FCC 47 CFR PART 22H and 24E

Test Report

Product Type	:	Mobile Hot Spot
Applicant	:	Netgear Inc.
Address	:	350 East Plumeria Drive, San Jose, CA 95134
Trade Name	:	Netgear
Model Number	:	AC779S-200
Test Specification	:	FCC 47 CFR PART 22H: Oct, 2013 FCC 47 CFR PART 24E: Oct, 2013 ANSI/TIA-603-C-2004
Application Purpose	:	Original
Receive Date	:	Dec. 19, 2014
Test Period	:	Nov. 28 ~ Dec. 09, 2014
Issue Date	:	Jan. 19, 2015

Issue by

A Test Lab Techno Corp.
No. 140-1, Changan Street, Bade City,
Taoyuan County 334, Taiwan R.O.C.
Tel：+886-3-2710188 / Fax：+886-3-2710190

Taiwan Accreditation Foundation accreditation number: 1330
FCC Test Firm Information: 510205

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Revision History

Rev.	Issue Date	Revisions	Revised By
00	Jan. 19, 2015	Initial Issue	

Verification of Compliance

Issued Date: 01/19/2015

Product Type	:	Mobile Hot Spot
Applicant	:	Netgear Inc.
Address	:	350 East Plumeria Drive, San Jose, CA 95134
Trade Name	:	Netgear
Model Number	:	AC779S-200
FCC ID	:	PY3AC779S
EUT Rated Voltage	:	DC 5V, 1.0A
Test Voltage	:	120 Vac / 60 Hz, DC 3.8V
Applicable Standard	:	FCC 47 CFR PART 22H: Oct, 2013 FCC 47 CFR PART 24E: Oct, 2013 ANSI/TIA-603-C-2004
Application Purpose	:	Original
Test Result	:	Complied
Performing Lab.	:	A Test Lab Techno Corp. No. 140-1, Changan Street, Bade City, Taoyuan County 334, Taiwan R.O.C. Tel：+886-3-2710188 / Fax：+886-3-2710190 Taiwan Accreditation Foundation accreditation number: 1330 FCC Test Firm Information: 510205 http://www.atl-lab.com.tw/e-index.htm

The above equipment was tested by A Test Lab Techno Corp. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4:2014 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	:	Fly Lu	Reviewed By	:	Eric Ou Yang
(Manager)		(Fly Lu)	(Testing Engineer)		(Eric Ou Yang)

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1 General Information

1.1. EUT Description

Applicant		Netgear Inc.			
Applicant Address		350 East Plumeria Drive, San Jose, CA 95134			
Manufacturer		Netgear Inc.			
Manufacturer Address		Suite 168 – 10760 Shellbridge Way, Richmond, BC Canada V6X 3H1			
Product Type		Mobile Hot Spot			
Trade Name		Netgear			
Model Number		AC779S-200			
Hardware Version		REV.2			
Software Version		FXC9X15B_45.00.03.01_MFG			
FCC ID		PY3AC779S			
IMEI No.		014260000002034			
Mode	WCDMA (RMC12.2K)/ HSDPA/ HSUPA	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		FPC Antenna			
Antenna Gain (dBi)		WCDMA/ HSDPA/ HSUPA Band II : 3.30 dBi WCDMA/ HSDPA/ HSUPA Band V : -0.68 dBi			
Max. RF Output power		WCDMA/ HSDPA/ HSUPA Band II : 26.19 dBm / 0.416 W WCDMA/ HSDPA/ HSUPA Band V : 26.53 dBm / 0.450 W			
Max. ERP/EIRP		WCDMA/ HSDPA/ HSUPA Band II : 24.84 dBm / 0.305 W WCDMA/ HSDPA/ HSUPA Band V : 22.89 dBm / 0.195 W			

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:

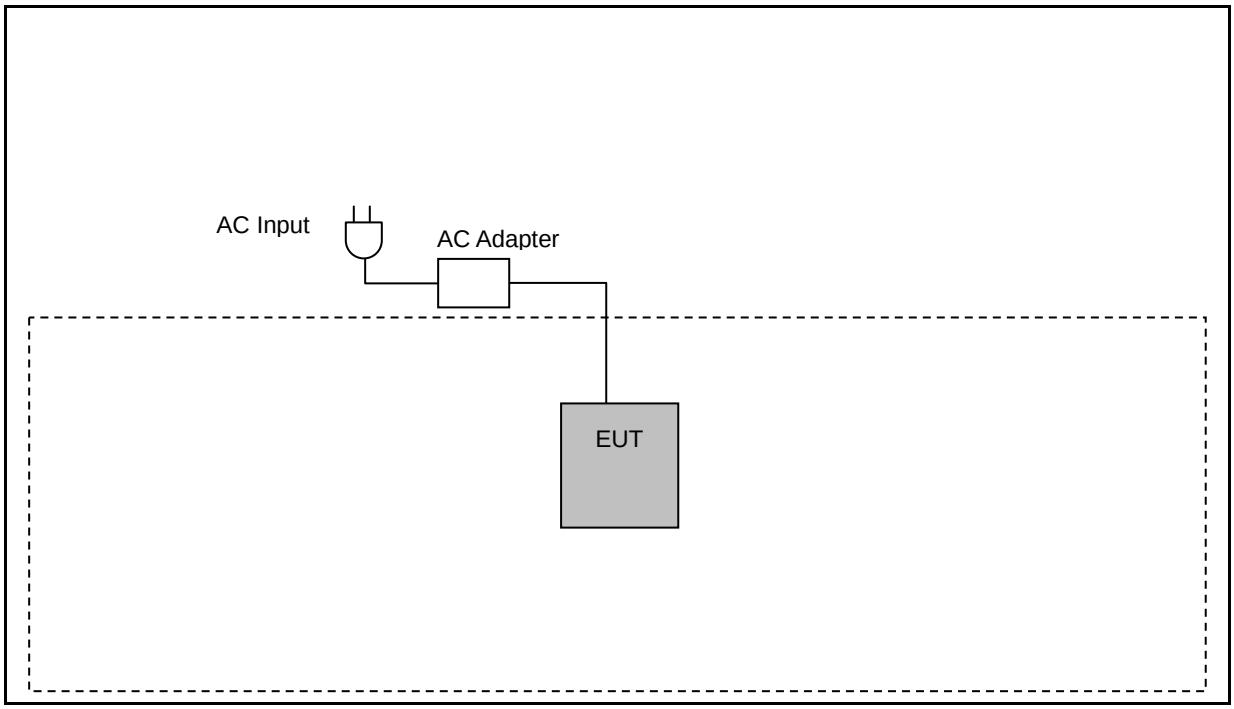
Test Mode
Mode 1: WCDMA Band II Link Mode
Mode 2: WCDMA Band V Link Mode

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 60068-1)	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	Limit	Result
Conducted Output Power	§2.1046	N/A	Pass
Effective Radiated Power	§22.913(a)(2)	< 7 Watts for FCC (<6.3 Watts for IC)	Pass
Equivalent Isotropic Radiated Power	§24.232(c)	< 2 Watts	Pass
Peak to average ratio	§24.232(d)	< 13 dB	Pass
Emission Bandwidth & Occupied Bandwidth	§2.1049 §22.917(a) §24.238(a)	N/A	Pass
Band Edge Measurement	§2.1051 §22.917(a) §24.238(a)	< $43+10\log_{10}$(P[Watts])	Pass
Conducted Spurious Emission	§2.1051 §22.917(a) §24.238(a)	< $43+10\log_{10}$(P[Watts])	Pass
Field Strength of Spurious Radiation	§2.1053 §22.917(a) §24.238(a)	< $43+10\log_{10}$(P[Watts])	Pass
Frequency Stability for Temperature & Voltage	§2.1055 §22.355 §24.235	< 2.5 ppm	Pass

2 RF Output Power Test

2.1. Limit

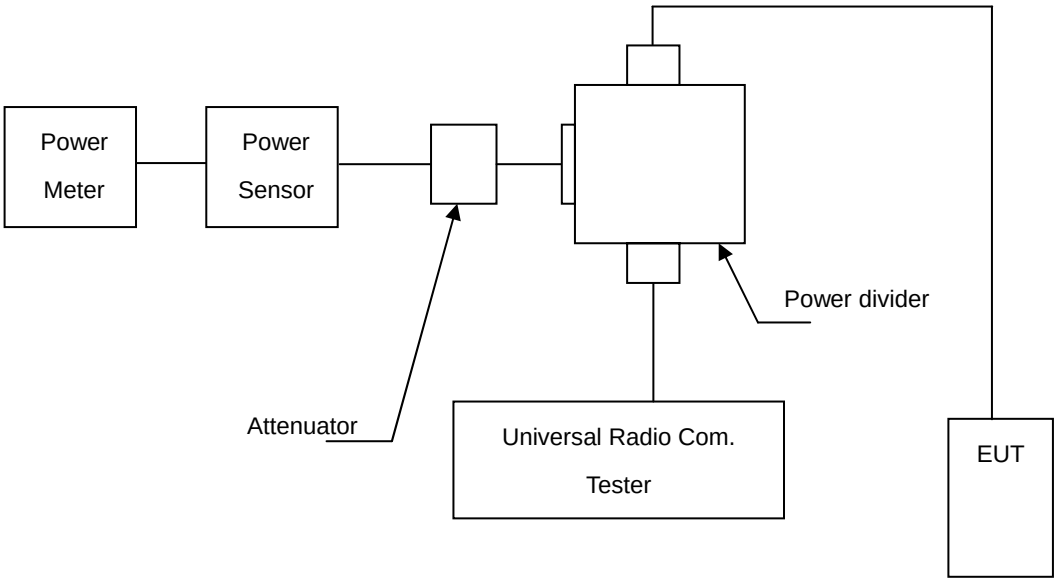
N/A

2.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/11/2014	(2)
Single Channel PK Power Sensor	Agilent	N1911A	MY45101619	12/21/2013	(2)
Wideband Power Meter	Agilent	N1921A	MY45241957	12/21/2013	(2)
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	AC779S-200						
Test Item	RF Output Power						
Date of Test	11/28/2014			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	22.78	0.190	26.12	0.409
			1880.0	22.79	0.190	**26.19**	**0.416**
			1907.6	22.53	0.179	26.00	0.398
HSDPA Band II	QPSK	1	1852.4	21.90	0.155	25.21	0.332
			1880.0	21.90	0.155	25.29	0.338
			1907.6	21.65	0.146	25.10	0.324
		2	1852.4	21.86	0.153	25.17	0.329
			1880.0	21.87	0.154	25.26	0.336
			1907.6	21.61	0.145	25.06	0.321
		3	1852.4	21.40	0.138	24.71	0.296
			1880.0	21.41	0.138	24.80	0.302
			1907.6	21.17	0.131	24.62	0.290
		4	1852.4	21.38	0.137	24.69	0.294
			1880.0	21.37	0.137	24.76	0.299
			1907.6	21.14	0.130	24.59	0.288
HSUPA Band II	QPSK	1	1852.4	21.30	0.135	24.62	0.290
			1880.0	21.32	0.136	24.73	0.297
			1907.6	21.06	0.128	24.50	0.282
		2	1852.4	19.32	0.086	22.64	0.184
			1880.0	19.35	0.086	22.76	0.189
			1907.6	19.07	0.081	22.51	0.178
		3	1852.4	20.33	0.108	23.65	0.232
			1880.0	20.35	0.108	23.76	0.238
			1907.6	20.07	0.102	23.51	0.224
		4	1852.4	19.27	0.085	22.59	0.182
			1880.0	19.31	0.085	22.72	0.187
			1907.6	19.06	0.081	22.50	0.178
		5	1852.4	21.27	0.134	24.59	0.288
			1880.0	21.30	0.135	24.71	0.296
			1907.6	21.02	0.126	24.46	0.279

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

Model Number	AC779S-200						
Test Item	RF Output Power						
Date of Test	11/28/2014			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	23.21	0.209	26.17	0.414
			836.6	23.11	0.205	26.48	0.445
			846.6	23.26	0.212	**26.53**	**0.450**
HSDPA Band V	QPSK	1	826.4	22.34	0.171	25.32	0.340
			836.6	22.22	0.167	25.58	0.361
			846.6	22.38	0.173	25.67	0.369
		2	826.4	22.31	0.170	25.29	0.338
			836.6	22.20	0.166	25.56	0.360
			846.6	22.34	0.171	25.63	0.366
		3	826.4	21.86	0.153	24.84	0.305
			836.6	21.73	0.149	25.09	0.323
			846.6	21.91	0.155	25.20	0.331
		4	826.4	21.83	0.152	24.81	0.303
			836.6	21.70	0.148	25.06	0.321
			846.6	21.88	0.154	25.17	0.329
HSUPA Band V	QPSK	1	826.4	22.09	0.162	24.77	0.300
			836.6	22.01	0.159	25.09	0.323
			846.6	22.16	0.164	25.16	0.328
		2	826.4	20.11	0.103	22.79	0.190
			836.6	20.04	0.101	23.12	0.205
			846.6	20.17	0.104	23.17	0.207
		3	826.4	21.11	0.129	23.79	0.239
			836.6	21.04	0.127	24.12	0.258
			846.6	21.17	0.131	24.17	0.261
		4	826.4	20.08	0.102	22.76	0.189
			836.6	19.99	0.100	23.07	0.203
			846.6	20.13	0.103	23.13	0.206
		5	826.4	22.05	0.160	24.73	0.297
			836.6	21.98	0.158	25.06	0.321
			846.6	22.14	0.164	25.14	0.327

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.

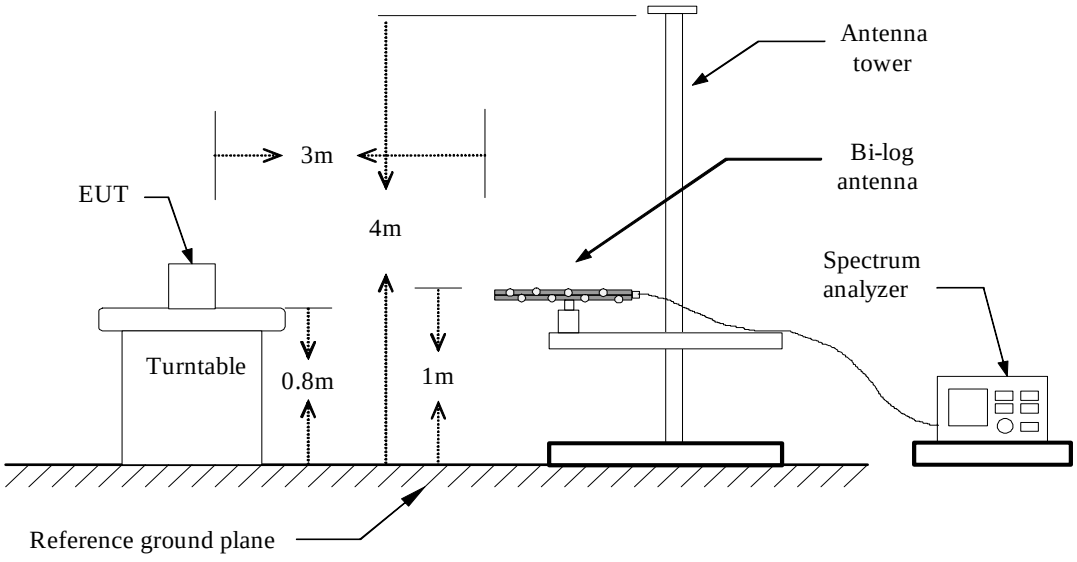
3.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/10/2014	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/10/2014	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/21/2014	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/21/2014	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/22/2014	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/11/2014	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	07/02/2014	(1)
Test Site	ATL	TE01	888001	08/28/2014	(1)

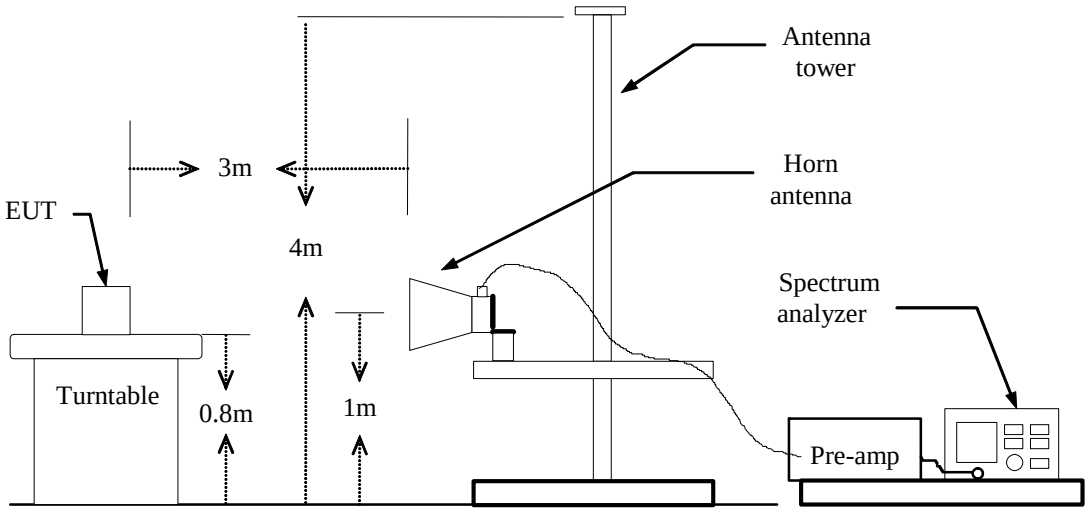
Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.
Note: N.C.R. = No Calibration Request.

3.3. Setup

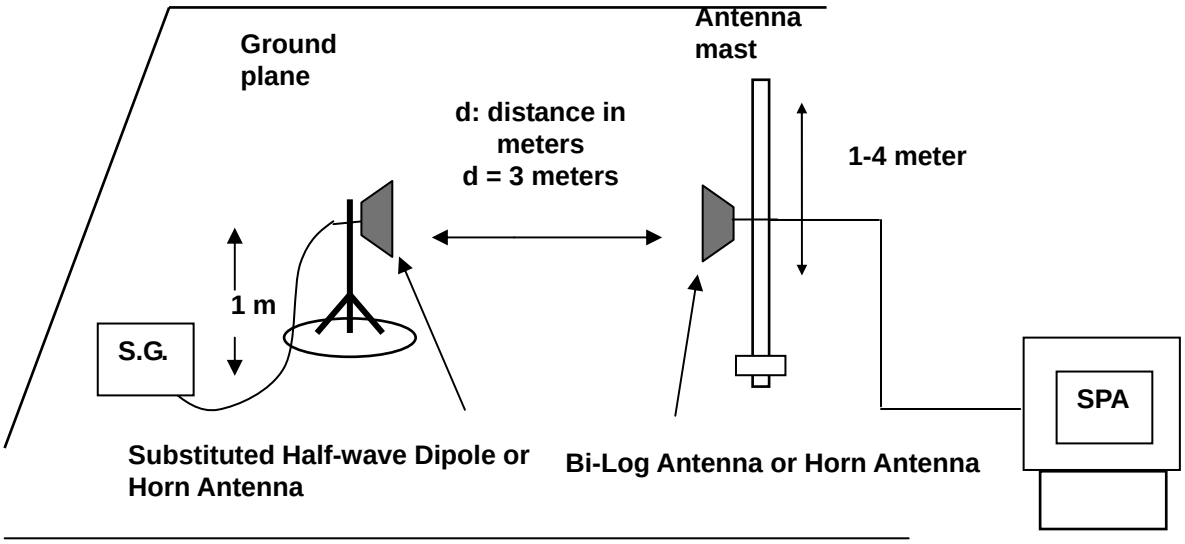
Below 1 GHz



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 an 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:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – 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	AC779S-200							
Test Item	ERP/EIRP							
Date of Test	11/28/2014					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	16.45	8.23	24.68	0.294	< 2W
			V	15.48	6.08	21.56	0.143	< 2W
		1880.0	H	16.35	8.22	24.57	0.286	< 2W
			V	15.88	6.28	22.16	0.164	< 2W
		1907.6	H	16.60	8.24	**24.84**	**0.305**	< 2W
			V	17.11	6.50	23.61	0.230	< 2W

Model Number	AC779S-200							
Test Item	ERP/EIRP							
Date of Test	11/28/2014					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	11.41	11.48	**22.89**	**0.195**	< 7W
			V	3.69	10.80	14.49	0.028	< 7W
		836.6	H	11.19	11.53	22.72	0.187	< 7W
			V	3.03	10.80	13.83	0.024	< 7W
		846.6	H	10.24	11.80	22.04	0.160	< 7W
			H	2.51	10.86	13.37	0.022	< 7W

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 Peak to Average Ratio Test

4.1. Limit

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

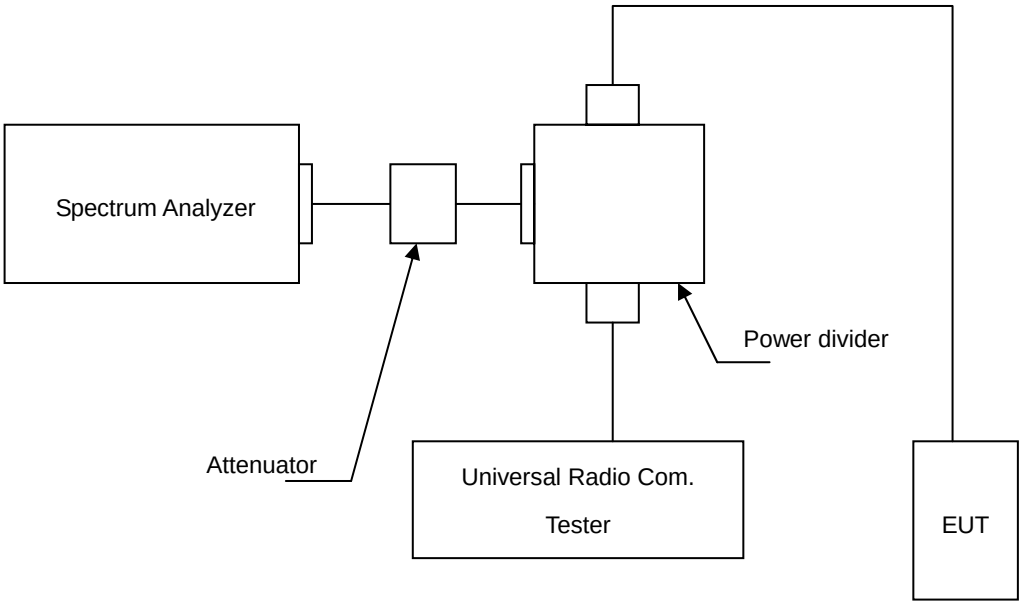
4.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/10/2014	(1)
Wideband Radio Communication Test	R & S	CMW500	103168	11/05/2014	(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 24:

a. Set resolution/measurement bandwidth signal's occupied bandwidth;

b. Set the number of counts to a value that stabilizes the measured CCDF curve;

c. Record the maximum PAPR level associated with a probability of 0.1%.

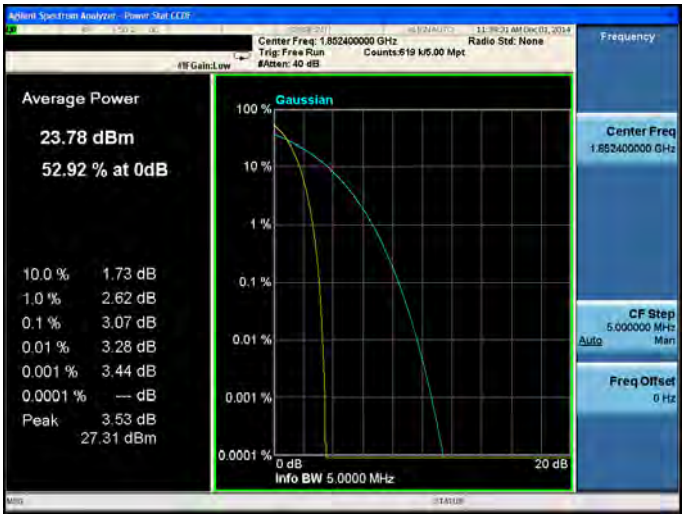
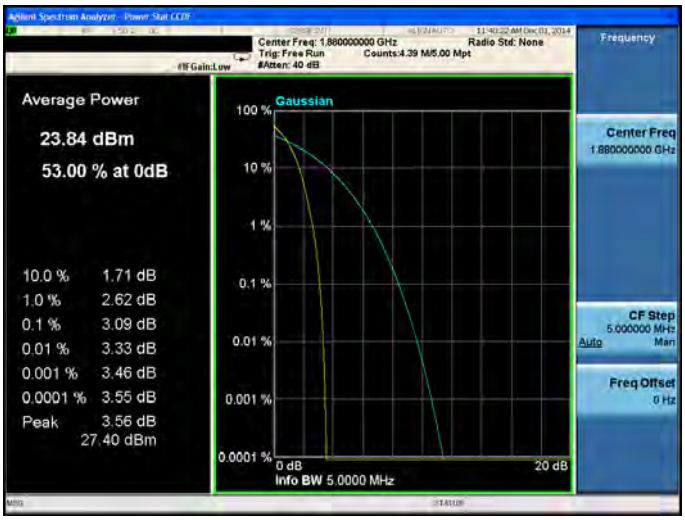
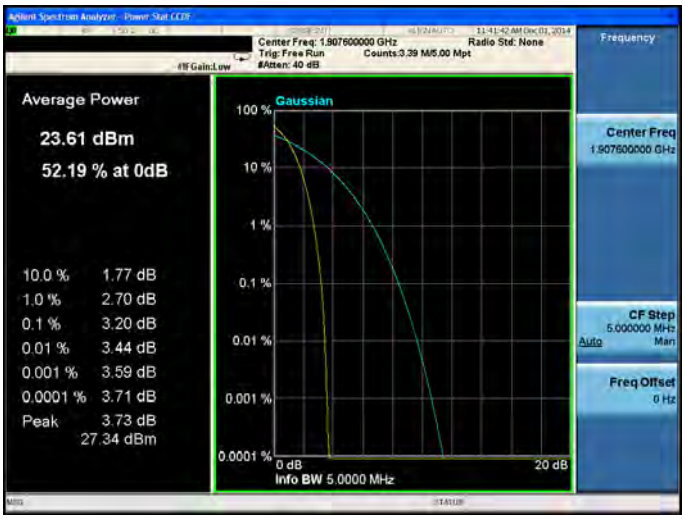
4.5. Uncertainty

The measurement uncertainty is defined as for Conducted Power measurement is 1.2 dB.

4.6. Test Result

Model Number	AC779S-200				
Test Item	Peak to Average Ratio				
Date of Test	12/01/2014			Test Site	TE05
Bands	Channel	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)	
WCDMA Band II	9262	1852.4	3.07	< 13	
	9400	1880.0	3.09	< 13	
	9538	1907.6	3.20	< 13	

4.7. Test Graphs

Mode 5: WCDMA Band II Link Mode	
1850.20 MHz	
1880.00 MHz	
1909.80 MHz	

5 Emission Bandwidth & Occupied Bandwidth Test

5.1. Limit

The Occupied Bandwidth Limit:

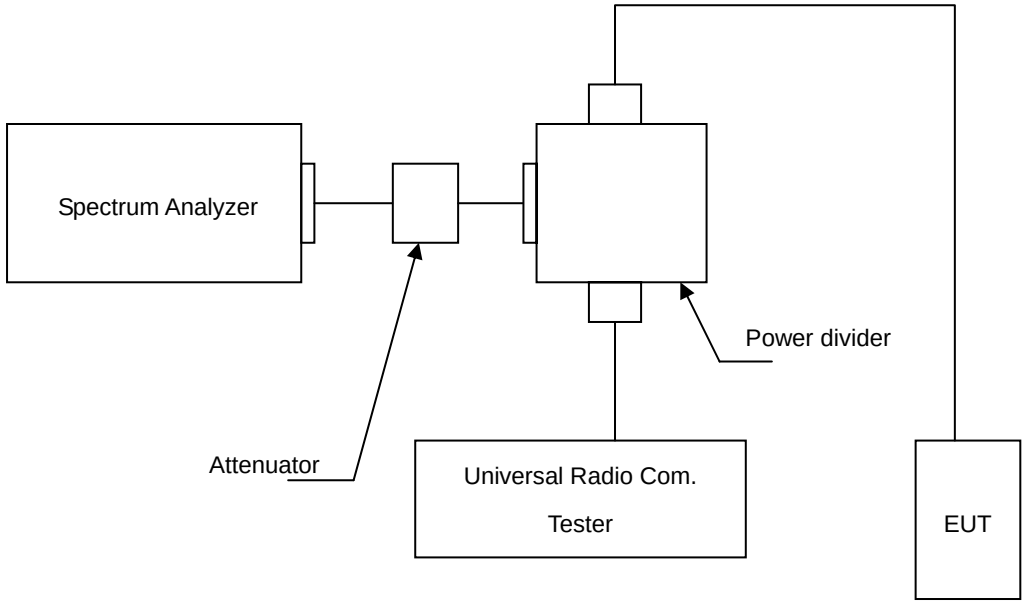
N/A.

5.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/11/2014	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/10/2014	(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:

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.

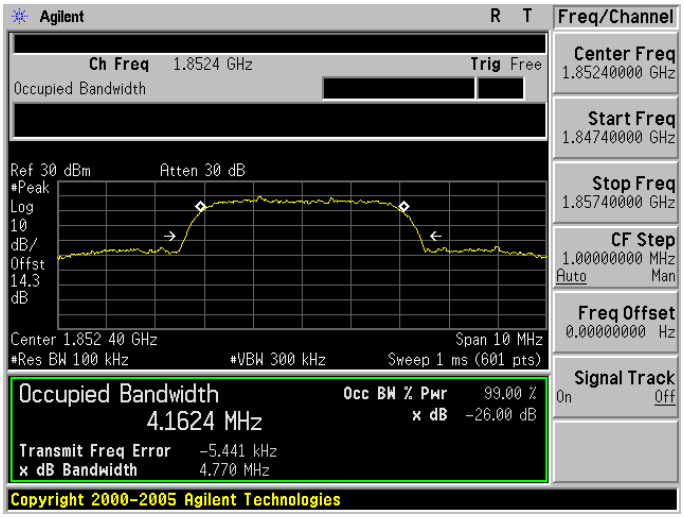
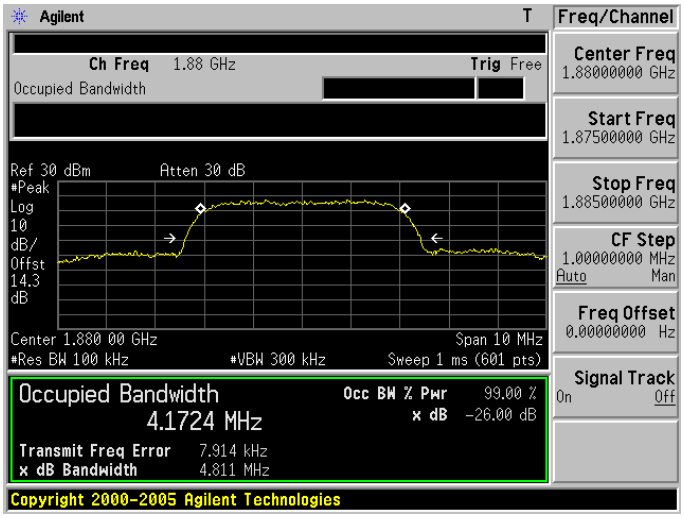
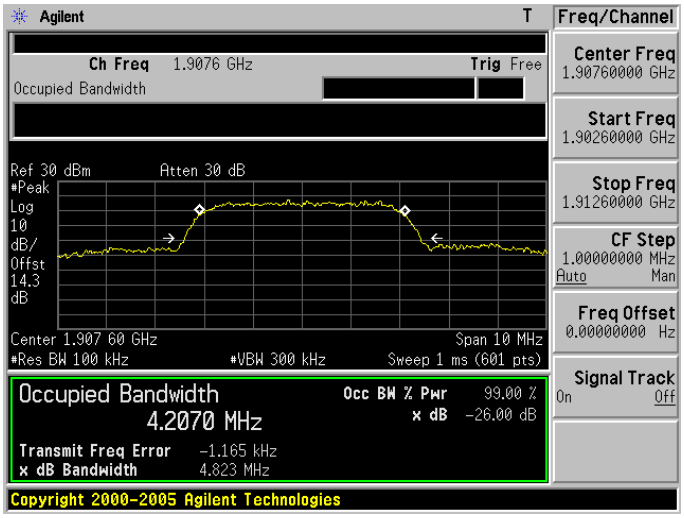
5.5. Uncertainty

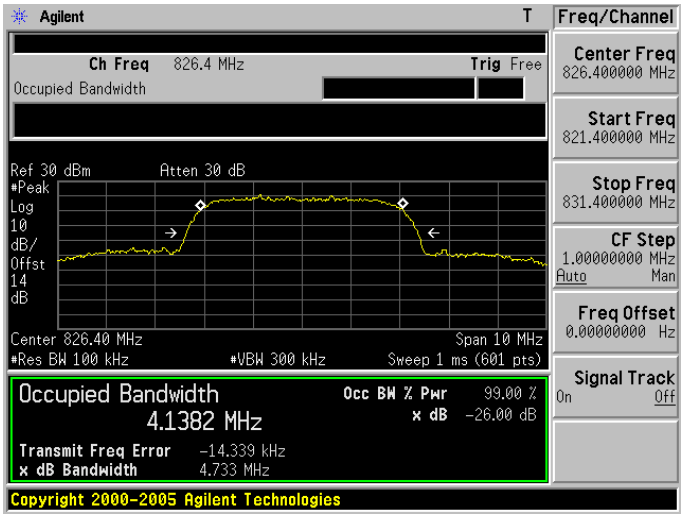
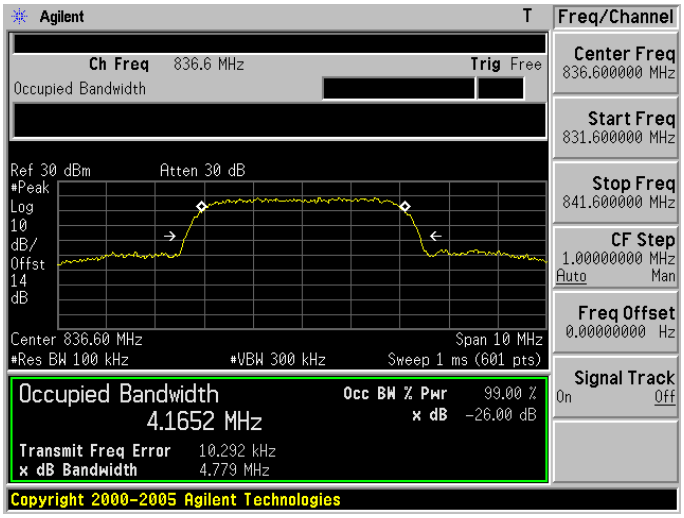
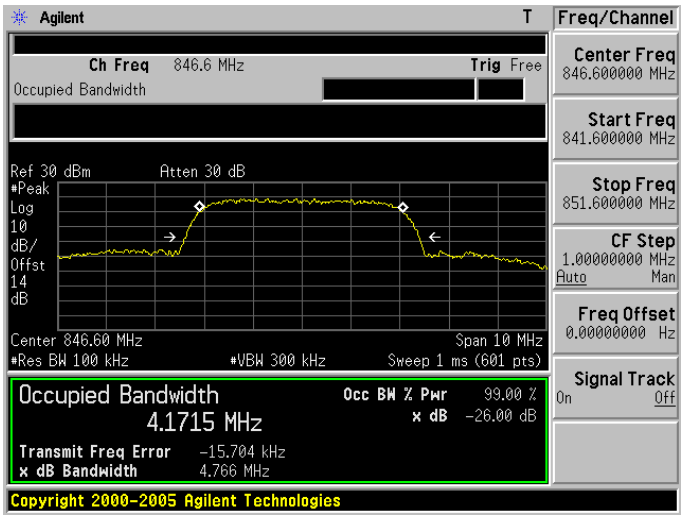
The measurement uncertainty is defined as ± 10Hz

5.6. Test Result

Model Number	AC779S-200					
Test Item	Emission Bandwidth & Occupied Bandwidth					
Date of Test	11/28/2014				Test Site	TE05
Bands	Channel	Frequency (MHz)	-26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Note	
WCDMA Band II	9262	1852.4	4.770	4.1624	RBW:100KHz , VBW:300KHz	
	9400	1880.0	4.811	4.1724	RBW:100KHz , VBW:300KHz	
	9538	1907.6	4.823	4.2070	RBW:100KHz , VBW:300KHz	
WCDMA Band V	4132	826.4	4.733	4.1382	RBW:100KHz , VBW:300KHz	
	4183	836.6	4.779	4.1652	RBW:100KHz , VBW:300KHz	
	4233	846.6	4.766	4.1715	RBW:100KHz , VBW:300KHz	

5.7. Test Graphs

Mode 1: WCDMA Band II Link Mode	
1850.20 MHz	
1880.00 MHz	
1909.80 MHz	

Mode 2: WCDMA Band V Link Mode	
826.4 MHz	
836.6 MHz	
846.6 MHz	

6 Band Edge Test

6.1. Limit

The Band Edge Limit:

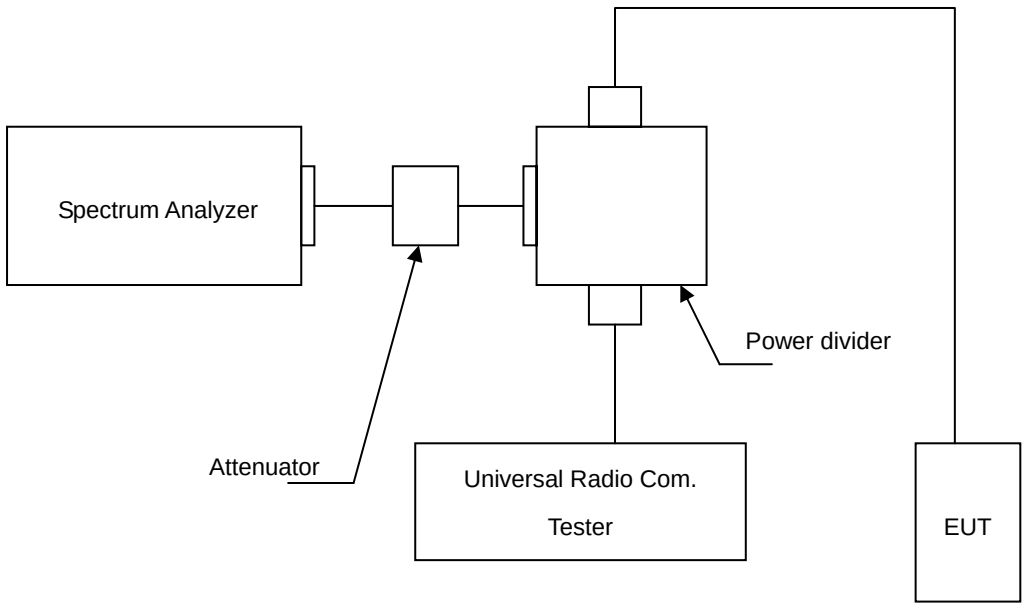
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

6.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/11/2014	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/10/2014	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power Divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.
Note: N.C.R. = No Calibration Request.

6.3. Setup



6.4. 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 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.
3. The band edge setting:
   a. RB=10 kHz; VB=30 kHz for GSM 850 and PCS 1900.
   b. RB=51 kHz; VB=160 kHz for WCDMA Band V and WCDMA Band II.

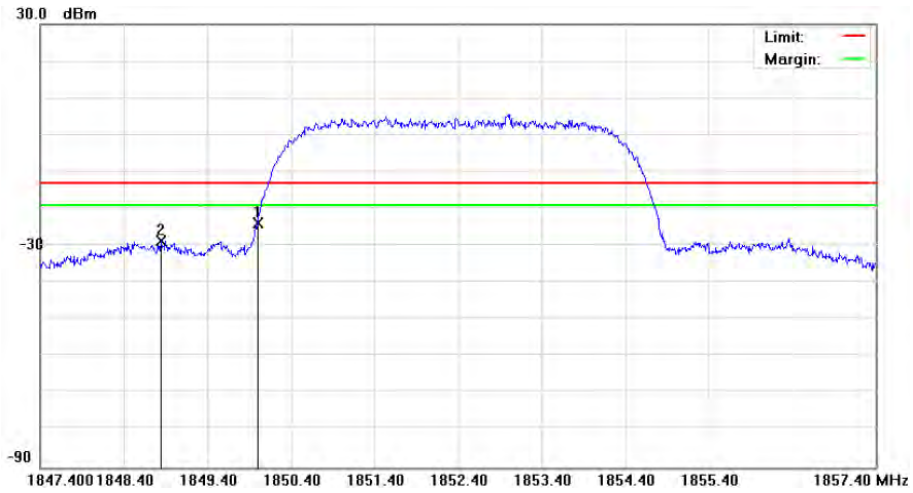
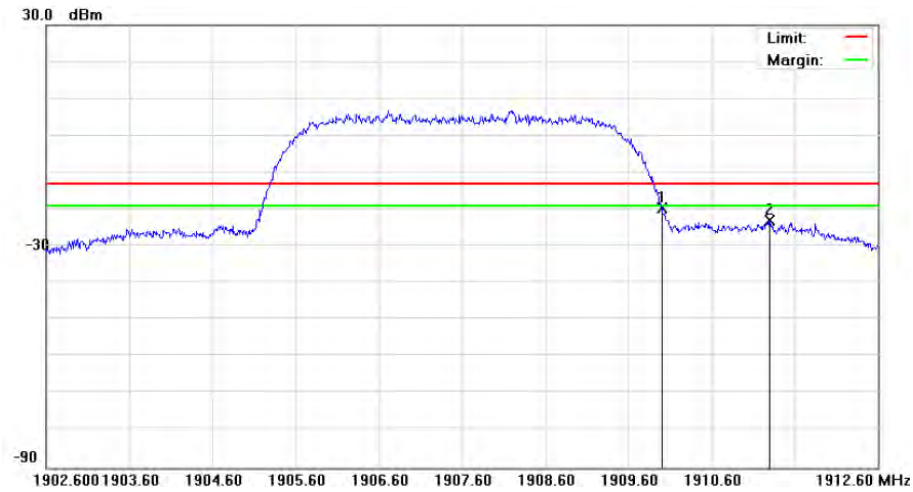
6.5. Uncertainty

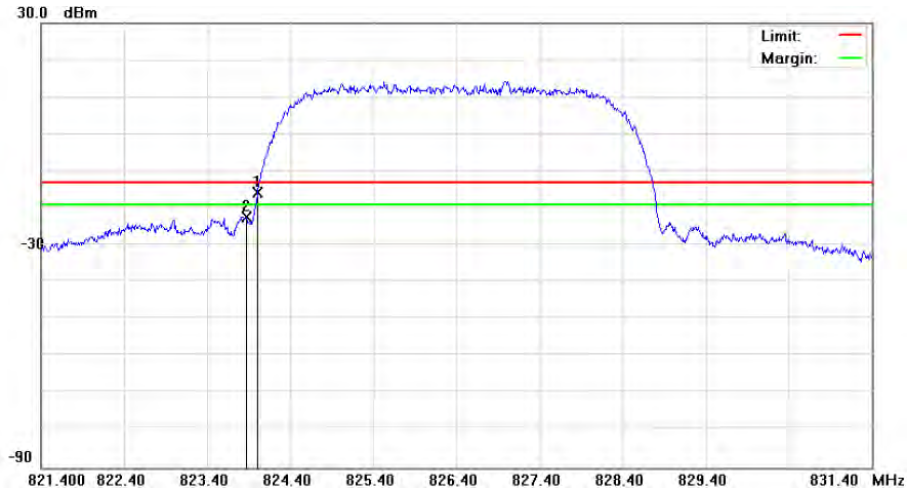
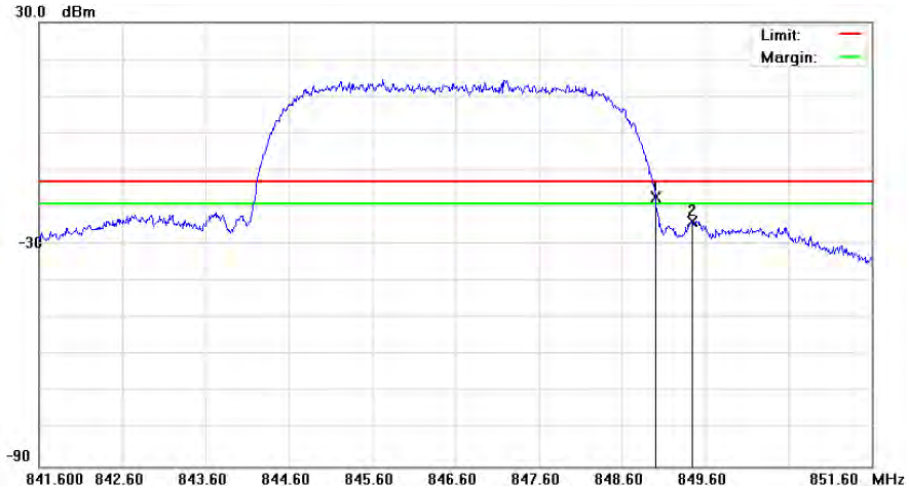
The measurement uncertainty is defined as ± 10Hz

6.6. Test Result

Model Number		AC779S-200				
Test Item		Band Edge				
Date of Test		11/28/2014			Test Site	TE05
Bands		Channel	Frequency (MHz)	Bandwidth (dBm)	Limit (dBm)	Result
WCDMA Band II	Lower	9262	1850.000	-23.92	-13	Pass
	Higher	9538	1910.000	-19.79	-13	Pass
WCDMA Band V	Lower	4132	824.0000	-15.80	-13	Pass
	Higher	4233	849.0000	-17.26	-13	Pass

6.7. Test Graphs

Mode 1: WCDMA Band II Link Mode	
Lower Band	
Higher Band	

Mode 2: WCDMA Band V Link Mode	
Lower Band	
Higher Band	

7 Conducted Spurious Emission 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 + 10log(P) dB.

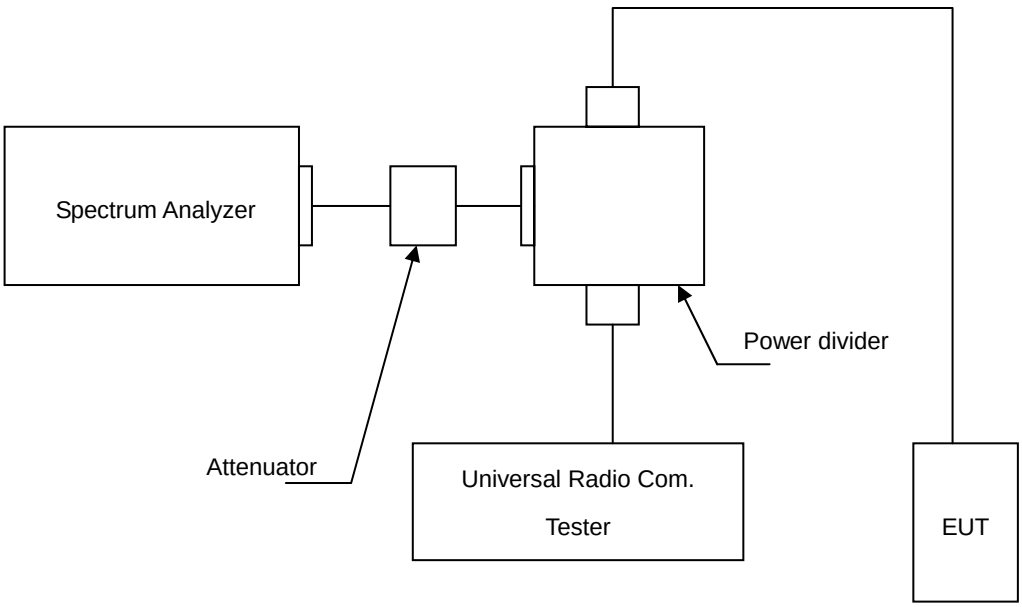
7.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/11/2014	(2)
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/10/2014	(1)
Attenuator	RADIALL	R41572000	0603033073	N.C.R.	-----
Power Divider	Agilent	87302C	3239A00760	N.C.R.	-----
Test Site	ATL	TE05	TE05	N.C.R.	-----

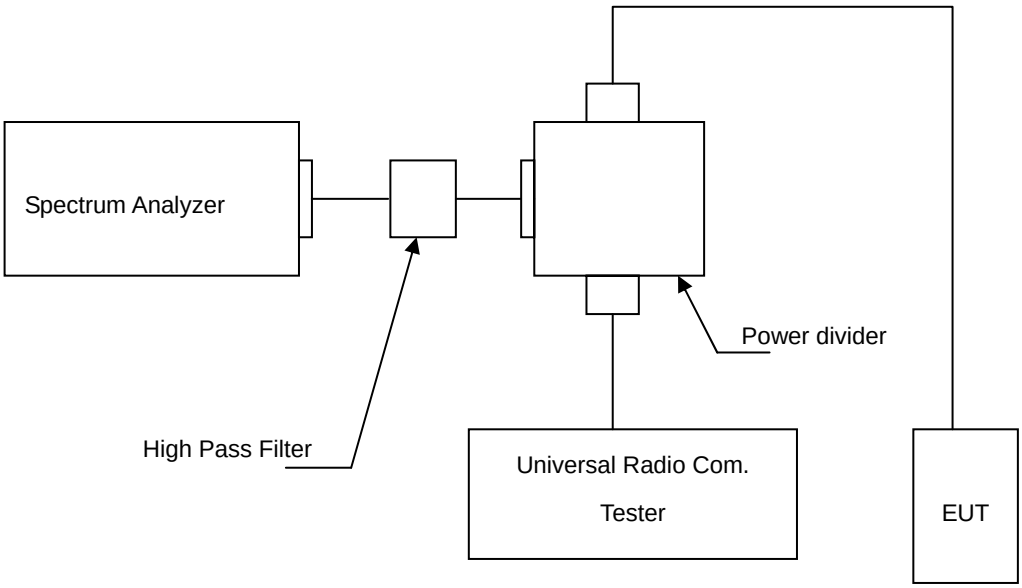
Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.
Note: N.C.R. = No Calibration Request.

7.3. Setup

Below 2.8GHz



Above 2.8GHz



7.4. 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.

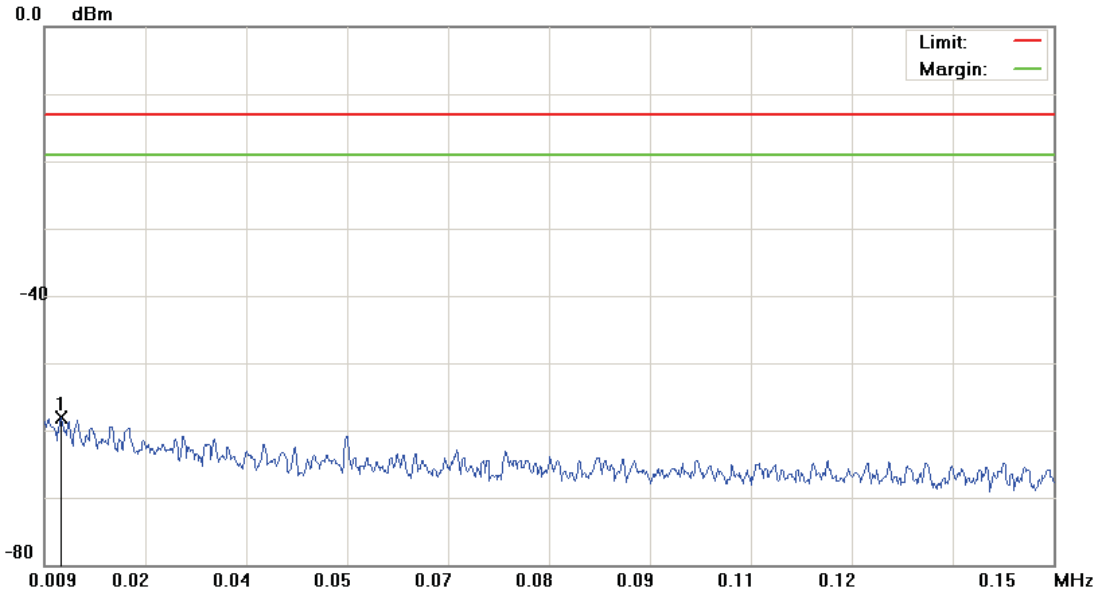
7.5. Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

7.6. Test Result

Model Number	AC779S-200		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 1 / Mode 2		
Date of Test	11/28/2014	Test Site	TE05

File :AC779S(CH9262) Data :#1 Date: 2014/11/28 Time: 下午 02:07:03



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

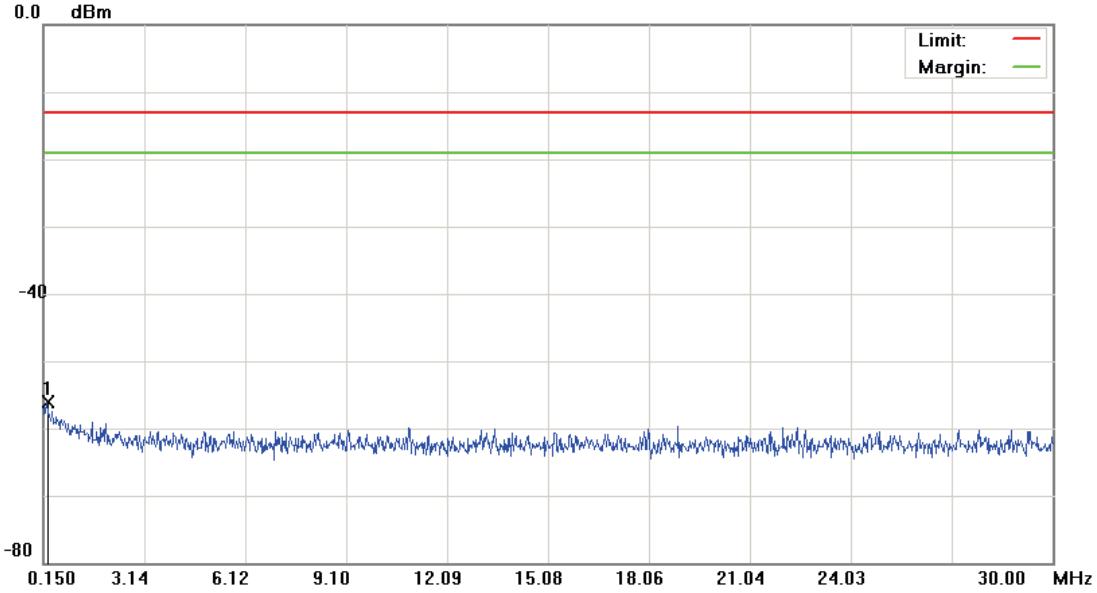
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1 KHz VBW: 3 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0113	-69.53	11.35	-58.18	-13.00	-45.18	peak			

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

File :AC779S(CH9262) Data :#2 Date: 2014/11/28 Time: 下午 02:07:27



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

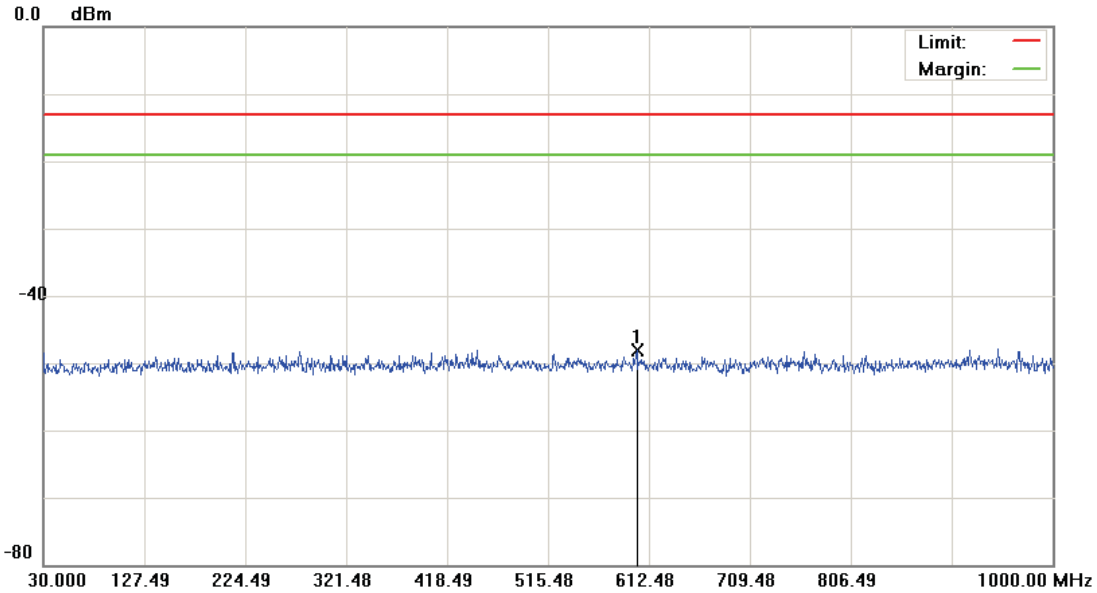
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 10 KHz VBW: 30 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.2545	-68.72	12.53	-56.19	-13.00	-43.19	peak			

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

File :AC779S(CH9262) Data :#3 Date: 2014/11/28 Time: 下午 02:07:51



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

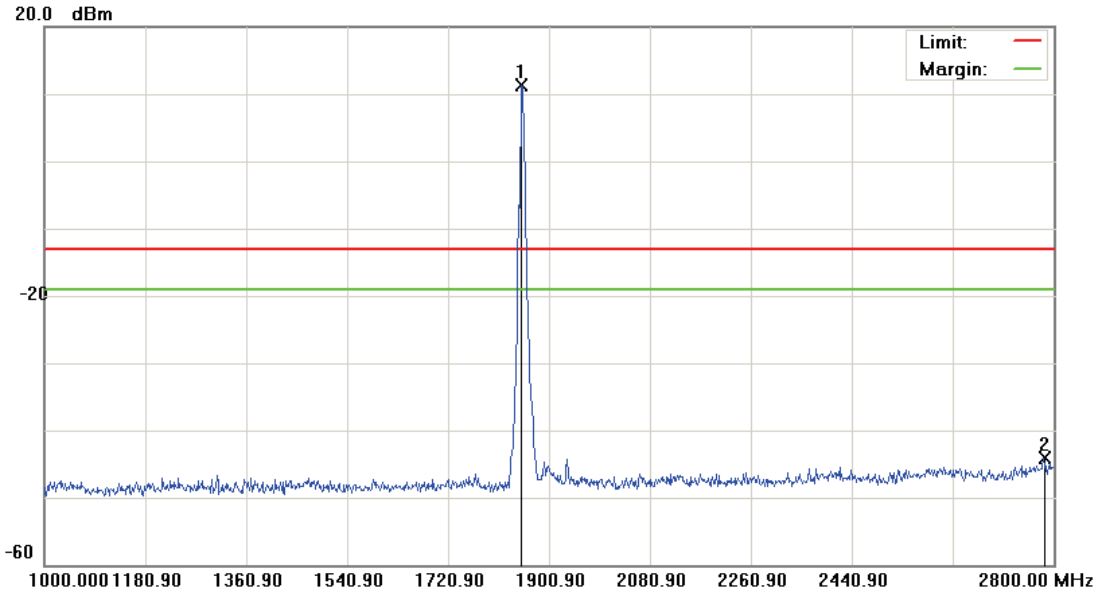
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 100 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	600.3600	-61.23	13.20	-48.03	-13.00	-35.03	peak			

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

File :AC779S(CH9262) Data :#4 Date: 2014/11/28 Time: 下午 02:23:56



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

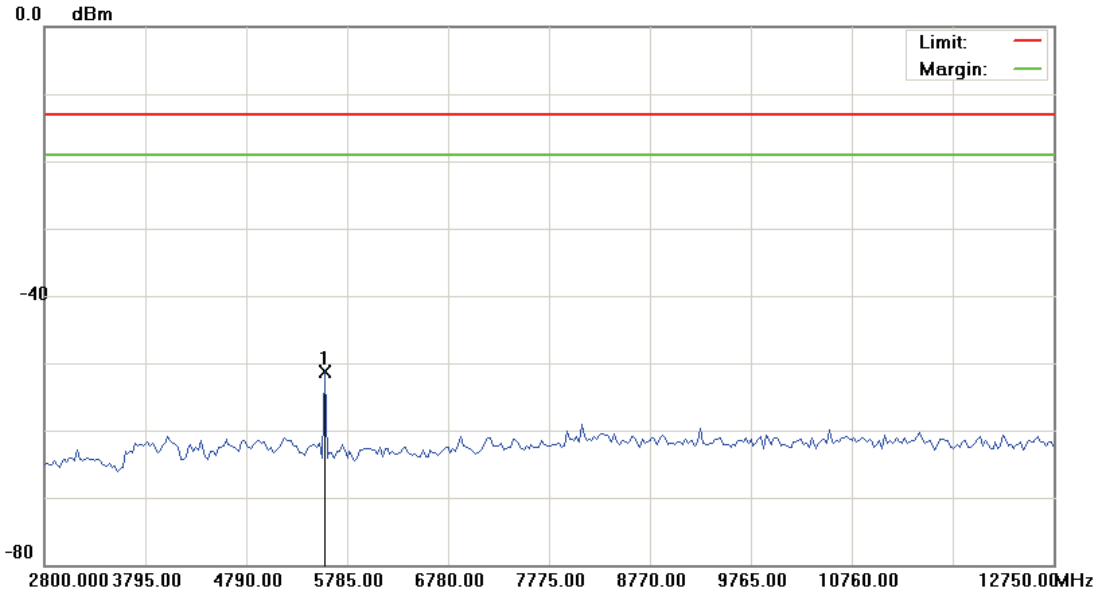
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1850.500	7.04	4.26	11.30	-13.00	24.30	peak			Tx
2		2782.900	-49.92	5.88	-44.04	-13.00	-31.04	peak			

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

File :AC779S(CH9262) Data :#5 Date: 2014/11/28 Time: 下午 03:50:18



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

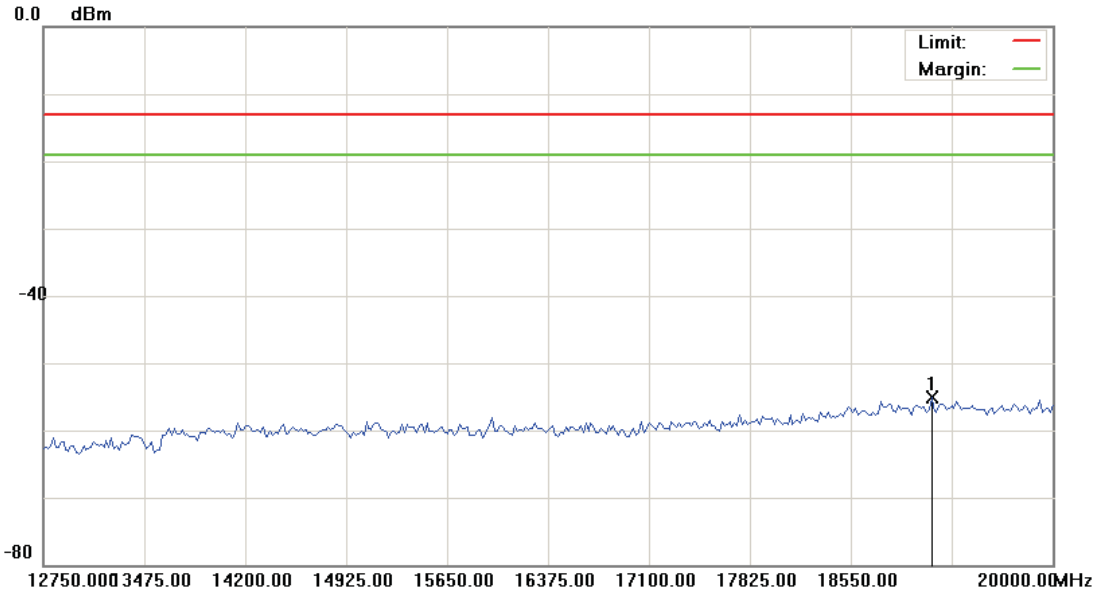
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	5561.125	-56.23	4.89	-51.34	-13.00	-38.34	peak			

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

File :AC779S(CH9262) Data :#6 Date: 2014/11/28 Time: 下午 03:50:37



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

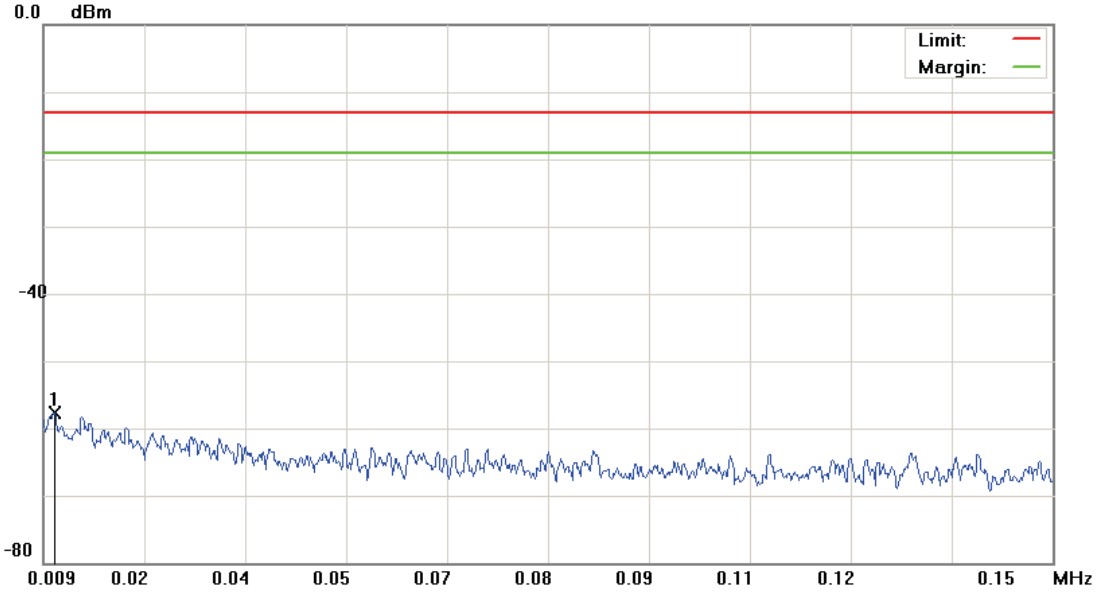
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	19130.000	-62.26	7.19	-55.07	-13.00	-42.07	peak			

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

File :AC779S(CH9400) Data :#1 Date: 2014/11/28 Time: 下午 02:18:45



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

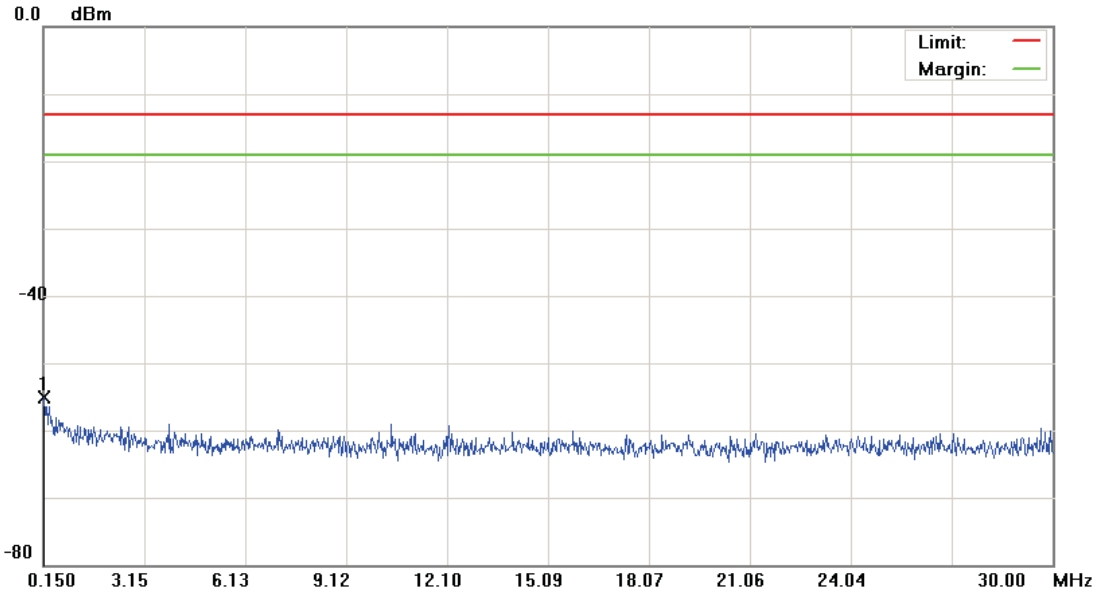
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1 KHz VBW: 3 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0106	-69.01	11.34	-57.67	-13.00	-44.67	peak			

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

File :AC779S(CH9400) Data :#2 Date: 2014/11/28 Time: 下午 02:19:09



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

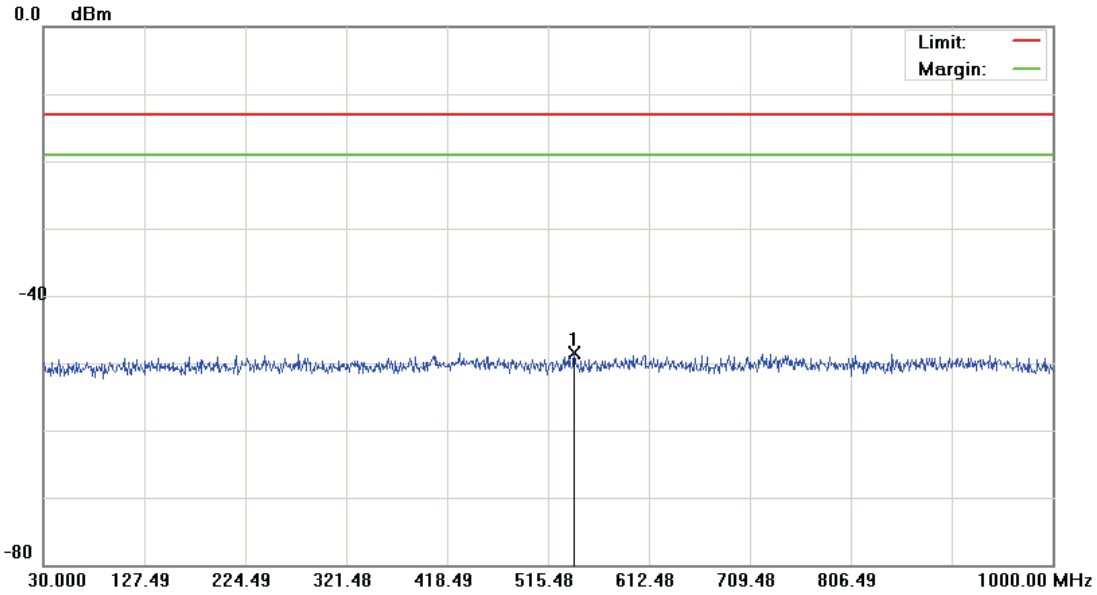
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 10 KHz VBW: 30 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1798	-67.63	12.45	-55.18	-13.00	-42.18	peak			

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

File :AC779S(CH9400) Data :#3 Date: 2014/11/28 Time: 下午 02:19:33



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

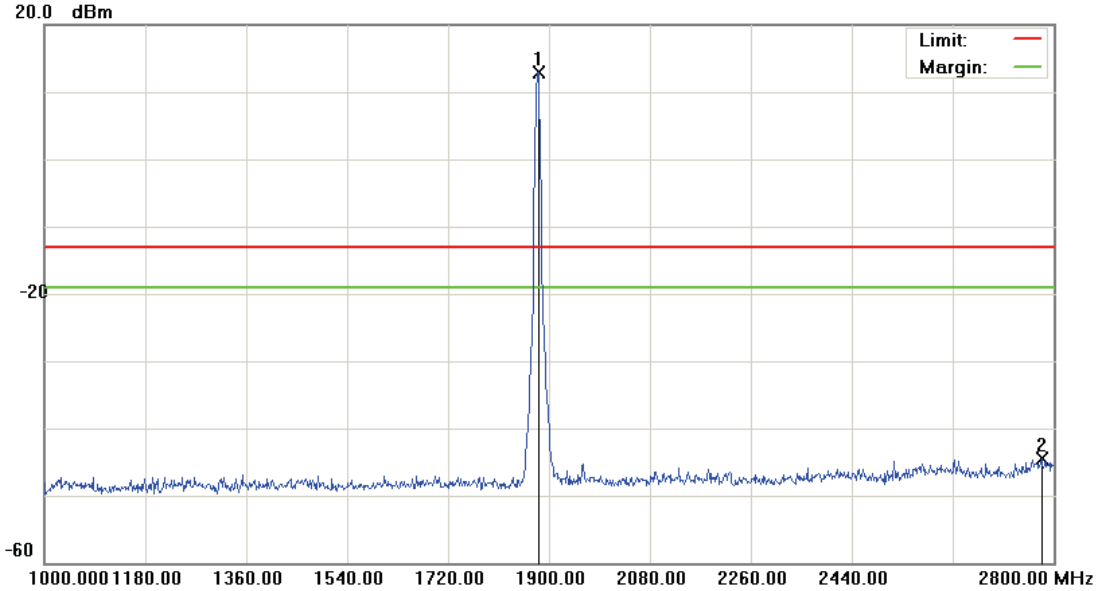
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 100 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	540.2200	-61.62	13.22	-48.40	-13.00	-35.40	peak			

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

File :AC779S(CH9400) Data :#4 Date: 2014/11/28 Time: 下午 02:25:08



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

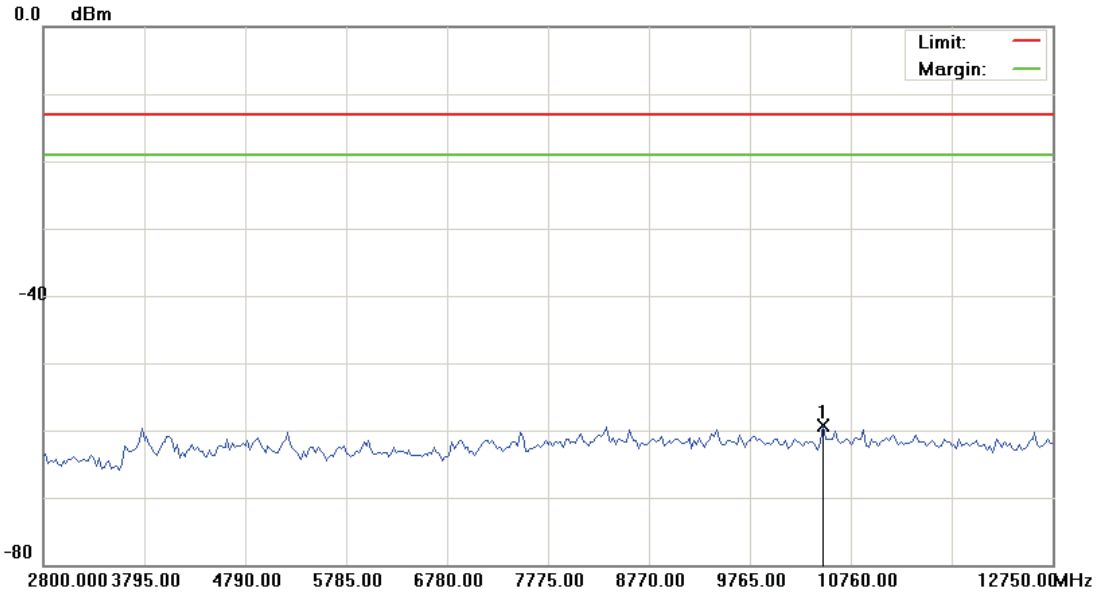
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1882.000	8.16	4.83	12.99	-13.00	25.99	peak			Tx
2		2778.400	-50.41	5.86	-44.55	-13.00	-31.55	peak			

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

File :AC779S(CH9400) Data :#5 Date: 2014/11/28 Time: 下午 03:53:25



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

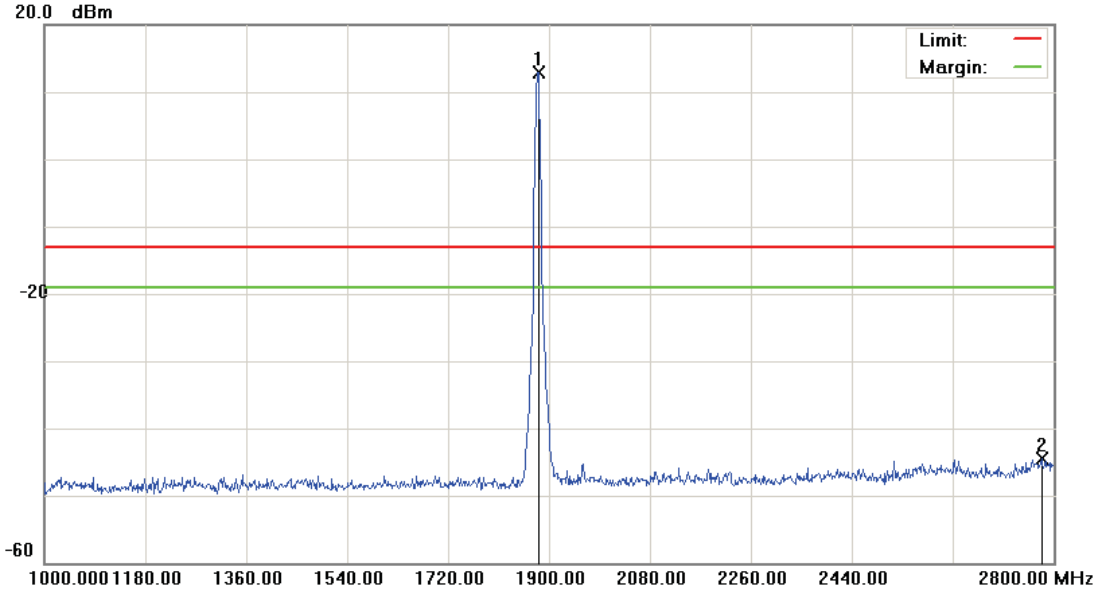
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	10486.375	-64.39	5.10	-59.29	-13.00	-46.29	peak			

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

File :AC779S(CH9400) Data :#4 Date: 2014/11/28 Time: 下午 02:25:08



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

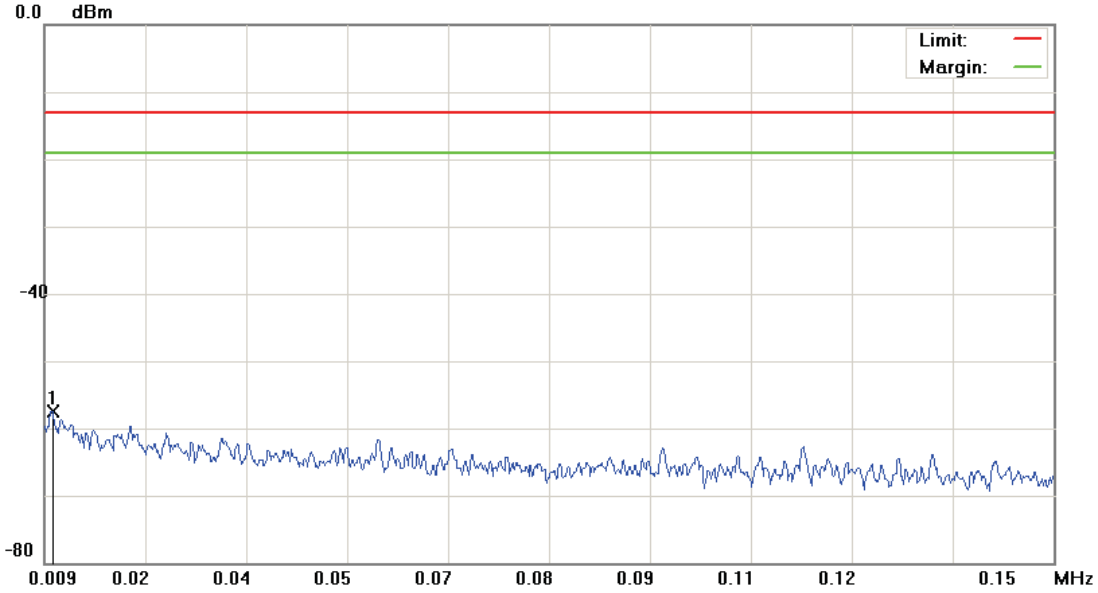
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1882.000	8.16	4.83	12.99	-13.00	25.99	peak			Tx
2		2778.400	-50.41	5.86	-44.55	-13.00	-31.55	peak			

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

File :AC779S(CH9538) Data :#1 Date: 2014/11/28 Time: 下午 02:20:37



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

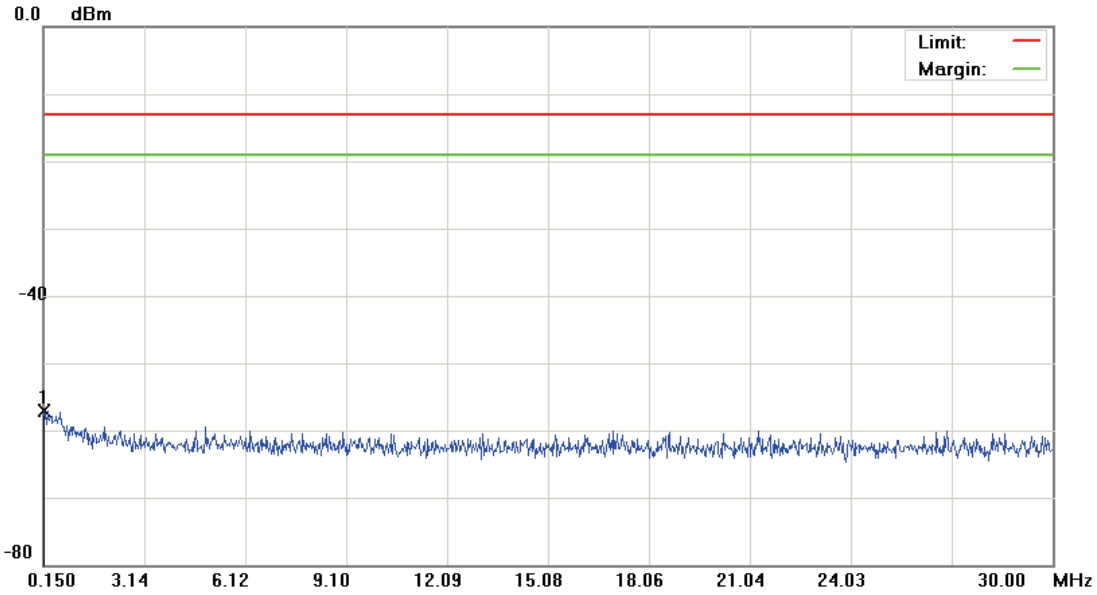
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1 KHz VBW: 3 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0101	-68.74	11.34	-57.40	-13.00	-44.40	peak			

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

File :AC779S(CH9538) Data :#2 Date: 2014/11/28 Time: 下午 02:21:01



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

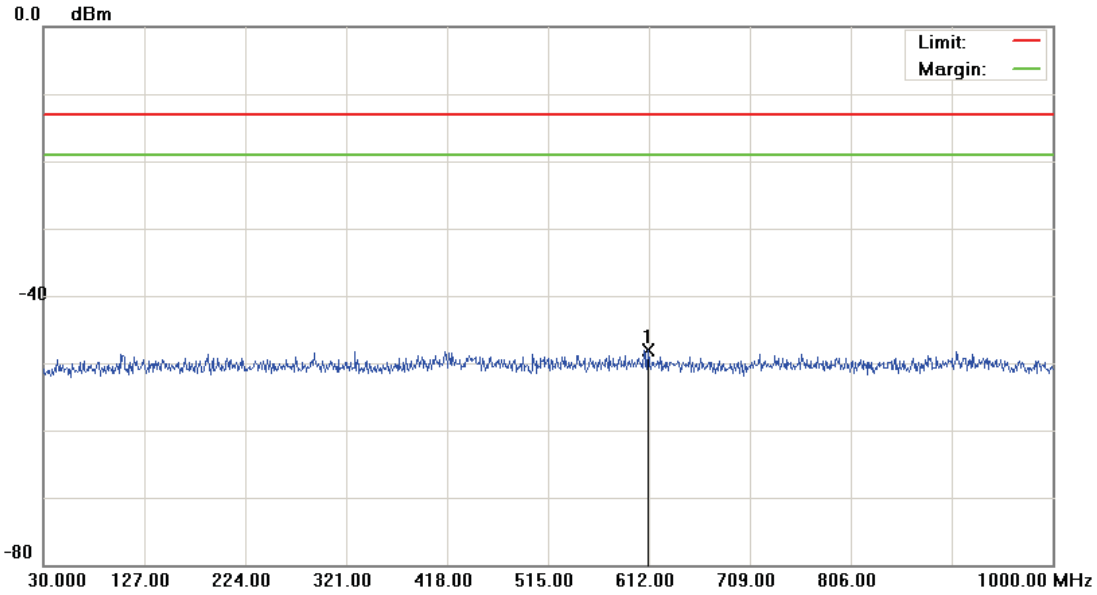
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 10 KHz VBW: 30 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.1500	-69.48	12.47	-57.01	-13.00	-44.01	peak			

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

File :AC779S(CH9538) Data :#3 Date: 2014/11/28 Time: 下午 02:21:25



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

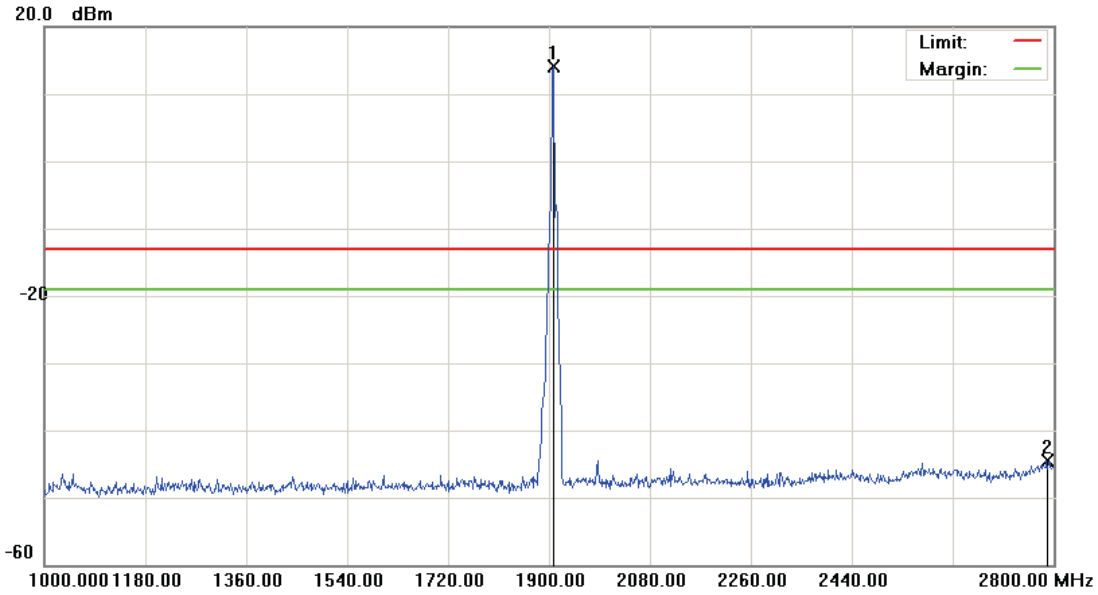
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 100 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	611.0300	-61.18	13.16	-48.02	-13.00	-35.02	peak			

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

File :AC779S(CH9538) Data :#4 Date: 2014/11/28 Time: 下午 02:26:40



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

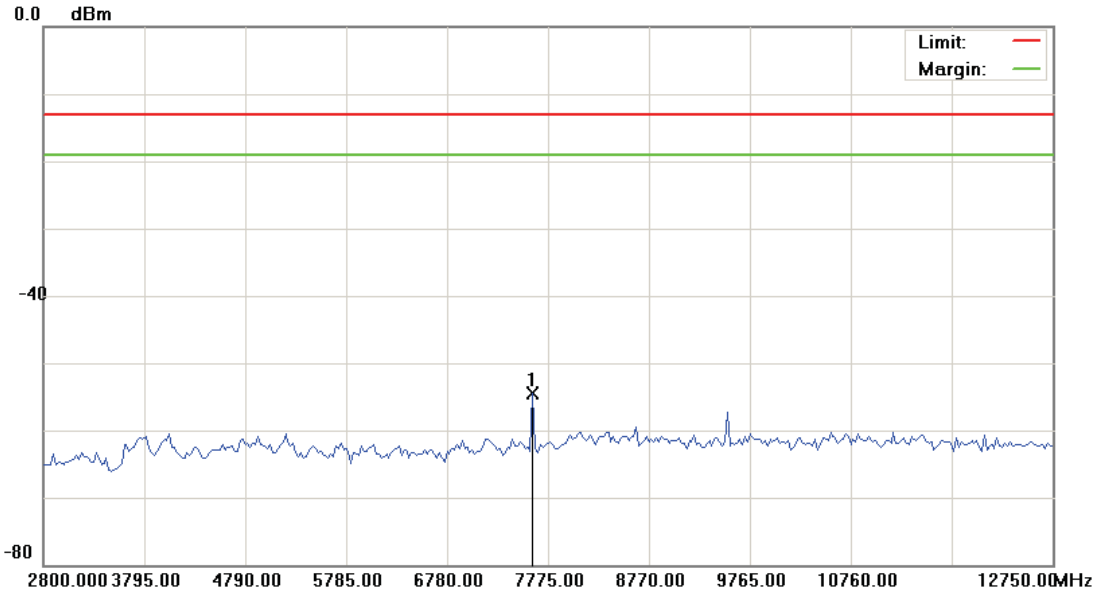
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1909.000	8.21	5.80	14.01	-13.00	27.01	peak			Tx
2		2788.300	-50.39	5.89	-44.50	-13.00	-31.50	peak			

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

File :AC779S(CH9538) Data :#5 Date: 2014/11/28 Time: 下午 03:54:18



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

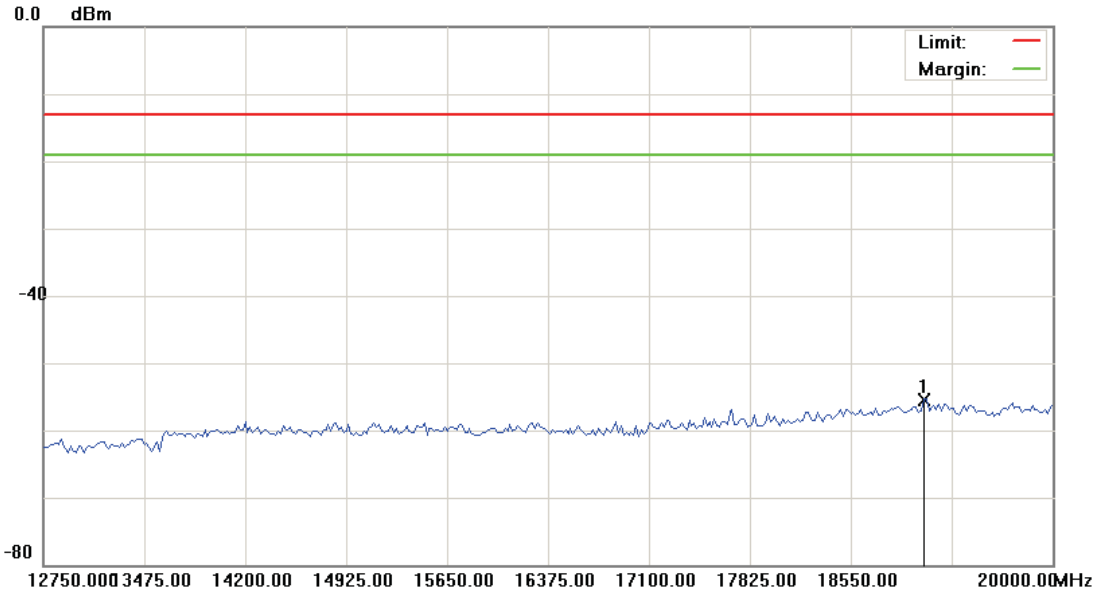
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7625.750	-59.66	5.15	-54.51	-13.00	-41.51	peak			

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

File :AC779S(CH9538) Data :#6 Date: 2014/11/28 Time: 下午 03:54:37



Site: site #1
Limit: FCC Part 24 conducted(9k-26.5G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band II
Note:

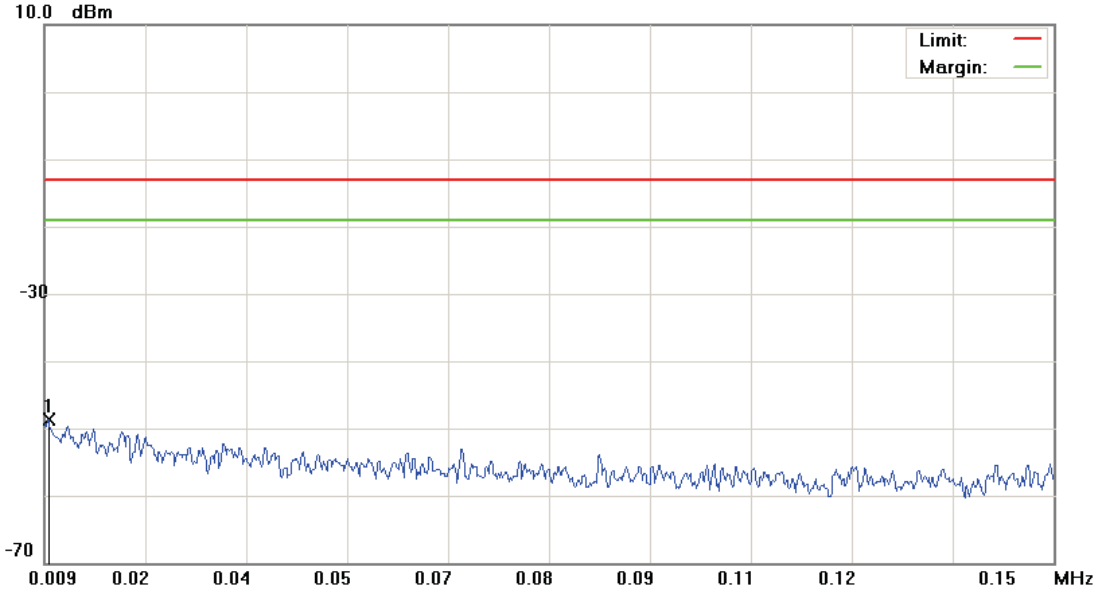
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	19075.625	-62.58	7.18	-55.40	-13.00	-42.40	peak			

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

File :AC779S(CH4132) Data :#1 Date: 2014/11/28 Time: 下午 03:27:59



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

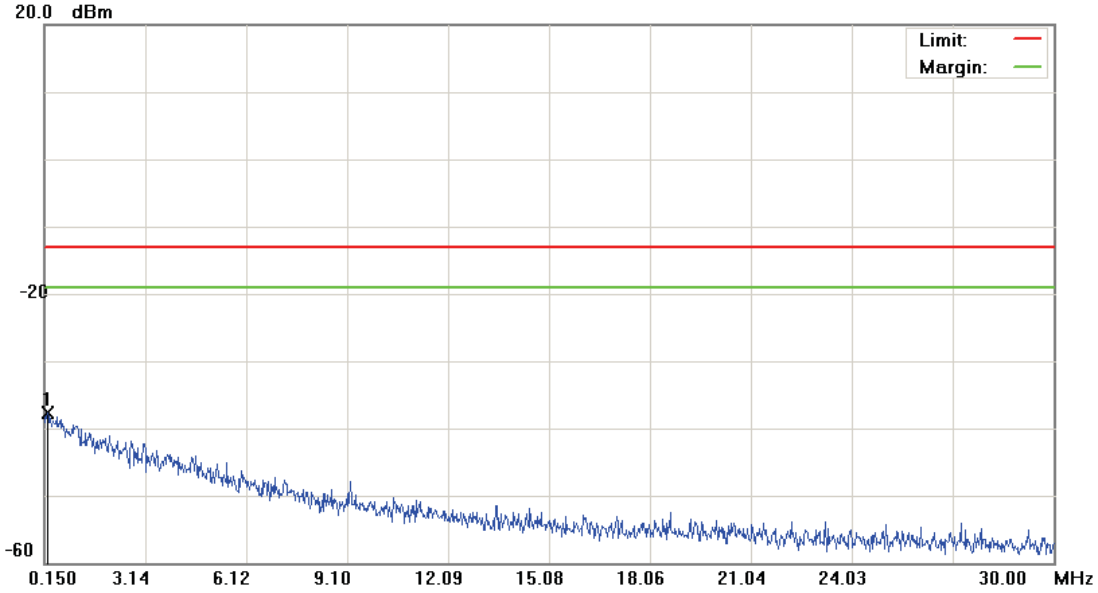
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1 KHz VBW: 3 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0095	-79.31	30.58	-48.73	-13.00	-35.73	peak			

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

File :AC779S(CH4132) Data :#2 Date: 2014/11/28 Time: 下午 03:28:23



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

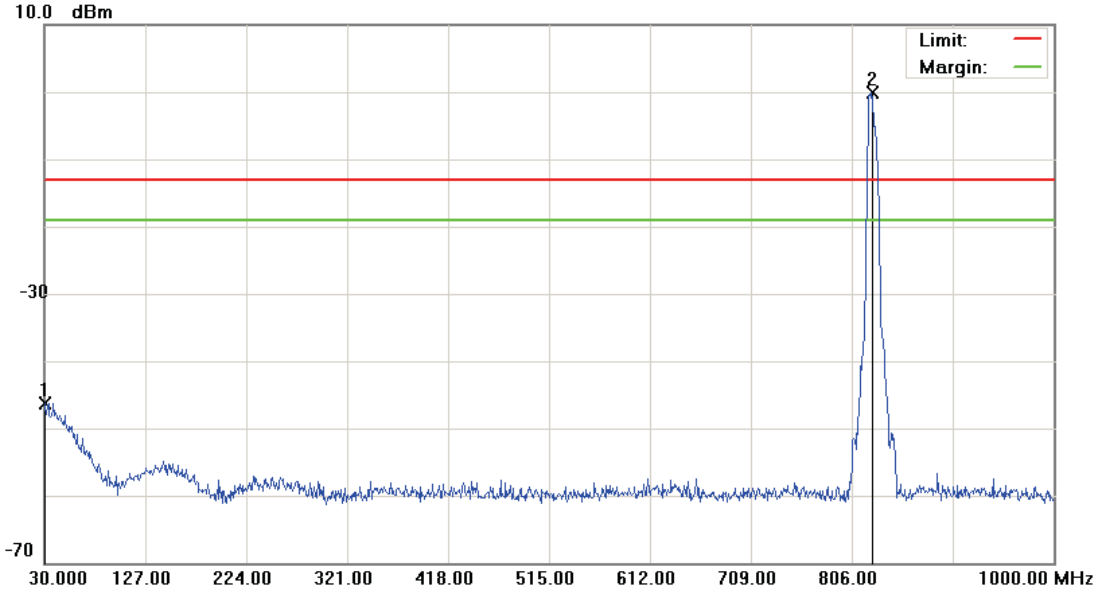
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 10 KHz VBW: 30 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.2395	-68.92	31.24	-37.68	-13.00	-24.68	peak			

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

File :AC779S(CH4132) Data :#3 Date: 2014/11/28 Time: 下午 03:28:47



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

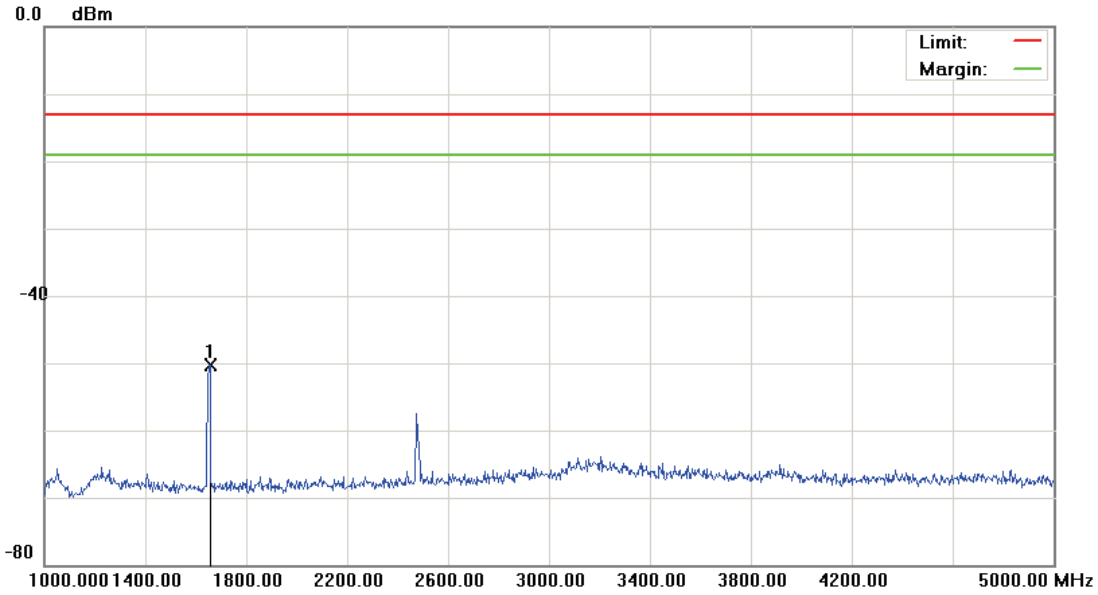
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 100 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		30.0000	-63.47	17.21	-46.26	-13.00	-33.26	peak			
2	*	824.9150	-3.91	3.84	-0.07	-13.00	12.93	peak			Tx

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

File :AC779S(CH4132) Data :#4 Date: 2014/11/28 Time: 下午 03:35:46



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

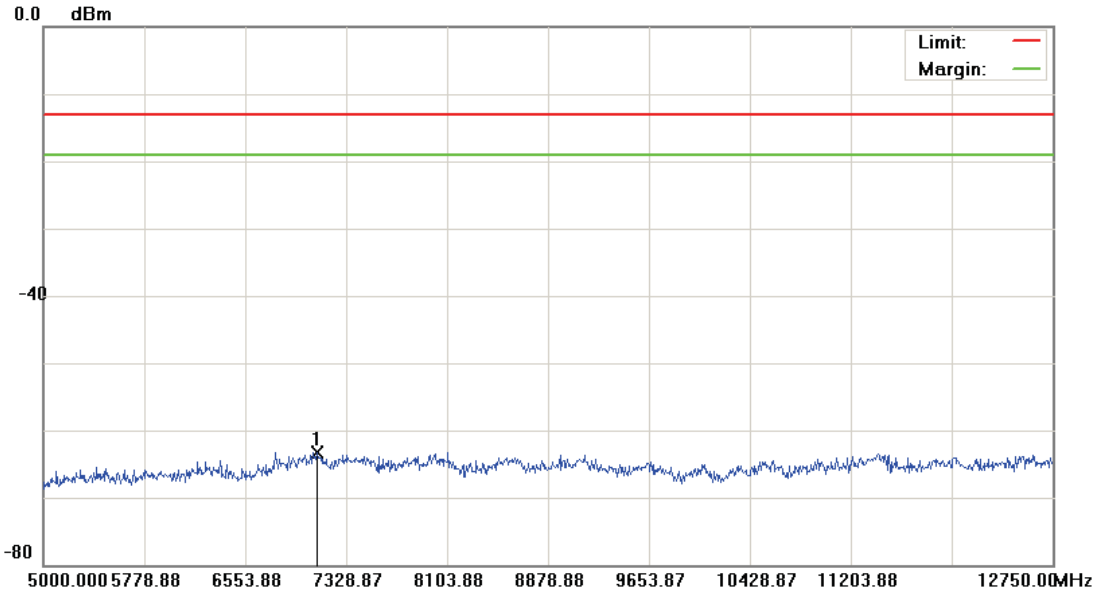
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1654.000	-54.70	4.45	-50.25	-13.00	-37.25	peak			

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

File :AC779S(CH4132) Data :#5 Date: 2014/11/28 Time: 下午 03:36:09



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

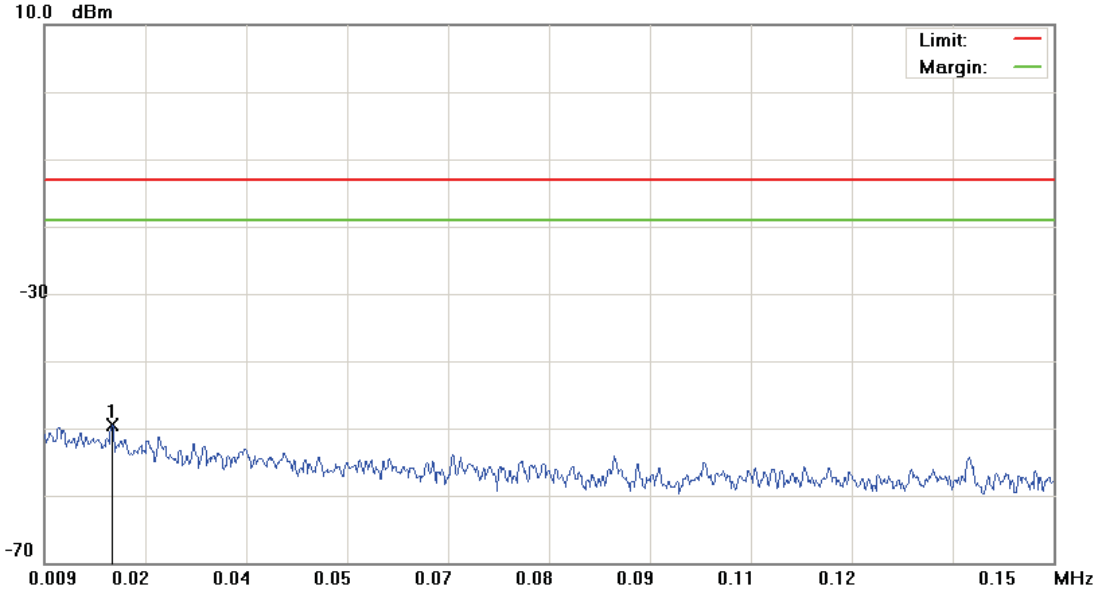
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7100.250	-68.32	5.09	-63.23	-13.00	-50.23	peak			

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

File :AC779S(CH4183) Data :#1 Date: 2014/11/28 Time: 下午 03:30:22



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

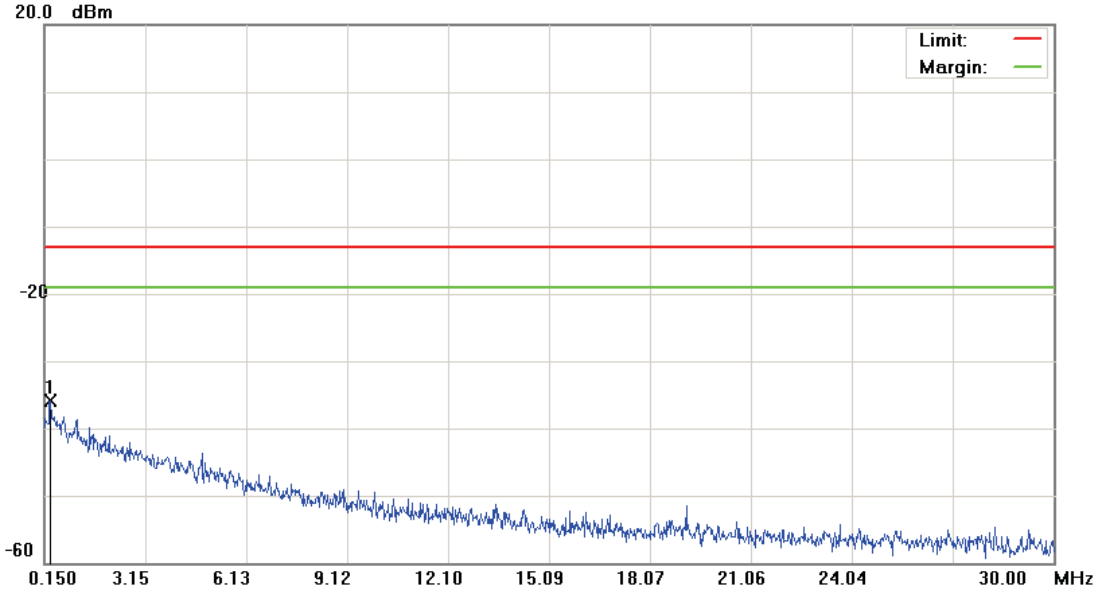
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1 KHz VBW: 3 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0184	-80.06	30.54	-49.52	-13.00	-36.52	peak			

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

File :AC779S(CH4183) Data :#2 Date: 2014/11/28 Time: 下午 03:30:46



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

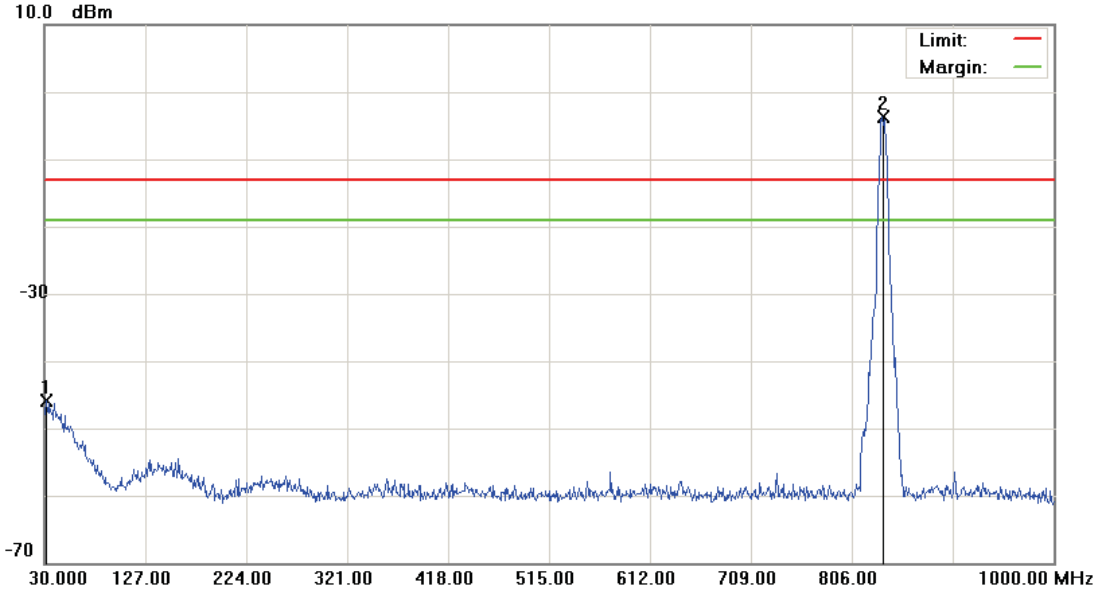
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 10 KHz VBW: 30 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.3291	-67.73	31.83	-35.90	-13.00	-22.90	peak			

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

File :AC779S(CH4183) Data :#3 Date: 2014/11/28 Time: 下午 03:31:10



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

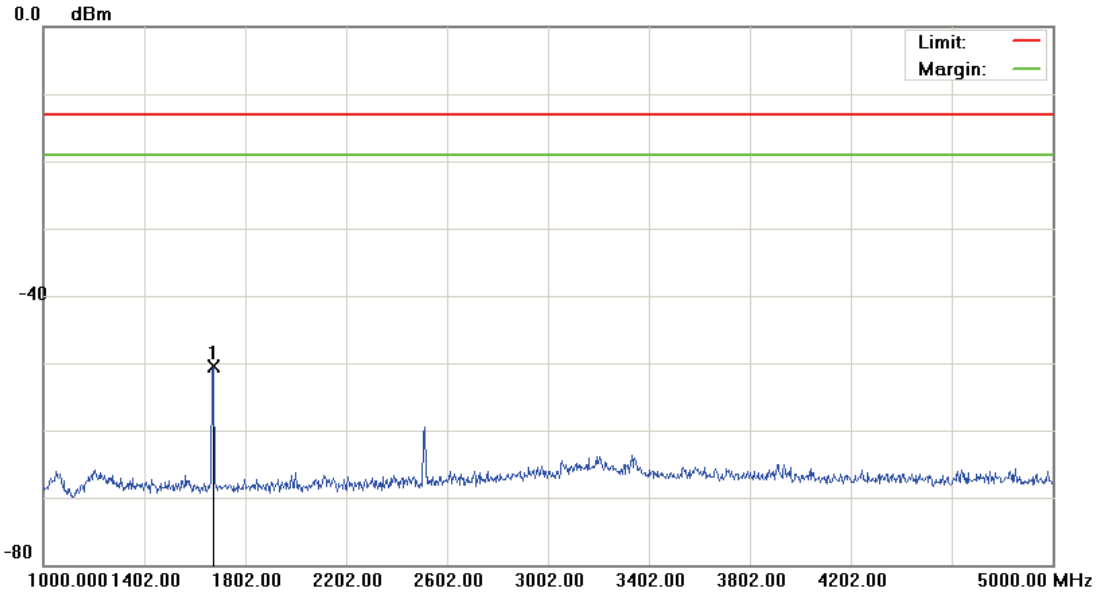
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 100 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		31.9400	-62.96	16.99	-45.97	-13.00	-32.97	peak			
2	*	835.5850	-7.68	3.95	-3.73	-13.00	9.27	peak			Tx

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

File :AC779S(CH4183) Data :#4 Date: 2014/11/28 Time: 下午 03:36:49



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

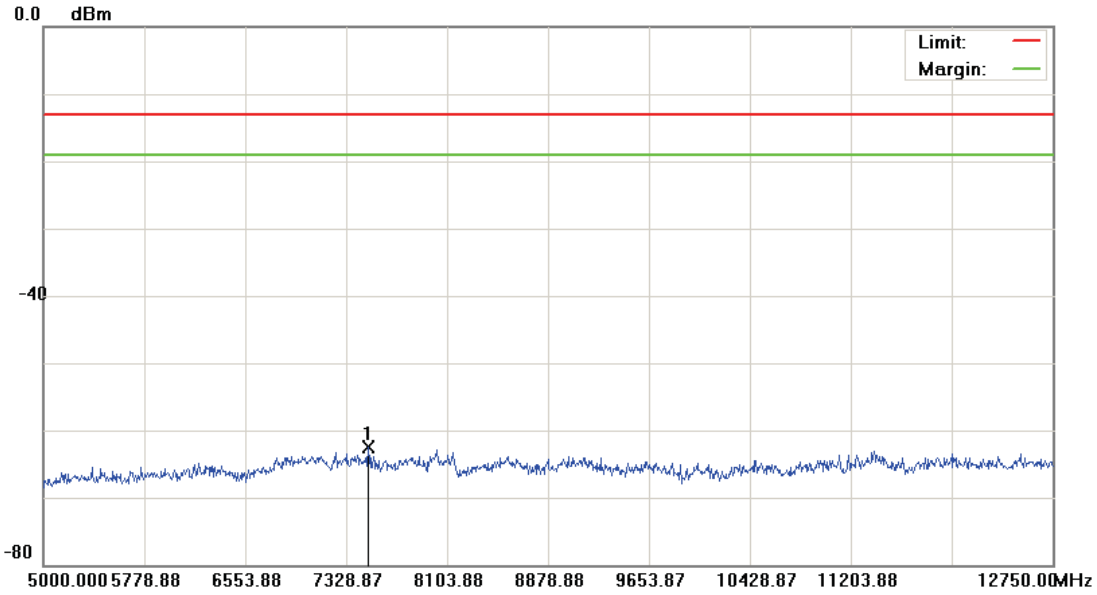
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1674.000	-54.97	4.46	-50.51	-13.00	-37.51	peak			

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

File :AC779S(CH4183) Data :#5 Date: 2014/11/28 Time: 下午 03:37:12



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

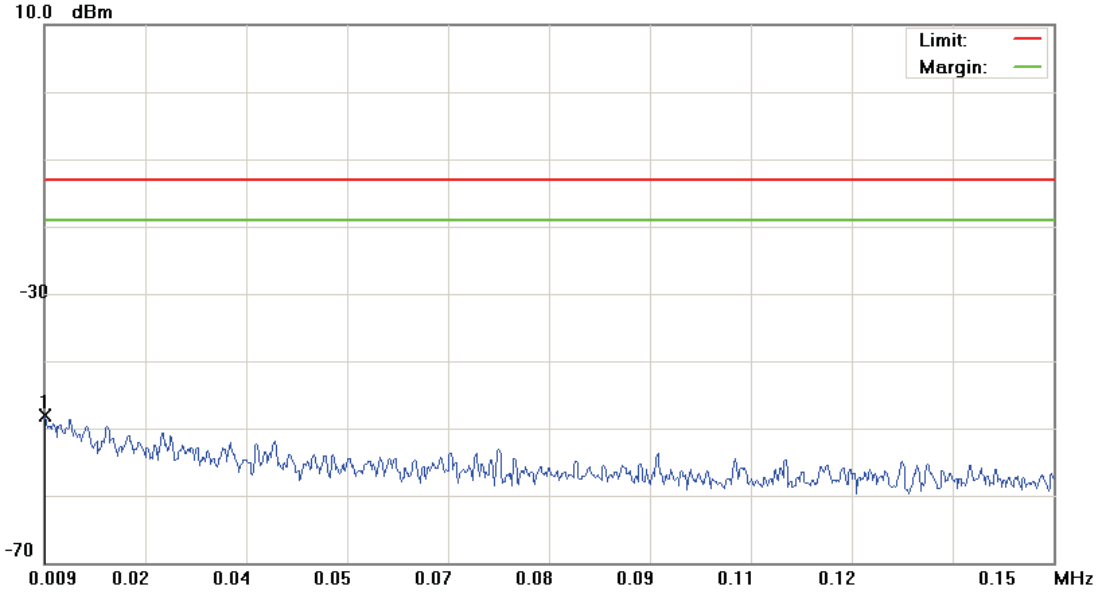
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7495.500	-67.63	5.21	-62.42	-13.00	-49.42	peak			

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

File :AC779S(CH4233) Data :#1 Date: 2014/11/28 Time: 下午 03:32:37



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

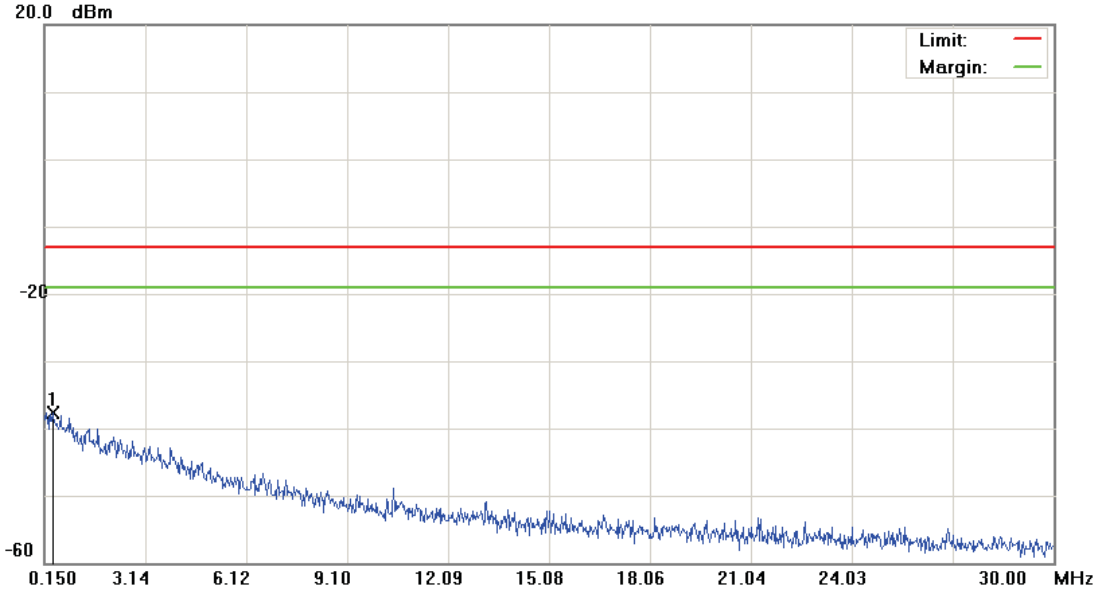
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1 KHz VBW: 3 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.0091	-78.60	30.58	-48.02	-13.00	-35.02	peak			

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

File :AC779S(CH4233) Data :#2 Date: 2014/11/28 Time: 下午 03:33:01



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

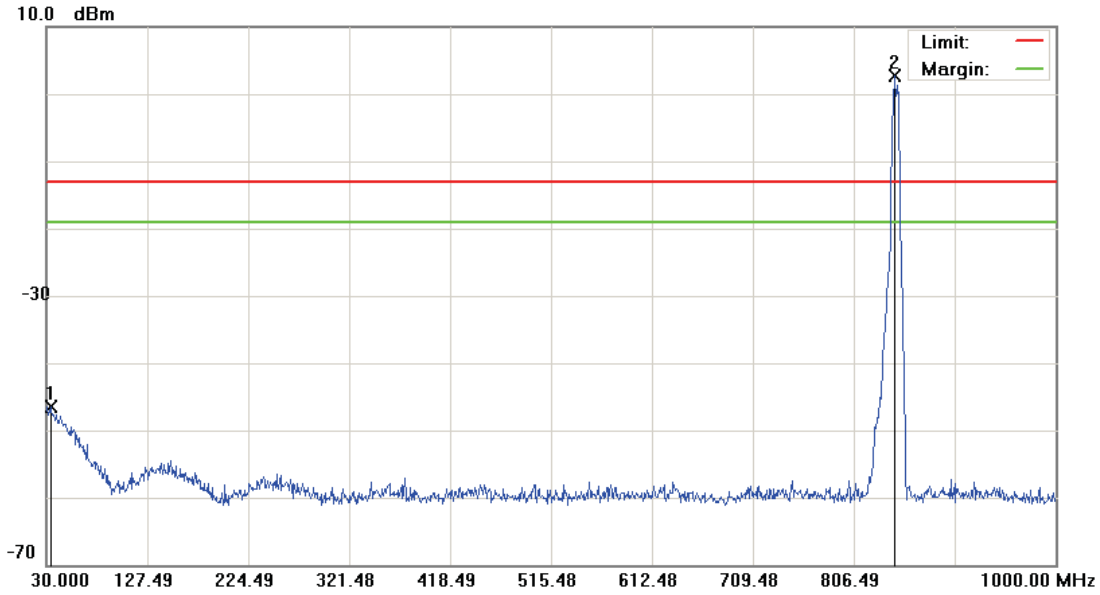
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 10 KHz VBW: 30 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	0.4037	-69.61	31.91	-37.70	-13.00	-24.70	peak			

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

File :AC779S(CH4233) Data :#3 Date: 2014/11/28 Time: 下午 03:33:25



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

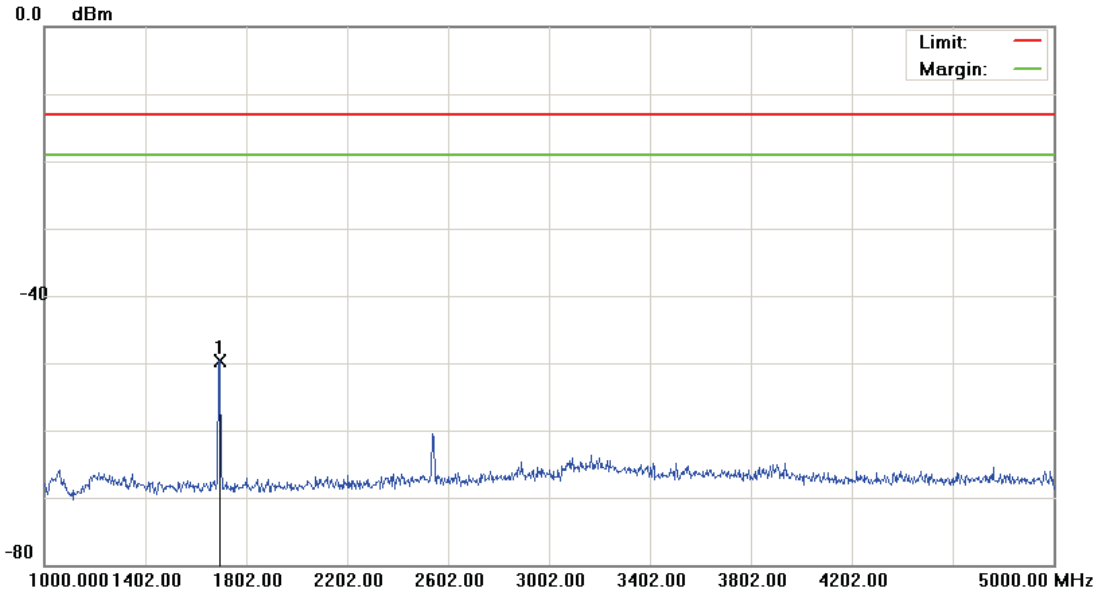
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 100 KHz VBW: 300 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1		34.3650	-63.28	16.72	-46.56	-13.00	-33.56	peak			
2	*	845.2850	-1.32	3.99	2.67	-13.00	15.67	peak			Tx

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

File :AC779S(CH4233) Data :#4 Date: 2014/11/28 Time: 下午 03:37:49



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

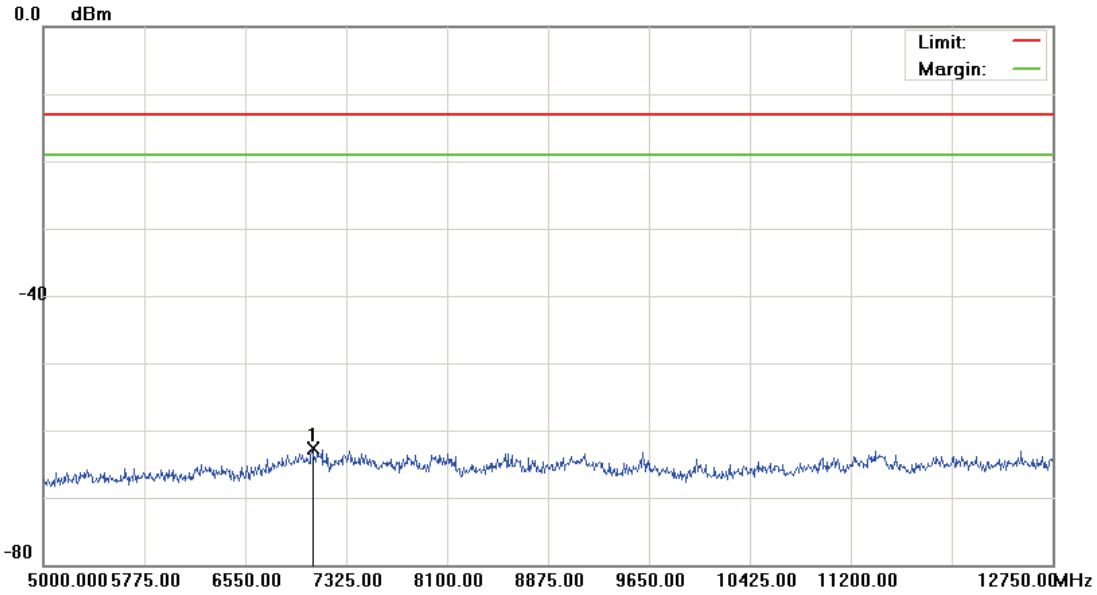
Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	1696.000	-54.11	4.48	-49.63	-13.00	-36.63	peak			

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

File :AC779S(CH4233) Data :#5 Date: 2014/11/28 Time: 下午 03:38:12



Site: site #1
Limit: FCC Part 22 conducted(9k-12.75G)
EUT: Mobile Hot Spot
M/N: AC779S-200
Mode: WCDMA Band V
Note:

Polarization: *Conducted Power*
Power: DC 3.8V
Distance:

Temperature: 26 ℃
Humidity: 55 %
RBW: 1000 KHz VBW: 3000 KHz

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBm	dB	dBm	dBm	dB	Detector	cm	degree	Comment
1	*	7065.375	-67.67	4.90	-62.77	-13.00	-49.77	peak			

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

8 Field Strength of Spurious Radiation Test

8.1. Limit

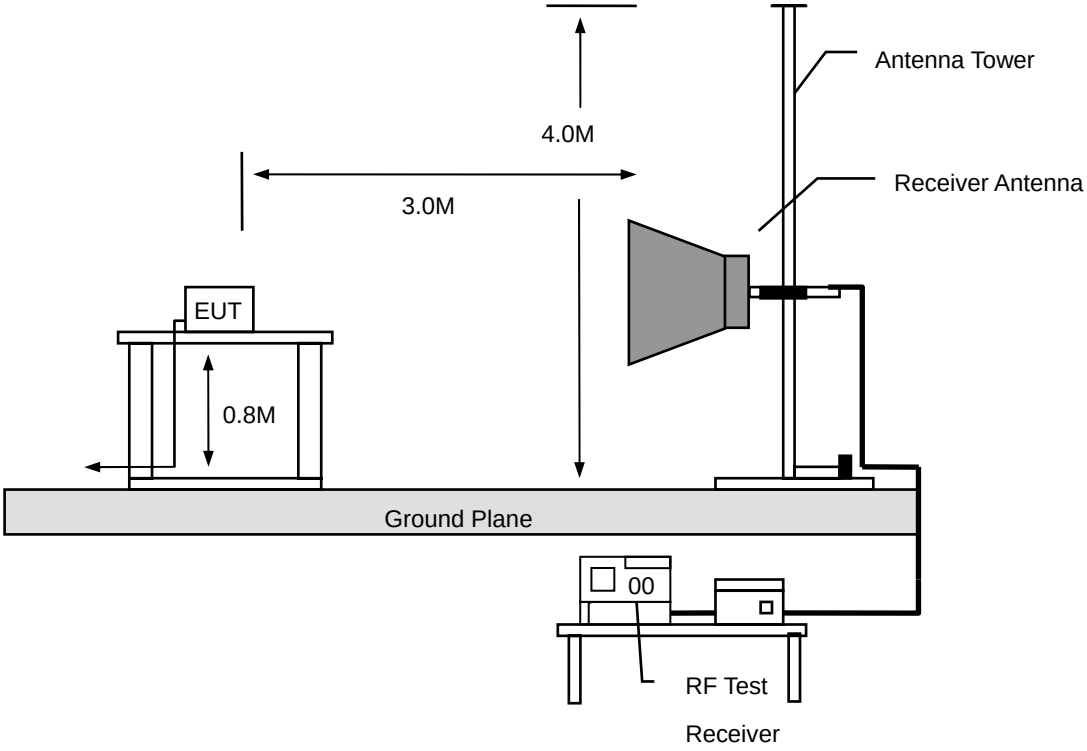
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

8.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
RF Pre-selector	Agilent	N9039A	MY46520256	01/10/2014	(1)
Spectrum Analyzer	Agilent	E4446A	MY46180578	01/10/2014	(1)
Pre Amplifier	Agilent	8449B	3008A02237	02/21/2014	(1)
Pre Amplifier	Agilent	8447D	2944A10961	02/21/2014	(1)
Broadband Antenna (30MHz~1GHz)	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	9163-270	07/22/2014	(1)
Horn Antenna (1~18GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	06/11/2014	(1)
Horn Antenna (18~40GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	07/02/2014	(1)
Test Site	ATL	TE01	888001	08/28/2014	(1)

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

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 tree 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 colts per meter (dBuV/m).

The actual field is intensity in 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) Amplitude (dBuV/m) = FI (dBuV) +AF (dBuV) +CL (dBuV)-Gain (dB)

FI= Reading of the field intensity.

AF= Antenna factor.

CL= Cable loss.

P.S Amplitude is auto calculate in spectrum analyzer.

(2) Actual Amplitude (dBuV/m) = Amplitude (dBuV)-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

8.5. Uncertainty

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

8.6. Test Result

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC779S-200	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	1	Date:	12/09/2014
Frequency:	1852.4 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
44.5500	-57.63	10.27	-47.36	-13.00	-34.36	peak	H
155.1300	-60.40	6.52	-53.88	-13.00	-40.88	peak	H
319.0600	-79.78	-1.51	-81.29	-13.00	-68.29	peak	H
429.6400	-75.27	2.96	-72.31	-13.00	-59.31	peak	H
579.9900	-68.71	6.60	-62.11	-13.00	-49.11	peak	H
743.9200	-81.42	8.22	-73.20	-13.00	-60.20	peak	H
3280.000	-71.40	11.96	-59.44	-13.00	-46.44	peak	H
4756.000	-74.57	14.96	-59.61	-13.00	-46.61	peak	H
7180.000	-76.10	23.52	-52.58	-13.00	-39.58	peak	H
126.0300	-71.53	14.98	-56.55	-13.00	-43.55	peak	V
266.6800	-67.72	-1.69	-69.41	-13.00	-56.41	peak	V
389.8700	-72.65	0.59	-72.06	-13.00	-59.06	peak	V
491.7200	-75.91	1.86	-74.05	-13.00	-61.05	peak	V
609.0900	-81.64	7.27	-74.37	-13.00	-61.37	peak	V
679.9000	-78.63	9.38	-69.25	-13.00	-56.25	peak	V
3088.000	-69.75	14.12	-55.63	-13.00	-42.63	peak	V
4756.000	-71.92	19.17	-52.75	-13.00	-39.75	peak	V
7156.000	-75.51	21.17	-54.34	-13.00	-41.34	peak	V

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC779S-200	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	1	Date:	12/09/2014
Frequency:	1880.0 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
126.0300	-73.01	-0.49	-73.50	-13.00	-60.50	peak	H
266.6800	-71.56	-5.30	-76.86	-13.00	-63.86	peak	H
429.6400	-74.00	2.96	-71.04	-13.00	-58.04	peak	H
544.1000	-80.08	7.24	-72.84	-13.00	-59.84	peak	H
623.6400	-81.26	6.90	-74.36	-13.00	-61.36	peak	H
774.9600	-80.26	9.68	-70.58	-13.00	-57.58	peak	H
3268.000	-70.65	11.92	-58.73	-13.00	-45.73	peak	H
4684.000	-76.04	14.58	-61.46	-13.00	-48.46	peak	H
7120.000	-76.05	23.34	-52.71	-13.00	-39.71	peak	H
126.0300	-71.77	14.98	-56.79	-13.00	-43.79	peak	V
160.9500	-81.41	17.97	-63.44	-13.00	-50.44	peak	V
266.6800	-68.60	-1.69	-70.29	-13.00	-57.29	peak	V
369.5000	-74.41	1.23	-73.18	-13.00	-60.18	peak	V
479.1100	-75.58	1.65	-73.93	-13.00	-60.93	peak	V
660.5000	-80.97	9.09	-71.88	-13.00	-58.88	peak	V
3268.000	-70.62	15.23	-55.39	-13.00	-42.39	peak	V
4828.000	-73.87	19.29	-54.58	-13.00	-41.58	peak	V
7120.000	-75.11	21.11	-54.00	-13.00	-41.00	peak	V

Standard:	FCC Part 24	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC779S-200	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	1	Date:	12/09/2014
Frequency:	1907.6 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
126.0300	-73.00	-0.49	-73.49	-13.00	-60.49	peak	H
220.1200	-74.96	-0.96	-75.92	-13.00	-62.92	peak	H
399.5700	-74.67	1.59	-73.08	-13.00	-60.08	peak	H
532.4600	-80.61	7.15	-73.46	-13.00	-60.46	peak	H
632.3700	-81.17	6.62	-74.55	-13.00	-61.55	peak	H
743.9200	-80.30	8.22	-72.08	-13.00	-59.08	peak	H
3220.000	-72.55	11.77	-60.78	-13.00	-47.78	peak	H
4780.000	-75.44	15.08	-60.36	-13.00	-47.36	peak	H
7168.000	-74.78	23.49	-51.29	-13.00	-38.29	peak	H
128.9400	-73.75	18.38	-55.37	-13.00	-42.37	peak	V
199.7500	-78.42	9.62	-68.80	-13.00	-55.80	peak	V
266.6800	-68.13	-1.69	-69.82	-13.00	-56.82	peak	V
370.4700	-74.45	1.18	-73.27	-13.00	-60.27	peak	V
429.6400	-74.17	0.69	-73.48	-13.00	-60.48	peak	V
651.7700	-80.55	8.71	-71.84	-13.00	-58.84	peak	V
3316.000	-71.94	15.52	-56.42	-13.00	-43.42	peak	V
4708.000	-74.01	19.09	-54.92	-13.00	-41.92	peak	V
7156.000	-74.19	21.17	-53.02	-13.00	-40.02	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC779S-200	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	12/09/2014
Frequency:	826.4 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
126.0300	-73.49	-0.49	-73.98	-13.00	-60.98	peak	H
266.6800	-72.18	-5.30	-77.48	-13.00	-64.48	peak	H
399.5700	-73.85	1.59	-72.26	-13.00	-59.26	peak	H
500.4500	-79.94	6.23	-73.71	-13.00	-60.71	peak	H
610.0600	-81.22	6.98	-74.24	-13.00	-61.24	peak	H
744.8900	-80.17	8.26	-71.91	-13.00	-58.91	peak	H
3280.000	-70.41	11.96	-58.45	-13.00	-45.45	peak	H
4804.000	-73.61	15.20	-58.41	-13.00	-45.41	peak	H
7204.000	-75.53	23.58	-51.95	-13.00	-38.95	peak	H
126.0300	-72.15	14.98	-57.17	-13.00	-44.17	peak	V
199.7500	-79.70	9.62	-70.08	-13.00	-57.08	peak	V
266.6800	-68.08	-1.69	-69.77	-13.00	-56.77	peak	V
370.4700	-74.48	1.18	-73.30	-13.00	-60.30	peak	V
491.7200	-76.42	1.86	-74.56	-13.00	-61.56	peak	V
679.9000	-78.22	9.38	-68.84	-13.00	-55.84	peak	V
3316.000	-72.04	15.52	-56.52	-13.00	-43.52	peak	V
4720.000	-73.43	19.11	-54.32	-13.00	-41.32	peak	V
7156.000	-76.95	21.17	-55.78	-13.00	-42.78	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC779S-200	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	12/09/2014
Frequency:	836.6 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
126.0300	-74.01	-0.49	-74.50	-13.00	-61.50	peak	H
266.6800	-72.30	-5.30	-77.60	-13.00	-64.60	peak	H
350.1000	-76.08	-1.02	-77.10	-13.00	-64.10	peak	H
499.4800	-78.29	6.19	-72.10	-13.00	-59.10	peak	H
549.9200	-81.28	7.11	-74.17	-13.00	-61.17	peak	H
714.8200	-81.10	7.25	-73.85	-13.00	-60.85	peak	H
3280.000	-72.33	11.96	-60.37	-13.00	-47.37	peak	H
4756.000	-73.96	14.96	-59.00	-13.00	-46.00	peak	H
7108.000	-74.64	23.32	-51.32	-13.00	-38.32	peak	H
126.0300	-72.21	14.98	-57.23	-13.00	-44.23	peak	V
199.7500	-81.39	9.62	-71.77	-13.00	-58.77	peak	V
266.6800	-67.40	-1.69	-69.09	-13.00	-56.09	peak	V
370.4700	-74.69	1.18	-73.51	-13.00	-60.51	peak	V
498.5100	-76.98	1.97	-75.01	-13.00	-62.01	peak	V
679.9000	-78.82	9.38	-69.44	-13.00	-56.44	peak	V
3316.000	-70.56	15.52	-55.04	-13.00	-42.04	peak	V
4768.000	-74.61	19.19	-55.42	-13.00	-42.42	peak	V
7060.000	-74.43	21.03	-53.40	-13.00	-40.40	peak	V

Standard:	FCC Part 22	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC779S-200	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	12/09/2014
Frequency:	846.6 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
126.0300	-73.60	-0.49	-74.09	-13.00	-61.09	peak	H
266.6800	-72.03	-5.30	-77.33	-13.00	-64.33	peak	H
389.8700	-74.82	0.75	-74.07	-13.00	-61.07	peak	H
510.1500	-79.82	6.52	-73.30	-13.00	-60.30	peak	H
643.0400	-80.82	6.43	-74.39	-13.00	-61.39	peak	H
738.1000	-81.69	7.99	-73.70	-13.00	-60.70	peak	H
3220.000	-72.66	11.77	-60.89	-13.00	-47.89	peak	H
4780.000	-75.45	15.08	-60.37	-13.00	-47.37	peak	H
7204.000	-76.19	23.58	-52.61	-13.00	-39.61	peak	H
126.0300	-71.35	14.98	-56.37	-13.00	-43.37	peak	V
159.9800	-83.07	19.00	-64.07	-13.00	-51.07	peak	V
266.6800	-66.74	-1.69	-68.43	-13.00	-55.43	peak	V
370.4700	-75.04	1.18	-73.86	-13.00	-60.86	peak	V
491.7200	-76.80	1.86	-74.94	-13.00	-61.94	peak	V
669.2300	-81.34	9.22	-72.12	-13.00	-59.12	peak	V
3196.000	-72.18	14.79	-57.39	-13.00	-44.39	peak	V
4756.000	-74.02	19.17	-54.85	-13.00	-41.85	peak	V
7132.000	-74.57	21.13	-53.44	-13.00	-40.44	peak	V

9 Frequency Stability (Temperature & Voltage Variation) Test

9.1. Limit

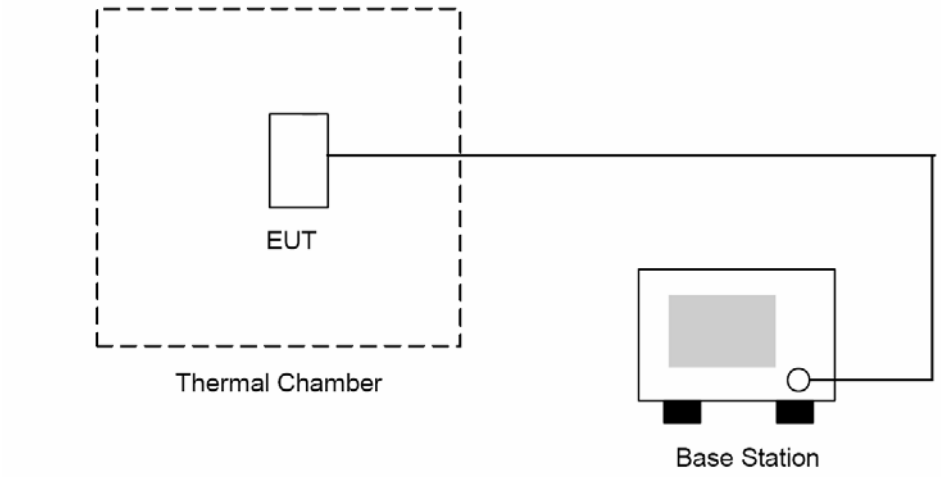
The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center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

9.2. Test Instruments

Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Remark
Universal Radio Communication Tester	R & S	CMU200	109369	08/11/2014	(2)
Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	08/14/2014	(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.

9.3. Setup



9.4. 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℃ 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℃ 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±5 ℃ 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.

9.5. Uncertainty

The measurement uncertainty is defined as for Frequency Stability (Temperature Variation) measurement is ± 10Hz.

9.6. Test Result

Model Number	AC779S-200					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 1					
Date of Test	12/08/2014				Test Site	TE05
Level	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	3.80	-30	2	0.001	±2.5	Pass
Normal	3.80	-20	-6	-0.003	±2.5	Pass
Normal	3.80	-10	5	0.003	±2.5	Pass
Normal	3.80	0	10	0.005	±2.5	Pass
Normal	3.80	10	7	0.004	±2.5	Pass
Battery full point	4.35	20	5	0.003	±2.5	Pass
Normal	3.80	20	13	0.007	±2.5	Pass
Battery cut-off point	3.50	20	9	0.005	±2.5	Pass
Normal	3.80	30	20	0.011	±2.5	Pass
Normal	3.80	40	26	0.014	±2.5	Pass
Normal	3.80	50	-14	-0.007	±2.5	Pass

Model Number	AC779S-200					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 2					
Date of Test	12/08/2014				Test Site	TE05
Level	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	3.80	-30	-2	-0.002	±2.5	Pass
Normal	3.80	-20	-20	-0.024	±2.5	Pass
Normal	3.80	-10	18	0.022	±2.5	Pass
Normal	3.80	0	7	0.008	±2.5	Pass
Normal	3.80	10	15	0.018	±2.5	Pass
Battery full point	4.35	20	-19	-0.023	±2.5	Pass
Normal	3.80	20	16	0.019	±2.5	Pass
Battery cut-off point	3.50	20	-4	-0.005	±2.5	Pass
Normal	3.80	30	8	0.010	±2.5	Pass
Normal	3.80	40	29	0.035	±2.5	Pass
Normal	3.80	50	-13	-0.016	±2.5	Pass