

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

Product Type : Wireless Modem
Applicant : Novatel Wireless Inc.
Address : 6715 - 8th Street N.E., Suite 200 Calgary Alberta T2E 7H7
Canada
Trade Name : HS 3002
Model Number : CNN0403
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 : Jun. 17, 2013
Test Period : Jun. 21 ~ Jun. 25, 2013
Issue Date : Jul. 10, 2013

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
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Taiwan Accreditation Foundation accreditation number: 1330

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jul. 03, 2013	Initial Issue	
01	Jul. 10, 2013	Revised report information	Snow Wang

Verification of Compliance

Issued Date: 07/10/2013

Product Type : Wireless Modem
Applicant : Novatel Wireless Inc.
Address : 6715 - 8th Street N.E., Suite 200 Calgary Alberta T2E 7H7
Canada
Trade Name : HS 3002
Model Number : CNN0403
FCC ID : PKRNVWCNN0403
IC : 3229A-CNN0403
EUT Rated Voltage : DC 5.0V (USB Interface)
Test Voltage : 120 Vac / 60 Hz
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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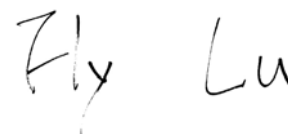
The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4: 2009 and the energy emitted by the sample tested as described in this report is 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 :



Reviewed By :



(Manager)

(Murphy Wang)

(Testing Engineer)

(Fly Lu)

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1 General Information

1.1. EUT Description

Applicant	Novatel Wireless Inc.				
Applicant Address	6715 - 8th Street N.E., Suite 200 Calgary Alberta T2E 7H7 Canada				
Manufacturer	Novatel Wireless Inc.				
Manufacturer Address	6715 - 8th Street N.E., Suite 200 Calgary Alberta T2E 7H7 Canada				
Product Type	Wireless Modem				
Trade Name	HS 3002				
Model Number	CNN0403				
FCC ID	PKRNVWCNN0403				
IC	3229A-CNN0403				
IMEI No.	001036000242910				
Mode	GSM/GPRS/EGPRS	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		850	824.2 ~ 848.8	869.2 ~ 893.8	GMSK/8PSK
		1900	1850.2 ~ 1909.8	1930.2 ~ 1989.8	GMSK/8PSK
	WCDMA(RM C12.2K)/HSDPA	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		II	1852.4 ~ 1907.6	1932.4 ~ 1987.6	QPSK
		V	826.4 ~ 846.6	871.4 ~ 891.6	QPSK
Channel Control	Auto				
Type of Antenna	Dipole Antenna				
Antenna Gain (dBi)	GSM/GPRS/EGPRS 850 : 1 dBi GSM/GPRS/EGPRS 1900 : 2 dBi WCDMA/ HSDPA Band II : 2 dBi WCDMA/ HSDPA Band V : 1 dBi				
Max. RF Output power	GSM/GPRS 850 : 32.03 dBm / 1.596 W EGPRS 850 : 30.13 dBm / 1.030 W GSM/GPRS 1900 : 29.33 dBm / 0.857 W EGPRS 1900 : 29.84 dBm / 0.964 W WCDMA/ HSDPA Band II : 26.42 dBm / 0.439 W WCDMA/ HSDPA Band V : 26.71 dBm / 0.469 W				
Max. ERP/EIRP	GSM/GPRS 850 : 32.44 dBm / 1.754 W EGPRS 850 : 30.07 dBm / 1.016 W GSM/GPRS 1900 : 25.73 dBm / 0.374 W EGPRS 1900 : 22.32 dBm / 0.171 W WCDMA Band II : 22.42 dBm / 0.175 W WCDMA Band V : 27.32 dBm / 0.540 W				
Emission Designator	GSM/GPRS 850 : 243KGXW EGPRS 850 : 248KG7W GSM/GPRS 1900 : 245KGXW EGPRS 1900 : 250KG7W WCDMA Band II : 4M17F9W WCDMA Band V : 4M20F9W				

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:

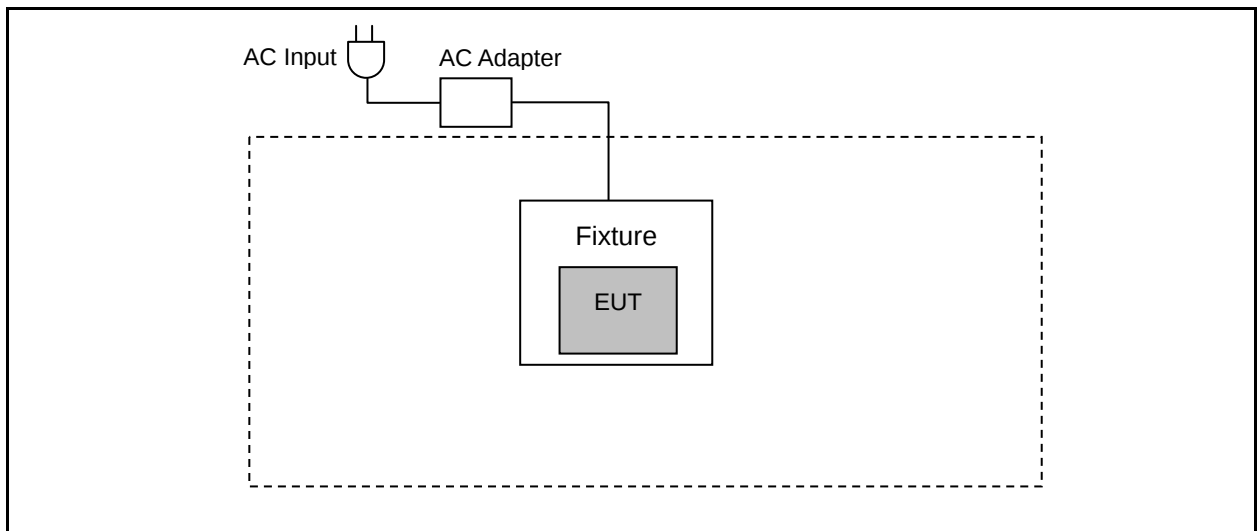
Test Mode
Mode 1: GSM 850 Link Mode
Mode 2: GSM 1900 Link Mode
Mode 3: EGPRS 850 Link Mode
Mode 4: EGPRS 1900 Link Mode
Mode 5: WCDMA Band II Link Mode
Mode 6: WCDMA Band V Link Mode
Mode 7: Receive Link Mode

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

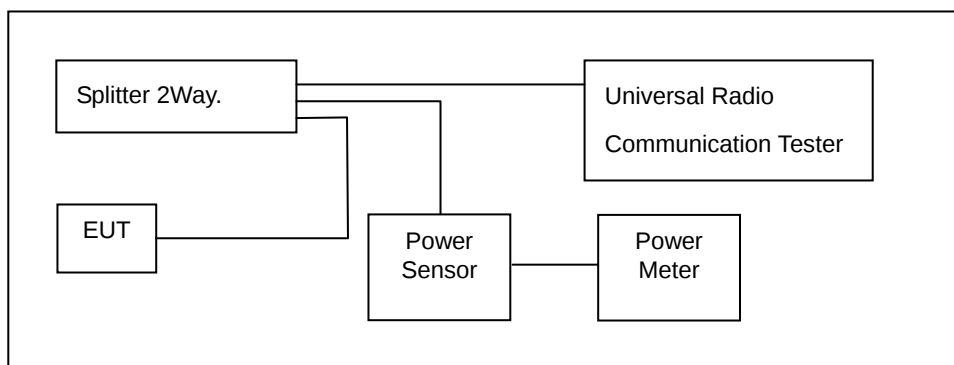
2.2. Test Instruments

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	12/15/2011	(2)
Wideband Power Meter	Agilent	N1921A	MY45241957	12/15/2011	(2)
Splitter 2Way.	GRENTech	SGR-GFQ-2-D	41106609	02/21/2013	(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	CNN0403						
Test Item	RF Output Power						
Date of Test	06/22/2013			Test Site		TE05	
Bands	Modulation Type	Data Rate	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
GSM 850	GMSK	-----	824.2	31.86	1.535	32.03	1.596
			836.6	31.74	1.493	31.91	1.552
			848.8	31.66	1.466	31.88	1.542
GRRS 850 Multi Class 10 Max Up:2 Max Down:4 Sum:6	GMSK	4Down1Up (Duty Factor 1/8)	824.2	31.71	1.483	31.92	1.556
			836.6	31.64	1.459	31.84	1.528
			848.8	31.58	1.439	31.73	1.489
		3Down2Up (Duty Factor 2/8)	824.2	31.66	1.466	31.84	1.528
			836.6	31.54	1.426	31.69	1.476
			848.8	31.43	1.390	31.58	1.439
EGPRS 850 Multi Class :13 Max Up:4 Max Down:4 Sum:6	8PSK	4Down1Up (Duty Factor 1/8)	824.2	27.03	0.505	30.13	1.030
			836.6	26.93	0.493	30.02	1.005
			848.8	26.84	0.483	29.86	0.968
		3Down2Up (Duty Factor 2/8)	824.2	26.94	0.494	29.96	0.991
			836.6	26.81	0.480	29.89	0.975
			848.8	26.72	0.470	29.73	0.940
		2Down3Up (Duty Factor 3/8)	824.2	26.78	0.476	29.81	0.957
			836.6	26.61	0.458	29.72	0.938
			848.8	26.52	0.449	29.55	0.902
		1Down4Up (Duty Factor 4/8)	824.2	26.63	0.460	29.66	0.925
			836.6	26.48	0.445	29.55	0.902
			848.8	26.37	0.434	29.39	0.869

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

Model Number	CNN0403						
Test Item	RF Output Power						
Date of Test	06/22/2013			Test Site		TE05	
Bands	Modulation Type	Data Rate	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
GSM 1900	GMSK	-----	1850.2	29.16	0.824	29.33	0.857
			1880.0	29.14	0.820	29.28	0.847
			1909.8	28.88	0.773	29.03	0.800
GRRS 1900 Multi Class :10 Max Up:2 Max Down:4 Sum:6	GMSK	4Down1Up (Duty Factor 1/8)	1850.2	29.07	0.807	29.22	0.836
			1880.0	29.02	0.798	29.16	0.824
			1909.8	28.72	0.745	28.89	0.774
		3Down2Up (Duty Factor 2/8)	1850.2	28.95	0.785	29.09	0.811
			1880.0	28.88	0.773	29.01	0.796
			1909.8	28.66	0.735	28.71	0.743
EGPRS 1900 Multi Class :12 Max Up:4 Max Down:4 Sum:6	8PSK	4Down1Up (Duty Factor 1/8)	1850.2	26.68	0.466	29.84	0.964
			1880.0	26.56	0.453	29.77	0.948
			1909.8	26.15	0.412	29.33	0.857
		3Down2Up (Duty Factor 2/8)	1850.2	26.54	0.451	29.71	0.935
			1880.0	26.41	0.438	29.66	0.925
			1909.8	26.01	0.399	29.19	0.830
		2Down3Up (Duty Factor 3/8)	1850.2	26.44	0.441	29.62	0.916
			1909.8	26.33	0.430	29.55	0.902
			1909.8	25.91	0.390	29.08	0.809
		1Down4Up (Duty Factor 4/8)	1850.2	26.31	0.428	29.53	0.897
			1909.8	26.19	0.416	29.41	0.873
			1909.8	25.80	0.380	28.94	0.783

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

Model Number	CNN0403						
Test Item	RF Output Power						
Date of Test	06/22/2013			Test Site		TE05	
Bands	Modulation Type	Sub-Test	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
WCDMA Band II	QPSK	-----	1852.4	23.07	0.203	26.42	0.439
			1880.0	23.01	0.200	26.37	0.434
			1907.6	22.96	0.198	26.32	0.429
HSDPA Band II	QPSK	1	1852.4	22.08	0.161	25.43	0.349
			1880.0	22.02	0.159	25.38	0.345
			1907.6	21.94	0.156	25.33	0.341
		2	1852.4	22.05	0.160	25.40	0.347
			1880.0	22.00	0.158	25.36	0.344
			1907.6	21.91	0.155	25.30	0.339
		3	1852.4	21.60	0.145	24.95	0.313
			1880.0	21.53	0.142	24.89	0.308
			1907.6	21.44	0.139	24.83	0.304
		4	1852.4	21.57	0.144	24.92	0.310
			1880.0	21.52	0.142	24.88	0.308
			1907.6	21.44	0.139	24.83	0.304

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

Model Number	CNN0403						
Test Item	RF Output Power						
Date of Test	06/22/2013			Test Site		TE05	
Bands	Modulation Type	Sub-Test	Frequency (MHz)	Burst Average Power		Peak Power	
				(dBm)	(W)	(dBm)	(W)
WCDMA Band V	QPSK	-----	826.4	23.43	0.220	26.71	0.469
			836.6	23.16	0.207	26.43	0.440
			846.6	23.12	0.205	26.36	0.433
HSDPA Band V	QPSK	1	826.4	22.36	0.172	25.58	0.361
			836.6	22.13	0.163	25.32	0.340
			846.6	22.03	0.160	25.24	0.334
		2	826.4	22.33	0.171	25.55	0.359
			836.6	22.11	0.163	25.30	0.339
			846.6	22.02	0.159	25.23	0.333
		3	826.4	21.87	0.154	25.09	0.323
			836.6	21.63	0.146	24.82	0.303
			846.6	21.53	0.142	24.74	0.298
		4	826.4	21.85	0.153	25.07	0.321
			836.6	21.61	0.145	24.80	0.302
			846.6	21.52	0.142	24.73	0.297

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

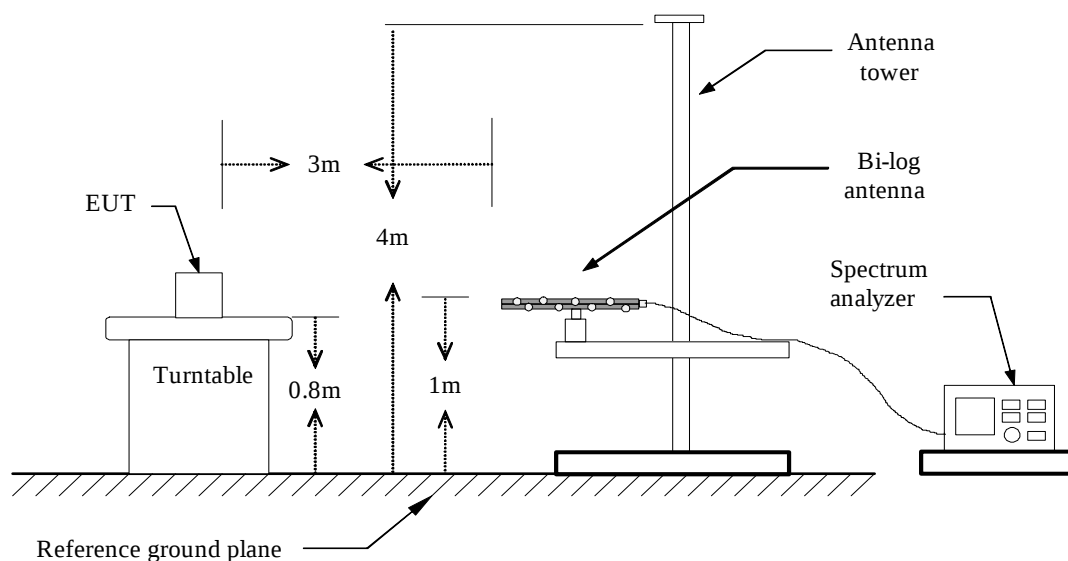
3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/21/2013	(2)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/21/2013	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/21/2013	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/21/2013	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	06/29/2012	(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	08/28/2012	(1)

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

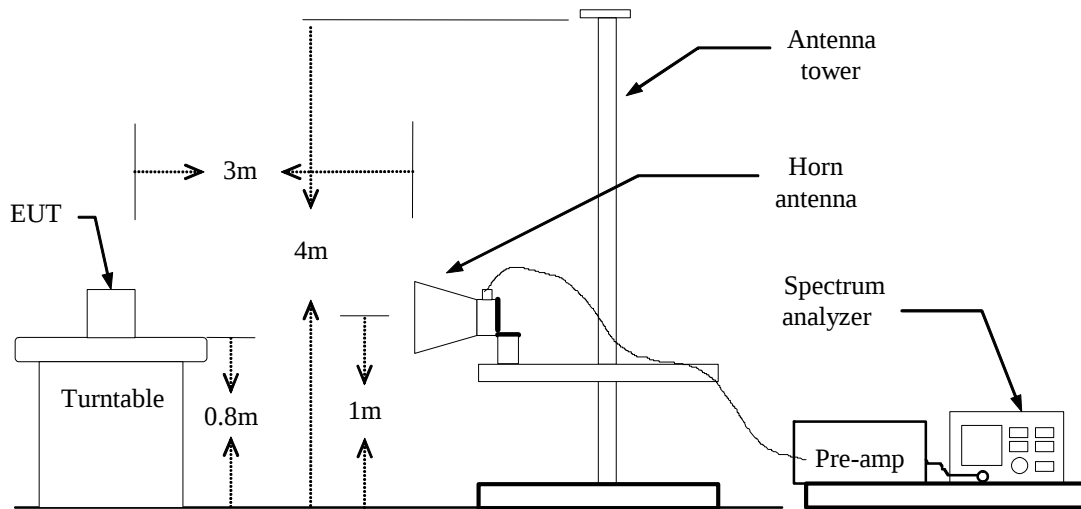
Note: N.C.R. = No Calibration Request.

3.3. Setup

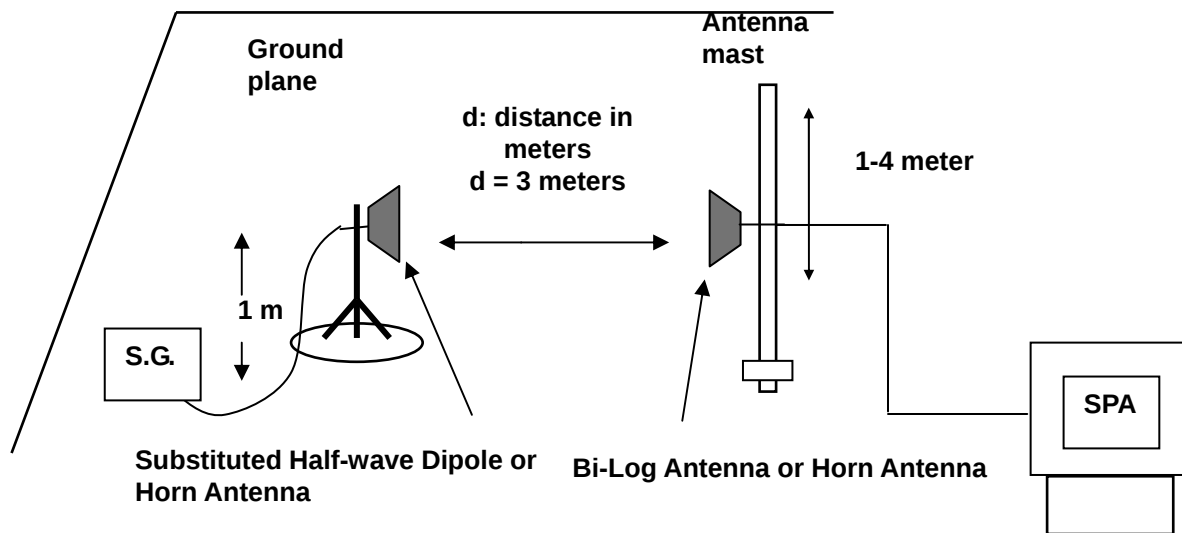
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



3.4. Test Procedure

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

The EUT was placed on a non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement of the EUT, the resolution bandwidth was set to 3MHz and the average bandwidth was set to 3MHz. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824-849MHz, and EIRP in frequency band 1851.25 –1910MHz were measured using a substitution method. The EUT was replaced by half-wave dipole (824-849MHz) or horn antenna (1851.25-1910MHz) connected to a signal generator. The spectrum analyzer reading was recorded and ERP/EIRP was calculated as follows:

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable (dB)}$$
$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable (dB)}$$

3.5. Uncertainty

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

3.6. Test Result

Model Number	CNN0403							
Test Item	ERP/EIRP							
Date of Test	06/24/2013					Test Site	TE01	
Bands	Modulation Type	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	ERP		Limit
						(dBm)	(W)	
GSM 850	GMSK	824.2	H	12.66	11.95	24.61	0.289	< 7W
			V	21.15	11.29	32.44	1.754	< 7W
		836.6	H	14.16	12.07	26.23	0.420	< 7W
			V	20.91	11.34	32.25	1.679	< 7W
		848.8	H	15.18	12.51	27.69	0.587	< 7W
			V	19.68	11.47	31.15	1.303	< 7W
EGPRS 850	8PSK	824.2	H	11.56	11.95	23.51	0.224	< 7W
			V	18.33	11.29	29.62	0.916	< 7W
		836.6	H	12.52	12.07	24.59	0.288	< 7W
			V	18.32	11.34	29.66	0.925	< 7W
		848.8	H	12.37	12.51	24.88	0.308	< 7W
			V	18.60	11.47	30.07	1.016	< 7W

Model Number	CNN0403							
Test Item	ERP/EIRP							
Date of Test	06/24/2013					Test Site	TE01	
Bands	Modulation Type	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	EIRP		Limit
						(dBm)	(W)	
GSM 1900	GMSK	1850.20	H	2.82	13.55	16.37	0.043	< 2W
			V	13.64	11.39	25.03	0.318	< 2W
		1880.00	H	1.52	13.59	15.11	0.032	< 2W
			V	12.34	11.65	23.99	0.251	< 2W
		1909.80	H	-0.42	13.62	13.20	0.021	< 2W
			V	13.82	11.91	25.73	0.374	< 2W
EGPRS 1900	8PSK	1850.20	H	1.82	13.55	15.37	0.034	< 2W
			V	10.93	11.39	22.32	0.171	< 2W
		1880.00	H	0.25	13.59	13.84	0.024	< 2W
			V	10.15	11.64	21.79	0.151	< 2W
		1909.80	H	-0.21	13.62	13.41	0.022	< 2W
			V	9.84	11.91	21.75	0.150	< 2W

Note: 1. ERP/EIRP = Read Level + Correction factor.

2. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.

3. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

Model Number	CNN0403							
Test Item	ERP/EIRP							
Date of Test	06/24/2013					Test Site	TE01	
Bands	Modulation Type	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	EIRP		Limit
						(dBm)	(W)	
WCDMA Band II	QPSK	1852.4	H	-1.40	13.55	12.15	0.016	< 2W
			V	9.43	11.40	20.83	0.121	< 2W
		1880.0	H	-3.28	13.59	10.31	0.011	< 2W
			V	10.03	11.66	21.69	0.148	< 2W
		1907.6	H	-3.39	13.61	10.22	0.011	< 2W
			V	10.54	11.88	22.42	0.175	< 2W

Model Number	CNN0403							
Test Item	ERP/EIRP							
Date of Test	06/24/2013					Test Site	TE01	
Bands	Modulation Type	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction Factor (dBm)	ERP		Limit
						(dBm)	(W)	
WCDMA Band V	QPSK	826.4	H	8.71	11.99	20.70	0.117	< 7W
			V	16.01	11.31	27.32	0.540	< 7W
		836.6	H	9.40	12.06	21.46	0.140	< 7W
			V	14.57	11.33	25.90	0.389	< 7W
		846.6	H	8.64	12.43	21.07	0.128	< 7W
			V					

Note: 1. ERP/EIRP = Read Level + Correction factor.

2. For WCDMA signals, a peak detector is used with RBW = VBW = 5MHz.

3. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW= 1 MHz.

4 Occupied Bandwidth Test

4.1. Limit

The Occupied Bandwidth Limit:

N/A.

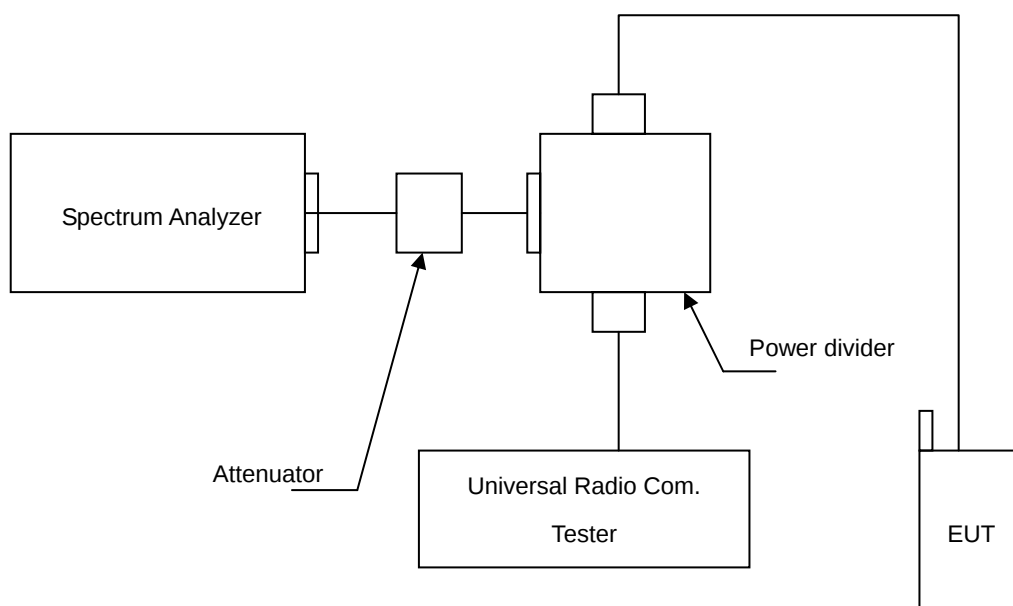
4.2. Test Instruments

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

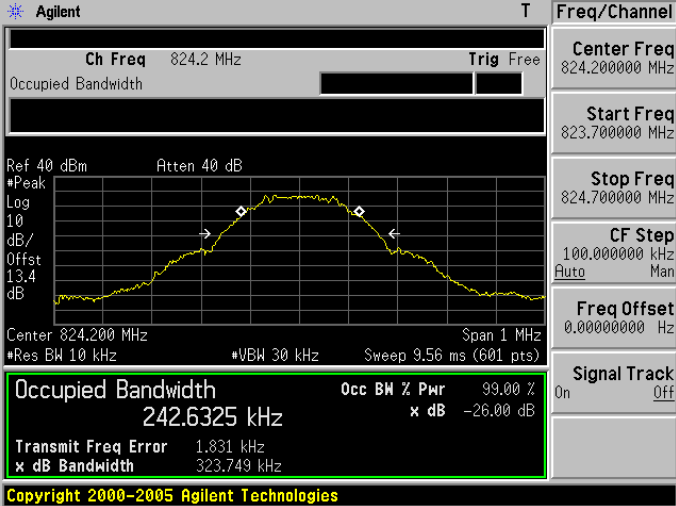
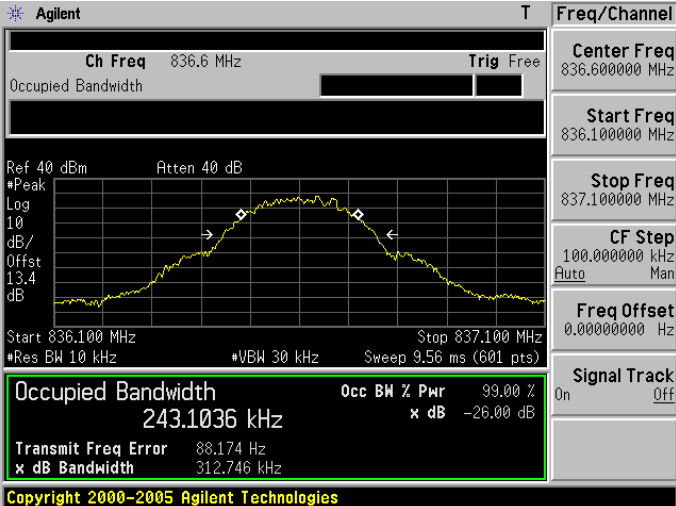
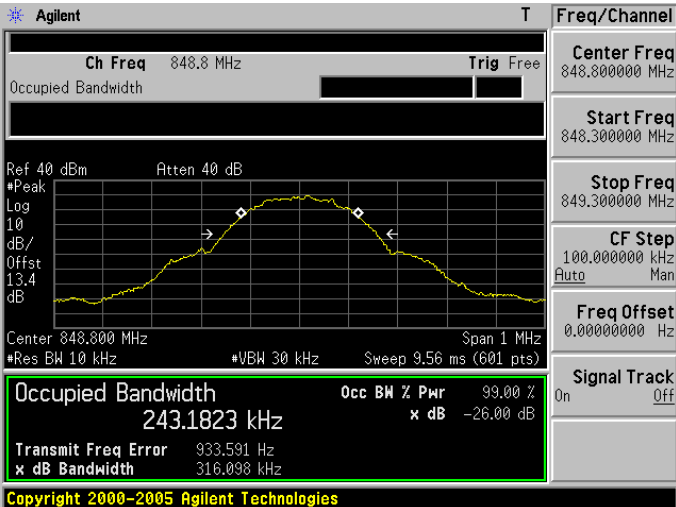
The measurement uncertainty is defined as $\pm 10\text{Hz}$

4.6. Test Result

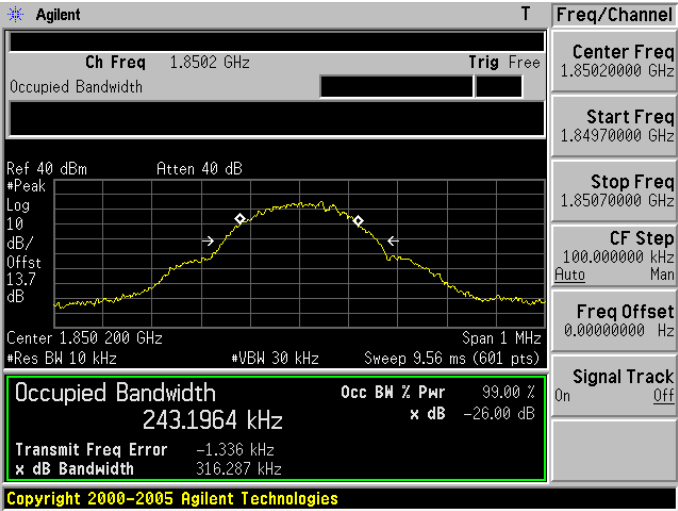
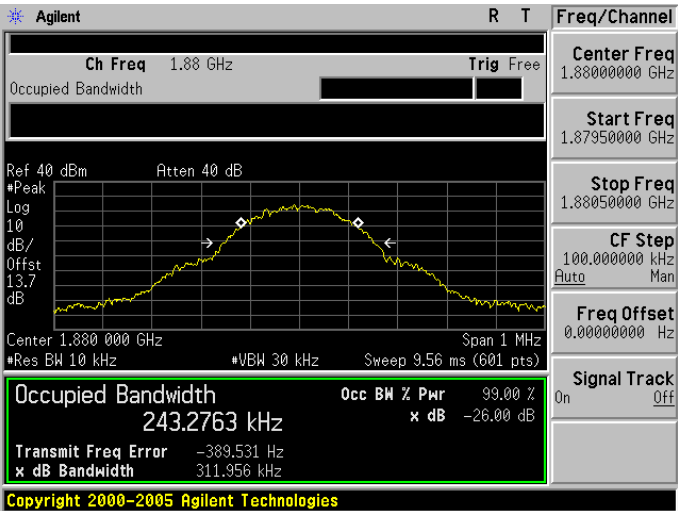
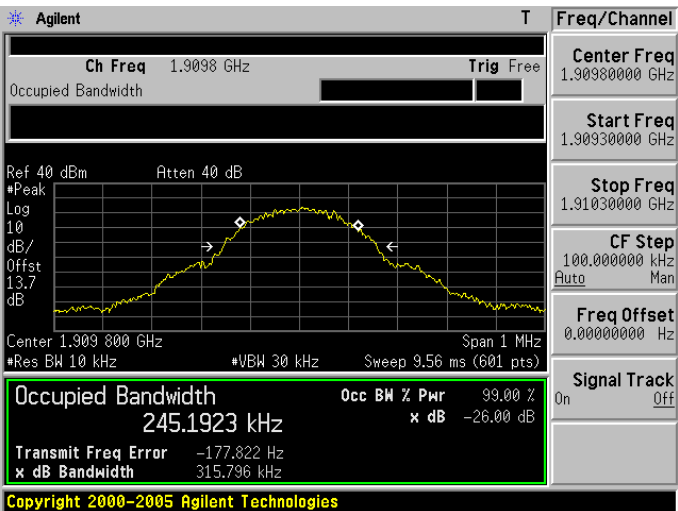
Model Number	CNN0403			
Test Item	Occupied Bandwidth			
Date of Test	06/22/2013			Test Site TE05
Bands	Channel	Frequency (MHz)	99% Bandwidth (kHz)	Note
GSM 850	128	824.2	242.6325	RBW:10KHz , VBW:30KHz
	190	836.6	243.1036	RBW:10KHz , VBW:30KHz
	251	848.8	243.1823	RBW:10KHz , VBW:30KHz
GSM 1900	512	1850.20	243.1964	RBW:10KHz , VBW:30KHz
	661	1880.00	243.2763	RBW:10KHz , VBW:30KHz
	810	1909.80	245.1923	RBW:10KHz , VBW:30KHz
EGPRS 850	128	824.2	248.0920	RBW:10KHz , VBW:30KHz
	190	836.6	246.2933	RBW:10KHz , VBW:30KHz
	251	848.8	239.8255	RBW:10KHz , VBW:30KHz
EGPRS 1900	512	1850.20	244.7545	RBW:10KHz , VBW:30KHz
	661	1880.00	242.9332	RBW:10KHz , VBW:30KHz
	810	1909.80	250.3242	RBW:10KHz , VBW:30KHz

Model Number	CNN0403			
Test Item	Occupied Bandwidth			
Date of Test	06/22/2013			Test Site TE05
Bands	Channel	Frequency (MHz)	99% Bandwidth (MHz)	Note
WCDMA Band II	9262	1852.4	4.1631	RBW:100KHz , VBW:300KHz
	9400	1880.0	4.1654	RBW:100KHz , VBW:300KHz
	9538	1907.6	4.1496	RBW:100KHz , VBW:300KHz
WCDMA Band V	4132	826.4	4.1816	RBW:100KHz , VBW:300KHz
	4183	836.6	4.1959	RBW:100KHz , VBW:300KHz
	4233	846.6	4.1677	RBW:100KHz , VBW:300KHz

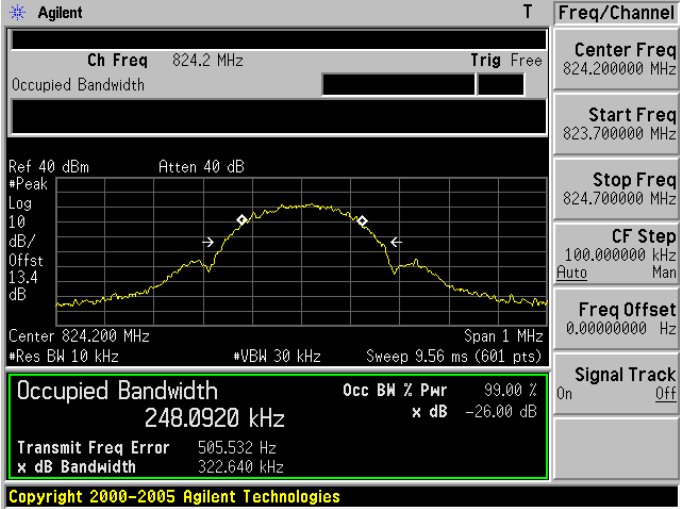
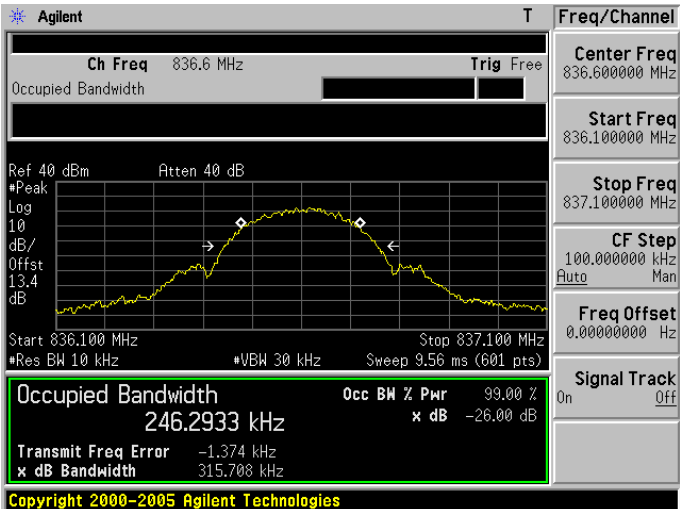
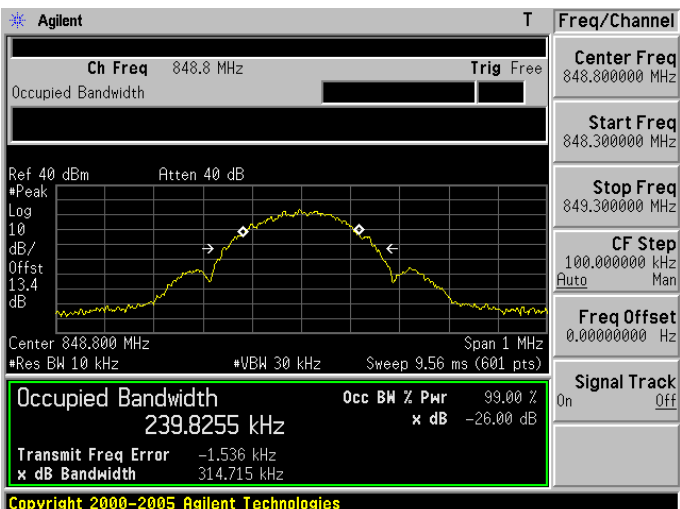
4.7. Test Graphs

Mode 1: GSM 850 Link Mode	
824.2 MHz	 Agilent T Freq/Channel Ch Freq 824.2 MHz Trig Free Center Freq 824.200000 MHz Start Freq 823.700000 MHz Stop Freq 824.700000 MHz 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 13.4 dB Center 824.200 MHz Span 1 MHz #Res BW 10 kHz #VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 242.6325 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 1.831 kHz x dB Bandwidth 323.749 kHz Copyright 2000-2005 Agilent Technologies
836.6 MHz	 Agilent T Freq/Channel Ch Freq 836.6 MHz Trig Free Center Freq 836.600000 MHz Start Freq 836.100000 MHz Stop Freq 837.100000 MHz 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 13.4 dB Start 836.100 MHz Stop 837.100 MHz #Res BW 10 kHz #VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 243.1036 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 88.174 Hz x dB Bandwidth 312.746 kHz Copyright 2000-2005 Agilent Technologies
848.8 MHz	 Agilent T Freq/Channel Ch Freq 848.8 MHz Trig Free Center Freq 848.800000 MHz Start Freq 848.300000 MHz Stop Freq 849.300000 MHz 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 13.4 dB Center 848.800 MHz Span 1 MHz #Res BW 10 kHz #VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 243.1823 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 933.591 Hz x dB Bandwidth 316.098 kHz Copyright 2000-2005 Agilent Technologies

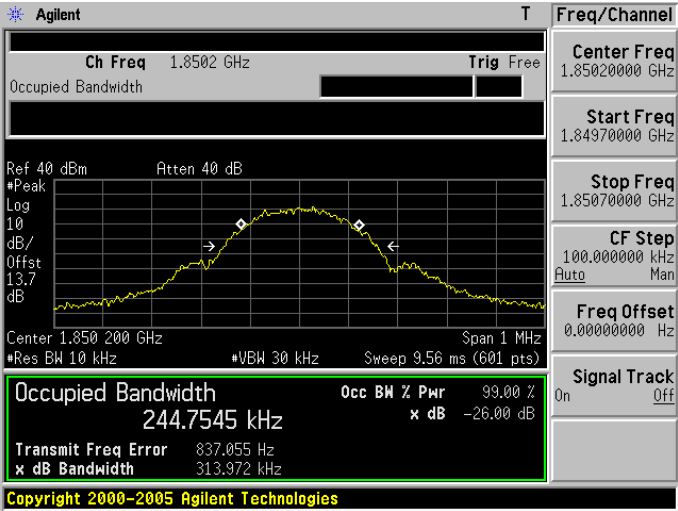
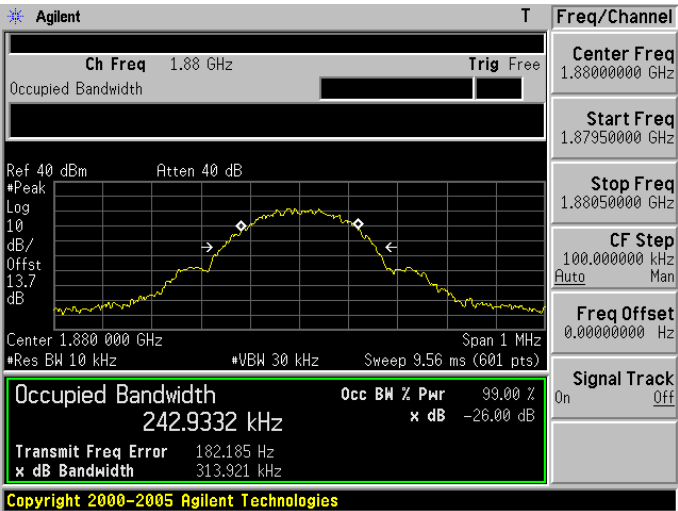
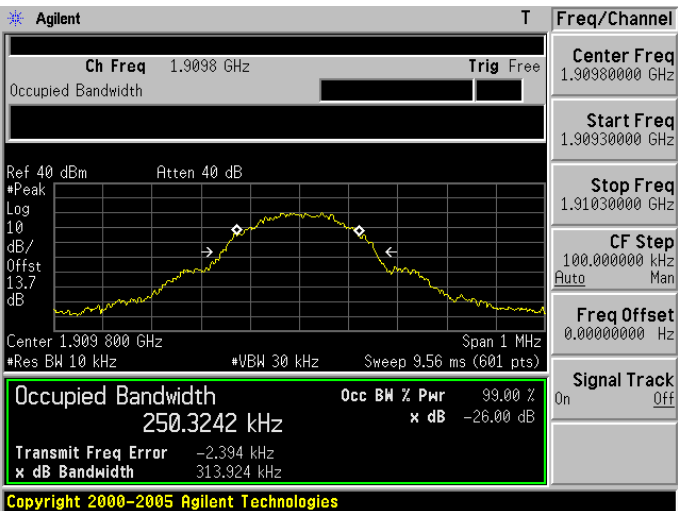
Mode 2: GSM 1900 Link Mode

1850.20 MHz	
1880.00 MHz	
1909.80 MHz	

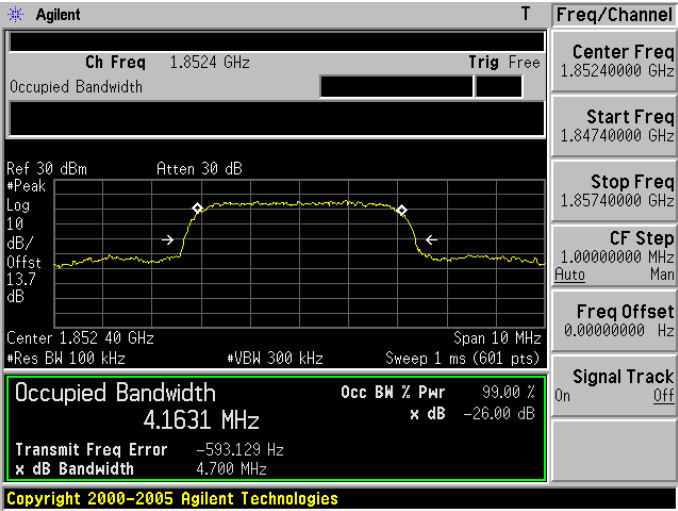
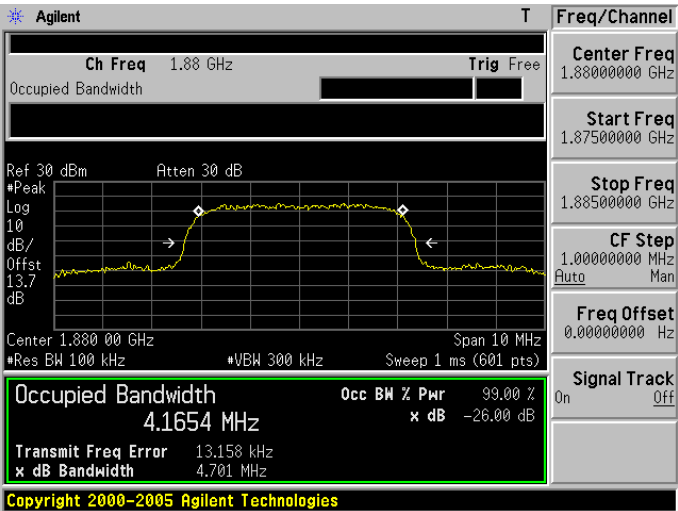
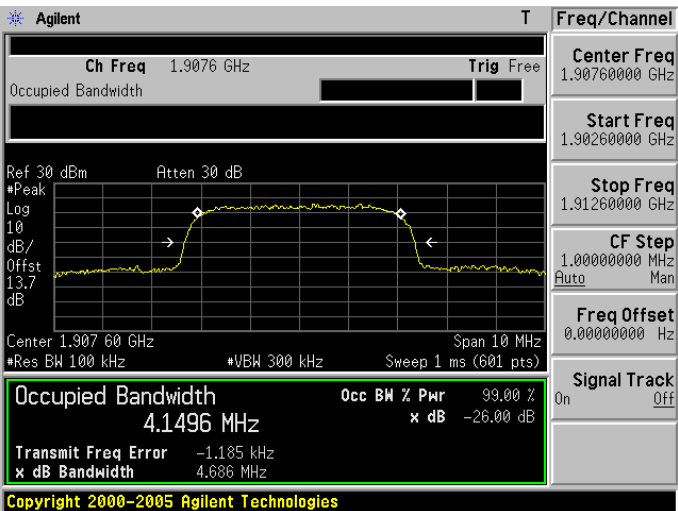
Mode 3: EGPRS 850 Link Mode

824.2 MHz	 Agilent T Ch Freq 824.2 MHz Trig Free Occupied Bandwidth Ref 40 dBm Atten 40 dB •Peak Log 10 dB/Offst 13.4 dB Center 824.200 MHz Span 1 MHz •Res BW 10 kHz •VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 248.0920 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 505.532 Hz x dB Bandwidth 322.640 kHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 824.200000 MHz Start Freq 823.700000 MHz Stop Freq 824.700000 MHz CF Step 100.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
836.6 MHz	 Agilent T Ch Freq 836.6 MHz Trig Free Occupied Bandwidth Ref 40 dBm Atten 40 dB •Peak Log 10 dB/Offst 13.4 dB Start 836.100 MHz Stop 837.100 MHz •Res BW 10 kHz •VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 246.2933 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.374 kHz x dB Bandwidth 315.708 kHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 836.600000 MHz Start Freq 836.100000 MHz Stop Freq 837.100000 MHz CF Step 100.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
848.8 MHz	 Agilent T Ch Freq 848.8 MHz Trig Free Occupied Bandwidth Ref 40 dBm Atten 40 dB •Peak Log 10 dB/Offst 13.4 dB Center 848.800 MHz Span 1 MHz •Res BW 10 kHz •VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 239.8255 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.536 kHz x dB Bandwidth 314.715 kHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 848.800000 MHz Start Freq 848.300000 MHz Stop Freq 849.300000 MHz CF Step 100.000000 kHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

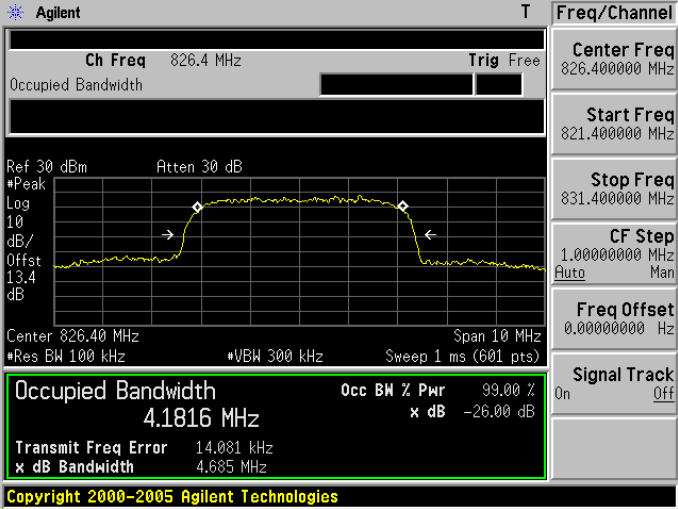
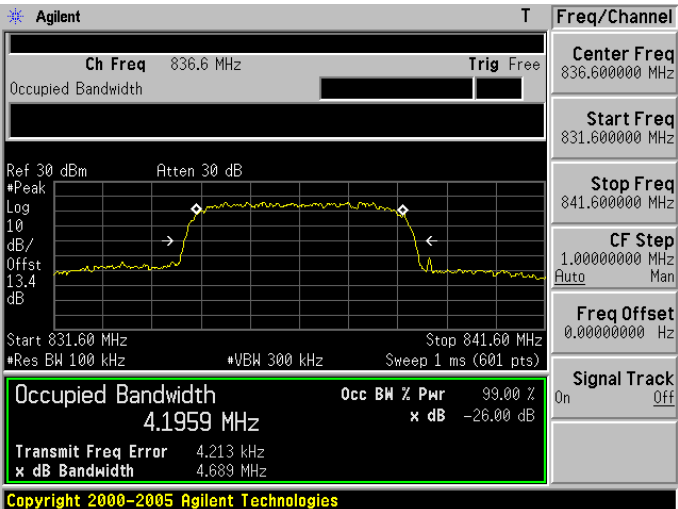
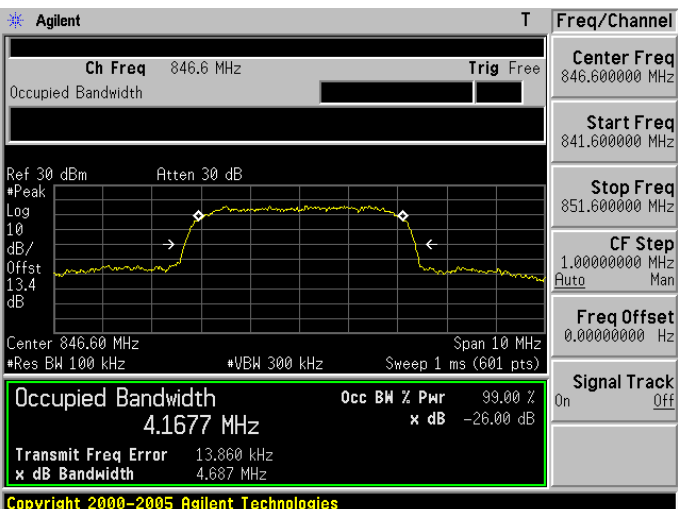
Mode 4: EGPRS 1900 Link Mode

1850.20 MHz	 Agilent T Ch Freq 1.8502 GHz Trig Free Occupied Bandwidth Ref 40 dBm Atten 40 dB •Peak Log 10 dB/Offst 13.7 dB Center 1.850 200 GHz Span 1 MHz •Res BW 10 kHz •VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 244.7545 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 837.055 Hz x dB Bandwidth 313.972 kHz Copyright 2000-2005 Agilent Technologies Freq/Channel 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
1880.00 MHz	 Agilent T Ch Freq 1.88 GHz Trig Free Occupied Bandwidth Ref 40 dBm Atten 40 dB •Peak Log 10 dB/Offst 13.7 dB Center 1.880 000 GHz Span 1 MHz •Res BW 10 kHz •VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 242.9332 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 182.185 Hz x dB Bandwidth 313.921 kHz Copyright 2000-2005 Agilent Technologies Freq/Channel 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
1909.80 MHz	 Agilent T Ch Freq 1.9098 GHz Trig Free Occupied Bandwidth Ref 40 dBm Atten 40 dB •Peak Log 10 dB/Offst 13.7 dB Center 1.909 800 GHz Span 1 MHz •Res BW 10 kHz •VBW 30 kHz Sweep 9.56 ms (601 pts) Occupied Bandwidth 250.3242 kHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -2.394 kHz x dB Bandwidth 313.924 kHz Copyright 2000-2005 Agilent Technologies Freq/Channel 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

Mode 5: WCDMA Band II Link Mode

1850.20 MHz	 Agilent T Ch Freq 1.8524 GHz Trig Free Occupied Bandwidth Ref 30 dBm Atten 30 dB •Peak Log 10 dB/Offst 13.7 dB Center 1.852 40 GHz Span 10 MHz •Res BW 100 kHz •VBW 300 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 4.1631 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -593.129 Hz x dB Bandwidth 4.700 MHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 1.85240000 GHz Start Freq 1.84740000 GHz Stop Freq 1.85740000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
1880.00 MHz	 Agilent T Ch Freq 1.88 GHz Trig Free Occupied Bandwidth Ref 30 dBm Atten 30 dB •Peak Log 10 dB/Offst 13.7 dB Center 1.880 00 GHz Span 10 MHz •Res BW 100 kHz •VBW 300 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 4.1654 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 13.158 kHz x dB Bandwidth 4.701 MHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 1.88000000 GHz Start Freq 1.87500000 GHz Stop Freq 1.88500000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
1909.80 MHz	 Agilent T Ch Freq 1.9076 GHz Trig Free Occupied Bandwidth Ref 30 dBm Atten 30 dB •Peak Log 10 dB/Offst 13.7 dB Center 1.907 60 GHz Span 10 MHz •Res BW 100 kHz •VBW 300 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 4.1496 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error -1.185 kHz x dB Bandwidth 4.686 MHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 1.90760000 GHz Start Freq 1.90260000 GHz Stop Freq 1.91260000 GHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

Mode 6: WCDMA Band V Link Mode

826.4 MHz	 Agilent T Ch Freq 826.4 MHz Trig Free Occupied Bandwidth Ref 30 dBm Atten 30 dB Peak Log 10 dB/ Offset 13.4 dB Center 826.40 MHz Span 10 MHz Res BW 100 kHz VBW 300 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 4.1816 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 14.081 kHz x dB Bandwidth 4.685 MHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 826.400000 MHz Start Freq 821.400000 MHz Stop Freq 831.400000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
836.6 MHz	 Agilent T Ch Freq 836.6 MHz Trig Free Occupied Bandwidth Ref 30 dBm Atten 30 dB Peak Log 10 dB/ Offset 13.4 dB Start 831.60 MHz Stop 841.60 MHz Res BW 100 kHz VBW 300 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 4.1959 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 4.213 kHz x dB Bandwidth 4.689 MHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 836.600000 MHz Start Freq 831.600000 MHz Stop Freq 841.600000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off
846.6 MHz	 Agilent T Ch Freq 846.6 MHz Trig Free Occupied Bandwidth Ref 30 dBm Atten 30 dB Peak Log 10 dB/ Offset 13.4 dB Center 846.60 MHz Span 10 MHz Res BW 100 kHz VBW 300 kHz Sweep 1 ms (601 pts) Occupied Bandwidth 4.1677 MHz Occ BW % Pwr 99.00 % x dB -26.00 dB Transmit Freq Error 13.860 kHz x dB Bandwidth 4.687 MHz Copyright 2000-2005 Agilent Technologies Freq/Channel Center Freq 846.600000 MHz Start Freq 841.600000 MHz Stop Freq 851.600000 MHz CF Step 1.00000000 MHz Auto Man Freq Offset 0.00000000 Hz Signal Track On Off

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.

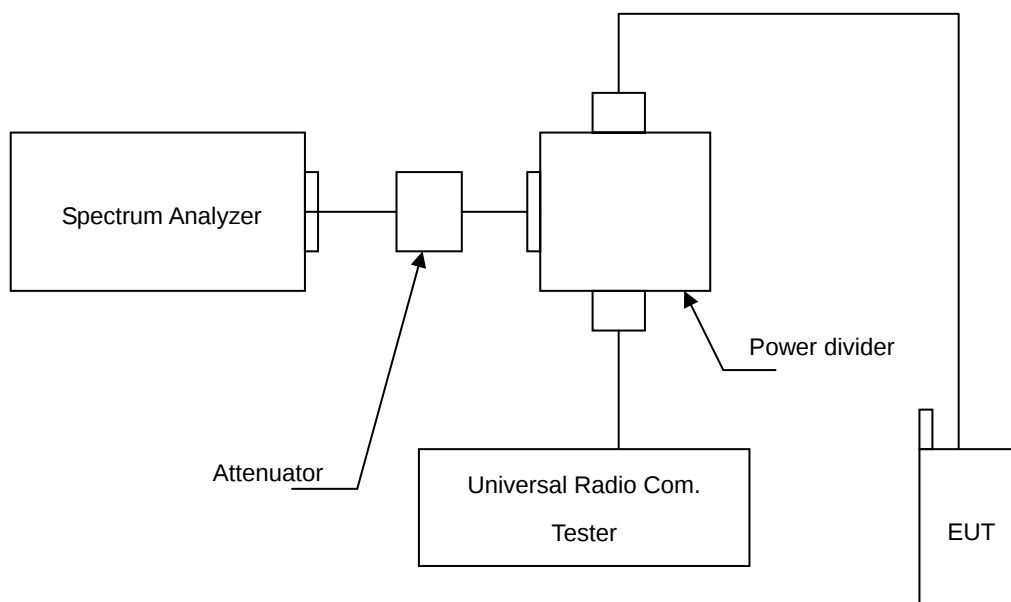
5.2. Test Instruments

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.

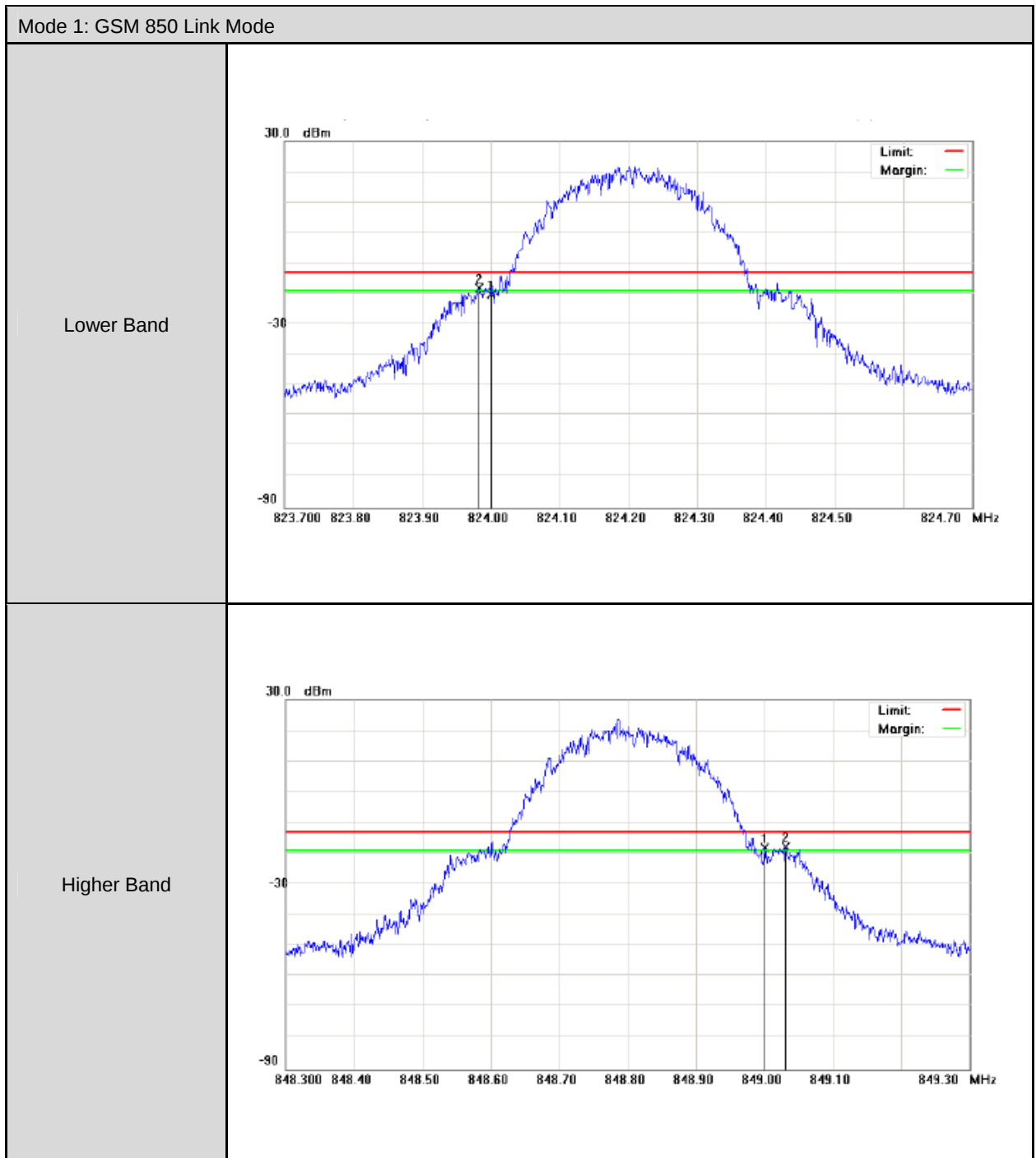
5.5. Uncertainty

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

5.6. Test Result

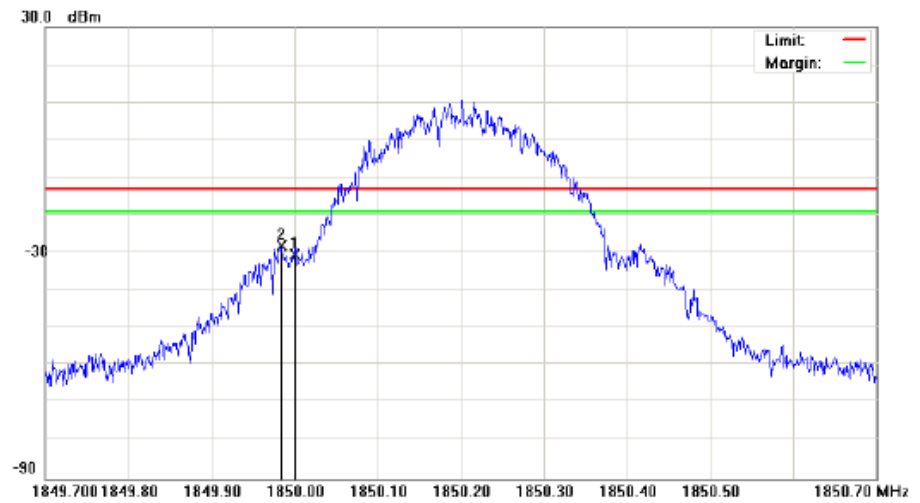
Model Number		CNN0403				
Test Item		Band Edge				
Date of Test		06/21/2013			Test Site	TE05
Bands		Channel	Frequency (MHz)	Measured Level (dBm)	Limit (dBm)	Result
GSM 850	Lower	128	824.0000	-18.17	-13	Pass
	Higher	251	849.0000	-17.95	-13	Pass
GSM 1900	Lower	512	1850.000	-28.12	-13	Pass
	Higher	810	1910.000	-25.53	-13	Pass
WCDMA Band II	Lower	9262	1850.000	-31.18	-13	Pass
	Higher	9538	1910.000	-33.11	-13	Pass
WCDMA Band V	Lower	4132	824.0000	-24.27	-13	Pass
	Higher	4233	849.0000	-25.58	-13	Pass

5.7. Test Graphs

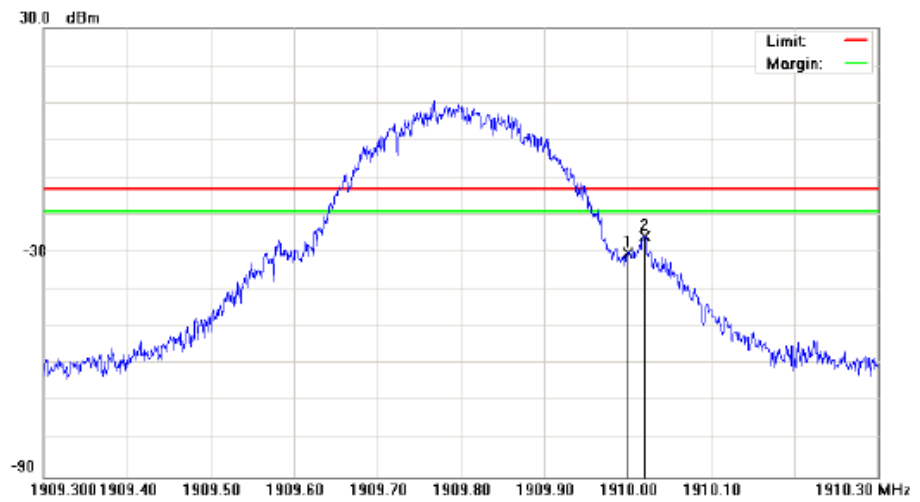


Mode 2: GSM 1900 Link Mode

Lower Band

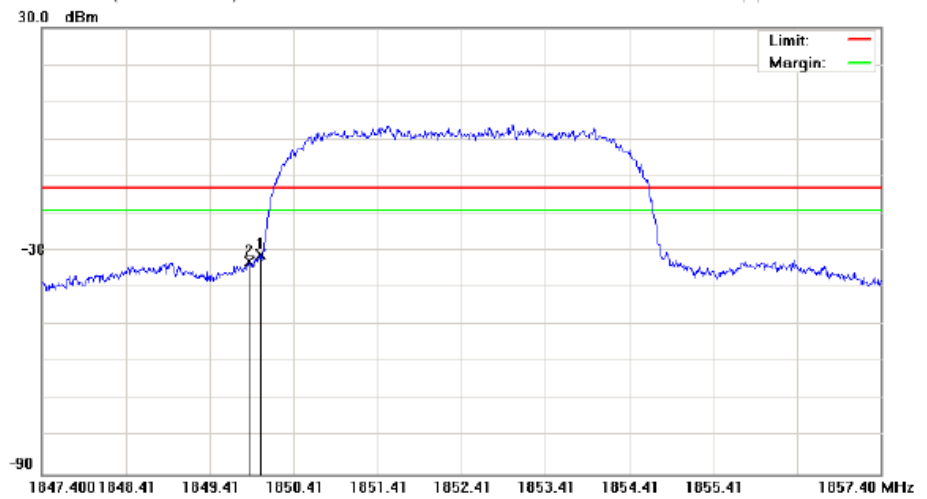


Higher Band

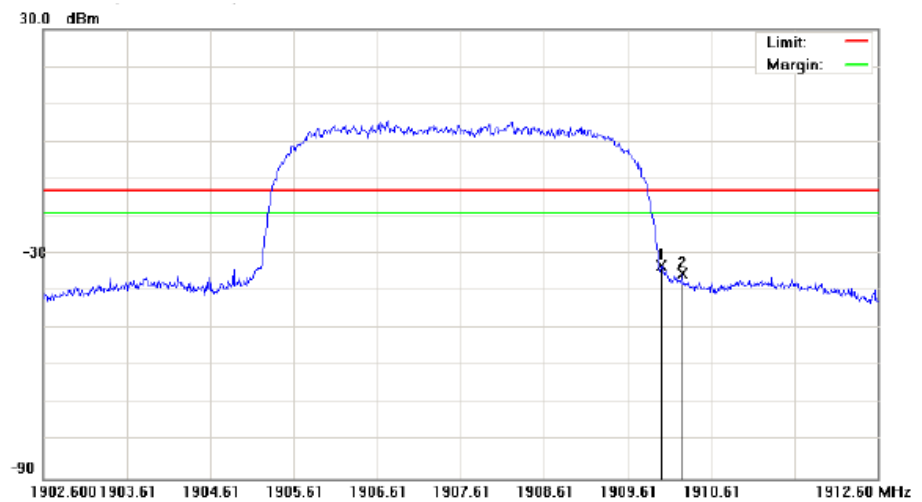


Mode 5: WCDMA Band II Link Mode

Lower Band

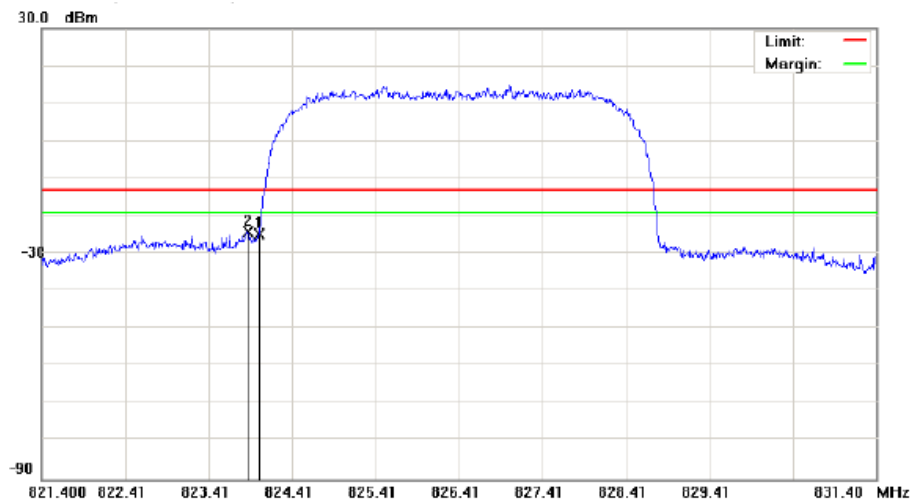


Higher Band

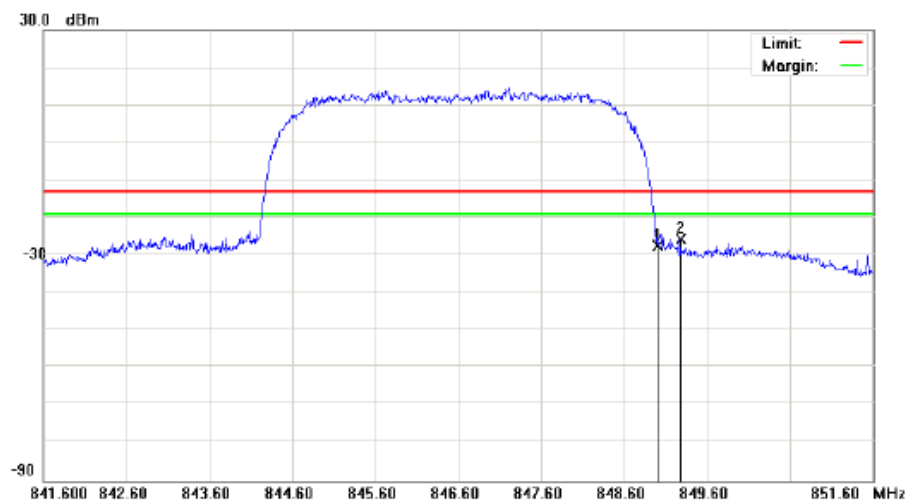


Mode 6: WCDMA Band V Link Mode

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

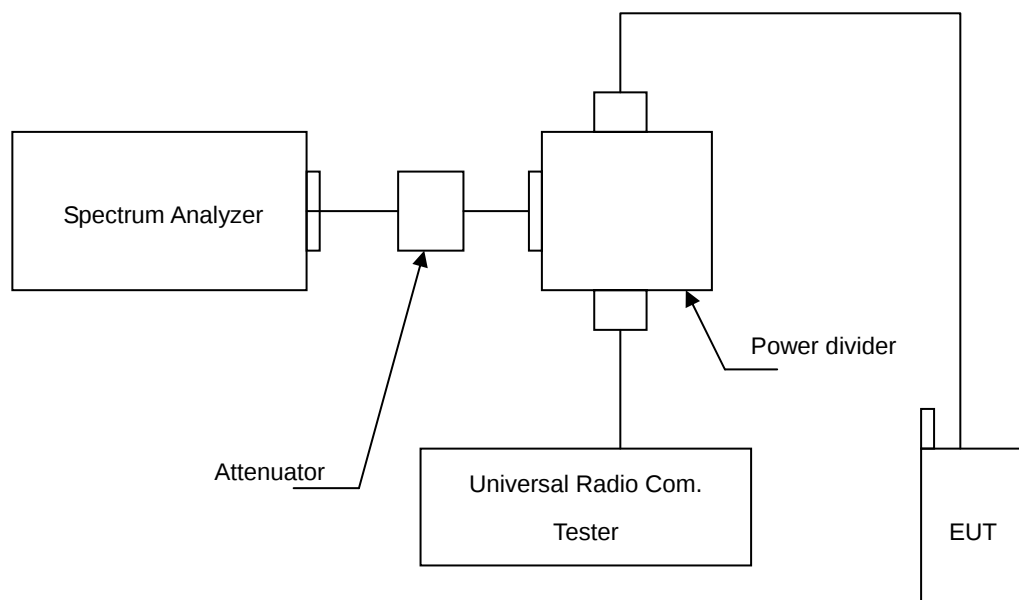
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/07/2012	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/16/2013	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power Divider	Agilent	87302C	3239A00760	N.C.R.	-----
Highpass Filter	MICRO-TRONICS	HPM50111	021	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

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

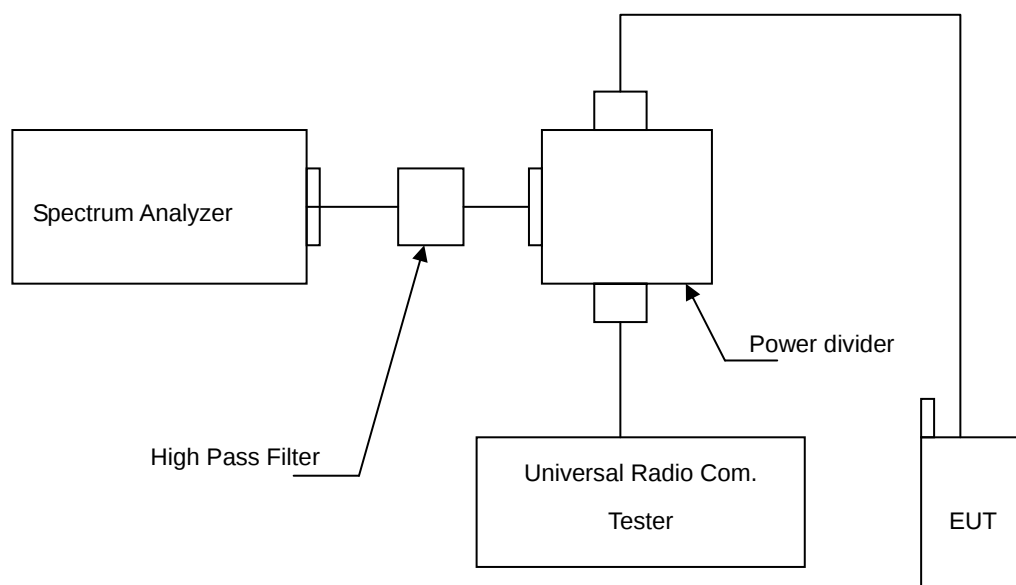
Note: N.C.R. = No Calibration Request.

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

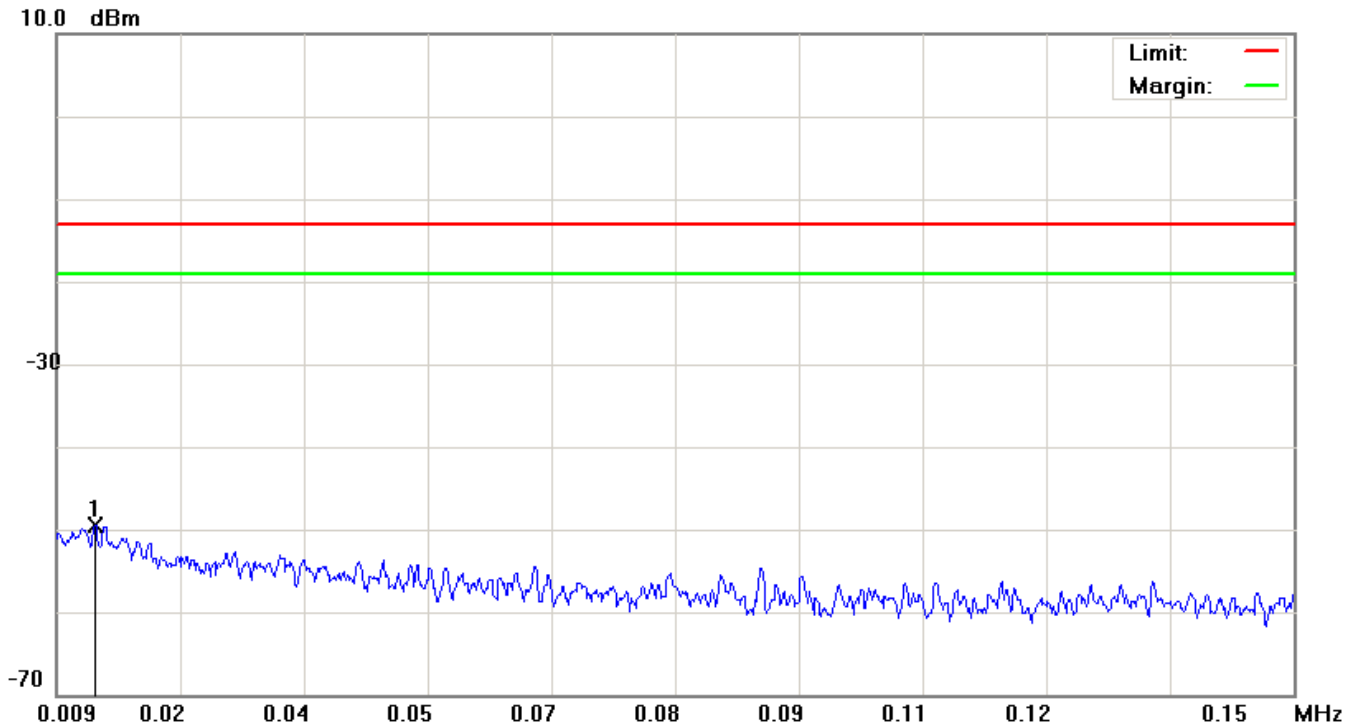
Model Number	CNN0403		
Test Item	Conducted Emission		
Test Mode	Mode 1 / Mode 2 / Mode 5 / Mode 6		
Date of Test	06/21/2013~06/22/2013	Test Site	TE05

File :CNN0403(CH128)

Data :#1

Date: 2013/6/22

Time: 上午 09:01:49



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0134	-80.00	30.56	-49.44	-13.00	-36.44	peak		Comment

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

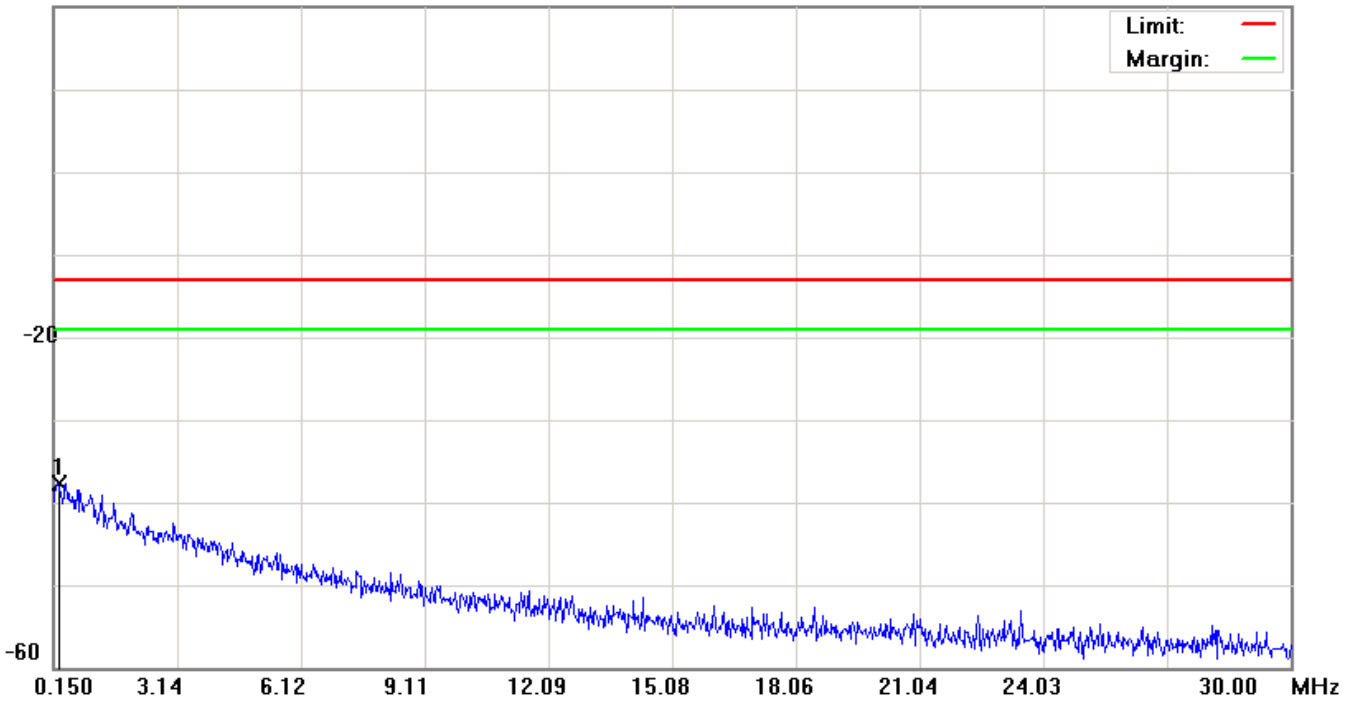
File :CNN0403(CH128)

Data :#2

Date: 2013/6/22

Time: 上午 09:02:13

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.2545	-69.01	31.36	-37.65	-13.00	-24.65	peak		Comment

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

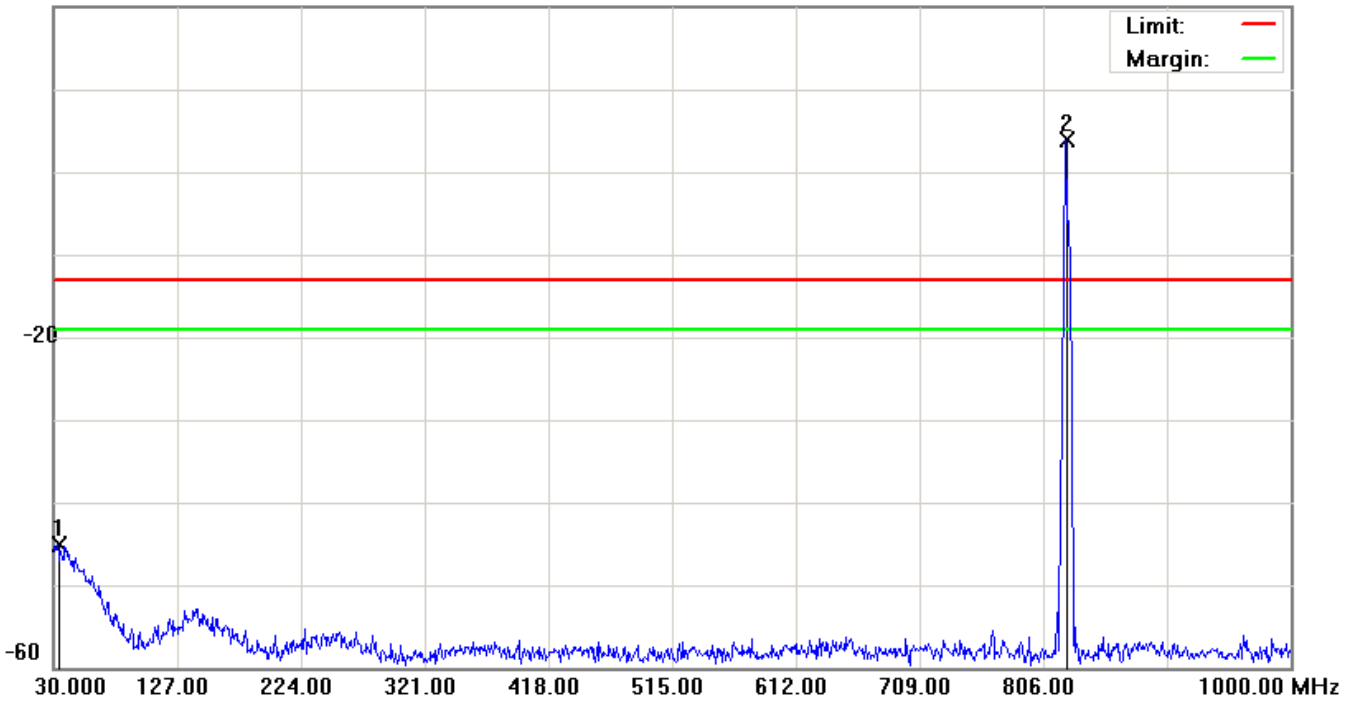
File :CNN0403(CH128)

Data :#3

Date: 2013/6/22

Time: 上午 09:02:37

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

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		33.3950	-61.93	16.83	-45.10	-13.00	-32.10	peak		
2	*	823.9450	0.10	3.83	3.93	-13.00	16.93	peak		Tx

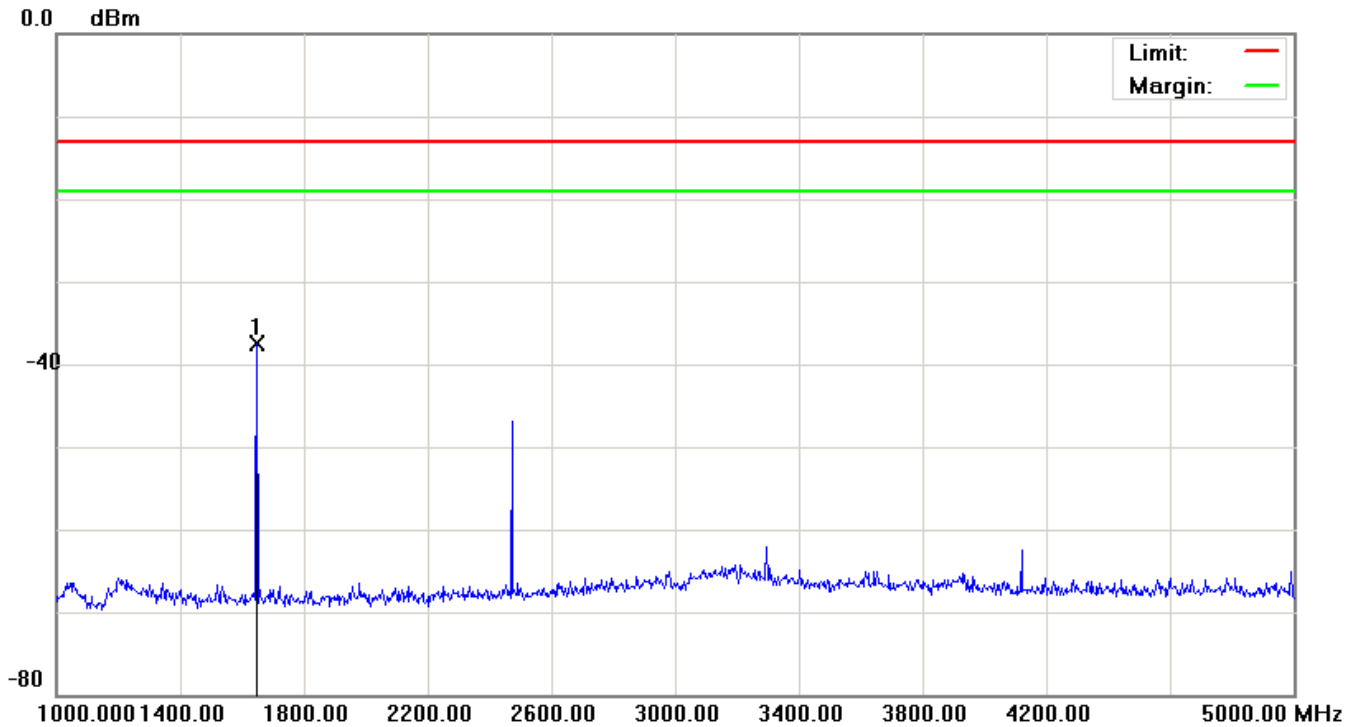
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH128)

Data :#4

Date: 2013/6/22

Time: 上午 09:13:34



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	1648.000	-42.02	4.45	-37.57	-13.00	-24.57	peak		

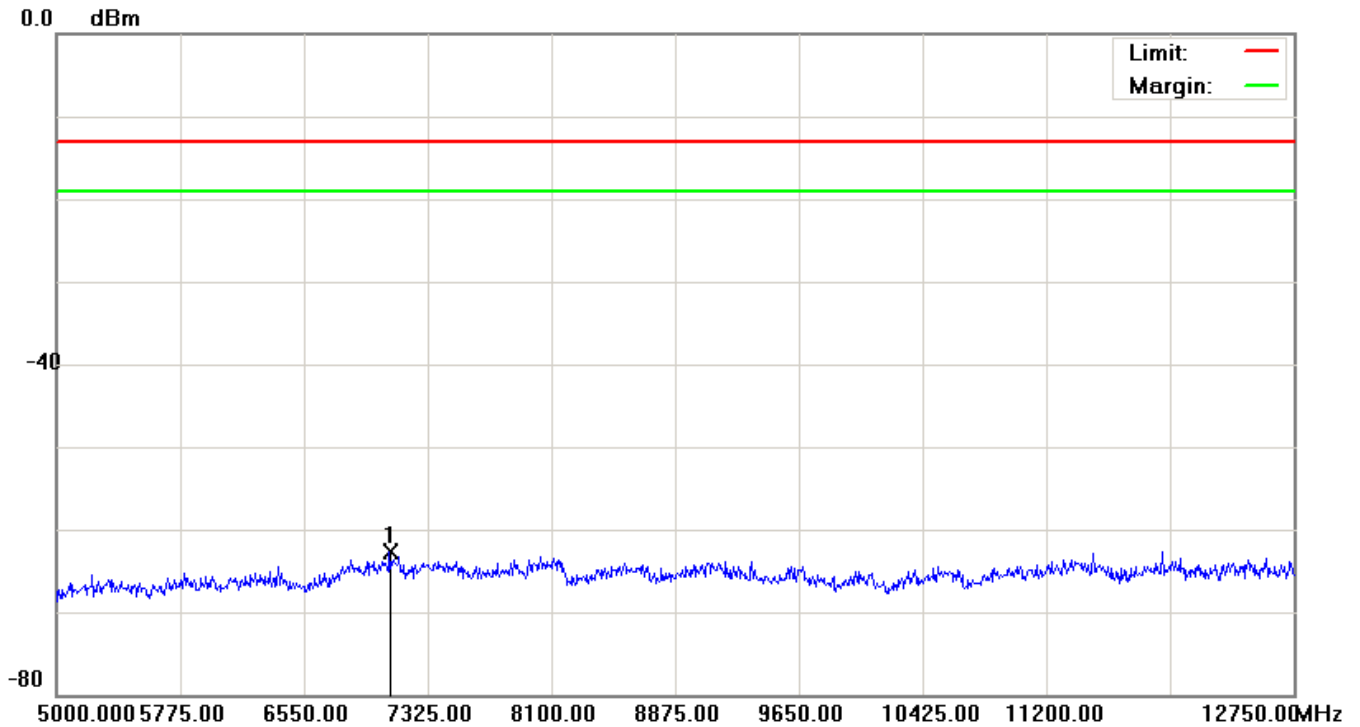
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH128)

Data :#5

Date: 2013/6/22

Time: 上午 09:13:57



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	7088.625	-67.73	5.03	-62.70	-13.00	-49.70	peak		

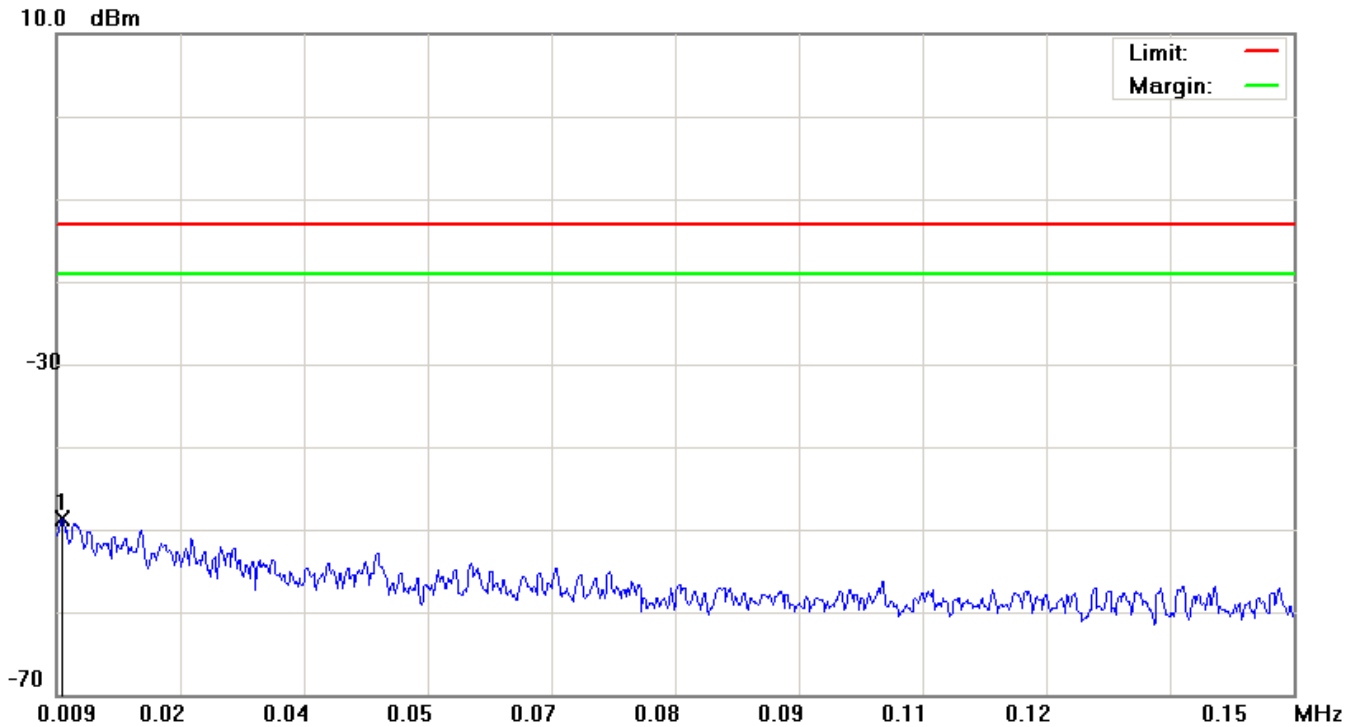
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH190)

Data :#1

Date: 2013/6/22

Time: 上午 09:05:33



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0096	-79.22	30.58	-48.64	-13.00	-35.64	peak		Comment

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

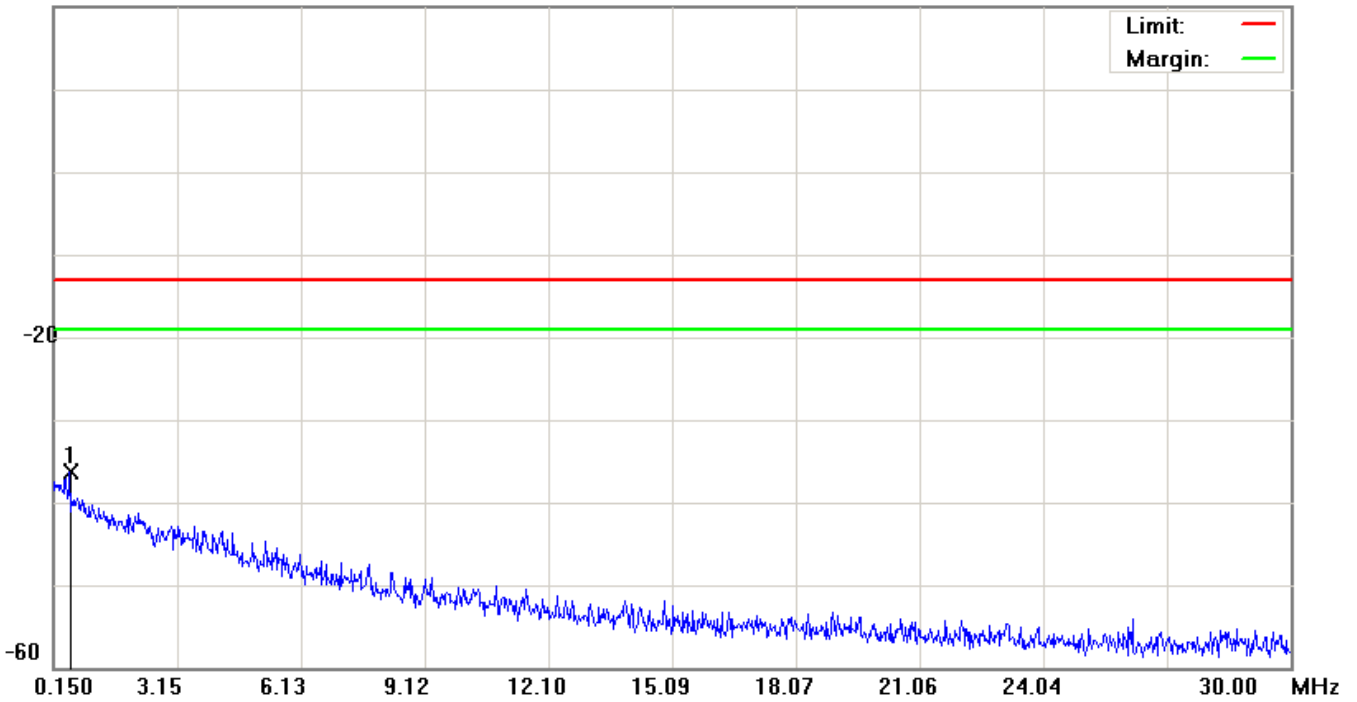
File :CNN0403(CH190)

Data :#2

Date: 2013/6/22

Time: 上午 09:05:57

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.5530	-68.35	31.98	-36.37	-13.00	-23.37	peak		Comment

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

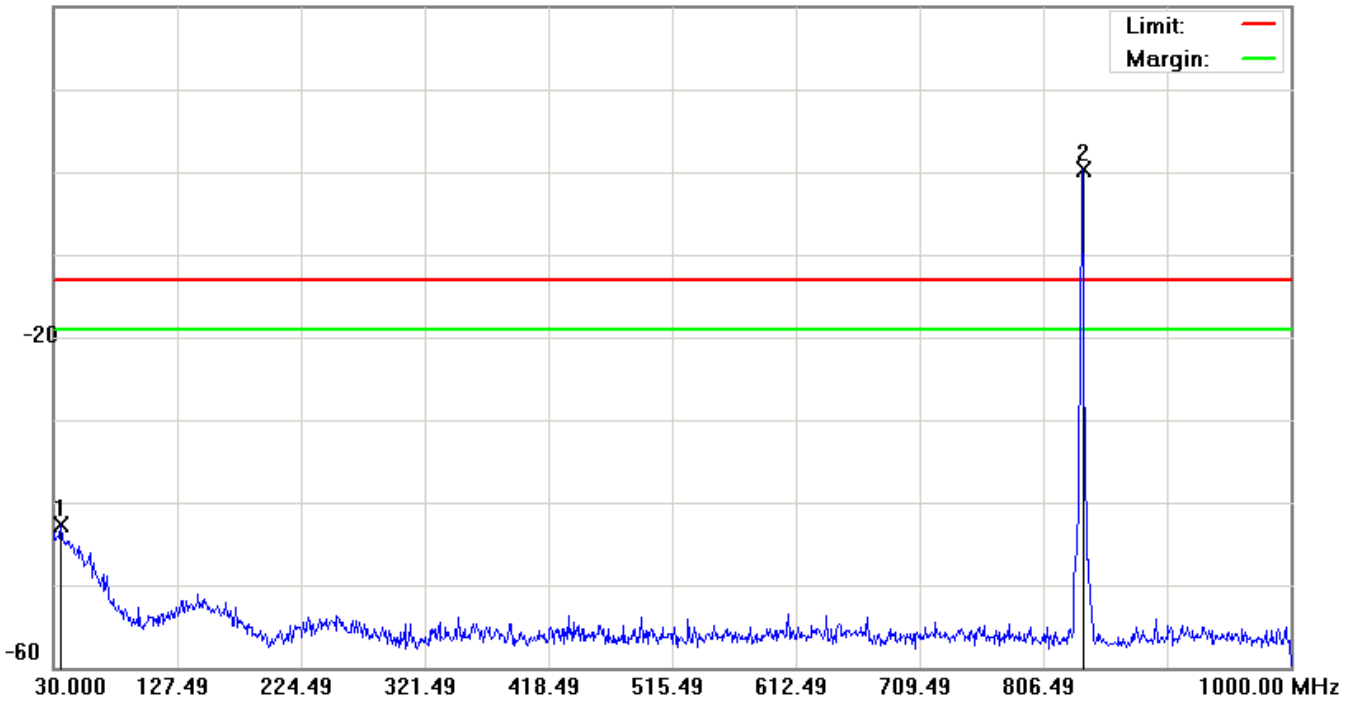
File :CNN0403(CH190)

Data :#3

Date: 2013/6/22

Time: 上午 09:06:21

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

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		35.8200	-59.25	16.55	-42.70	-13.00	-29.70	peak		
2	*	836.5550	-3.61	3.96	0.35	-13.00	13.35	peak		Tx

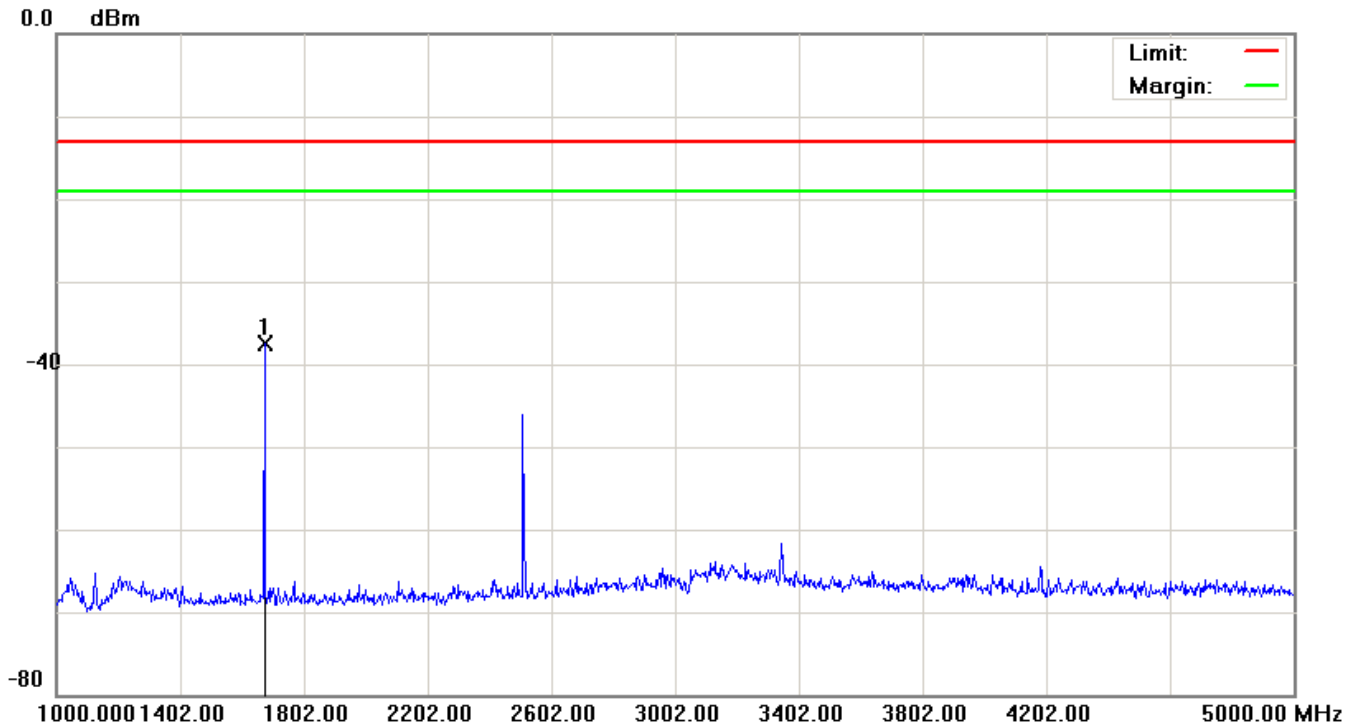
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH190)

Data :#4

Date: 2013/6/22

Time: 上午 09:14:46



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	1674.000	-41.95	4.46	-37.49	-13.00	-24.49	peak		

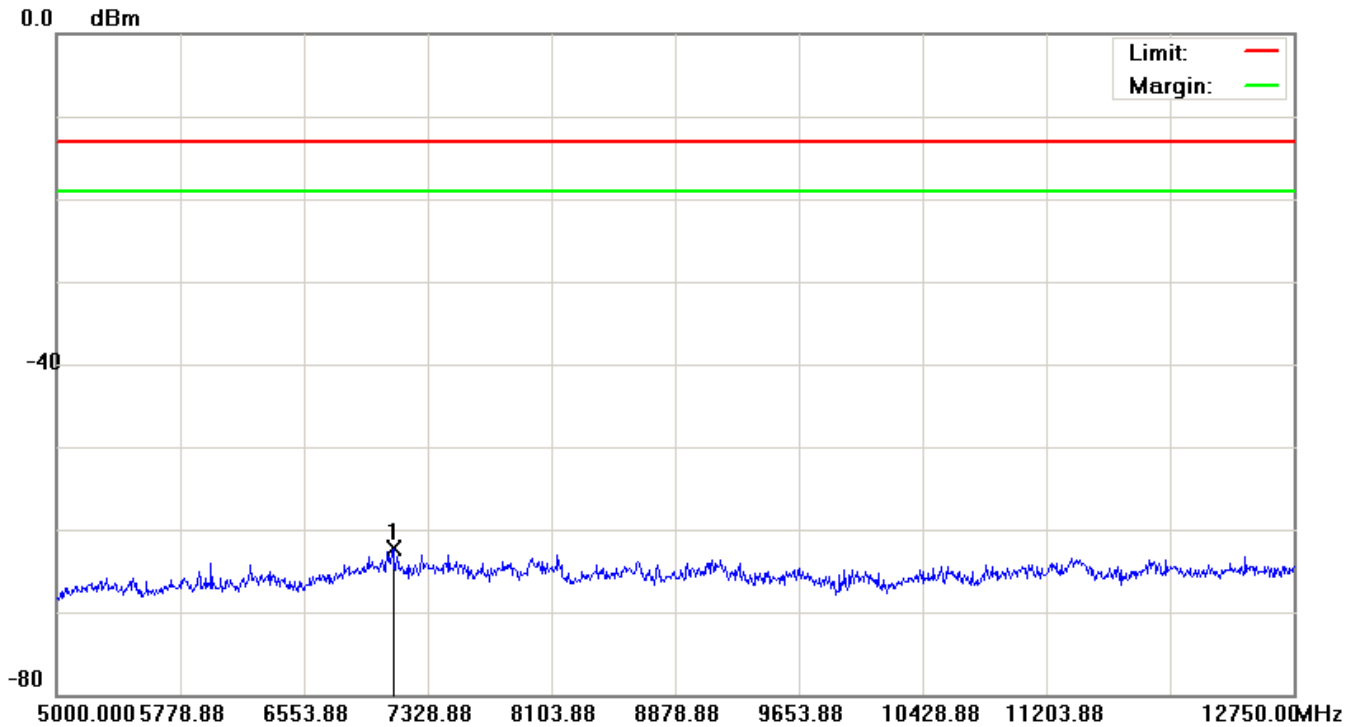
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH190)

Data :#5

Date: 2013/6/22

Time: 上午 09:15:09



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	7108.000	-67.39	5.12	-62.27	-13.00	-49.27	peak		Comment

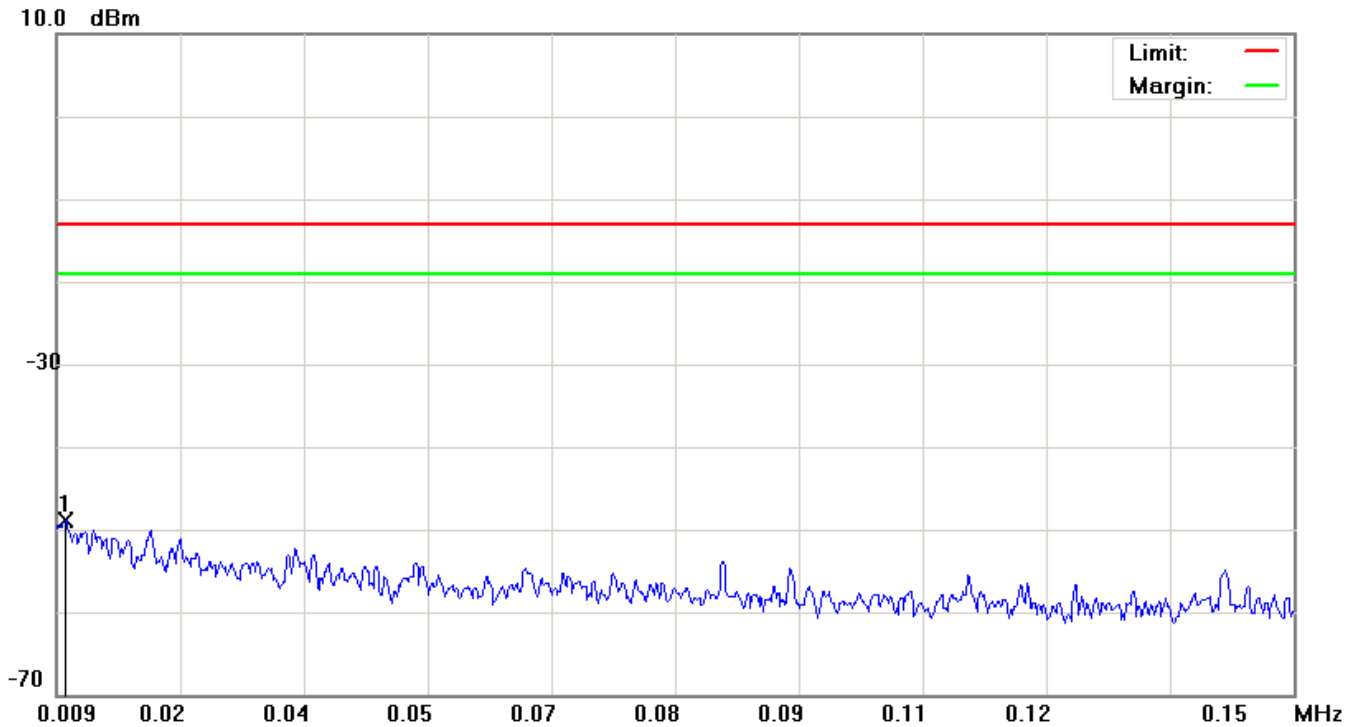
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH251)

Data :#1

Date: 2013/6/22

Time: 上午 09:08:49



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0100	-79.52	30.58	-48.94	-13.00	-35.94	peak		Comment

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

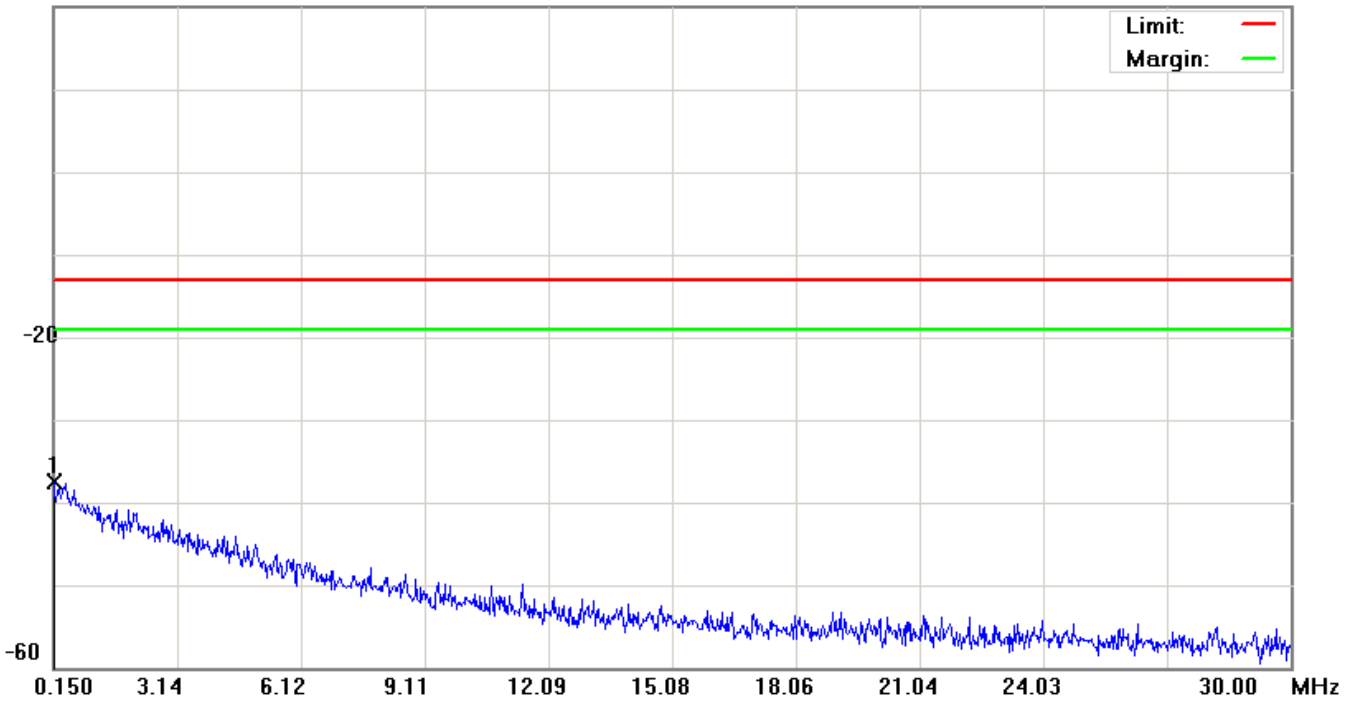
File :CNN0403(CH251)

Data :#2

Date: 2013/6/22

Time: 上午 09:09:13

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: GSM 850

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.1500	-68.08	30.51	-37.57	-13.00	-24.57	peak		Comment

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

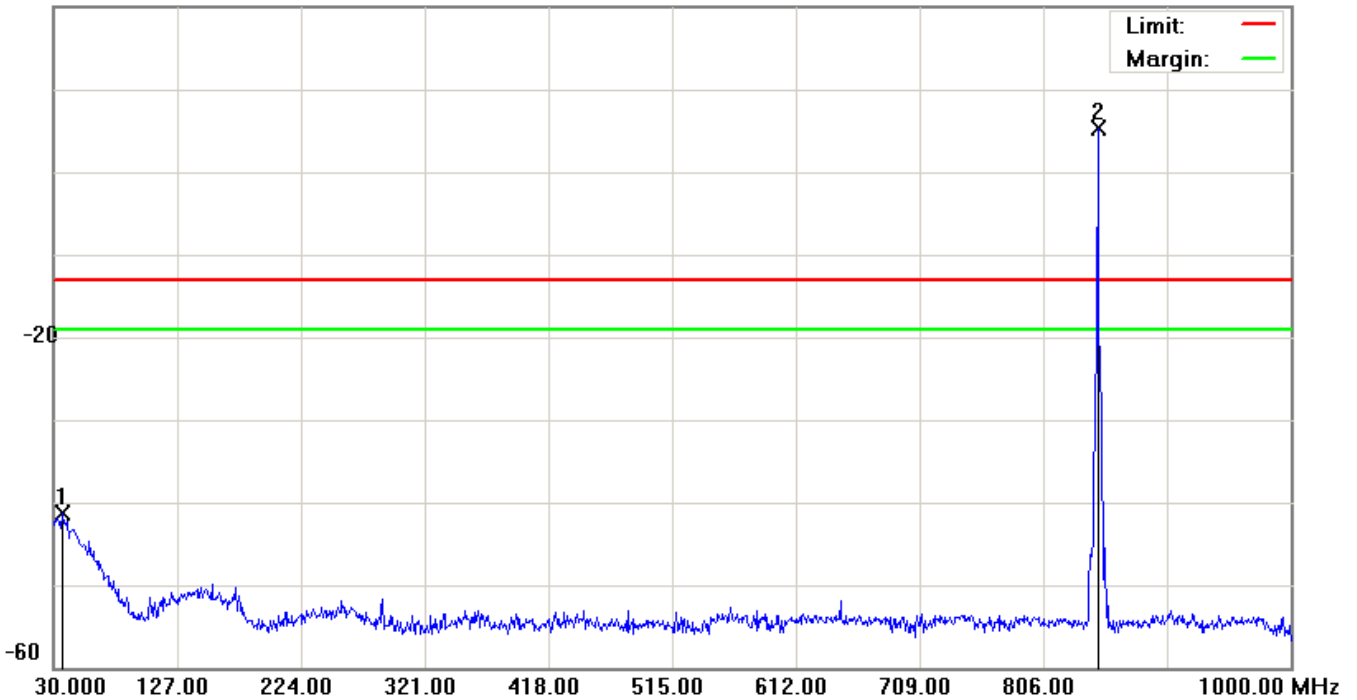
File :CNN0403(CH251)

Data :#3

Date: 2013/6/22

Time: 上午 09:09:37

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

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		36.7900	-57.70	16.44	-41.26	-13.00	-28.26	peak		
2	*	848.6800	1.36	3.98	5.34	-13.00	18.34	peak		Tx

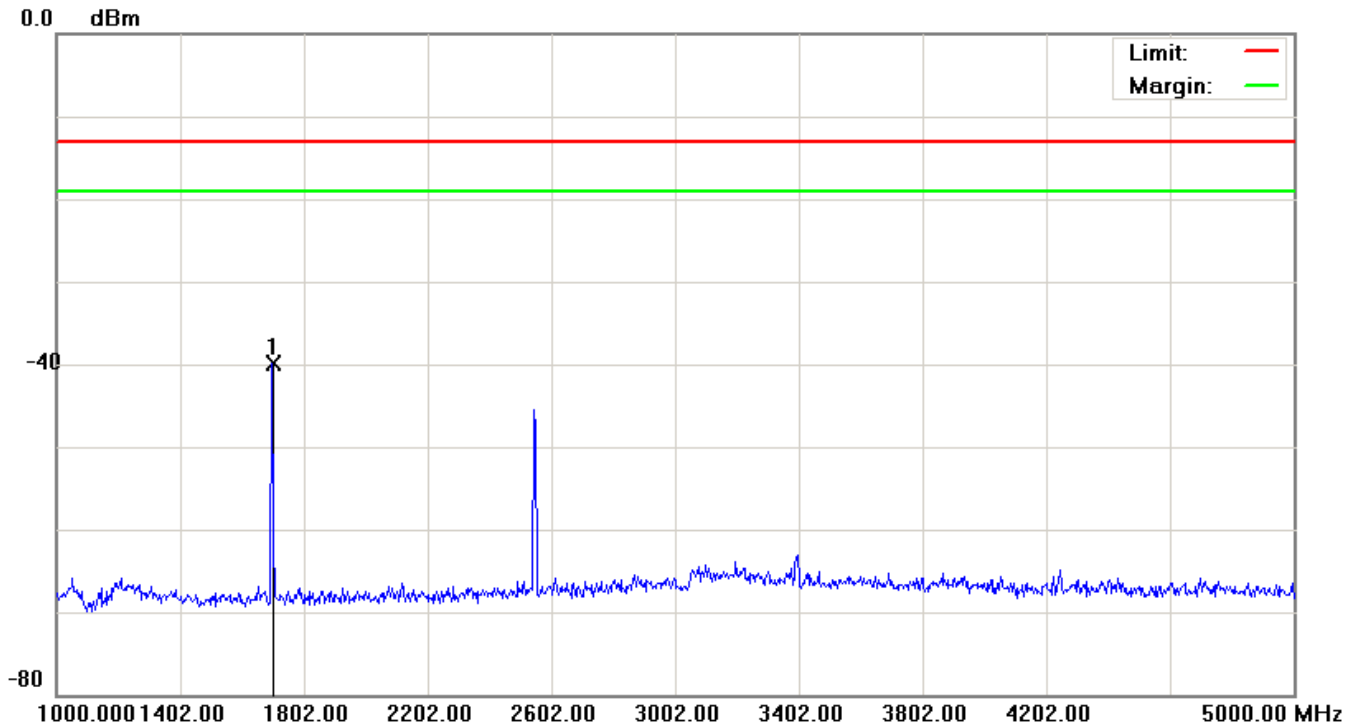
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH251)

Data :#4

Date: 2013/6/22

Time: 上午 09:16:05



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	1698.000	-44.29	4.48	-39.81	-13.00	-26.81	peak		

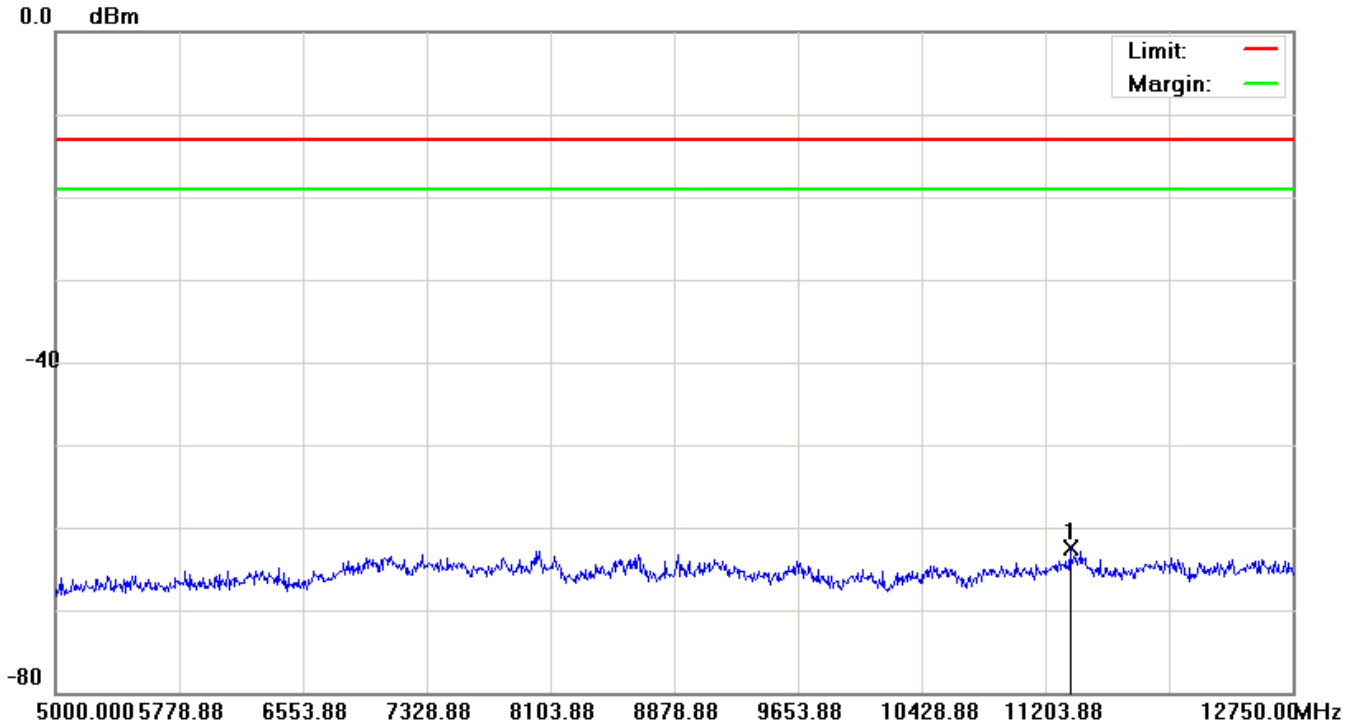
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH251)

Data :#5

Date: 2013/6/22

Time: 上午 09:16:28



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	11358.875	-67.76	5.35	-62.41	-13.00	-49.41	peak		

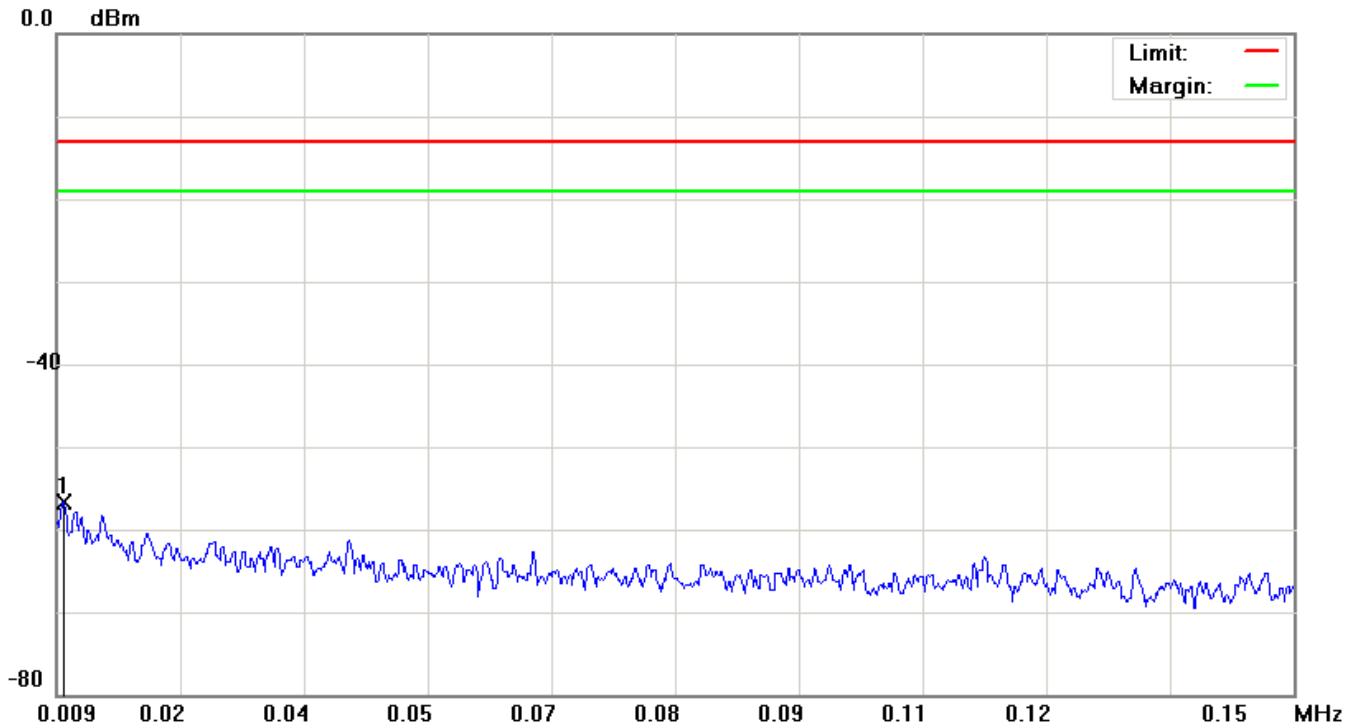
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH512)

Data :#1

Date: 2013/6/21

Time: 下午 05:08:57



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0098	-68.09	11.33	-56.76	-13.00	-43.76	peak		Comment

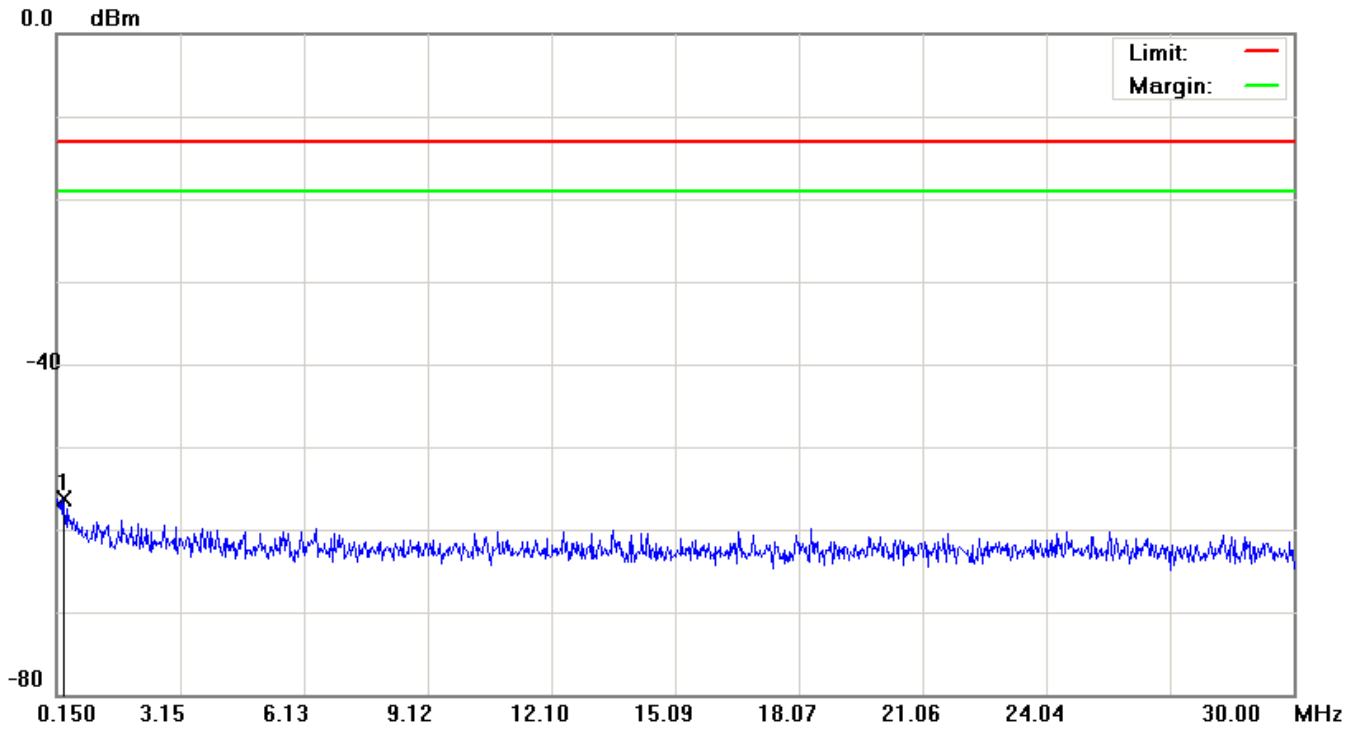
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH512)

Data :#2

Date: 2013/6/21

Time: 下午 05:09:21



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.3141	-68.94	12.65	-56.29	-13.00	-43.29	peak		Comment

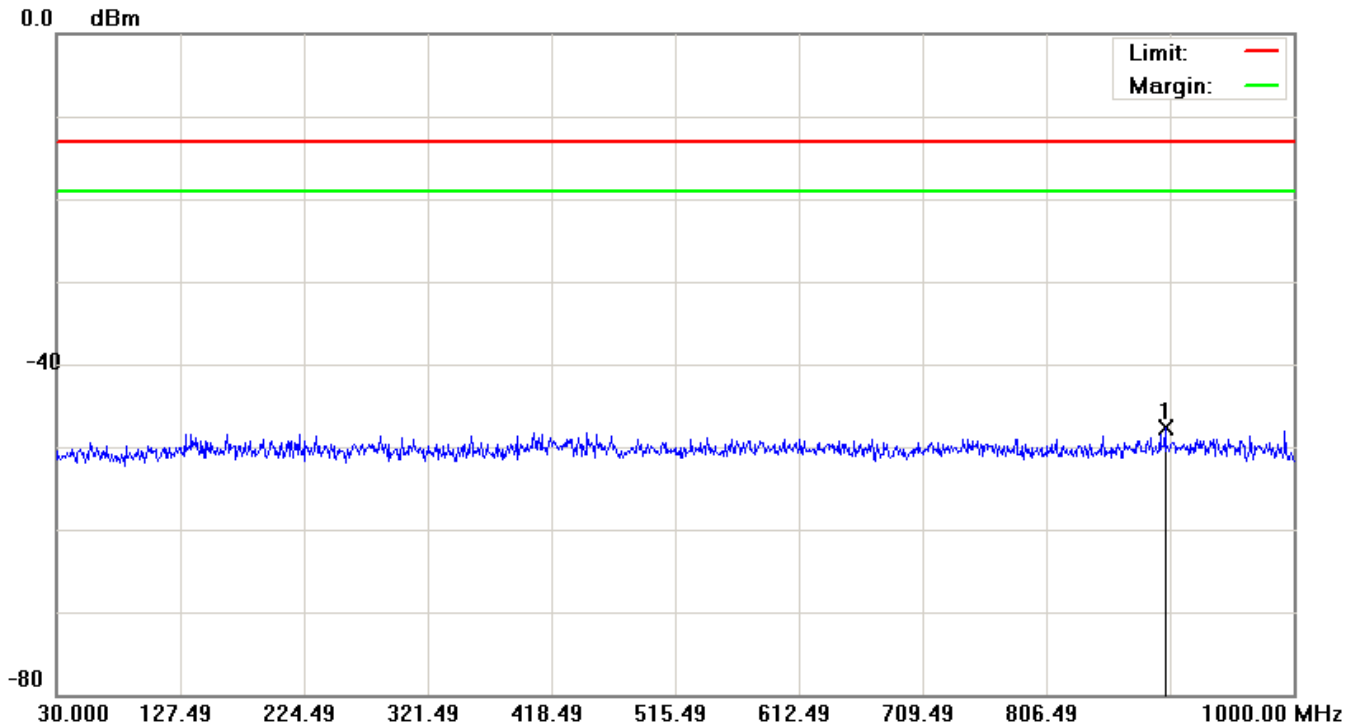
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH512)

Data :#3

Date: 2013/6/21

Time: 下午 05:09:45



Site: : RF Conducted	Polarization: Conducted po	Temperature: 23 °C
Limit: FCC Part 24 conducted(9k-26.5G)	Power: AC 120V/60Hz	Humidity: 55.2 %
EUT: Wireless Modem	Distance:	RBW: 100 KHz VBW: 300 KHz
M/N: CNN0403		
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	*	899.1200	-60.91	13.26	-47.65	-13.00	-34.65	peak		

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

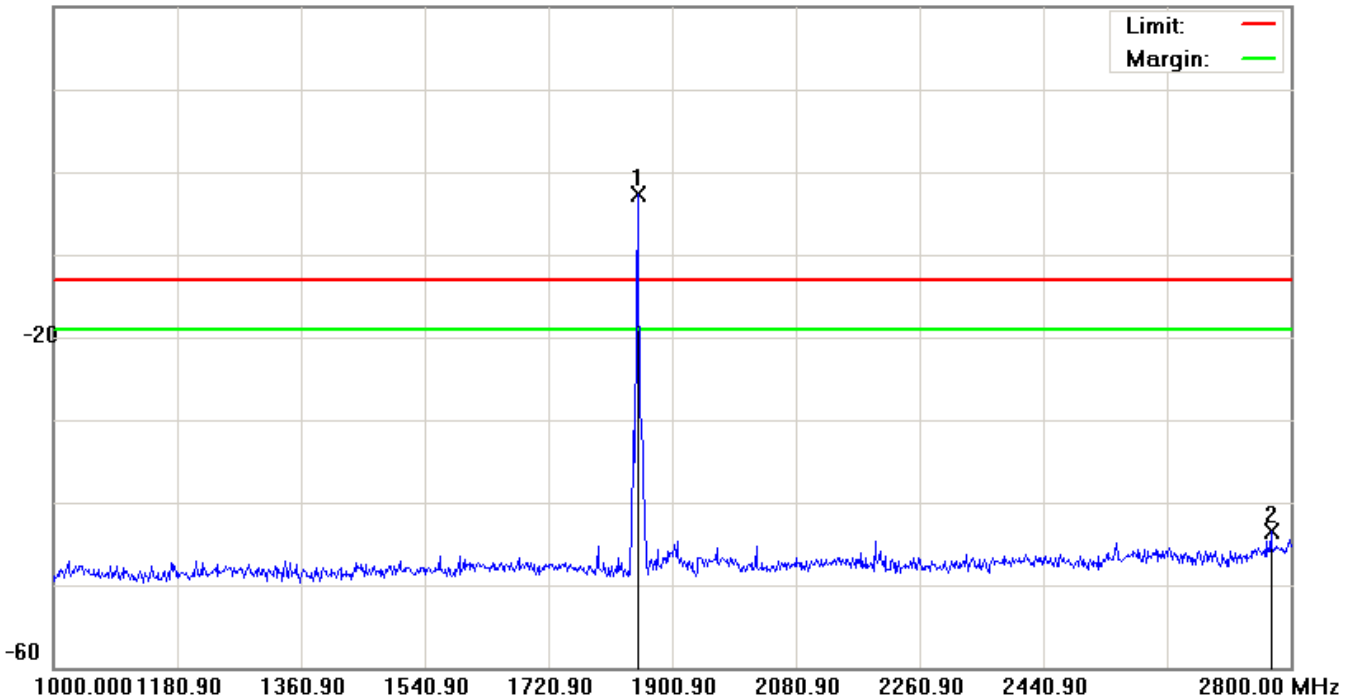
File :CNN0403(CH512)

Data :#4

Date: 2013/6/21

Time: 下午 05:15:47

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	-6.91	4.26	-2.65	-13.00	10.35	peak		Tx
2		2772.100	-49.18	5.77	-43.41	-13.00	-30.41	peak		

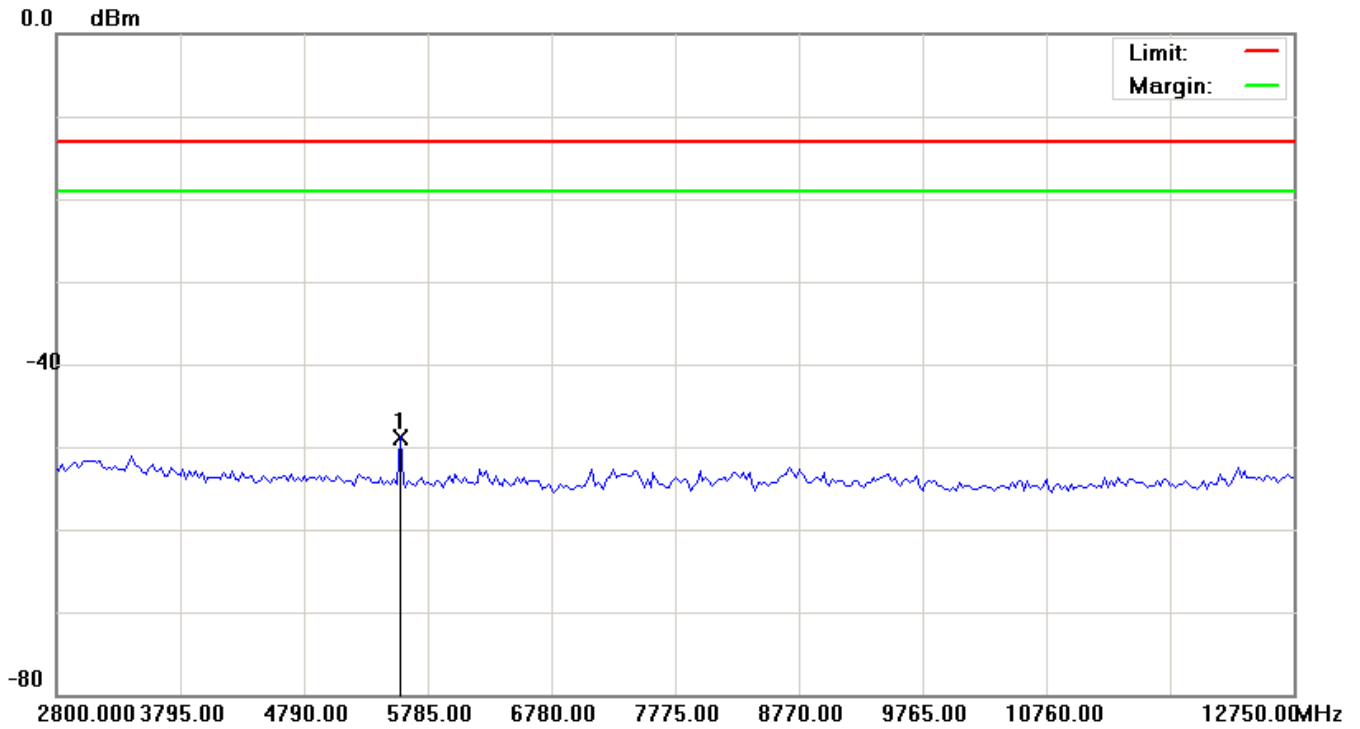
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH512)

Data :#5

Date: 2013/6/21

Time: 下午 05:55:23



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	-53.69	4.89	-48.80	-13.00	-35.80	peak		

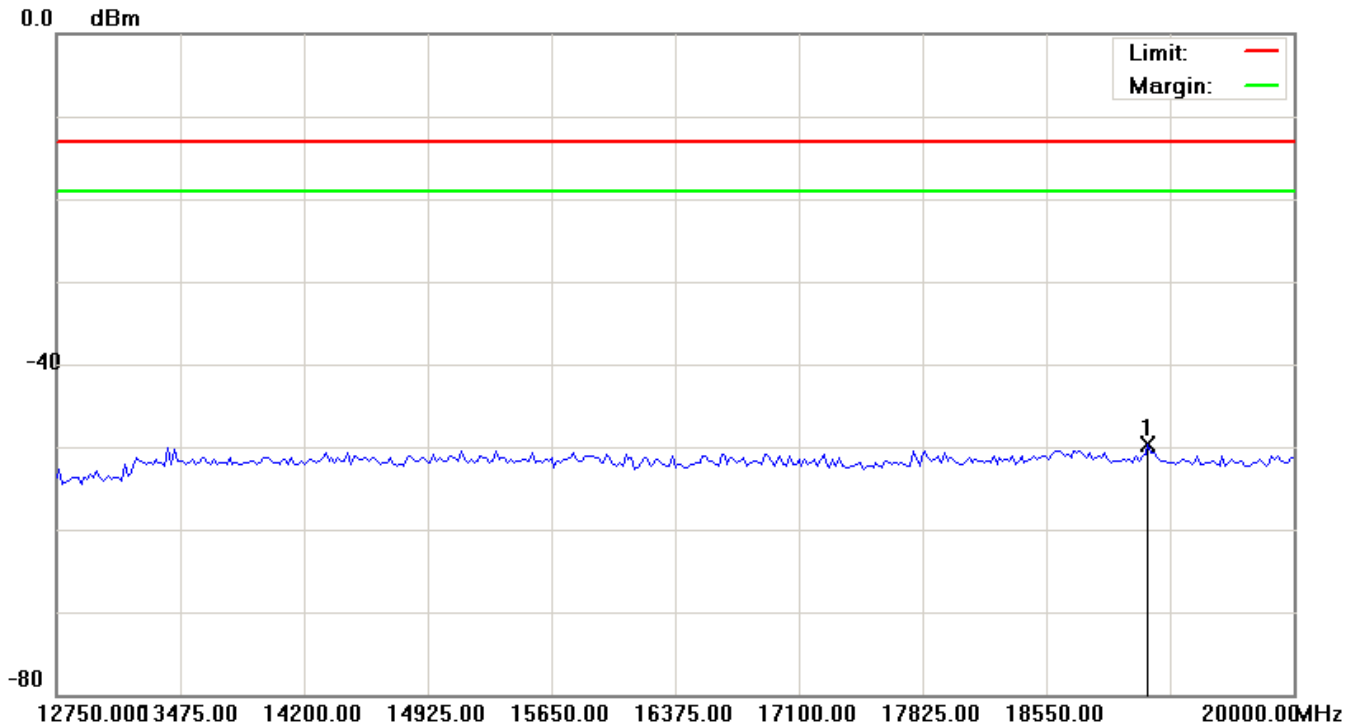
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH512)

Data :#6

Date: 2013/6/21

Time: 下午 05:55:43



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	19148.125	-56.99	7.20	-49.79	-13.00	-36.79	peak		

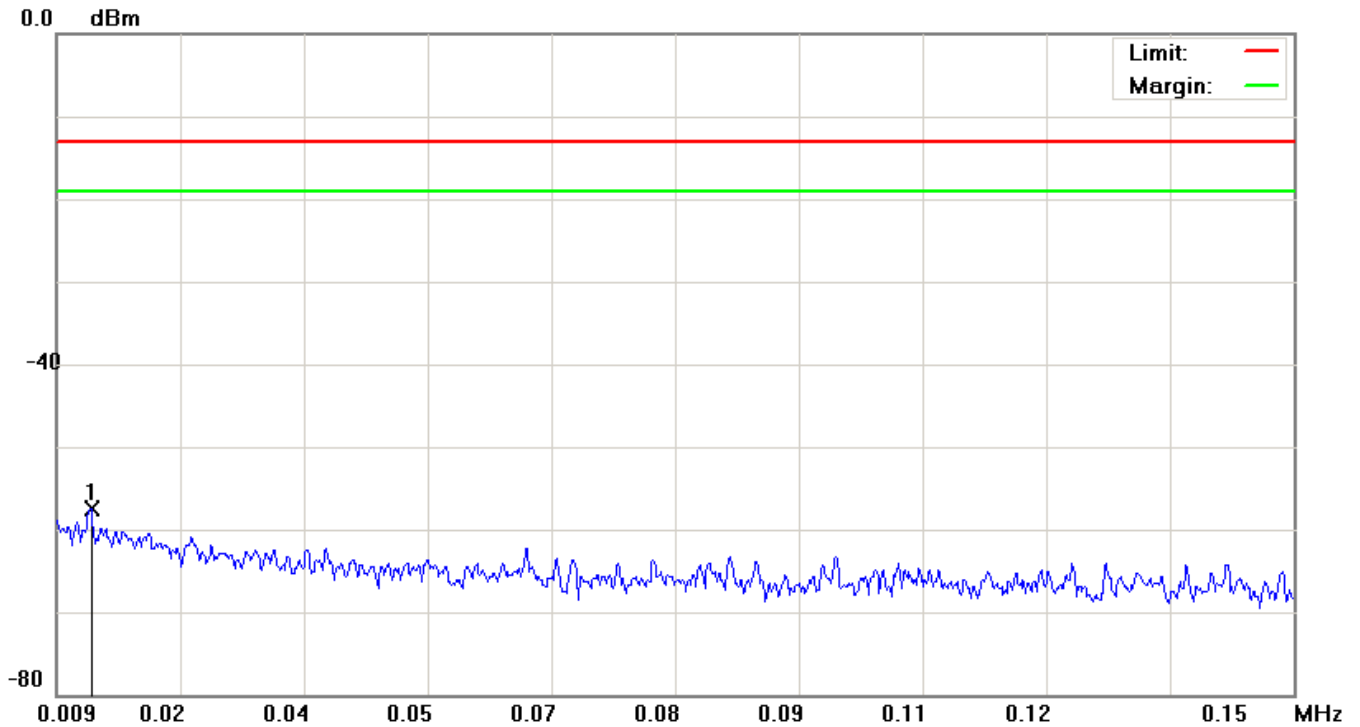
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH661)

Data :#1

Date: 2013/6/21

Time: 下午 05:10:48



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0130	-68.78	11.37	-57.41	-13.00	-44.41	peak		Comment

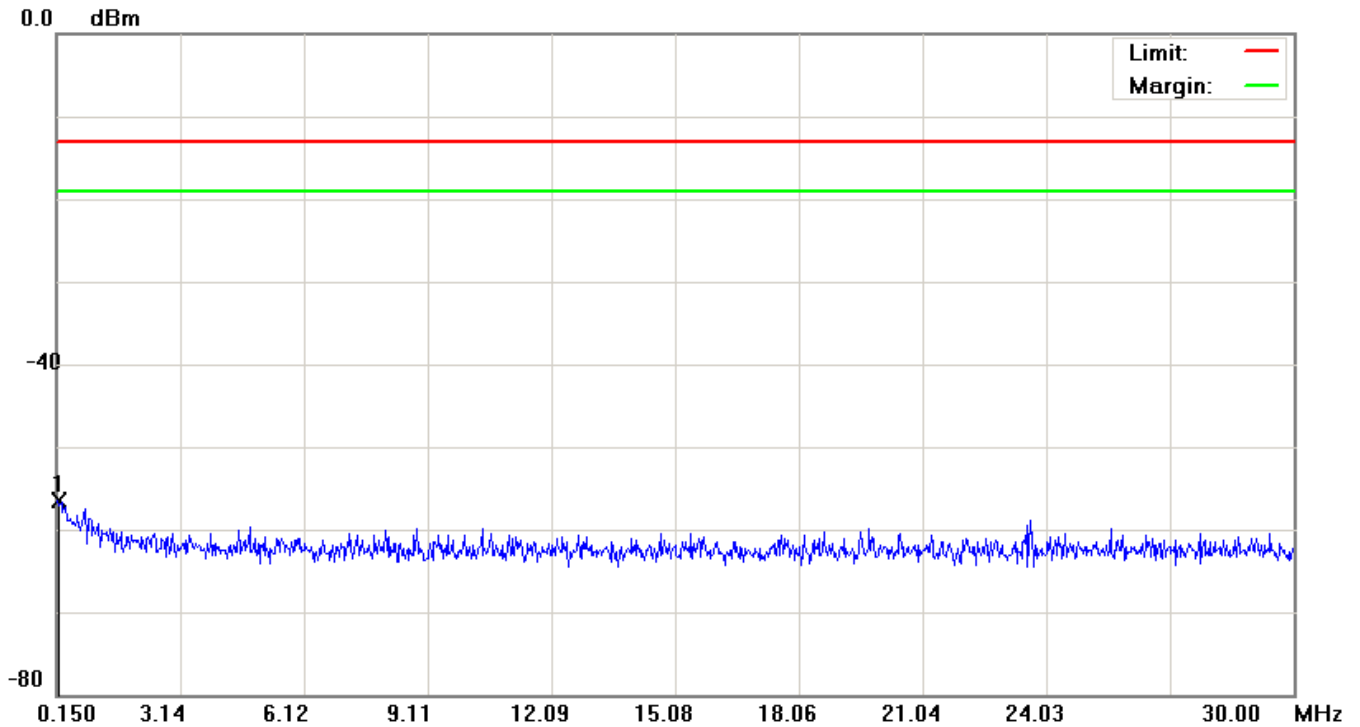
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH661)

Data :#2

Date: 2013/6/21

Time: 下午 05:11:11



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.1948	-69.03	12.45	-56.58	-13.00	-43.58	peak		Comment

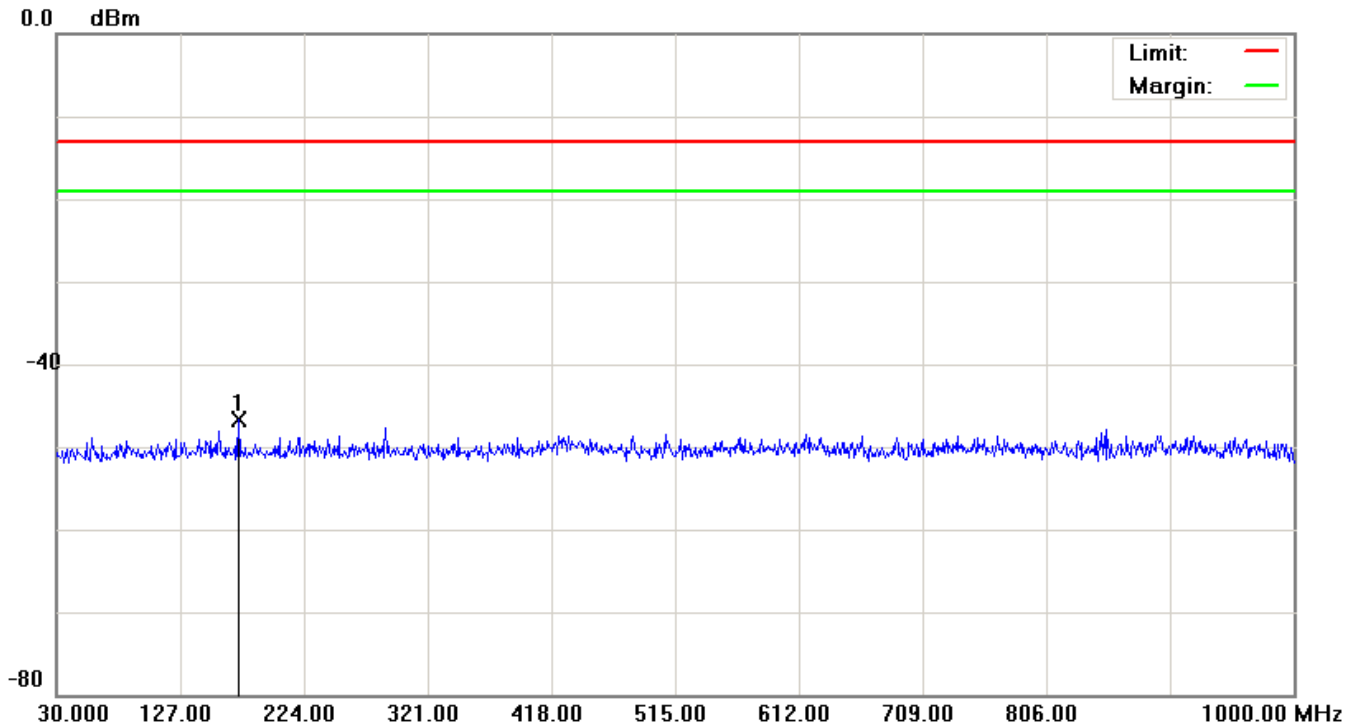
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH661)

Data :#3

Date: 2013/6/21

Time: 下午 05:11:35



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

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	*	172.5900	-59.95	13.30	-46.65	-13.00	-33.65	peak		

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

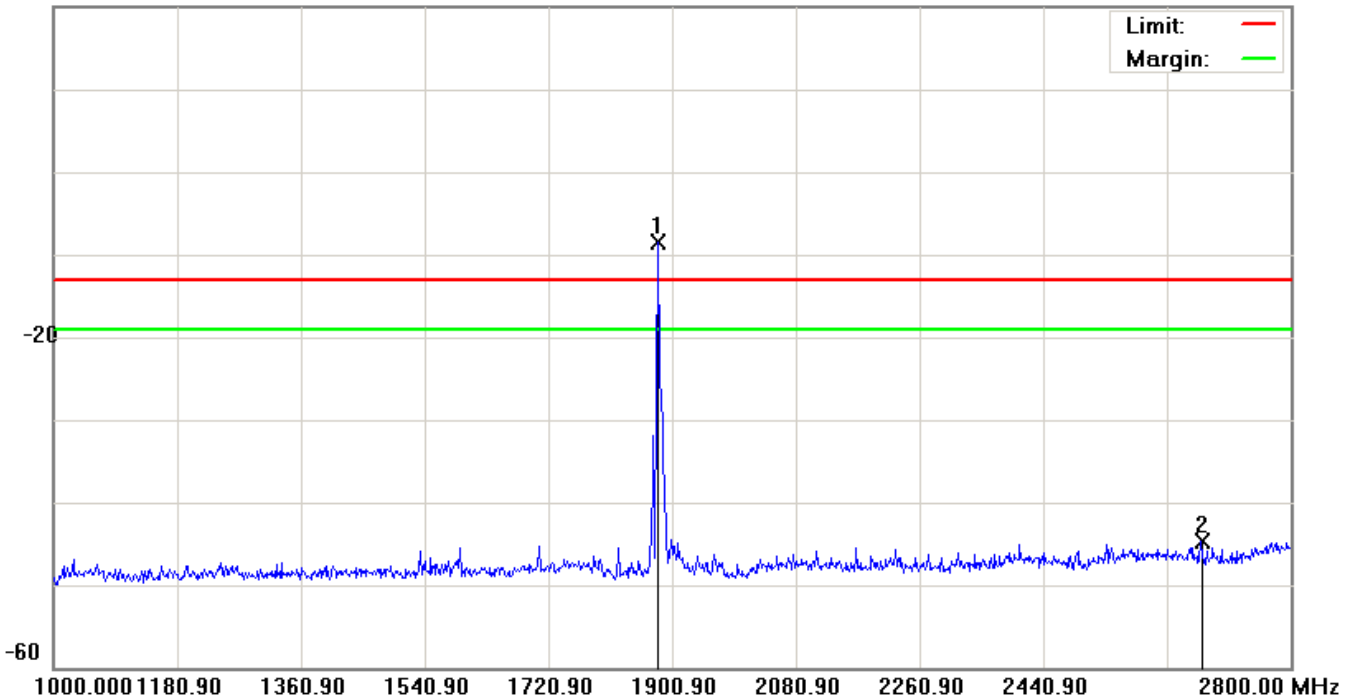
File :CNN0403(CH661)

Data :#4

Date: 2013/6/21

Time: 下午 05:16:53

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	-13.08	4.65	-8.43	-13.00	4.57	peak		Tx
2		2669.500	-49.59	4.89	-44.70	-13.00	-31.70	peak		

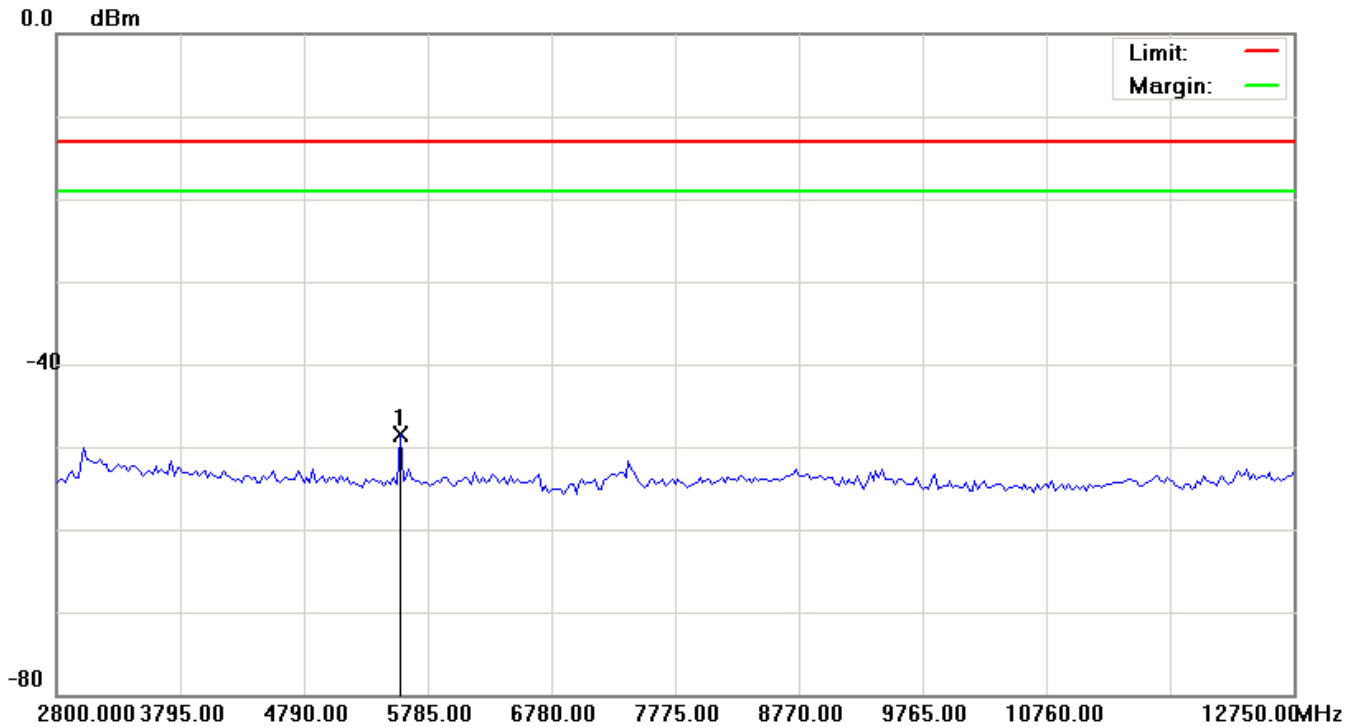
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH661)

Data :#5

Date: 2013/6/21

Time: 下午 06:01:09



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	-53.39	4.89	-48.50	-13.00	-35.50	peak		

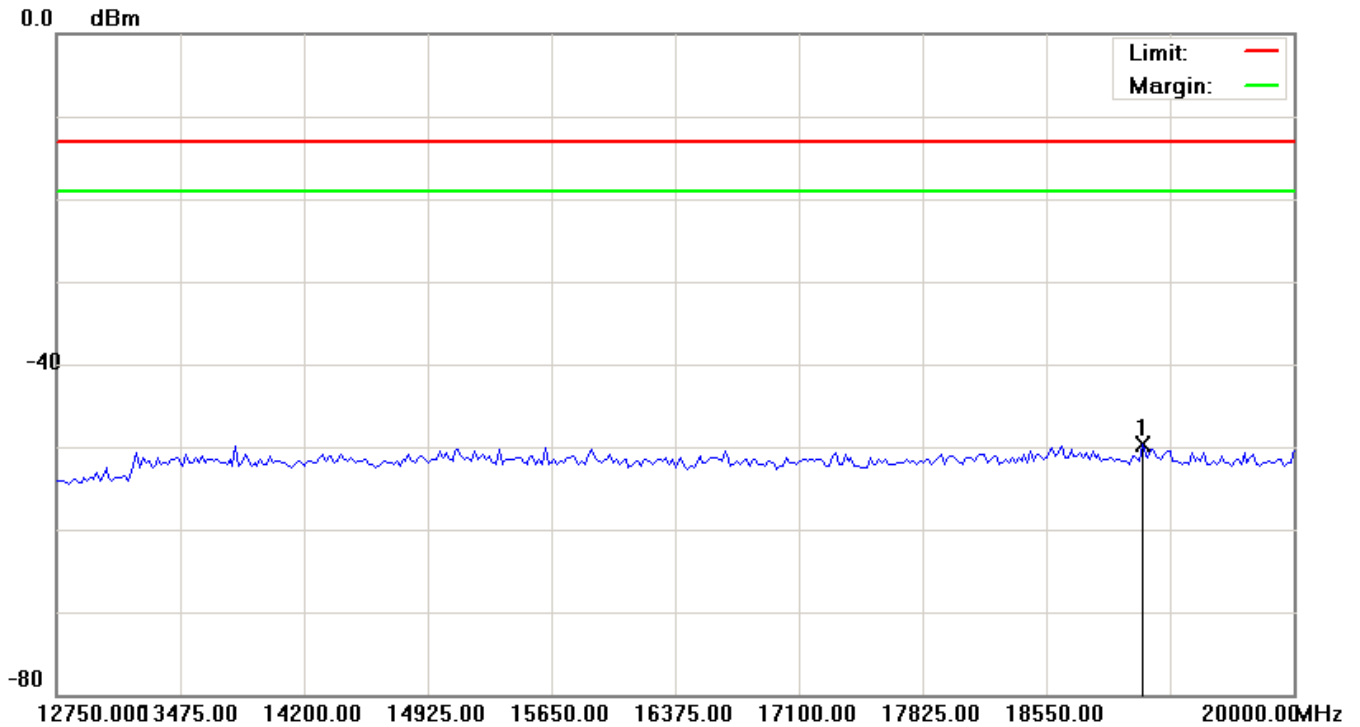
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH661)

Data :#6

Date: 2013/6/21

Time: 下午 06:01:28



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	19111.875	-56.96	7.19	-49.77	-13.00	-36.77	peak		

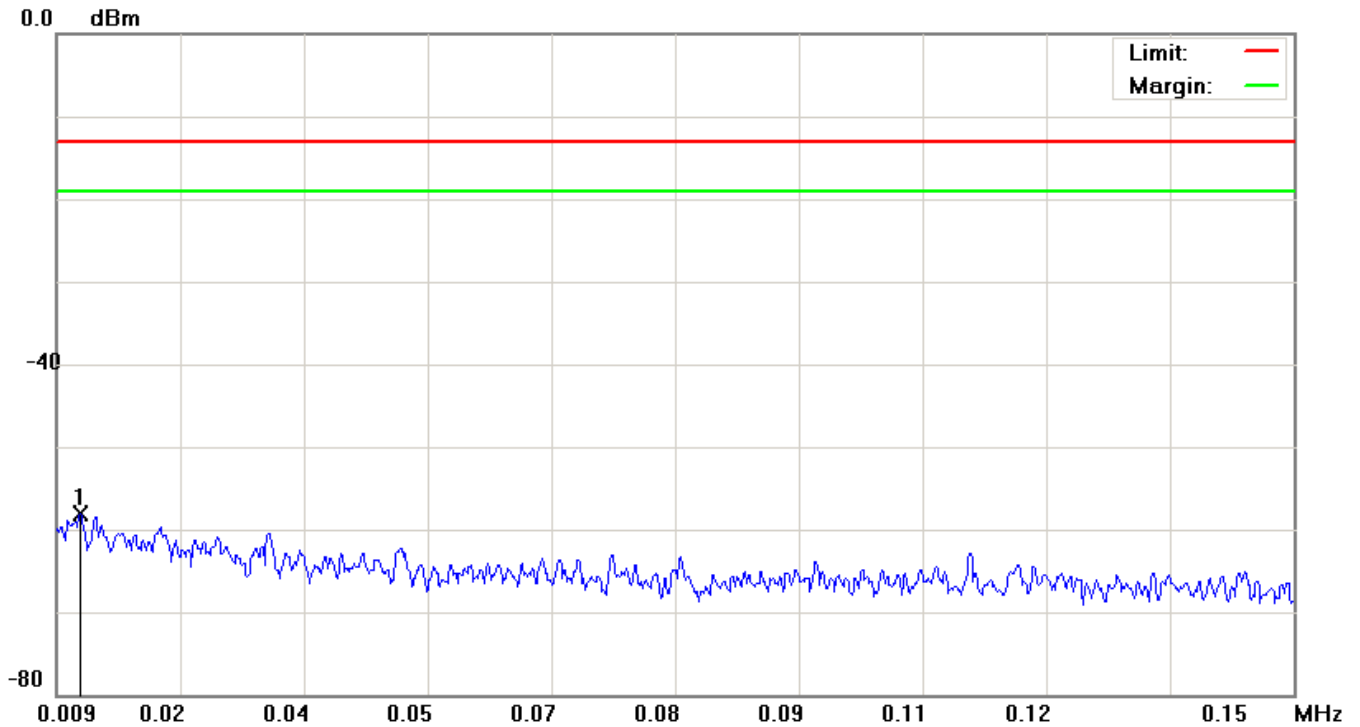
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH810)

Data :#1

Date: 2013/6/21

Time: 下午 05:12:26



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0117	-69.47	11.35	-58.12	-13.00	-45.12	peak		Comment

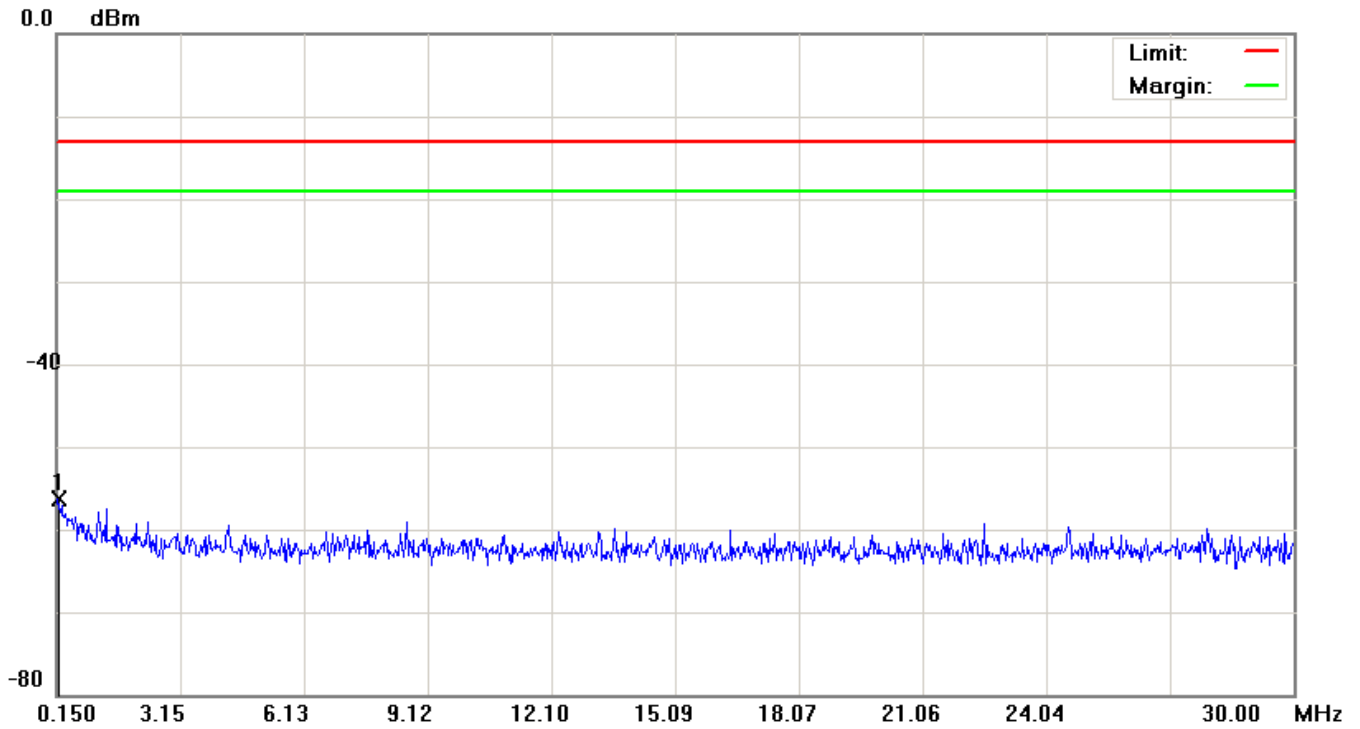
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH810)

Data :#2

Date: 2013/6/21

Time: 下午 05:12:50



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: GSM 1900

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.1948	-68.67	12.45	-56.22	-13.00	-43.22	peak		Comment

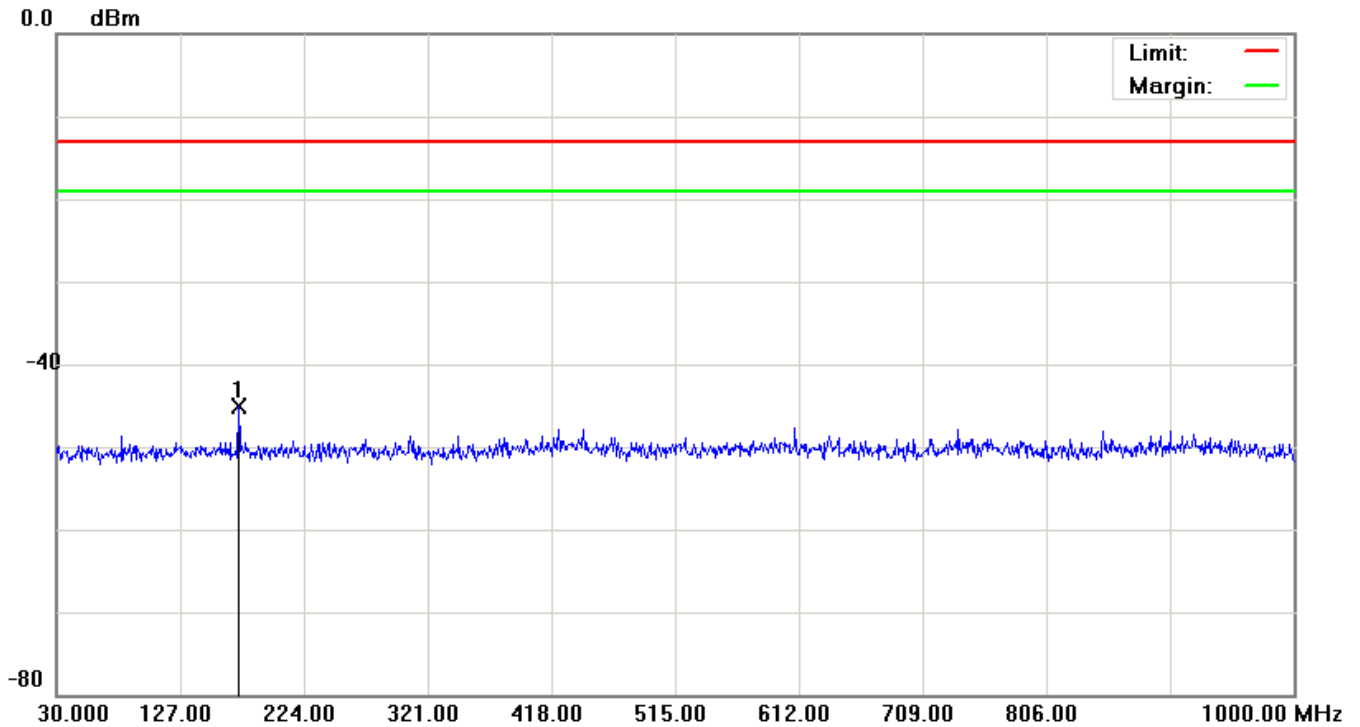
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH810)

Data :#3

Date: 2013/6/21

Time: 下午 05:13:14



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

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	*	172.5900	-58.35	13.30	-45.05	-13.00	-32.05	peak		

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

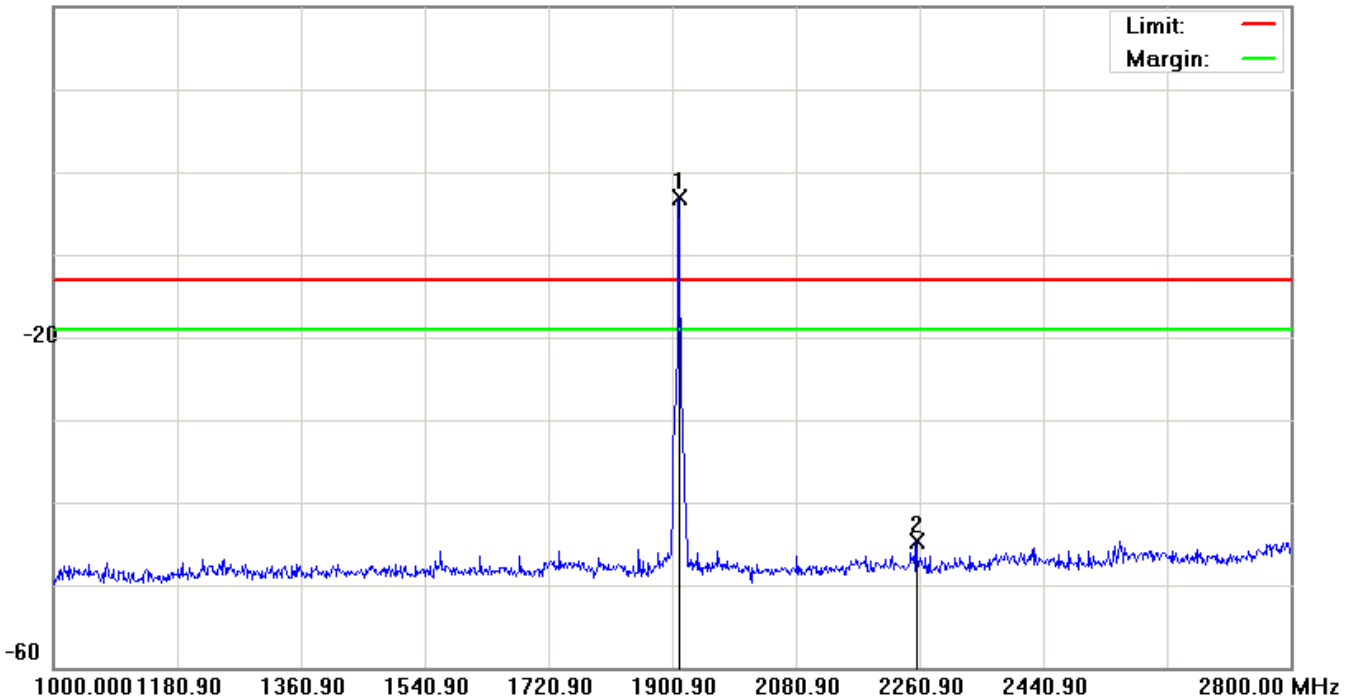
File :CNN0403(CH810)

Data :#4

Date: 2013/6/21

Time: 下午 05:19:11

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	*	1909.900	-8.88	5.71	-3.17	-13.00	9.83	peak		Tx
2		2255.500	-49.09	4.47	-44.62	-13.00	-31.62	peak		

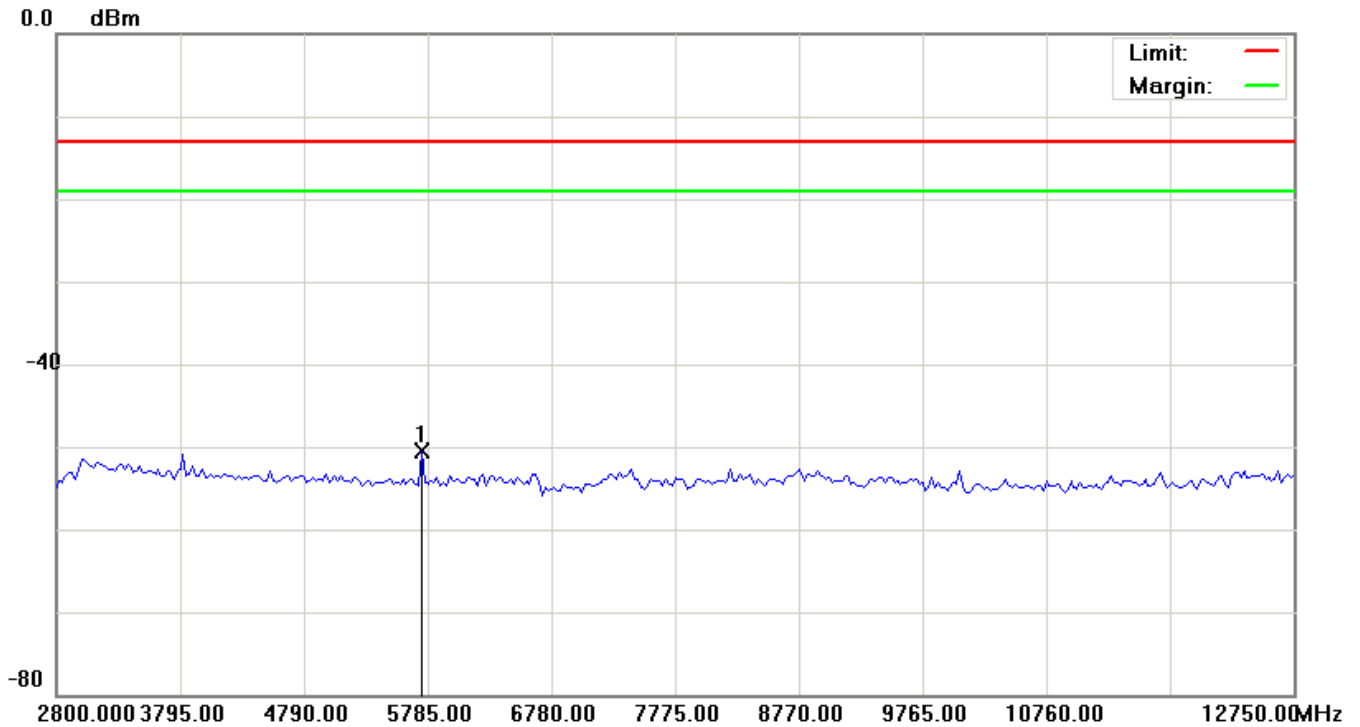
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH810)

Data :#5

Date: 2013/6/21

Time: 下午 06:04:51



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

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	-55.42	4.89	-50.53	-13.00	-37.53	peak		

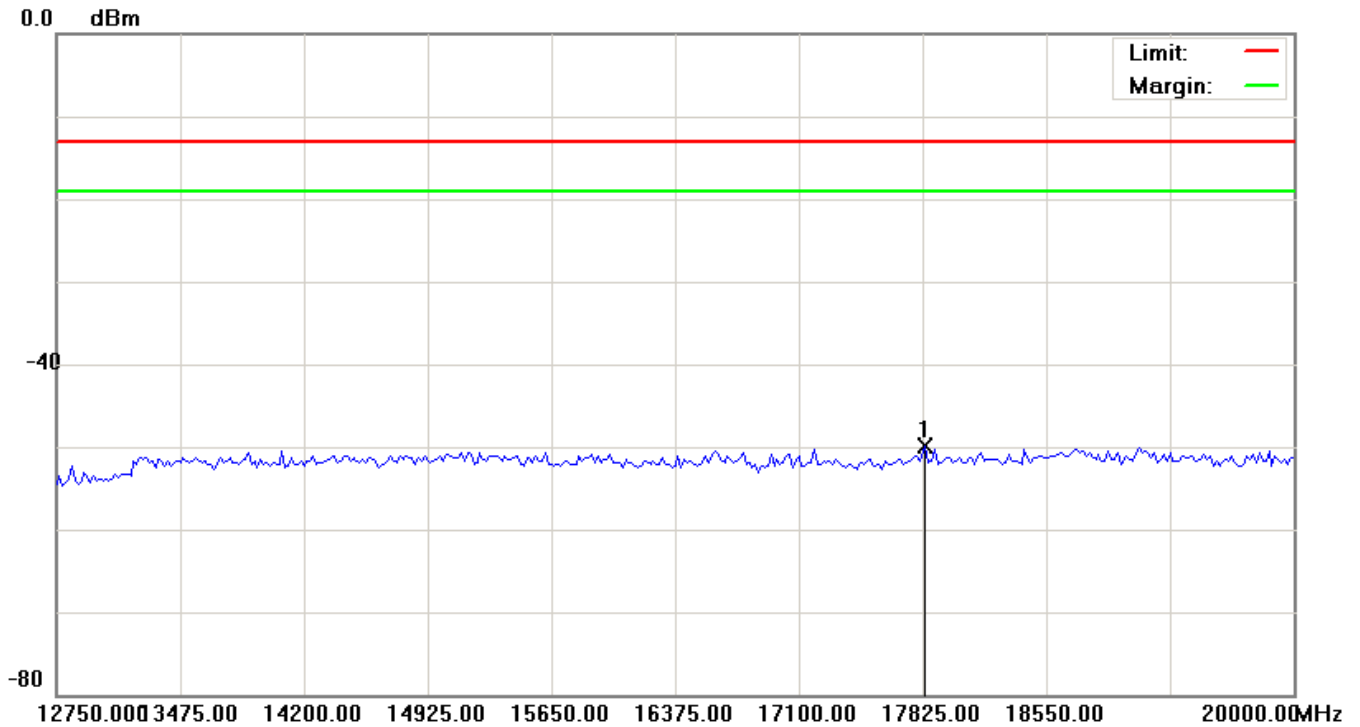
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH810)

Data :#6

Date: 2013/6/21

Time: 下午 06:05:10



Site: : RF Conducted	Polarization: Conducted po	Temperature: 23 °C
Limit: FCC Part 24 conducted(9k-26.5G)	Power: AC 120V/60Hz	Humidity: 55.2 %
EUT: Wireless Modem	Distance:	RBW: 1000 KHz VBW: 3000 KHz
M/N: CNN0403		
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	*	17843.125	-56.78	6.82	-49.96	-13.00	-36.96	peak		

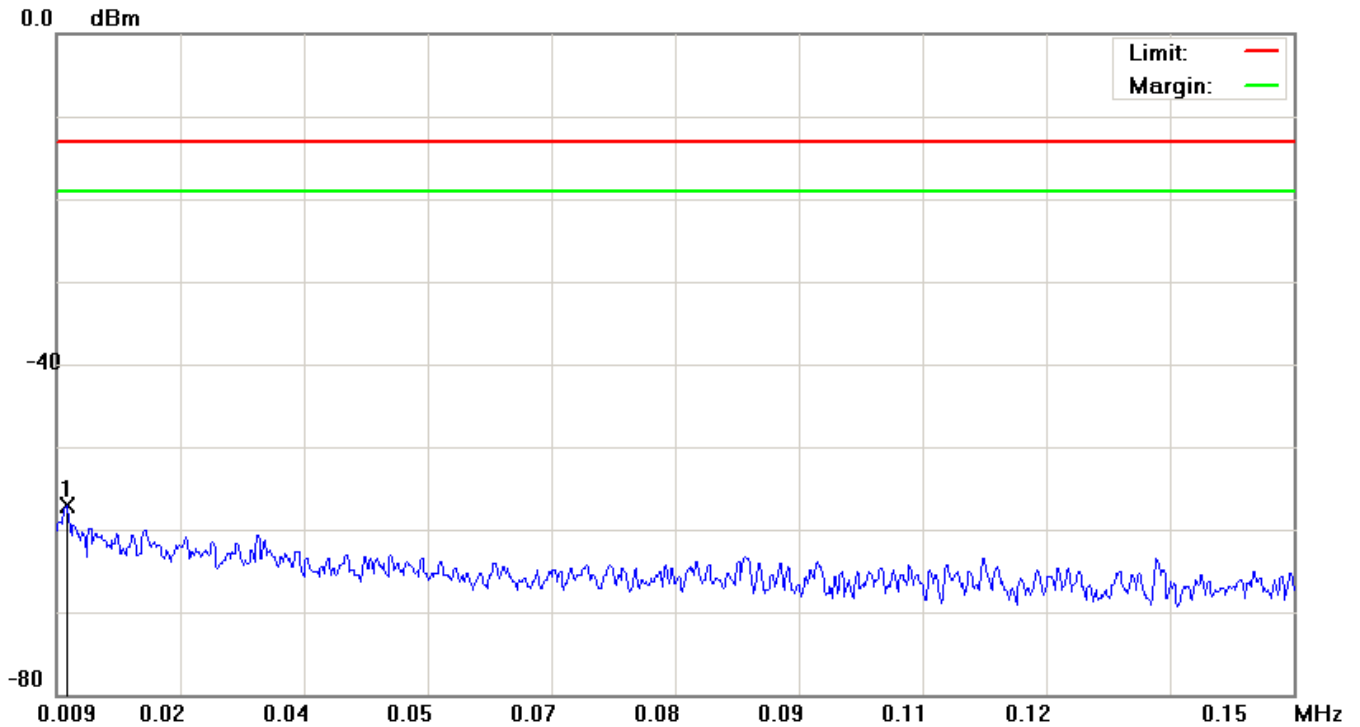
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9262)

Data :#1

Date: 2013/6/21

Time: 下午 05:03:17



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0101	-68.37	11.34	-57.03	-13.00	-44.03	peak		Comment

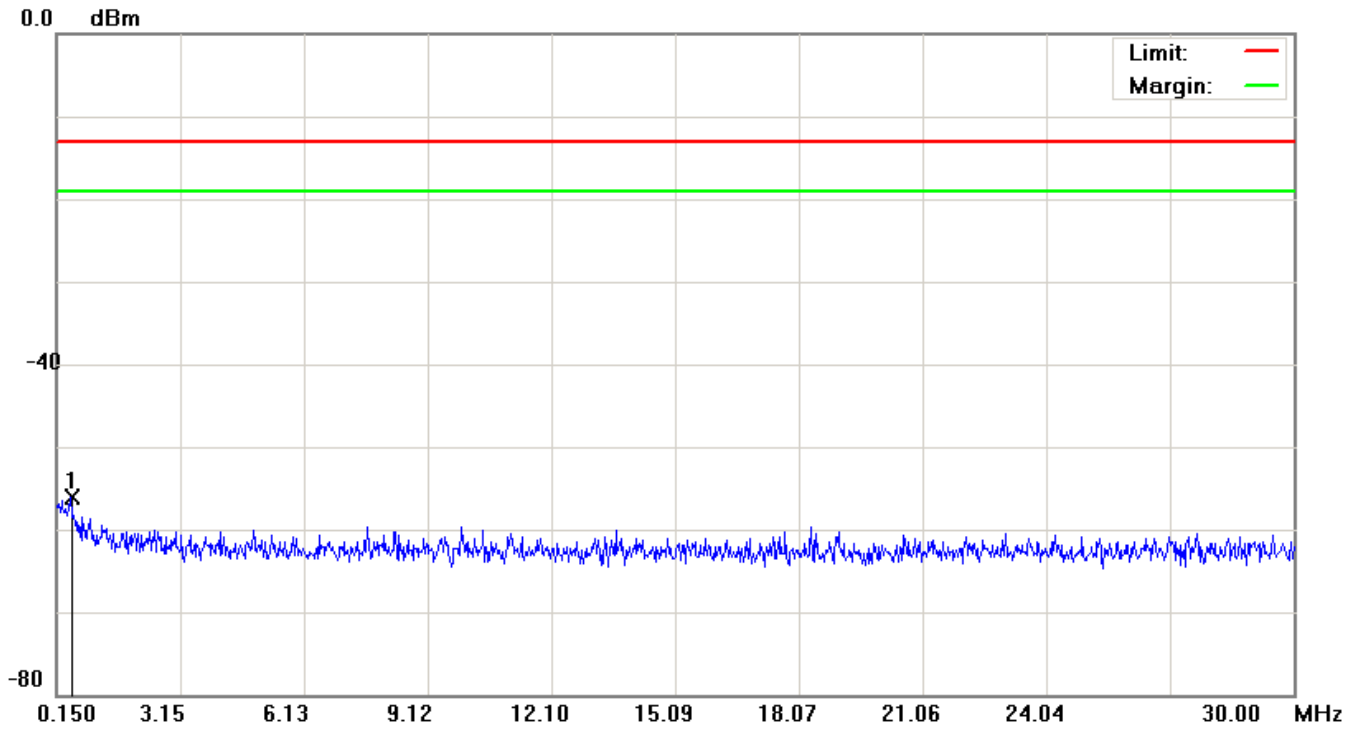
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9262)

Data :#2

Date: 2013/6/21

Time: 下午 05:03:41



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.4933	-68.92	12.80	-56.12	-13.00	-43.12	peak		Comment

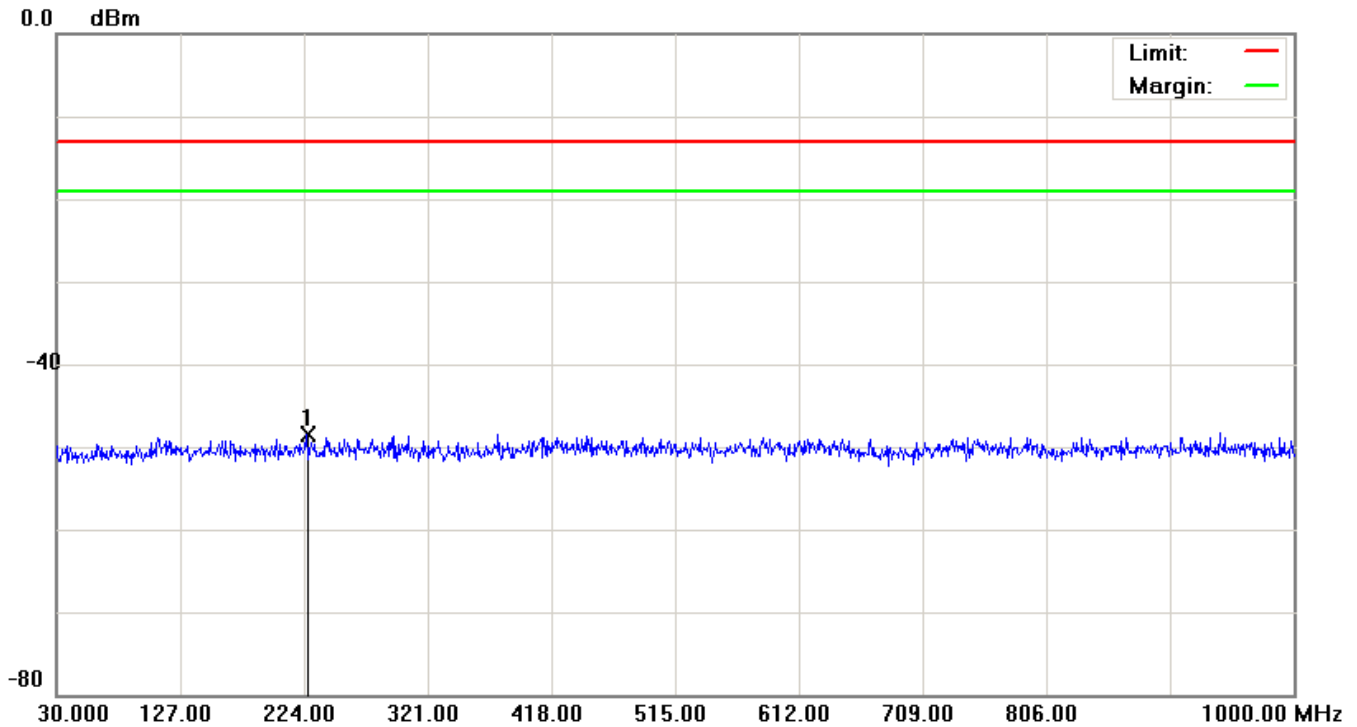
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9262)

Data :#3

Date: 2013/6/21

Time: 下午 05:04:05



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	226.4250	-61.71	13.26	-48.45	-13.00	-35.45	peak		

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

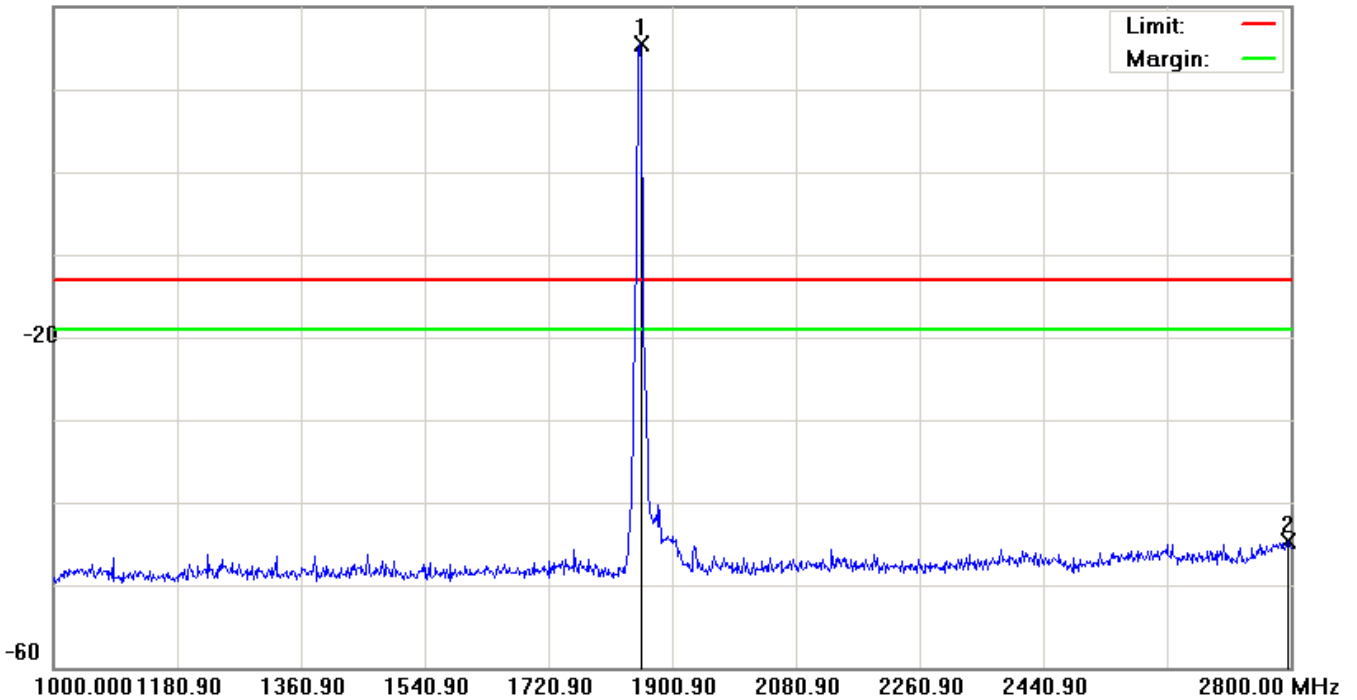
File :CNN0403(CH9262)

Data :#4

Date: 2013/6/21

Time: 下午 05:25:09

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	1854.100	11.19	4.28	15.47	-13.00	28.47	peak		Tx
2		2796.400	-50.50	5.90	-44.60	-13.00	-31.60	peak		

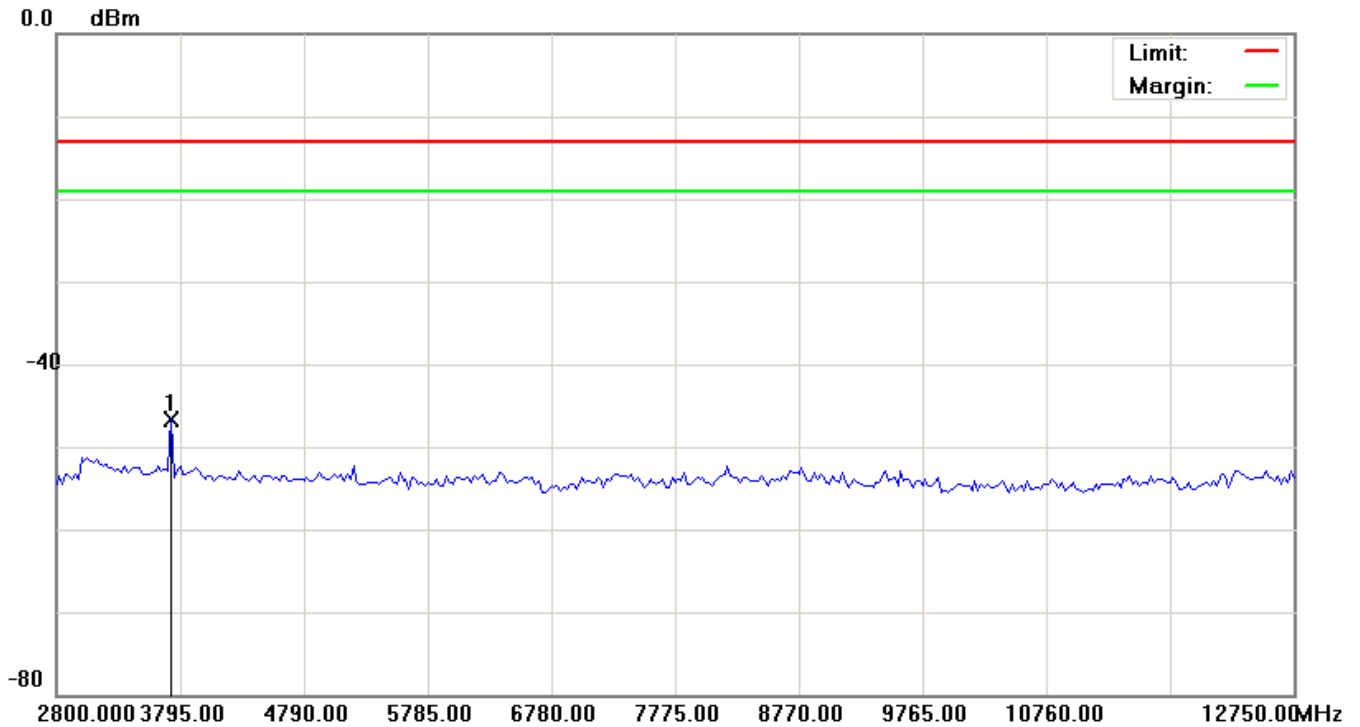
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9262)

Data :#5

Date: 2013/6/21

Time: 下午 05:33:36



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	3720.375	-51.48	4.88	-46.60	-13.00	-33.60	peak		

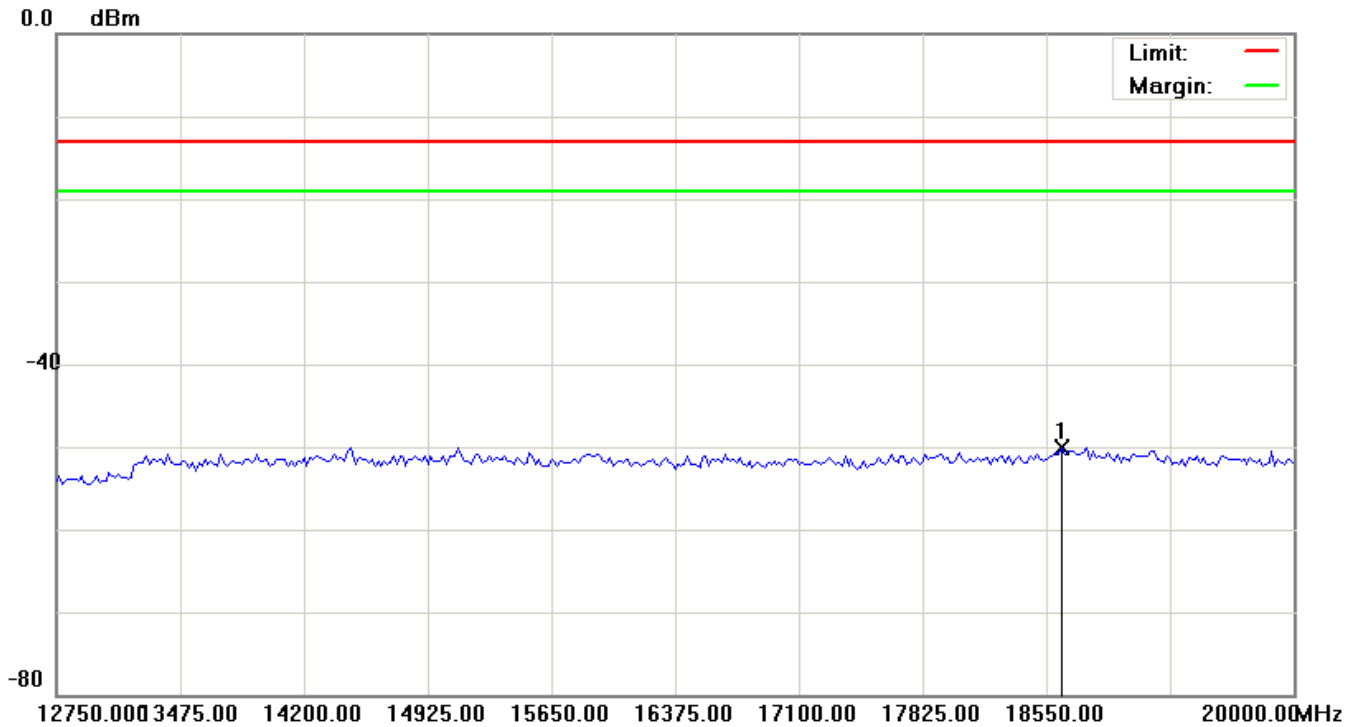
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9262)

Data :#6

Date: 2013/6/21

Time: 下午 05:33:56



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	18640.625	-57.15	7.05	-50.10	-13.00	-37.10	peak		

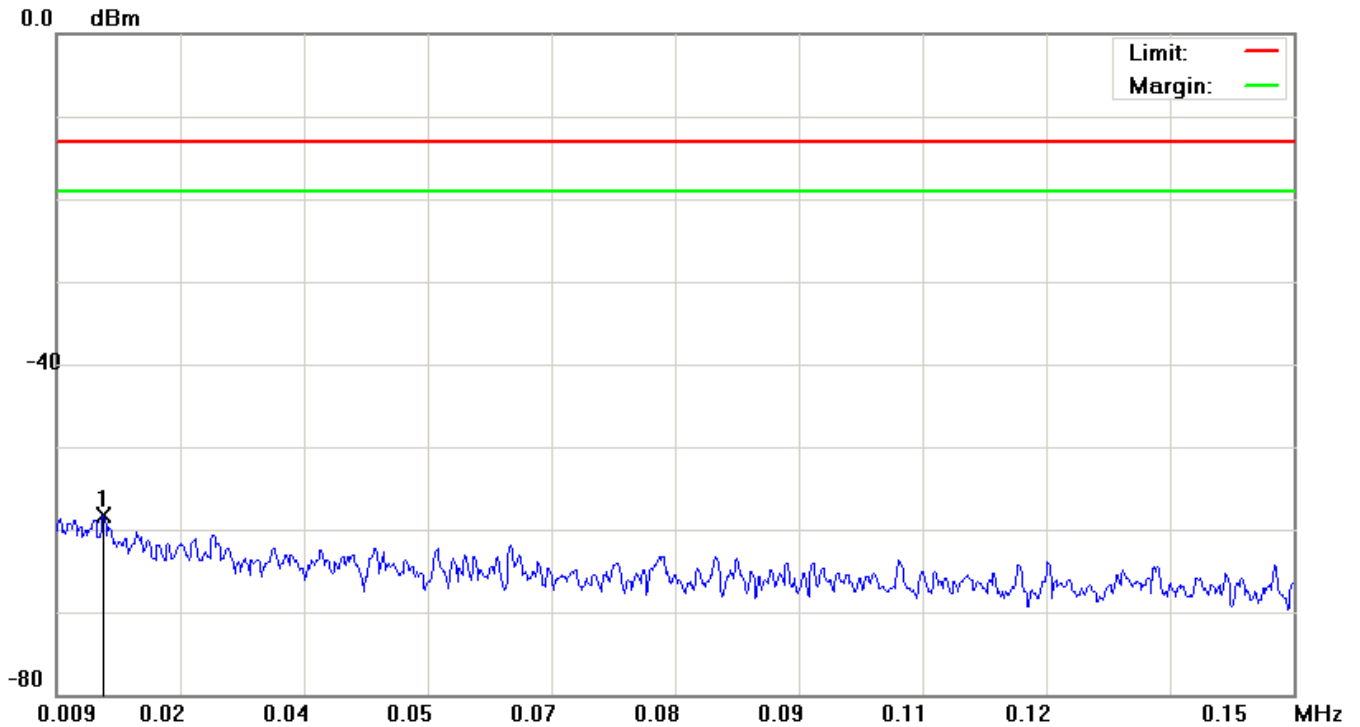
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9400)

Data :#1

Date: 2013/6/21

Time: 下午 05:04:51



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0144	-69.78	11.39	-58.39	-13.00	-45.39	peak		Comment

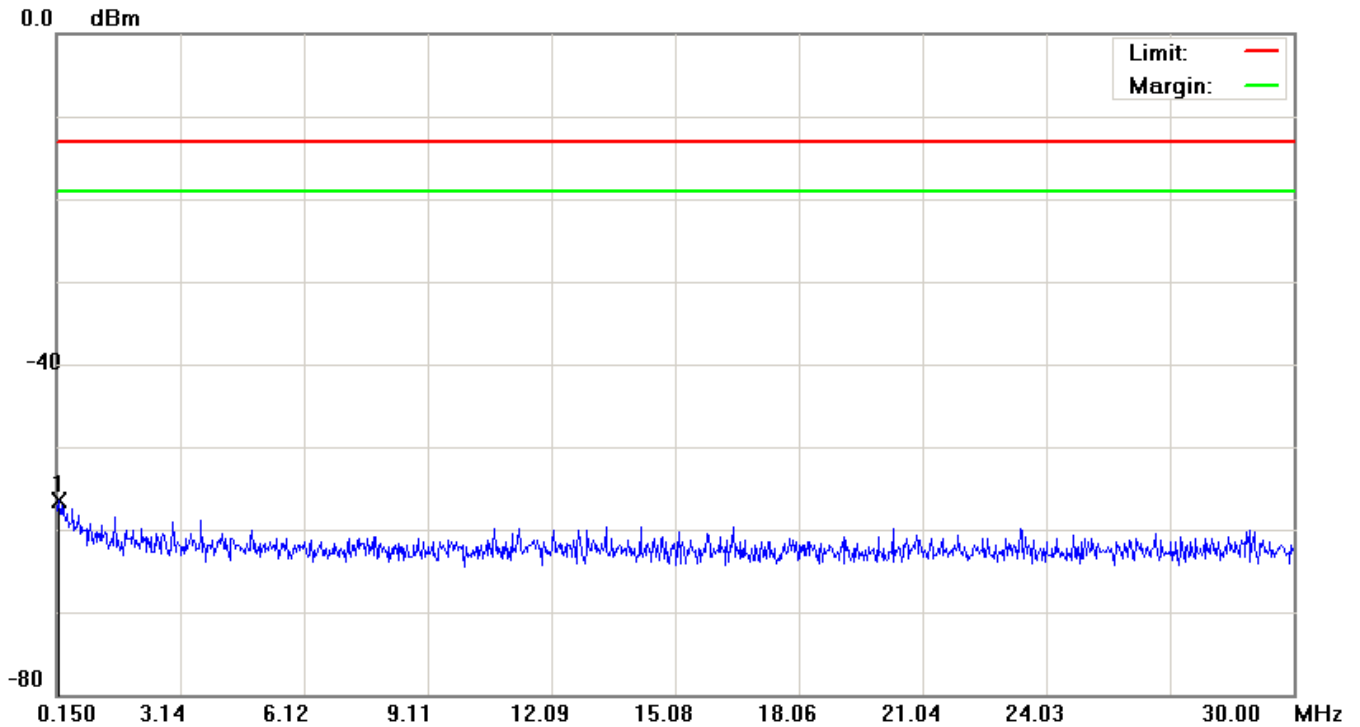
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9400)

Data :#2

Date: 2013/6/21

Time: 下午 05:05:15



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.2097	-68.97	12.44	-56.53	-13.00	-43.53	peak		Comment

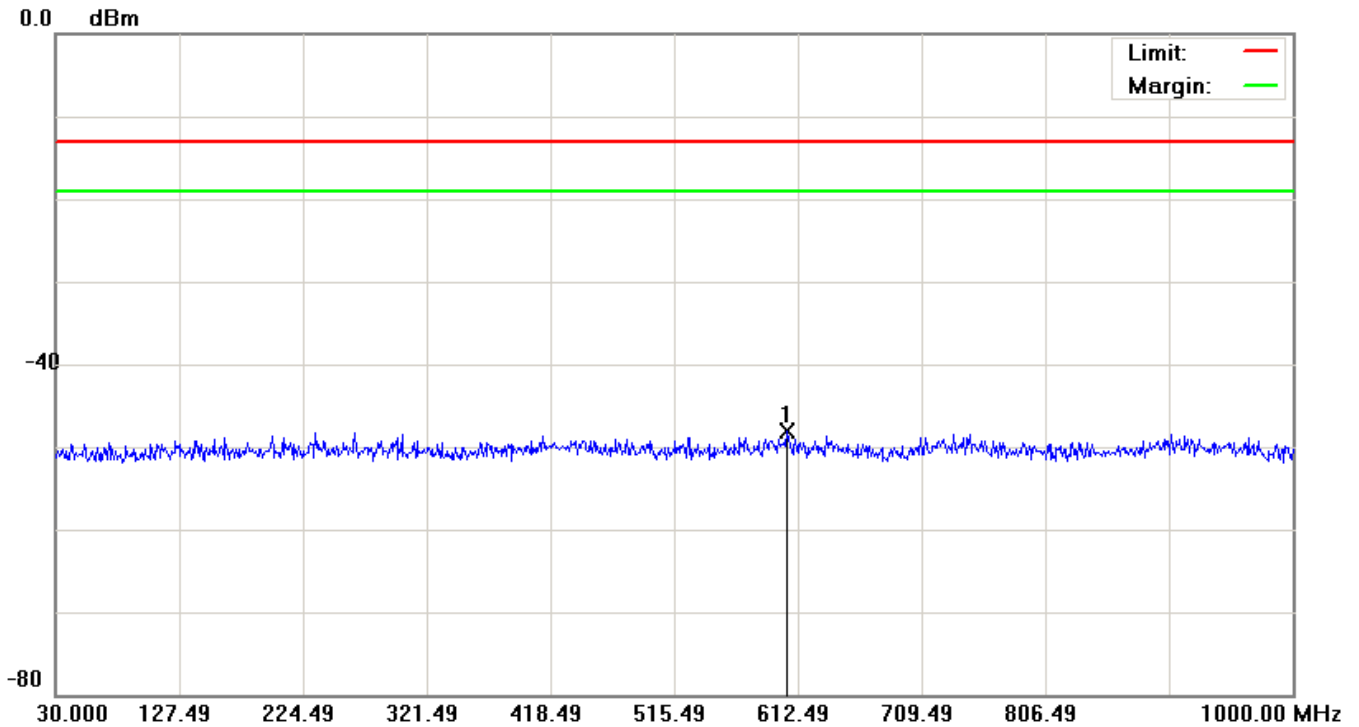
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9400)

Data :#3

Date: 2013/6/21

Time: 下午 05:05:39



Site: : RF Conducted	Polarization: Conducted po	Temperature: 23 °C
Limit: FCC Part 24 conducted(9k-26.5G)	Power: AC 120V/60Hz	Humidity: 55.2 %
EUT: Wireless Modem	Distance:	RBW: 100 KHz VBW: 300 KHz
M/N: CNN0403		
Mode: WCDMA Band II		
Note:		

No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	603.2700	-61.22	13.17	-48.05	-13.00	-35.05	peak		Comment

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

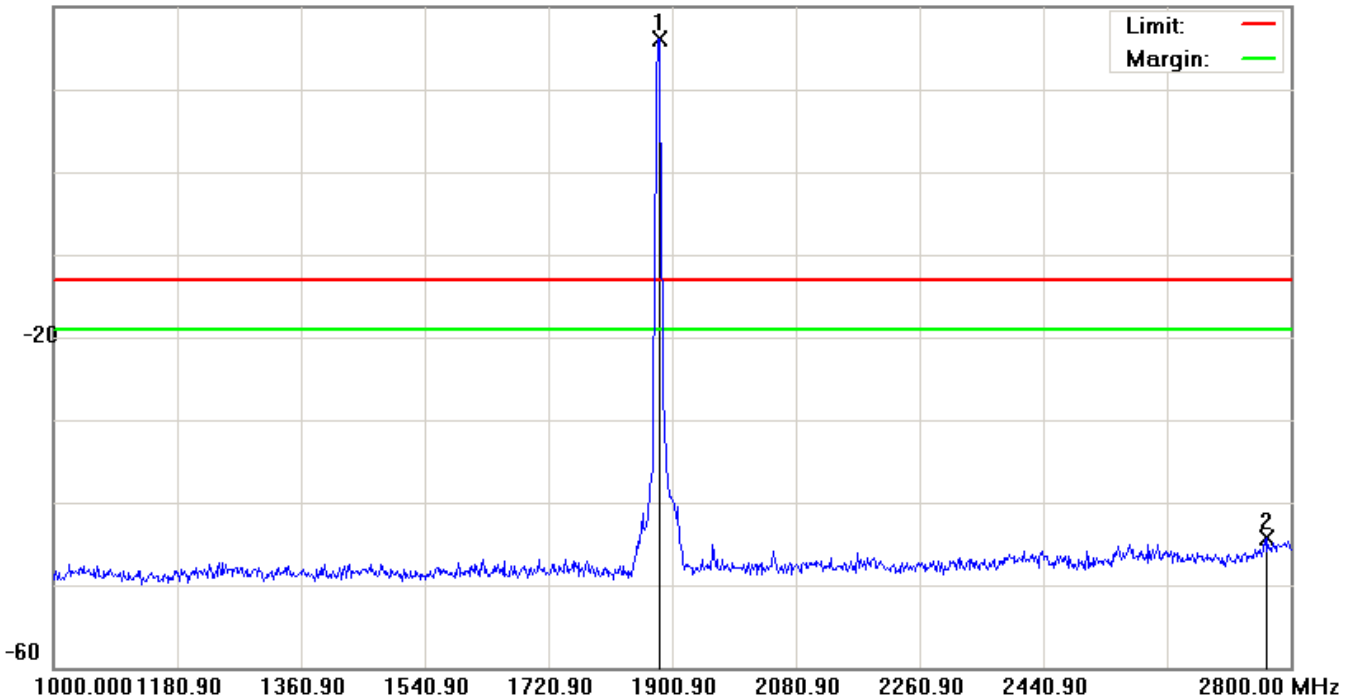
File :CNN0403(CH9400)

Data :#4

Date: 2013/6/21

Time: 下午 05:26:28

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	1881.100	11.35	4.74	16.09	-13.00	29.09	peak		Tx
2		2765.800	-50.06	5.68	-44.38	-13.00	-31.38	peak		

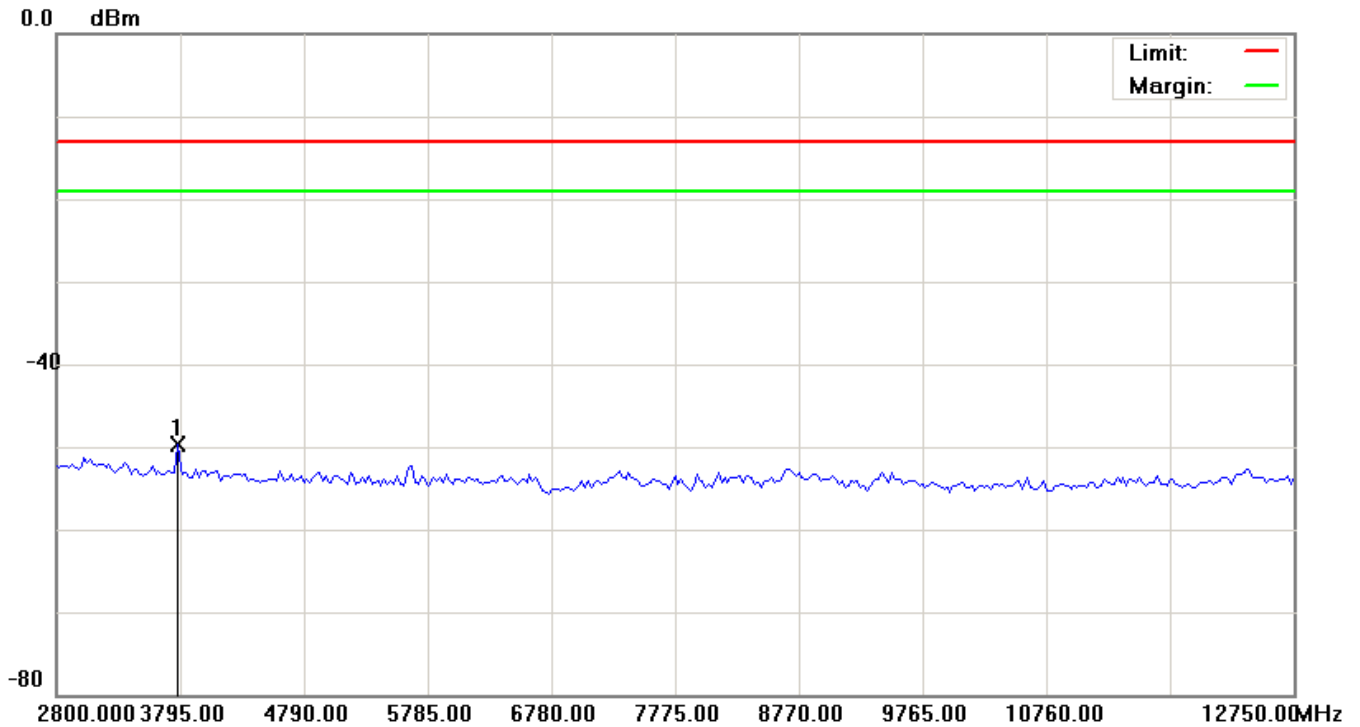
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9400)

Data :#5

Date: 2013/6/21

Time: 下午 05:48:40



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	3770.125	-54.57	4.93	-49.64	-13.00	-36.64	peak		

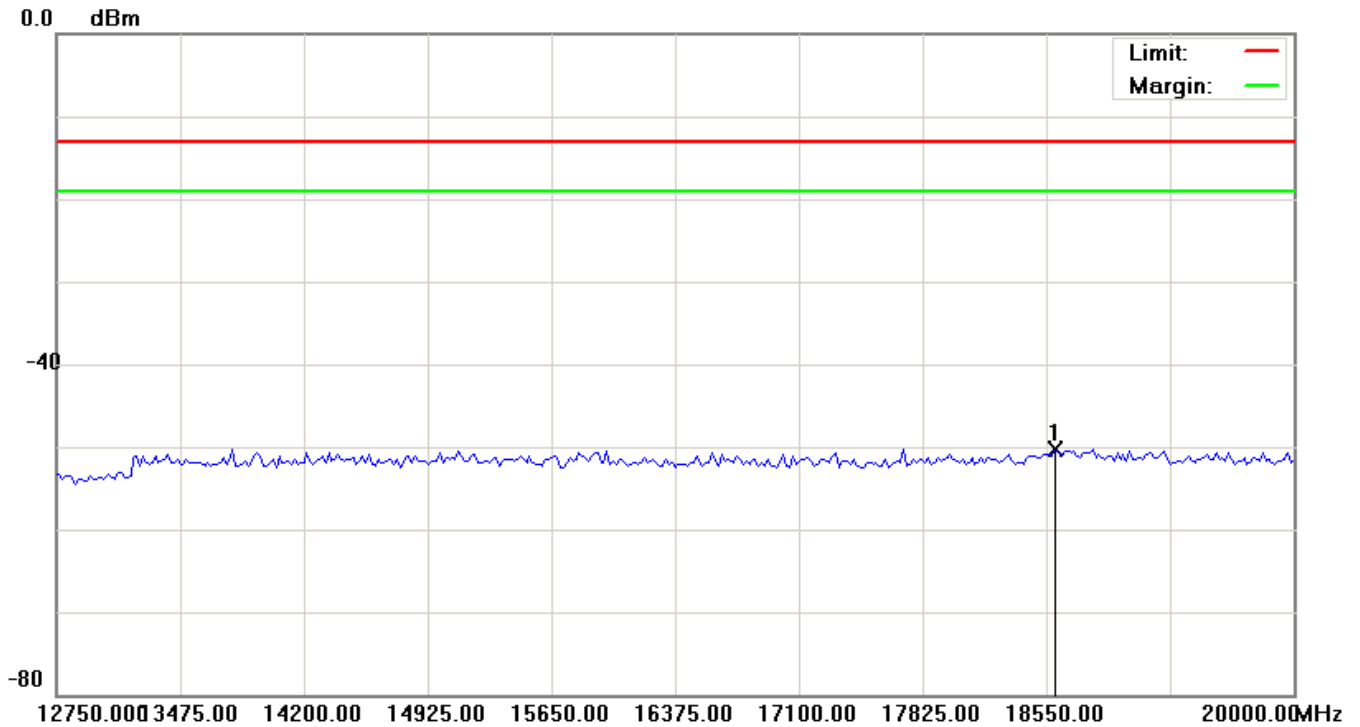
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9400)

Data :#6

Date: 2013/6/21

Time: 下午 05:49:01



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	18604.375	-57.25	7.04	-50.21	-13.00	-37.21	peak		

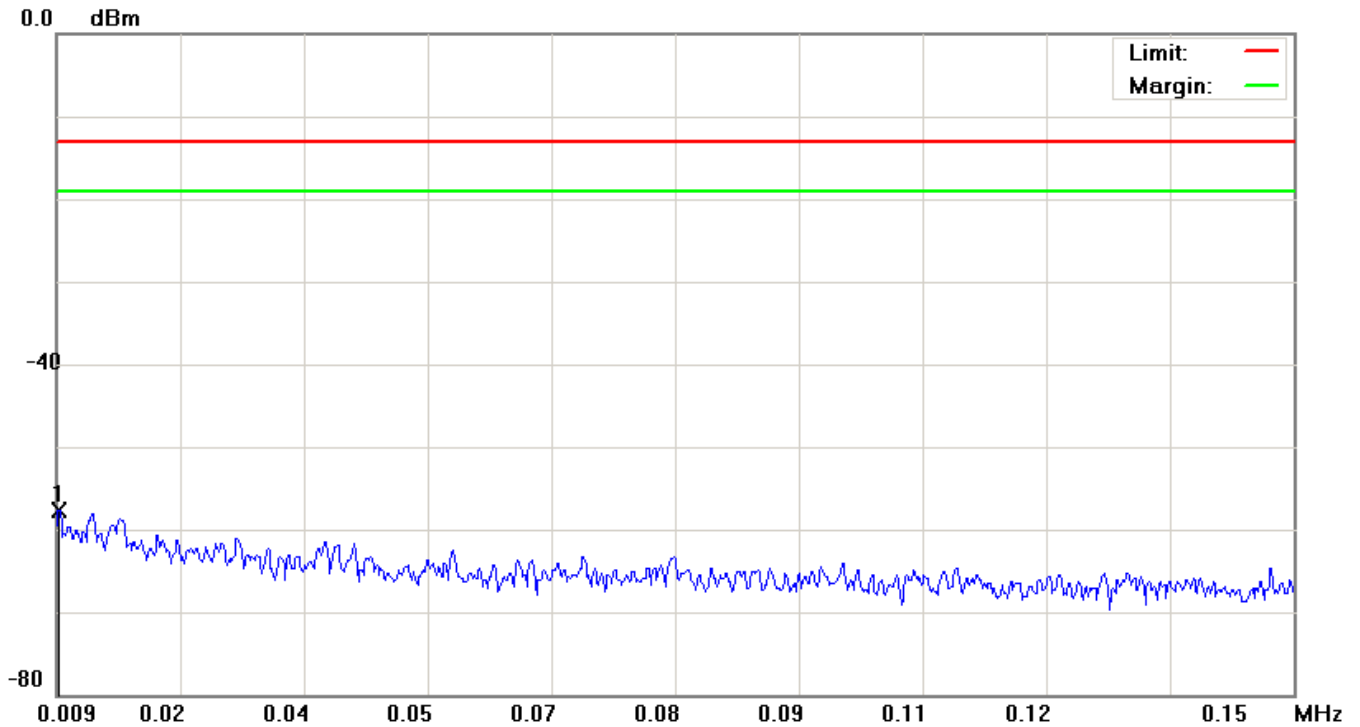
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9538)

Data :#1

Date: 2013/6/21

Time: 下午 05:06:34



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0093	-69.08	11.33	-57.75	-13.00	-44.75	peak		Comment

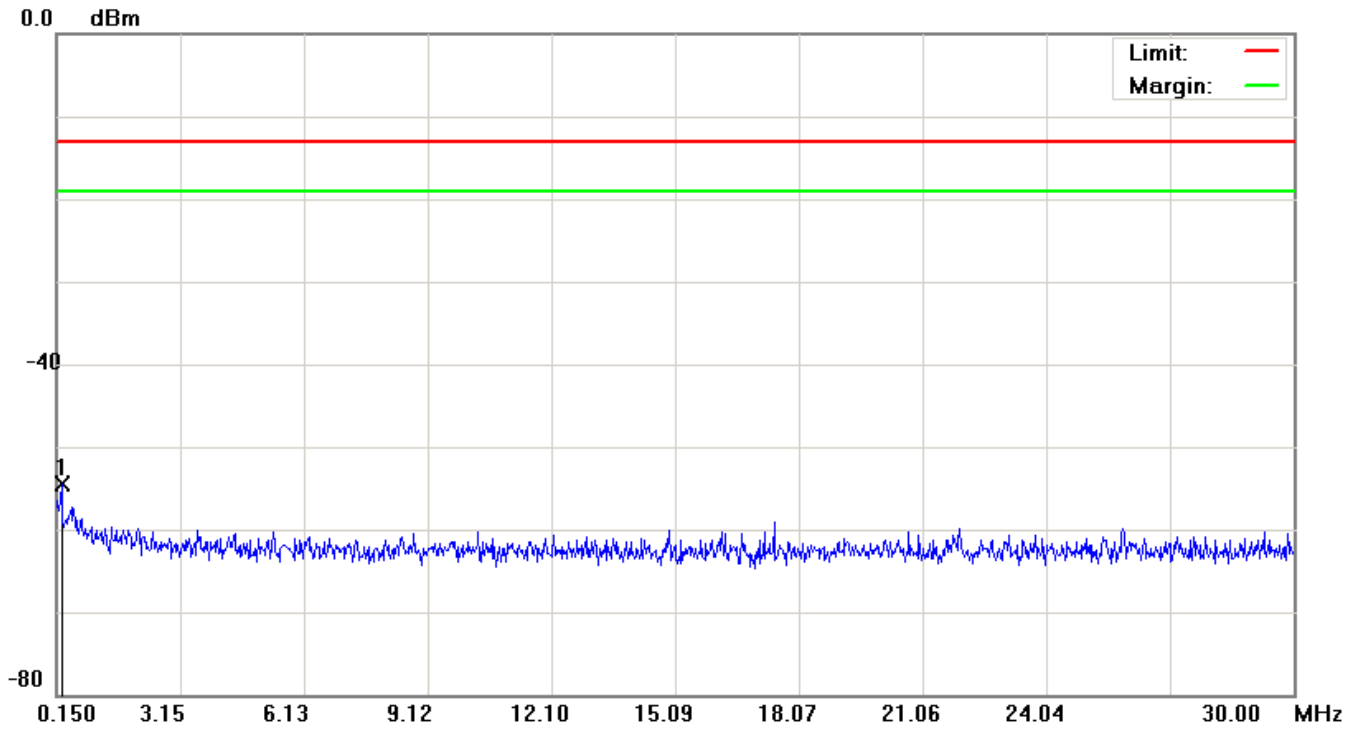
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9538)

Data :#2

Date: 2013/6/21

Time: 下午 05:06:58



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.2694	-67.09	12.56	-54.53	-13.00	-41.53	peak		Comment

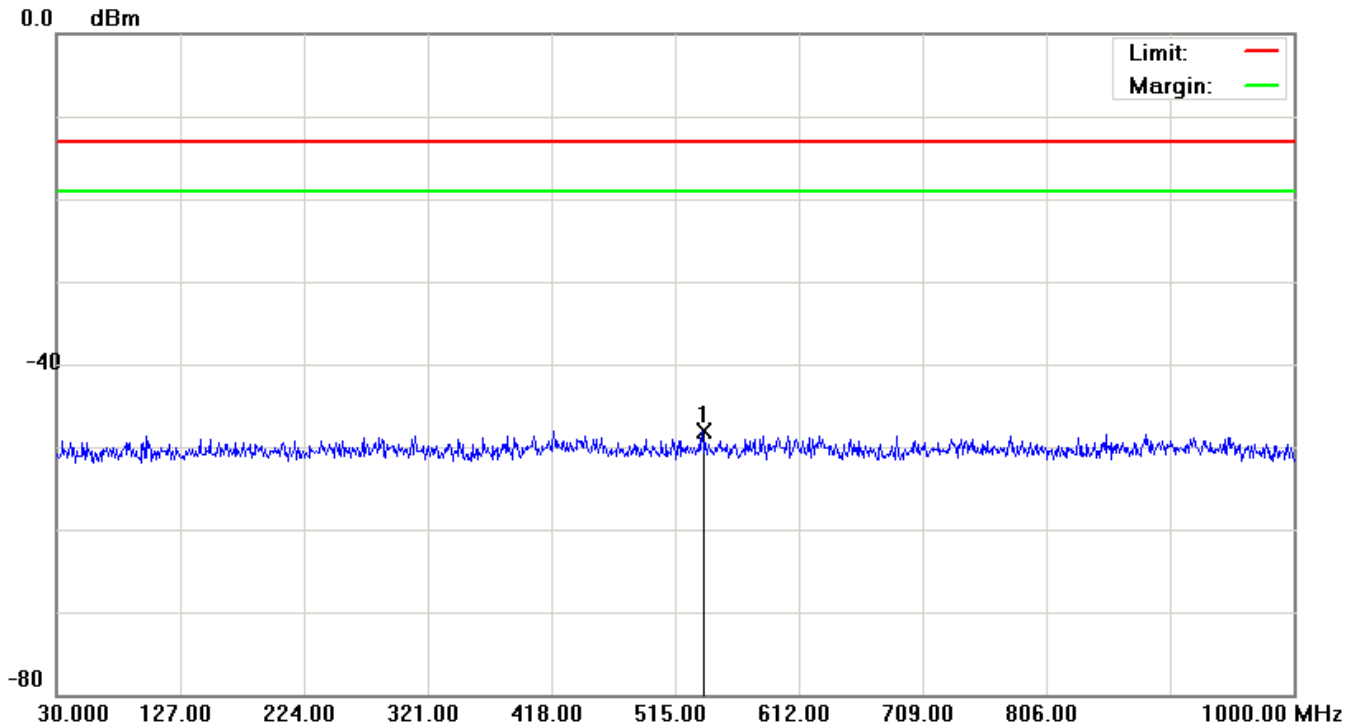
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9538)

Data :#3

Date: 2013/6/21

Time: 下午 05:07:22



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

Mode: WCDMA Band II

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	536.8250	-61.35	13.18	-48.17	-13.00	-35.17	peak		Comment

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

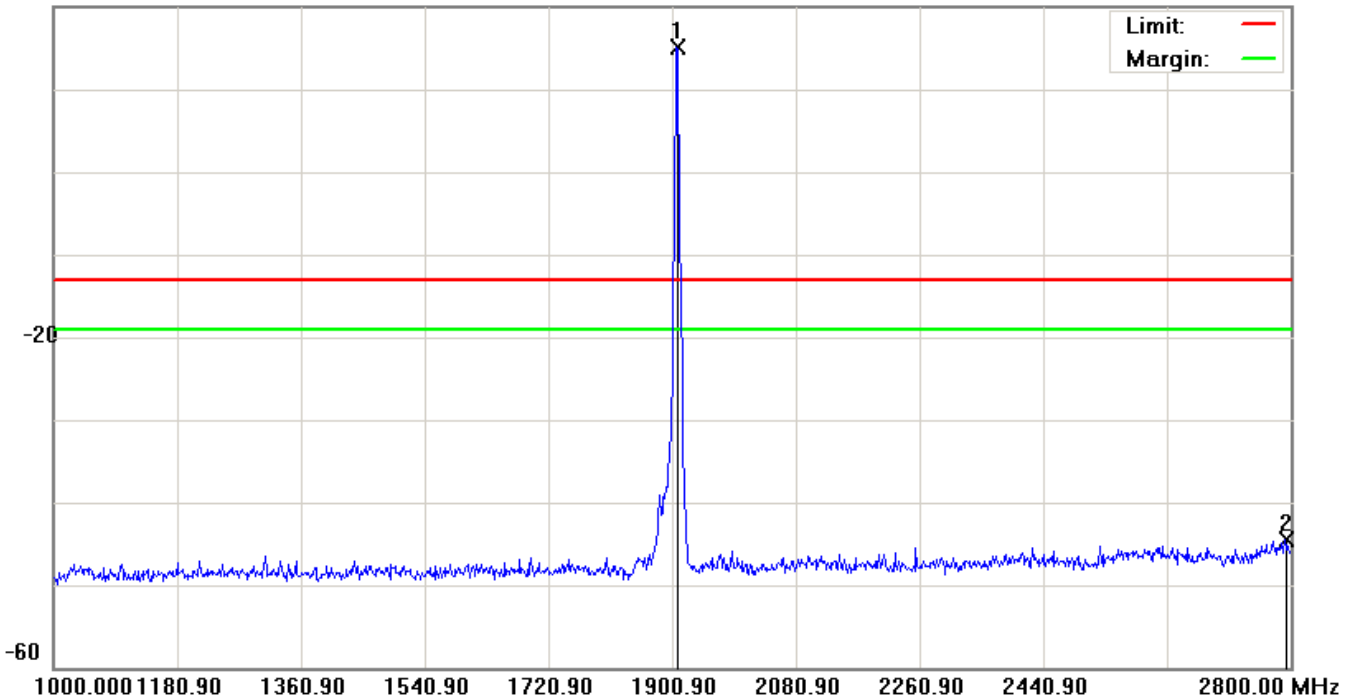
File :CNN0403(CH9538)

Data :#4

Date: 2013/6/21

Time: 下午 05:27:32

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	1906.300	9.07	6.05	15.12	-13.00	28.12	peak		Tx
2		2791.900	-50.49	5.90	-44.59	-13.00	-31.59	peak		

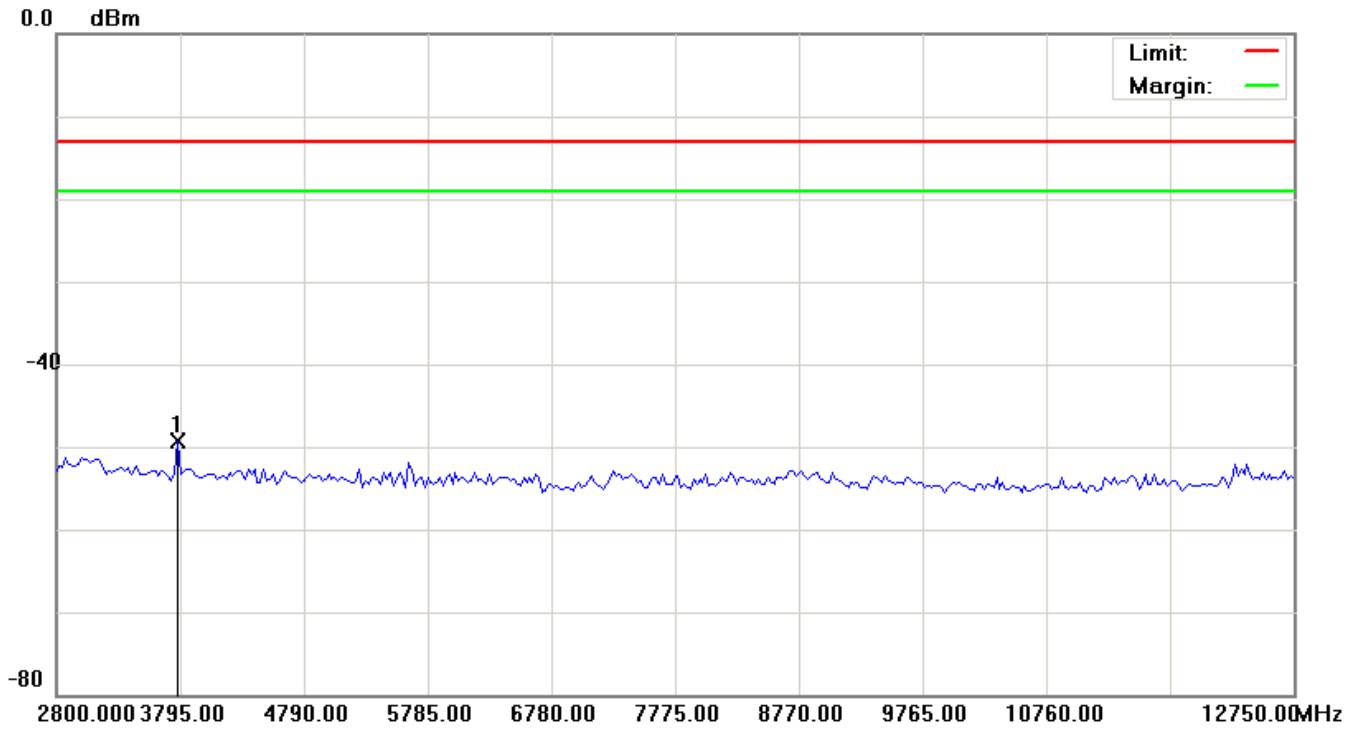
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9538)

Data :#5

Date: 2013/6/21

Time: 下午 05:50:21



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	3770.125	-54.31	4.93	-49.38	-13.00	-36.38	peak		

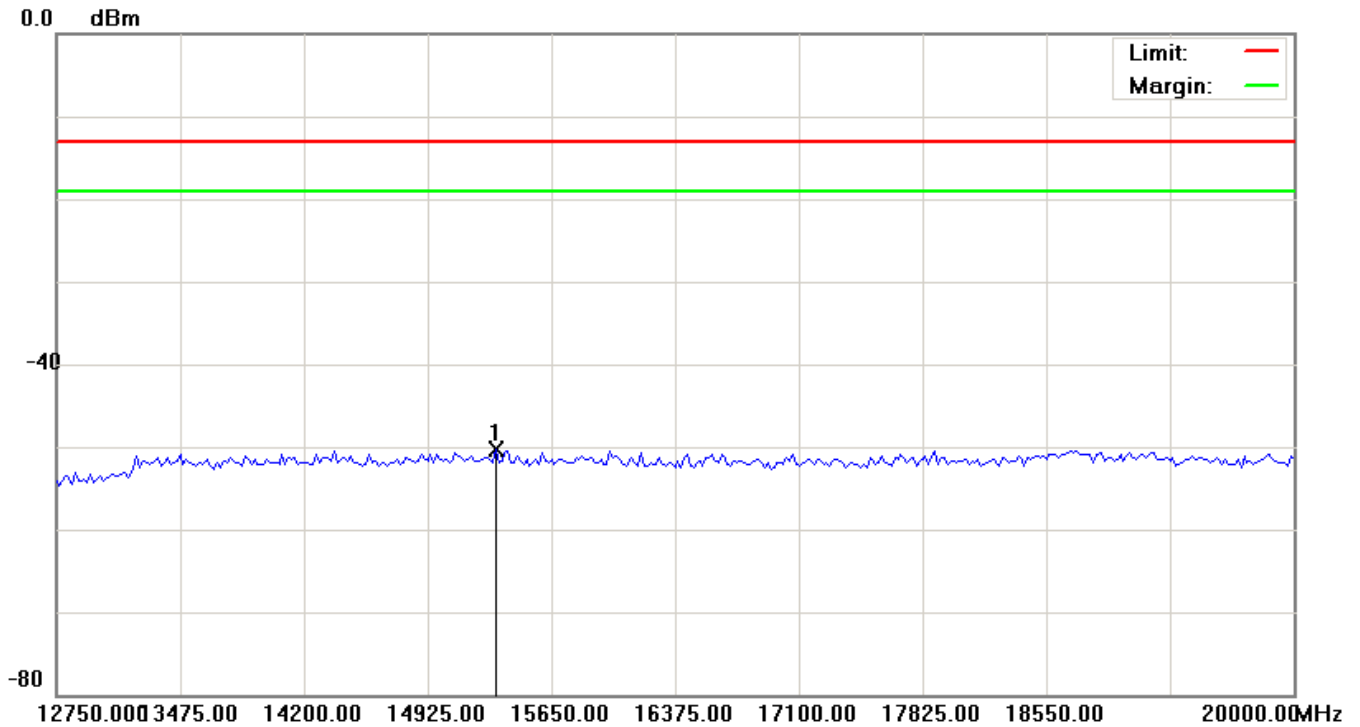
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH9538)

Data :#6

Date: 2013/6/21

Time: 下午 05:50:40



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band II

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	*	15323.750	-56.36	6.10	-50.26	-13.00	-37.26	peak		

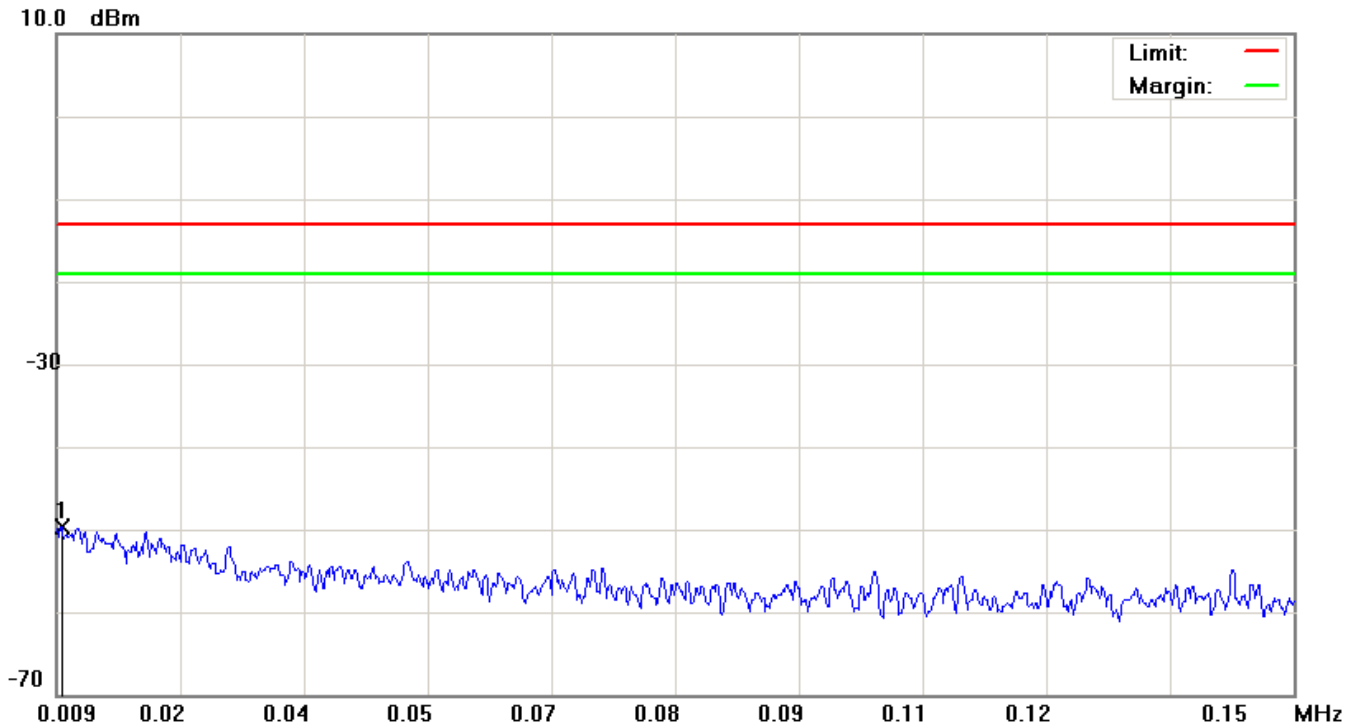
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4132)

Data :#1

Date: 2013/6/22

Time: 上午 08:47:06



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0096	-80.22	30.58	-49.64	-13.00	-36.64	peak		Comment

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

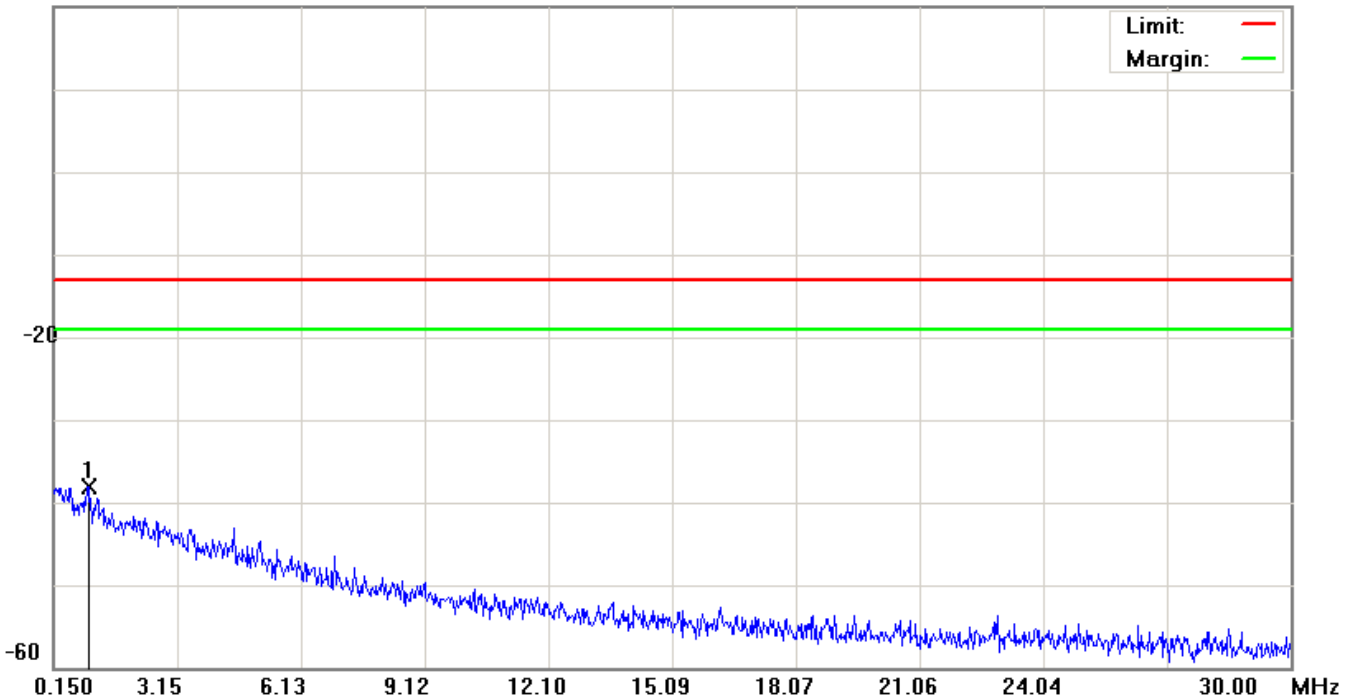
File :CNN0403(CH4132)

Data :#2

Date: 2013/6/22

Time: 上午 08:47:30

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.9858	-70.11	31.98	-38.13	-13.00	-25.13	peak		Comment

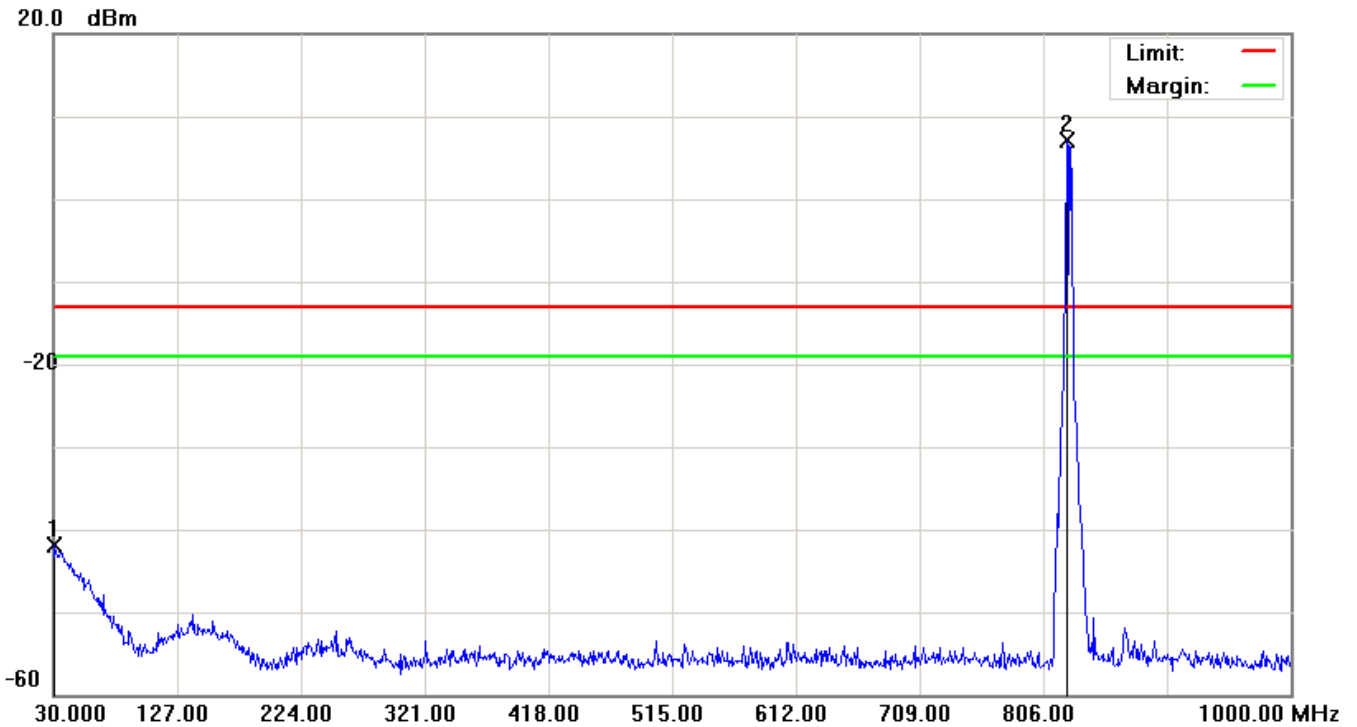
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4132)

Data :#3

Date: 2013/6/22

Time: 上午 08:47:54



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

Mode: WCDMA Band V

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		30.9700	-59.04	17.10	-41.94	-13.00	-28.94	peak		
2	*	824.4300	3.18	3.84	7.02	-13.00	20.02	peak		Tx

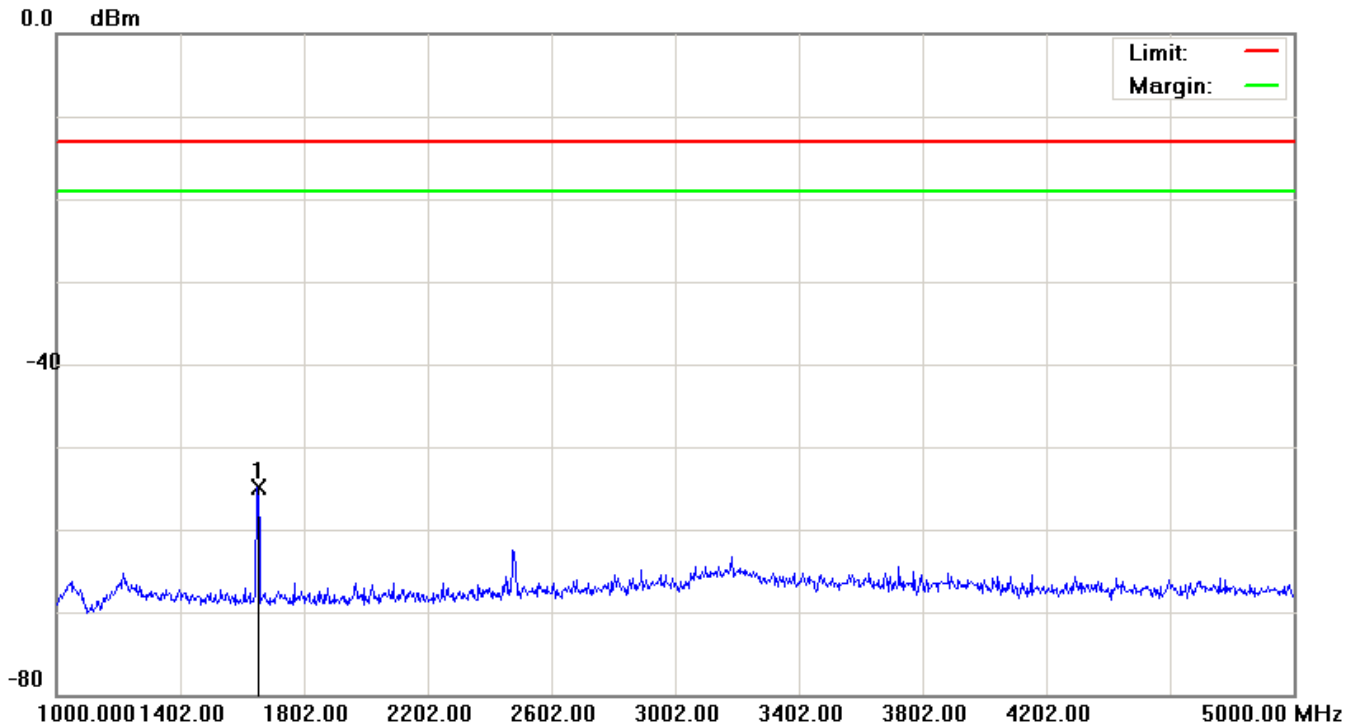
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4132)

Data :#4

Date: 2013/6/22

Time: 上午 09:17:43



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band V

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	*	1650.000	-59.39	4.45	-54.94	-13.00	-41.94	peak		

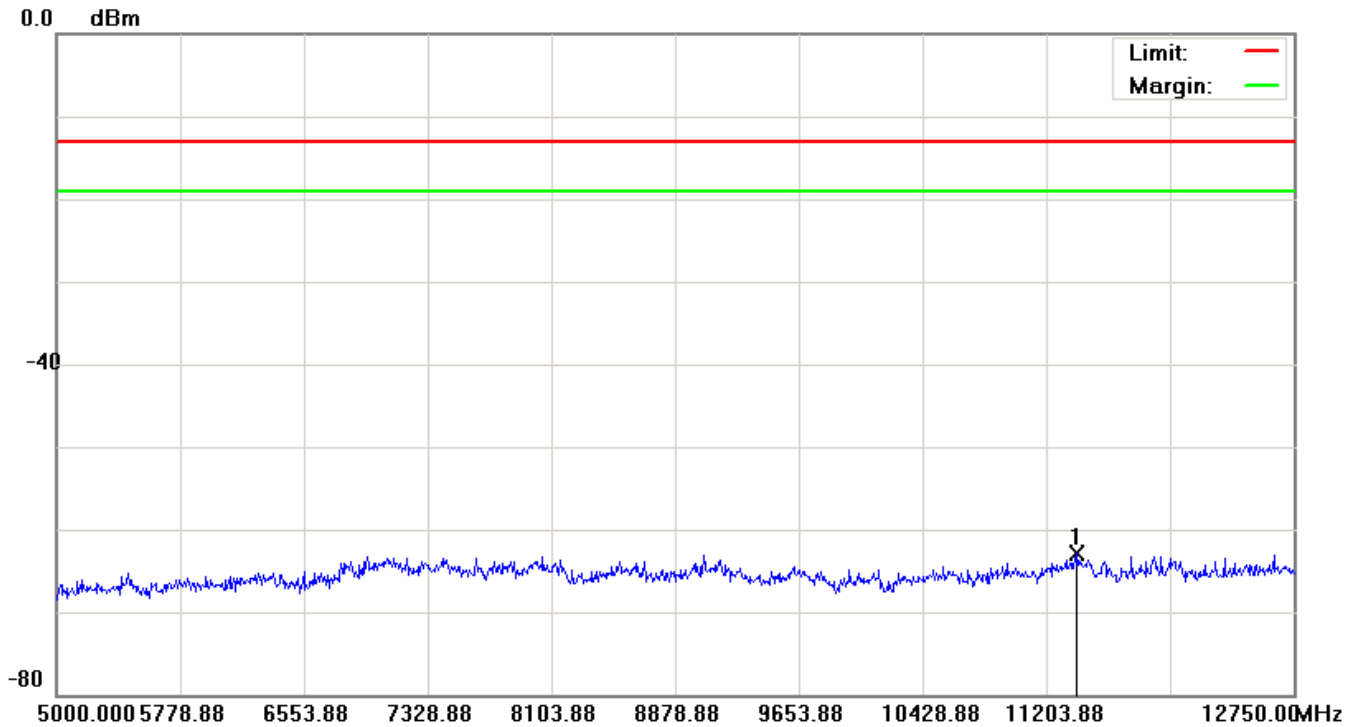
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4132)

Data :#5

Date: 2013/6/22

Time: 上午 09:18:06



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band V

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	*	11393.750	-68.52	5.53	-62.99	-13.00	-49.99	peak		

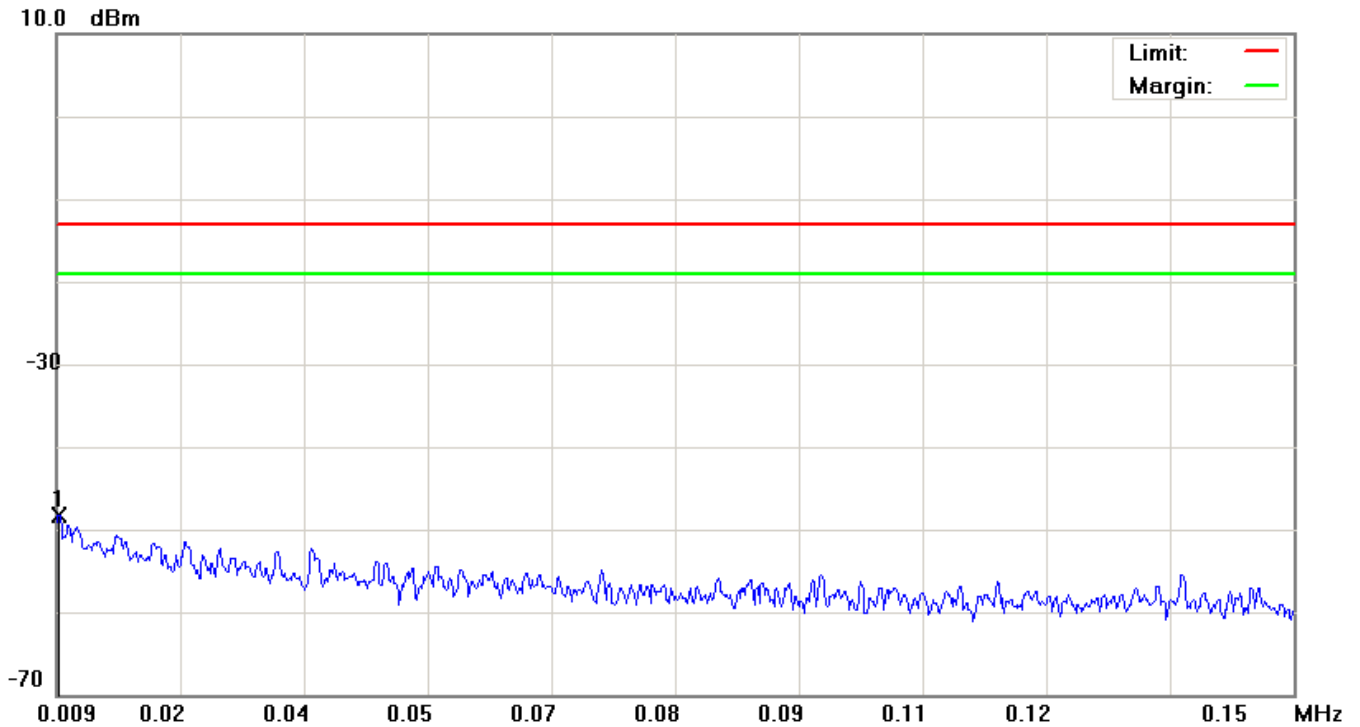
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4183)

Data :#1

Date: 2013/6/22

Time: 上午 08:51:07



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0093	-78.84	30.58	-48.26	-13.00	-35.26	peak		Comment

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

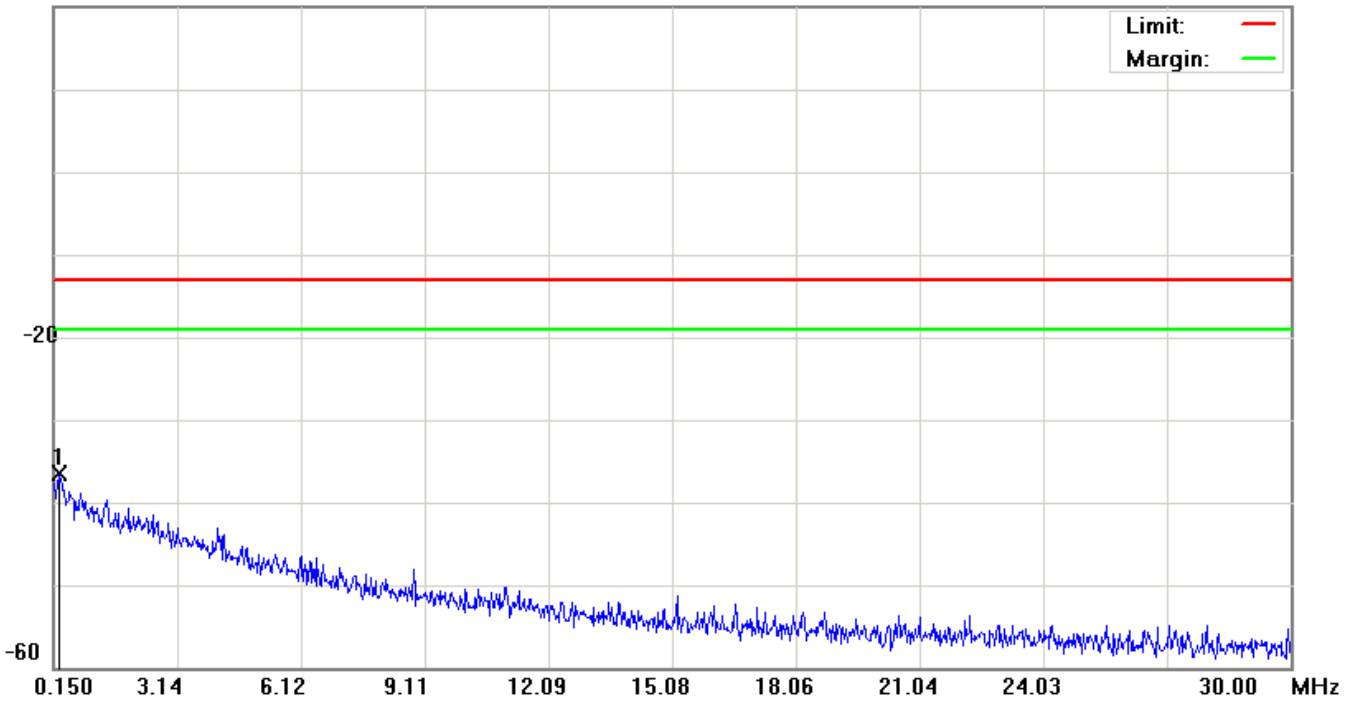
File :CNN0403(CH4183)

Data :#2

Date: 2013/6/22

Time: 上午 08:51:31

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.2993	-68.27	31.73	-36.54	-13.00	-23.54	peak		Comment

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

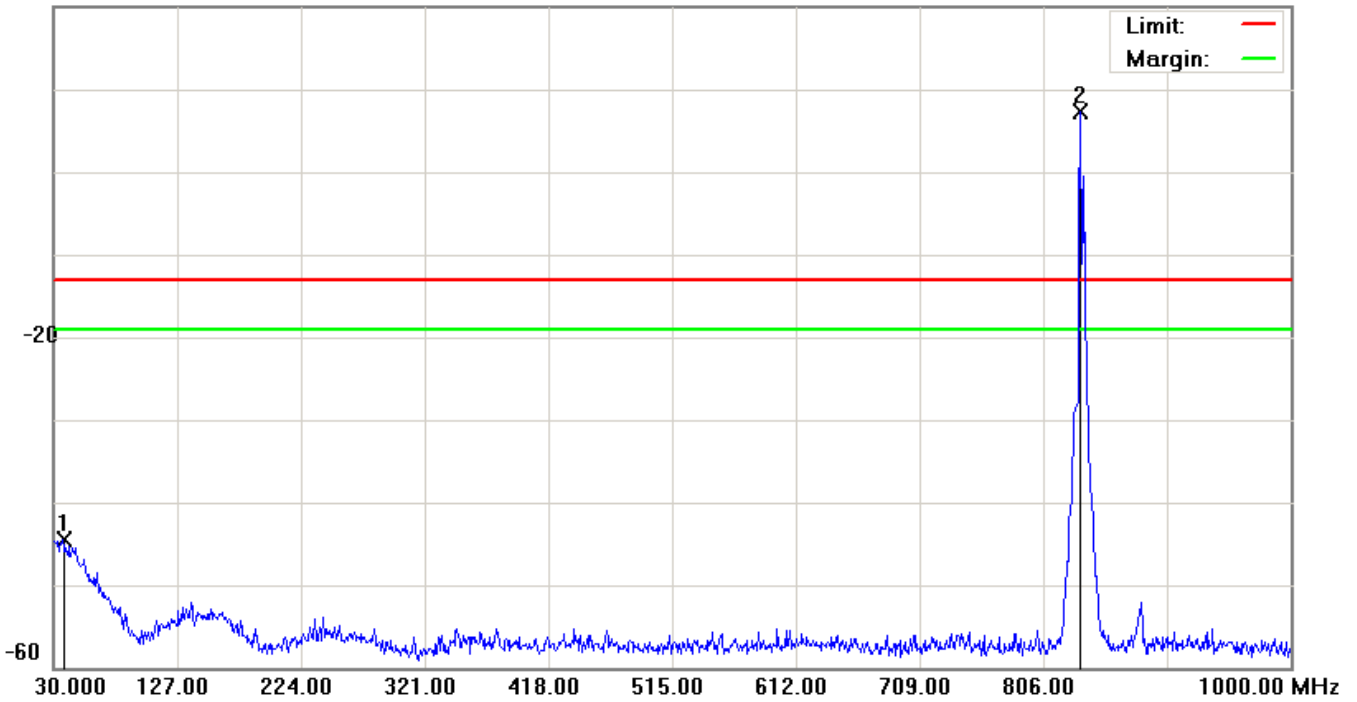
File :CNN0403(CH4183)

Data :#3

Date: 2013/6/22

Time: 上午 08:51:55

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

Mode: WCDMA Band V

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		37.2750	-60.86	16.39	-44.47	-13.00	-31.47	peak		
2	*	835.1000	3.30	3.95	7.25	-13.00	20.25	peak		Tx

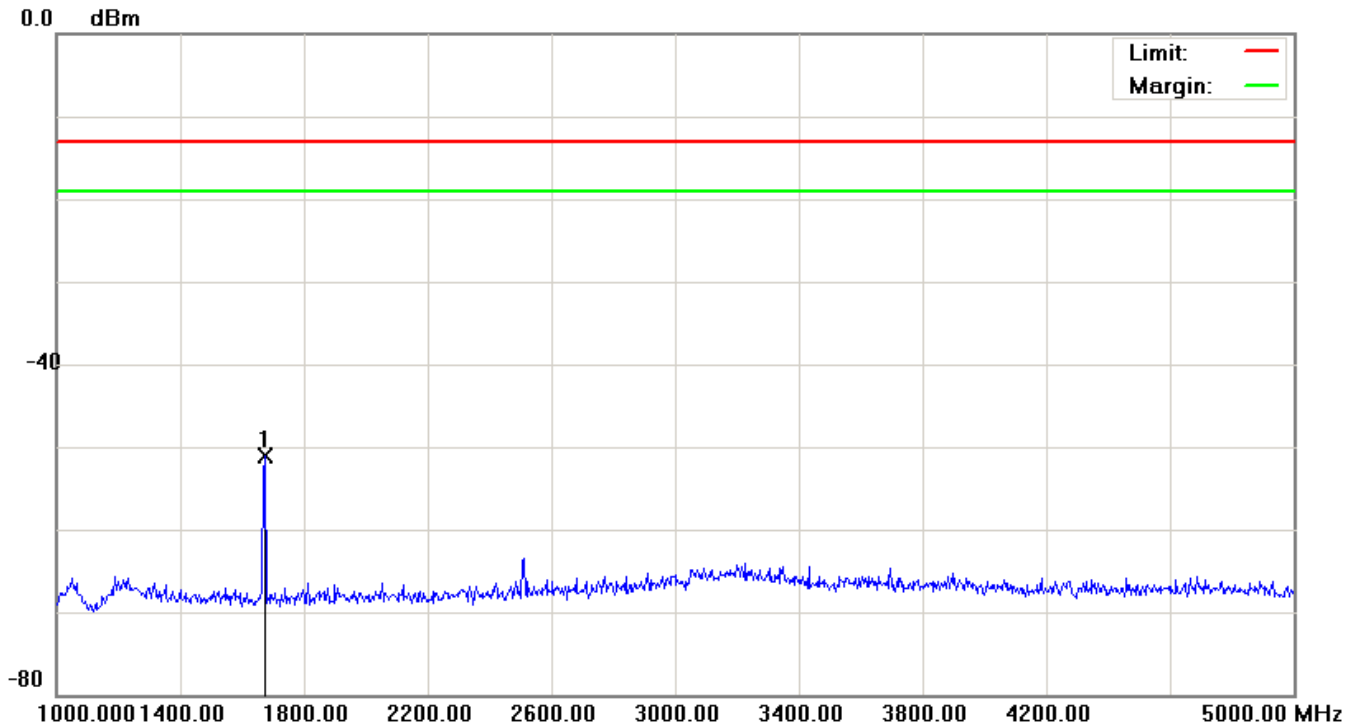
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4183)

Data :#4

Date: 2013/6/22

Time: 上午 09:18:46



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band V

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	*	1676.000	-55.48	4.47	-51.01	-13.00	-38.01	peak		

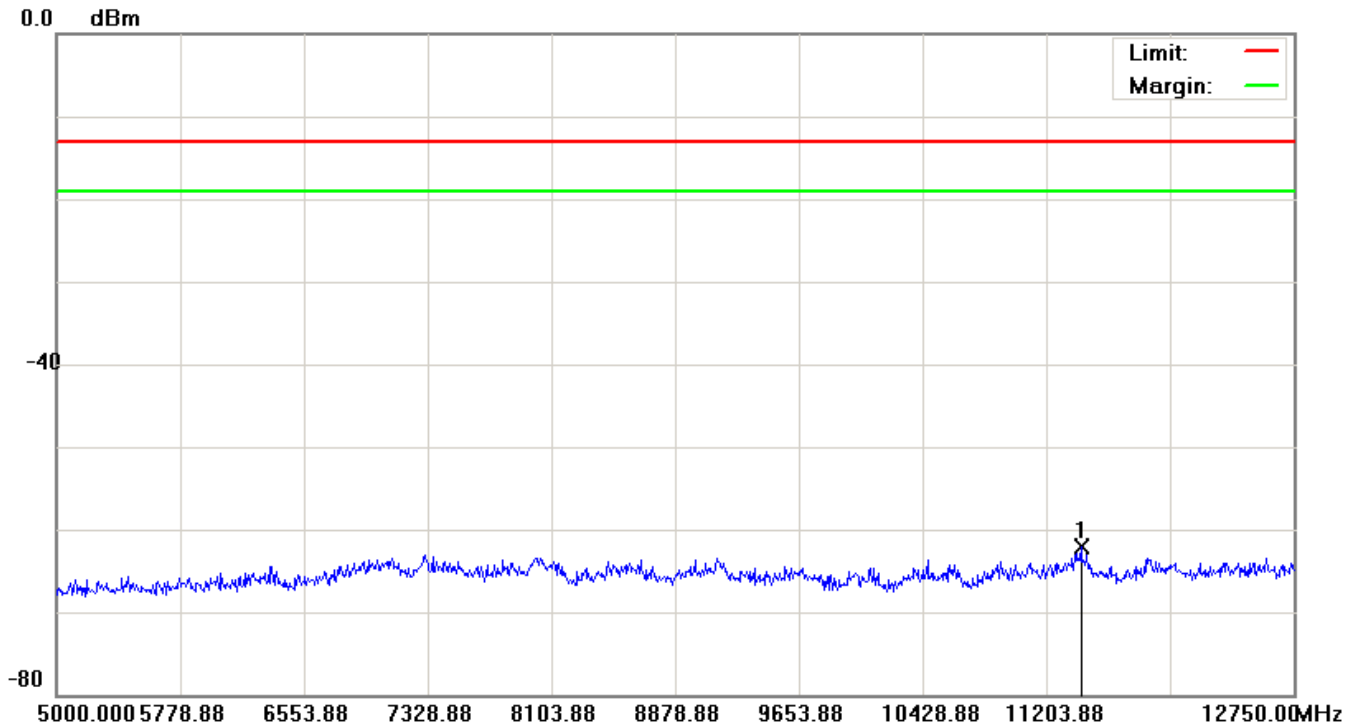
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4183)

Data :#5

Date: 2013/6/22

Time: 上午 09:19:09



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band V

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	*	11420.875	-67.74	5.57	-62.17	-13.00	-49.17	peak		

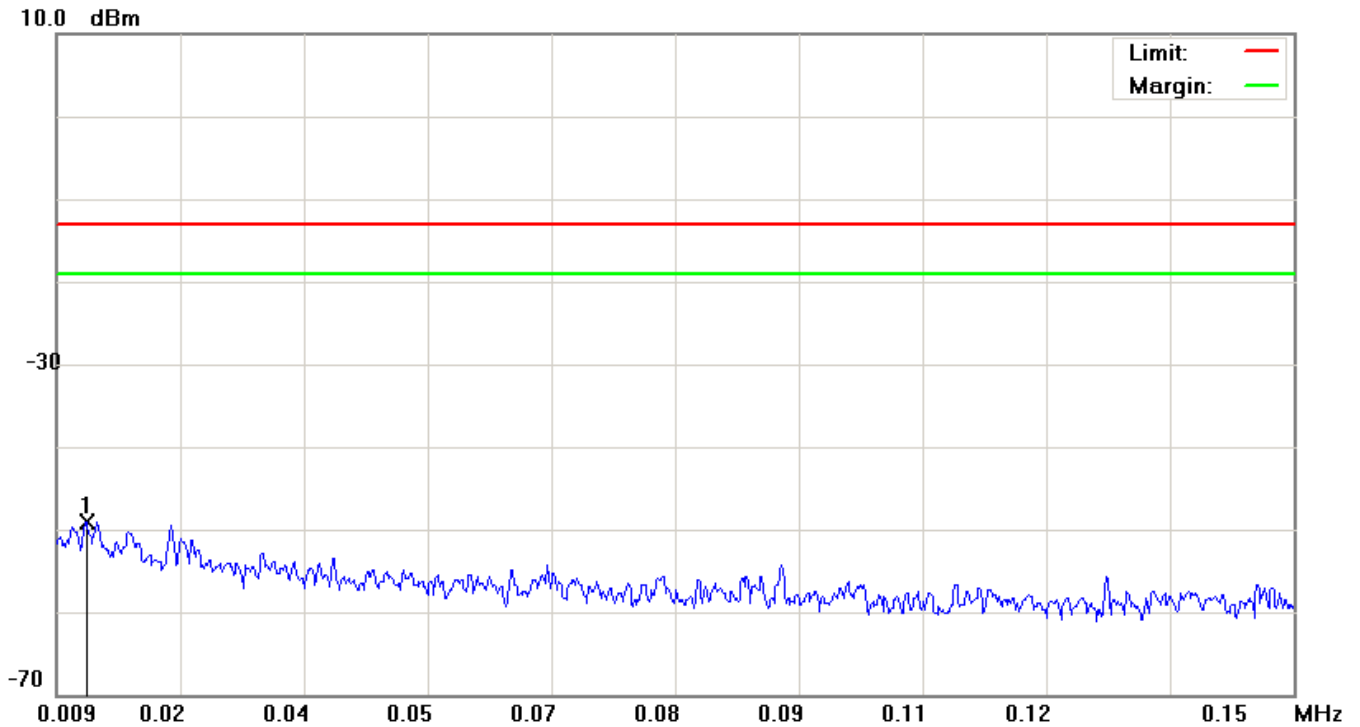
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4233)

Data :#1

Date: 2013/6/22

Time: 上午 08:55:02



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1 KHz VBW: 3 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.0123	-79.62	30.57	-49.05	-13.00	-36.05	peak		Comment

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

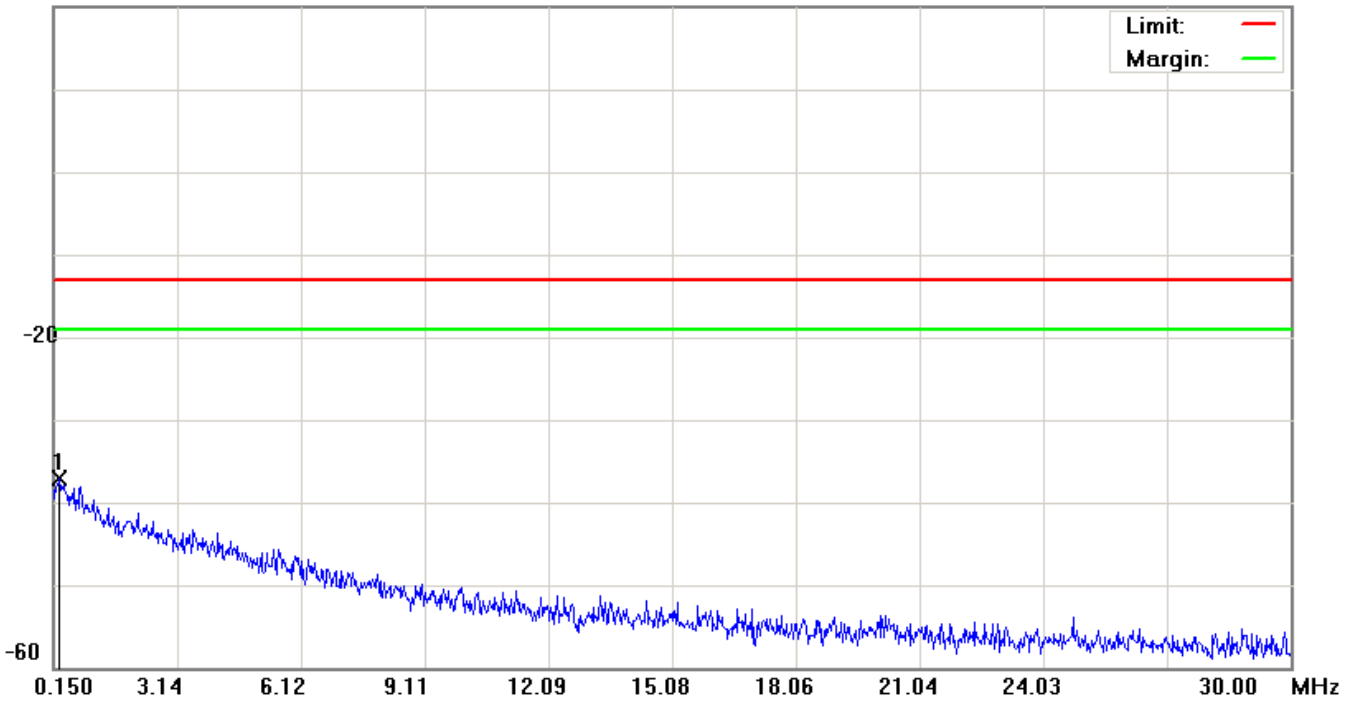
File :CNN0403(CH4233)

Data :#2

Date: 2013/6/22

Time: 上午 08:55:26

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 10 KHz VBW: 30 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	0.2993	-68.75	31.73	-37.02	-13.00	-24.02	peak		Comment

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

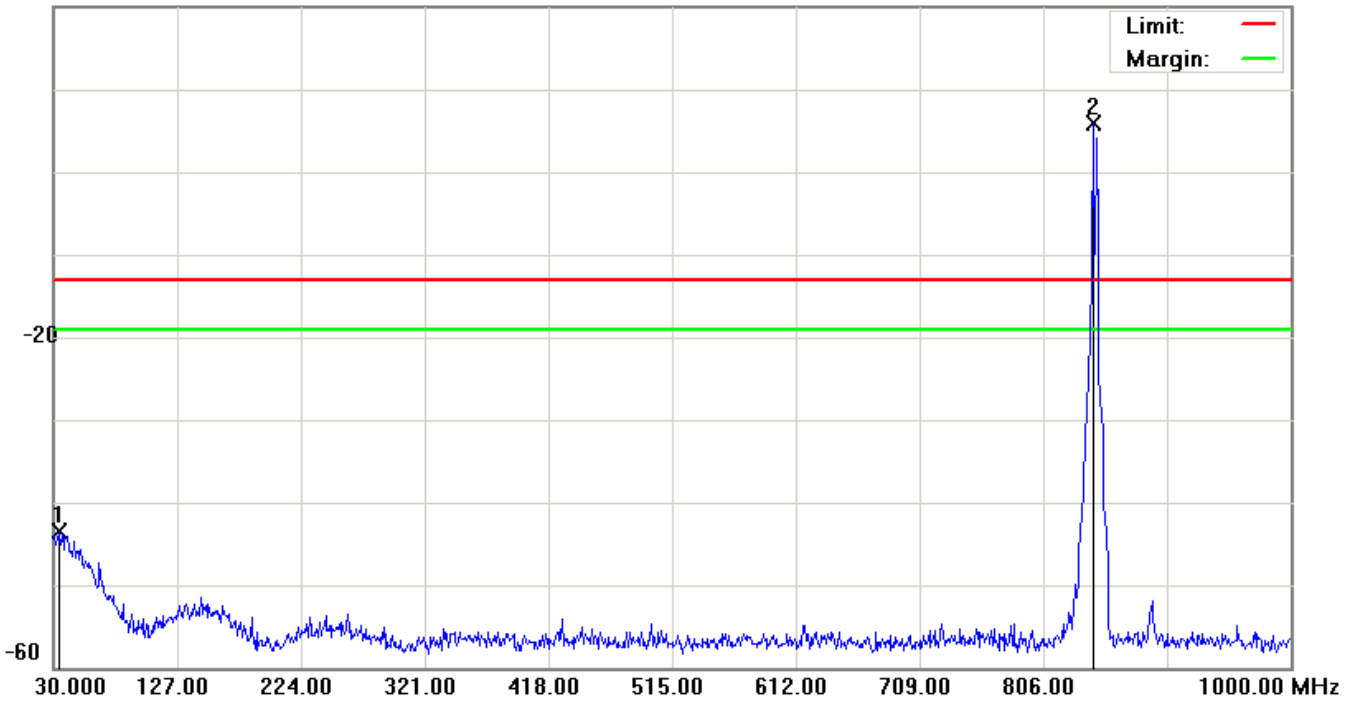
File :CNN0403(CH4233)

Data :#3

Date: 2013/6/22

Time: 上午 08:55:50

20.0 dBm



Site: : RF Conducted

Polarization: **Conducted po**

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 100 KHz VBW: 300 KHz

M/N: CNN0403

Mode: WCDMA Band V

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		34.8500	-60.18	16.66	-43.52	-13.00	-30.52	peak		
2	*	845.2850	1.92	3.99	5.91	-13.00	18.91	peak		Tx

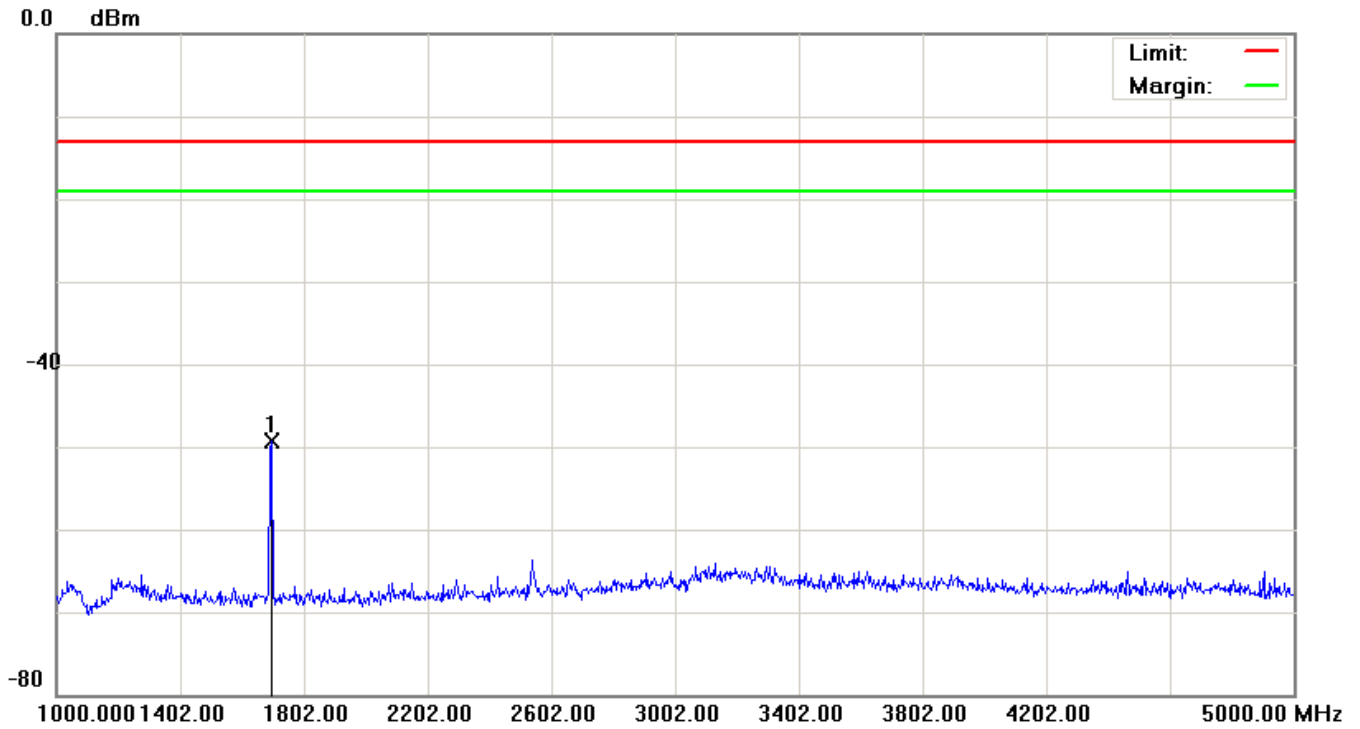
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4233)

Data :#4

Date: 2013/6/22

Time: 上午 09:19:42



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band V

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree
1	*	1696.000	-53.73	4.48	-49.25	-13.00	-36.25	peak		Comment

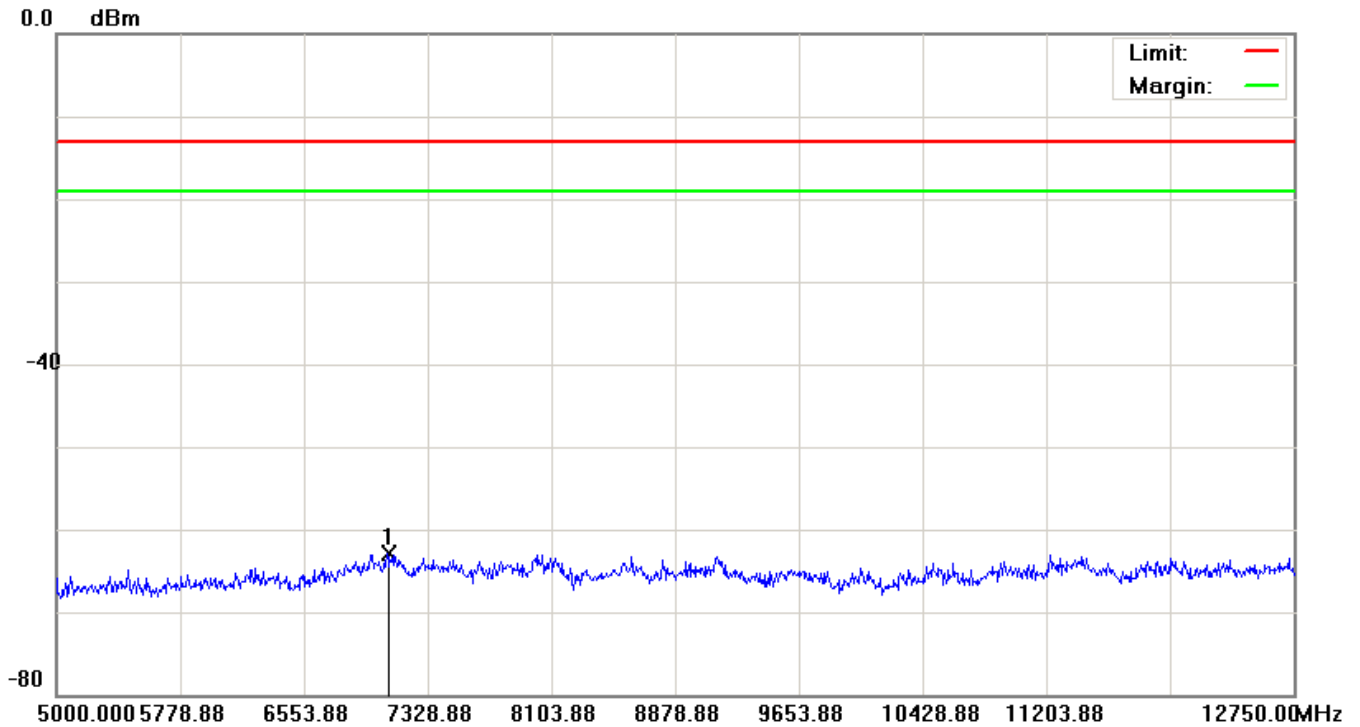
*:Maximum data x:Over limit !:over margin

File :CNN0403(CH4233)

Data :#5

Date: 2013/6/22

Time: 上午 09:20:05



Site: : RF Conducted

Polarization: Conducted po

Temperature: 23 °C

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

Power: AC 120V/60Hz

Humidity: 55.2 %

EUT: Wireless Modem

Distance:

RBW: 1000 KHz VBW: 3000 KHz

M/N: CNN0403

Mode: WCDMA Band V

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	*	7073.125	-67.75	4.94	-62.81	-13.00	-49.81	peak		

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

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.

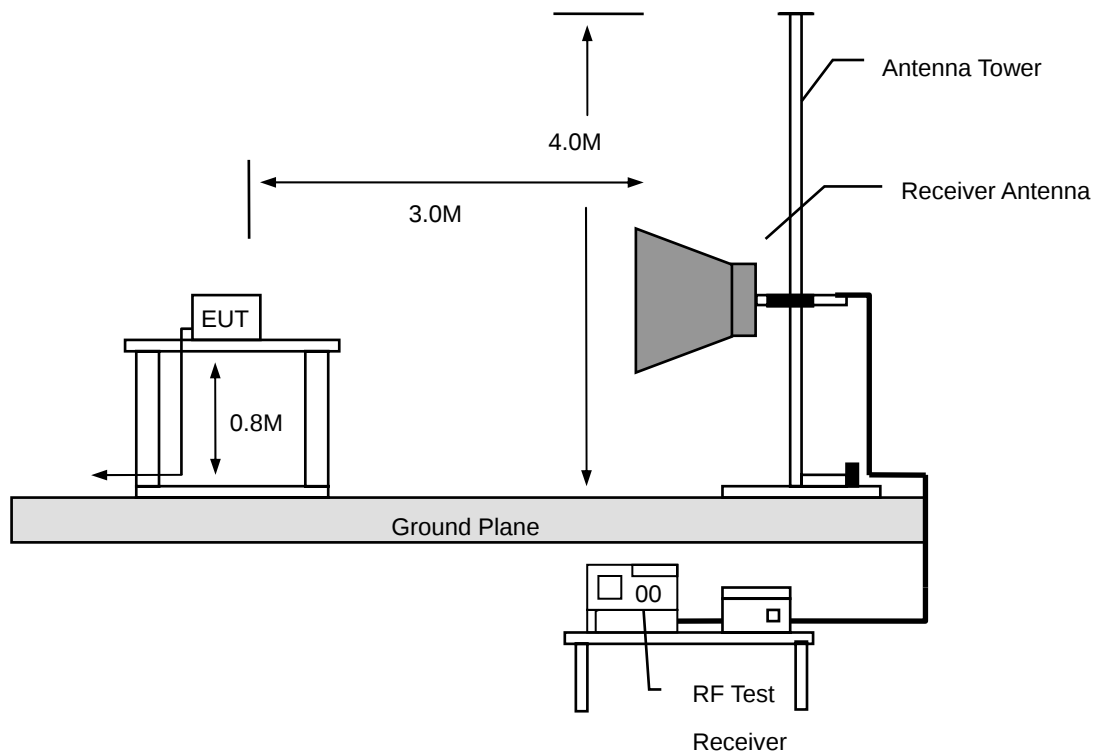
7.2. Test Instruments

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	01/21/2013	(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	06/29/2012	(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	08/28/2012	(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:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	06/24/2013
Frequency:	824.2 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
230.5000	-60.57	-0.98	-61.55	-13.00	-48.55	peak	H
260.0000	-57.78	-4.34	-62.12	-13.00	-49.12	peak	H
370.0000	-75.17	0.41	-74.76	-13.00	-61.76	peak	H
536.0000	-76.18	8.13	-68.05	-13.00	-55.05	peak	H
594.0000	-69.91	7.85	-62.06	-13.00	-49.06	peak	H
709.0000	-67.95	7.20	-60.75	-13.00	-47.75	peak	H
3328.000	-71.34	18.62	-52.72	-13.00	-39.72	peak	H
4672.000	-72.39	22.01	-50.38	-13.00	-37.38	peak	H
6508.000	-72.97	30.51	-42.46	-13.00	-29.46	peak	H
173.0000	-58.80	2.89	-55.91	-13.00	-42.91	peak	V
230.5000	-58.22	2.10	-56.12	-13.00	-43.12	peak	V
390.0000	-71.16	1.49	-69.67	-13.00	-56.67	peak	V
520.0000	-73.05	3.11	-69.94	-13.00	-56.94	peak	V
594.0000	-60.50	7.00	-53.50	-13.00	-40.50	peak	V
709.0000	-55.43	10.49	-44.94	-13.00	-31.94	peak	V
3028.000	-70.69	20.39	-50.30	-13.00	-37.30	peak	V
4660.000	-72.23	26.49	-45.74	-13.00	-32.74	peak	V
7012.000	-73.63	30.58	-43.05	-13.00	-30.05	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	06/24/2013
Frequency:	836.6 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
160.5000	-77.44	1.05	-76.39	-13.00	-63.39	peak	H
260.0000	-57.70	-4.34	-62.04	-13.00	-49.04	peak	H
360.0000	-75.29	0.05	-75.24	-13.00	-62.24	peak	H
520.0000	-79.06	7.65	-71.41	-13.00	-58.41	peak	H
593.5000	-69.51	7.82	-61.69	-13.00	-48.69	peak	H
709.0000	-67.55	7.20	-60.35	-13.00	-47.35	peak	H
3184.000	-69.69	18.23	-51.46	-13.00	-38.46	peak	H
4624.000	-71.41	21.75	-49.66	-13.00	-36.66	peak	H
6700.000	-72.96	31.34	-41.62	-13.00	-28.62	peak	H
115.0000	-59.28	2.67	-56.61	-13.00	-43.61	peak	V
173.0000	-58.44	2.89	-55.55	-13.00	-42.55	peak	V
230.5000	-58.72	2.10	-56.62	-13.00	-43.62	peak	V
390.0000	-71.64	1.49	-70.15	-13.00	-57.15	peak	V
594.0000	-60.34	7.00	-53.34	-13.00	-40.34	peak	V
709.0000	-55.33	10.49	-44.84	-13.00	-31.84	peak	V
3040.000	-71.24	20.46	-50.78	-13.00	-37.78	peak	V
4612.000	-72.19	26.40	-45.79	-13.00	-32.79	peak	V
6796.000	-72.74	30.02	-42.72	-13.00	-29.72	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	1	Date:	06/24/2013
Frequency:	848.8 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
230.5000	-60.44	-0.98	-61.42	-13.00	-48.42	peak	H
260.0000	-57.52	-4.34	-61.86	-13.00	-48.86	peak	H
370.0000	-75.31	0.41	-74.90	-13.00	-61.90	peak	H
536.5000	-75.27	8.17	-67.10	-13.00	-54.10	peak	H
594.0000	-69.86	7.85	-62.01	-13.00	-49.01	peak	H
709.0000	-67.73	7.20	-60.53	-13.00	-47.53	peak	H
3100.000	-69.60	18.01	-51.59	-13.00	-38.59	peak	H
4612.000	-73.00	21.68	-51.32	-13.00	-38.32	peak	H
6688.000	-71.71	31.29	-40.42	-13.00	-27.42	peak	H
115.0000	-59.65	2.67	-56.98	-13.00	-43.98	peak	V
230.5000	-58.10	2.10	-56.00	-13.00	-43.00	peak	V
390.0000	-71.88	1.49	-70.39	-13.00	-57.39	peak	V
536.5000	-70.12	4.07	-66.05	-13.00	-53.05	peak	V
651.5000	-57.03	9.07	-47.96	-13.00	-34.96	peak	V
709.0000	-55.24	10.49	-44.75	-13.00	-31.75	peak	V
3124.000	-70.24	20.95	-49.29	-13.00	-36.29	peak	V
4564.000	-71.35	26.32	-45.03	-13.00	-32.03	peak	V
6964.000	-72.72	30.47	-42.25	-13.00	-29.25	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	06/24/2013
Frequency:	1850.2 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
215.0000	-75.53	0.06	-75.47	-13.00	-62.47	peak	H
260.0000	-58.19	-4.34	-62.53	-13.00	-49.53	peak	H
370.0000	-75.96	0.41	-75.55	-13.00	-62.55	peak	H
530.5000	-80.38	7.96	-72.42	-13.00	-59.42	peak	H
686.0000	-79.97	7.00	-72.97	-13.00	-59.97	peak	H
870.5000	-81.19	13.13	-68.06	-13.00	-55.06	peak	H
3040.000	-69.58	17.85	-51.73	-13.00	-38.73	peak	H
4672.000	-72.52	22.01	-50.51	-13.00	-37.51	peak	H
6652.000	-73.77	31.13	-42.64	-13.00	-29.64	peak	H
151.5000	-68.37	8.59	-59.78	-13.00	-46.78	peak	V
260.0000	-68.40	-1.56	-69.96	-13.00	-56.96	peak	V
390.0000	-74.64	1.49	-73.15	-13.00	-60.15	peak	V
540.0000	-76.55	4.26	-72.29	-13.00	-59.29	peak	V
644.0000	-79.44	8.77	-70.67	-13.00	-57.67	peak	V
858.0000	-80.29	11.59	-68.70	-13.00	-55.70	peak	V
3100.000	-68.07	20.81	-47.26	-13.00	-34.26	peak	V
4780.000	-71.59	26.70	-44.89	-13.00	-31.89	peak	V
6916.000	-71.38	30.33	-41.05	-13.00	-28.05	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	06/24/2013
Frequency:	1880.0 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
208.0000	-76.73	1.11	-75.62	-13.00	-62.62	peak	H
260.0000	-58.59	-4.34	-62.93	-13.00	-49.93	peak	H
370.0000	-75.16	0.41	-74.75	-13.00	-61.75	peak	H
526.5000	-79.70	7.86	-71.84	-13.00	-58.84	peak	H
670.5000	-79.84	7.10	-72.74	-13.00	-59.74	peak	H
866.5000	-81.42	13.08	-68.34	-13.00	-55.34	peak	H
3364.000	-71.11	18.72	-52.39	-13.00	-39.39	peak	H
4720.000	-73.08	22.27	-50.81	-13.00	-37.81	peak	H
6544.000	-71.30	30.66	-40.64	-13.00	-27.64	peak	H
152.0000	-68.26	8.82	-59.44	-13.00	-46.44	peak	V
260.0000	-66.74	-1.56	-68.30	-13.00	-55.30	peak	V
390.0000	-76.17	1.49	-74.68	-13.00	-61.68	peak	V
520.0000	-72.78	3.11	-69.67	-13.00	-56.67	peak	V
680.0000	-79.70	9.56	-70.14	-13.00	-57.14	peak	V
882.0000	-79.37	10.86	-68.51	-13.00	-55.51	peak	V
3136.000	-70.08	21.01	-49.07	-13.00	-36.07	peak	V
4720.000	-72.98	26.61	-46.37	-13.00	-33.37	peak	V
6964.000	-73.12	30.47	-42.65	-13.00	-29.65	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	2	Date:	06/24/2013
Frequency:	1909.8 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
160.0000	-77.03	1.45	-75.58	-13.00	-62.58	peak	H
260.0000	-59.31	-4.34	-63.65	-13.00	-50.65	peak	H
370.0000	-75.66	0.41	-75.25	-13.00	-62.25	peak	H
545.5000	-80.71	8.13	-72.58	-13.00	-59.58	peak	H
702.0000	-80.53	7.00	-73.53	-13.00	-60.53	peak	H
885.5000	-81.65	13.44	-68.21	-13.00	-55.21	peak	H
2980.000	-71.67	17.68	-53.99	-13.00	-40.99	peak	H
4564.000	-72.82	21.43	-51.39	-13.00	-38.39	peak	H
6640.000	-73.24	31.07	-42.17	-13.00	-29.17	peak	H
150.5000	-67.66	8.10	-59.56	-13.00	-46.56	peak	V
260.0000	-67.03	-1.56	-68.59	-13.00	-55.59	peak	V
370.0000	-76.21	2.03	-74.18	-13.00	-61.18	peak	V
520.0000	-74.20	3.11	-71.09	-13.00	-58.09	peak	V
680.0000	-78.70	9.56	-69.14	-13.00	-56.14	peak	V
820.5000	-80.36	11.28	-69.08	-13.00	-56.08	peak	V
3076.000	-71.78	20.66	-51.12	-13.00	-38.12	peak	V
4516.000	-73.25	26.23	-47.02	-13.00	-34.02	peak	V
6892.000	-73.70	30.27	-43.43	-13.00	-30.43	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	06/24/2013
Frequency:	1852.4 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
210.5000	-76.50	0.58	-75.92	-13.00	-62.92	peak	H
260.0000	-59.21	-4.34	-63.55	-13.00	-50.55	peak	H
370.0000	-75.24	0.41	-74.83	-13.00	-61.83	peak	H
530.5000	-80.26	7.96	-72.30	-13.00	-59.30	peak	H
698.5000	-81.05	6.95	-74.10	-13.00	-61.10	peak	H
909.5000	-81.28	14.38	-66.90	-13.00	-53.90	peak	H
3268.000	-71.34	18.46	-52.88	-13.00	-39.88	peak	H
4660.000	-72.83	21.94	-50.89	-13.00	-37.89	peak	H
6832.000	-73.87	31.93	-41.94	-13.00	-28.94	peak	H
150.5000	-67.97	8.10	-59.87	-13.00	-46.87	peak	V
260.0000	-67.66	-1.56	-69.22	-13.00	-56.22	peak	V
390.0000	-74.89	1.49	-73.40	-13.00	-60.40	peak	V
540.0000	-77.08	4.26	-72.82	-13.00	-59.82	peak	V
709.0000	-80.75	10.49	-70.26	-13.00	-57.26	peak	V
943.5000	-82.08	12.68	-69.40	-13.00	-56.40	peak	V
2992.000	-71.47	20.17	-51.30	-13.00	-38.30	peak	V
4672.000	-72.79	26.52	-46.27	-13.00	-33.27	peak	V
6964.000	-72.61	30.47	-42.14	-13.00	-29.14	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	06/24/2013
Frequency:	1880.0 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
211.5000	-75.32	0.47	-74.85	-13.00	-61.85	peak	H
260.0000	-59.88	-4.34	-64.22	-13.00	-51.22	peak	H
370.0000	-76.11	0.41	-75.70	-13.00	-62.70	peak	H
528.0000	-80.79	7.89	-72.90	-13.00	-59.90	peak	H
741.0000	-80.64	8.24	-72.40	-13.00	-59.40	peak	H
918.5000	-81.93	14.69	-67.24	-13.00	-54.24	peak	H
2908.000	-72.57	17.51	-55.06	-13.00	-42.06	peak	H
4624.000	-73.31	21.75	-51.56	-13.00	-38.56	peak	H
6868.000	-73.17	32.08	-41.09	-13.00	-28.09	peak	H
152.0000	-68.44	8.82	-59.62	-13.00	-46.62	peak	V
260.0000	-67.38	-1.56	-68.94	-13.00	-55.94	peak	V
390.0000	-74.14	1.49	-72.65	-13.00	-59.65	peak	V
520.0000	-73.65	3.11	-70.54	-13.00	-57.54	peak	V
713.5000	-79.88	10.64	-69.24	-13.00	-56.24	peak	V
861.0000	-81.44	11.57	-69.87	-13.00	-56.87	peak	V
3172.000	-70.16	21.21	-48.95	-13.00	-35.95	peak	V
4576.000	-69.92	26.34	-43.58	-13.00	-30.58	peak	V
6736.000	-73.87	29.86	-44.01	-13.00	-31.01	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	5	Date:	06/24/2013
Frequency:	1907.6 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
156.0000	-77.03	0.18	-76.85	-13.00	-63.85	peak	H
260.0000	-59.42	-4.34	-63.76	-13.00	-50.76	peak	H
370.0000	-75.77	0.41	-75.36	-13.00	-62.36	peak	H
549.0000	-79.01	8.06	-70.95	-13.00	-57.95	peak	H
737.0000	-81.09	8.09	-73.00	-13.00	-60.00	peak	H
925.5000	-81.42	14.77	-66.65	-13.00	-53.65	peak	H
3028.000	-71.85	17.81	-54.04	-13.00	-41.04	peak	H
4660.000	-73.73	21.94	-51.79	-13.00	-38.79	peak	H
6820.000	-74.91	31.88	-43.03	-13.00	-30.03	peak	H
150.5000	-67.71	8.10	-59.61	-13.00	-46.61	peak	V
260.0000	-68.65	-1.56	-70.21	-13.00	-57.21	peak	V
390.0000	-73.45	1.49	-71.96	-13.00	-58.96	peak	V
520.0000	-72.63	3.11	-69.52	-13.00	-56.52	peak	V
680.0000	-78.81	9.56	-69.25	-13.00	-56.25	peak	V
790.0000	-80.03	11.58	-68.45	-13.00	-55.45	peak	V
3052.000	-69.95	20.53	-49.42	-13.00	-36.42	peak	V
4672.000	-72.86	26.52	-46.34	-13.00	-33.34	peak	V
6820.000	-74.22	30.10	-44.12	-13.00	-31.12	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	06/24/2013
Frequency:	826.4 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
230.5000	-60.26	-0.98	-61.24	-13.00	-48.24	peak	H
260.0000	-59.34	-4.34	-63.68	-13.00	-50.68	peak	H
370.0000	-75.68	0.41	-75.27	-13.00	-62.27	peak	H
564.0000	-71.14	7.78	-63.36	-13.00	-50.36	peak	H
594.0000	-69.70	7.85	-61.85	-13.00	-48.85	peak	H
709.0000	-74.21	7.20	-67.01	-13.00	-54.01	peak	H
3184.000	-69.74	18.23	-51.51	-13.00	-38.51	peak	H
4636.000	-72.78	21.80	-50.98	-13.00	-37.98	peak	H
6784.000	-74.17	31.71	-42.46	-13.00	-29.46	peak	H
173.0000	-57.94	2.89	-55.05	-13.00	-42.05	peak	V
230.5000	-58.28	2.10	-56.18	-13.00	-43.18	peak	V
390.0000	-73.79	1.49	-72.30	-13.00	-59.30	peak	V
536.0000	-70.56	4.03	-66.53	-13.00	-53.53	peak	V
651.5000	-56.70	9.07	-47.63	-13.00	-34.63	peak	V
709.0000	-58.58	10.49	-48.09	-13.00	-35.09	peak	V
3280.000	-71.98	21.83	-50.15	-13.00	-37.15	peak	V
4660.000	-72.71	26.49	-46.22	-13.00	-33.22	peak	V
7012.000	-72.51	30.58	-41.93	-13.00	-28.93	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	06/24/2013
Frequency:	836.6 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
230.5000	-66.06	-0.98	-67.04	-13.00	-54.04	peak	H
260.0000	-58.06	-4.34	-62.40	-13.00	-49.40	peak	H
288.0000	-66.96	-3.55	-70.51	-13.00	-57.51	peak	H
536.0000	-75.70	8.13	-67.57	-13.00	-54.57	peak	H
651.5000	-72.55	7.03	-65.52	-13.00	-52.52	peak	H
709.0000	-67.61	7.20	-60.41	-13.00	-47.41	peak	H
3172.000	-68.75	18.20	-50.55	-13.00	-37.55	peak	H
4612.000	-72.09	21.68	-50.41	-13.00	-37.41	peak	H
6784.000	-73.41	31.71	-41.70	-13.00	-28.70	peak	H
151.5000	-67.97	8.59	-59.38	-13.00	-46.38	peak	V
230.5000	-58.30	2.10	-56.20	-13.00	-43.20	peak	V
288.0000	-71.79	1.63	-70.16	-13.00	-57.16	peak	V
536.5000	-70.62	4.07	-66.55	-13.00	-53.55	peak	V
651.5000	-63.00	9.07	-53.93	-13.00	-40.93	peak	V
709.0000	-55.04	10.49	-44.55	-13.00	-31.55	peak	V
2836.000	-71.45	19.05	-52.40	-13.00	-39.40	peak	V
4540.000	-73.91	26.28	-47.63	-13.00	-34.63	peak	V
6976.000	-72.68	30.51	-42.17	-13.00	-29.17	peak	V



Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	6	Date:	06/24/2013
Frequency:	846.6 MHz	Test By:	Fly Lu

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
212.0000	-75.88	0.41	-75.47	-13.00	-62.47	peak	H
260.0000	-58.68	-4.34	-63.02	-13.00	-50.02	peak	H
360.0000	-75.17	0.05	-75.12	-13.00	-62.12	peak	H
564.0000	-71.84	7.78	-64.06	-13.00	-51.06	peak	H
594.0000	-69.77	7.85	-61.92	-13.00	-48.92	peak	H
709.0000	-67.84	7.20	-60.64	-13.00	-47.64	peak	H
3136.000	-69.55	18.10	-51.45	-13.00	-38.45	peak	H
4612.000	-72.47	21.68	-50.79	-13.00	-37.79	peak	H
6436.000	-74.07	30.16	-43.91	-13.00	-30.91	peak	H
115.0000	-59.31	2.67	-56.64	-13.00	-43.64	peak	V
173.0000	-57.46	2.89	-54.57	-13.00	-41.57	peak	V
230.5000	-57.99	2.10	-55.89	-13.00	-42.89	peak	V
390.0000	-72.24	1.49	-70.75	-13.00	-57.75	peak	V
594.0000	-60.15	7.00	-53.15	-13.00	-40.15	peak	V
766.5000	-73.74	11.07	-62.67	-13.00	-49.67	peak	V
2848.000	-71.95	19.13	-52.82	-13.00	-39.82	peak	V
4660.000	-73.80	26.49	-47.31	-13.00	-34.31	peak	V
7024.000	-73.51	30.59	-42.92	-13.00	-29.92	peak	V

Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	CNN0403	Temp.(°C)/Hum.(%RH):	26(°C)/60%RH
Mode:	7	Date:	06/25/2013
		Test By:	Fly Lu

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3167.500	37.29	6.28	43.57	74.00	-30.43	peak	H
5360.500	33.36	13.74	47.10	74.00	-26.90	peak	H
6482.500	33.52	17.35	50.87	74.00	-23.13	peak	H
2963.500	36.71	5.81	42.52	74.00	-31.48	peak	V
4621.000	35.78	11.19	46.97	74.00	-27.03	peak	V
6329.500	33.58	16.88	50.46	74.00	-23.54	peak	V

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.

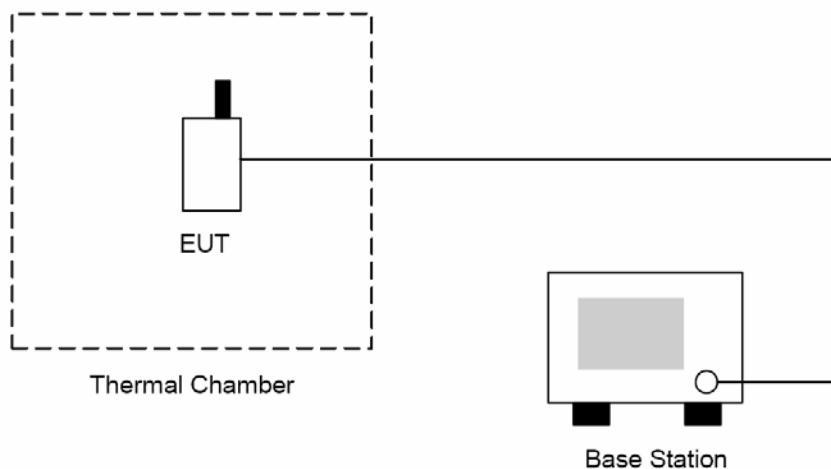
8.2. Test Instruments

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	08/07/2012	(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	CNN0403					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 1					
Date of Test	06/24/2013				Test Site	TE05
Level	Voltage [Vac]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	120.00	-30	-16	-0.019	±2.5	Pass
Normal	120.00	-20	-22	-0.026	±2.5	Pass
Normal	120.00	-10	-31	-0.037	±2.5	Pass
Normal	120.00	0	-25	-0.030	±2.5	Pass
Normal	120.00	10	-33	-0.039	±2.5	Pass
High Voltage	138.00	20	-19	-0.023	±2.5	Pass
Normal	120.00	20	-21	-0.025	±2.5	Pass
Low Voltage	102.00	20	-5	-0.006	±2.5	Pass
Normal	120.00	30	-14	-0.017	±2.5	Pass
Normal	120.00	40	-11	-0.013	±2.5	Pass
Normal	120.00	50	-6	-0.007	±2.5	Pass
Normal	120.00	60	-13	-0.016	±2.5	Pass
Normal	120.00	70	22	0.026	±2.5	Pass

Model Number	CNN0403					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 2					
Date of Test	06/24/2013				Test Site	TE05
Level	Voltage [Vac]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	120.00	-30	-35	-0.019	±2.5	Pass
Normal	120.00	-20	-50	-0.027	±2.5	Pass
Normal	120.00	-10	-66	-0.035	±2.5	Pass
Normal	120.00	0	-46	-0.024	±2.5	Pass
Normal	120.00	10	-33	-0.018	±2.5	Pass
High Voltage	138.00	20	-50	-0.027	±2.5	Pass
Normal	120.00	20	-22	-0.012	±2.5	Pass
Low Voltage	102.00	20	-33	-0.018	±2.5	Pass
Normal	120.00	30	6	0.003	±2.5	Pass
Normal	120.00	40	-25	-0.013	±2.5	Pass
Normal	120.00	50	16	0.009	±2.5	Pass
Normal	120.00	60	-36	-0.019	±2.5	Pass
Normal	120.00	70	11	0.006	±2.5	Pass

Model Number	CNN0403					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 5					
Date of Test	06/24/2013				Test Site	TE05
Level	Voltage [Vac]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	120.00	-30	-16	-0.009	±2.5	Pass
Normal	120.00	-20	-44	-0.023	±2.5	Pass
Normal	120.00	-10	-51	-0.027	±2.5	Pass
Normal	120.00	0	-6	-0.003	±2.5	Pass
Normal	120.00	10	9	0.005	±2.5	Pass
High Voltage	138.00	20	-33	-0.018	±2.5	Pass
Normal	120.00	20	-43	-0.023	±2.5	Pass
Low Voltage	102.00	20	25	0.013	±2.5	Pass
Normal	120.00	30	23	0.012	±2.5	Pass
Normal	120.00	40	-8	-0.004	±2.5	Pass
Normal	120.00	50	-7	-0.004	±2.5	Pass
Normal	120.00	60	-9	-0.005	±2.5	Pass
Normal	120.00	70	10	0.005	±2.5	Pass

Model Number	CNN0403					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 6					
Date of Test	06/24/2013				Test Site	TE05
Level	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	120.00	-30	16	0.019	±2.5	Pass
Normal	120.00	-20	33	0.039	±2.5	Pass
Normal	120.00	-10	29	0.035	±2.5	Pass
Normal	120.00	0	31	0.037	±2.5	Pass
Normal	120.00	10	-6	-0.007	±2.5	Pass
High Voltage	138.00	20	-5	-0.006	±2.5	Pass
Normal	120.00	20	16	0.019	±2.5	Pass
Low Voltage	102.00	20	-17	-0.020	±2.5	Pass
Normal	120.00	30	13	0.016	±2.5	Pass
Normal	120.00	40	22	0.026	±2.5	Pass
Normal	120.00	50	37	0.044	±2.5	Pass
Normal	120.00	60	22	0.026	±2.5	Pass
Normal	120.00	70	30	0.036	±2.5	Pass