FCC 47 CFR PART 27

RF Test Report

Product Type	:	WWAN Mobile Hotspot Portable Device
Applicant	:	Netgear Inc.
Address	:	350 East Plumeria Drive, San Jose, California 95134 United States
Trade name	:	Netgear
Model No.	:	AC785S-500
Test Specification	:	FCC 47 CFR PART 27: Oct. 2013 Canada RSS-139 ISSUE 2: Feb. 2009 Canada RSS-Gen ISSUE 4: Nov., 2014 ANSI C63.4:2014 ANSI/TIA-603-C-2004
Application Purpose	:	Original
Receive Date	:	Sep. 11, 2014
Test Period	:	Sep. 16 ~ Oct. 08, 2014
Issue Date	:	Dec. 31, 2014

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
IC Test Firm Information: 7381A-1

Revision History

Rev.	Issue Date	Revisions	Revised By
00	Nov. 27, 2014	Initial Issue	
01	Dec. 31, 2014	Revised report information.	Peggy Chang

Verification of Compliance

Issued Date: 12/31/2014

Product Type	:	WWAN Mobile Hotspot Portable Device
Applicant	:	Netgear Inc.
Address	:	350 East Plumeria Drive, San Jose, California 95134 United States
Trade Name	:	Netgear
Model Number	:	AC785S-500
FCC ID	:	PY3AC785S
EUT Rated Voltage	:	DC 5.0V, 1.0A
Test Voltage	:	120 Vac / 60Hz ; DC 3.7V
Applicable Standard	:	FCC 47 CFR PART 27 SUBPART L: Oct. 2013 CANADA RSS-139 Issue 2, February 2009 CANADA RSS-Gen ISSUE 4: Nov., 2014 ANSI C63.4:2014 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 IC Test Firm Information: 7381A-1 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, California 95134 United States			
Manufacturer		Netgear Inc.			
Manufacturer Address		Suite 168 – 10760 Shellbridge Way, Richmond, BC Canada V6X 3H1			
Product Type		WWAN Mobile Hotspot Portable Device			
Trade Name		Netgear			
Model Number		AC785S-500			
IMEI No.		014197000002053			
FCC ID		PY3AC785S			
Mode	WCDMA (RMC 12.2K)	Band	UL Frequency (MHz)	DL Frequency (MHz)	Modulation
		IV	1712.4 ~ 1752.6	2112.4 ~ 2152.6	QPSK
Type of Antenna		IFA Antenna			
Antenna Gain (dBi)		2.86 dBi			
Max. RF Output Power		26.71 dBm / 0.469 W			
Max. EIRP		22.53 dBm / 0.179 W			
Emission Designator		4M17F9W			

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 IV Link Mode
Mode 2: 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.

Tested System Details

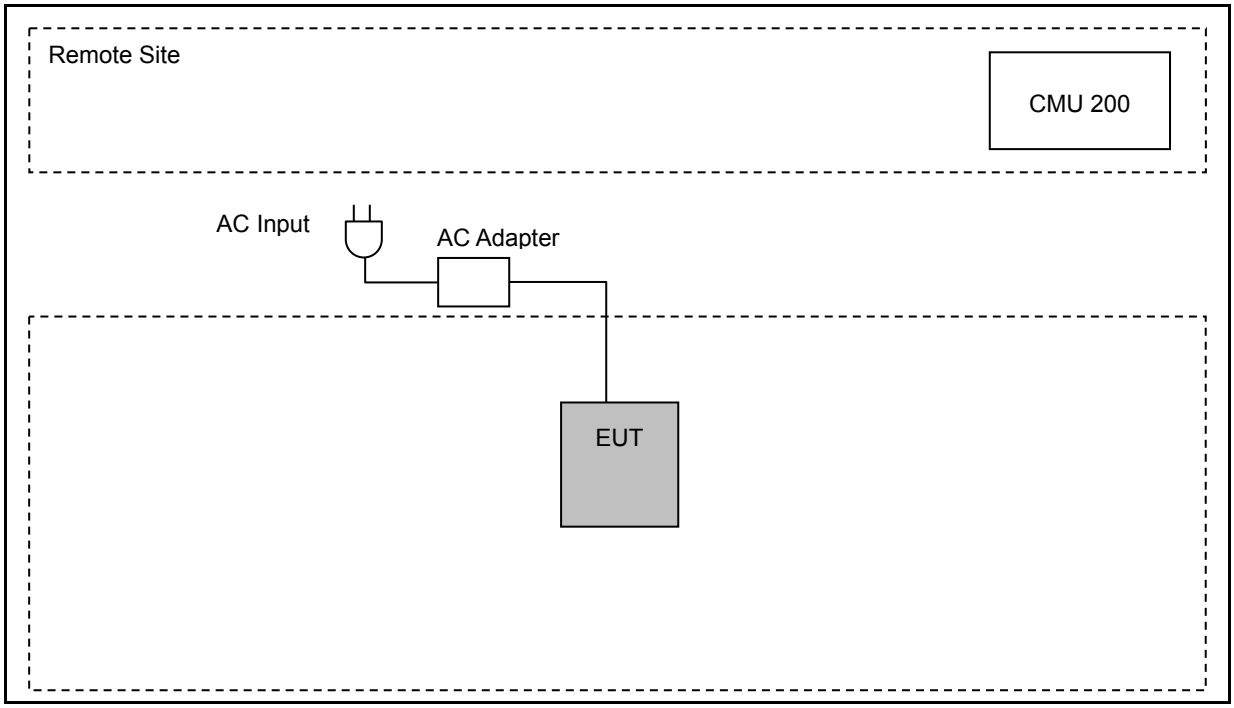
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1.	Universal Radio Communication Tester	R&S	CMU200	109369	N/A

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
Equivalent Isotropic Radiated Power	§27.50(d)(2)	RSS-139 (6.4) SRSP-513(5.1.2)	< 1 Watts	Pass
Peak to average ratio	§27.50(d)	RSS-139 (6.4)	< 13 dB	Pass
Emission Bandwidth & Occupied Bandwidth	§2.1049 §27.53(g)	RSS-Gen (6.6)	N/A	Pass
Band Edge Measurement	§2.1051 §27.53(g)	RSS-139 (6.5)	< $43+10\log_{10}$(P[Watts])	Pass
Conducted Emission	§2.1051 §27.53(g)	RSS-139 (6.5)	< $43+10\log_{10}$(P[Watts])	Pass
Field Strength of Spurious Radiation	§2.1053 §27.53(g)	RSS-139 (6.5)	< $43+10\log_{10}$(P[Watts])	Pass
Frequency Stability for Temperature & Voltage	§2.1055 §27.54	RSS-139(6.3)	< 2.5 ppm	Pass

2 RF Output Power Test

2.1. Limit

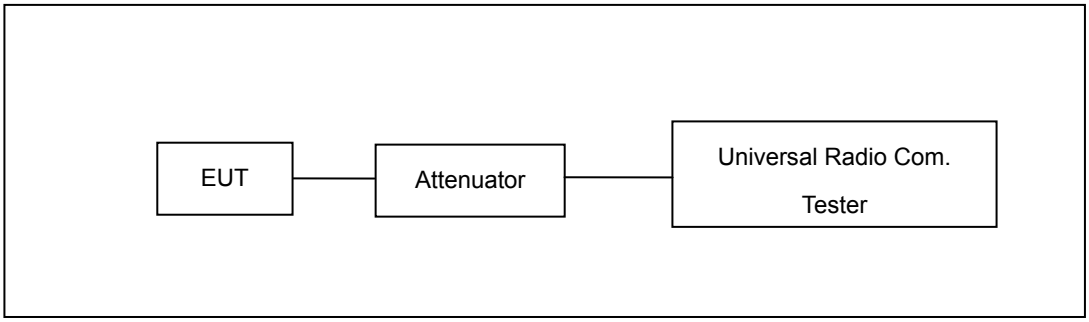
N/A

2.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Remark
Universal Radio Communication Tester	ROHDE & SCHWARZ	CMU200	109369	08/11/2014	(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

1. Set base station for EUT at WCDMA Band IV, power level was set to maximum.
2. Select lowest, middle, and highest channels for each band.

HSDPA Data Devices setup

Sub-test	βc	βd	βd (SF)	βc/βd	βhs(1,2)	CM (dB)(3)	MRP (dB)(3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15(4)	15/15(4)	64	12/15(4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note

1. Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 ⇔ Ahs = βhs/βc = 30/15 ⇔ βhs= 30/15 *βc
2. For theHS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude(EVM) with HS-DPCCH test in clause 5.13.1A and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and Δ_{NACK} = 30/15 with βhs = 30/15 *βc and Δ_{CQI} = 24/15 with βhs = 24/15*βc
3. CM = 1 for βc/βd =12/15, βhs/βc=24/15. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.
4. For subtest 2 the βc/βd ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to βc = 11/15 and βd = 15/15.

Table 1. Setup for Release 5 HSDPA

2.5. Uncertainty

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

2.6. Test Result

Model Number	AC785S-500					
Test Item	RF Output Power					
Date of Test	10/08/2014				Test Site	TE05
Bands	Sub-Test	Frequency (MHz)	Average Power		Peak Power	
			(dBm)	(W)	(dBm)	(W)
WCDMA IV (RMC 12.2K)	-----	1712.4	23.15	0.207	26.47	0.444
		1732.6	23.30	0.214	**26.71**	**0.469**
		1752.6	23.37	0.217	26.21	0.418
HSDPA IV	1	1712.4	22.30	0.170	25.60	0.363
		1732.6	22.51	0.178	25.86	0.385
		1752.6	22.48	0.177	25.38	0.345
	2	1712.4	22.29	0.169	25.58	0.361
		1732.6	22.48	0.177	25.85	0.385
		1752.6	22.47	0.177	25.36	0.344
	3	1712.4	21.82	0.152	25.12	0.325
		1732.6	22.06	0.161	25.39	0.346
		1752.6	22.03	0.160	24.97	0.314
	4	1712.4	21.80	0.151	25.10	0.324
		1732.6	22.03	0.160	25.36	0.344
		1752.6	22.01	0.159	24.95	0.313
HSUPA IV	1	1712.4	21.80	0.151	25.10	0.324
		1732.6	22.01	0.159	25.36	0.344
		1752.6	21.98	0.158	24.88	0.308
	2	1712.4	19.86	0.097	23.15	0.207
		1732.6	20.06	0.101	23.40	0.219
		1752.6	20.02	0.100	22.91	0.195
	3	1712.4	20.83	0.121	24.13	0.259
		1732.6	21.03	0.127	24.39	0.275
		1752.6	20.99	0.126	23.93	0.247
	4	1712.4	19.83	0.096	23.13	0.206
		1732.6	20.03	0.101	23.38	0.218
		1752.6	20.00	0.100	22.86	0.193
	5	1712.4	21.76	0.150	25.07	0.321
		1732.6	21.96	0.157	25.33	0.341
		1752.6	21.95	0.157	24.86	0.306

Note: The testing result was used peak detector.

3 Effective Radiated Power / Equivalent Isotropic Radiated Power Test

3.1. Limit

For FCC Part 27.50(d)(2): The EIRP of mobile transmitters are limited to 1 watt for 1710~1755 MHz.

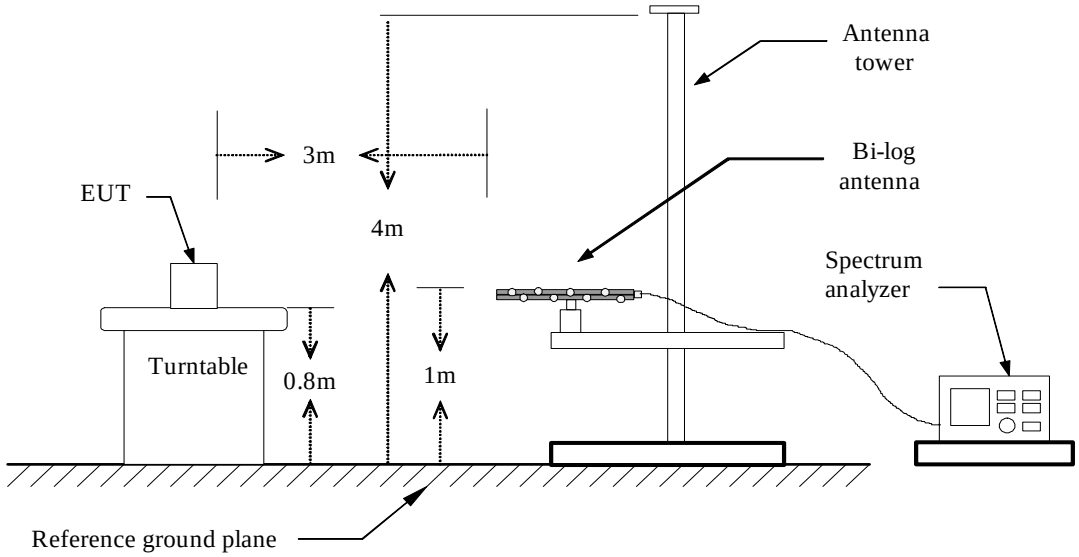
3.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model No.	Serial No.	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)

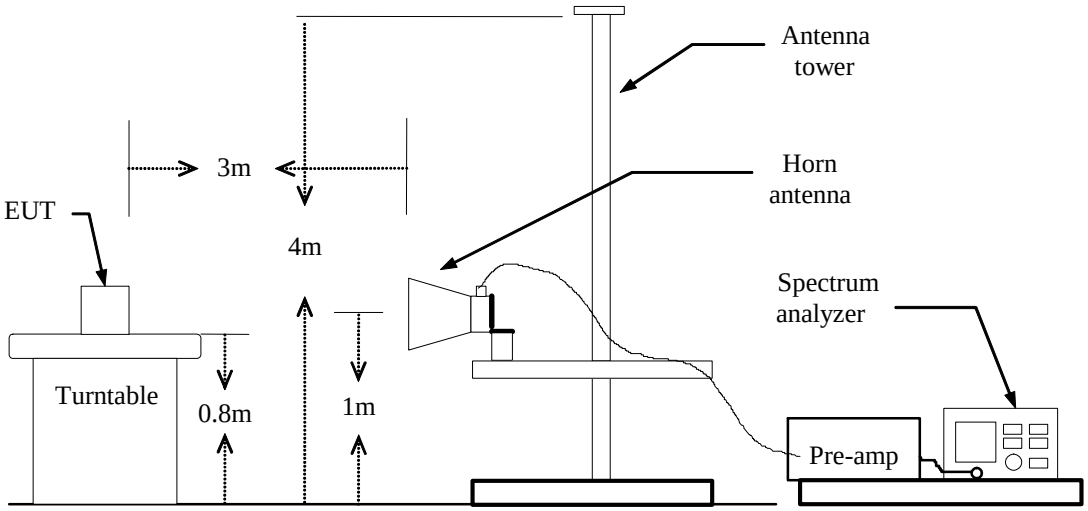
Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.
Note: N.C.R. = No Calibration Request.

3.3. Test Setup

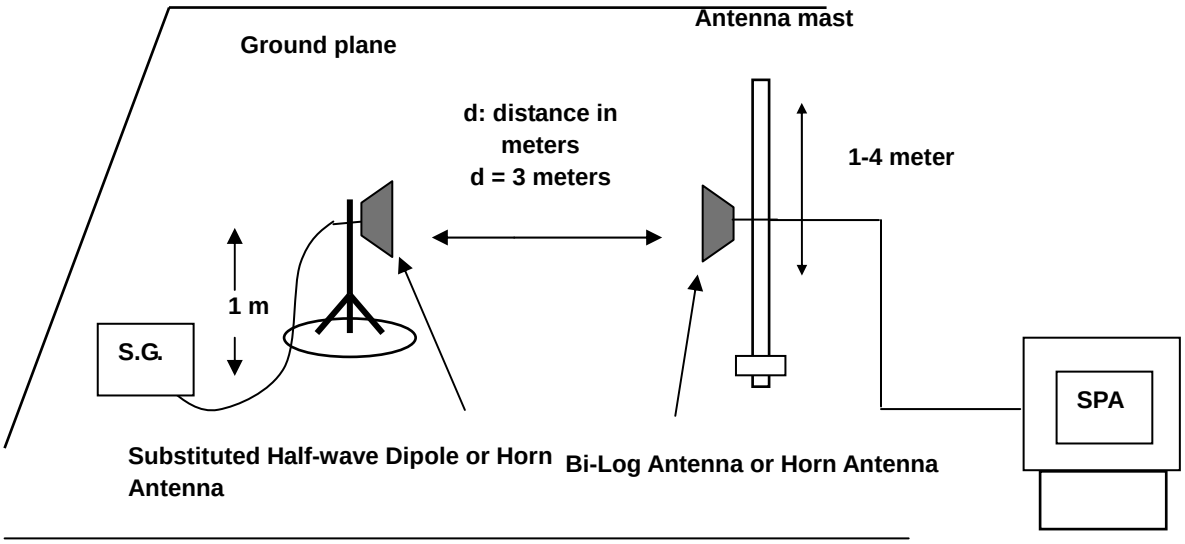
Below 1 GHz



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	AC785S-500						
Test Item	E.I.R.P.						
Test Mode	Mode 1						
Date of Test	09/17/2014				Test Site	TE01	
Bands	Frequency (MHz)	Ant. Polar.	Read Level (dBm)	Correction factor (dB)	E.IR.P.		Limit (W)
					(dBm)	(W)	
WCDMA IV (RMC 12.2K)	1712.4	H	13.73	5.27	19.00	0.079	< 1
		V	17.25	5.28	**22.53**	**0.179**	< 1
	1732.6	H	14.06	5.43	19.49	0.089	< 1
		V	17.03	5.43	22.46	0.176	< 1
	1752.6	H	12.75	5.58	18.33	0.068	< 1
		V	16.76	5.58	22.34	0.171	< 1

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.

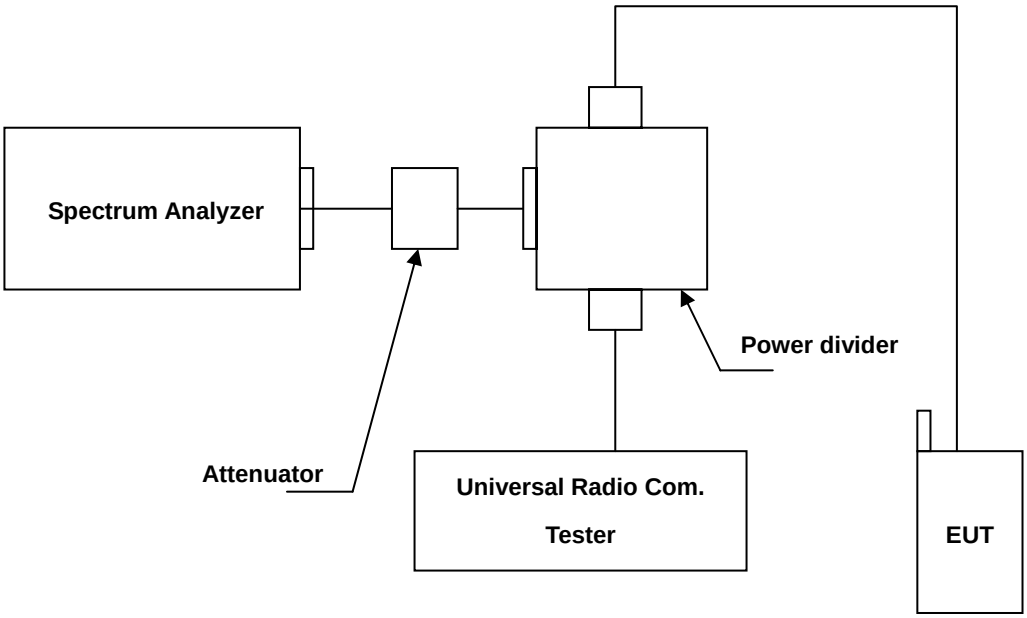
4.2. Test Instruments

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	11/05/2013	(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 27:

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%.

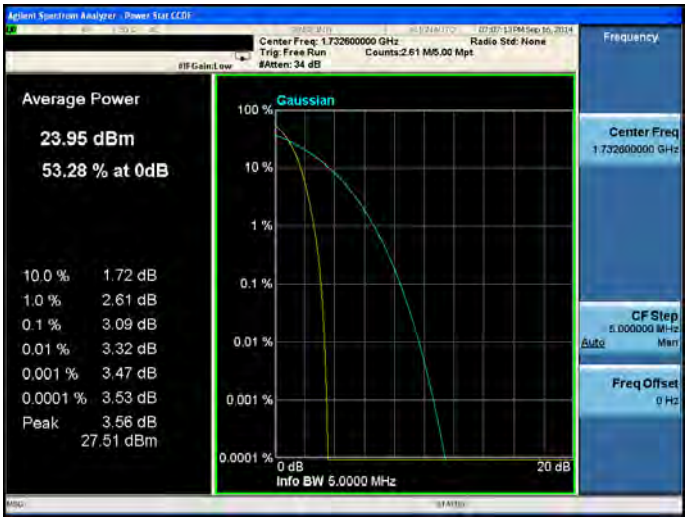
4.5. Uncertainty

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

4.6. Test Result

Model Number	AC785S-500				
Test Item	Peak to Average Ratio				
Test Mode	Mode 1				
Date of Test	09/16/2014			Test Site	TE05
Bands	Channel	Frequency (MHz)	Peak to Average Ratio (dB)	Limit (dB)	
WCDMA IV	1312	1712.4	3.15	< 13	
	1413	1732.6	3.09	< 13	
	1513	1752.6	2.58	< 13	

4.7. Test Graphs

Mode 1	
1712.4 MHz	
1732.6 MHz	
1752.6 MHz	

5 Emission Bandwidth & Occupied Bandwidth Test

5.1. Limit

The Occupied Bandwidth Limit:

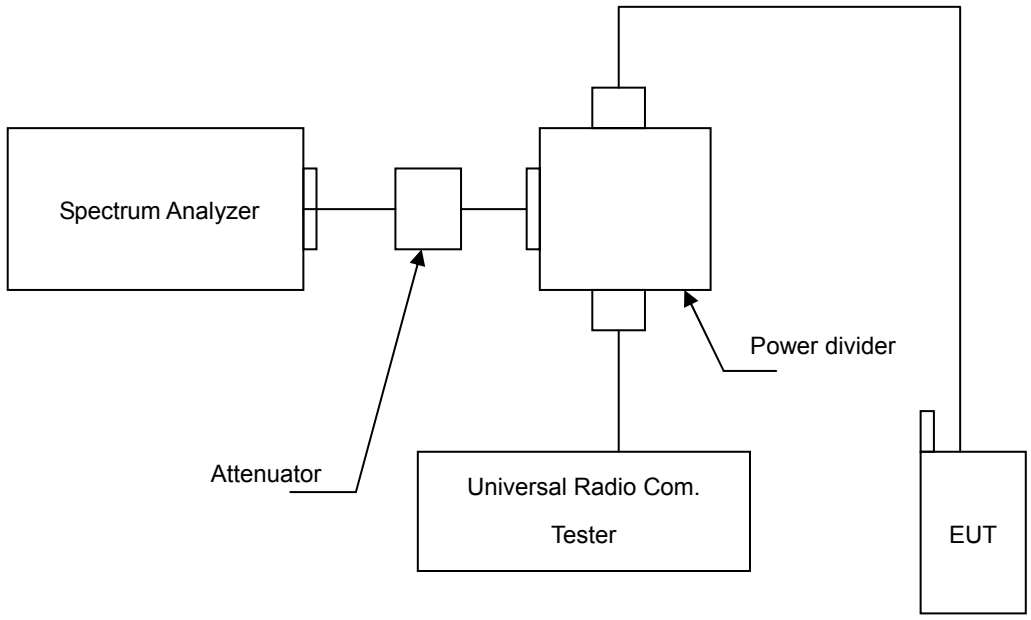
N/A.

5.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	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 27:

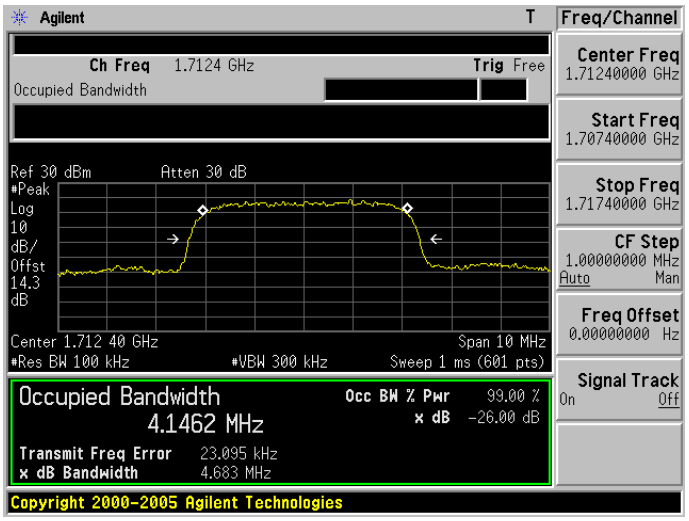
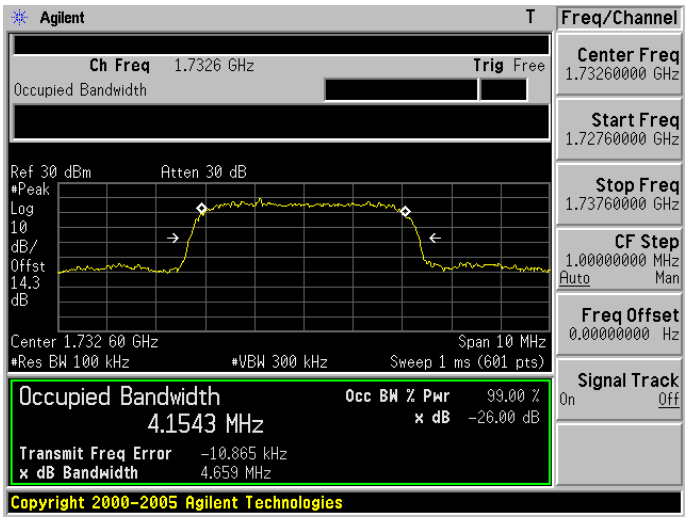
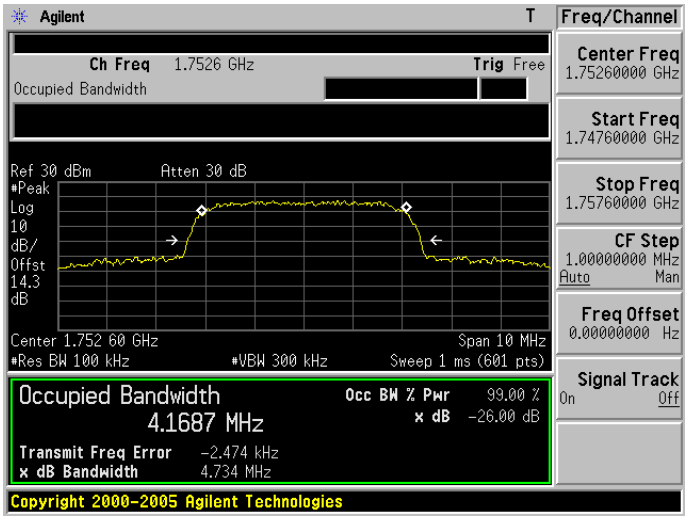
1. The EUT was connected to Spectrum Analyzer and Base Station via power divider.
2. The occupied bandwidth of middle channel for the highest and lowest RF powers was measured.

5.5. Uncertainty

The measurement uncertainty is defined as ± 10Hz

5.6. Test Result

Model Number	AC785S-500					
Test Item	Emission Bandwidth & Occupied Bandwidth					
Test Mode	Mode 1					
Date of Test	09/16/2014				Test Site	TE05
Channel No.	Frequency (MHz)	-26dB Bandwidth (MHz)	99 % Bandwidth (MHz)	Limit	Note	
1312	1712.4	4.683	4.1462	N/A	RBW:100kHz , VBW:300kHz	
1413	1732.6	4.659	4.1543	N/A	RBW:100kHz , VBW:300kHz	
1513	1752.6	4.734	4.1687	N/A	RBW:100kHz , VBW:300kHz	

Mode 1	
1712.4 MHz	
1732.6 MHz	
1752.6 MHz	

6 Band Edge Test

6.1. Limit

The Band Edge Limit:

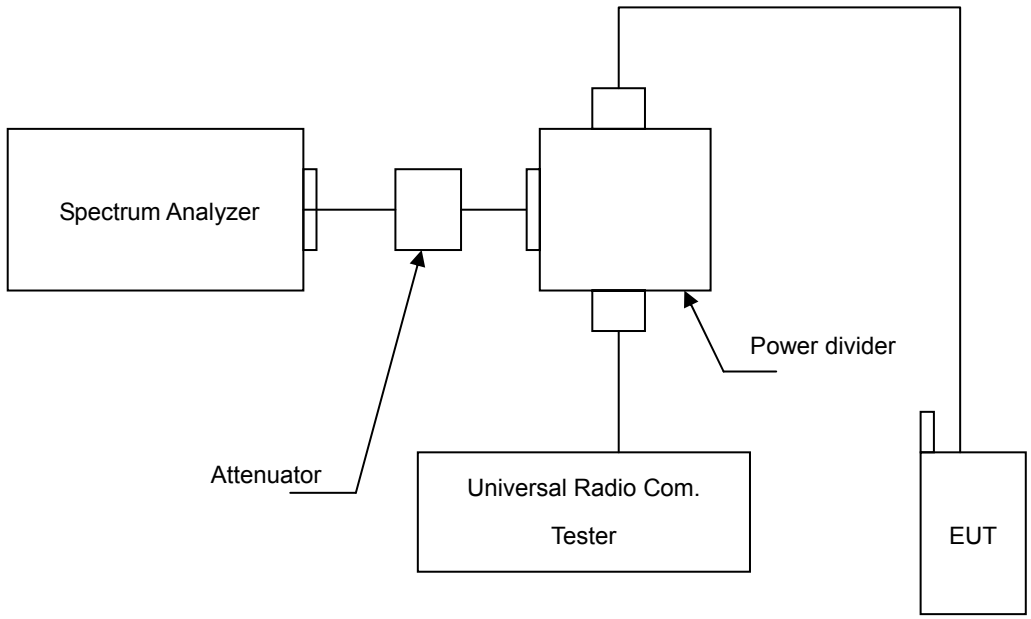
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.

6.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	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 27:

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:RB=51 kHz; VB=160 kHz for WCDMA Band IV.

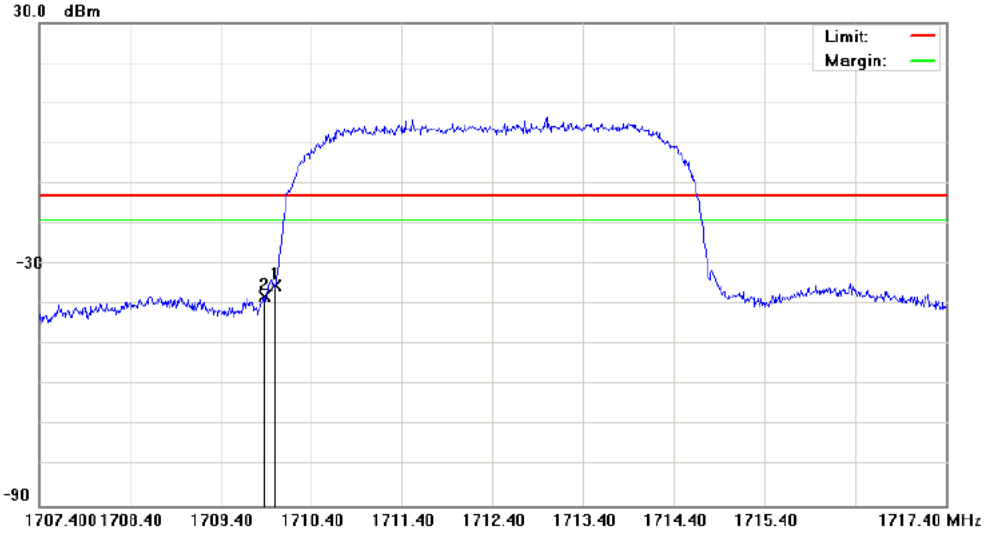
6.5. Uncertainty

The measurement uncertainty is defined as ± 10Hz

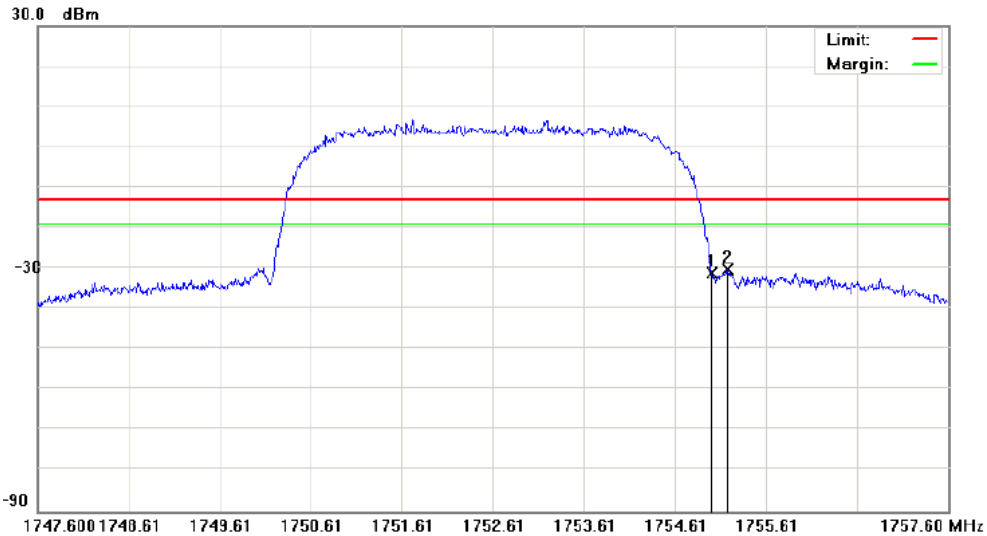
6.6. Test Result

Model Number	AC785S-500				
Test Item	Band Edge				
Test Mode	Mode 1				
Date of Test	09/16/2014		Test Site	TE05	
Band	Channel	Frequency (MHz)	Band Edge (dBm)	Limit (dBm)	Result
Lower	1312	1710.00	-35.13	-13	Pass
Higher	1513	1755.00	-30.13	-13	Pass

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.

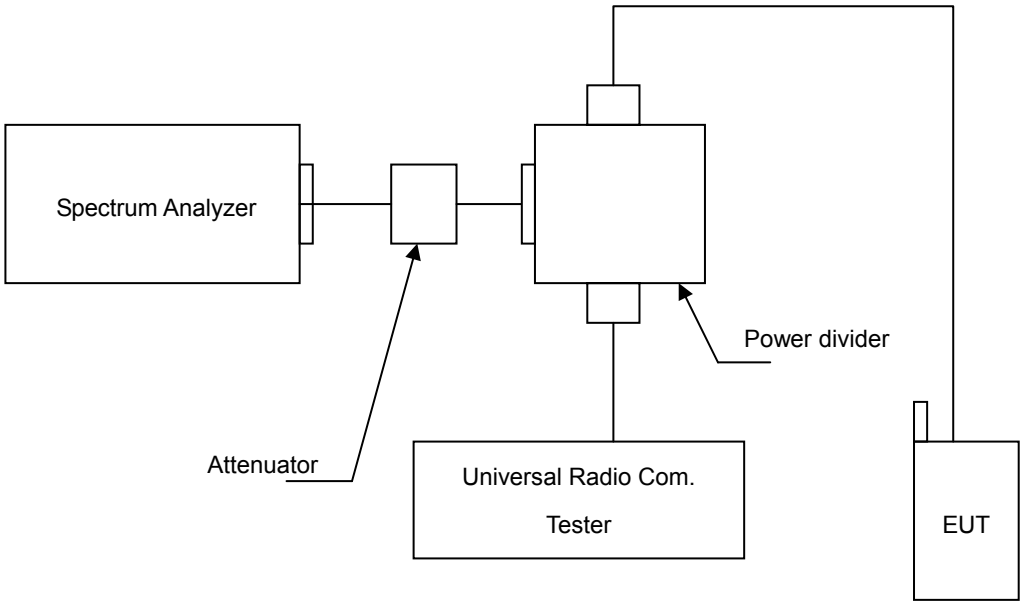
7.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	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.	-----

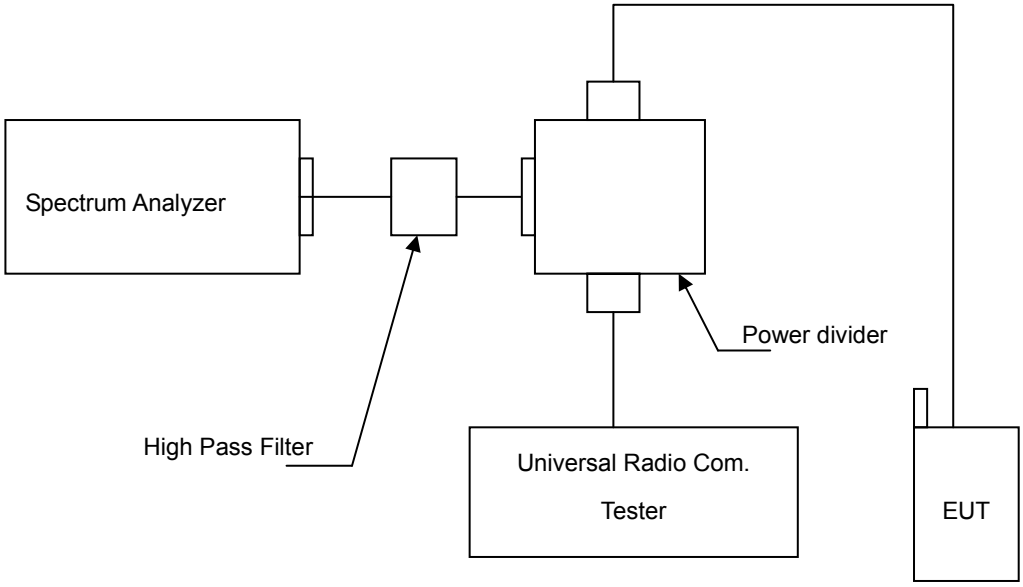
Remark: (1) Calibration period 1 year. (2) Calibration period 2 years.
Note: N.C.R. = No Calibration Request.

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 WCDMA Band IV RB=1MHz, VB=1MHz.

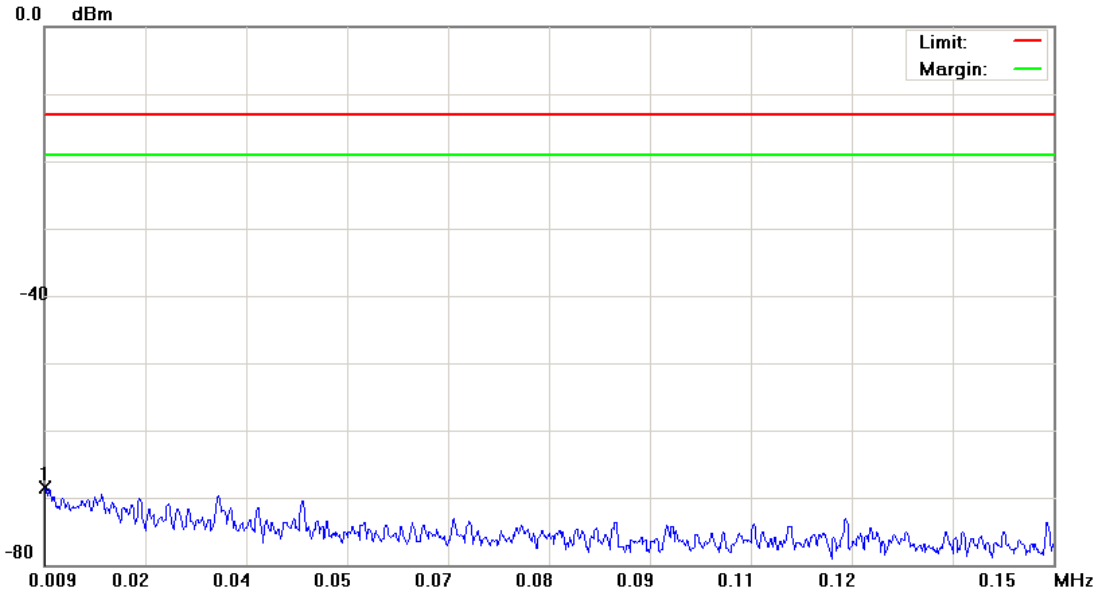
7.5. Uncertainty

The measurement uncertainty is evaluated as ± 2.24 dB.

7.6. Test Result

Model Number	AC785S-500		
Test Item	Conducted Spurious Emission		
Test Mode	Mode 1		
Date of Test	09/16/2014	Test Site	TE05

File :AC785S-500(CH1312) Data :#1 Date: 2014/9/16 Time: 下午 02:15:09



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

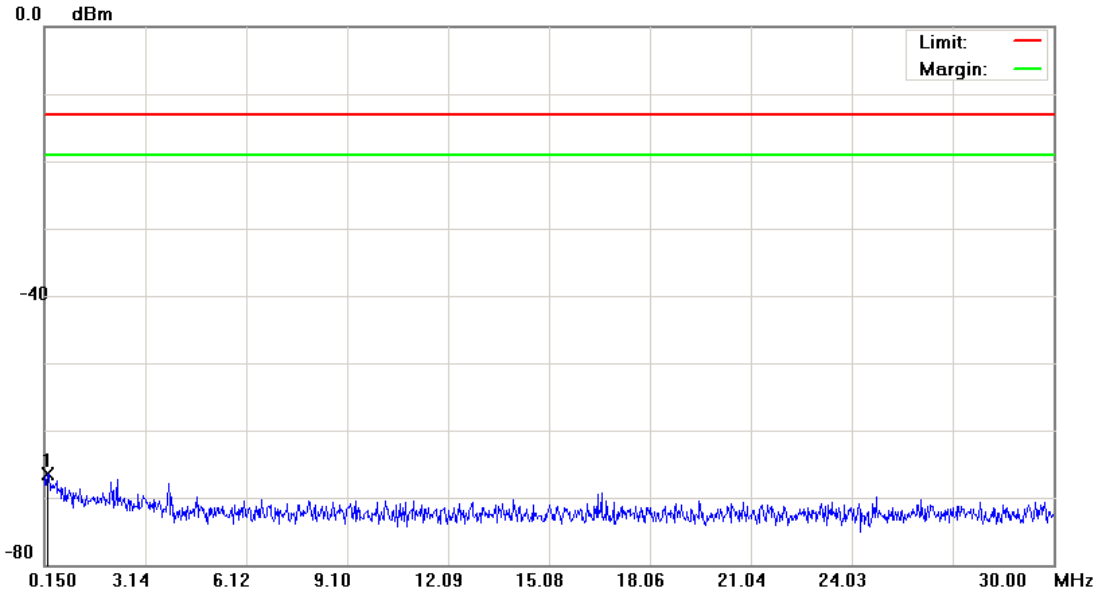
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	-79.81	11.32	-68.49	-13.00	-55.49	peak			

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

File :AC785S-500(CH1312) Data :#2 Date: 2014/9/16 Time: 下午 02:15:33



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

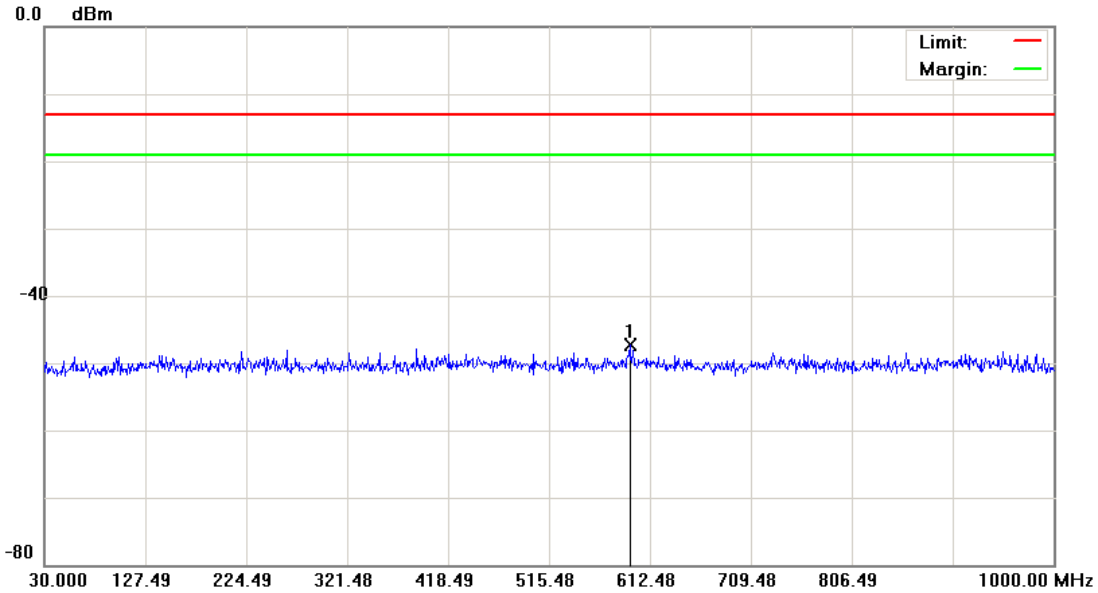
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	-79.05	12.50	-66.55	-13.00	-53.55	peak			

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

File :AC785S-500(CH1312) Data :#3 Date: 2014/9/16 Time: 下午 02:15:57



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

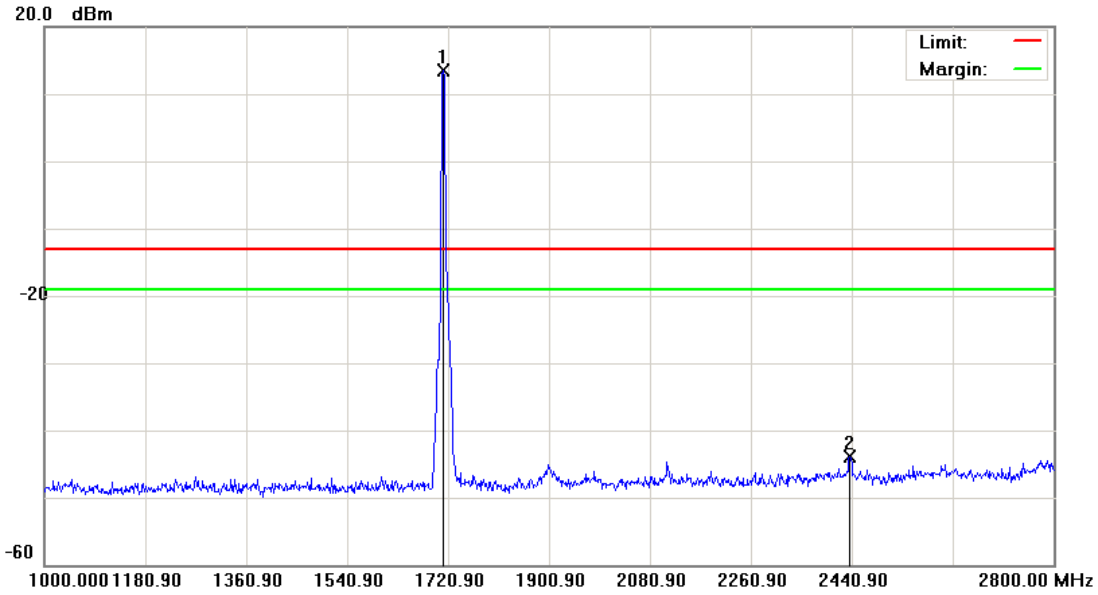
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	592.6000	-60.47	13.19	-47.28	-13.00	-34.28	peak			

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

File :AC785S-500(CH1312) Data :#4 Date: 2014/9/16 Time: 下午 02:53:35



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

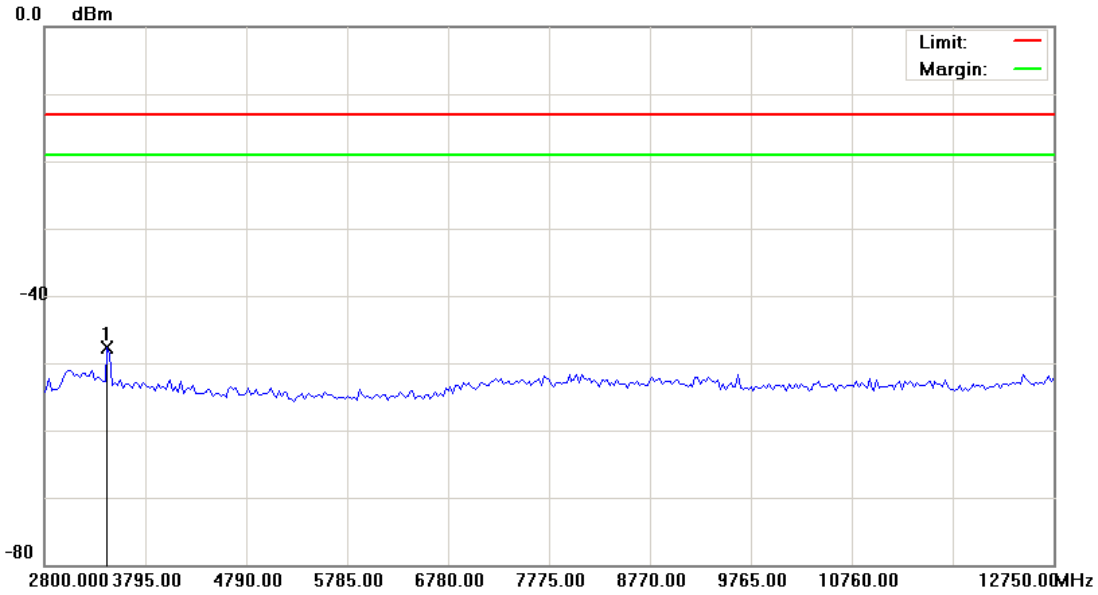
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	1711.000	9.14	4.35	13.49	-13.00	26.49	peak			Tx
2		2436.400	-49.03	5.05	-43.98	-13.00	-30.98	peak			

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

File :AC785S-500(CH1312) Data :#5 Date: 2014/9/16 Time: 上午 11:22:59



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

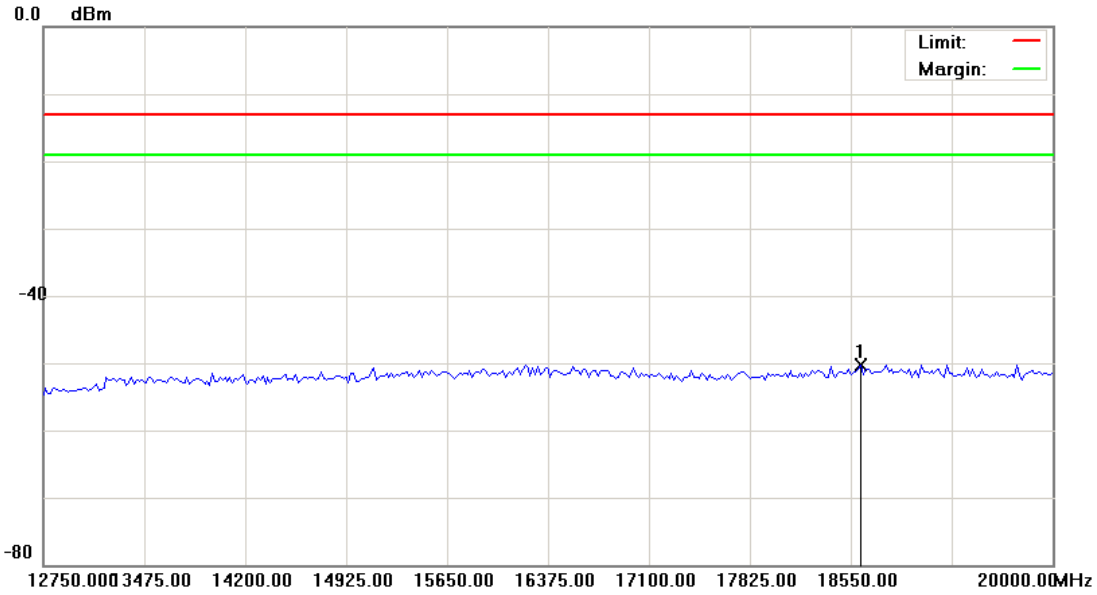
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	3421.875	-52.72	5.06	-47.66	-13.00	-34.66	peak			

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

File :AC785S-500(CH1312) Data :#6 Date: 2014/9/16 Time: 上午 11:23:19



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

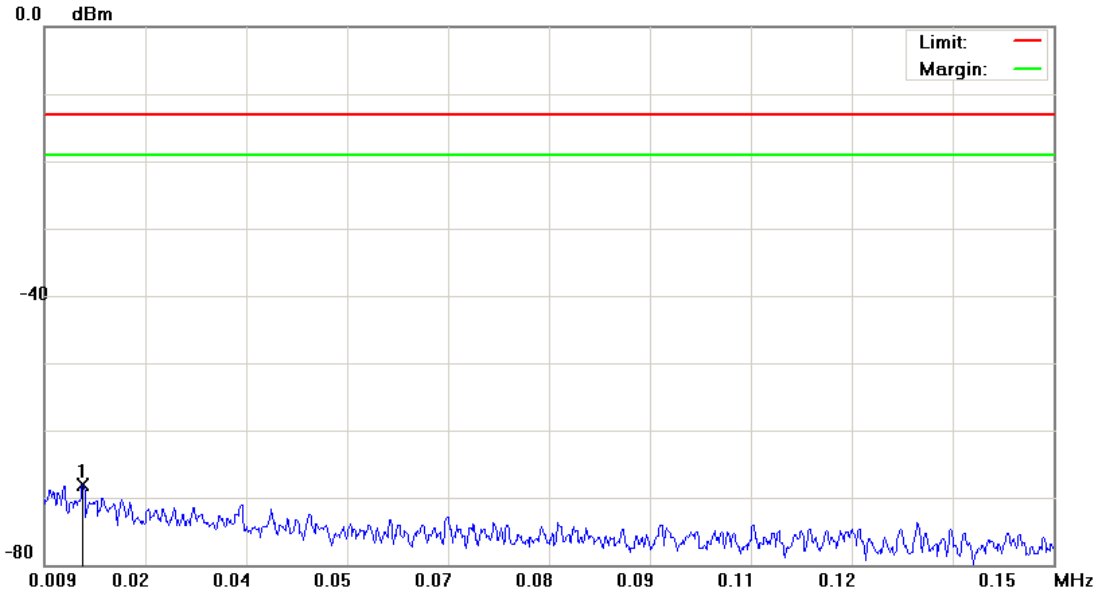
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	18622.500	-57.26	7.05	-50.21	-13.00	-37.21	peak			

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

File :AC785S-500(CH1413) Data :#1 Date: 2014/9/16 Time: 下午 02:16:48



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

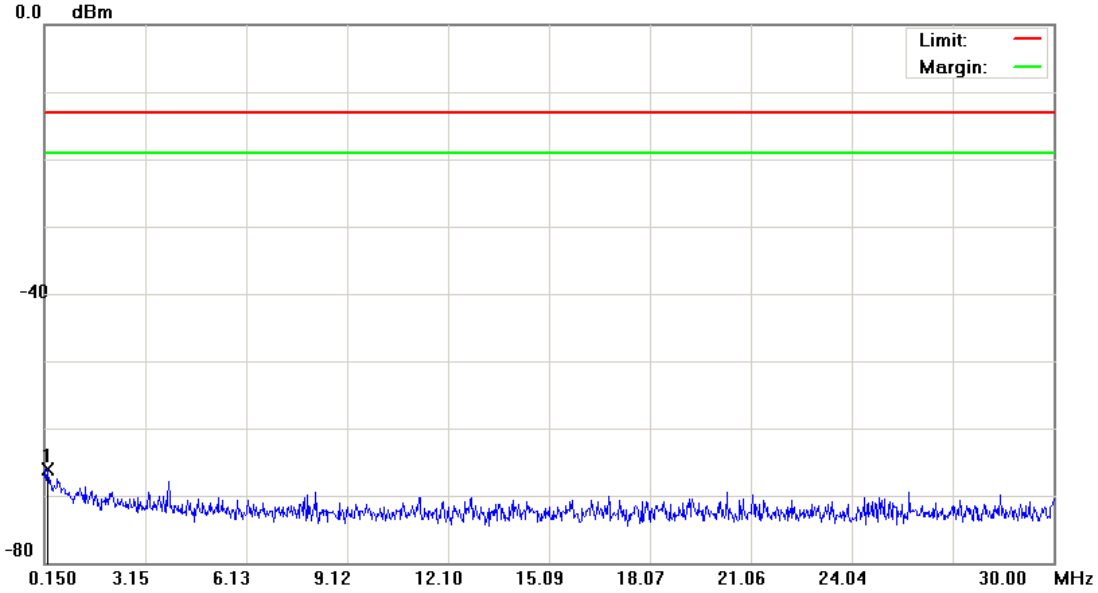
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	0.0144	-79.47	11.39	-68.08	-13.00	-55.08	peak			

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

File :AC785S-500(CH1413) Data :#2 Date: 2014/9/16 Time: 下午 02:17:11



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

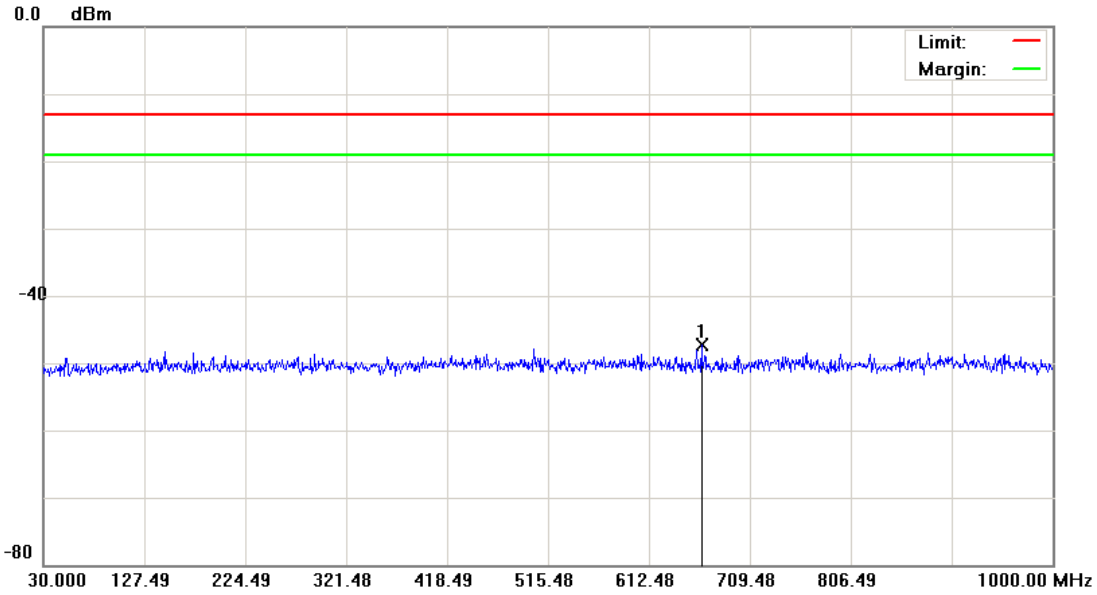
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	-78.54	12.50	-66.04	-13.00	-53.04	peak			

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

File :AC785S-500(CH1413) Data :#3 Date: 2014/9/16 Time: 下午 02:17:35



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

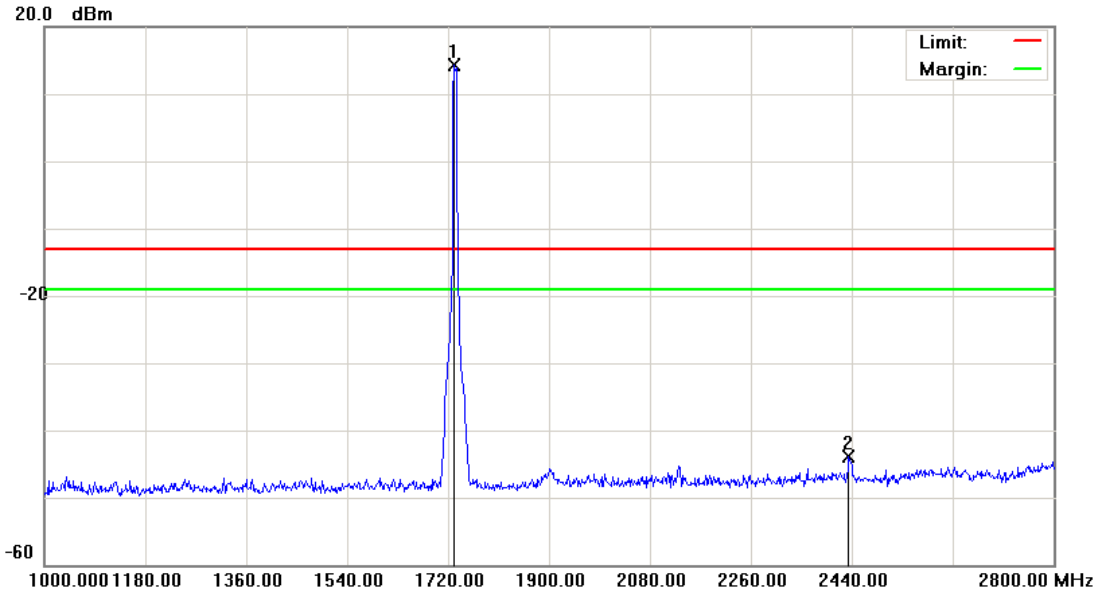
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	662.9250	-60.45	13.09	-47.36	-13.00	-34.36	peak			

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

File :AC785S-500(CH1413) Data :#4 Date: 2014/9/16 Time: 下午 02:55:24



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

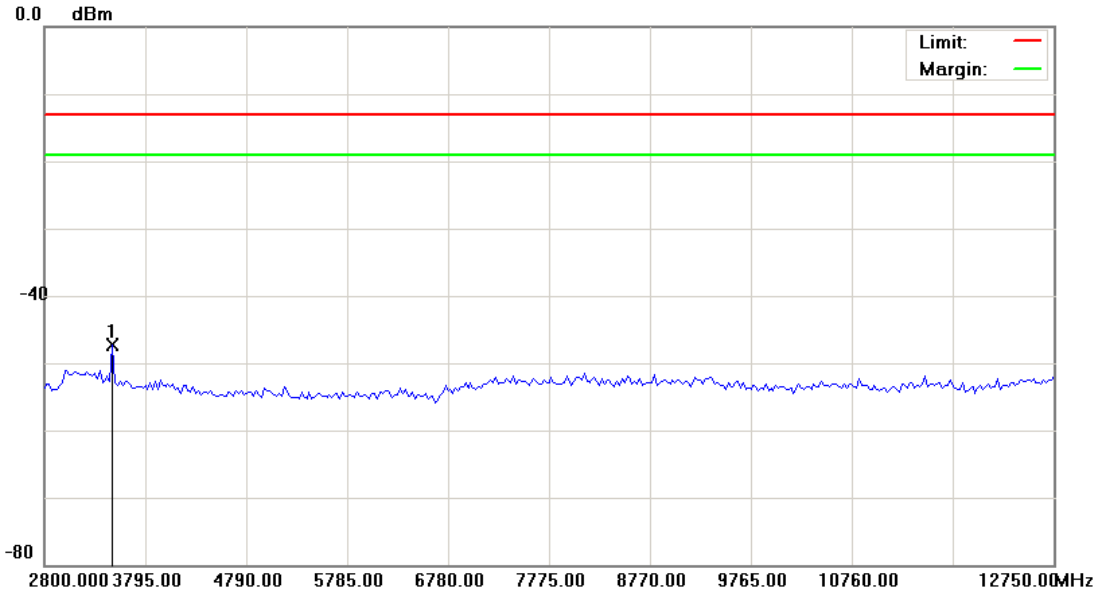
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	1730.800	9.80	4.54	14.34	-13.00	27.34	peak			Tx
2		2434.600	-48.91	5.06	-43.85	-13.00	-30.85	peak			

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

File :AC785S-500(CH1413) Data :#5 Date: 2014/9/16 Time: 上午 11:24:23



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

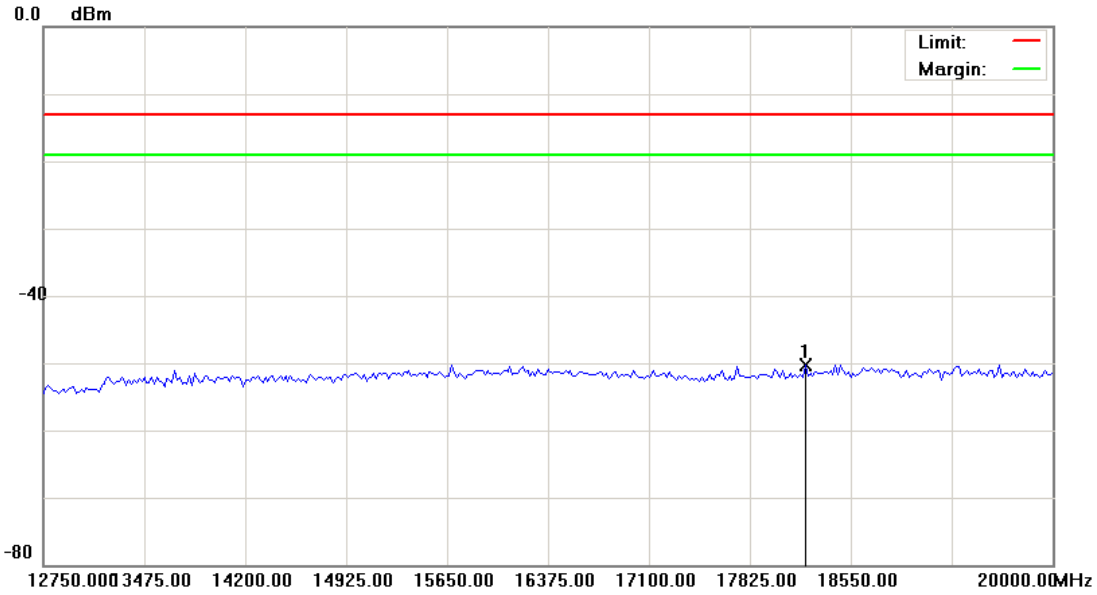
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	3471.625	-52.34	5.03	-47.31	-13.00	-34.31	peak			

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

File :AC785S-500(CH1413) Data :#6 Date: 2014/9/16 Time: 上午 11:24:43



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

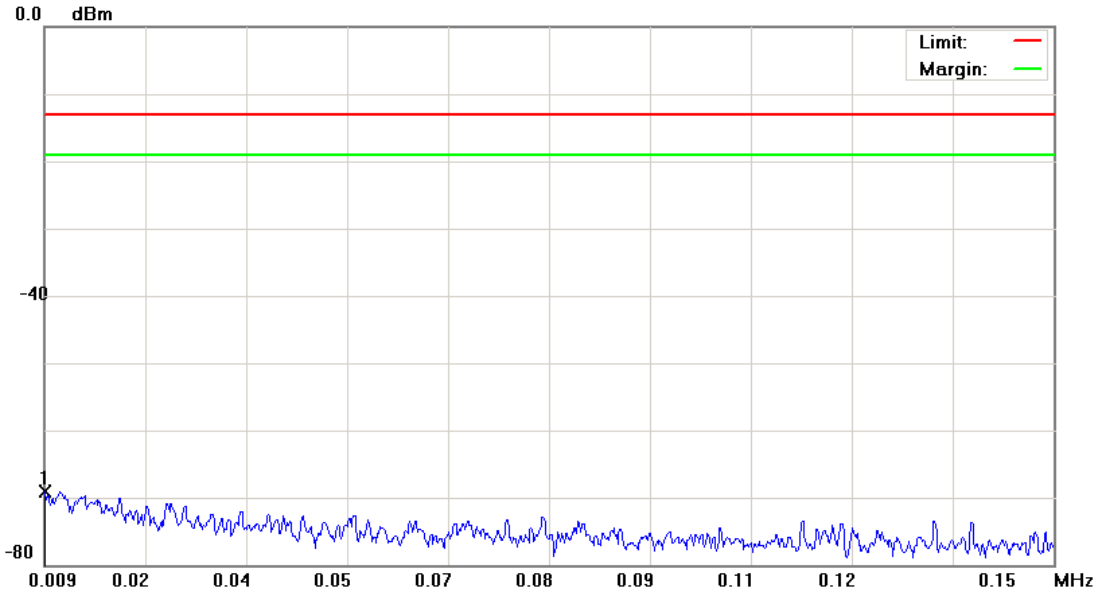
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	18223.750	-57.15	6.93	-50.22	-13.00	-37.22	peak			

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

File :AC785S-500(CH1513) Data :#1 Date: 2014/9/16 Time: 下午 02:18:51



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

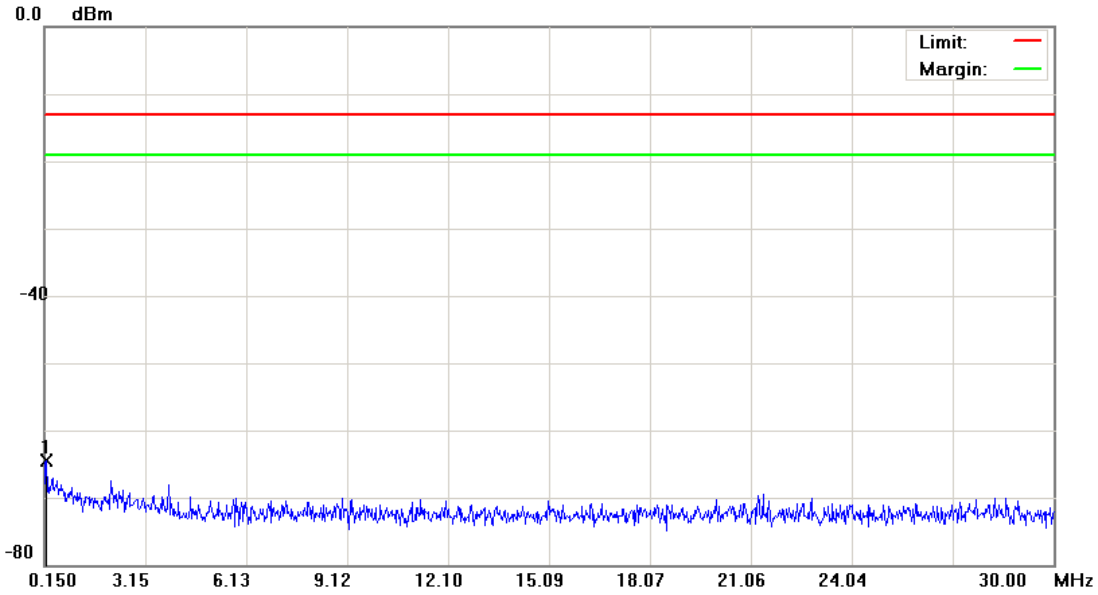
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	-80.48	11.32	-69.16	-13.00	-56.16	peak			

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

File :AC785S-500(CH1513) Data :#2 Date: 2014/9/16 Time: 下午 02:19:15



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

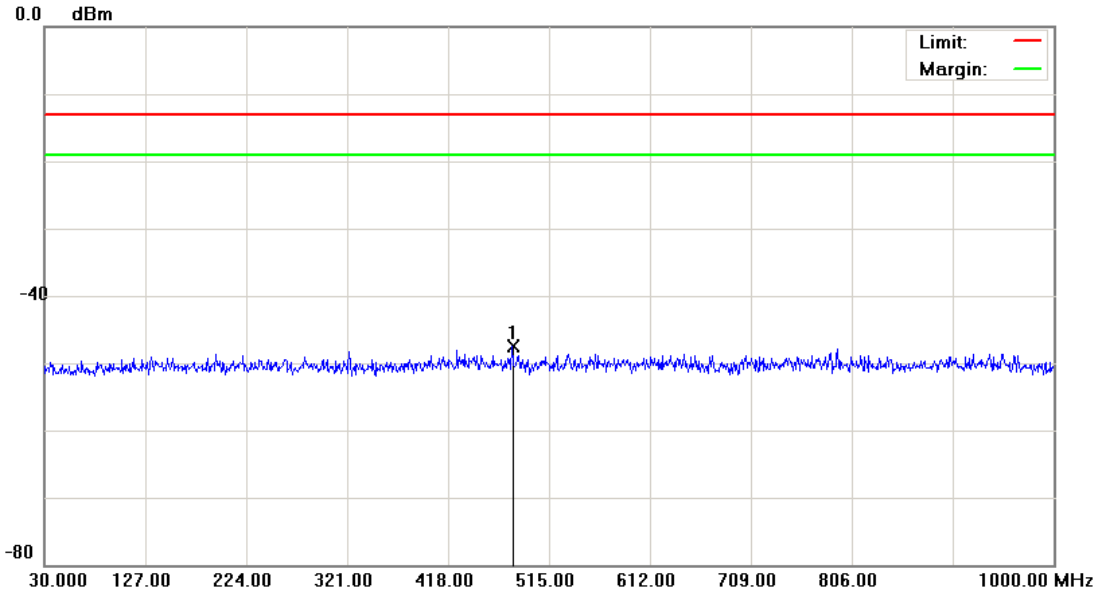
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	0.2097	-76.92	12.44	-64.48	-13.00	-51.48	peak			

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

File :AC785S-500(CH1513) Data :#3 Date: 2014/9/16 Time: 下午 02:19:39



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

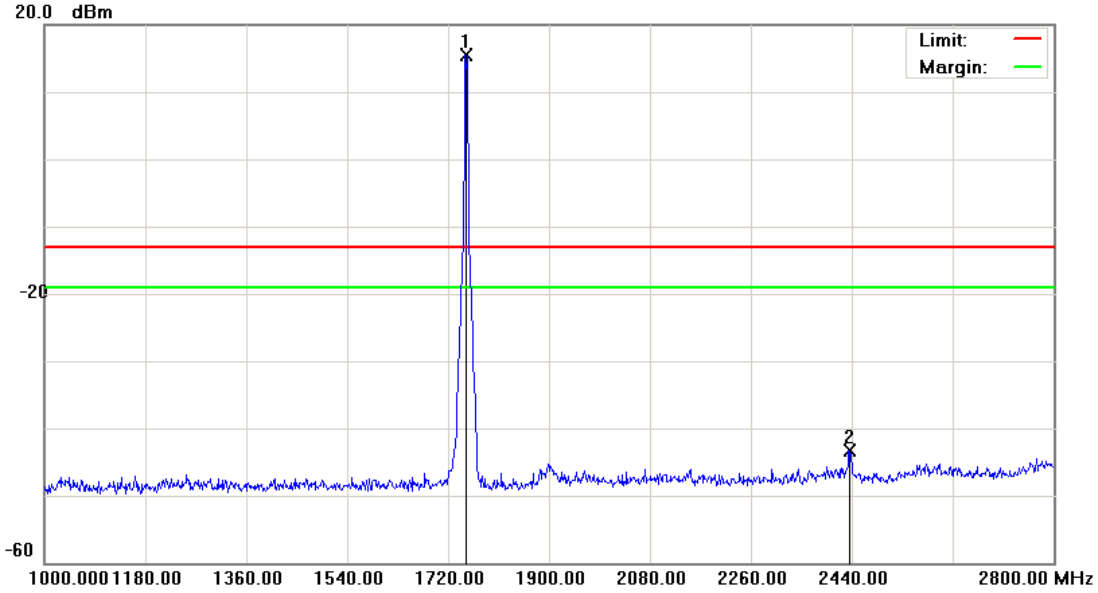
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	479.5950	-60.60	13.17	-47.43	-13.00	-34.43	peak			

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

File :AC785S-500(CH1513) Data :#4 Date: 2014/9/16 Time: 下午 02:56:31



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

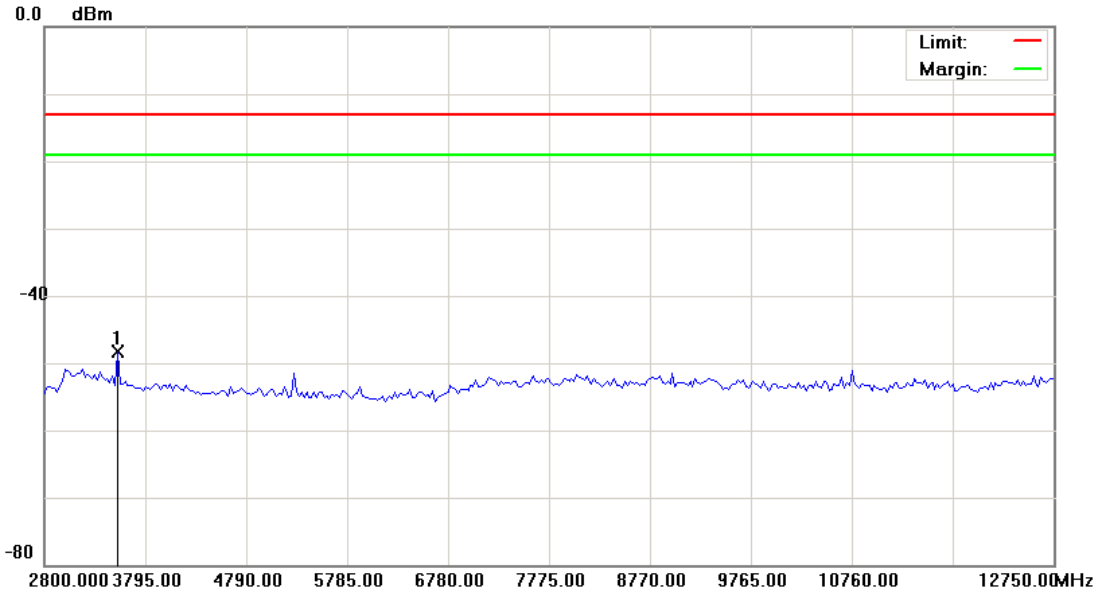
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	1751.500	10.85	4.63	15.48	-13.00	28.48	peak			Tx
2		2435.500	-48.26	5.05	-43.21	-13.00	-30.21	peak			

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

File :AC785S-500(CH1513) Data :#5 Date: 2014/9/16 Time: 上午 11:25:28



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

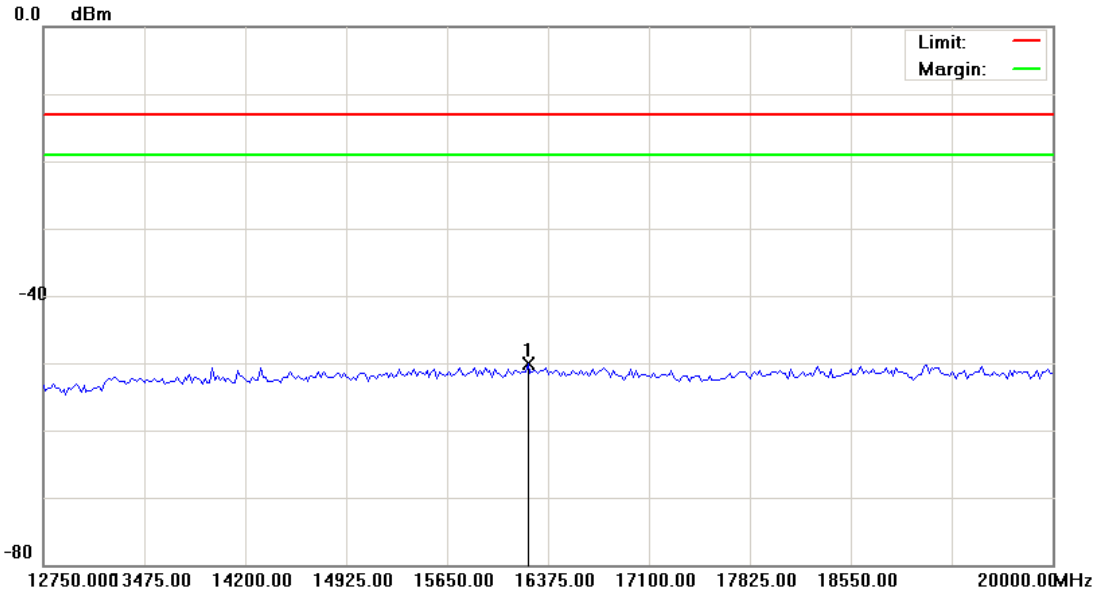
Polarization: *Conducted Power*
Power: DC 3.7V
Distance:

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	*	3521.375	-53.17	4.95	-48.22	-13.00	-35.22	peak			

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

File :AC785S-500(CH1513) Data :#6 Date: 2014/9/16 Time: 上午 11:25:48



Site: site #1
Limit: FCC Part 27 conducted(9k-26.5G)
EUT: WWAN Mobile Hotspot Portable Device
M/N: AC785S-500
Mode: WCDMA Band IV
Note:

Polarization: *Conducted Power*
Power: DC 3.7V
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	*	16230.000	-56.42	6.36	-50.06	-13.00	-37.06	peak			

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

8 Field Strength of Spurious Radiation Test

8.1. Limit

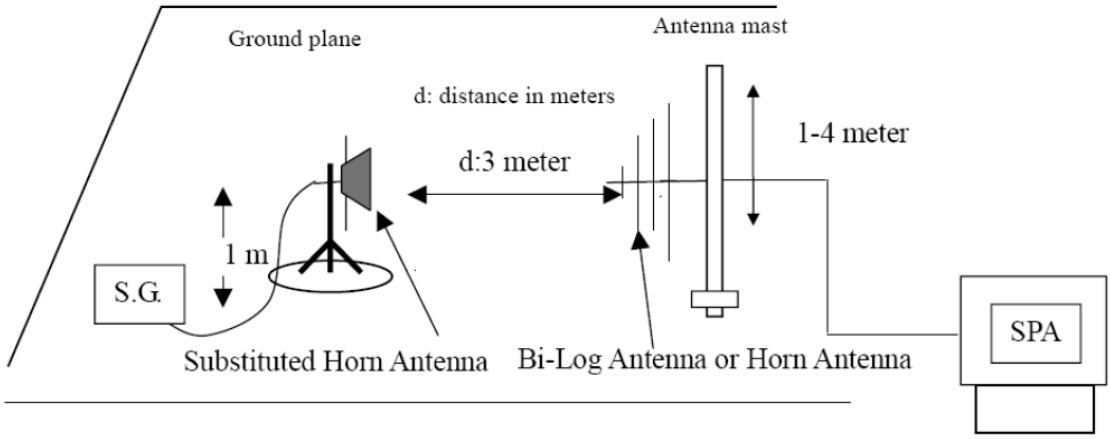
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10log(P) dB.
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

8.2. Test Instruments

3 Meter Chamber					
Equipment	Manufacturer	Model No.	Serial No.	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

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

The equipment under test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

The equipment under test is then replaced with a substitution antenna fed by a signal generator. With the signal generator tuned to a particular spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters to obtain a maximum reading at the spectrum analyzer. The output of the signal generator is then adjusted until a reading identical to that obtained with the actual transmitter is achieved.

The power in dBm of each spurious emission is calculated by correcting the signal generator level for cable loss and gain of the substitution antenna referenced to a dipole. A fully charged battery was used for the supply voltage.

The settings of the receiver were as follows:

Units	dBm
Resolution Bandwidth	1 MHz
Video Bandwidth	Auto
Sweep Time	Auto

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 27	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC785S-500	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	1	Date:	09/17/2014
Frequency:	1712.4 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
79.5000	-64.72	-3.03	-67.75	-13.00	-54.75	peak	H
160.0000	-80.75	7.53	-73.22	-13.00	-60.22	peak	H
288.0000	-72.12	-4.10	-76.22	-13.00	-63.22	peak	H
365.5000	-77.11	-0.56	-77.67	-13.00	-64.67	peak	H
572.5000	-77.69	6.69	-71.00	-13.00	-58.00	peak	H
630.0000	-78.60	6.70	-71.90	-13.00	-58.90	peak	H
3232.000	-71.00	12.16	-58.84	-13.00	-45.84	peak	H
4732.000	-74.18	15.24	-58.94	-13.00	-45.94	peak	H
7084.000	-74.85	23.76	-51.09	-13.00	-38.09	peak	H
132.0000	-76.94	18.46	-58.48	-13.00	-45.48	peak	V
201.5000	-81.82	9.59	-72.23	-13.00	-59.23	peak	V
298.0000	-81.49	1.97	-79.52	-13.00	-66.52	peak	V
433.5000	-79.34	0.75	-78.59	-13.00	-65.59	peak	V
623.5000	-80.27	8.22	-72.05	-13.00	-59.05	peak	V
669.5000	-80.14	9.19	-70.95	-13.00	-57.95	peak	V
3196.000	-68.88	15.13	-53.75	-13.00	-40.75	peak	V
4708.000	-73.69	19.49	-54.20	-13.00	-41.20	peak	V
7180.000	-74.65	21.74	-52.91	-13.00	-39.91	peak	V

Standard:	FCC Part 27	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC785S-500	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	1	Date:	09/17/2014
Frequency:	1732.6 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
79.0000	-63.71	-2.79	-66.50	-13.00	-53.50	peak	H
144.0000	-72.82	2.89	-69.93	-13.00	-56.93	peak	H
200.0000	-80.85	2.61	-78.24	-13.00	-65.24	peak	H
288.0000	-72.49	-4.10	-76.59	-13.00	-63.59	peak	H
503.0000	-80.31	6.27	-74.04	-13.00	-61.04	peak	H
630.0000	-77.62	6.70	-70.92	-13.00	-57.92	peak	H
3292.000	-69.92	12.35	-57.57	-13.00	-44.57	peak	H
4732.000	-73.31	15.24	-58.07	-13.00	-45.07	peak	H
7180.000	-74.69	24.04	-50.65	-13.00	-37.65	peak	H
133.0000	-78.98	18.04	-60.94	-13.00	-47.94	peak	V
201.0000	-80.10	9.68	-70.42	-13.00	-57.42	peak	V
299.5000	-81.18	2.10	-79.08	-13.00	-66.08	peak	V
429.5000	-79.78	0.70	-79.08	-13.00	-66.08	peak	V
613.0000	-79.27	7.61	-71.66	-13.00	-58.66	peak	V
727.0000	-80.70	10.62	-70.08	-13.00	-57.08	peak	V
3316.000	-71.93	15.87	-56.06	-13.00	-43.06	peak	V
4708.000	-73.83	19.49	-54.34	-13.00	-41.34	peak	V
7168.000	-75.94	21.72	-54.22	-13.00	-41.22	peak	V

Standard:	FCC Part 27	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC785S-500	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	1	Date:	09/17/2014
Frequency:	1752.6 MHz	Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBm)	Correct Factor (dB)	Result (dBm)	Limit (dBm)	Margin (dB)	Remark	Ant.Polar. H / V
80.5000	-63.77	-3.15	-66.92	-13.00	-53.92	peak	H
157.5000	-79.45	6.90	-72.55	-13.00	-59.55	peak	H
288.0000	-73.30	-4.10	-77.40	-13.00	-64.40	peak	H
365.0000	-77.65	-0.58	-78.23	-13.00	-65.23	peak	H
545.5000	-79.78	7.20	-72.58	-13.00	-59.58	peak	H
687.5000	-79.39	6.83	-72.56	-13.00	-59.56	peak	H
3268.000	-70.26	12.26	-58.00	-13.00	-45.00	peak	H
4804.000	-74.38	15.63	-58.75	-13.00	-45.75	peak	H
7168.000	-74.54	24.01	-50.53	-13.00	-37.53	peak	H
133.5000	-76.76	17.84	-58.92	-13.00	-45.92	peak	V
202.5000	-80.80	9.45	-71.35	-13.00	-58.35	peak	V
299.0000	-82.23	2.06	-80.17	-13.00	-67.17	peak	V
486.0000	-81.19	1.75	-79.44	-13.00	-66.44	peak	V
620.0000	-81.74	8.21	-73.53	-13.00	-60.53	peak	V
708.5000	-80.39	10.38	-70.01	-13.00	-57.01	peak	V
3280.000	-69.96	15.65	-54.31	-13.00	-41.31	peak	V
4708.000	-73.46	19.49	-53.97	-13.00	-40.97	peak	V
7156.000	-74.09	21.69	-52.40	-13.00	-39.40	peak	V

Standard:	RSS-Gen	Test Distance:	3m
Test item:	Radiated Emission	Power:	AC 120V/60Hz
Model Number:	AC785S-500	Temp.(℃)/Hum.(%RH):	26(℃)/60%RH
Mode:	2	Date:	09/17/2014
		Test By:	Eric Ou Yang

Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark	Ant.Polar. H / V
3030.000	36.86	-0.11	36.75	74.00	-37.25	peak	H
4542.000	33.88	4.31	38.19	74.00	-35.81	peak	H
6698.000	34.02	10.03	44.05	74.00	-29.95	peak	H
3030.000	35.73	-0.11	35.62	74.00	-38.38	peak	V
4626.000	33.56	4.52	38.08	74.00	-35.92	peak	V
6733.000	32.98	10.13	43.11	74.00	-30.89	peak	V

9 Frequency Stability (Temperature & Voltage Variation) Test

9.1. Limit

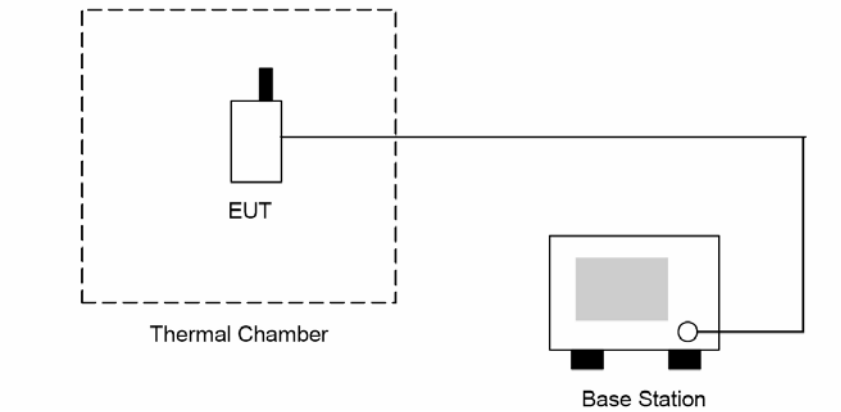
The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center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

9.2. Test Instruments

Equipment	Manufacturer	Model No.	Serial No.	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	AC785S-500					
Test Item	Frequency Stability (Temperature & Voltage Variation)					
Test Mode	Mode 1					
Date of Test	09/16/2014				Test Site	TE05
Level	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Result
Normal	3.70	-30	-7	-0.004	±2.5	Pass
Normal	3.70	-20	-11	-0.006	±2.5	Pass
Normal	3.70	-10	-5	-0.003	±2.5	Pass
Normal	3.70	0	-8	-0.005	±2.5	Pass
Normal	3.70	10	6	0.003	±2.5	Pass
Battery full point	4.25	20	-13	-0.008	±2.5	Pass
Normal	3.70	20	25	0.014	±2.5	Pass
Battery cut-off point	3.60	20	16	0.009	±2.5	Pass
Normal	3.70	30	-12	-0.007	±2.5	Pass
Normal	3.70	40	-17	-0.010	±2.5	Pass
Normal	3.70	50	6	0.003	±2.5	Pass