

## FCC Part 22H&24E&27M Test Report

Product Name : Module  
Trade Name : AirPrime  
Model No. : AR7582  
FCC ID : N7NAR7582  
IC : 2417C-AR7582

Applicant : Sierra Wireless Inc.  
Address : 13811 Wireless Way, Richmond,  
BC, V6V 3A4 Canada

Date of Receipt : Mar. 23, 2018  
Issued Date : May 02 , 2018  
Report No. : 1830369R-HPUSP50V00-A  
Report Version : V1.0



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# Test Report Certification

Issued Date : May 02 , 2018

Report No. : 1830369R-HPUSP50V00-A



Product Name : Module  
Applicant : Sierra Wireless Inc.  
Address : 13811 Wireless Way, Richmond, BC, V6V 3A4 Canada  
Manufacturer : Sierra Wireless Inc.  
Address : 13811 Wireless Way, Richmond, BC, V6V 3A4 Canada  
Model No. : AR7582  
FCC ID : N7NAR7582  
IC : 2417C-AR7582  
EUT Voltage : DC 3.7V  
Testing Voltage : DC 3.7V  
Trade Name : AirPrime  
Applicable Standard : FCC CFR Title 47 Part 2, ANSI/TIA-603-D  
FCC Part22 Subpart H, FCC Part24 Subpart E  
FCC CFR Title 47 Part 27 Subpart M  
Industry Canada RSS-132, Issue 3  
Industry Canada RSS-133, Issue 6  
ANSI/TIA-603-D-2010  
RSS Gen Issue 4  
RSS 139 Issue 3  
Test Lab : Hsin Chu Laboratory  
Test Result : Complied

Documented By : Lyla Yang  
( Lyla Yang / Engineering Adm. Specialist )

Tested By : Max Chang  
( Max Chang / Engineer )

Approved By : Roy Wang  
( Roy Wang / Director )

**Revision History**

Report No.	Version	Description	Issued Date
1720509R-HPUSP49V00	V1.0	Initial issue of report	Mar. 29, 2017
1830369R-HPUSP50V00-A	V1.0	This device change the PCB layout small adjustment to improve performance for LTE B13 ,BOM small adjustment to improve performance for LTE B13 and Shield frame small change to improve performance for LTE B13, verify spurious emission test item	May 02 , 2018

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## 1. General Information

### 1.1. EUT Description

Product Name	Module
Model No.	AR7582
Trade Name	AirPrime
Tx Frequency Range/ Channel number	GSM 850: 824.2-848.8 MHz GSM 1900: 1850.2-1909.8 MHz WCDMA Band 2: 1852.4-1907.6 MHz WCDMA Band 4: 1712.4-1752.6 MHz WCDMA Band 5: 826.4-846.6 MHz
Rx Frequency Range/ Channel number	GSM 850: 869.2-893.8 MHz GSM 1900: 1930.2-1989.8 MHz WCDMA Band 2: 1932.4-1987.6 MHz WCDMA Band 4: 2112.4-2152.6 MHz WCDMA Band 5: 871.4-891.6 MHz
Type of Modulation	GPRS: GMSK; EGPRS: GMSK / 8PSK WCDMA: QPSK (Uplink); HSDPA: QPSK (Uplink)
HW Version	V1.0
SW Version	SWI9X28A_00.04.03.00.
IMEI No.	35872907

Antenna Information	
Product Name/Model No.	Pulse Electronics, Inc./SPDA24700/2700
Antenna Type	Dipole Antenna
Antenna Gain	2 dBi

#### Note:

1. This Module included GSM 850, DCS 1900, WCDMA Band 2, WCDMA Band 4, WCDMA Band 5 and LTE Band 2, 4, 5, 7, 12, 13, 17 function.
2. 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.

## 1.2. Mode of Operation

DEKRA 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:

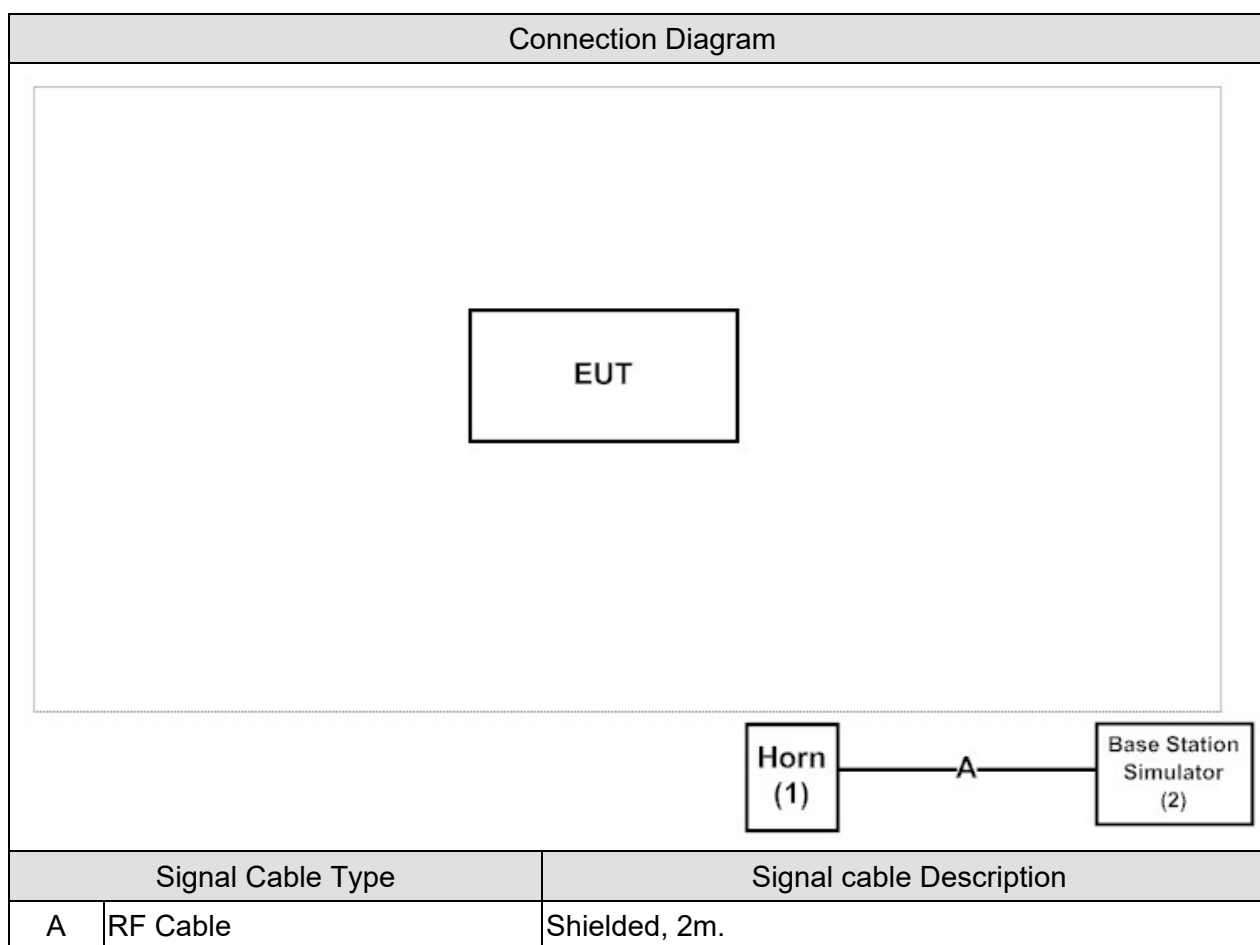
Test Mode
Mode 1: GPRS 850_Link
Mode 2: GPRS 1900_Link
Mode 3: EGPRS 850_Link
Mode 4: EGPRS 1900_Link
Mode 5: WCDMA Band 5_Link
Mode 6: WCDMA Band 5_HSUPA_Link
Mode 7: WCDMA Band 5_HSDPA_Link
Mode 8: WCDMA Band 2_Link
Mode 9: WCDMA Band 2_HSUPA_Link
Mode 10: WCDMA Band 2_HSDPA_Link
Mode 11: WCDMA Band4_Link
Mode 12: WCDMA Band4_HSUPA_Link
Mode 13: WCDMA Band4_HSDPA_Link

### 1.3. Tested System Details

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

Product	Manufacturer	Model No.	Serial No.	Power Cord
1   Horn Antenna	ELECTRO METRICS	EM-6961	103326	--
2   Base Station Simulator	JRC	NJZ-2000	ET00477	--

### 1.4. Configuration of Tested System



### 1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment. Horn link with base station.
3	The EUT link with base station and it will continue receive the signal.
4	Repeat the above procedure.

## 2. Technical Test

### 2.1. Summary of Test Result

- No deviations from the test standards  
 Deviations from the test standards as below description:

#### For GPRS850/EGPRS850/WCDMA Band5

#### (FCC Part 22 Subpart H, Industry Canada RSS-132, Issue 3, Industry Canada RSS-GEN )

Performed Item	FCC Rule	IC Rule	Limit	Result
Maximum Output Power	§2.1033			
	§2.1046	§5.4	< 7 Watts	Pass
	§22.913			
Modulation characteristic	§2.1047	§5.2	N/A	Pass
Occupied Bandwidth	§2.1049	RSS-GEN §4.2	N/A	Pass
Peak To Average Ratio	§22.913(d)	§5.4	≤ 13dB	Pass
Conducted Band Edge	§22.917	§5.5	< -13dBm	Pass
Spurious Emission	§2.1053	§5.5	< -13dBm	Pass
	§22.917			
Frequency Stability	§2.1055	§5.3	< 2.5 ppm	Pass
	§22.335			



**For GPRS1900/EGPRS1900/WCDMA Band2****(FCC Part 24 Subpart E, Industry Canada RSS-133, Issue 6, Industry Canada RSS-GEN )**

Performed Item	FCC Rule	IC Rule	Limit	Result
Maximum Output Power	§2.1033 §2.1046 §24.232	§6.4	< 2 Watts	Pass
Modulation characteristic	§2.1047	§6.2	N/A	Pass
Occupied Bandwidth	§2.1049	RSS-GEN §4.2	N/A	Pass
Peak To Average Ratio	§24.232(d)	§6.4	≤ 13dB	Pass
Conducted Band Edge	§27.238	§6.5	< -13dBm	Pass
Spurious Emission	§2.1053 §24.238	§6.5	< -13dBm	Pass
Frequency Stability	§2.1055 §24.235	§6.3	< 2.5 ppm	Pass

**For WCDMA Band4**

**(FCC CFR Title 47 Part 27 Subpart M, Industry Canada RSS-139, Issue 3, Industry Canada RSS-GEN )**

Performed Item	FCC Rule	IC Rule	Limit	Result
Maximum Output Power	FCC PART 2.1046 and PART 27.50(h)(2)	RSS -139 §6.5	< 2.0 Watts EIRP	Pass
Occupied Bandwidth	FCC PART 2.1049 and PART 27.53(l)(6)	RSS - Gen §6.6	N/A	Pass
Peak To Average Ratio	§27.50(b)	§6.5	≤ 13dB	Pass
Conducted Band Edge	FCC PART 2.1051 and PART 27.53(l)(4)(6)	RSS - 139 §6.6	< -13 dBm	Pass
Spurious Emission	FCC PART 2.1051 and PART 27.53(l)(4)(6)	RSS - 139 §6.6	< -25 dBm	Pass
Frequency Stability	FCC PART 2.1055(a)(l) and PART 27.54	RSS - 139 §6.4	< 2.5 ppm	Pass

## 2.2. Test Environment

Items	Test Item	Required (IEC 68-1)	Actual	Test Site
Temperature (°C)	Spurious Emission	15-35	23	2
Humidity (%RH)		25-75	52	
Barometric pressure (mbar)		860-1060	950-1000	

Note: Test Site information refers to Laboratory Information.

### Laboratory Information

**USA : FCC Registration Number: TW3024**  
**Canada : IC Registration Number: 22397-1 / 22397-2 / 22397-3**

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site :

<http://www.dekra.com.tw/english/about/certificates.aspx?bval=5>

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site : [http://www.dekra.com.tw/index\\_en.aspx](http://www.dekra.com.tw/index_en.aspx)

If you have any comments, Please don't hesitate to contact us. Our test sites as below:

- No. 75-2, 3rd Lin, WangYe Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan (R.O.C.)  
 TEL: +886-3-592-8858 / FAX: +886-3-592-8859 E-Mail : [info.tw@dekra.com](mailto:info.tw@dekra.com)
- No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.  
 TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail : [info.tw@dekra.com](mailto:info.tw@dekra.com)
- No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.  
 TEL: +886-3-582-8001 / FAX: +886-3-582-8958 E-Mail : [info.tw@dekra.com](mailto:info.tw@dekra.com)

### 2.3. Test Equipment

Radiated Spurious Emission / CB4-H

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date
Signal Analyzer	R&S	FSVA40	101455	2017/11/21	2018/11/20
Signal & Spectrum Analyzer	R&S	FSV40	101049	2018/01/10	2019/01/09
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2018/03/05	2019/03/04
Bilog Antenna	Teseq	CBL6112D	23191	2017/06/28	2018/06/27
Horn Antenna	Schwarzbeck	BBHA 9120D	639	2017/06/14	2018/06/13
Horn Antenna	Schwarzbeck	BBHA 9170	202	2018/01/31	2019/01/30
Pre-Amplifier	Dekra	AP-025C	201801236	2018/02/26	2019/02/25
Pre-Amplifier	EMCI	EMC11830I	980366	2018/01/08	2019/01/07
Pre-Amplifier	Dekra	AP-400C	201801231	2017/12/13	2018/12/12
EXA Signal Analyzer	Keysight	N9010A	MY51440132	2018/03/05	2019/03/04
Wideband Radio Communication Tester	R&S	CMW500	150246	2018/03/30	2019/03/29

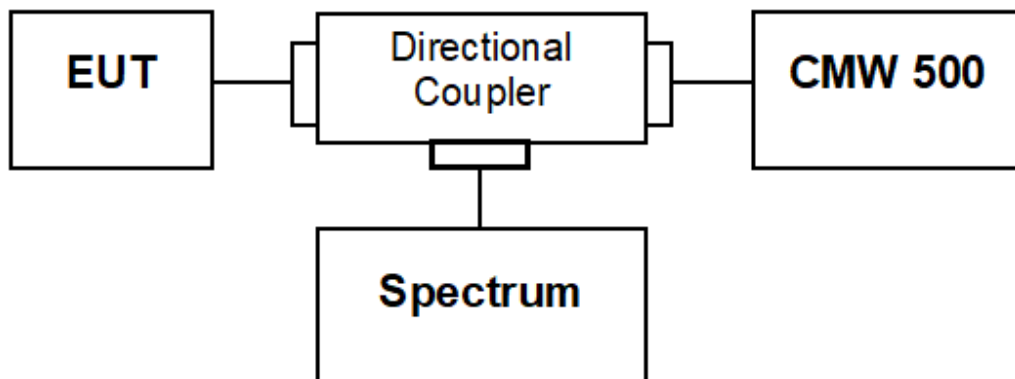
### 2.4. Uncertainty

Test Item	Uncertainty
Spurious Emission	$\pm 1.27$ dB for Conducted Measurement. $\pm 3.2$ dB for Radiated Measurement.

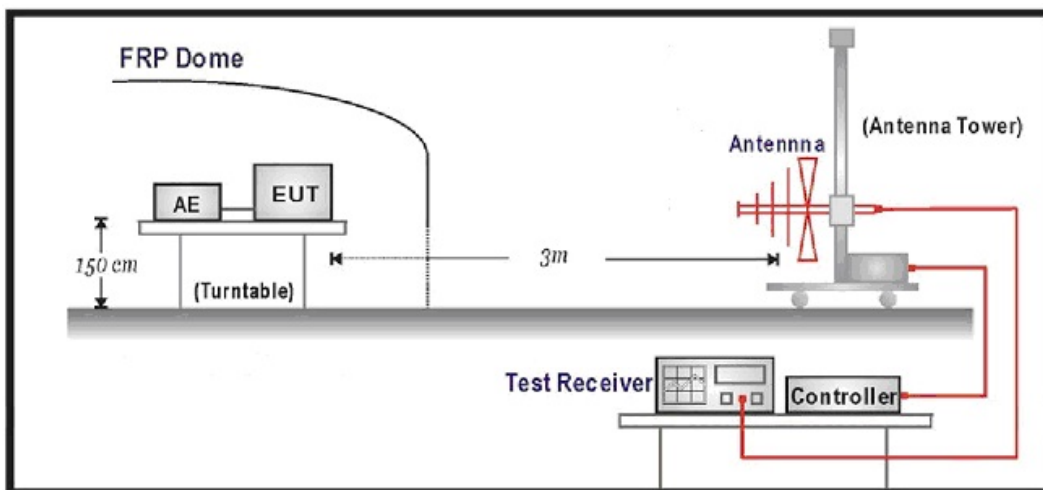
### 3. Spurious Emission

#### 3.1. Test Setup

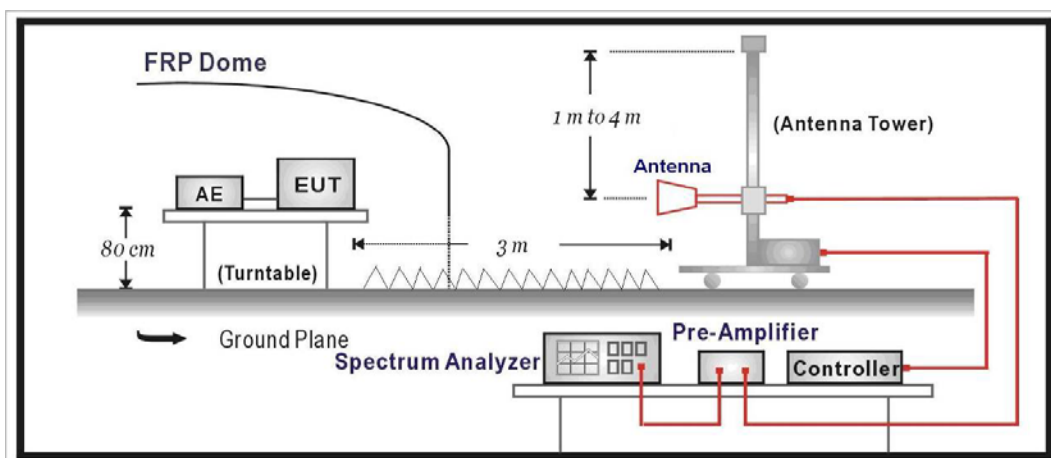
Conducted Spurious Measurement (below 1GHz)



Radiated Spurious Measurement (below 1GHz)



Radiated Spurious Measurement (above 1GHz)



## 3.2. Test Procedure

### Conducted Spurious Measurement:

- a) Place the EUT on a bench and set it in transmitting mode.
- b) Connect a low loss RF cable from the antenna port to a spectrum analyzer and CMU200 by a Directional Couple.
- c) EUT Communicate with CMU200, then select a channel for testing.
- d) Add a correction factor to the display of spectrum, and then test.
- e) The resolution bandwidth of the spectrum analyzer was set at 1 MHz, sufficient scans were taken to show the out of band Emission if any up to 10<sup>th</sup> harmonic.

### Radiated Spurious Measurement:

- a) The EUT was placed on a rotatable wooden table with 1.5 meter above ground.
- a) The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- b) The table was rotated 360 degrees to determine the position of the highest spurious emission.
- c) The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- d) Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 1MHz, Sweep 500ms, Taking the record of maximum spurious emission.
- e) A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- f) Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- g) Taking the record of output power at antenna port
- h) Repeat step 7 to step 8 for another polarization.
- i)  $EIRP = SG - \text{Cable loss} + \text{Antenna Gain}$

### 3.3. Test Result

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 1: GPRS 850_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)								
1648.40	-38.580	H	-44.520	2.790	8.745	-38.565	-13	-25.565
2472.60	-53.740	H	-56.525	3.437	10.556	-49.406	-13	-36.406
1648.40	-36.130	V	-43.264	2.790	8.745	-37.309	-13	-24.309
2472.60	-53.290	V	-56.880	3.437	10.556	-49.761	-13	-36.761
Middle Channel 190 (836.60MHz)								
1673.20	-47.220	H	-53.393	2.813	8.820	-47.386	-13	-34.386
2509.80	-50.810	H	-53.705	3.463	10.608	-46.560	-13	-33.560
1673.20	-45.080	V	-52.381	2.813	8.820	-46.374	-13	-33.374
2509.80	-50.880	V	-54.503	3.463	10.608	-47.358	-13	-34.358
High Channel 251 (848.80MHz)								
1697.60	-52.610	H	-59.011	2.835	8.893	-52.953	-13	-39.953
2546.40	-46.690	H	-49.498	3.489	10.637	-42.350	-13	-29.350
1697.60	-49.400	V	-56.865	2.835	8.893	-50.807	-13	-37.807
2546.40	-51.320	V	-54.783	3.489	10.637	-47.635	-13	-34.635

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 2: GPRS 1900_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)								
3700.40	-59.430	H	-60.568	4.283	11.939	-52.912	-13	-39.912
5550.60	-60.300	H	-55.694	5.201	12.900	-47.995	-13	-34.995
3700.40	-60.840	V	-61.876	4.283	11.939	-54.220	-13	-41.220
5550.60	-60.980	V	-56.045	5.201	12.900	-48.346	-13	-35.346
Middle Channel 661 (1880.00MHz)								
3760.00	-61.350	H	-62.159	4.335	11.832	-54.662	-13	-41.662
5640.00	-64.430	H	-59.535	5.235	12.900	-51.870	-13	-38.870
3760.00	-60.260	V	-60.870	4.335	11.832	-53.373	-13	-40.373
5640.00	-62.330	V	-57.277	5.235	12.900	-49.612	-13	-36.612
High Channel 810 (1909.80MHz)								
3819.60	-60.630	H	-61.314	4.386	11.725	-53.975	-13	-40.975
5729.40	-60.140	H	-54.955	5.270	12.900	-47.325	-13	-34.325
3819.60	-60.380	V	-60.871	4.386	11.725	-53.532	-13	-40.532
5729.40	-60.960	V	-55.787	5.270	12.900	-48.157	-13	-35.157



Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 3: EGPRS 850_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 128 (824.20MHz)								
1648.40	-38.920	H	-44.860	2.790	8.745	-38.905	-13	-25.905
2472.60	-53.940	H	-56.725	3.437	10.556	-49.606	-13	-36.606
1648.40	-37.010	V	-44.144	2.790	8.745	-38.189	-13	-25.189
2472.60	-52.450	V	-56.040	3.437	10.556	-48.921	-13	-35.921
Middle Channel 190 (836.60MHz)								
1673.20	-46.010	H	-52.183	2.813	8.820	-46.176	-13	-33.176
2509.80	-50.950	H	-53.845	3.463	10.608	-46.700	-13	-33.700
1673.20	-43.900	V	-51.201	2.813	8.820	-45.194	-13	-32.194
2509.80	-52.090	V	-55.713	3.463	10.608	-48.568	-13	-35.568
High Channel 251 (848.80MHz)								
1697.60	-51.360	H	-57.761	2.835	8.893	-51.703	-13	-38.703
2546.40	-47.530	H	-50.338	3.489	10.637	-43.190	-13	-30.190
1697.60	-49.670	V	-57.135	2.835	8.893	-51.077	-13	-38.077
2564.60	-51.000	V	-54.382	3.502	10.652	-47.233	-13	-34.233

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 4: EGPRS 1900_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 512 (1850.20MHz)								
3700.40	-59.490	H	-60.628	4.283	11.939	-52.972	-13	-39.972
5550.60	-59.740	H	-55.134	5.201	12.900	-47.435	-13	-34.435
3700.40	-60.310	V	-61.346	4.283	11.939	-53.690	-13	-40.690
5550.60	-60.300	V	-55.365	5.201	12.900	-47.666	-13	-34.666
Middle Channel 661 (1880.00MHz)								
3760.00	-60.910	H	-61.719	4.335	11.832	-54.222	-13	-41.222
5640.00	-61.630	H	-56.735	5.235	12.900	-49.070	-13	-36.070
3760.00	-60.400	V	-61.010	4.335	11.832	-53.513	-13	-40.513
5640.00	-61.560	V	-56.507	5.235	12.900	-48.842	-13	-35.842
High Channel 810 (1909.80MHz)								
3819.60	-60.860	H	-61.544	4.386	11.725	-54.205	-13	-41.205
5729.40	-60.810	H	-55.625	5.270	12.900	-47.995	-13	-34.995
3819.60	-60.070	V	-60.561	4.386	11.725	-53.222	-13	-40.222
5729.40	-61.890	V	-56.717	5.270	12.900	-49.087	-13	-36.087

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 5: WCDMA Band 5_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 4132 (826.40MHz)								
1652.80	-57.230	H	-63.211	2.794	8.758	-57.247	-13	-44.247
2479.20	-61.850	H	-64.676	3.442	10.567	-57.551	-13	-44.551
1652.80	-56.760	V	-63.923	2.794	8.758	-57.959	-13	-44.959
2479.20	-62.030	V	-65.647	3.442	10.567	-58.522	-13	-45.522
Middle Channel 4182 (836.60MHz)								
1673.20	-57.200	H	-63.373	2.813	8.820	-57.366	-13	-44.366
2509.80	-62.370	H	-65.265	3.463	10.608	-58.120	-13	-45.120
1673.20	-56.840	V	-64.141	2.813	8.820	-58.134	-13	-45.134
2509.80	-62.020	V	-65.643	3.463	10.608	-58.498	-13	-45.498
High Channel 4233 (846.60MHz)								
1693.20	-57.530	H	-63.890	2.831	8.880	-57.841	-13	-44.841
2539.80	-63.190	H	-66.013	3.484	10.632	-58.866	-13	-45.866
1693.20	-56.540	V	-63.975	2.831	8.880	-57.926	-13	-44.926
2539.80	-61.700	V	-65.192	3.484	10.632	-58.045	-13	-45.045

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 6: WCDMA Band 5_HSUPA_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 4132 (826.40MHz)								
1652.80	-58.000	H	-63.981	2.794	8.758	-58.017	-13	-45.017
2479.20	-62.710	H	-65.536	3.442	10.567	-58.411	-13	-45.411
1652.80	-57.680	V	-64.843	2.794	8.758	-58.879	-13	-45.879
2479.20	-61.250	V	-64.867	3.442	10.567	-57.742	-13	-44.742
Middle Channel 4182 (836.60MHz)								
1673.20	-56.920	H	-63.093	2.813	8.820	-57.086	-13	-44.086
2509.80	-62.840	H	-65.735	3.463	10.608	-58.590	-13	-45.590
1673.20	-57.510	V	-64.811	2.813	8.820	-58.804	-13	-45.804
2509.80	-62.600	V	-66.223	3.463	10.608	-59.078	-13	-46.078
High Channel 4233 (846.60MHz)								
1693.20	-56.630	H	-62.990	2.831	8.880	-56.941	-13	-43.941
2539.80	-61.810	H	-64.633	3.484	10.632	-57.486	-13	-44.486
1693.20	-56.390	V	-63.825	2.831	8.880	-57.776	-13	-44.776
2539.80	-62.260	V	-65.752	3.484	10.632	-58.605	-13	-45.605

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 7: WCDMA Band 5_HSDPA_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 4132 (826.40MHz)								
1652.80	-59.100	H	-65.081	2.794	8.758	-59.117	-13	-46.117
2479.20	-63.180	H	-66.006	3.442	10.567	-58.881	-13	-45.881
1652.80	-57.760	V	-64.923	2.794	8.758	-58.959	-13	-45.959
2479.20	-63.430	V	-67.047	3.442	10.567	-59.922	-13	-46.922
Middle Channel 4182 (836.60MHz)								
1673.20	-58.330	H	-64.503	2.813	8.820	-58.496	-13	-45.496
2509.80	-62.980	H	-65.875	3.463	10.608	-58.730	-13	-45.730
1673.20	-58.160	V	-65.461	2.813	8.820	-59.454	-13	-46.454
2509.80	-63.580	V	-67.203	3.463	10.608	-60.058	-13	-47.058
High Channel 4233 (846.60MHz)								
1693.20	-59.200	H	-65.560	2.831	8.880	-59.511	-13	-46.511
2539.80	-63.080	H	-65.903	3.484	10.632	-58.756	-13	-45.756
1693.20	-57.450	V	-64.885	2.831	8.880	-58.836	-13	-45.836
2539.80	-63.440	V	-66.932	3.484	10.632	-59.785	-13	-46.785

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 8: WCDMA Band 2_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 9262 (1852.40MHz)								
3704.80	-64.280	H	-65.390	4.287	11.931	-57.746	-13	-44.746
5557.20	-66.350	H	-61.723	5.203	12.900	-54.026	-13	-41.026
3704.80	-63.940	V	-64.939	4.287	11.931	-57.295	-13	-44.295
5557.20	-65.990	V	-61.047	5.203	12.900	-53.350	-13	-40.350
Middle Channel 9400 (1880.00MHz)								
3760.00	-64.160	H	-64.969	4.335	11.832	-57.472	-13	-44.472
5640.00	-65.990	H	-61.095	5.235	12.900	-53.430	-13	-40.430
3760.00	-64.030	V	-64.640	4.335	11.832	-57.143	-13	-44.143
5640.00	-64.880	V	-59.827	5.235	12.900	-52.162	-13	-39.162
High Channel 9538 (1907.60MHz)								
3815.20	-64.050	H	-64.744	4.382	11.733	-57.393	-13	-44.393
5722.80	-66.320	H	-61.157	5.267	12.900	-53.524	-13	-40.524
3815.20	-63.600	V	-64.100	4.382	11.733	-56.749	-13	-43.749
5722.80	-66.370	V	-61.206	5.267	12.900	-53.573	-13	-40.573

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 9: WCDMA Band 2_HSUPA_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 9262 (1852.40MHz)								
3704.80	-63.500	H	-64.610	4.287	11.931	-56.966	-13	-43.966
5557.20	-65.470	H	-60.843	5.203	12.900	-53.146	-13	-40.146
3704.80	-64.030	V	-65.029	4.287	11.931	-57.385	-13	-44.385
5557.20	-66.010	V	-61.067	5.203	12.900	-53.370	-13	-40.370
Middle Channel 9400 (1880.00MHz)								
3760.00	-64.640	H	-65.449	4.335	11.832	-57.952	-13	-44.952
5640.00	-67.130	H	-62.235	5.235	12.900	-54.570	-13	-41.570
3760.00	-63.560	V	-64.170	4.335	11.832	-56.673	-13	-43.673
5640.00	-66.370	V	-61.317	5.235	12.900	-53.652	-13	-40.652
High Channel 9538 (1907.60MHz)								
3815.20	-64.270	H	-64.964	4.382	11.733	-57.613	-13	-44.613
5722.80	-66.570	H	-61.407	5.267	12.900	-53.774	-13	-40.774
3815.20	-63.820	V	-64.320	4.382	11.733	-56.969	-13	-43.969
5722.80	-66.750	V	-61.586	5.267	12.900	-53.953	-13	-40.953

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 10: WCDMA Band 2_HSDPA_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 9262 (1852.40MHz)								
3704.80	-64.360	H	-65.470	4.287	11.931	-57.826	-13	-44.826
5557.20	-66.130	H	-61.503	5.203	12.900	-53.806	-13	-40.806
3704.80	-63.790	V	-64.789	4.287	11.931	-57.145	-13	-44.145
5557.20	-65.970	V	-61.027	5.203	12.900	-53.330	-13	-40.330
Middle Channel 9400 (1880.00MHz)								
3760.00	-64.080	H	-64.889	4.335	11.832	-57.392	-13	-44.392
5640.00	-65.670	H	-60.775	5.235	12.900	-53.110	-13	-40.110
3760.00	-64.000	V	-64.610	4.335	11.832	-57.113	-13	-44.113
5640.00	-65.960	V	-60.907	5.235	12.900	-53.242	-13	-40.242
High Channel 9538 (1907.60MHz)								
3815.20	-64.070	H	-64.764	4.382	11.733	-57.413	-13	-44.413
5722.80	-66.600	H	-61.437	5.267	12.900	-53.804	-13	-40.804
3815.20	-63.920	V	-64.420	4.382	11.733	-57.069	-13	-44.069
5722.80	-66.150	V	-60.986	5.267	12.900	-53.353	-13	-40.353



Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 11: WCDMA Band4_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 1312 (1712.40MHz)								
3424.80	-51.500	H	-53.876	4.066	12.104	-45.838	-13	-32.838
5137.20	-65.270	H	-61.358	5.077	12.247	-54.188	-13	-41.188
3424.80	-57.490	V	-60.155	4.066	12.104	-52.117	-13	-39.117
5137.20	-65.450	V	-61.242	5.077	12.247	-54.072	-13	-41.072
Middle Channel 1413 (1732.60MHz)								
3465.20	-51.910	H	-54.290	4.090	12.210	-46.171	-13	-33.171
5197.80	-66.280	H	-62.323	5.094	12.356	-55.061	-13	-42.061
3465.20	-58.470	V	-61.143	4.090	12.210	-53.024	-13	-40.024
5197.80	-65.630	V	-61.465	5.094	12.356	-54.203	-13	-41.203
High Channel 1513 (1752.60MHz)								
3505.20	-54.650	H	-57.000	4.115	12.291	-48.825	-13	-35.825
5257.80	-66.690	H	-62.681	5.111	12.464	-55.328	-13	-42.328
3505.20	-60.760	V	-63.394	4.115	12.291	-55.219	-13	-42.219
5257.80	-65.550	V	-61.399	5.111	12.464	-54.046	-13	-41.046

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 12: WCDMA Band4_HSUPA_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 1312 (1712.40MHz)								
3424.80	-47.630	H	-50.006	4.066	12.104	-41.968	-13	-28.968
5137.20	-65.390	H	-61.478	5.077	12.247	-54.308	-13	-41.308
3424.80	-54.810	V	-57.475	4.066	12.104	-49.437	-13	-36.437
5137.20	-65.000	V	-60.792	5.077	12.247	-53.622	-13	-40.622
Middle Channel 1413 (1732.60MHz)								
3465.20	-48.890	H	-51.270	4.090	12.210	-43.151	-13	-30.151
5197.80	-65.280	H	-61.323	5.094	12.356	-54.061	-13	-41.061
3465.20	-56.400	V	-59.073	4.090	12.210	-50.954	-13	-37.954
5197.80	-65.580	V	-61.415	5.094	12.356	-54.153	-13	-41.153
High Channel 1513 (1752.60MHz)								
3505.20	-51.900	H	-54.250	4.115	12.291	-46.075	-13	-33.075
5257.80	-66.310	H	-62.301	5.111	12.464	-54.948	-13	-41.948
3505.20	-58.930	V	-61.564	4.115	12.291	-53.389	-13	-40.389
5257.80	-65.440	V	-61.289	5.111	12.464	-53.936	-13	-40.936

Product	Module		
Test Item	Radiated Spurious Emission		
Test Mode	Mode 13: WCDMA Band4_HSDPA_Link		
Date of Test	2018/04/18	Test Site	CB4-H

Frequency (MHz)	SA Reading (dBm)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel 1312 (1712.40MHz)								
3424.80	-49.380	H	-51.756	4.066	12.104	-43.718	-13	-30.718
5137.20	-64.740	H	-60.828	5.077	12.247	-53.658	-13	-40.658
3424.80	-55.480	V	-58.145	4.066	12.104	-50.107	-13	-37.107
5137.20	-64.430	V	-60.222	5.077	12.247	-53.052	-13	-40.052
Middle Channel 1413 (1732.60MHz)								
3465.20	-50.310	H	-52.690	4.090	12.210	-44.571	-13	-31.571
5197.80	-66.000	H	-62.043	5.094	12.356	-54.781	-13	-41.781
3465.20	-58.410	V	-61.083	4.090	12.210	-52.964	-13	-39.964
5197.80	-64.810	V	-60.645	5.094	12.356	-53.383	-13	-40.383
High Channel 1513 (1752.60MHz)								
3505.20	-53.900	H	-56.250	4.115	12.291	-48.075	-13	-35.075
5257.80	-65.940	H	-61.931	5.111	12.464	-54.578	-13	-41.578
3505.20	-60.590	V	-63.224	4.115	12.291	-55.049	-13	-42.049
5257.80	-65.370	V	-61.219	5.111	12.464	-53.866	-13	-40.866

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