Registration
No.788871

TEST REPORT FOR CDMA TESTING

Report No.: SRTC2019-9004(F)-19012902(P)

Product Name: TD-LTE Wireless Data Terminal

Marketing Name: easytrans 900

Product Model: easytrans 900

Applicant: IFLYTEK CO.,LTD.

Manufacturer: IFLYTEK CO.,LTD.

Specification: FCC Part 24E, Part 22H, Part 2 (2019)

FCC ID: 2AMI5-EASYTRANS-900

The State Radio_monitoring_center Testing Center (SRTC)

15th Building, No.30, Shixing Street, Shijingshan District,

Beijing, P.R.China

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1. GENERAL INFORMATION

1.1 Notes of the test report

The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written permission of The State Radio_monitoring_center Testing Center (SRTC).
The test results relate only to individual items of the samples which have been tested.
The certification and accreditation identifiers used in this report shall not be applicable to the tested or calibrated samples thereof. The manufacturer shall not mark the tested samples or items (or a separate part of the item) with the identifiers of certification and accreditation to mislead relevant parties about the tested samples or items.

1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Address:	15th Building, No.30 Shixing Street, Shijingshan District, P.R.China
City:	Beijing
Country or Region:	P.R.China
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Fax:	+86 10 57996388
Email:	liujiaf@srtc.org.cn

1.3 Applicant's details

Company:	IFLYTEK CO.,LTD.
Address:	National Intelligent Speech High-tech Industrialization Base, No. 666, Wangjiang Road West, Hefei City, Anhui Province, China
City:	Hefei
Country or Region:	China
Contacted person:	Yumei Tao
Tel:	+86-0-15056085095
Fax:	---
Email:	ymtao3@iflytek.com

1.4 Manufacturer's details

Company:	IFLYTEK CO.,LTD.
Address:	National Intelligent Speech High-tech Industrialization Base, No. 666, Wangjiang Road West, Hefei City, Anhui Province, China
City:	Hefei
Country or Region:	China
Contacted person:	Yumei Tao
Tel:	+86-0-15056085095
Fax:	---
Email:	ymtao3@iflytek.com

1.5 Test Environment

Date of Receipt of test sample at SRTC:	2019-01-29
Testing Start Date:	2019-05-11
Testing End Date:	2019-05-25

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient	25	30
Maximum Extreme	50	---
Minimum Extreme	-10	---

Normal Supply Voltage (V d.c.):	3.80
Maximum Extreme Supply Voltage (V d.c.):	4.35
Minimum Extreme Supply Voltage (V d.c.):	3.60

2 DESCRIPTION OF THE DEVICE UNDER TEST

2.1Final Equipment Build Status

Frequency Range	BC0: Tx:824.70~848.31MHz Rx:869.70~893.31MHz BC1: Tx:1851.25~1908.75MHz Rx:1931.25~1988.75MHz
Rated Output Power	24.0dBm
Modulation Type	CDMA2000 1x:QPSK CDMA2000 1Xevdo:QPSK/8PSK
Duplex Mode	FDD
Duplex Spacing	45MHz
Antenna Type	Fixed Internal Antenna
Power Supply	Battery/AC adapter
IMEI	865531040033670

EUT	EUT1	EUT2	EUT3	EUT4	EUT5
Model	easytrans 900	JT-BLUE-DATA	JT-BLUE-WIFI	JT-GREY-DATA	JT-GREY-WIFI
Software Version	V8.1	V9.1	V9.2	V9.1	V9.2
Hardware Version	V1.0	V1.0	V1.0	V1.0	V1.0

Note: The software version, Model and Shell color are only a difference in user experience, the software differences, Model and Shell color listed above will not affect the RF performance of this products.

2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:

Equipment	Battery
Manufacturer	DONGGUAN DRN NEW ENERGYCO.,LTD
Model Number	EASYTRANS 808
Serial Number	---

Equipment	Charger
Manufacturer	SHENZHEN EAST SUN ELECTRONIC CO.,LTD.
Model Number	ES568-U050200XYC
Serial Number	---

2.3 Conducted measurement Path Loss

GSM850 Offset 6.5dB = Power Divider 6dB+ Temporary antenna connector loss 0.2dB+ Cable loss 0.3dB
PCS1900 Offset 6.8dB = Power Divider 6dB+ Temporary antenna connector loss 0.2dB+ Cable loss 0.6dB

2.4 Summary table.

FCC Rule Part	Mode	Frequency Range(MHz)	ERP/ EIRP (dBm)	ERP/ EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
22H	CDMA BC0	824.70-848.31	23.95	0.248	0.029	1M27F9W
24E	CDMA BC1	1851.25-1908.75	22.91	0.195	0.027	1M27F9W

3 REFERENCE SPECIFICATION

Specification	Version	Title
2.1046	2019	Measurements required: RF power output.
2.1049	2019	Measurements required: Occupied bandwidth.
2.1051	2019	Measurements required: Spurious emissions at antenna terminals.
2.1053	2019	Measurements required: Field strength of spurious radiation.
2.1055	2019	Measurements required: Frequency stability.
22.355	2019	Frequency tolerance.
22.913	2019	Effective radiated power limits.
22.917	2019	Emission limitations for cellular equipment.
24.232	2019	Power and antenna height limits.
24.235	2019	Frequency stability.
24.238	2019	Emission limitations for Broadband PCS equipment.
ANSI C63.26	2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 971168 D01	April 9, 2018	MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

4 KEY TO NOTES AND RESULT CODES

The following are the definition of the test result.

Code	Meaning
PASS	Test result shows that the requirements of the relevant specification have been met.
FAIL	Test result shows that the requirements of the relevant specification have not been met.
N/T	Test case is not tested.
NTC	Nominal voltage, Normal Temperature
HV	High voltage, Normal Temperature
LV	Low voltage, Normal Temperature
HTHV	high voltage, High Temperature
LTHV	High voltage, Low Temperature
HTLV	Low voltage, High Temperature
LTLV	Low voltage, Low Temperature

5 RESULT SUMMARY

No.	Test case	FCC reference	Verdict
1	RF Power Output	2.1046	Pass
2	Effective Radiated Power and Effective Isotropic Radiated Power	22.913(a)/24.232(c)	Pass
3	Occupied Bandwidth	2.1049	Pass
4	Emission Bandwidth	22.917(b)/24.238(b)	Pass
5	Spurious Emissions at antenna terminals	2.1051/22.917(a)/24.238(a)	Pass
6	Band Edges Compliance	2.1051/22.917(a)/24.238(a)	Pass
7	Frequency Stability	2.1055/22.355/24.235	Pass
8	Radiated Spurious Emissions	2.1053/22.917(a)/24.238(a)	Pass
9	Peak-Average Ratio	24.232(d)	Pass

This Test Report Is Issued by: Mr. Peng Zhen	Checked by: Mr. Li Bin
Tested by: Tong Daocheng	Issued date: 20190625

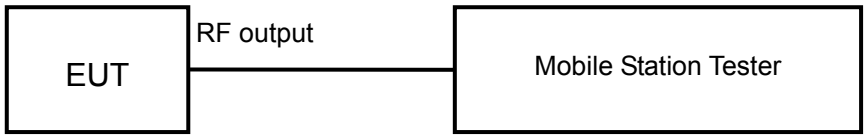
6 TEST RESULT

6.1 RF Power Output-FCC Part 2.1046

Ambient condition:

Temperature	Relative humidity	Pressure
24°C	44%	101.9kPa

Test Setup:



CDMA BC0

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration.

Limits	≤33.0dBm

CDMA BC1
Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration.

Limits	≤30.0dBm

Test result:

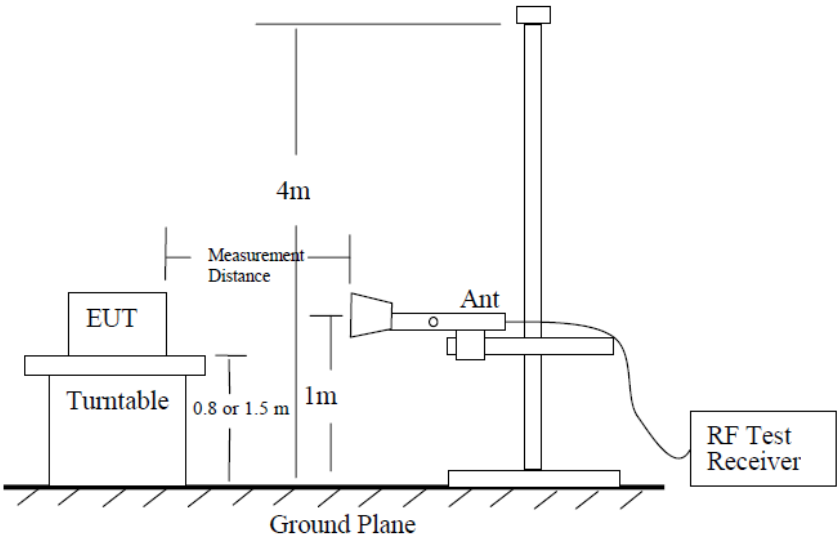
The test results are shown in Appendix A.

6.2 Effective Radiated Power-FCC Part 22.913(a)/Part 24.232(c)

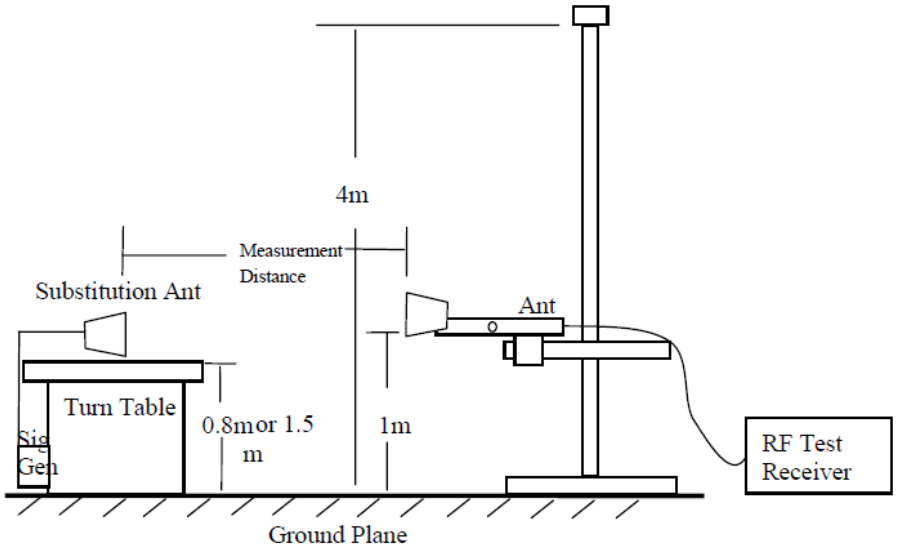
Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test setup:



Step 1



Step 2

CDMA BC0

Test procedure:
The measurements procedures in TIA-603-E are used.
Step 1:
The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used and RBW is set to 3MHz.Then the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum power value on spectrum analyzer or receiver. And the maximum value of the receiver should be recorded as (Pr).
Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator. To repeat the same procedure as step1 and the level of signal generator will be adjusted till the same power value on the spectrum analyzer or receiver. The ERP/EIRP of the EUT can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).
The measurement results are obtained as described below:
Power (EIRP) = Pmea+ Pca+ Ga
This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP – 2.15 (dB).

Limits:

Operation Mode	E.R.P. (dBm)
CDMA	≤38.45

CDMA BC1

Test procedure:
The measurements procedures in TIA-603-E are used.

Step 1:
The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meters high non-conductive table at a 3 meters test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A peak detector is used and RBW is set to 3MHz.Then the height of receive antenna shall be moved from 1 to 4 meters, and the antenna shall be performed under horizontal and vertical polarization. The turn table shall be rotated from 0 to 360 degrees for detecting the maximum power value on spectrum analyzer or receiver. And the maximum value of the receiver should be recorded as (Pr).

Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator. To repeat the same procedure as step1 and the level of signal generator will be adjusted till the same power value on the spectrum analyzer or receiver. The ERP/EIRP of the EUT can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.

A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.

A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).
The measurement results are obtained as described below:
Power (EIRP) = Pmea+ Pca+ Ga

Limits:

Operation Mode	E.R.P. (dBm)
CDMA	≤33.0

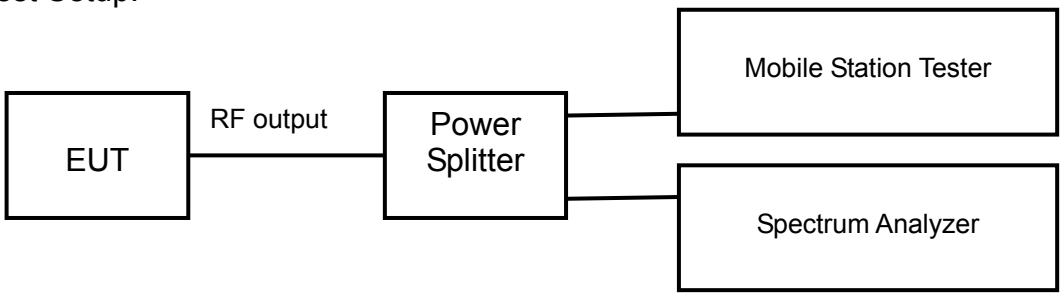
Test result:
The test results are shown in Appendix B.

6.3 Occupied Bandwidth-FCC Part 2.1049

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test Setup:



CDMA BC0

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 3kHz on spectrum analyzer. The bandwidth of 99% power can be read on spectrum analyzer.

Limits: No specific occupied bandwidth requirements in part 2.1049

CDMA BC1

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The occupied bandwidth is measured using spectrum analyzer. RBW is set to 3kHz on spectrum analyzer. The bandwidth of 99% power can be read on spectrum analyzer.

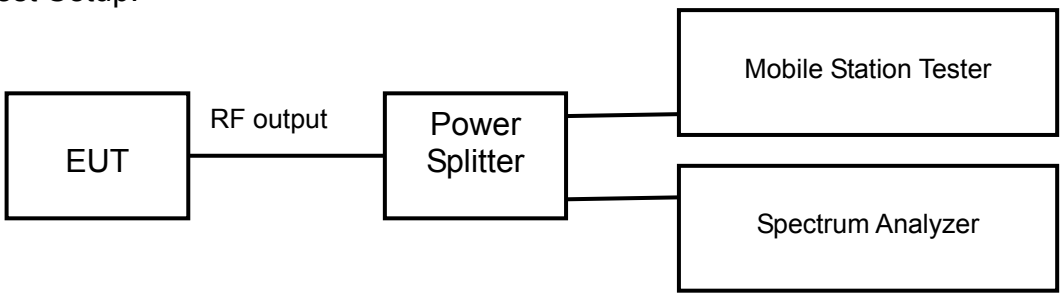
Limits: No specific occupied bandwidth requirements in part 2.1049
Test result:
The test results are shown in Appendix A.

6.4 Emission Bandwidth-FCC Part 22.917(b)/Part 24.238(b)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test Setup:



CDMA BC0

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The emission bandwidth is measured using spectrum analyzer. RBW is set to 3kHz on spectrum analyzer. The bandwidth of -26dB transmitter power can be read on spectrum analyzer.

Limits: No specific emission bandwidth requirements in part 22.917(b)

CDMA BC1
Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The emission bandwidth is measured using spectrum analyzer. RBW is set to 3kHz on spectrum analyzer. The bandwidth of -26dB transmitter power can be read on spectrum analyzer.

Limits: No specific emission bandwidth requirements in part 24.238(b)

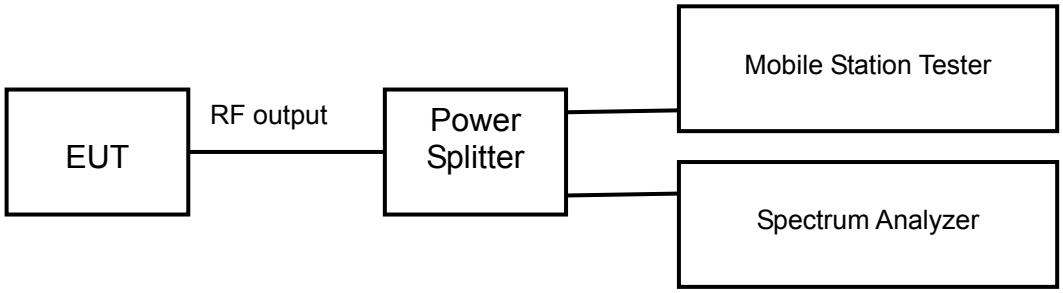
Test result:
The test results are shown in Appendix A.

6.5 Spurious Emissions at antenna terminal-FCC Part 2.1051/ 22.917(a) /Part 24.238(a)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test Setup:



CDMA BC0

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to 9GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer.

Limits	≤-13dBm

CDMA BC1

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer. The spectrum analyzer scans from 30MHz to 20GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer.

Limits	≤-13dBm

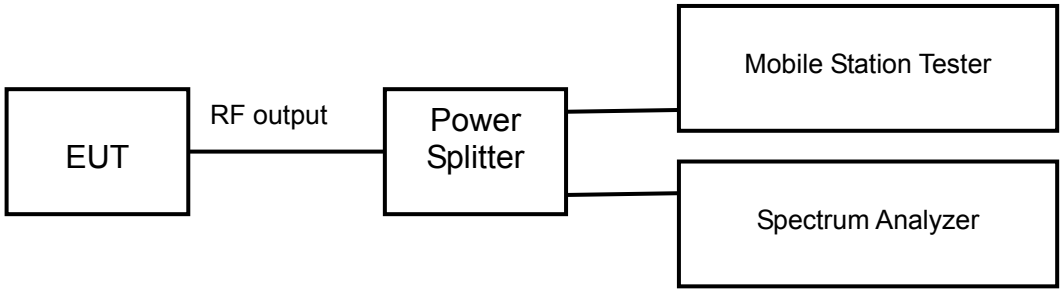
Test result:
The test results are shown in Appendix A.

6.6 Band Edges Compliance- FCC Part 2.1051/ 22.917(a) /Part 24.238(a)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test Setup:



CDMA BC0

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer. The peak detector is used and RBW is set to at least 1% of the emission bandwidth on spectrum analyzer.

Limits	≤-13dBm

CDMA BC1

Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer. The peak detector is used and RBW is set to at least 1% of the emission bandwidth on spectrum analyzer.

Limits	≤-13dBm

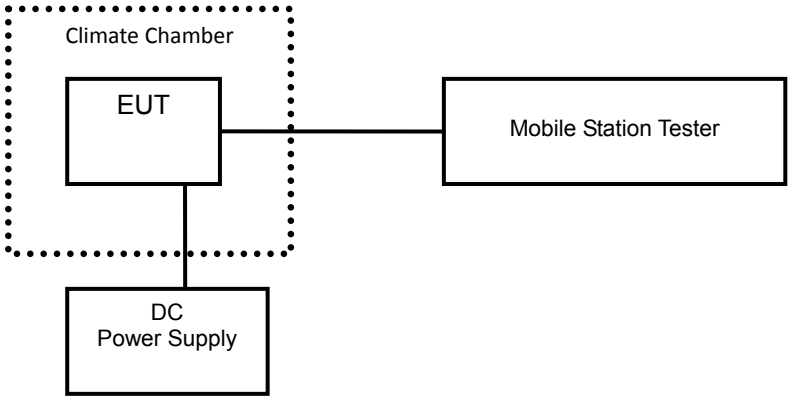
Test result:
The test results are shown in Appendix A.

6.7 Frequency Stability- FCC Part 2.1055/22.355 /Part 24.235

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test setup:



CDMA BC0

Test Procedure:
A radio link shall be established between EUT and Tester. The tester will sample the transmitter RF output signal and measure its frequency. The temperature inside the climate chamber is varied from -30 to +50°C in 10°C step size, and also the DC power supply voltage to the EUT is varied from LV to HV. The measurement will be conducted at three

Limits: No specific frequency stability requirements in part 2.1055 and part 22.355.

CDMA BC1

Test Procedure:
A radio link shall be established between EUT and Tester. The tester will sample the transmitter RF output signal and measure its frequency. The temperature inside the climate chamber is varied from -30 to +50°C in 10°C step size, and also the DC power supply voltage to the EUT is varied from LV to HV. The measurement will be conducted at three

Limits: No specific frequency stability requirements in part 2.1055 and part 24.235.

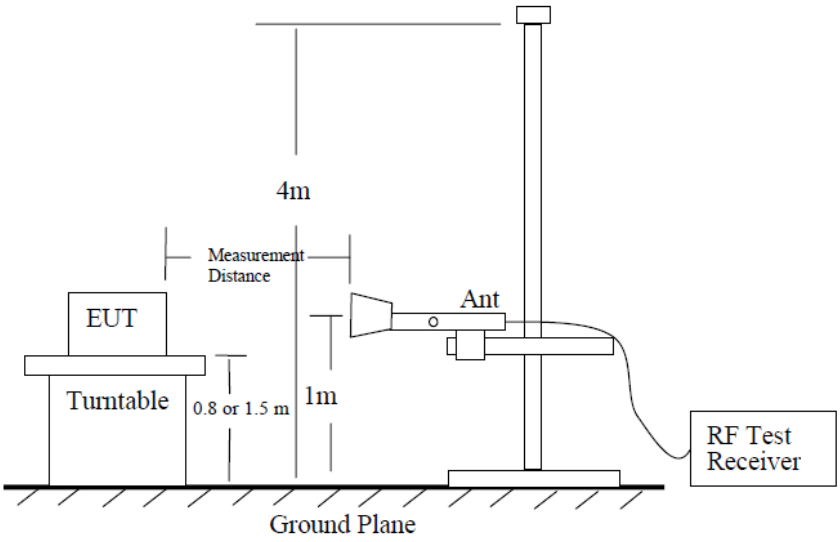
Test result:
The test results are shown in Appendix A.

6.8 Radiated Spurious Emissions-FCC Part2.1053/ 22.917(a)/Part 24.238(a)

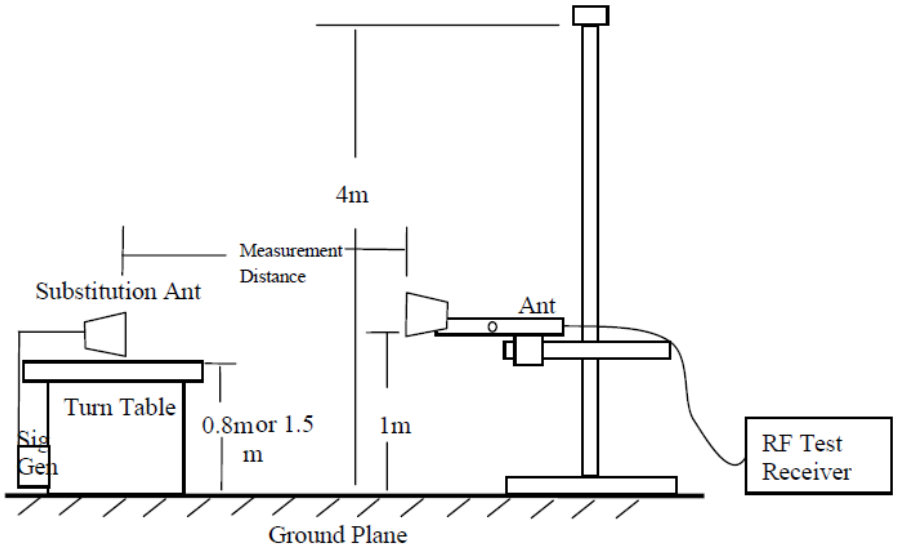
Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test Setup:



Step 1



Step 2

CDMA BC0

Test procedure:
The measurements procedures in TIA-603-E are used.
The spectrum was scanned from 30MHz to the 10th harmonic of the highest frequency generated within the equipment.

Step 1:
The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meter high non-conductive table at a 3 meter test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer or receiver. The spectrum analyzer scans from 30MHz to 20GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer. Then the antenna height and turn table rotation is adjusted till the maximum power value is founded on spectrum analyzer or receiver. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.

Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (P_{ca}) and the Substitution Antenna Gain (Ga).

Calculation procedure:
The data of cable loss and antenna gain has been calibrated in full testing frequency range before the testing.

The power of the Radiated Spurious Emissions is calculated by adding the cable loss and antenna gain. The basic equation with a sample calculation is as followed:
Power(EIRP) = P_{mea}+ P_{ca} + G_a
This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP – 2.15 (dB).

Assumed the power of signal source record is -20dBm. A cable loss of -30dB, and an antenna gain of 11dB are added.
$P=P_{mea}+P_{ca}+G_a=(-20dBm)+(-30dB)+(11dB)= -39dBm$

CDMA BC1

Test procedure:
The measurements procedures in TIA-603-E are used.
The spectrum was scanned from 30MHz to the 10th harmonic of the highest frequency generated within the equipment.

Step 1:
The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meter high non-conductive table at a 3 meter test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. The measurement is carried out using a spectrum analyzer or receiver. The spectrum analyzer scans from 30MHz to 20GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer. Then the antenna height and turn table rotation is adjusted till the maximum power value is founded on spectrum analyzer or receiver. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.

Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.
A power (Pmea) is applied to the input of the substitution antenna, and adjusts the level of the signal generator output until the value of the receiver reach the previously recorded (Pr). The power of signal source (Pmea) is recorded. The test should be performed by rotating the test item and adjusting the receiving antenna polarization.
A “reference path loss” should be calculated after test. The attenuation of “reference path loss” is the cable loss between the Signal Source with the Substitution Antenna (Pca) and the Substitution Antenna Gain (Ga).

Calculation procedure:
The data of cable loss and antenna gain has been calibrated in full testing frequency range before the testing.

The power of the Radiated Spurious Emissions is calculated by adding the cable loss and

antenna gain. The basic equation with a sample calculation is as followed:
Power(EIRP) = P_{mea}+ P_{ca} + G_a
This value is EIRP since the measurement is calibrated using an antenna of known gain (2.15dB) and known input power. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP – 2.15 (dB).

Assumed the power of signal source record is -20dBm. A cable loss of -30dB and an antenna gain of 11dB are added.
$P=P_{mea}+P_{ca}+G_a$=(-20dBm)+(-30dB)+(11dB)= -39dBm

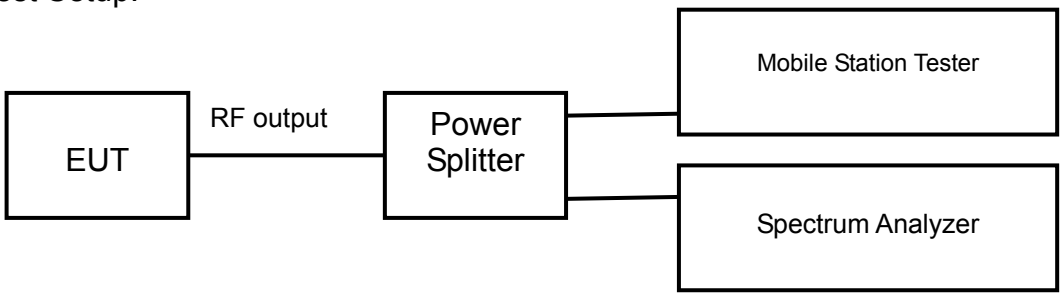
Test result:
The test results are shown in Appendix B.

6.9 Peak-Average Ratio -FCC Part 24.232(d)

Ambient condition:

Temperature	Relative humidity	Pressure
25°C	30%	101.9kPa

Test Setup:



Test procedure:
After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The Peak-Average Ratio is measured using spectrum analyzer. RBW is set to 30kHz on spectrum analyzer. The Peak-Average Ratio can be read on spectrum analyzer.

Limits: the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Test result:
The test results are shown in Appendix A

7 MEASUREMENT UNCERTAINTIES

Items	Uncertainty	
Occupied Bandwidth	3kHz	
Peak power output	0.67dB	
Band edge compliance	1.20dB	
Spurious emissions	30MHz～1GHz	2.83dB
	1GHz～12.75GHz	2.50dB
	12.75GHz～25GHz	2.75dB

8 TEST EQUIPMENTS

No.	Name/Model	Manufacturer	S/N	Calibration Date	Calibration Due Date
1	E5515C(8960) Mobile Station Tester	Agilent	MY50266302	2018.08.20	2019.08.19
2	N9020A Spectrum Analyzer	Agilent	MY48010771	2018.08.20	2019.08.19
3	6007 Power Divider	Weinschel	6007-GJ-1	2018.08.20	2019.08.19
4	DC Power Supply E3645A	Agilent	MY40000741	2019.03.01	2020.02.28
5	Temperature chamber SH241	ESPEC	92013758	2018.08.20	2019.08.19
6	12.65m×8.03m×7.50m Fully-Anechoic Chamber	FRANKONIA	-----	-----	-----
7	23.18m×16.88m×9.60m Semi-Anechoic Chamber	FRANKONIA	---	-----	-----
8	Turn table Diameter:1m	FRANKONIA	-----	-----	-----
9	Turn table Diameter:5m	FRANKONIA	-----	-----	-----
10	Antenna master FAC(MA4.0)	MATURO	-----	-----	-----
11	Antenna master SAC(MA4.0)	MATURO	-----	-----	-----
12	9.080m×5.255m×3.525m Shielding room	FRANKONIA	-----	-----	-----
13	HF 907 Double-Ridged Waveguide Horn Antenna	R&S	100512	2018.08.20	2019.08.19
14	HF 907 Double-Ridged Waveguide Horn Antenna	R&S	100513	2018.08.20	2019.08.19
15	HL562 Ultra log antenna	R&S	100016	2018.08.20	2019.08.19
16	3160-09 Receive antenna	SCHWARZ-BECK	002058-002	2018.08.20	2019.08.19
17	ESI 40 EMI test receiver	R&S	100015	2018.08.20	2019.08.19
18	ESCS30 EMI test receiver	R&S	100029	2018.08.20	2019.08.19
19	HL562 Receive antenna	R&S	100167	2018.08.20	2019.08.19
20	ENV216 AMN	R&S	3560.6550.12	2018.08.20	2019.08.19

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Please refer to the attachment.

APPENDIX B – TEST DATA OF RADIATED EMISSION

Please refer to the attachment.

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

RF Power Output-FCC Part2.1046

BC0 Antenna Gain=1.90dBi

1X RTT BC0:

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)
824.70	1013	24.68
836.52	384	24.63
848.31	777	24.58

1X EVDO R0 BC0:

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)
824.70	1013	24.73
836.52	384	24.65
848.31	777	24.64

1X EVDO RA BC0:

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)
824.70	1013	24.71
836.52	384	24.61
848.31	777	24.57

BC1 Antenna Gain=2.72dBi

1X RTT BC1:

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)
1851.25	25	23.62
1880.00	600	23.57
1908.75	1175	23.52

1X EVDO RA BC0

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)
1851.25	25	23.72
1880.00	600	23.61
1908.75	1175	23.55

1X EVDO RA BC1:

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)
1851.25	25	23.64
1880.00	600	23.55
1908.75	1175	23.52

Occupied Bandwidth-FCC Part2.1049

CDMA BC0:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (MHz)
824.70	1013	1.2653
836.52	384	1.2683
848.31	777	1.2709

CDMA BC1:

Carrier frequency (MHz)	Channel No.	Bandwidth of 99% Power (kHz)
1851.25	25	1.2735
1880.00	600	1.2682
1908.75	1175	1.2665

Emission Bandwidth-FCC Part 22.917(b)/Part 24.238(b)

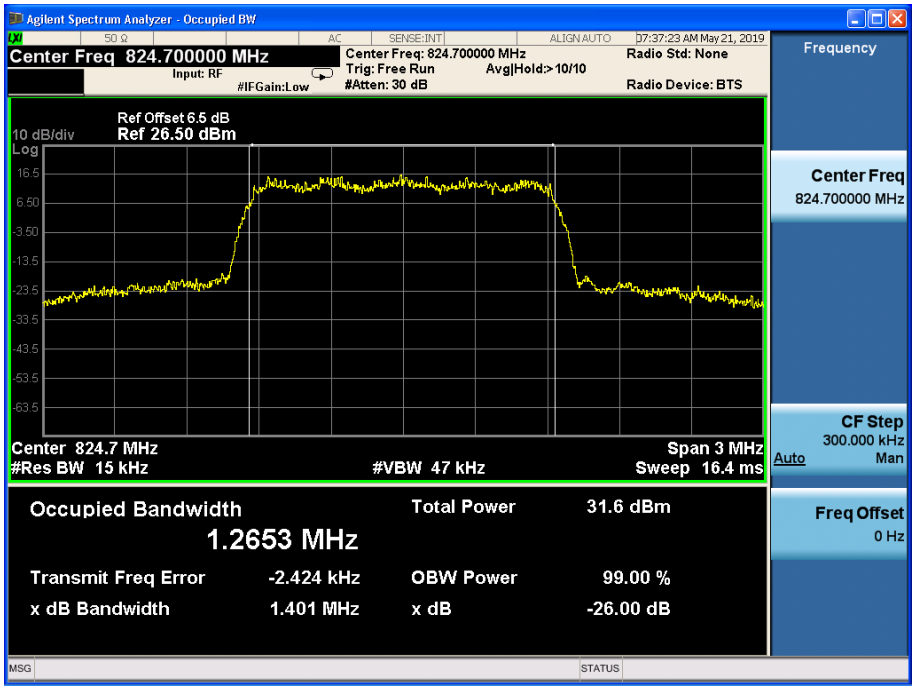
CDMA BC0:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (MHz)
824.70	1013	1.401
836.52	384	1.413
848.31	777	1.407

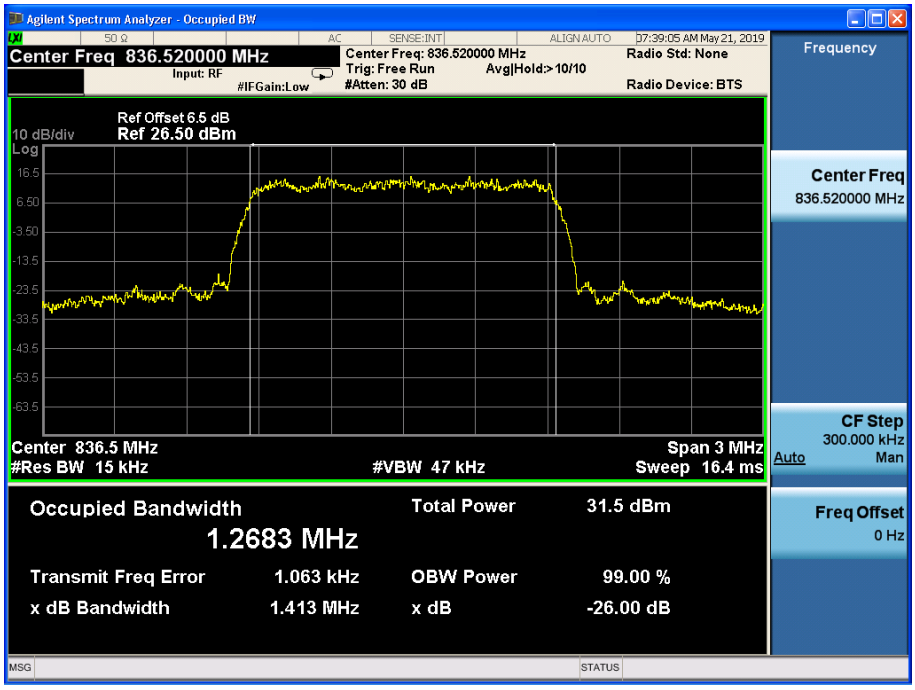
CDMA BC1:

Carrier frequency (MHz)	Channel No.	Bandwidth of -26dB transmitter power (MHz)
1851.25	25	1.418
1880.00	600	1.420
1908.75	1175	1.409

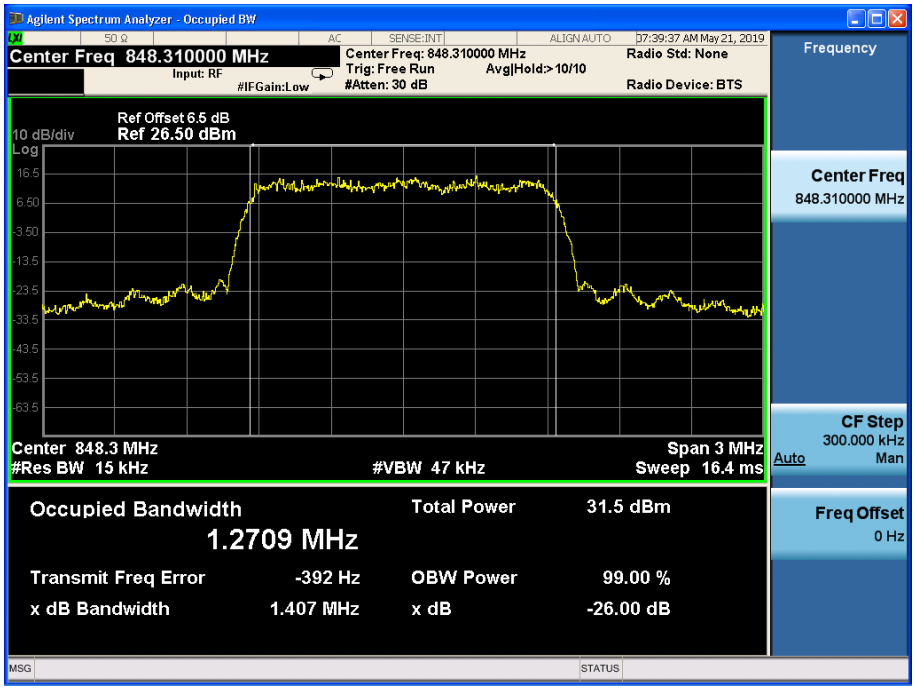
CDMA BC0



Channel 1013

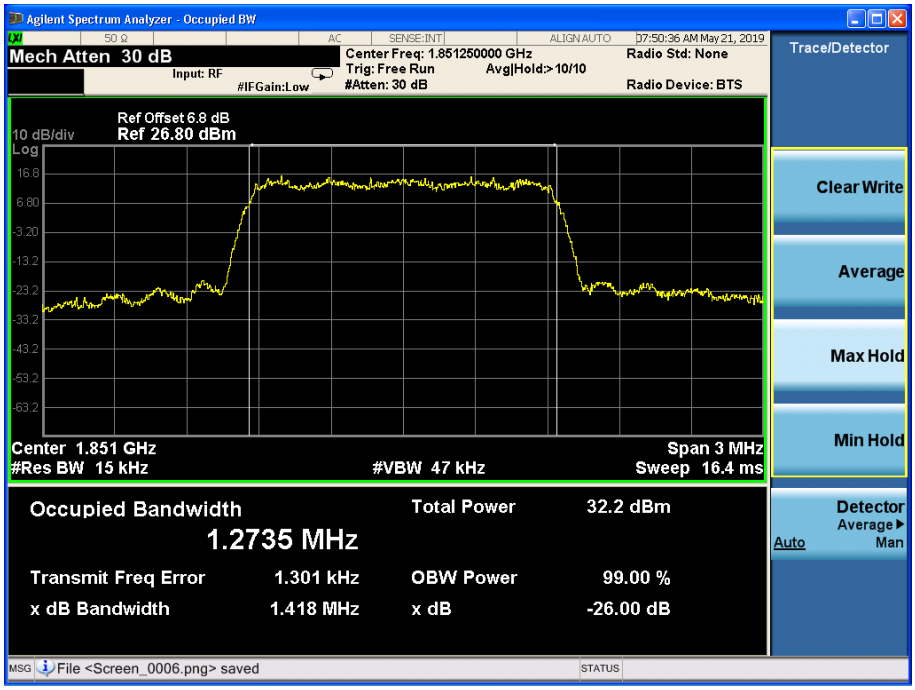


Channel 384

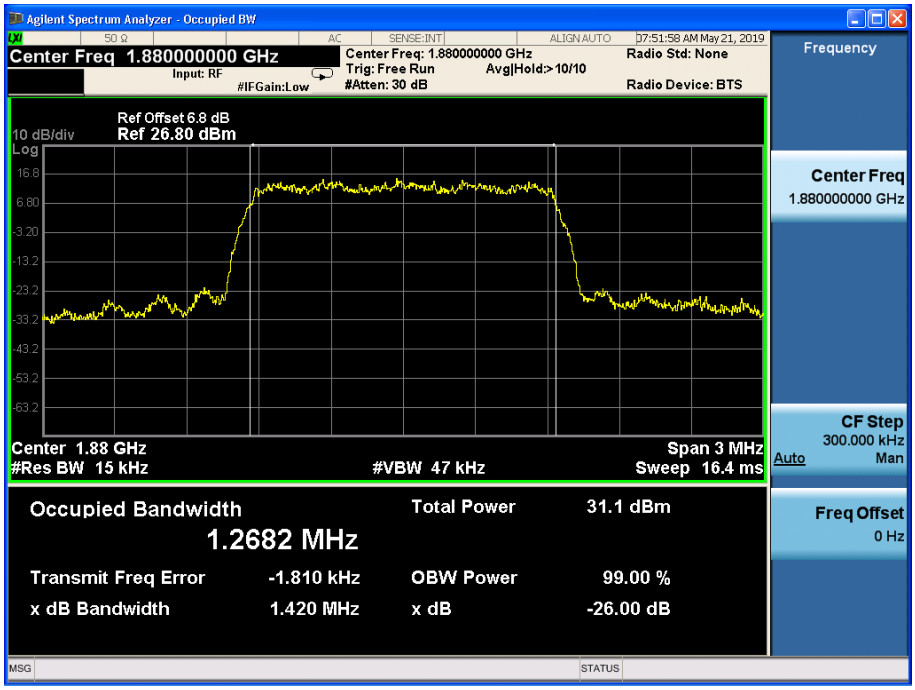


Channel 777

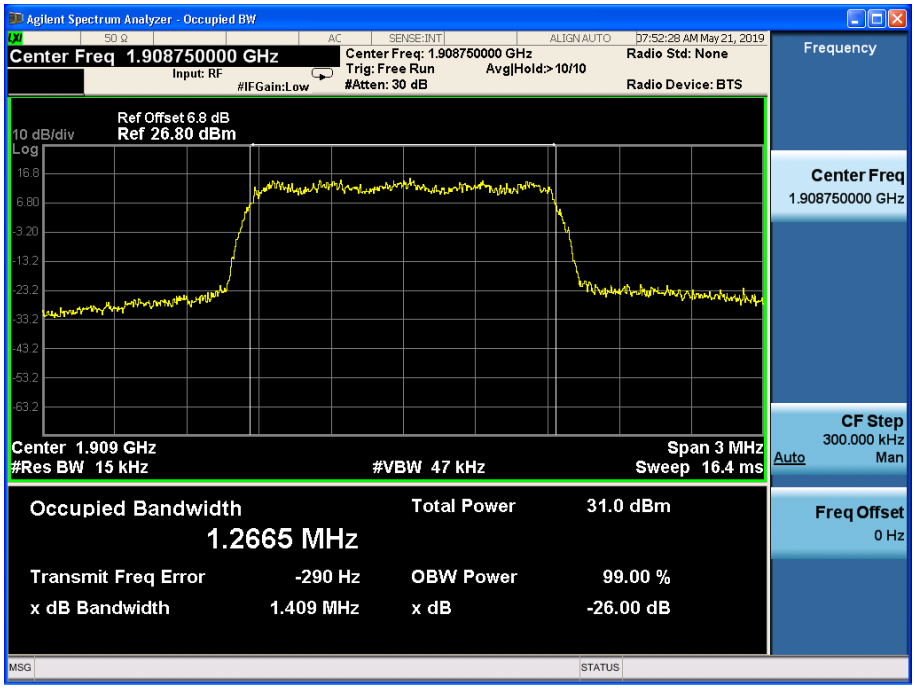
CDMA BC1:



Channel 25



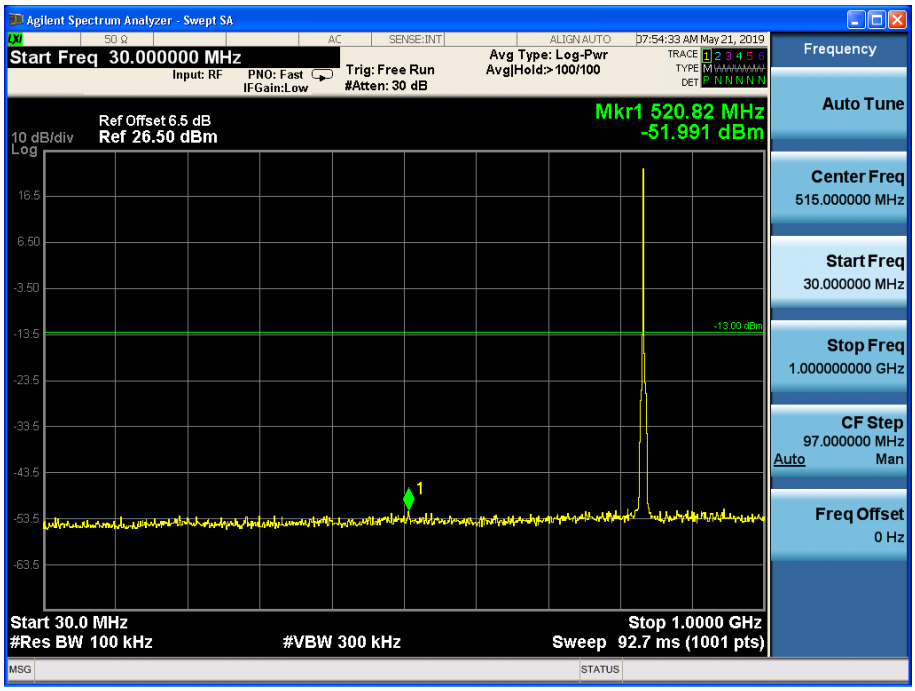
Channel 600



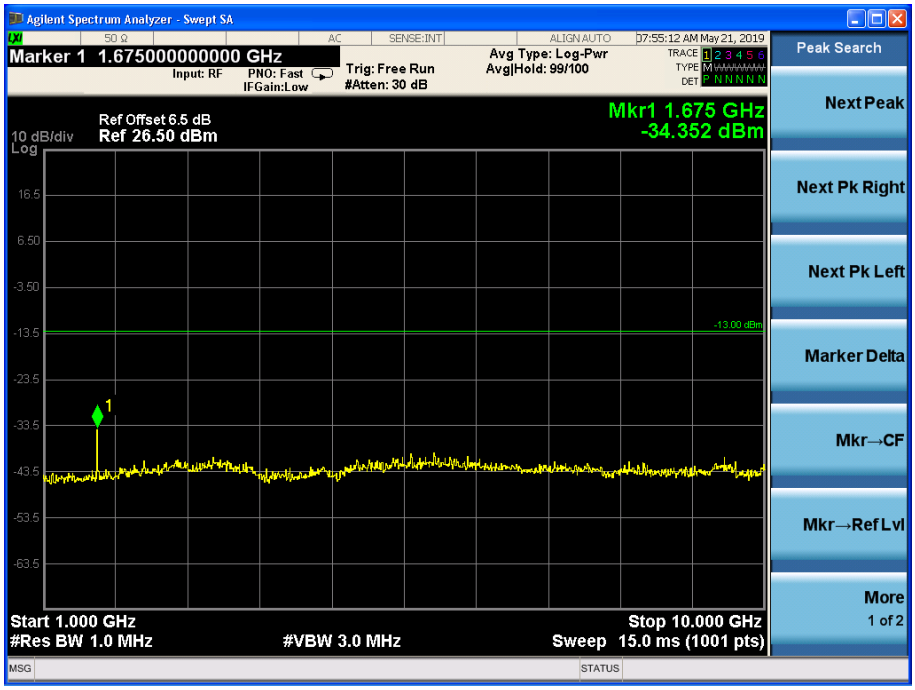
Channel 1175

Spurious Emissions at antenna terminal- FCC Part 2.1051/ 22.917(a) /Part 24.238(a)

CDMA BC0:

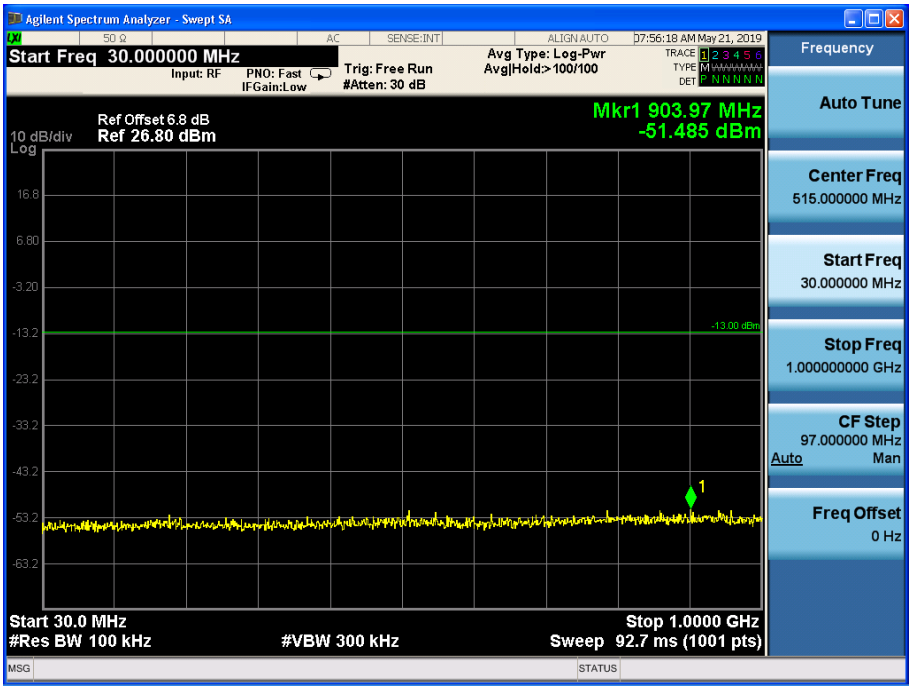


Channel 384, 30MHz~1GHz



Channel 384, 1GHz~10GHz

CDMA BC1:

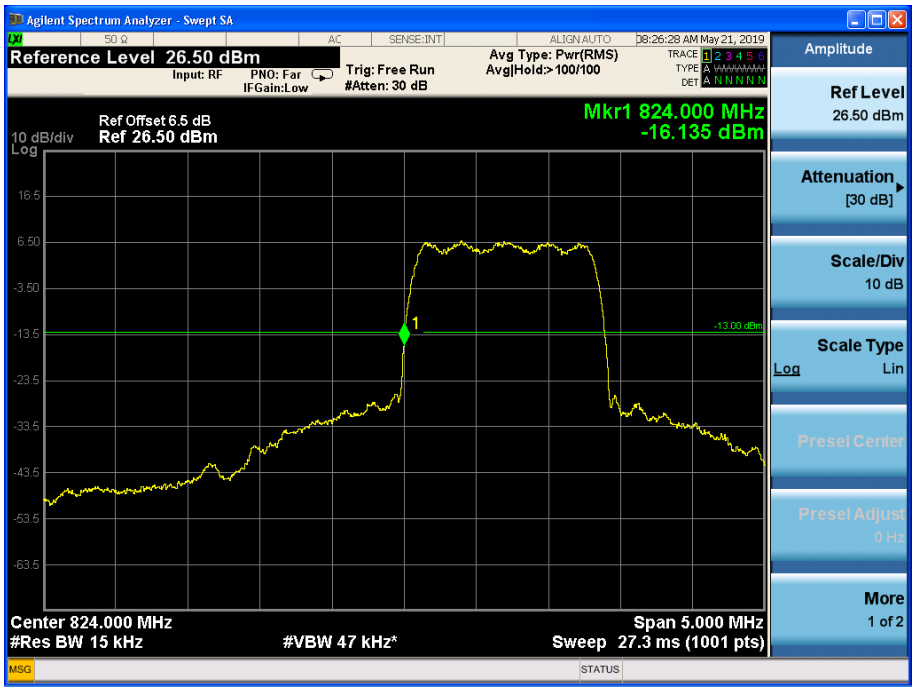


Channel 600, 30MHz~1GHz

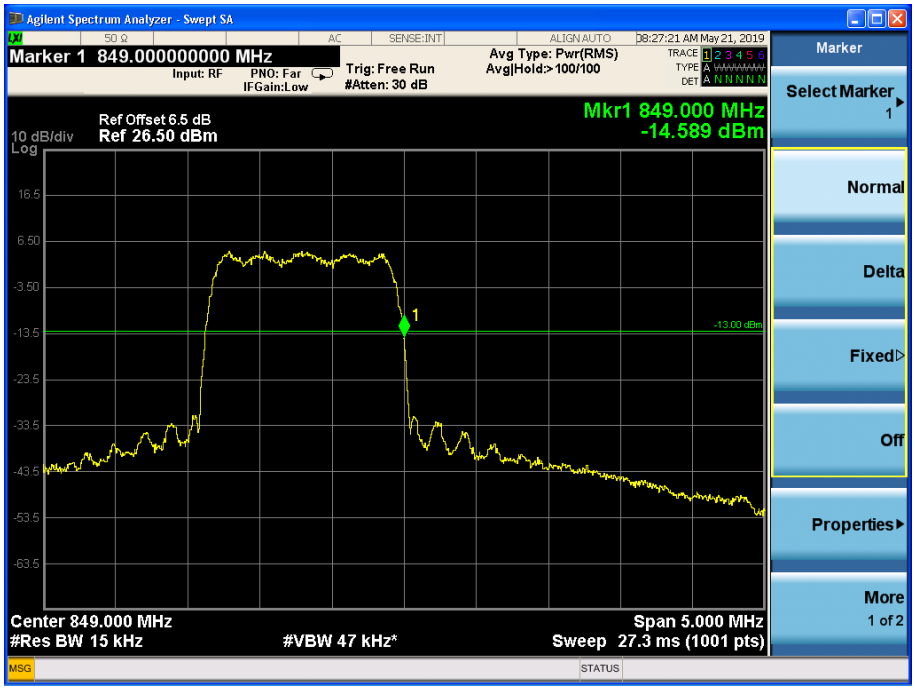
Channel 600, 1GHz~20GHz

Band Edges Compliance- FCC Part 2.1051/ 22.917(a) /Part 24.238(a)

CDMA BC0:

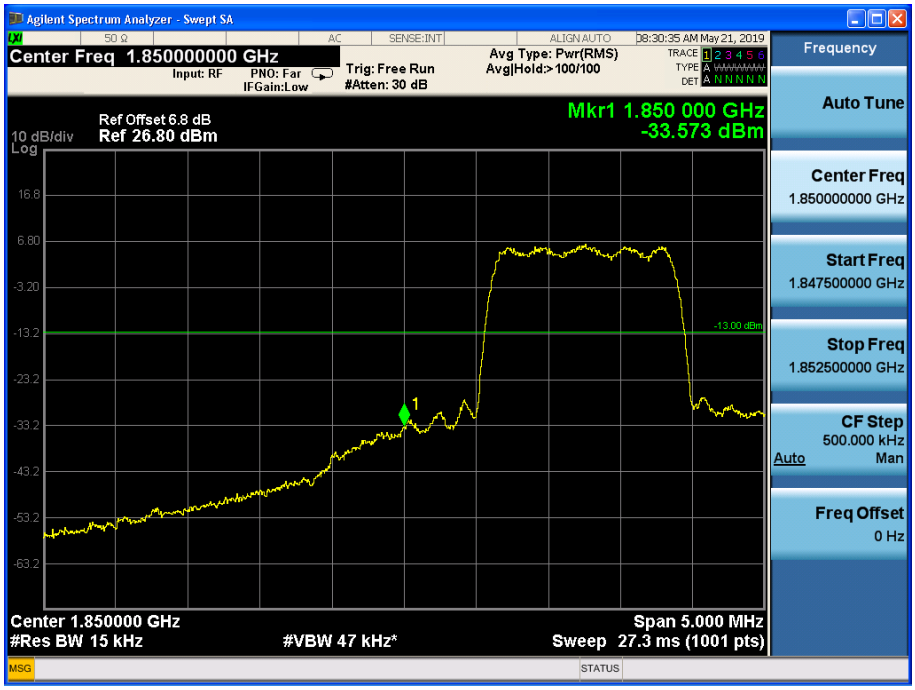


Channel 1013



Channel 777

CDMA BC1:



Channel 25

Channel 1175

Frequency Stability- FCC Part 2.1055/22.355 /Part 24.235

CDMA BC0:

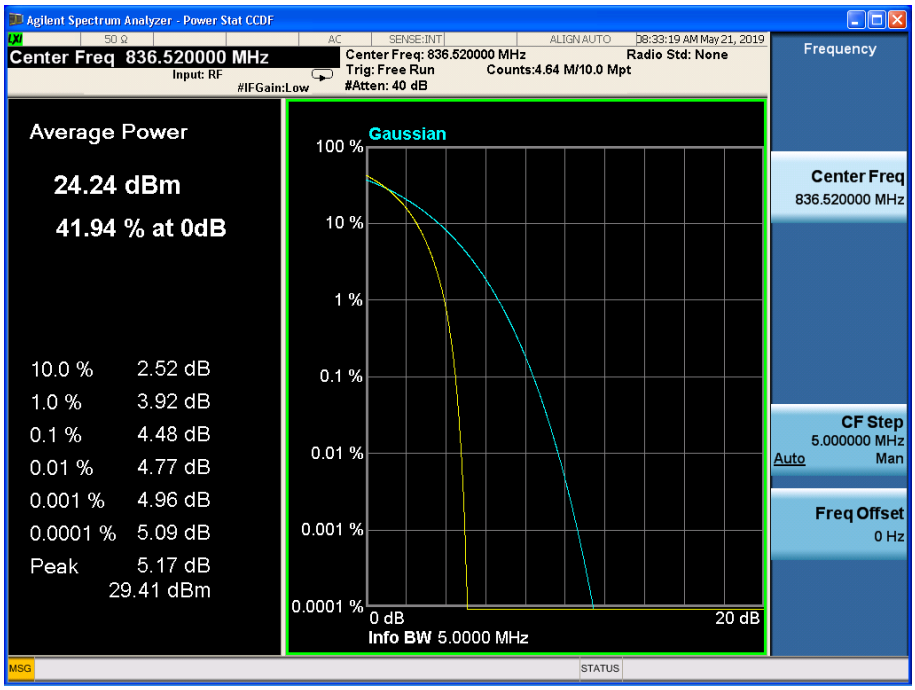
Temperature(°C)	Test Result (ppm)@NV		
	Channel 1013	Channel 384	Channel 777
-10	-0.002	-0.026	0.001
0	-0.007	-0.013	0.013
+10	0.004	-0.028	-0.017
+20	0.018	-0.028	0.000
+30	0.003	-0.017	-0.010
+40	-0.024	0.012	-0.019
+50	-0.026	-0.006	0.002
Voltage	Test Result (ppm)@NT		
	Channel 1013	Channel 384	Channel 777
LV	-0.021	0.004	0.007
HV	-0.023	0.029	-0.001

CDMA BC1:

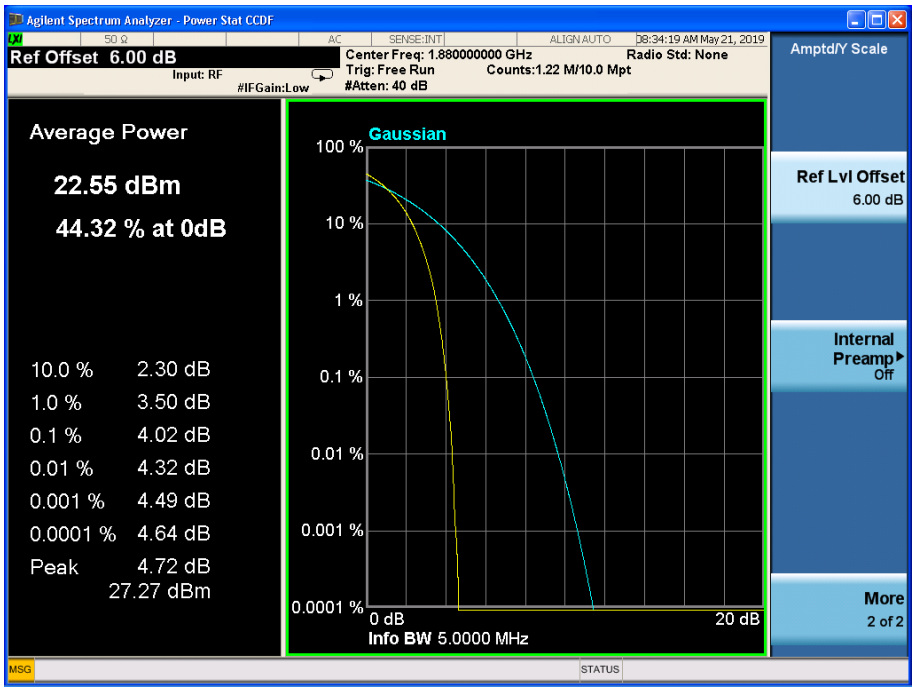
Temperature(°C)	Test Result (ppm)@NV		
	Channel 25	Channel 600	Channel 1175
-10	0.008	0.005	-0.007
0	0.015	0.011	0.001
+10	0.016	-0.026	0.022
+20	-0.023	-0.014	-0.017
+30	-0.011	0.027	0.000
+40	0.014	-0.008	0.010
+50	-0.021	-0.002	-0.010
Voltage	Test Result (ppm)@NT		
	Channel 25	Channel 600	Channel 1175
LV	-0.023	0.003	-0.010
HV	-0.014	0.004	-0.020

Peak-Average Ratio -FCC Part 24.232(d)

CDMA BC0:



CDMA BC1:



APPENDIX B – TEST DATA OF RADIATED EMISSION

Effective Radiated Power-FCC Part22.913(a)

The measurement results are obtained as described below:
Peak ERP = Pmea + Pca Cable loss+ Ga Antenna Gain- Correction

Sample calculation: (23.95 dBm) = (21.60 dBm) + (-3.8 dB) + (8.3 dB)- (2.15 dB), the corresponding frequency is 824.70MHz.

Frequency (MHz)	Peak ERP (dBm)	Pca Cable loss(dB)	Ga Antenna Gain (dB)	Correction (dB)	Pmea (dBm)	Polarization
824.70	23.95	-3.8	8.3	2.15	21.60	Vertical

Test result:
CDMA BC0

Frequency (MHz)	Peak ERP (dBm)	Pca Cable loss(dB)	Ga Antenna Gain (dB)	Correction (dB)	Pmea (dBm)	Polarization
824.70	23.95	-3.8	8.3	2.15	21.60	Vertical
836.52	23.31	-3.8	8.3	2.15	20.96	Vertical
848.31	23.39	-3.8	8.3	2.15	21.04	Vertical

Channel 384:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1648.17	-53.81	-13	Vertical
1667.35	-50.79	-13	Vertical
2535.62	-43.47	-13	Horizontal
2577.54	-43.48	-13	Vertical
8963.35	-39.95	-13	Vertical
9969.55	-36.36	-13	Vertical

Channel 777:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1652.43	-53.08	-13	Vertical
1664.35	-50.90	-13	Vertical
2537.58	-43.53	-13	Horizontal
2572.21	-44.33	-13	Vertical
8961.56	-39.97	-13	Vertical
9971.89	-35.94	-13	Vertical

Channel 1013:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
1646.95	-52.88	-13	Vertical
1665.33	-50.38	-13	Vertical
2532.56	-44.05	-13	Horizontal
2574.70	-43.39	-13	Vertical
8967.78	-40.00	-13	Vertical
9968.07	-35.98	-13	Vertical

CDMA BC1

Frequency (MHz)	Peak EIRP(dBm)	Pca Cable loss(dB)	Ga Antenna Gain (dB)	Pmea (dBm)	Polarization
1851.25	22.49	-3.8	8.6	17.69	Vertical
1880.00	22.91	-3.8	8.6	18.11	Vertical
1908.75	22.90	-3.8	8.6	18.10	Vertical

Channel 25

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2456.03	-48.51	-13	Vertical
2778.12	-47.52	-13	Vertical
3728.79	-40.00	-13	Horizontal
6678.36	-40.83	-13	Vertical
9961.40	-37.23	-13	Vertical
17820.51	-34.53	-13	Vertical

Channel 600:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2460.09	-48.59	-13	Vertical
2779.08	-47.63	-13	Horizontal
3729.43	-40.52	-13	Vertical
6681.33	-39.87	-13	Vertical
9961.48	-37.14	-13	Vertical
17822.22	-34.83	-13	Horizontal

Channel 1175:

Frequency (MHz)	Power (dBm)	Limited (dBm)	Polarization
2456.03	-49.72	-13	Vertical
2779.57	-47.80	-13	Vertical
3726.86	-40.00	-13	Horizontal
6676.71	-39.97	-13	Horizontal
9958.75	-37.02	-13	Vertical
17822.87	-34.81	-13	Vertical

---End of Test Report---