85	peak
6	652.0000	-81.06	9.09	-71.97	-13.00	-58.97	peak
7	1648.400	-72.33	13.66	-58.67	-13.00	-45.67	peak
8	2472.600	-70.53	17.44	-53.09	-13.00	-40.09	peak
9	3296.800	-70.40	20.95	-49.45	-13.00	-36.45	peak
10	4121.000	-71.99	24.20	-47.79	-13.00	-34.79	peak
11	4945.200	-72.64	26.95	-45.69	-13.00	-32.69	peak
12	5769.400	-75.10	28.25	-46.85	-13.00	-33.85	peak
13	6593.600	-74.22	29.54	-44.68	-13.00	-31.68	peak
14	7417.800	-73.46	30.84	-42.62	-13.00	-29.62	peak
15	8242.000	-73.96	30.48	-43.48	-13.00	-30.48	peak
16	9066.200	-73.09	29.98	-43.11	-13.00	-30.11	peak
17	9890.400	-73.91	35.46	-38.45	-13.00	-25.45	peak

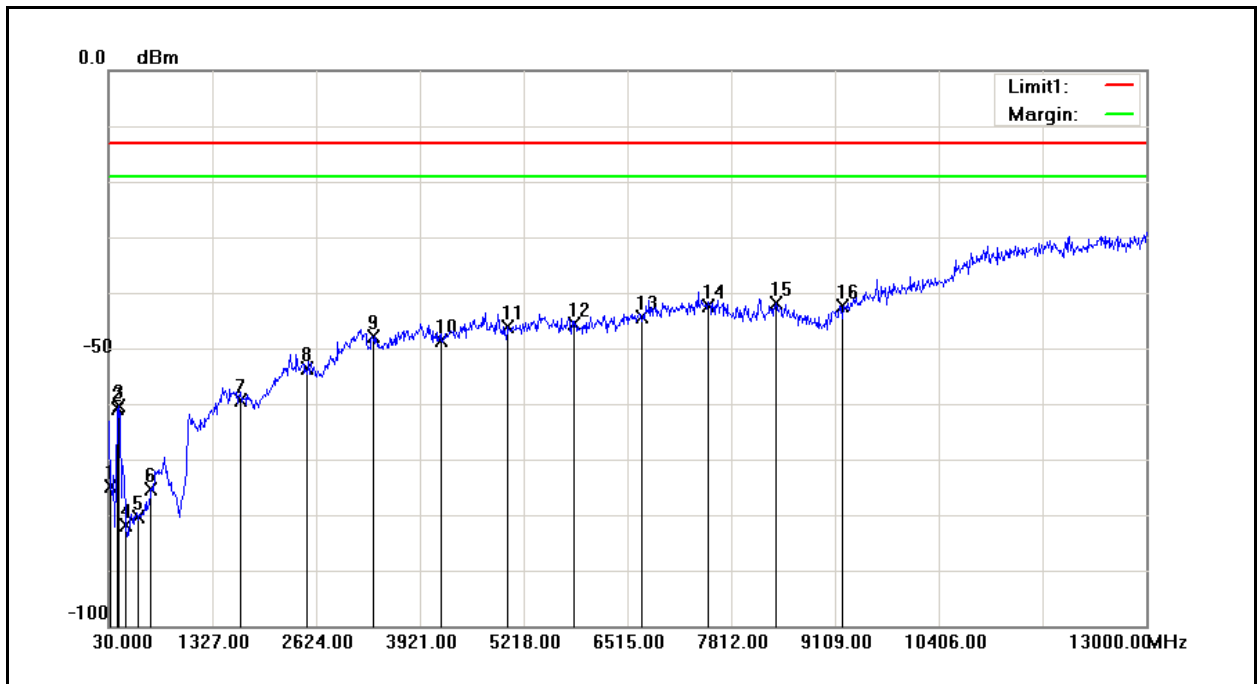
Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	836.6 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	836.6 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	92.5000	-71.73	-0.43	-72.16	-13.00	-59.16	peak
2	417.0000	-80.93	3.31	-77.62	-13.00	-64.62	peak
3	538.0000	-80.67	8.19	-72.48	-13.00	-59.48	peak
4	582.5000	-80.35	7.64	-72.71	-13.00	-59.71	peak
5	705.5000	-80.95	7.10	-73.85	-13.00	-60.85	peak
6	958.0000	-82.36	14.83	-67.53	-13.00	-54.53	peak
7	1673.200	-71.14	15.80	-55.34	-13.00	-42.34	peak
8	2509.800	-70.95	16.94	-54.01	-13.00	-41.01	peak
9	3346.400	-71.68	18.70	-52.98	-13.00	-39.98	peak
10	4183.000	-72.83	20.96	-51.87	-13.00	-38.87	peak
11	5019.600	-73.54	23.57	-49.97	-13.00	-36.97	peak
12	5856.200	-72.55	27.07	-45.48	-13.00	-32.48	peak
13	6692.800	-73.77	30.58	-43.19	-13.00	-30.19	peak
14	7529.400	-73.12	33.76	-39.36	-13.00	-26.36	peak
15	8366.000	-73.87	33.37	-40.50	-13.00	-27.50	peak
16	9202.600	-75.62	33.39	-42.23	-13.00	-29.23	peak

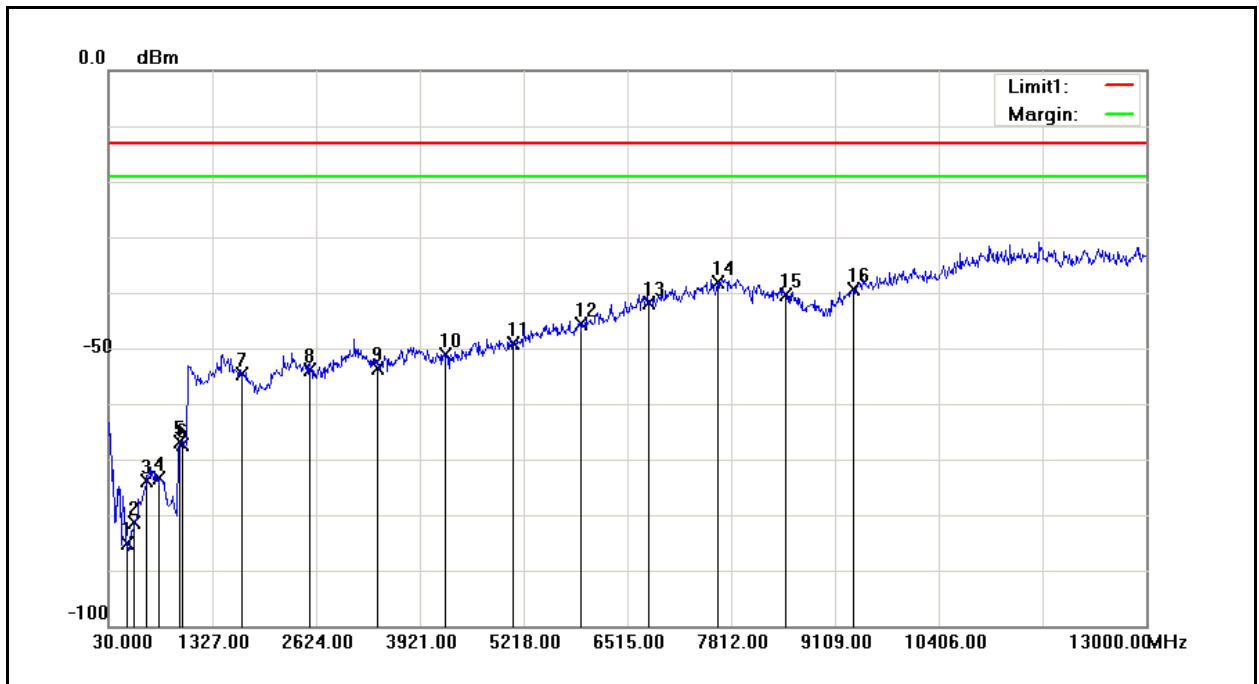
Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	836.6 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	836.6 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.5000	-69.10	-5.83	-74.93	-13.00	-61.93	peak
2	130.5000	-74.91	14.10	-60.81	-13.00	-47.81	peak
3	156.0000	-71.03	10.76	-60.27	-13.00	-47.27	peak
4	239.5000	-82.47	0.48	-81.99	-13.00	-68.99	peak
5	389.5000	-81.98	1.49	-80.49	-13.00	-67.49	peak
6	554.5000	-79.66	4.34	-75.32	-13.00	-62.32	peak
7	1673.200	-70.87	11.56	-59.31	-13.00	-46.31	peak
8	2509.800	-70.59	16.96	-53.63	-13.00	-40.63	peak
9	3346.400	-68.92	21.12	-47.80	-13.00	-34.80	peak
10	4183.000	-73.03	24.40	-48.63	-13.00	-35.63	peak
11	5019.600	-73.15	27.10	-46.05	-13.00	-33.05	peak
12	5856.200	-74.01	28.45	-45.56	-13.00	-32.56	peak
13	6692.800	-74.12	29.80	-44.32	-13.00	-31.32	peak
14	7529.400	-73.47	31.03	-42.44	-13.00	-29.44	peak
15	8366.000	-72.45	30.53	-41.92	-13.00	-28.92	peak
16	9202.600	-73.92	31.51	-42.41	-13.00	-29.41	peak

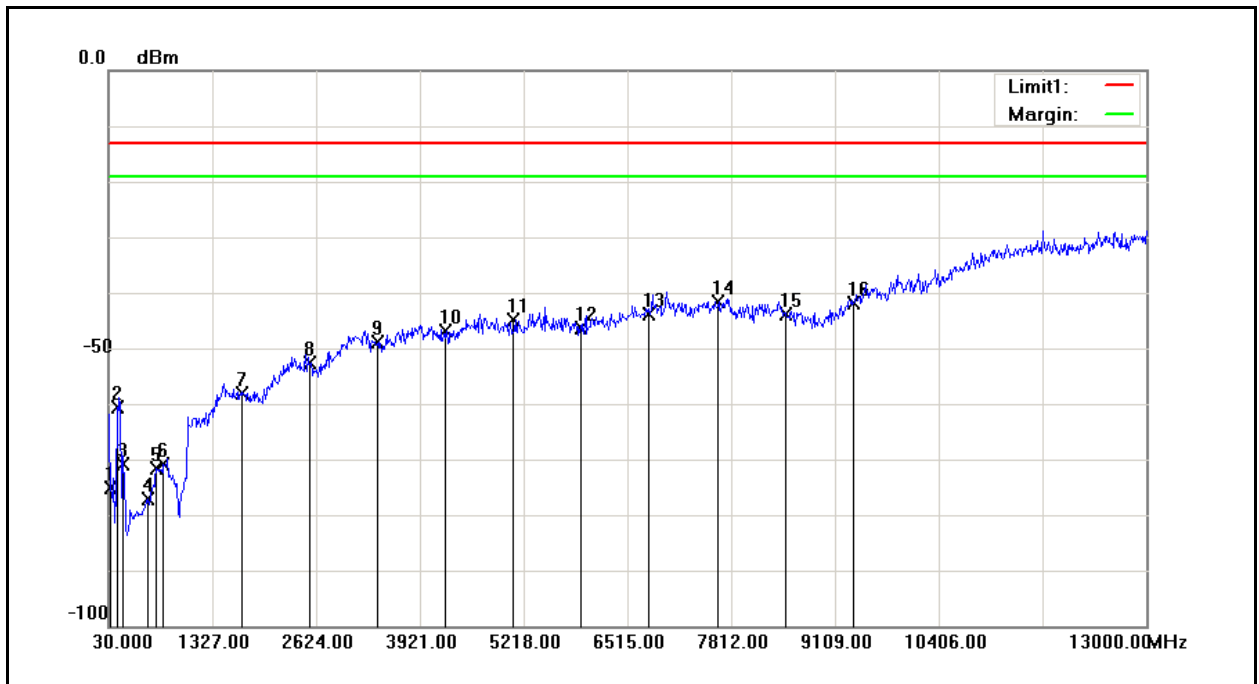
Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	848.8 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	848.8 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		

No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	260.0000	-80.81	-4.34	-85.15	-13.00	-72.15	peak
2	344.5000	-80.98	-0.37	-81.35	-13.00	-68.35	peak
3	498.5000	-80.73	6.87	-73.86	-13.00	-60.86	peak
4	659.5000	-80.62	7.15	-73.47	-13.00	-60.47	peak
5	912.5000	-81.35	14.49	-66.86	-13.00	-53.86	peak
6	963.5000	-82.07	14.74	-67.33	-13.00	-54.33	peak
7	1697.600	-70.37	15.83	-54.54	-13.00	-41.54	peak
8	2546.400	-71.04	17.09	-53.95	-13.00	-40.95	peak
9	3395.200	-72.34	18.82	-53.52	-13.00	-40.52	peak
10	4244.000	-72.38	21.16	-51.22	-13.00	-38.22	peak
11	5092.800	-73.06	23.91	-49.15	-13.00	-36.15	peak
12	5941.600	-73.13	27.45	-45.68	-13.00	-32.68	peak
13	6790.400	-72.79	30.99	-41.80	-13.00	-28.80	peak
14	7639.200	-71.26	33.75	-38.01	-13.00	-25.01	peak
15	8488.000	-73.64	33.28	-40.36	-13.00	-27.36	peak
16	9336.800	-74.15	34.81	-39.34	-13.00	-26.34	peak

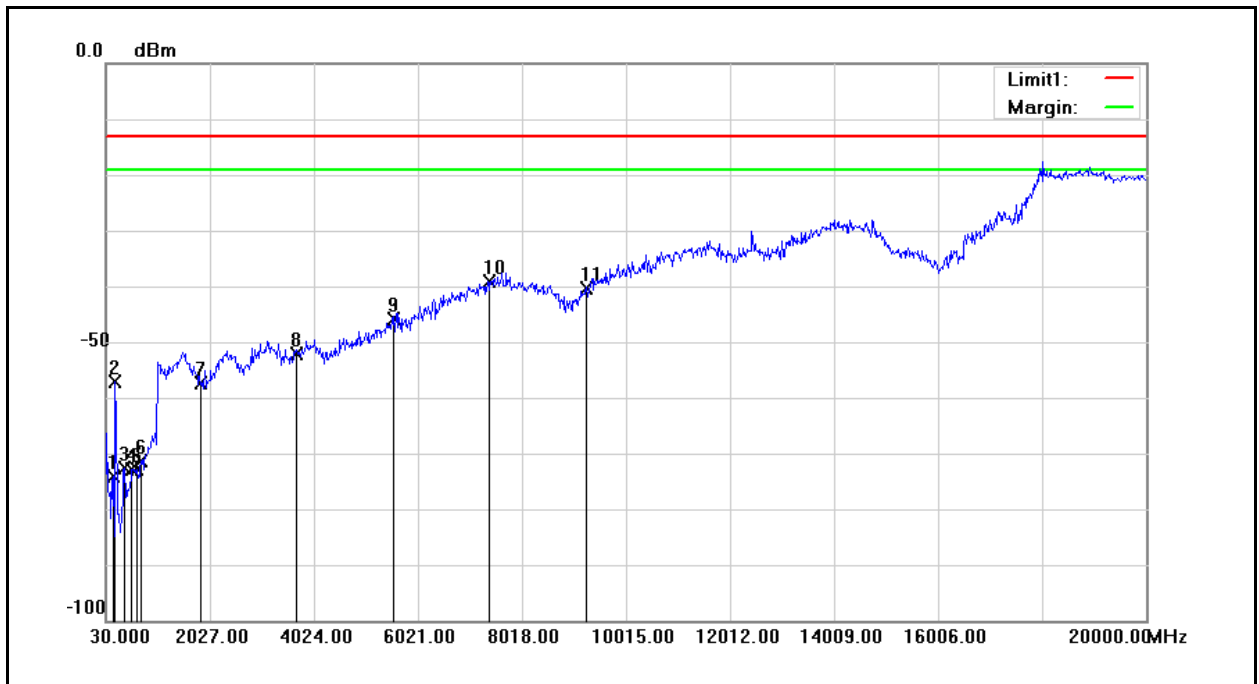
Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	848.8 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	02/07/2014
Frequency:	848.8 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		

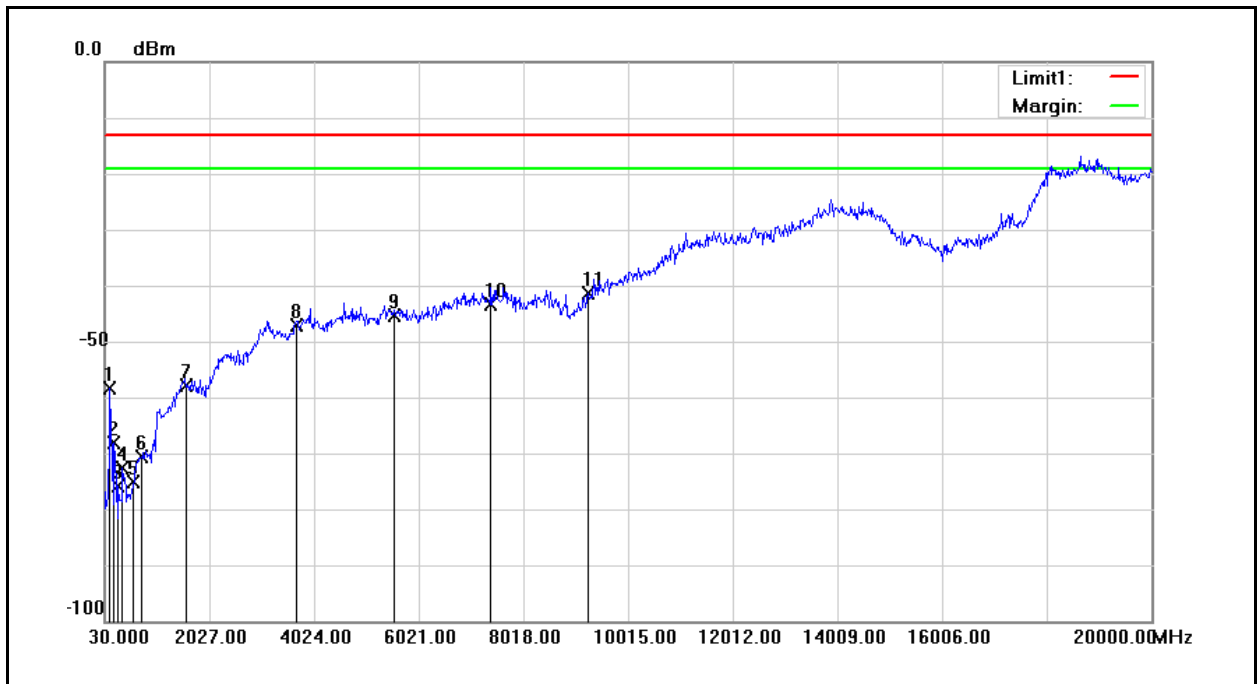
No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	54.5000	-69.36	-5.83	-75.19	-13.00	-62.19	peak
2	130.0000	-75.07	14.37	-60.70	-13.00	-47.70	peak
3	204.0000	-80.50	9.66	-70.84	-13.00	-57.84	peak
4	511.0000	-80.03	2.94	-77.09	-13.00	-64.09	peak
5	624.0000	-80.34	8.83	-71.51	-13.00	-58.51	peak
6	708.0000	-81.27	10.46	-70.81	-13.00	-57.81	peak
7	1697.600	-72.43	14.34	-58.09	-13.00	-45.09	peak
8	2546.400	-70.41	17.68	-52.73	-13.00	-39.73	peak
9	3395.200	-69.93	21.12	-48.81	-13.00	-35.81	peak
10	4244.000	-71.49	24.61	-46.88	-13.00	-33.88	peak
11	5092.800	-71.96	27.20	-44.76	-13.00	-31.76	peak
12	5941.600	-74.98	28.57	-46.41	-13.00	-33.41	peak
13	6790.400	-73.71	29.93	-43.78	-13.00	-30.78	peak
14	7639.200	-72.52	30.89	-41.63	-13.00	-28.63	peak
15	8488.000	-74.47	30.58	-43.89	-13.00	-30.89	peak
16	9336.800	-74.80	33.01	-41.79	-13.00	-28.79	peak

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	02/07/2014
Frequency:	1850.2 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		



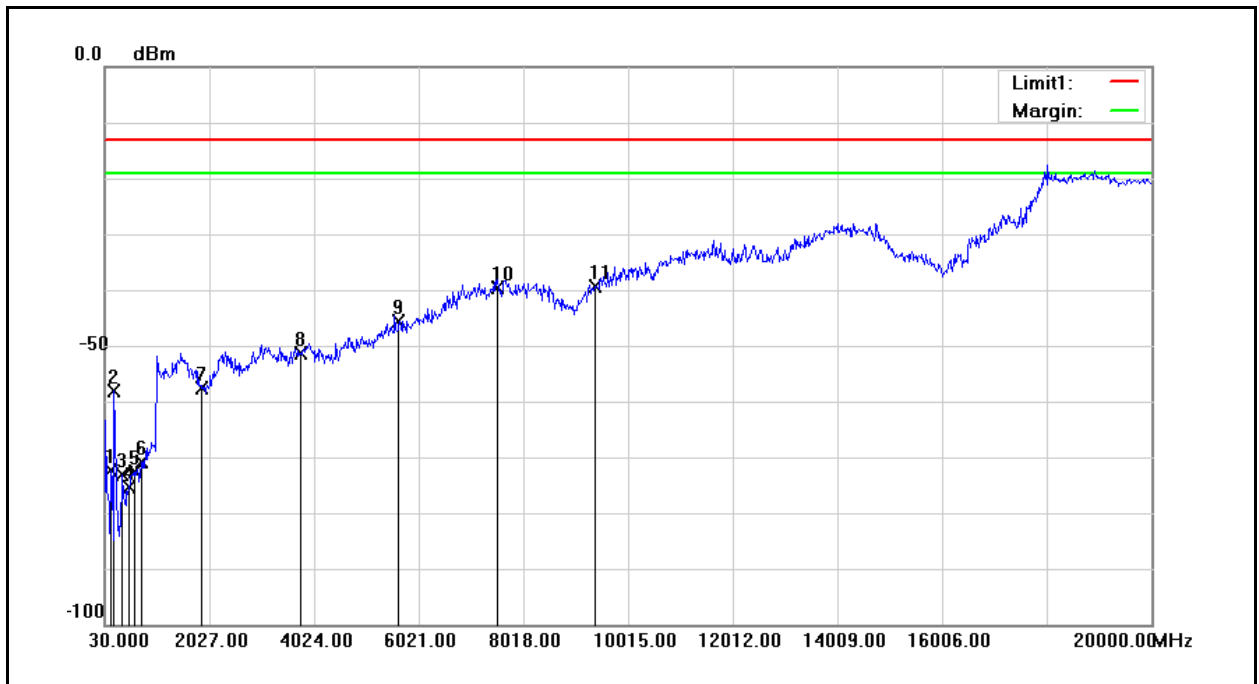
No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	157.0000	-74.58	0.49	-74.09	-13.00	-61.09	peak
2	202.5000	-59.44	2.37	-57.07	-13.00	-44.07	peak
3	370.5000	-73.17	0.43	-72.74	-13.00	-59.74	peak
4	515.0000	-80.36	7.49	-72.87	-13.00	-59.87	peak
5	612.5000	-80.60	7.80	-72.80	-13.00	-59.80	peak
6	703.5000	-78.33	7.05	-71.28	-13.00	-58.28	peak
7	1850.200	-69.83	12.38	-57.45	-13.00	-44.45	peak
8	3700.400	-71.63	19.59	-52.04	-13.00	-39.04	peak
9	5550.600	-72.01	26.07	-45.94	-13.00	-32.94	peak
10	7400.800	-72.65	33.56	-39.09	-13.00	-26.09	peak
11	9251.000	-74.15	33.90	-40.25	-13.00	-27.25	peak

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	02/07/2014
Frequency:	1850.2 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		



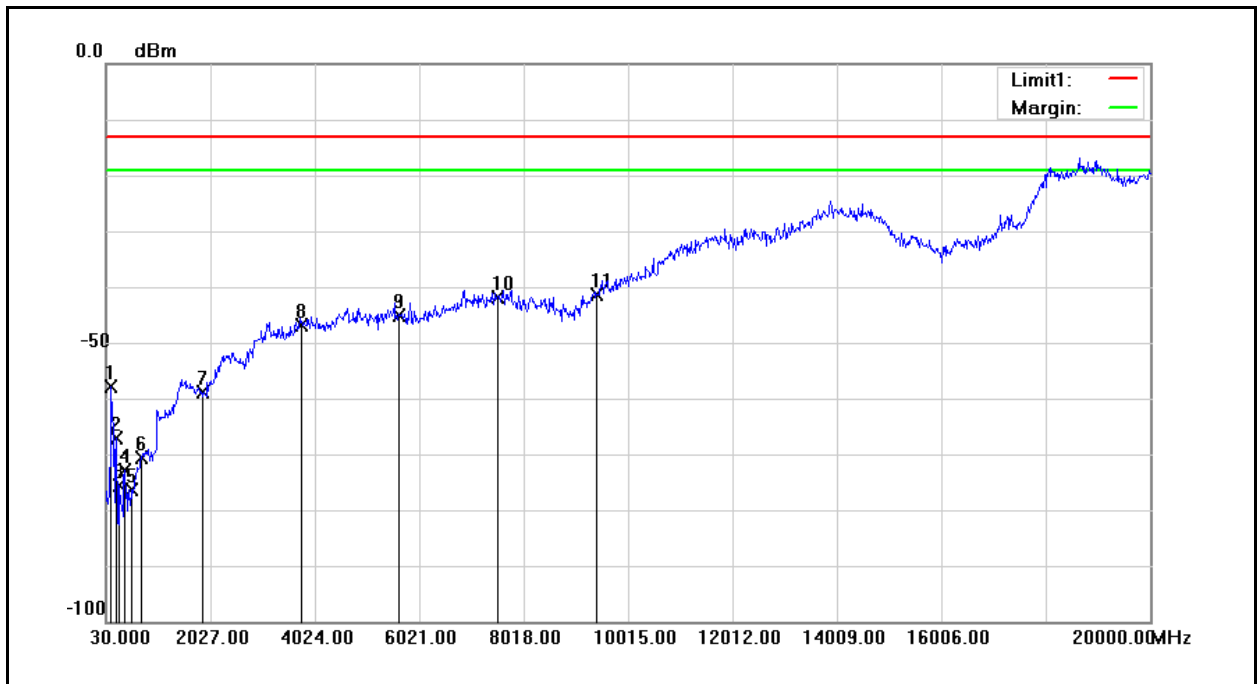
No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	128.5000	-71.24	12.88	-58.36	-13.00	-45.36	peak
2	208.5000	-77.14	9.13	-68.01	-13.00	-55.01	peak
3	284.5000	-77.14	1.31	-75.83	-13.00	-62.83	peak
4	368.0000	-74.72	2.11	-72.61	-13.00	-59.61	peak
5	570.0000	-80.33	5.14	-75.19	-13.00	-62.19	peak
6	714.5000	-81.20	10.68	-70.52	-13.00	-57.52	peak
7	1580.200	-71.93	14.16	-57.77	-13.00	-44.77	peak
8	3700.400	-69.80	22.60	-47.20	-13.00	-34.20	peak
9	5550.600	-73.28	28.01	-45.27	-13.00	-32.27	peak
10	7400.800	-74.32	30.98	-43.34	-13.00	-30.34	peak
11	9251.000	-73.43	32.05	-41.38	-13.00	-28.38	peak

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	02/07/2014
Frequency:	1880.0 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		



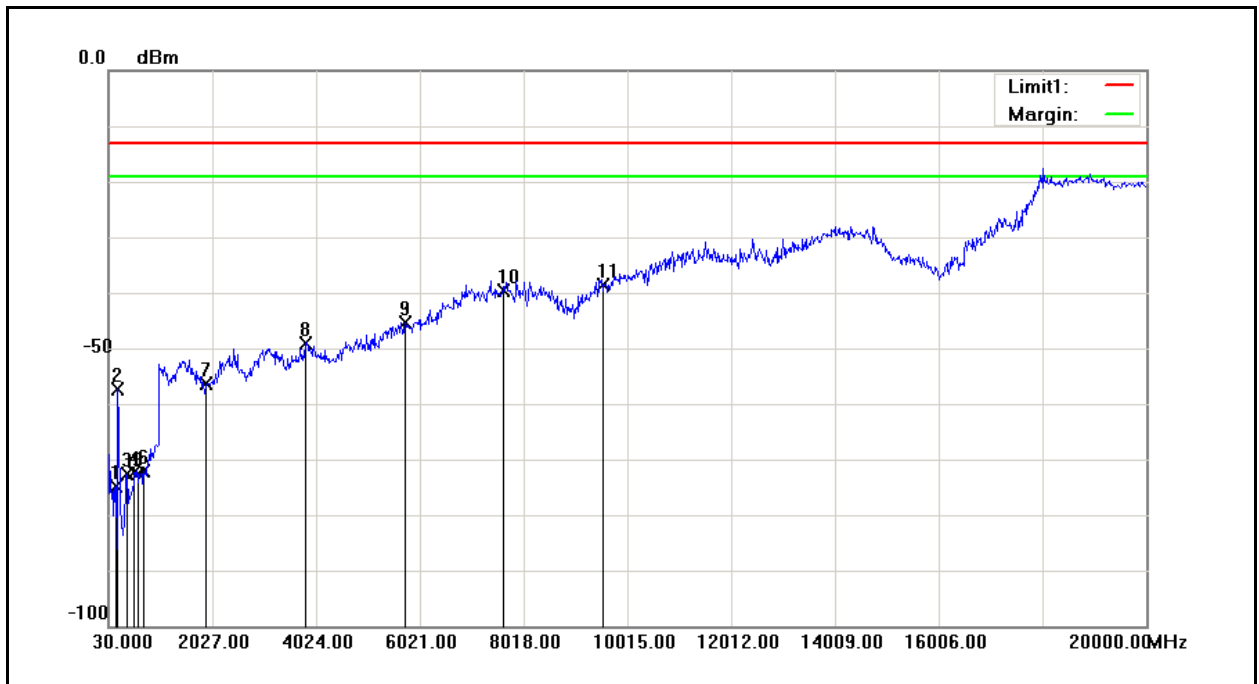
No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	146.5000	-69.52	-2.80	-72.32	-13.00	-59.32	peak
2	203.0000	-60.28	2.26	-58.02	-13.00	-45.02	peak
3	365.0000	-73.24	0.23	-73.01	-13.00	-60.01	peak
4	490.0000	-81.68	6.35	-75.33	-13.00	-62.33	peak
5	598.5000	-80.56	7.91	-72.65	-13.00	-59.65	peak
6	710.5000	-78.13	7.23	-70.90	-13.00	-57.90	peak
7	1880.000	-70.21	12.71	-57.50	-13.00	-44.50	peak
8	3760.000	-71.16	19.78	-51.38	-13.00	-38.38	peak
9	5640.000	-72.15	26.49	-45.66	-13.00	-32.66	peak
10	7520.000	-73.39	33.78	-39.61	-13.00	-26.61	peak
11	9400.000	-75.54	35.48	-39.41	-13.00	-26.41	peak

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	02/07/2014
Frequency:	1880.0 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		



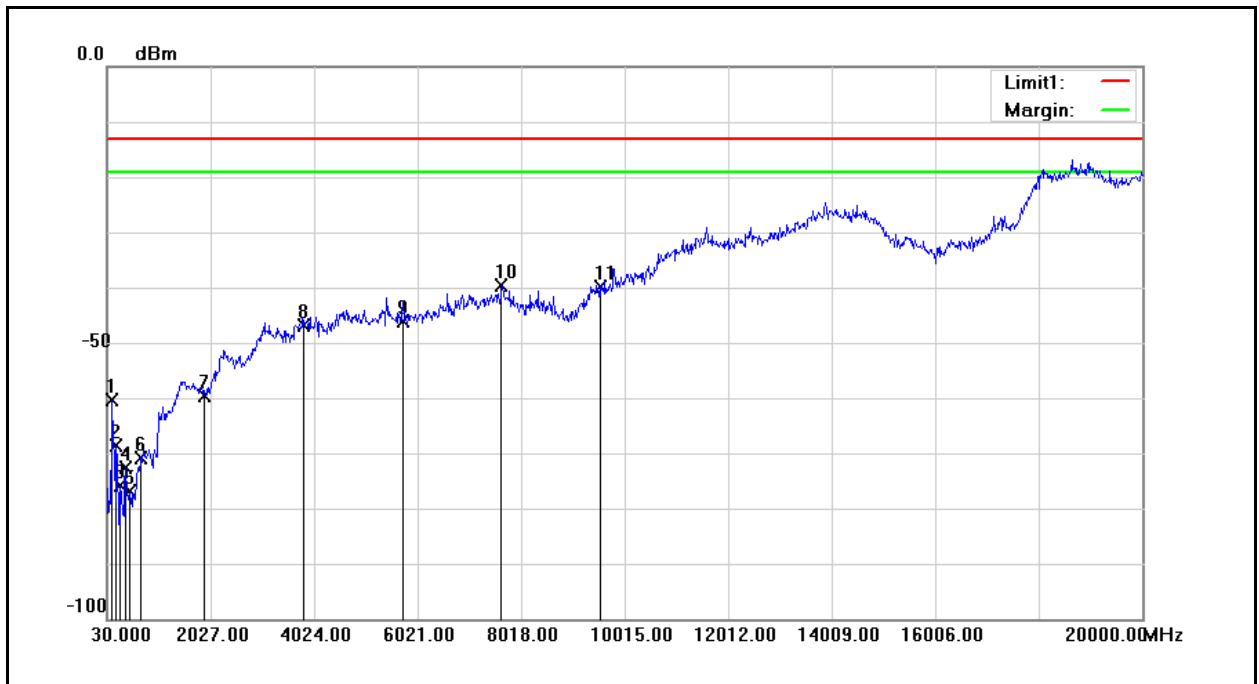
No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	128.0000	-70.30	12.39	-57.91	-13.00	-44.91	peak
2	210.5000	-75.79	8.76	-67.03	-13.00	-54.03	peak
3	279.0000	-76.33	0.78	-75.55	-13.00	-62.55	peak
4	373.5000	-74.69	1.88	-72.81	-13.00	-59.81	peak
5	525.0000	-79.89	3.40	-76.49	-13.00	-63.49	peak
6	702.5000	-80.84	10.26	-70.58	-13.00	-57.58	peak
7	1880.000	-74.10	15.30	-58.80	-13.00	-45.80	peak
8	3760.000	-69.91	22.94	-46.97	-13.00	-33.97	peak
9	5640.000	-73.33	28.17	-45.16	-13.00	-32.16	peak
10	7520.000	-73.01	31.06	-41.95	-13.00	-28.95	peak
11	9400.000	-75.07	33.71	-41.36	-13.00	-28.36	peak

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	02/07/2014
Frequency:	1909.8 MHz	Test By:	Fly Lu
Ant.Polar.:	Horizontal		



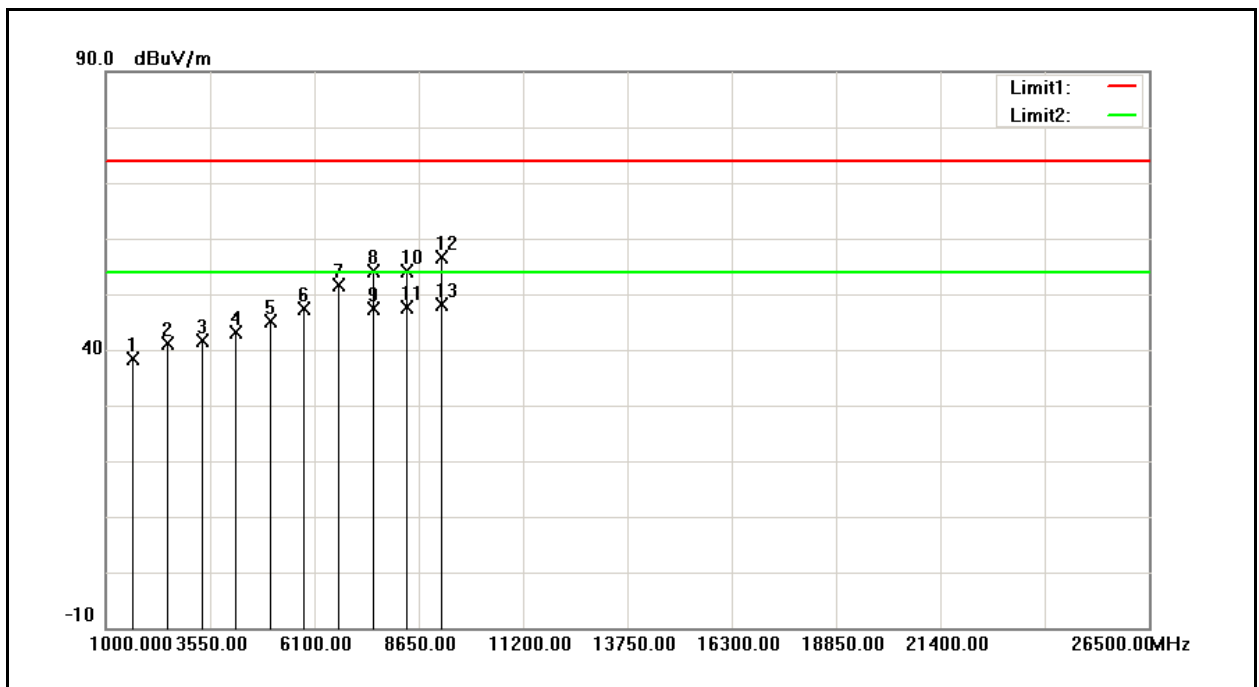
No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	155.5000	-74.85	0.01	-74.84	-13.00	-61.84	peak
2	202.0000	-59.90	2.48	-57.42	-13.00	-44.42	peak
3	374.0000	-73.09	0.56	-72.53	-13.00	-59.53	peak
4	526.0000	-80.23	7.82	-72.41	-13.00	-59.41	peak
5	608.5000	-80.38	7.83	-72.55	-13.00	-59.55	peak
6	706.5000	-79.36	7.13	-72.23	-13.00	-59.23	peak
7	1909.800	-69.25	12.80	-56.45	-13.00	-43.45	peak
8	3819.600	-68.58	19.55	-49.03	-13.00	-36.03	peak
9	5729.400	-72.27	26.81	-45.46	-13.00	-32.46	peak
10	7639.200	-73.30	33.75	-39.55	-13.00	-26.55	peak
11	9549.000	-75.28	36.64	-38.64	-13.00	-25.64	peak

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	02/07/2014
Frequency:	1909.8 MHz	Test By:	Fly Lu
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark
1	128.5000	-73.32	12.88	-60.44	-13.00	-47.44	peak
2	201.0000	-78.57	10.04	-68.53	-13.00	-55.53	peak
3	274.5000	-76.18	0.23	-75.95	-13.00	-62.95	peak
4	374.0000	-74.45	1.87	-72.58	-13.00	-59.58	peak
5	453.5000	-78.57	1.62	-76.95	-13.00	-63.95	peak
6	682.5000	-80.47	9.65	-70.82	-13.00	-57.82	peak
7	1909.800	-74.74	15.10	-59.64	-13.00	-46.64	peak
8	3819.600	-69.91	23.12	-46.79	-13.00	-33.79	peak
9	5729.400	-74.42	28.29	-46.13	-13.00	-33.13	peak
10	7639.200	-70.41	30.89	-39.52	-13.00	-26.52	peak
11	9549.000	-74.86	34.92	-39.94	-13.00	-26.94	peak

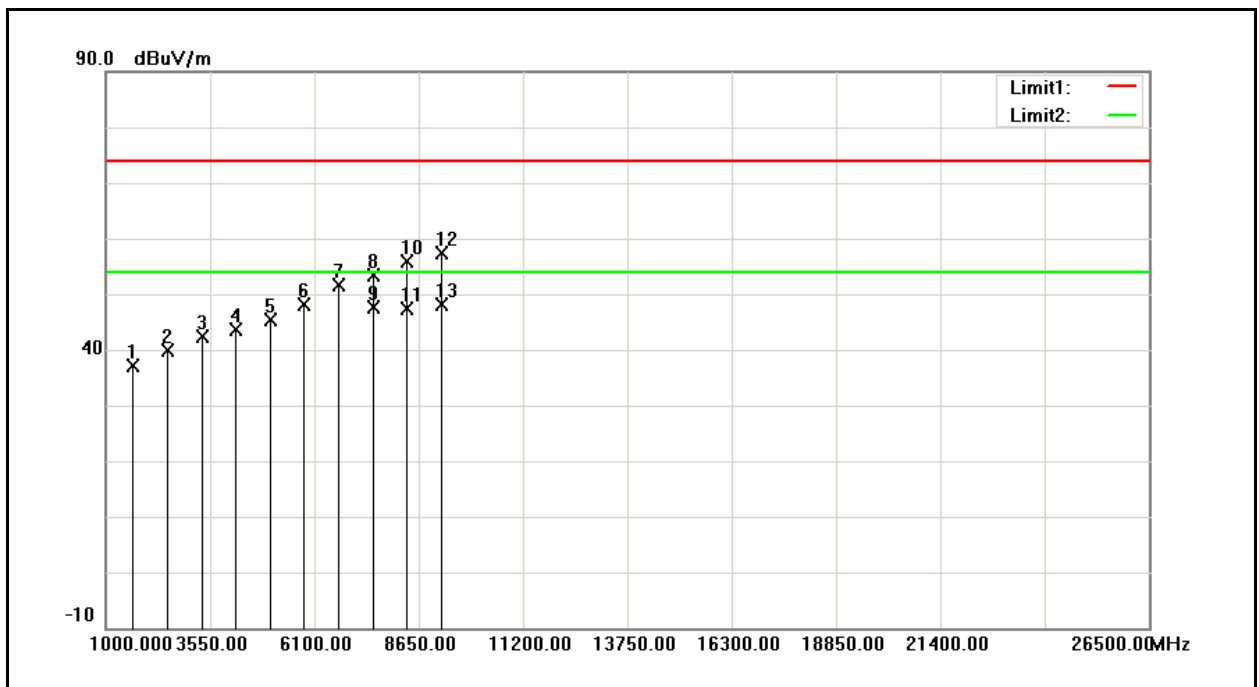
Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	02/07/2014
Ant.Polar.:	Horizontal	Test By:	Fly Lu



Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	02/07/2014
Ant.Polar.:	Horizontal	Test By:	Fly Lu

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1673.200	38.58	-0.16	38.42	74.00	-35.58	peak
2	2509.800	36.17	5.04	41.21	74.00	-32.79	peak
3	3346.400	34.65	6.94	41.59	74.00	-32.41	peak
4	4183.000	32.93	10.08	43.01	74.00	-30.99	peak
5	5019.600	32.44	12.64	45.08	74.00	-28.92	peak
6	5856.200	31.79	15.60	47.39	74.00	-26.61	peak
7	6692.800	33.08	18.59	51.67	74.00	-22.33	peak
8	7529.400	33.32	20.92	54.24	74.00	-19.76	peak
9	7529.400	26.42	20.92	47.34	54.00	-6.66	AVG
10	8366.000	32.21	21.91	54.12	74.00	-19.88	peak
11	8366.000	25.63	21.91	47.54	54.00	-6.46	AVG
12	9202.600	33.02	23.59	56.61	74.00	-17.39	peak
13	9202.600	24.63	23.59	48.22	54.00	-5.78	AVG

Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	02/07/2014
Ant.Polar.:	Vertical	Test By:	Fly Lu



Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	DC 3.8V
Model Number:	GE866-QUAD	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	3	Date:	02/07/2014
Ant.Polar.:	Vertical	Test By:	Fly Lu

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1673.200	37.35	-0.16	37.19	74.00	-36.81	peak
2	2509.800	34.87	5.04	39.91	74.00	-34.09	peak
3	3346.400	35.52	6.94	42.46	74.00	-31.54	peak
4	4183.000	33.54	10.08	43.62	74.00	-30.38	peak
5	5019.600	32.84	12.64	45.48	74.00	-28.52	peak
6	5856.200	32.49	15.60	48.09	74.00	-25.91	peak
7	6692.800	33.10	18.59	51.69	74.00	-22.31	peak
8	7529.400	32.46	20.92	53.38	74.00	-20.62	peak
9	7529.400	26.77	20.92	47.69	54.00	-6.31	AVG
10	8366.000	34.09	21.91	56.00	74.00	-18.00	peak
11	8366.000	25.40	21.91	47.31	54.00	-6.69	AVG
12	9202.600	33.90	23.59	57.49	74.00	-16.51	peak
13	9202.600	24.47	23.59	48.06	54.00	-5.94	AVG

8 Frequency Stability (Temperature & Voltage Variation) Test

8.1. Limit

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

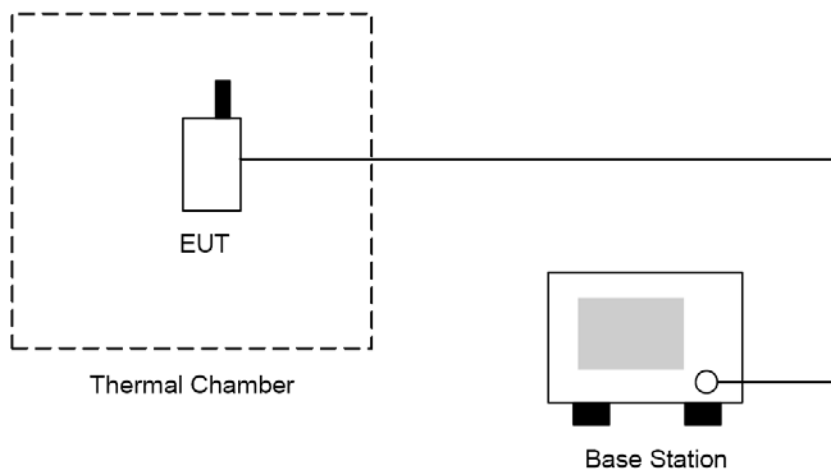
8.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/07/2013	(1)
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: ⁽¹⁾ Calibration period 1 year. ⁽²⁾ Calibration period 2 years.

Note: N.C.R. = No Calibration Request.

8.3. Setup



8.4. Test Procedure

The measurement is made according to FCC rules part 22 and 24:

1. The EUT and test equipment were set up as shown on the following section.
2. With all power removed, the temperature was decreased to -30°C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute.
3. With power OFF, the temperature was raised in 10°C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute.
4. The EUT was placed in a temperature chamber at $25 \pm 5^{\circ}\text{C}$ and connected as the following section.
5. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
6. The temperature tests were performed for the worst case.
7. Test data was recorded.

8.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Temperature Variation) measurement is $\pm 10\text{Hz}$.

8.6. Test Result

Model Number	GE866-QUAD					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 1					
Date of Test	01/29/2014				Test Site	TE05
Level	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	3.80	-30	9	0.011	±2.5	Pass
Normal	3.80	-20	-10	-0.012	±2.5	Pass
Normal	3.80	-10	18	0.022	±2.5	Pass
Normal	3.80	0	-26	-0.031	±2.5	Pass
Normal	3.80	10	-6	-0.007	±2.5	Pass
High Voltage	4.20	20	-16	-0.019	±2.5	Pass
Normal	3.80	20	11	0.013	±2.5	Pass
Low Voltage	3.40	20	5	0.006	±2.5	Pass
Normal	3.80	30	-13	-0.016	±2.5	Pass
Normal	3.80	40	-16	-0.019	±2.5	Pass
Normal	3.80	50	11	0.013	±2.5	Pass

Model Number	GE866-QUAD					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 2					
Date of Test	01/29/2014				Test Site	TE05
Level	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	3.80	-30	58	0.031	±2.5	Pass
Normal	3.80	-20	63	0.034	±2.5	Pass
Normal	3.80	-10	49	0.026	±2.5	Pass
Normal	3.80	0	35	0.019	±2.5	Pass
Normal	3.80	10	22	0.012	±2.5	Pass
High Voltage	4.20	20	54	0.029	±2.5	Pass
Normal	3.80	20	63	0.034	±2.5	Pass
Low Voltage	3.40	20	45	0.024	±2.5	Pass
Normal	3.80	30	37	0.020	±2.5	Pass
Normal	3.80	40	55	0.029	±2.5	Pass
Normal	3.80	50	44	0.023	±2.5	Pass