FCC TEST REPORT

(PART 24)

REPORT NO.:	RF120313C05-1
MODEL NO.:	R528
FCC ID:	UZI-R528
RECEIVED:	Mar. 13, 2012
TESTED:	Mar. 25 ~ Apr. 09, 2012
ISSUED:	Apr. 11, 2012

APPLICANT:	BandRich Inc.
ADDRESS:	6F., No. 71, Zhouzi St., Neihu Dist., Taipei City 11493, Taiwan (R.O.C.)

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB ADDRESS:	No. 47, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C)
TEST LOCATION:	No. 19, Hwa Ya 2nd Rd, Wen Hwa Tsuen, Kwei Shan Hsiang, Taoyuan Hsien 333, Taiwan, R.O.C.

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF120313C05-1	Original release	Apr. 11, 2012

1 CERTIFICATION

PRODUCT:	LTE/EVDO Rev. A WLAN VOIP Router
MODEL NO.:	R528
BRAND:	BandLuxe
APPLICANT:	BandRich Inc.
TEST SAMPLE:	ENGINEERING SAMPLE
TESTED:	Mar. 25 ~ Apr. 09, 2012
TEST STANDARDS:	**FCC Part 24, Subpart E**

The above equipment (model: R528) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch,** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : _____ , **DATE :** Apr. 11, 2012
Andrea Hsia / Specialist

APPROVED BY : _____ , **DATE :** Apr. 11, 2012
Gary Chang / Technical Manager

2 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
2.1046 24.232	Equivalent isotropically radiated power	PASS	Meet the requirement of limit.
2.1055 24.235	Frequency Stability	PASS	Meet the requirement of limit.
2.1049 24.238(b)	Occupied Bandwidth	PASS	Meet the requirement of limit.
24.238(b)	Band Edge Measurements	PASS	Meet the requirement of limit.
2.1051 24.238	Conducted Spurious Emissions	PASS	Meet the requirement of limit.
2.1053 24.238	Radiated Spurious Emissions	PASS	Meet the requirement of limit. Minimum passing margin is –11.3dB at 3760.60MHz.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	3.34 dB
	200MHz ~1000MHz	3.35 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESIB7	100212	Aug. 02, 2011	Aug. 01, 2012
Spectrum Analyzer ROHDE & SCHWARZ	FSP40	100041	Jul. 21, 2011	Jul. 20, 2012
BILOG Antenna SCHWARZBECK	VULB9168	9168-160	Apr. 13, 2011	Apr. 12, 2012
HORN Antenna SCHWARZBECK	9120D	209	Aug. 25, 2011	Aug. 24, 2012
HORN Antenna SCHWARZBECK	BBHA 9170	148	Jul. 20, 2011	Jul. 19, 2012
Preamplifier Agilent	8447D	2944A10633	Oct. 29, 2011	Oct. 28, 2012
Preamplifier Agilent	8449B	3008A01964	Oct. 29, 2011	Oct. 28, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250723/4	Aug. 30, 2011	Aug. 29, 2012
RF signal cable HUBER+SUHNNER	SUCOFLEX 106	12738/6+309224/4	Aug. 30, 2011	Aug. 29, 2012
Software ADT.	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
Antenna Tower inn-co GmbH	MA 4000	013303	NA	NA
Antenna Tower Controller inn-co GmbH	CO2000	017303	NA	NA
Turn Table ADT.	TT100	TT93021703	NA	NA
Turn Table Controller ADT.	SC100	SC93021703	NA	NA
Communication Tester R&S	CMU200	104484	Dec. 30, 2011	Dec. 29, 2012
Standard Temperature & Humidity Chamber WIT	MHU-225AU	920842	Jun. 15, 2011	Jun. 14, 2012
Mini-Circuits Power Splitter	ZN2PD-9G	NA	May 25, 2011	May 24, 2012
RF cable	SUCOFLEX 104	274403/4	Aug. 20, 2011	Aug. 19, 2012
RF cable	SUCOFLEX 104	250729/4	Aug. 19, 2011	Aug. 18, 2012
RF cable	SUCOFLEX 104	214377/4	Aug. 19, 2011	Aug. 18, 2012
JFW 20dB attenuation	50HF-020-SMA	NA	NA	NA

NOTE: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. The test was performed in HwaYa Chamber 3.

3. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.

4. The FCC Site Registration No. is 988962.

5. The IC Site Registration No. is IC 7450F-3.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	LTE/EVDO Rev. A WLAN VOIP Router	
MODEL NO.	R528	
POWER SUPPLY	12Vdc	
MODULATION TYPE	**CDMA**	QPSK, OQPSK, HPSK
	LTE	**Uplink:** QPSK1/2, 16QAM1/2, 16QAM3/4 **Downlink:** QPSK1/2, 16QAM1/2, 16QAM3/4, 64QAM3/4
FREQUENCY RANGE	**CDMA**	1851.25MHz ~ 1908.75MHz
	LTE Channel Bandwidth: 5MHz	1852.5MHz ~ 1912.5MHz
	LTE Channel Bandwidth: 10MHz	1855.0MHz ~ 1910.0MHz
	LTE Channel Bandwidth: 20MHz	1860.0MHz ~ 1905.0MHz
MAX. EIRP POWER	**CDMA**	24.6dBm (0.2884Watts)
	LTE	24.9dBm (0.3090Watts)
ANTENNA TYPE	Monopole antenna with 2.5dBi gain	
DATA CABLE	NA	
I/O PORTS	Refer to user's manual	
ACCESSORY DEVICES	Adapter	

NOTE:

1. The EUT was powered by the following adapter.

BRAND:	Channel Well Technology
MODEL:	SAG024F4
INPUT:	100-240Vac, 47-63Hz, 0.8A
OUTPUT:	12Vdc, 2.0A
POWER LINE:	1.5m non-shielded cable w/o core

2. HW version : V01.
3. SW version : 00013922.
4. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

CDMA

1151 channels are provided to this EUT in the CDMA band. Therefore, the low, middle and high channels are chosen for testing.

	CHANNEL	FREQUENCY	TX MODE
LOW	25	1851.25 MHz	CDMA, 1xEVDO Rev. 0 & 1xEVDO Rev. A
MIDDLE	600	1880.00 MHz	CDMA, 1xEVDO Rev. 0 & 1xEVDO Rev. A
HIGH	1175	1908.75 MHz	CDMA, 1xEVDO Rev. 0 & 1xEVDO Rev. A

NOTE:

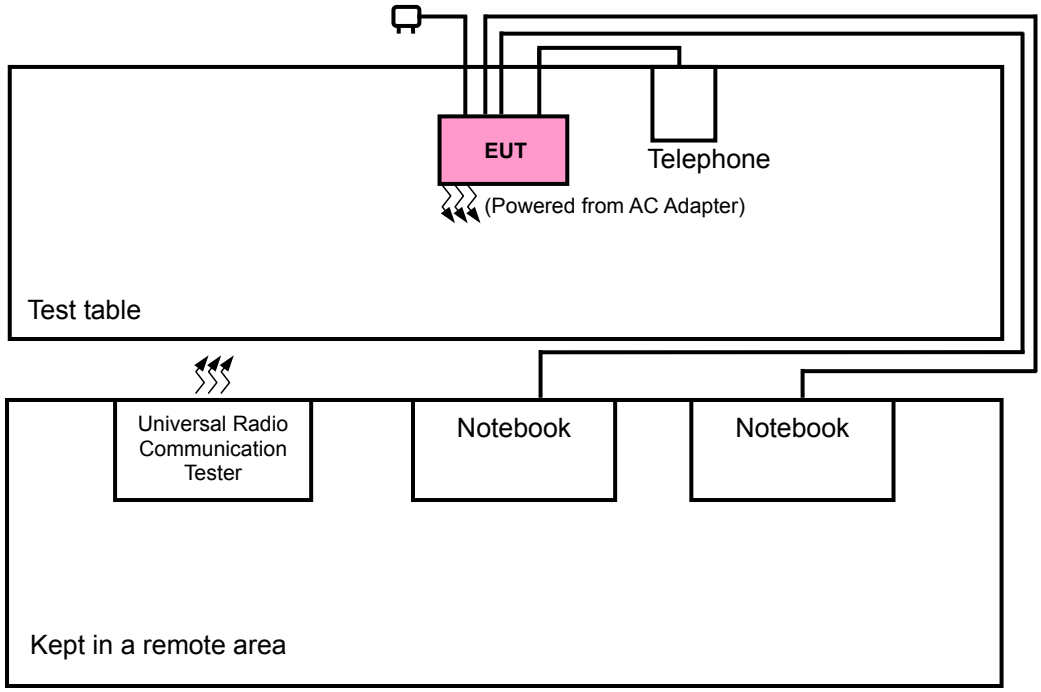
1. Below 1 GHz, the channel 25, 600 and 1175 were pre-tested in chamber. The channel 25 was the worst case and chosen for final test.
2. The channel space is 0.05MHz.
3. After pretest of output power and spurious emission under 1xEVDO Rev. A, 1xEVDO Rev. 0, CDMA mode, find the worst mode is CDMA. Therefore, select CDMA mode to do final test

LTE Band

Three channels had been tested for each channel bandwidth.

CHANNEL BANDWIDTH	5MHz		10MHz		20MHz	
	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
Low channel (L)	26065	1852.5	26090	1855.0	26140	1860.0
Middle channel (M)	26365	1882.5	26365	1882.5	26365	1882.5
High channel (H)	26665	1912.5	26640	1910.0	26590	1905.0

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST



3.2.2 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	TELEPHONE	HTT	HTT-806	NA	NA
2	NOTEBOOK	DELL	E5410	1HC2XM1	NA
3	NOTEBOOK	DELL	E5410	6RP2YM1	NA
4	UNIVERSAL RADIO COMMUNICATION TESTER	R&S	CMU200	104484	NA

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	1.8m RJ11 cable
2	10m RJ45 cable
3	10m RJ45 cable
4	NA

NOTE 1: All power cords of the above support units are non shielded (1.8m).

NOTE 2: Item 2 ~ 4 acted as a communication partner to transfer data.

3.2.3 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO							DESCRIPTION
	OP	FS	OB	BE	CE	RE<1G	RE≥1G	
-	√	√	√	√	√	√	√	-

Where **OP:** Output power
FS: Frequency stability
OB: Occupied bandwidth
BE: Band edge
CE: Conducted spurious emissions
RE<1G: Radiated emission below 1GHz
RE≥1G: Radiated emission above 1GHz

OUTPUT POWER MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	AXIS
CDMA	25 to 1175	25, 600, 1175	CDMA, 1xEVDO Rev. A, 1xEVDO Rev. 0	X
LTE	26065 to 26665	26065, 26365, 26665	QPSK	Z
	26090 to 26640	26090, 26365, 26640	QPSK	Z
	26140 to 26590	26140, 26365, 26590	QPSK	Z

FREQUENCY STABILITY MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY
CDMA	25 to 1175	600	CDMA
LTE	26065 to 26665	26365	QPSK
	26090 to 26640	26365	QPSK
	26140 to 26590	26365	QPSK

OCCUPIED BANDWIDTH MEASUREMENT:

☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY
CDMA	25 to 1175	25, 600, 1175	CDMA, 1xEVDO Rev. A, 1xEVDO Rev. 0
LTE	26065 to 26665	26065, 26365, 26665	QPSK
	26090 to 26640	26090, 26365, 26640	QPSK
	26140 to 26590	26140, 26365, 26590	QPSK

BAND EDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY
CDMA	25 to 1175	25, 1175	CDMA, 1xEVDO Rev. A, 1xEVDO Rev. 0
LTE	26065 to 26665	26065, 26665	QPSK, 16QAM
	26090 to 26640	26090, 26640	QPSK, 16QAM
	26140 to 26590	26140, 26590	QPSK, 16QAM

CONDUCTED SPURIOUS EMISSIONS MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY
CDMA	25 to 1175	25, 600, 1175	CDMA
LTE	26065 to 26665	26065, 26365, 26665	QPSK
	26090 to 26640	26090, 26365, 26640	QPSK
	26140 to 26590	26140, 26365, 26590	QPSK

RADIATED EMISSION MEASUREMENT (BELOW 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	AXIS
CDMA	25 to 1175	25	CDMA	X
LTE	26065 to 26665	26065	QPSK	Z
	26090 to 26640	26090	QPSK	Z
	26140 to 26590	26140	QPSK	Z

RADIATED EMISSION MEASUREMENT (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports (if EUT with antenna diversity architecture).
☒ Following channel(s) was (were) selected for the final test as listed below.

OPERATING BAND	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	AXIS
CDMA	25 to 1175	25, 600, 1175	CDMA	X
LTE	26065 to 26665	26065, 26365, 26665	QPSK	Z
	26090 to 26640	26090, 26365, 26640	QPSK	Z
	26140 to 26590	26140, 26365, 26590	QPSK	Z

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
OP	25deg. C, 65%RH	120Vac, 60Hz	Mark Liao
FS	25deg. C, 65%RH	120Vac, 60Hz	Mark Liao
OB	25deg. C, 65%RH	120Vac, 60Hz	Mark Liao
EM	25deg. C, 65%RH	120Vac, 60Hz	Mark Liao
BE	25deg. C, 65%RH	120Vac, 60Hz	Mark Liao
CE	25deg. C, 65%RH	120Vac, 60Hz	Mark Liao
RE < 1G	25deg. C, 65%RH	120Vac, 60Hz	Haru Yang
RE ≥ 1G	25deg. C, 65%RH 21deg. C, 67%RH	120Vac, 60Hz	Haru Yang Aska Huang

3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC 47 CFR Part 2

FCC 47 CFR Part 24

ANSI/TIA/EIA-603-C 2004

All test items have been performed and recorded as per the above standards.

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (DoC). The test report has been issued separately.

4 TEST TYPES AND RESULTS

4.1 OUTPUT POWER MEASUREMENT

4.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Mobile and portable stations are limited to 2 watts EIRP

4.1.2 TEST PROCEDURES

EIRP MEASUREMENT:

a. All measurements were done at low, middle and high operational frequency range. RWB and VBW is 5MHz for CDMA mode and10MHz for LTE mode.

b. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.

c. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a tx cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to “Read Value” of step c. Record the power level of S.G

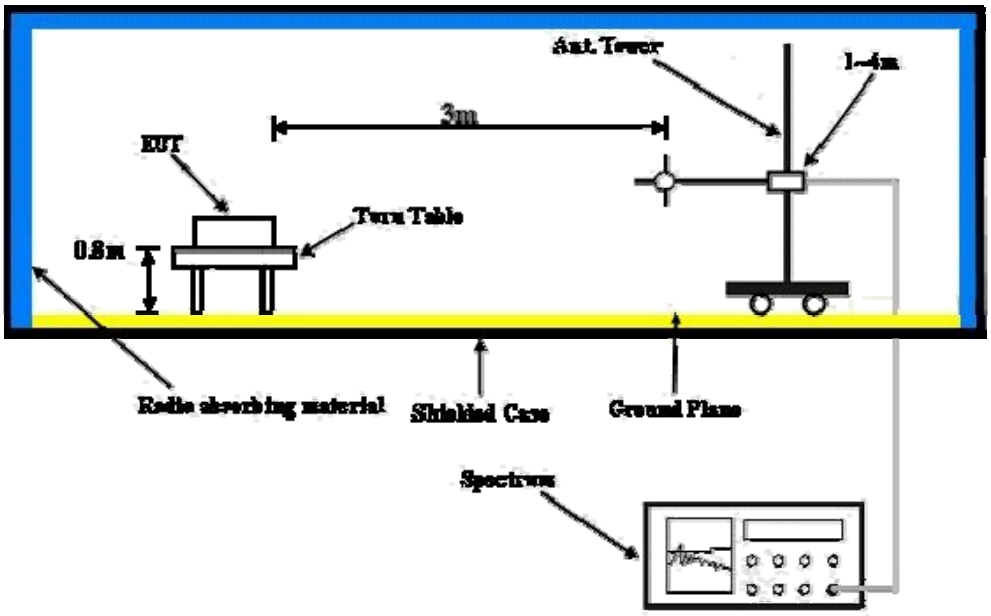
d. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn.

CONDUCTED POWER MEASUREMENT:

The EUT was set up for the maximum power with CDMA / LTE link data modulation and link up with simulator. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.

4.1.3 TEST SETUP

EIRP POWER MEASUREMENT:



For the actual test configuration, please refer to the attached file (Test Setup Photo).

CONDUCTED POWER MEASUREMENT:

For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.4 TEST RESULTS

CONDUCTED OUTPUT POWER (dBm)

Band	CDMA		
Channel	25	600	1175
Frequency	1851.25	1880	1908.75
RC1+SO55	23.84	23.56	22.66
RC3+SO55	24.05	23.60	22.65
RC3+SO32(+ F-SCH)	23.84	23.60	22.67
RC3+SO32(+SCH)	23.76	23.58	22.62
RTAP 153.6	23.81	23.61	22.81
RETAP 4096	23.92	23.66	22.82

LTE						
BW	Modulation	CH	Frequency (MHz)	RB	RB Offset	Measured Power
5 MHz	QPSK	26065	1852.5	1	0	22.38
		26365	1882.5	1	0	22.14
		26665	1912.5	1	0	21.75
		26065	1852.5	1	24	22.07
		26365	1882.5	1	24	22.16
		26665	1912.5	1	24	21.22
		26065	1852.5	12	6	21.65
		26365	1882.5	12	6	21.51
		26665	1912.5	12	6	21.27
		26065	1852.5	25	0	21.64
		26365	1882.5	25	0	21.48
		26665	1912.5	25	0	21.19
	16QAM	26065	1852.5	1	0	22.12
		26365	1882.5	1	0	21.74
		26665	1912.5	1	0	21.58
		26065	1852.5	1	24	21.94
		26365	1882.5	1	24	21.95
		26665	1912.5	1	24	20.94
		26065	1852.5	12	6	20.73
		26365	1882.5	12	6	20.58
		26665	1912.5	12	6	20.55
		26065	1852.5	25	0	21.16
		26365	1882.5	25	0	21.02
		26665	1912.5	25	0	20.58

LTE						
BW	Modulation	CH	Frequency (MHz)	RB	RB Offset	Measured Power
10 MHz	QPSK	26090	1855.0	1	0	22.53
		26365	1882.5	1	0	22.01
		26640	1910.0	1	0	21.81
		26090	1855.0	1	49	21.9
		26365	1882.5	1	49	22.22
		26640	1910.0	1	49	21.42
		26090	1855.0	25	12	21.53
		26365	1882.5	25	12	21.35
		26640	1910.0	25	12	21.45
		26090	1855.0	50	0	21.55
		26365	1882.5	50	0	21.51
		26640	1910.0	50	0	21.41
	16QAM	26090	1855.0	1	0	22.18
		26365	1882.5	1	0	21.78
		26640	1910.0	1	0	21.52
		26090	1855.0	1	49	21.78
		26365	1882.5	1	49	22.12
		26640	1910.0	1	49	20.98
		26090	1855.0	25	12	21.04
		26365	1882.5	25	12	20.99
		26640	1910.0	25	12	20.76
		26090	1855.0	50	0	20.68
		26365	1882.5	50	0	20.7
		26640	1910.0	50	0	20.44

LTE						
BW	Modulation	CH	Frequency (MHz)	RB	RB Offset	Measured Power
20 MHz	QPSK	26140	1860.0	1	0	22.34
		26365	1882.5	1	0	21.81
		26590	1905.0	1	0	21.79
		26140	1860.0	1	99	21.11
		26365	1882.5	1	99	21.89
		26590	1905.0	1	99	21.32
		26140	1860.0	50	25	21.54
		26365	1882.5	50	25	21.53
		26590	1905.0	50	25	21.22
		26140	1860.0	100	0	21.31
		26365	1882.5	100	0	21.54
		26590	1905.0	100	0	21.43
	16QAM	26140	1860.0	1	0	22.11
		26365	1882.5	1	0	21.54
		26590	1905.0	1	0	21.68
		26140	1860.0	1	99	21.08
		26365	1882.5	1	99	21.79
		26590	1905.0	1	99	21.11
		26140	1860.0	50	25	20.57
		26365	1882.5	50	25	20.73
		26590	1905.0	50	25	20.41
		26140	1860.0	100	0	20.38
		26365	1882.5	100	0	20.71
		26590	1905.0	100	0	20.51

EIRP POWER

CDMA: FOR CDMA MODE:

MODE	TX channel 25						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1851.25	-12.6	23.5	1.1	24.6	33.0	-8.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1851.25	-14.3	20.6	1.1	21.7	33.0	-11.3

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	TX channel 600						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1880.00	-12.6	22.9	1.1	24.0	33.0	-9.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1880.00	-15.1	19.3	1.1	20.4	33.0	-12.6

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE	TX channel 1175						
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1908.75	-13.3	22.1	1.1	23.2	33.0	-9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1908.75	-16.7	18.6	1.1	19.7	33.0	-13.3

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

FOR 1xEVDO Rev. 0 MODE:

MODE		TX channel 25					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1851.25	-13.3	22.8	1.1	23.9	33.0	-9.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1851.25	-14.9	20.0	1.1	21.1	33.0	-11.9

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 600					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1880.00	-13.1	22.4	1.1	23.5	33.0	-9.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1880.00	-15.7	18.7	1.1	19.8	33.0	-13.2

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 1175					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1908.75	-13.9	21.5	1.1	22.6	33.0	-10.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	1908.75	-17.2	18.1	1.1	19.2	33.0	-13.8

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

FOR 1xEVDO Rev. A MODE:

MODE		TX channel 25					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1851.25	-13.1	23.0	1.1	24.1	33.0	-8.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1851.25	-14.7	20.2	1.1	21.3	33.0	-11.7

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 600					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-12.9	22.6	1.1	23.7	33.0	-9.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1880.00	-15.5	18.9	1.1	20.0	33.0	-13.0

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 1175					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1908.75	-13.8	21.6	1.1	22.7	33.0	-10.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1908.75	-17.0	18.3	1.1	19.4	33.0	-13.6

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

FOR LTE:

CHANNEL BANDWIDTH: 5MHz

MODE		TX channel 26065					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1852.50	-12.3	23.8	1.1	24.9	33.0	-8.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1852.50	-17.9	17.0	1.1	18.1	33.0	-14.9

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 26365					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-12.9	22.6	1.1	23.7	33.0	-9.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-19.1	15.3	1.1	16.4	33.0	-16.6

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 26665					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1912.50	-13.3	23.2	0.8	24.0	33.0	-9.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1912.50	-18.1	17.7	0.8	18.5	33.0	-14.5

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

CHANNEL BANDWIDTH: 10MHz

MODE		TX channel 26090					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1855.00	-12.5	23.6	1.1	24.7	33.0	-8.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1855.00	-18.1	16.8	1.1	17.9	33.0	-15.1

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 26365					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.2	22.4	1.1	23.5	33.0	-9.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-19.1	15.3	1.1	16.4	33.0	-16.6

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 26640					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1910.00	-13.5	21.9	1.1	23.0	33.0	-10.0
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1910.00	-19.5	15.7	1.1	16.8	33.0	-16.2

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

CHANNEL BANDWIDTH: 20MHz

MODE		TX channel 26140					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1860.00	-12.8	23.3	1.1	24.4	33.0	-8.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1860.00	-18.2	16.7	1.1	17.8	33.0	-15.2

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 24365					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-13.5	22.1	1.1	23.2	33.0	-9.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1882.50	-19.1	15.5	1.1	16.6	33.0	-16.4

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

MODE		TX channel 26590					
ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1905.00	-13.2	22.3	1.1	23.4	33.0	-9.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	1905.00	-19.1	15.8	1.1	16.9	33.0	-16.1

NOTE: Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).

4.2 FREQUENCY STABILITY MEASUREMENT

4.2.1 LIMITS OF FREQUENCY STABILIITY MEASUREMENT

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

4.2.2 TEST PROCEDURE

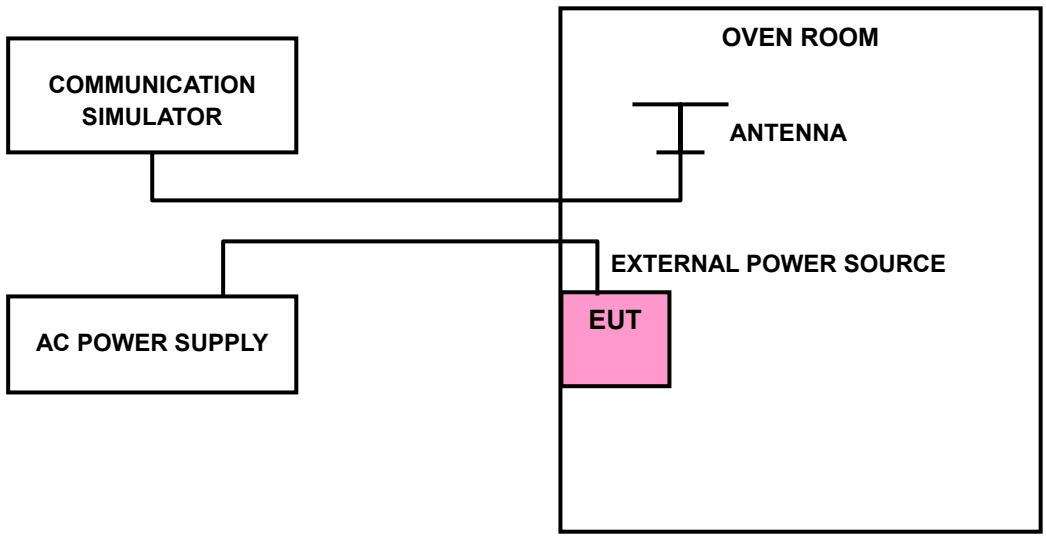
a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.

b. EUT is connected the external power supply to control the AC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.

c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5℃ during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

4.2.3 TEST SETUP



4.2.4 TEST RESULTS

CDMA

AFC FREQUENCY ERROR vs. VOLTAGE			
VOLTAGE (Volts)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
126.5	-13	-0.007	2.5
93.5	7	0.004	2.5

NOTE: The applicant defined the normal working voltage of the host equipment is from 93.5Vac to 126.5Vac.

AFC FREQUENCY ERROR vs. TEMP.			
TEMP. (℃)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
55	-11	-0.006	2.5
50	-8	-0.004	2.5
40	-6	-0.003	2.5
30	-4	-0.002	2.5
20	-7	-0.004	2.5
10	-2	-0.001	2.5
0	-3	-0.002	2.5
-10	-5	-0.003	2.5
-20	-8	-0.004	2.5
-30	-10	-0.005	2.5

LTE:

CHANNEL BANDWIDTH: 5MHz

AFC FREQUENCY ERROR vs. VOLTAGE			
VOLTAGE (Volts)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
126.5	-8	-0.004	2.5
93.5	-4	-0.002	2.5

NOTE: The applicant defined the normal working voltage of the host equipment is from 93.5Vac to 126.5Vac.

AFC FREQUENCY ERROR vs. TEMP.			
TEMP. (℃)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
55	-9	-0.005	2.5
50	-7	-0.004	2.5
40	-4	-0.002	2.5
30	-2	-0.001	2.5
20	-3	-0.002	2.5
10	-6	-0.003	2.5
0	-7	-0.004	2.5
-10	-8	-0.004	2.5
-20	-10	-0.005	2.5
-30	-12	-0.006	2.5

CHANNEL BANDWIDTH: 10MHz

AFC FREQUENCY ERROR vs. VOLTAGE			
VOLTAGE (Volts)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
126.5	-11	-0.006	2.5
93.5	-6	-0.003	2.5

NOTE: The applicant defined the normal working voltage of the host equipment is from 93.5Vac to 126.5Vac.

AFC FREQUENCY ERROR vs. TEMP.			
TEMP. (℃)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
55	-12	-0.006	2.5
50	-10	-0.005	2.5
40	-8	-0.004	2.5
30	-7	-0.004	2.5
20	-4	-0.002	2.5
10	-2	-0.001	2.5
0	-1	-0.001	2.5
-10	-5	-0.003	2.5
-20	-8	-0.004	2.5
-30	-9	-0.005	2.5

CHANNEL BANDWIDTH: 20MHz

AFC FREQUENCY ERROR vs. VOLTAGE			
VOLTAGE (Volts)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
126.5	-12	-0.006	2.5
93.5	-7	-0.004	2.5

NOTE: The applicant defined the normal working voltage of the host equipment is from 93.5Vac to 126.5Vac.

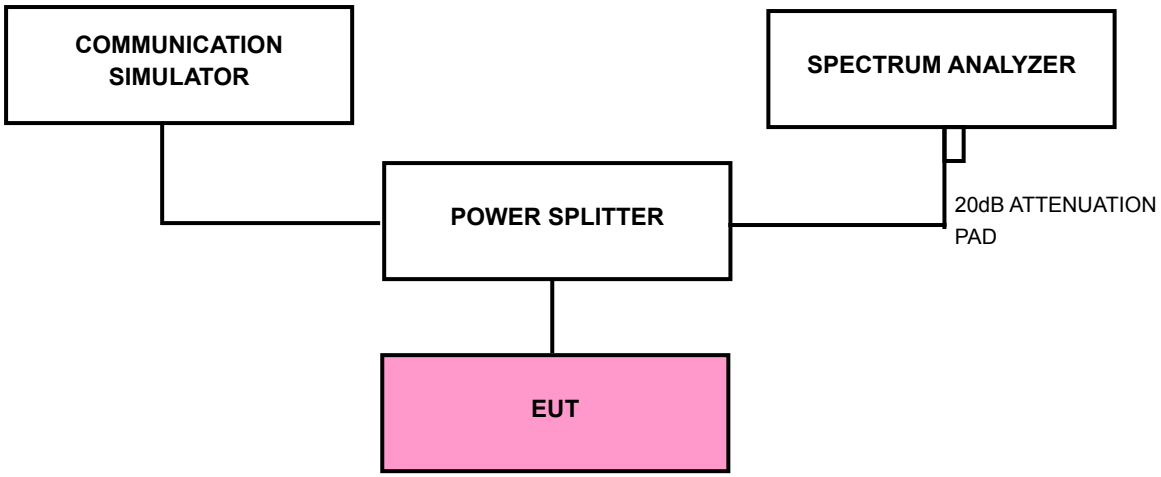
AFC FREQUENCY ERROR vs. TEMP.			
TEMP. (℃)	**FREQUENCY ERROR (Hz)**	**FREQUENCY ERROR (ppm)**	**LIMIT (ppm)**
55	-9	-0.005	2.5
50	-7	-0.004	2.5
40	-4	-0.002	2.5
30	-2	-0.001	2.5
20	-1	-0.001	2.5
10	-6	-0.003	2.5
0	-8	-0.004	2.5
-10	-10	-0.005	2.5
-20	-12	-0.006	2.5
-30	-13	-0.007	2.5

4.3 OCCUPIED BANDWIDTH MEASUREMENT

4.3.1 TEST PROCEDURES

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

4.3.2 TEST SETUP



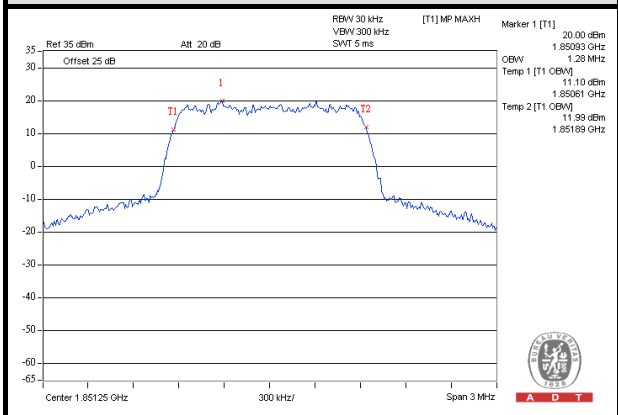
4.3.3 TEST RESULTS

CDMA

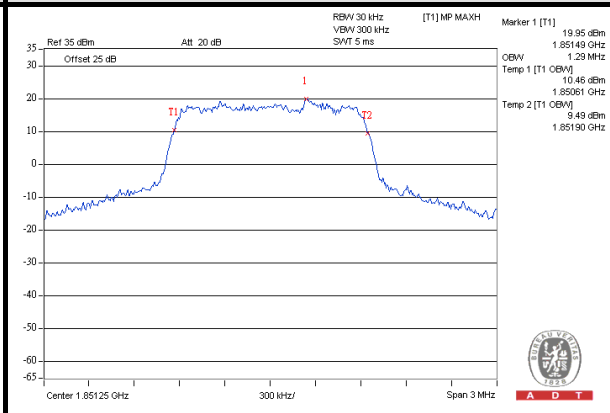
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)		
		CDMA MODE	1xEV-DO Rev. 0 MODE	1xEV-DO Rev. A MODE
25	1851.25	1.28	1.29	1.30
600	1880.00	1.28	1.29	1.29
1175	1908.75	1.28	1.27	1.28

SPECTRUM PLOT OF WORST VALUE

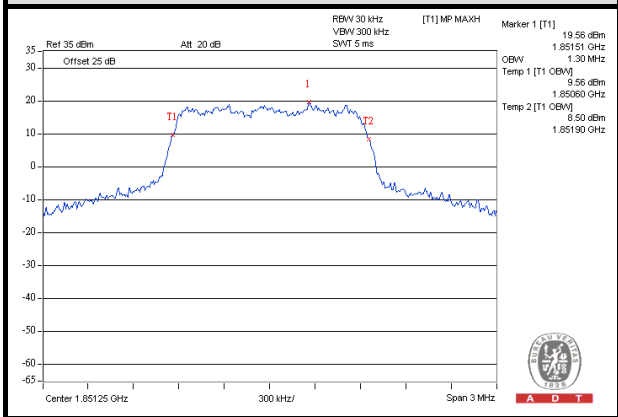
CDMA MODE



1xEV-DO Rev. 0 MODE



1xEV-DO Rev. A MODE



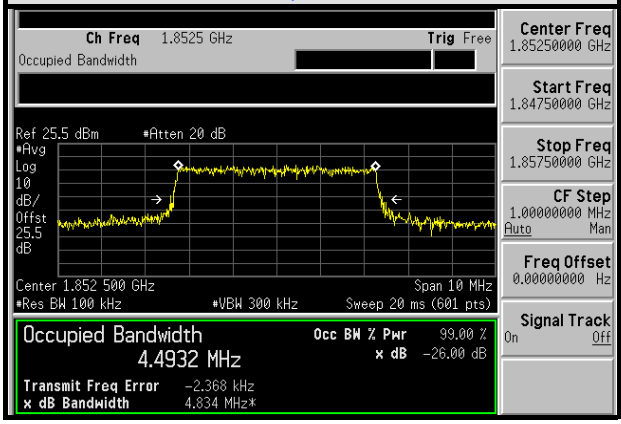
LTE

CHANNEL BANDWIDTH: 5MHz

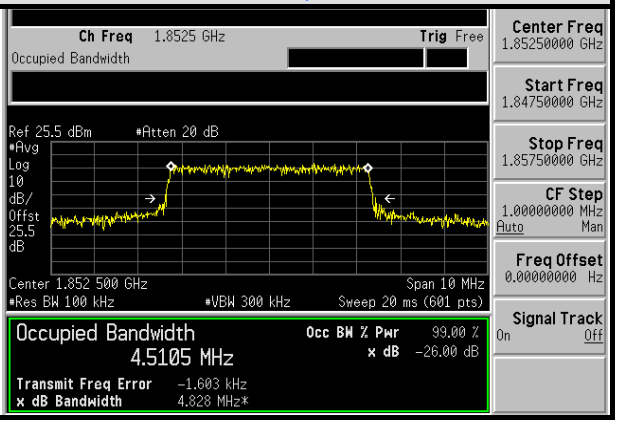
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)	
		QPSK	16QAM
26065	1852.5	4.4932	4.5105
26365	1882.5	4.4344	4.4638
26665	1912.5	4.4699	4.4565

SPECTRUM PLOT OF WORST VALUE

QPSK



16QAM

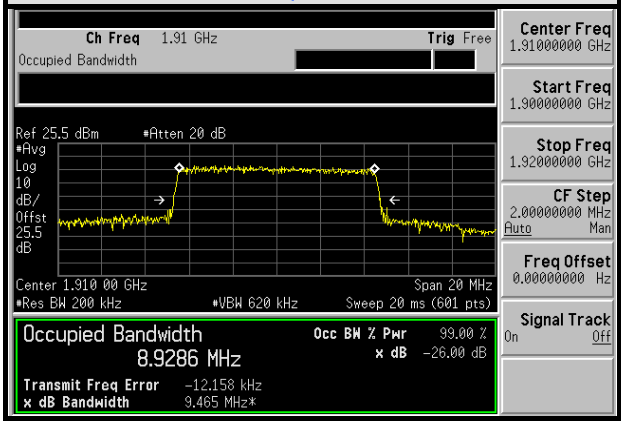


CHANNEL BANDWIDTH: 10MHz

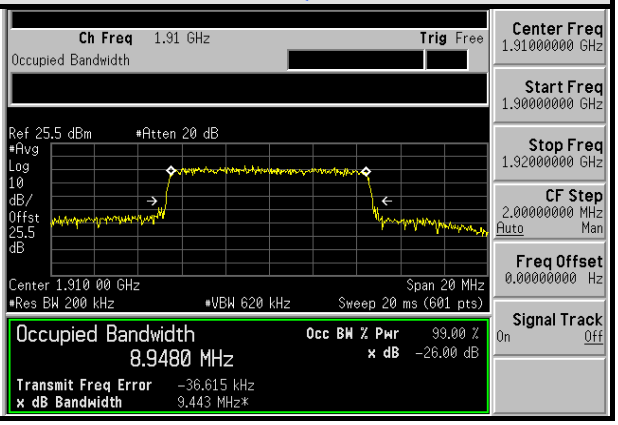
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)	
		QPSK	16QAM
26090	1855.0	8.9110	8.9097
26365	1882.5	8.9277	8.9394
26640	1910.0	8.9286	8.9480

SPECTRUM PLOT OF WORST VALUE

QPSK



16QAM

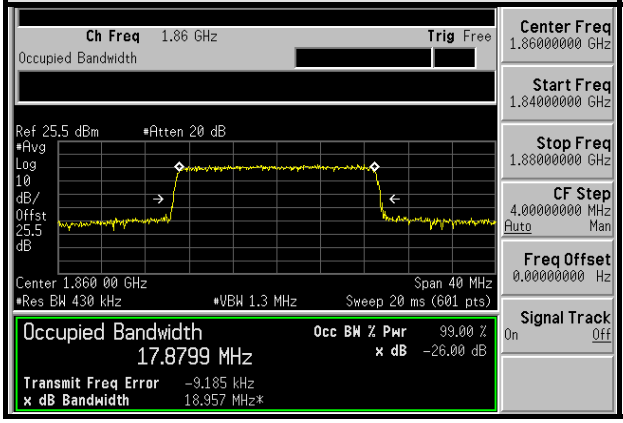


CHANNEL BANDWIDTH: 20MHz

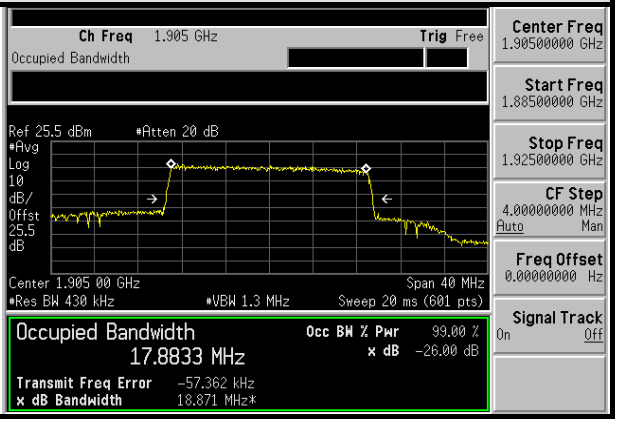
CHANNEL	FREQUENCY (MHz)	99% OCCUPIED BANDWIDTH (MHz)	
		QPSK	16QAM
26140	1860.0	17.8799	17.8225
26365	1882.5	17.7796	17.7451
26590	1905.0	17.8543	17.8833

SPECTRUM PLOT OF WORST VALUE

QPSK



16QAM

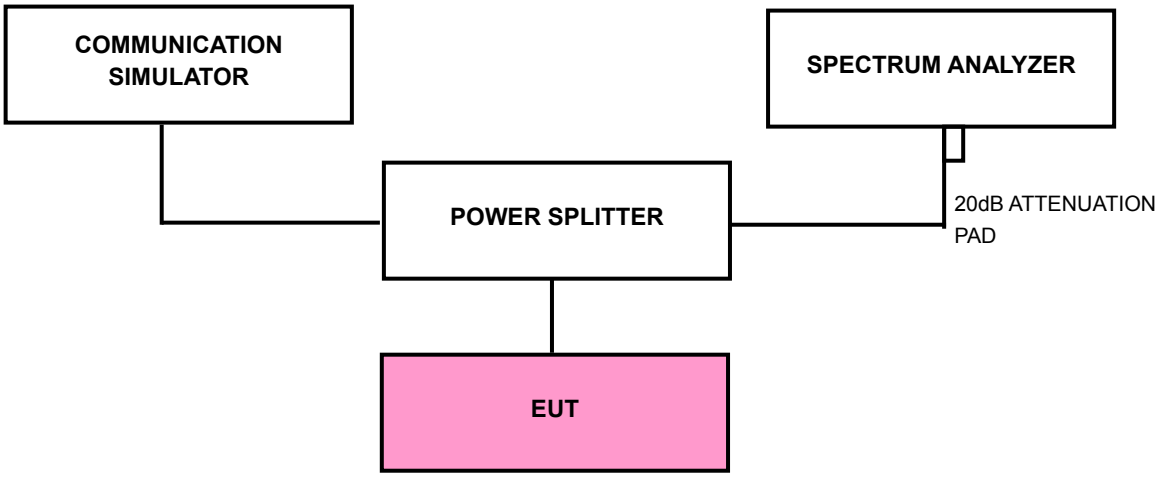


4.4 BAND EDGE MEASUREMENT

4.4.1 LIMITS OF BAND EDGE MEASUREMENT

Power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

4.4.2 TEST SETUP



4.4.3 TEST PROCEDURES

a. All measurements were done at low and high operational frequency range.

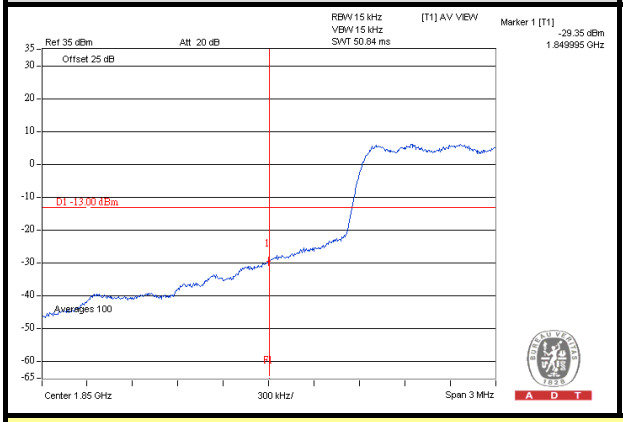
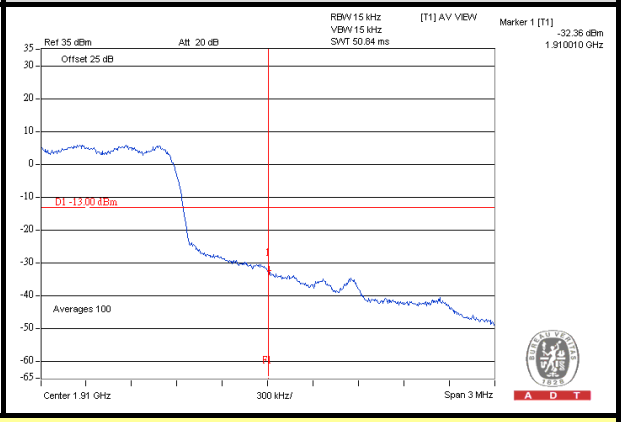
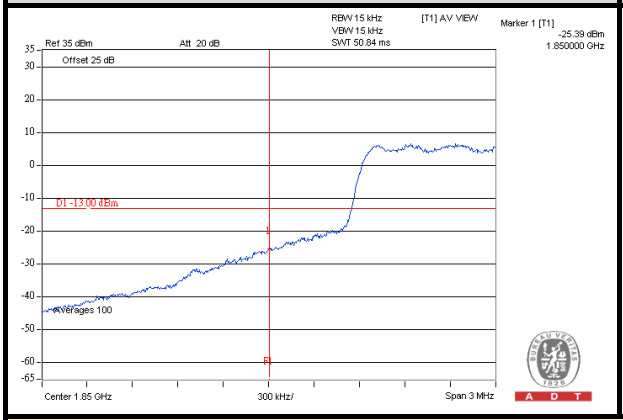
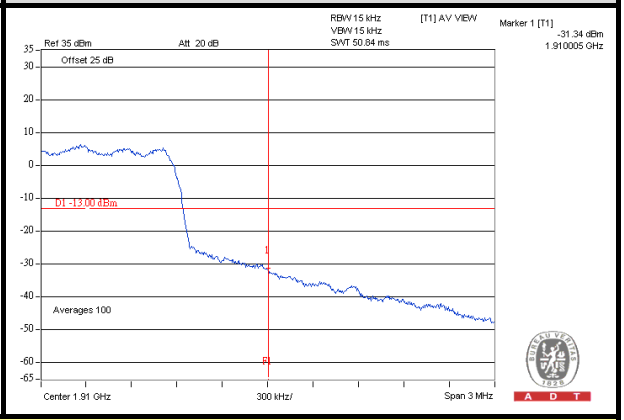
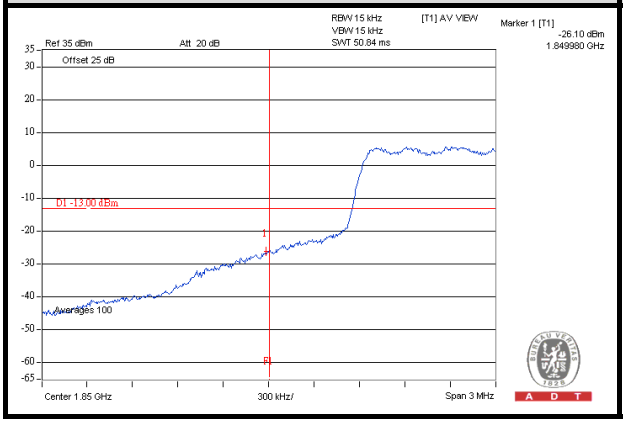
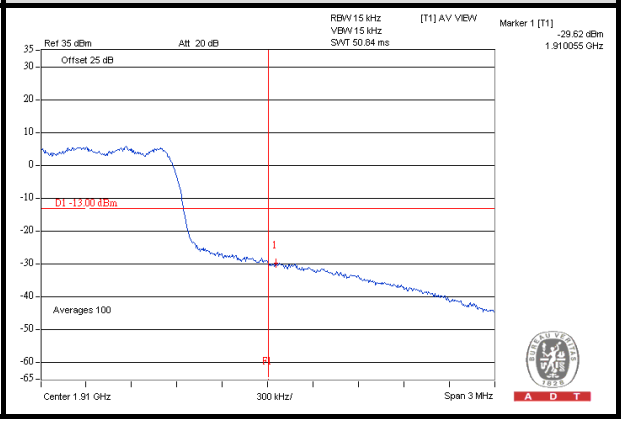
b. The center frequency of spectrum is the band edge frequency and span is 3MHz. RB of the spectrum is 15kHz and VB of the spectrum is 15kHz (CDMA).

c. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 10kHz and VB of the spectrum is 30kHz (LTE).

d. Record the max trace plot into the test report.

4.4.4 TEST RESULTS

FOR CDMA

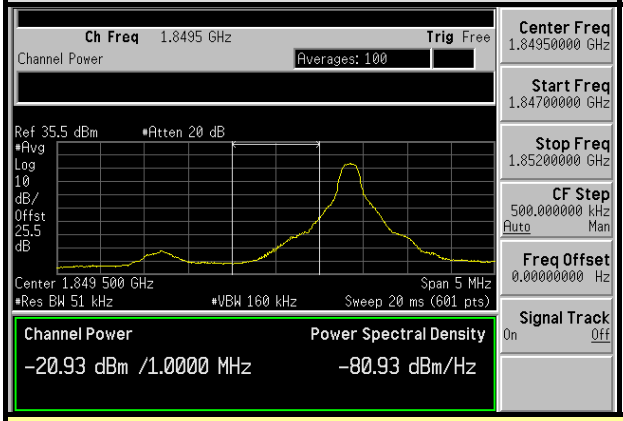
CDMA MODE	
CHANNEL: 25	**CHANNEL:** 1175
	
1xEV-DO Rev. 0 MODE	
CHANNEL: 25	**CHANNEL:** 1175
	
1xEV-DO Rev. A MODE	
CHANNEL: 25	**CHANNEL:** 1175
	

FOR LTE

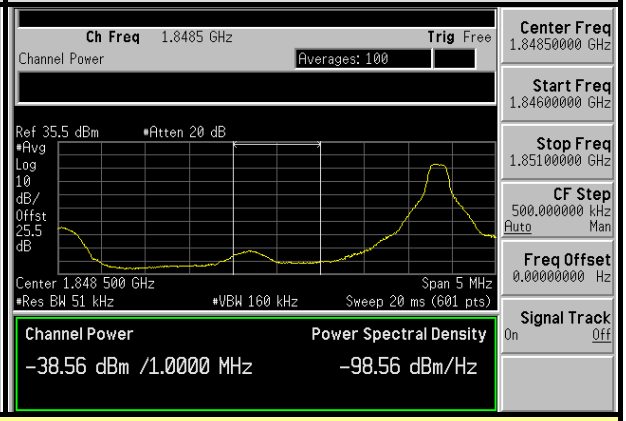
CHANNEL BANDWIDTH: 5MHz, QPSK

LOWER EDGE / 1 RB ALLOCATED

CHANNEL: 26065

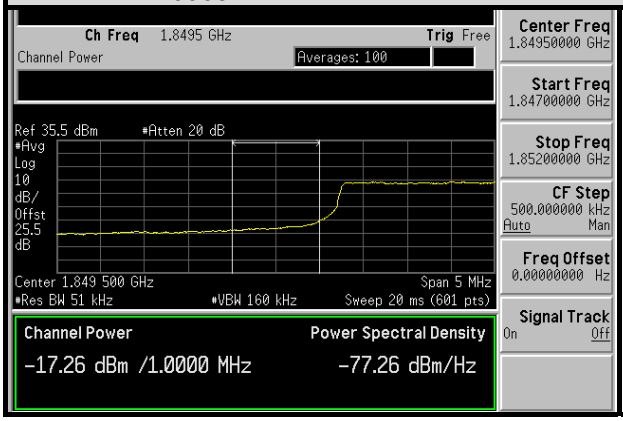


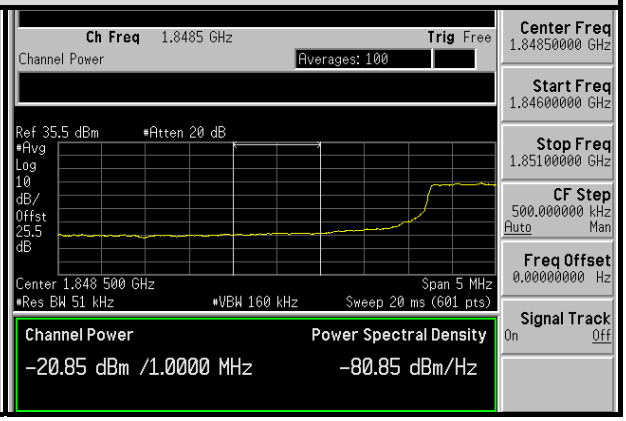
CHANNEL: 26665



LOWER EDGE / FULL RB ALLOCATED

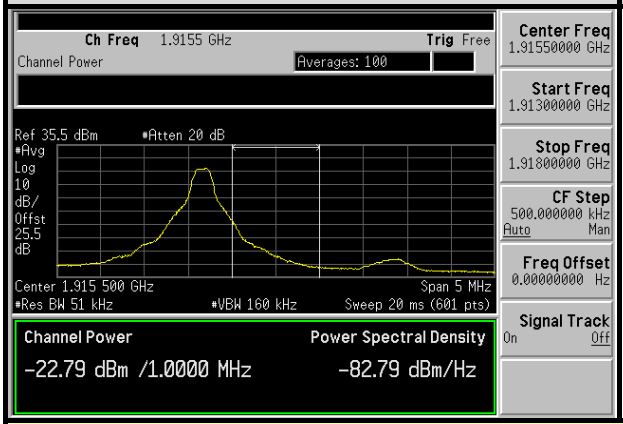
CHANNEL: 26065



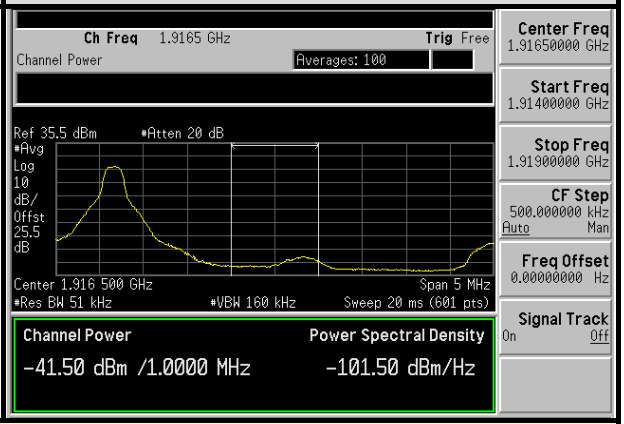


UPPER EDGE / 1 RB ALLOCATED

CHANNEL: 26065

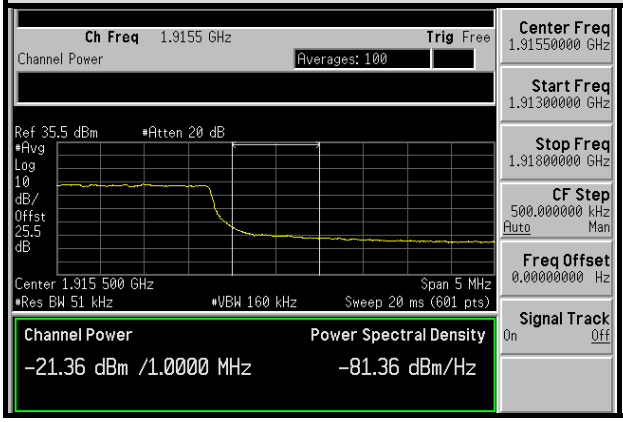


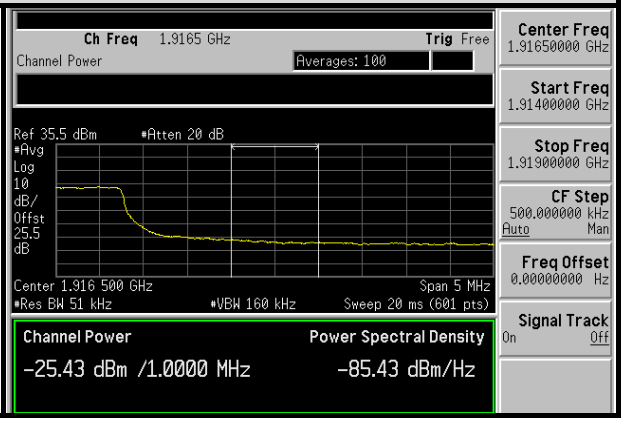
CHANNEL: 26665



UPPER EDGE / FULL RB ALLOCATED

CHANNEL: 26665

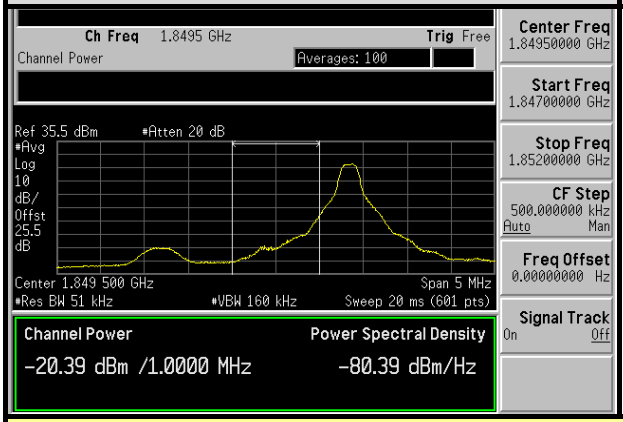




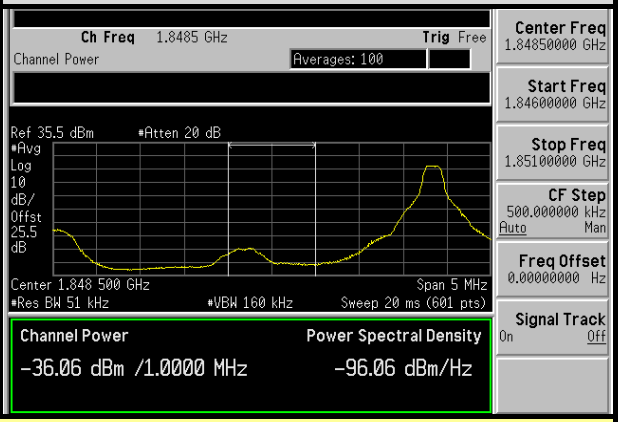
CHANNEL BANDWIDTH: 5MHz, 16QAM

LOWER EDGE / 1 RB ALLOCATED

CHANNEL: 26065

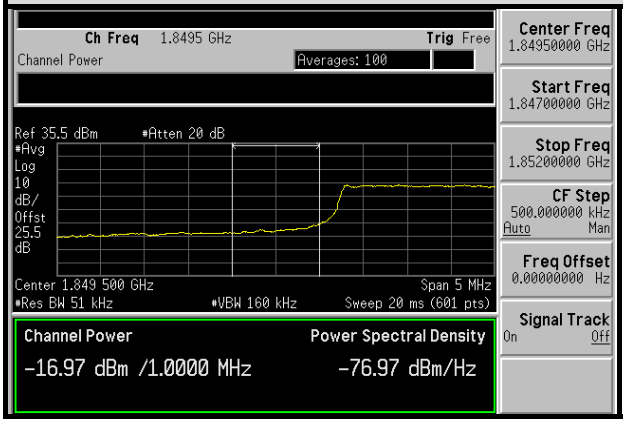


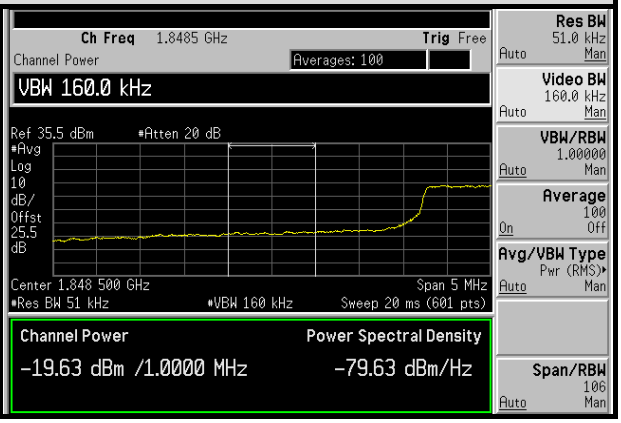
CHANNEL: 26665



LOWER EDGE / FULL RB ALLOCATED

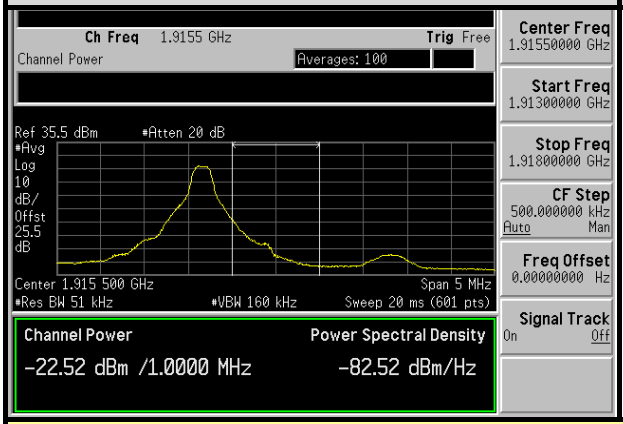
CHANNEL: 26065



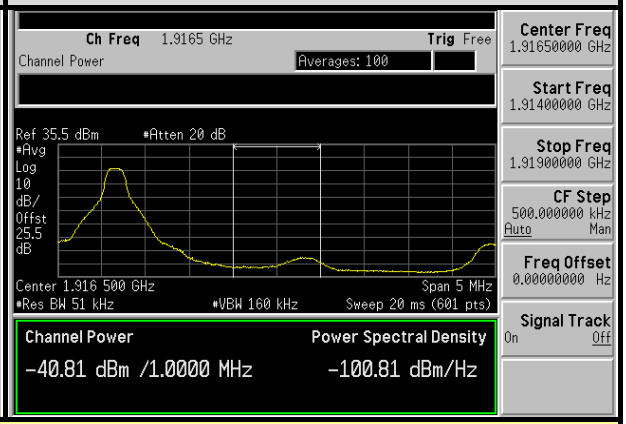


UPPER EDGE / 1 RB ALLOCATED

CHANNEL: 26065

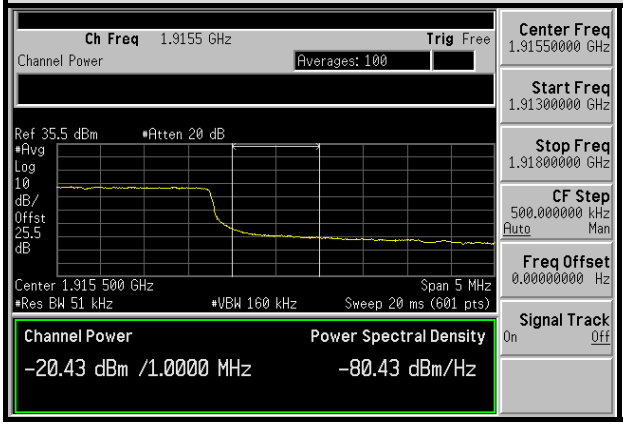


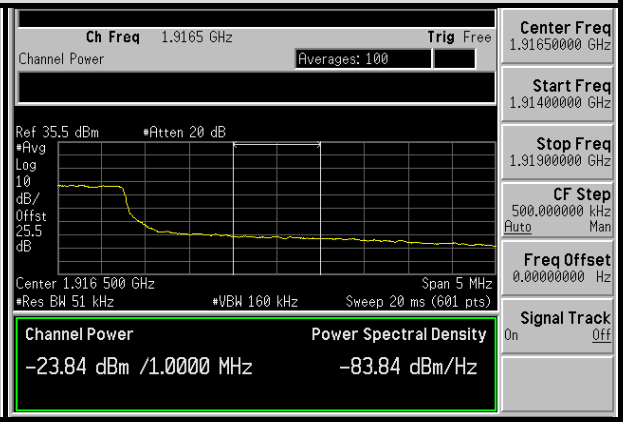
CHANNEL: 26665



UPPER EDGE / FULL RB ALLOCATED

CHANNEL: 26665

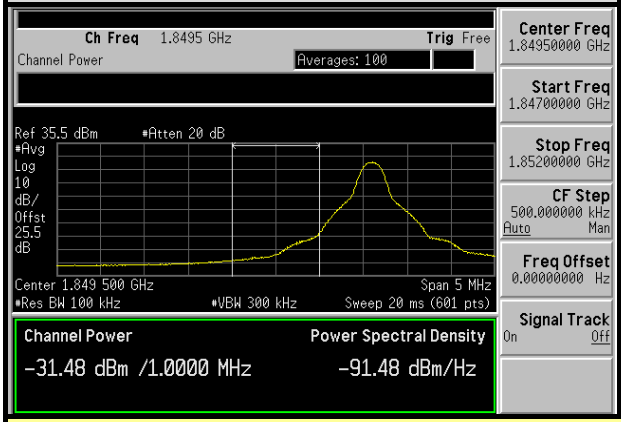




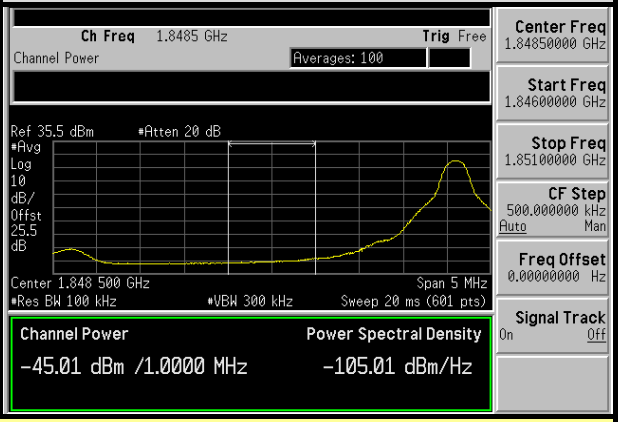
CHANNEL BANDWIDTH: 10MHz, QPSK

LOWER EDGE / 1 RB ALLOCATED

CHANNEL: 26090

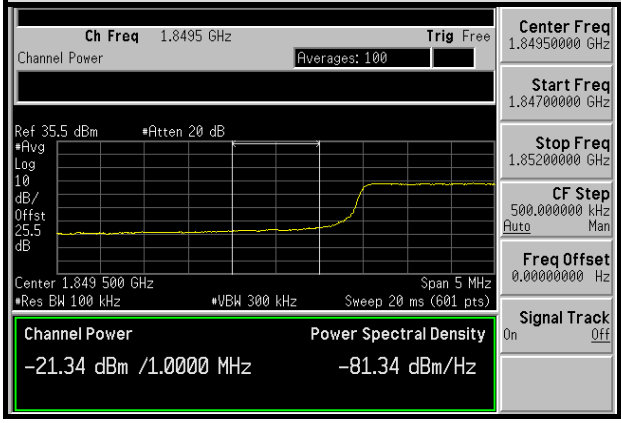


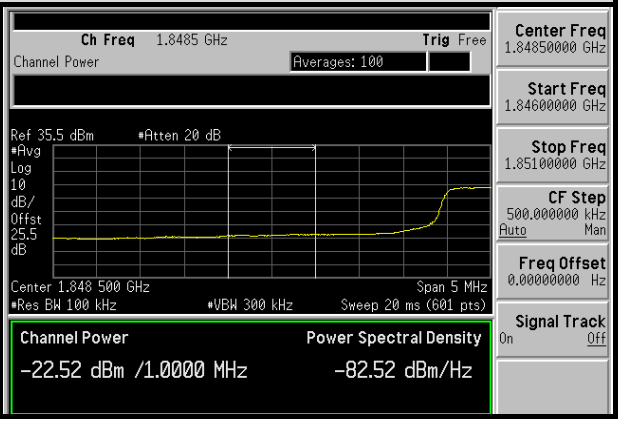
CHANNEL: 26640



LOWER EDGE / FULL RB ALLOCATED

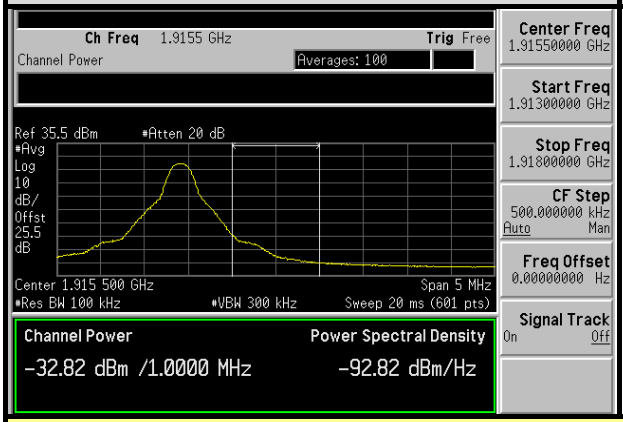
CHANNEL: 26090



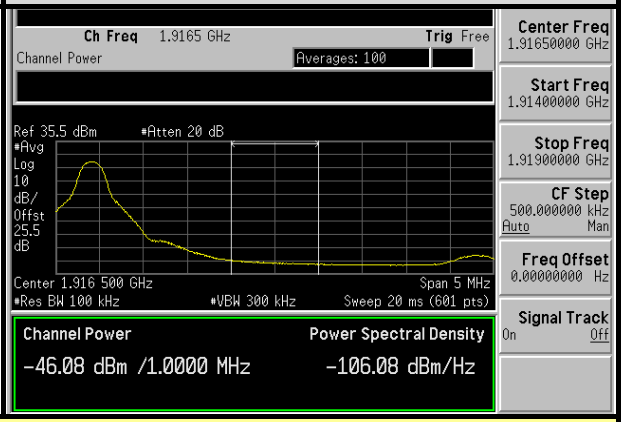


UPPER EDGE / 1 RB ALLOCATED

CHANNEL: 26090

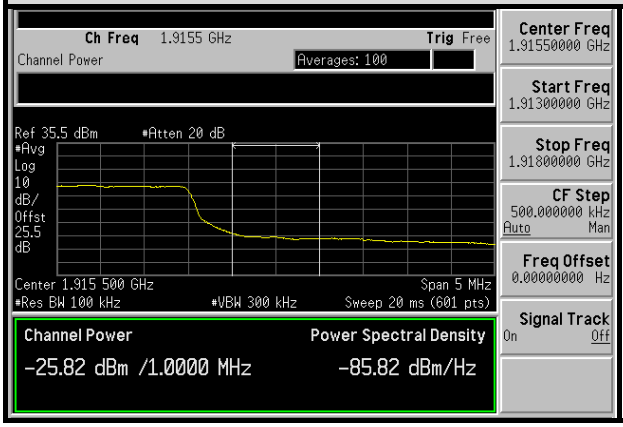


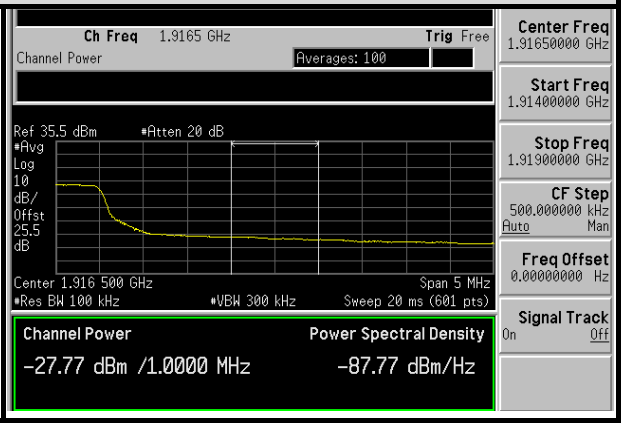
CHANNEL: 26640



UPPER EDGE / FULL RB ALLOCATED

CHANNEL: 26640

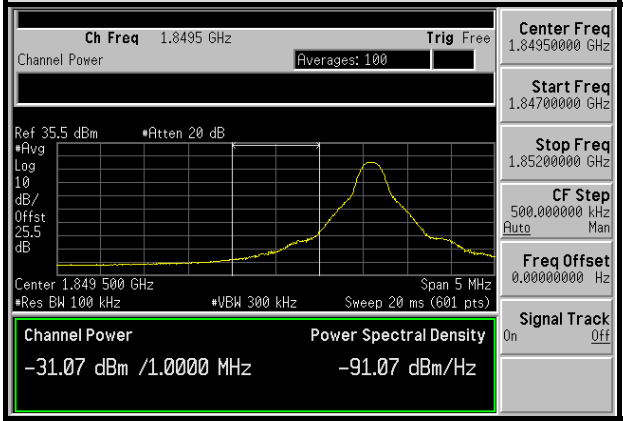




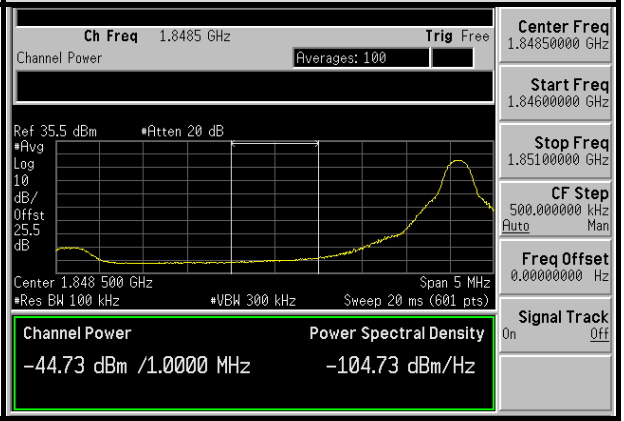
CHANNEL BANDWIDTH: 10MHz, 16QAM

LOWER EDGE / 1 RB ALLOCATED

CHANNEL: 26090

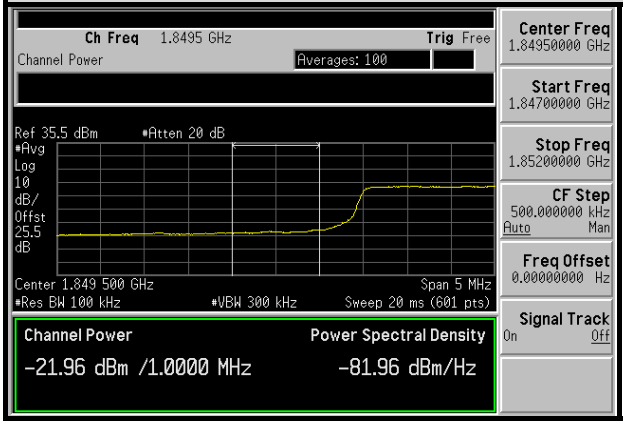


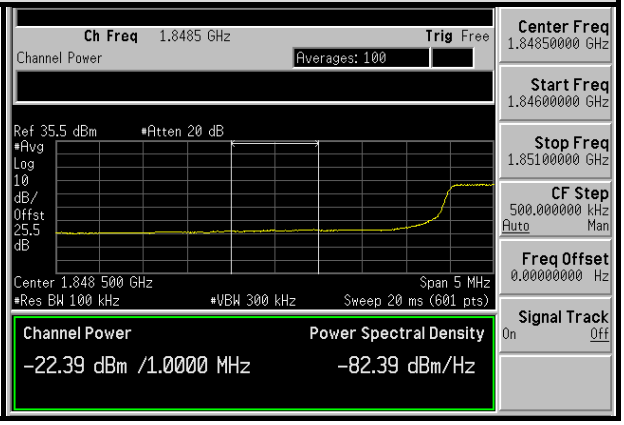
CHANNEL: 26640



LOWER EDGE / FULL RB ALLOCATED

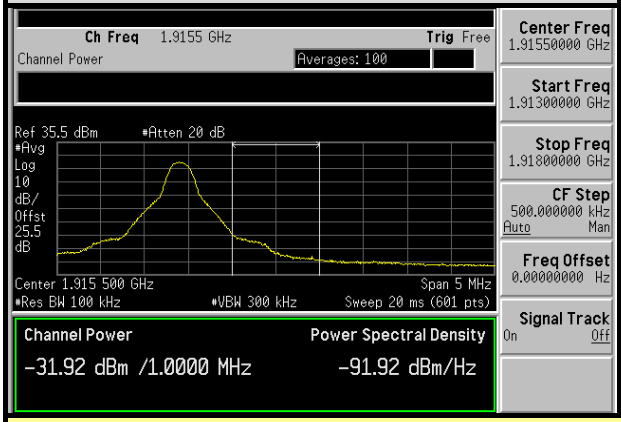
CHANNEL: 26090



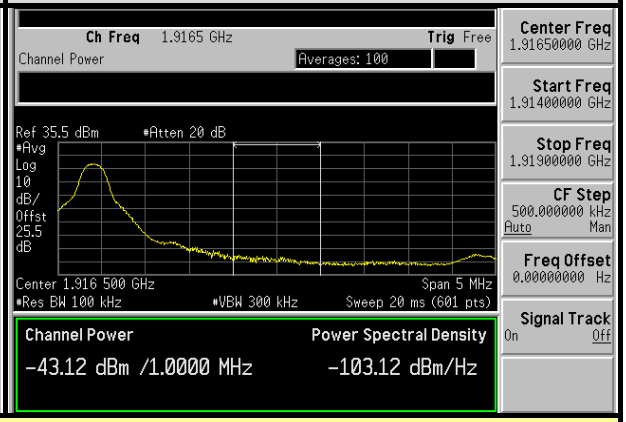


UPPER EDGE / 1 RB ALLOCATED

CHANNEL: 26090

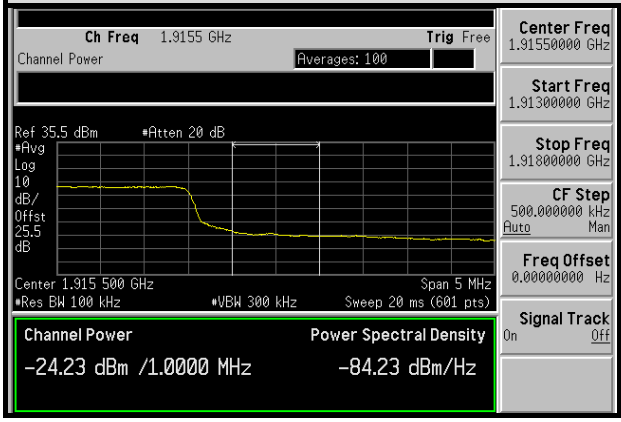


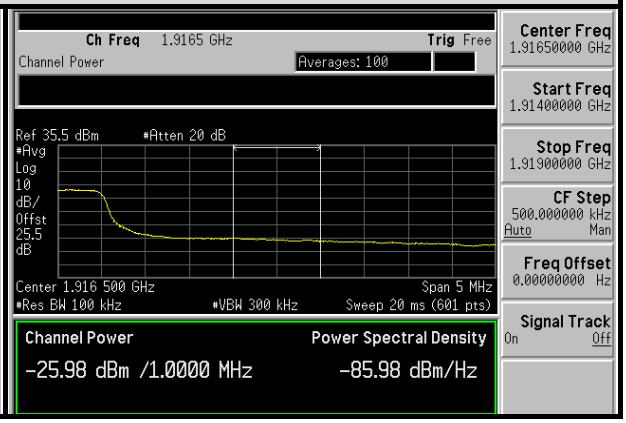
CHANNEL: 26640



UPPER EDGE / FULL RB ALLOCATED

CHANNEL: 26640

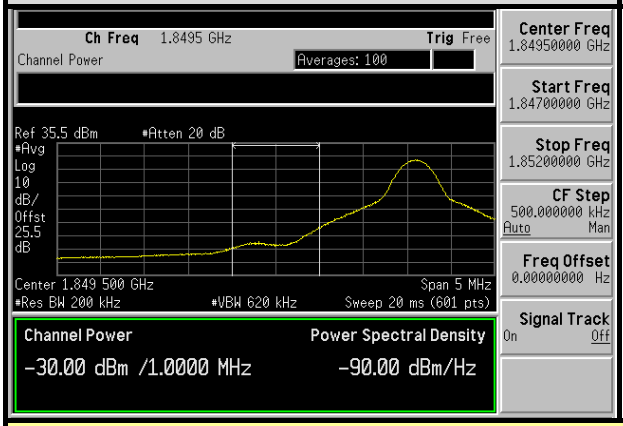




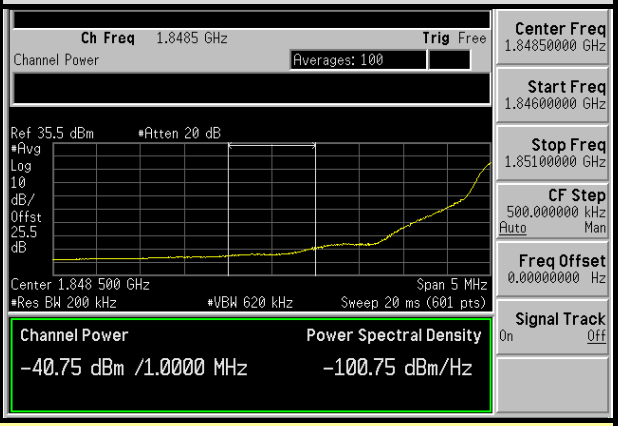
CHANNEL BANDWIDTH: 20MHz, QPSK

LOWER EDGE / 1 RB ALLOCATED

CHANNEL: 26140

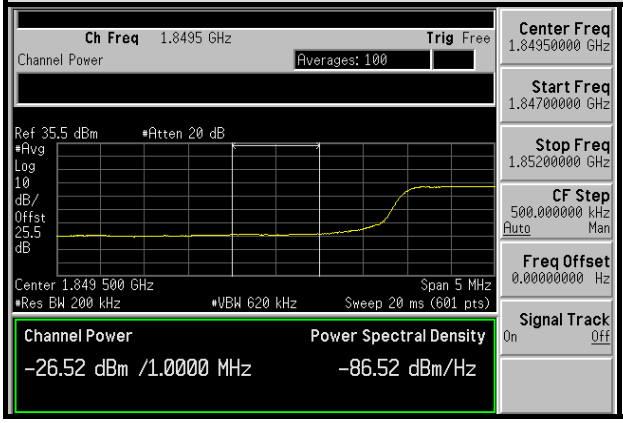


CHANNEL: 26590

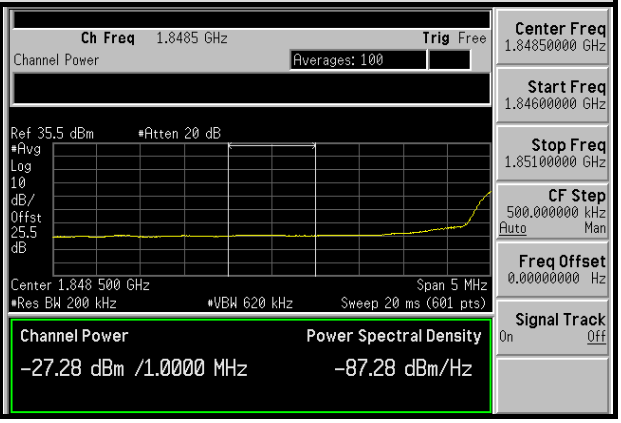


LOWER EDGE / FULL RB ALLOCATED

CHANNEL: 26140

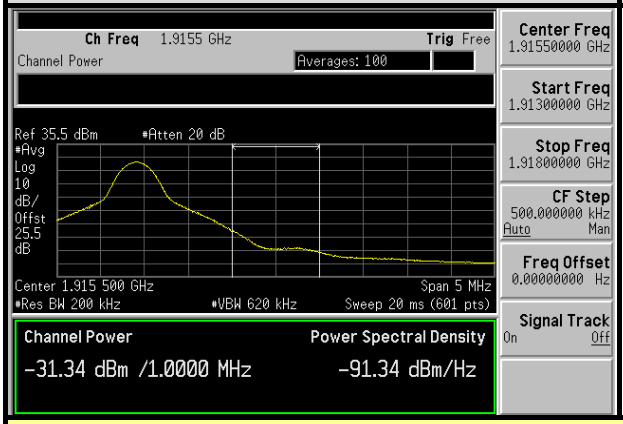


CHANNEL: 26140

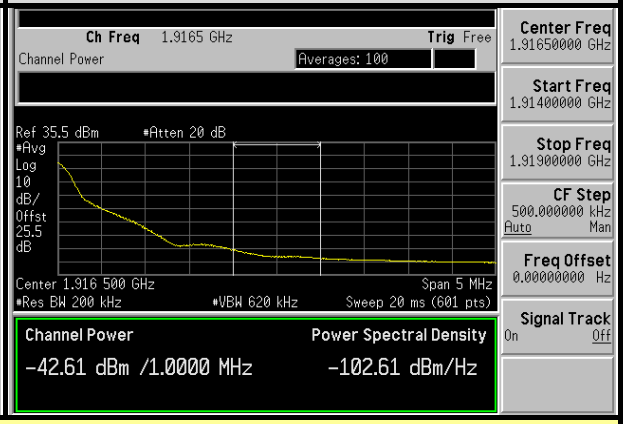


UPPER EDGE / 1 RB ALLOCATED

CHANNEL: 26140

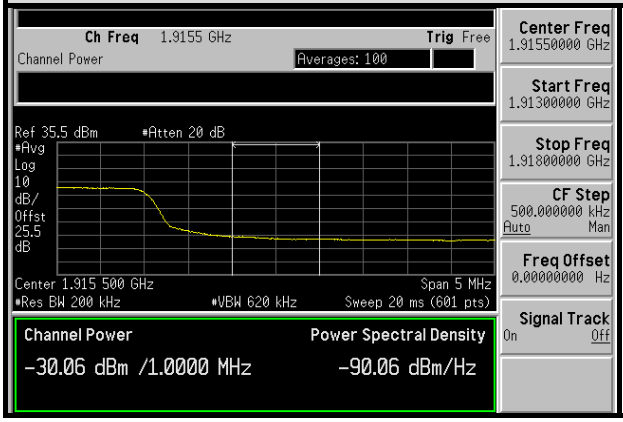


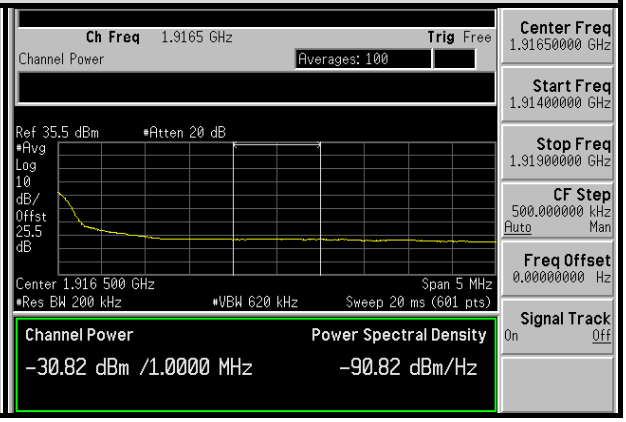
CHANNEL: 26590



UPPER EDGE / FULL RB ALLOCATED

CHANNEL: 26590

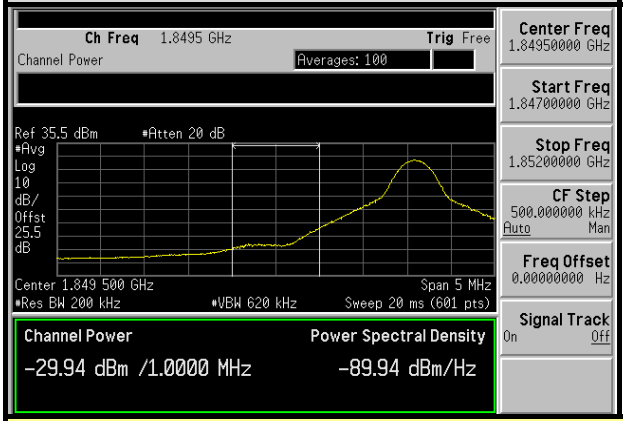




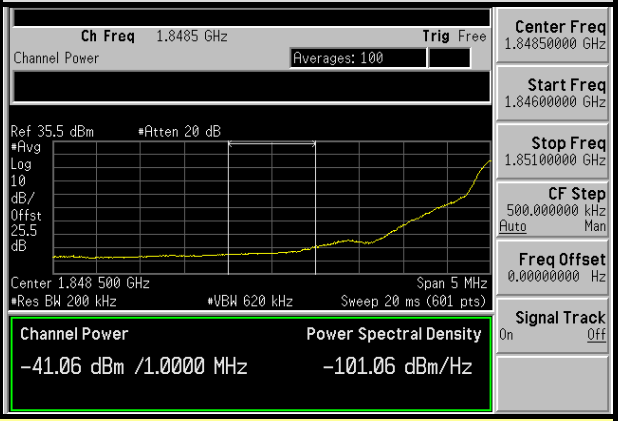
CHANNEL BANDWIDTH: 20MHz, 16QAM

LOWER EDGE / 1 RB ALLOCATED

CHANNEL: 26140

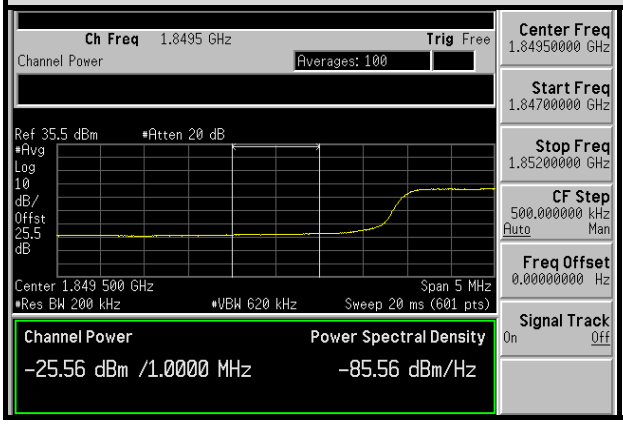


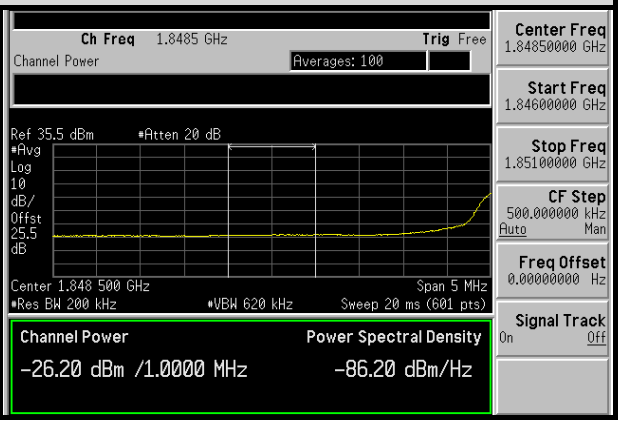
CHANNEL: 26590



LOWER EDGE / FULL RB ALLOCATED

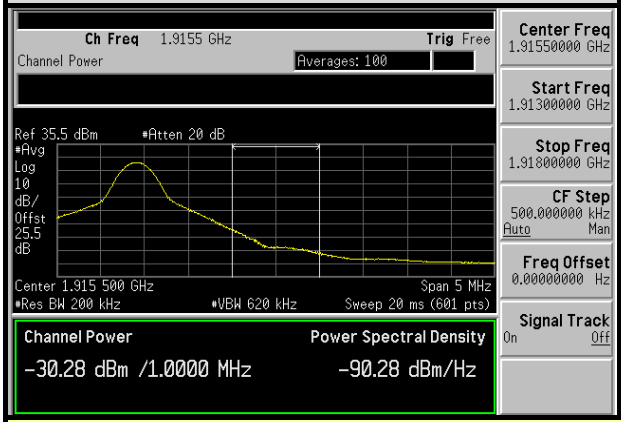
CHANNEL: 26140



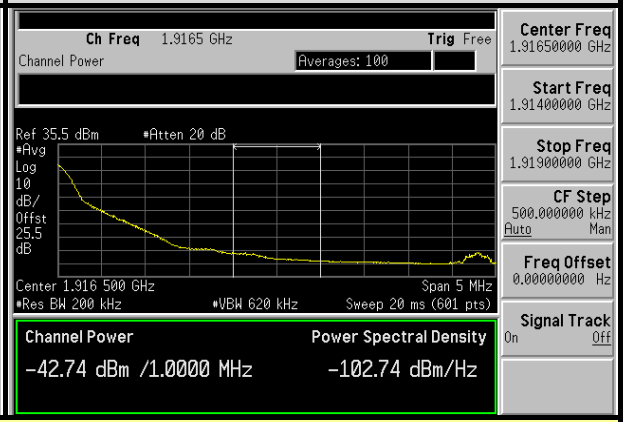


UPPER EDGE / 1 RB ALLOCATED

CHANNEL: 26140

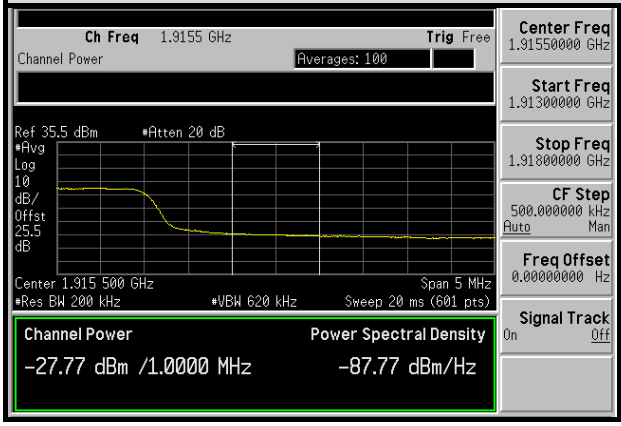


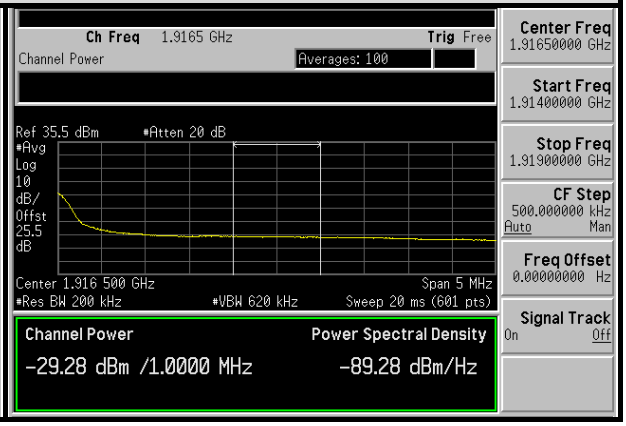
CHANNEL: 26590



UPPER EDGE / FULL RB ALLOCATED

CHANNEL: 26590





4.5 CONDUCTED SPURIOUS EMISSIONS

4.5.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

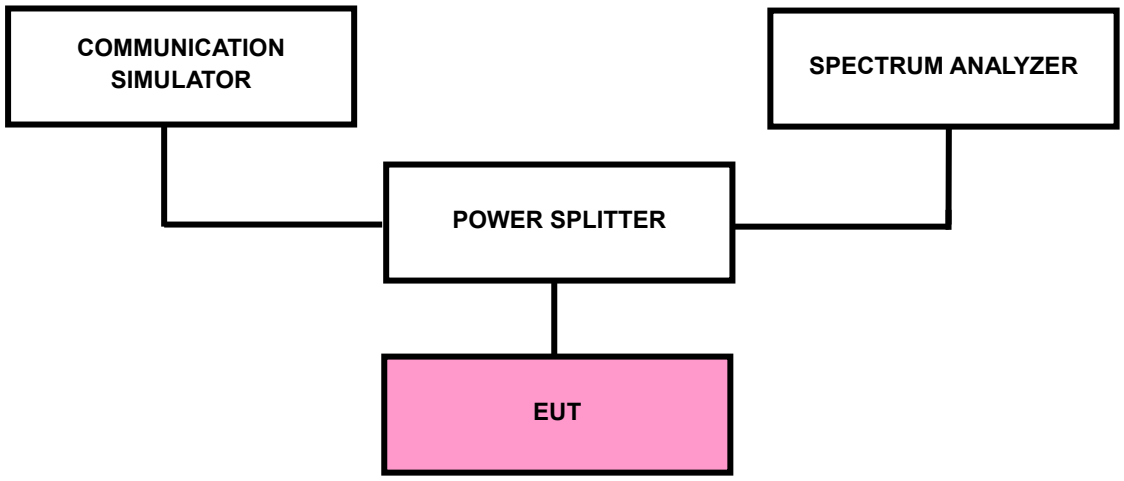
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

4.5.2 TEST PROCEDURE

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.

b. Measuring frequency range is from 9 kHz to 19.1GHz. 20dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz is used for conducted emission measurement.

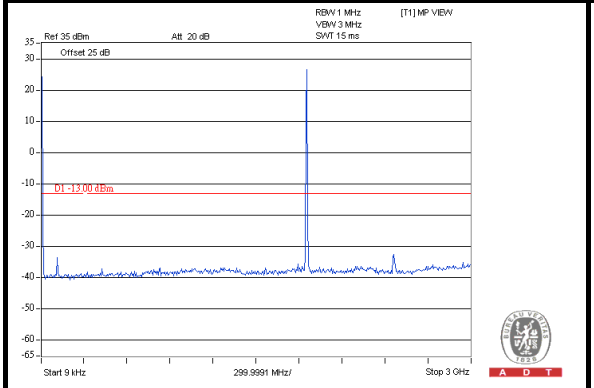
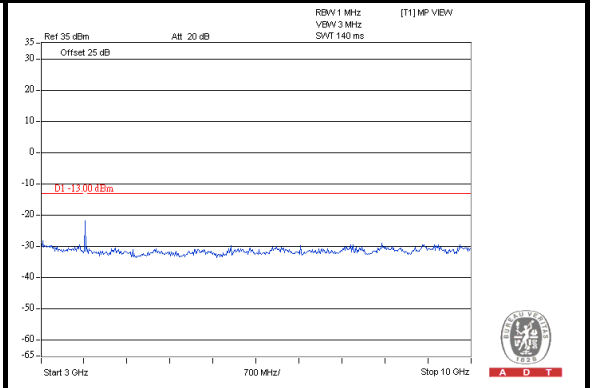
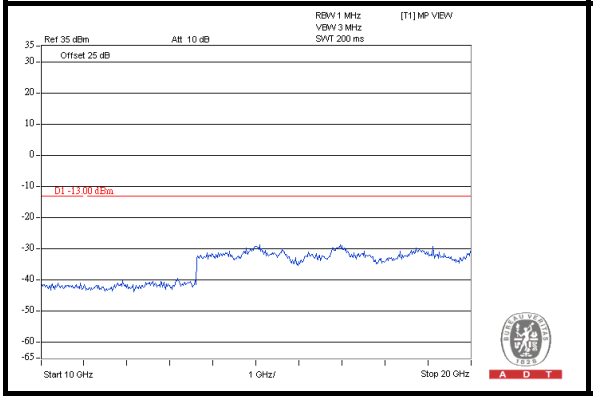
4.5.3 TEST SETUP



4.5.4 TEST RESULTS

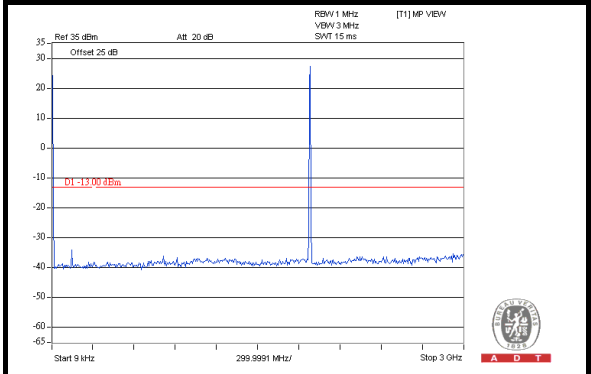
CDMA

FOR CDMA MODE:

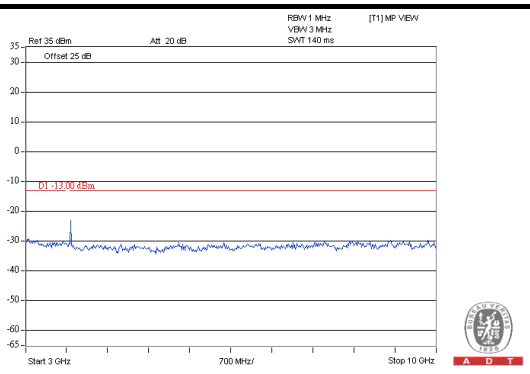
CH 25	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

CH 600

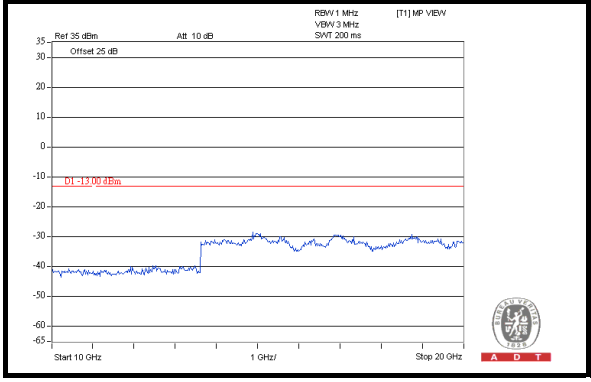
9kHz ~ 3GHz



3GHz ~ 10GHz

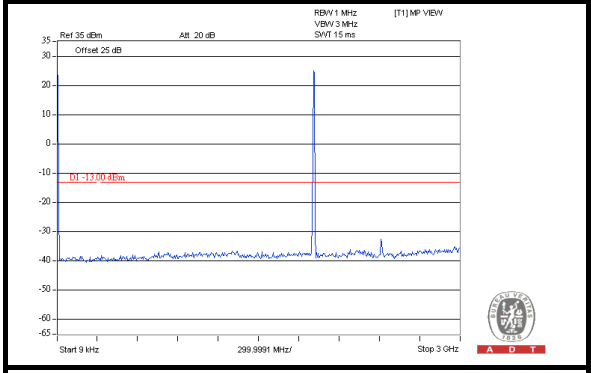


10GHz ~ 20GHz

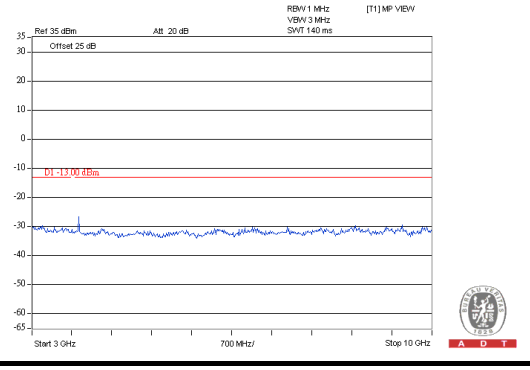


CH 1175

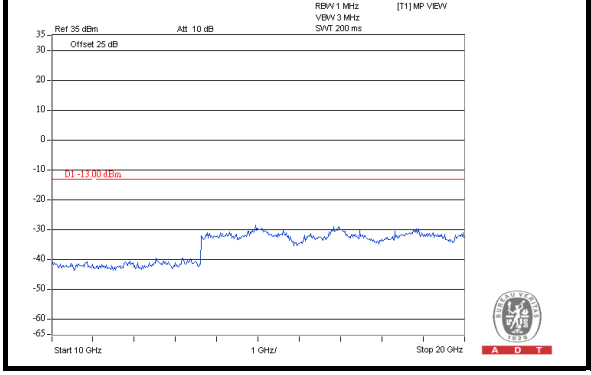
9kHz ~ 3GHz



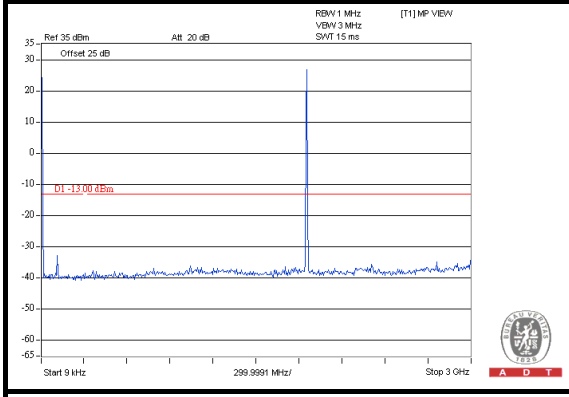
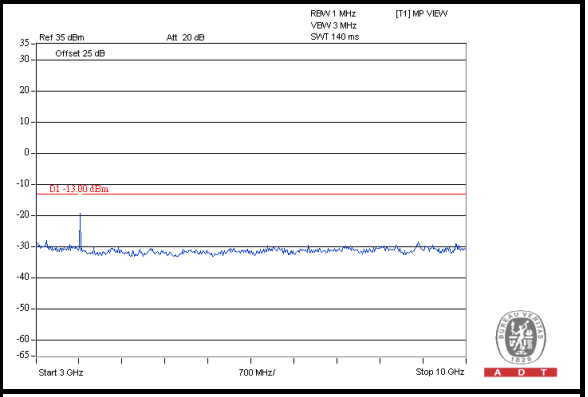
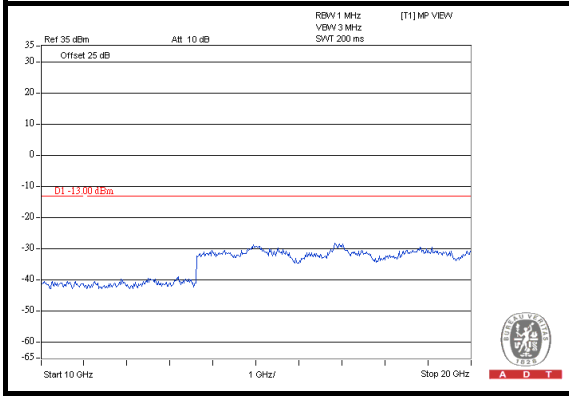
3GHz ~ 10GHz

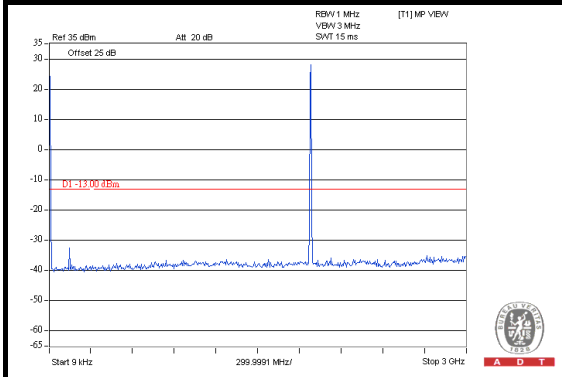
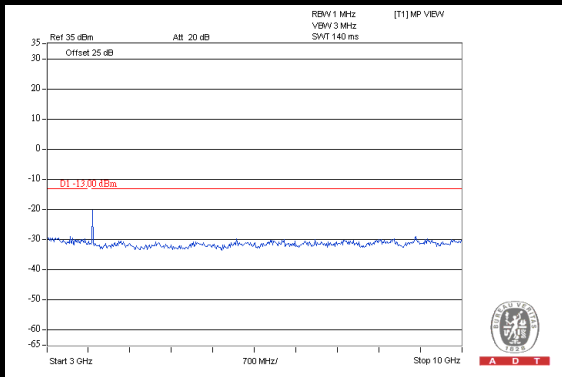
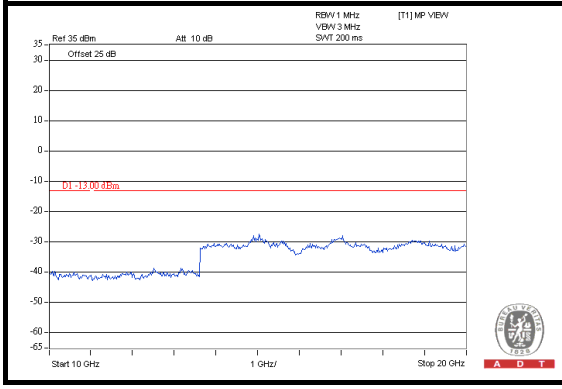


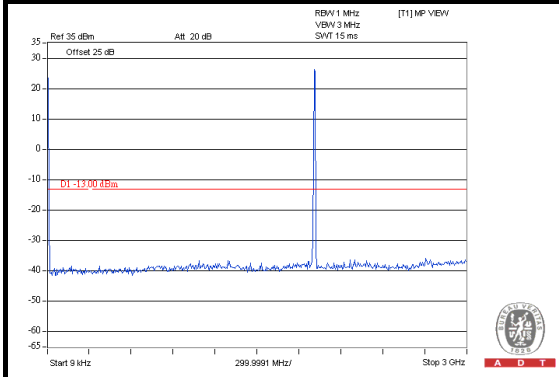
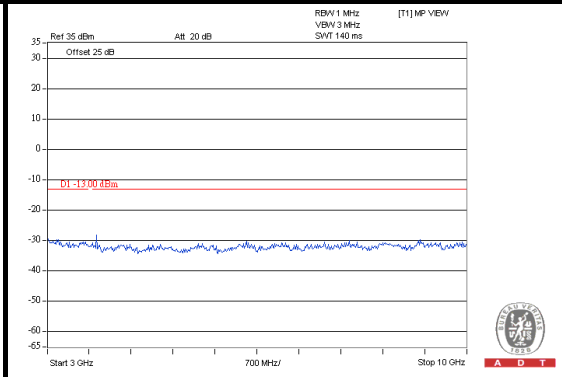
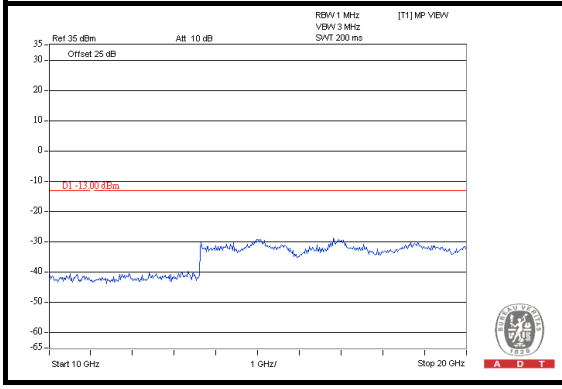
10GHz ~ 20GHz



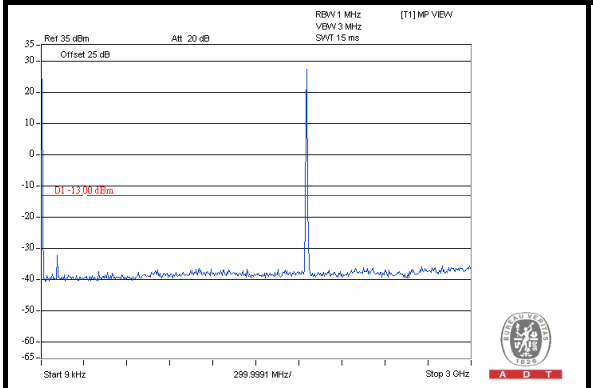
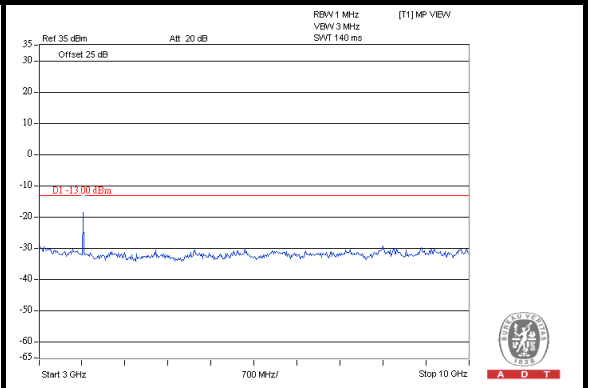
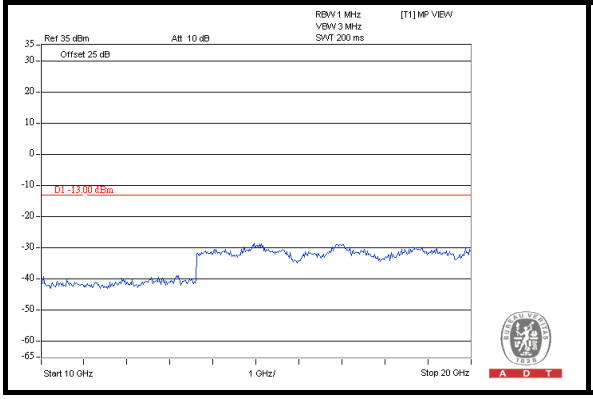
FOR 1xEV-DO Rev. 0 MODE:

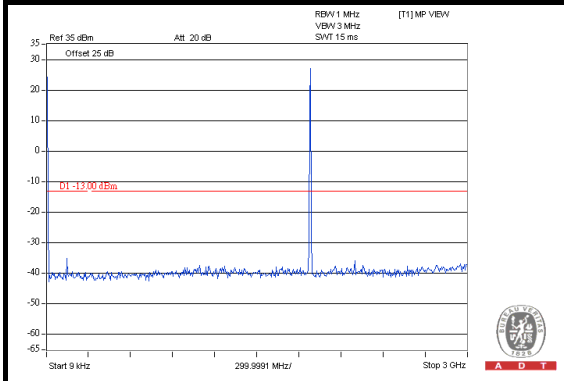
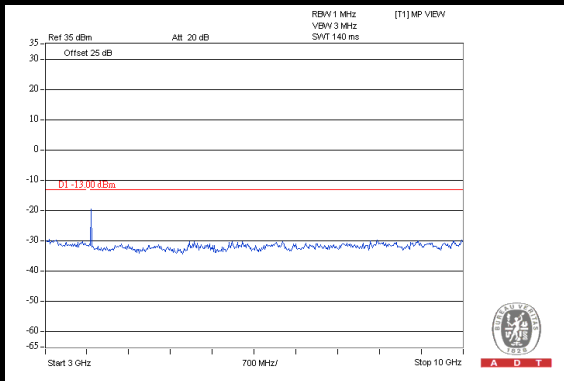
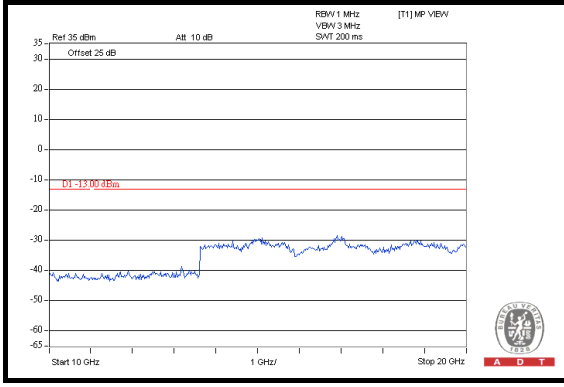
CH 25	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

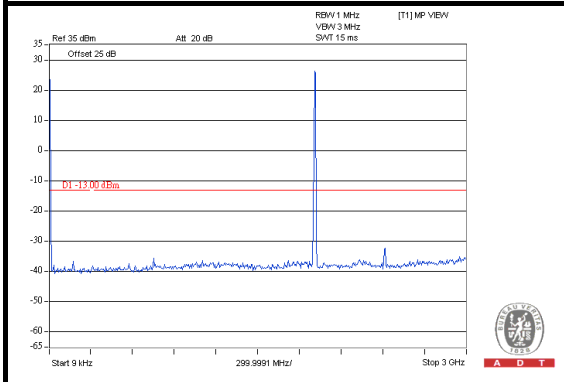
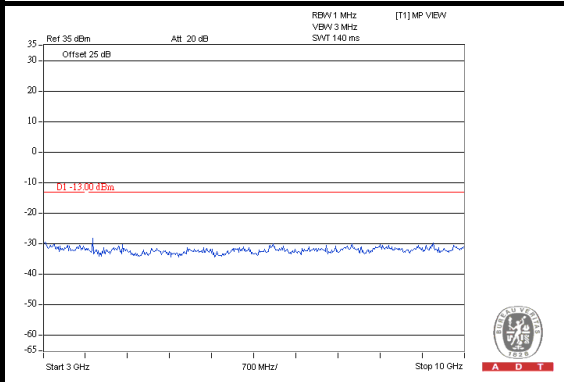
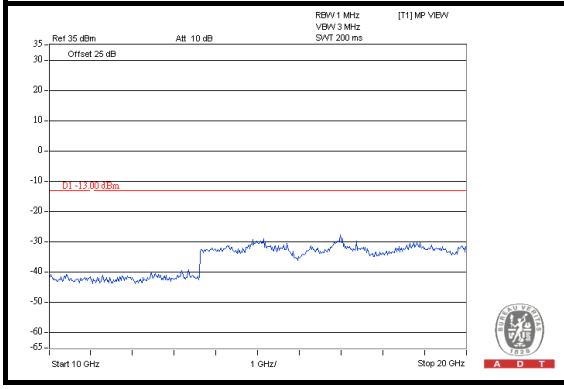
CH 600	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

CH 1175	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

FOR 1xEV-DO Rev. A MODE:

CH 25	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

CH 600	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

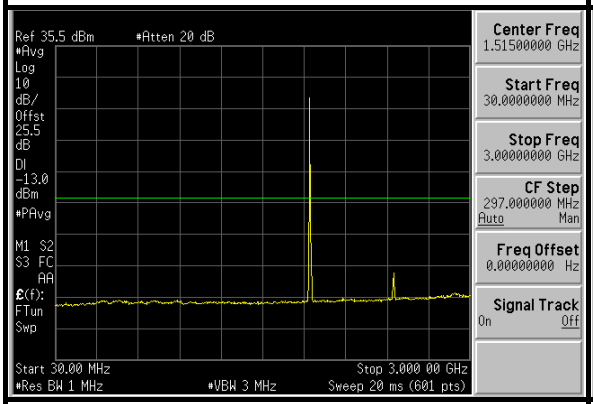
CH 1175	
9kHz ~ 3GHz	3GHz ~ 10GHz
	
10GHz ~ 20GHz	
	

LTE:

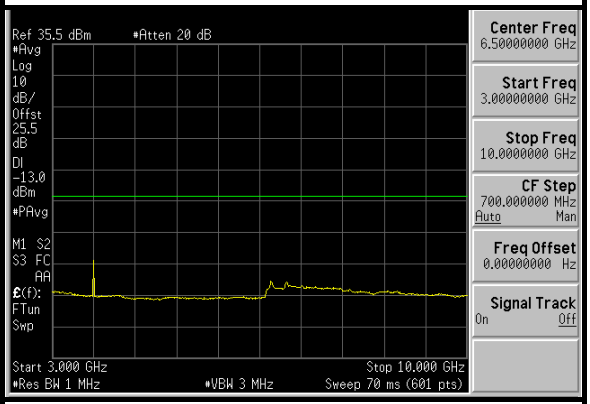
CHANNEL BANDWIDTH: 5MHz

CH 26065

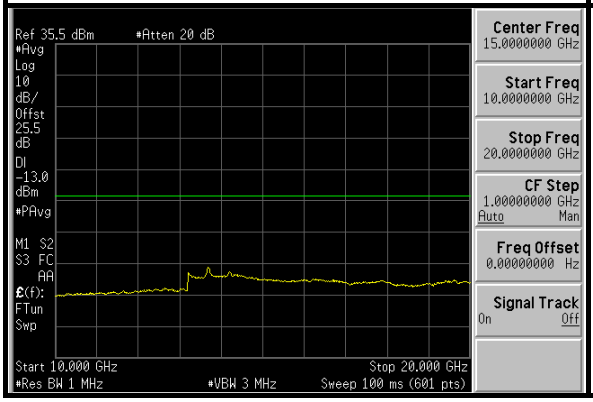
30MHz ~ 3GHz



3GHz ~ 10GHz

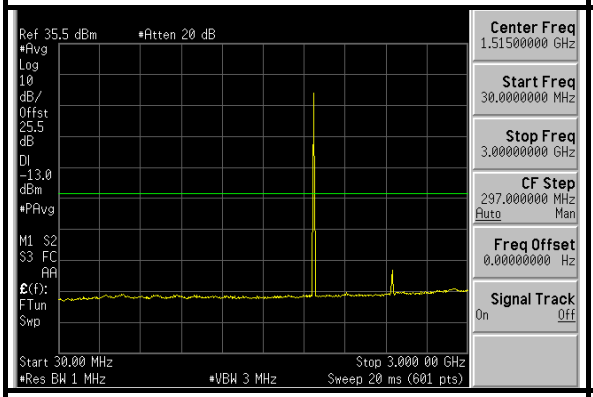


10GHz ~ 20GHz

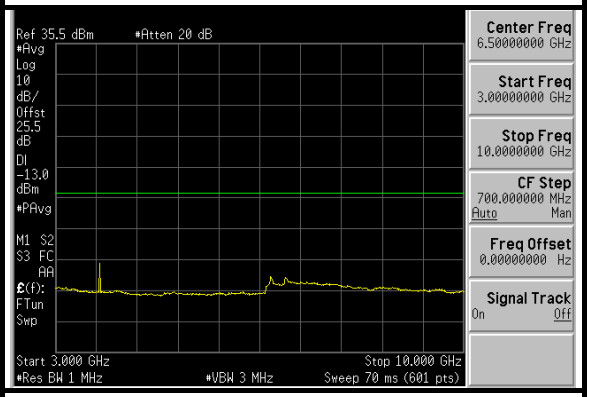


CH 26365

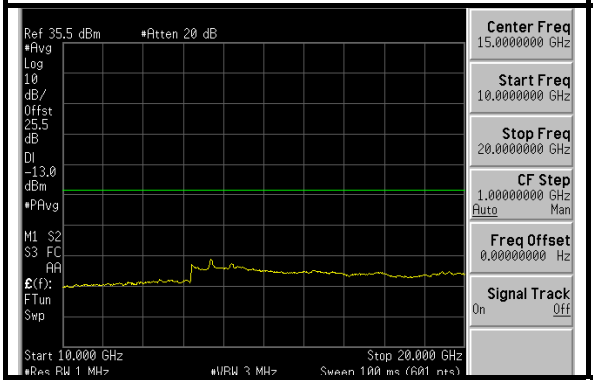
30MHz ~ 3GHz



3GHz ~ 10GHz

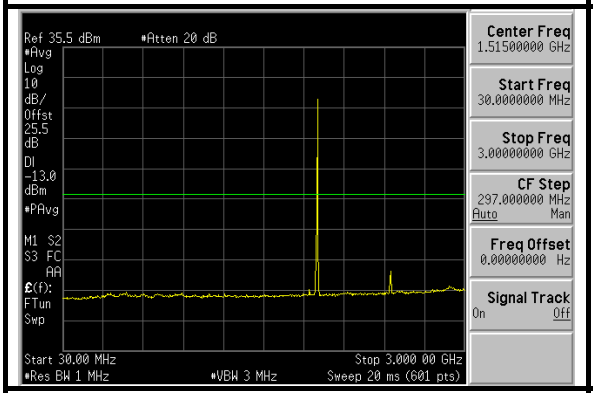


10GHz ~ 20GHz

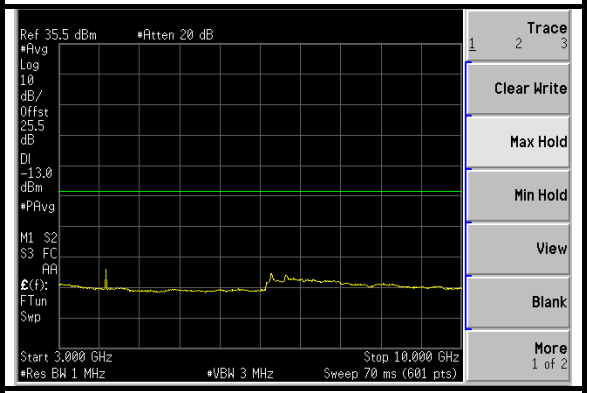


CH 26665

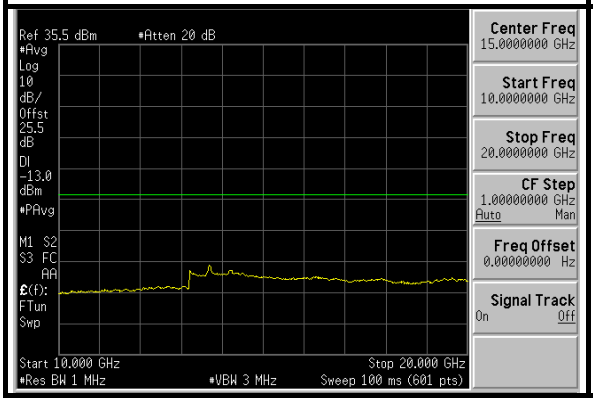
30MHz ~ 3GHz



3GHz ~ 10GHz



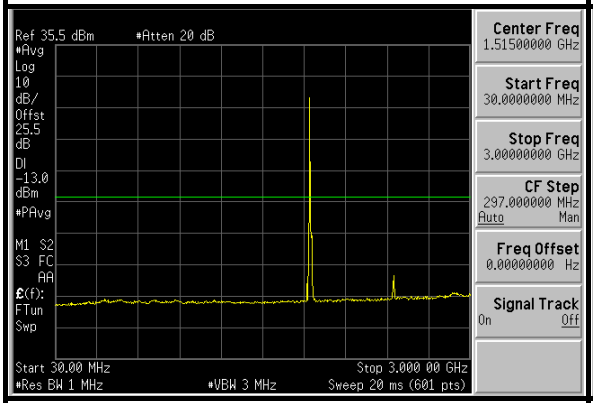
10GHz ~ 20GHz



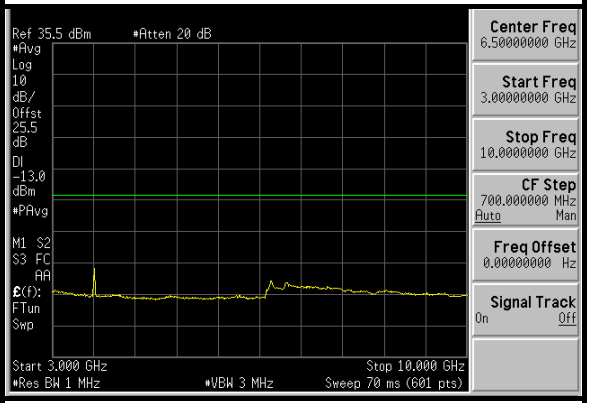
CHANNEL BANDWIDTH: 10MHz

CH 26090

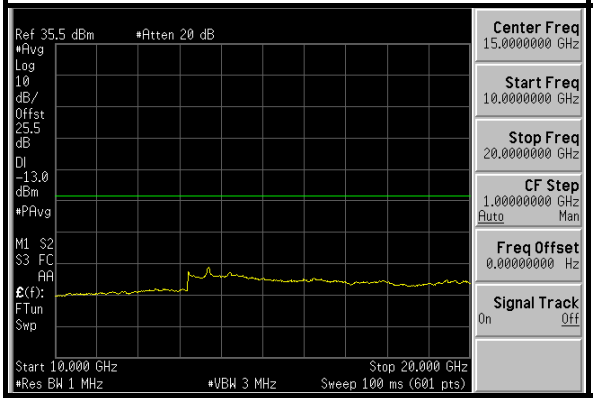
30MHz ~ 3GHz



3GHz ~ 10GHz

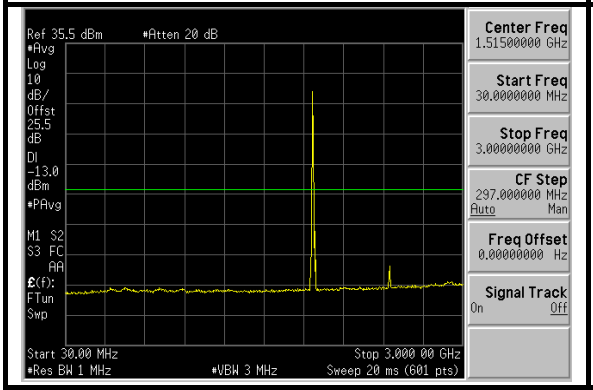


10GHz ~ 20GHz

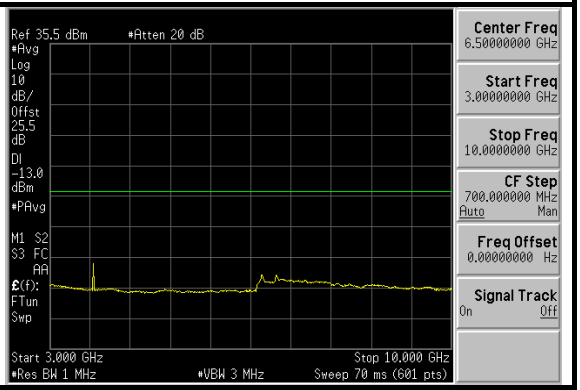


CH 26365

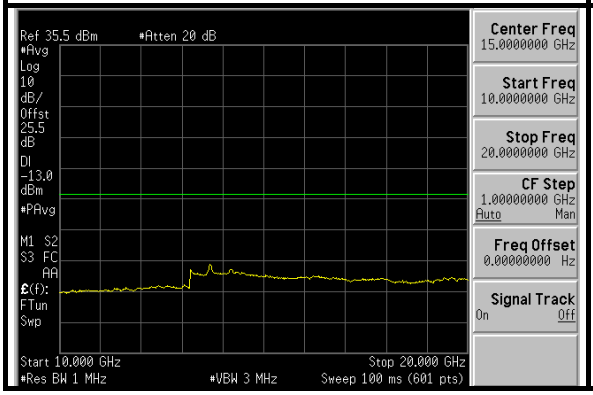
30MHz ~ 3GHz



3GHz ~ 10GHz

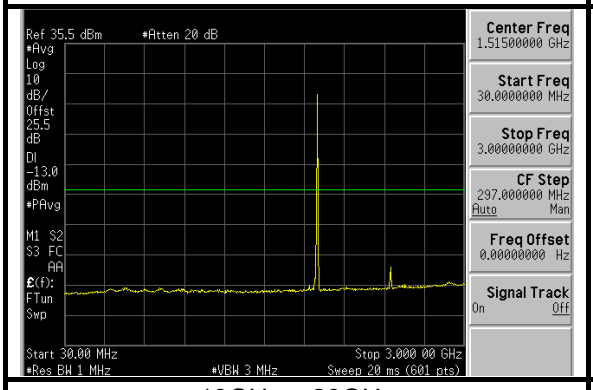


10GHz ~ 20GHz

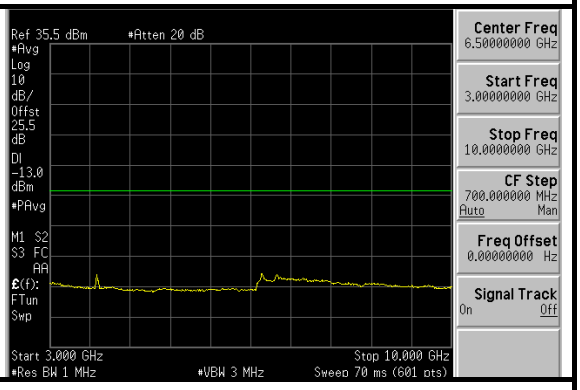


CH 26640

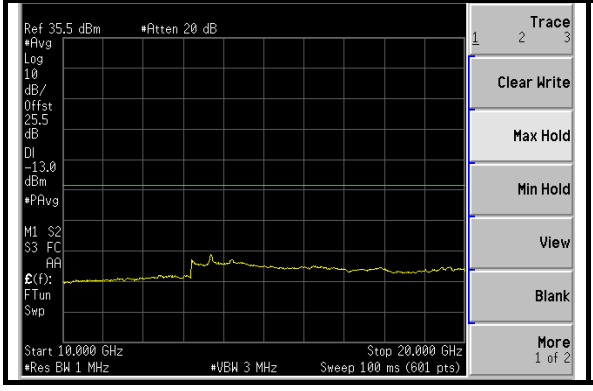
30MHz ~ 3GHz



3GHz ~ 10GHz



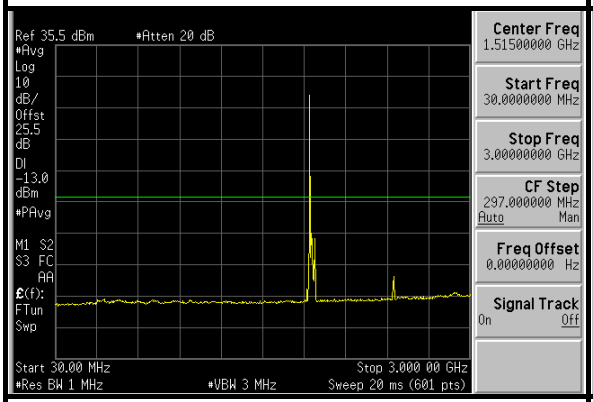
10GHz ~ 20GHz



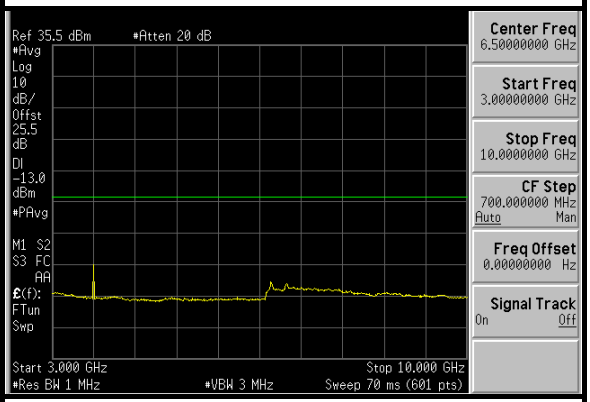
CHANNEL BANDWIDTH: 20MHz

CH 26140

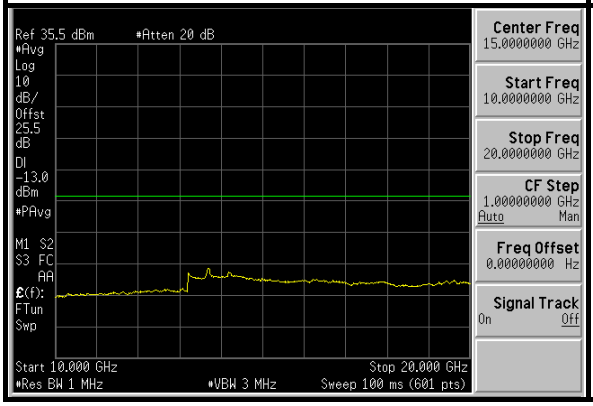
30MHz ~ 3GHz



3GHz ~ 10GHz

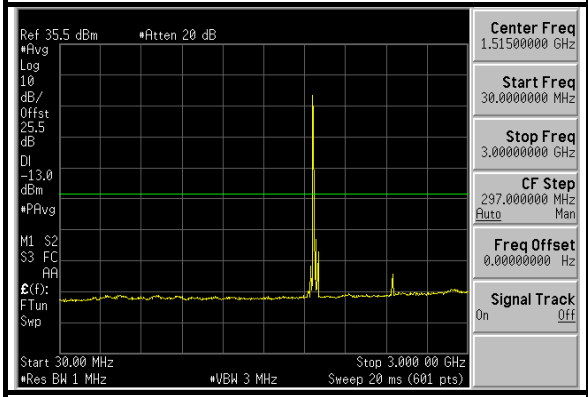


10GHz ~ 20GHz

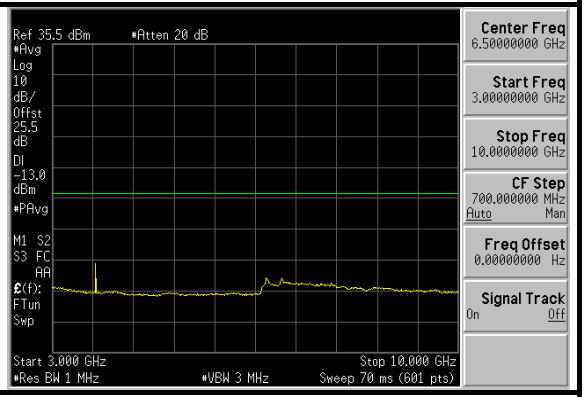


CH 26365

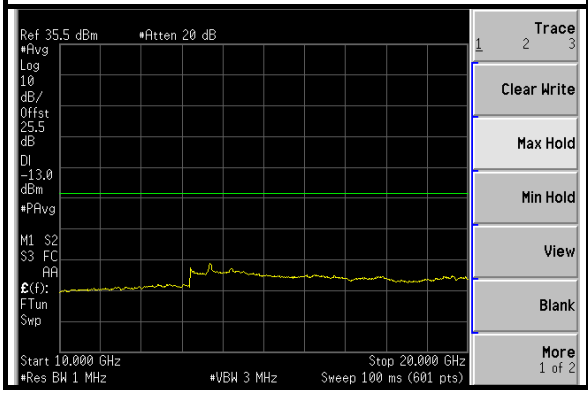
30MHz ~ 3GHz



3GHz ~ 10GHz

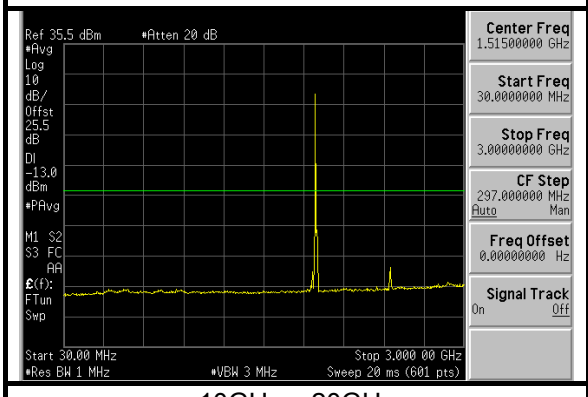


10GHz ~ 20GHz

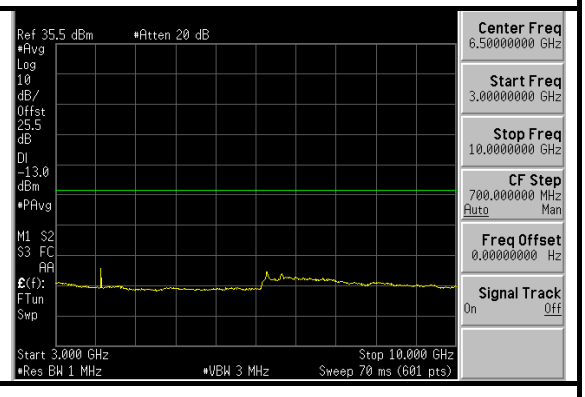


CH 26590

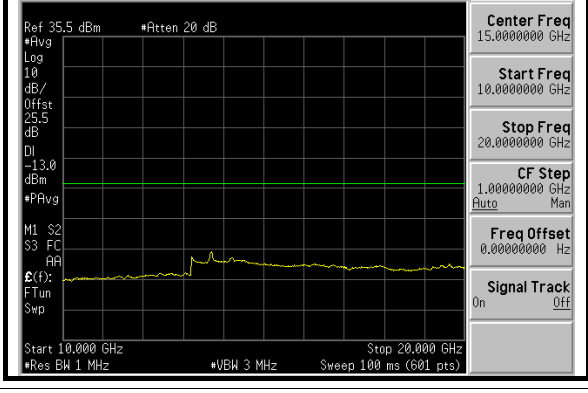
30MHz ~ 3GHz



3GHz ~ 10GHz



10GHz ~ 20GHz



4.6 RADIATED EMISSION MEASUREMENT

4.6.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to –13dBm.

4.6.2 TEST PROCEDURES

a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.

b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value " of step a. Record the power level of S.G

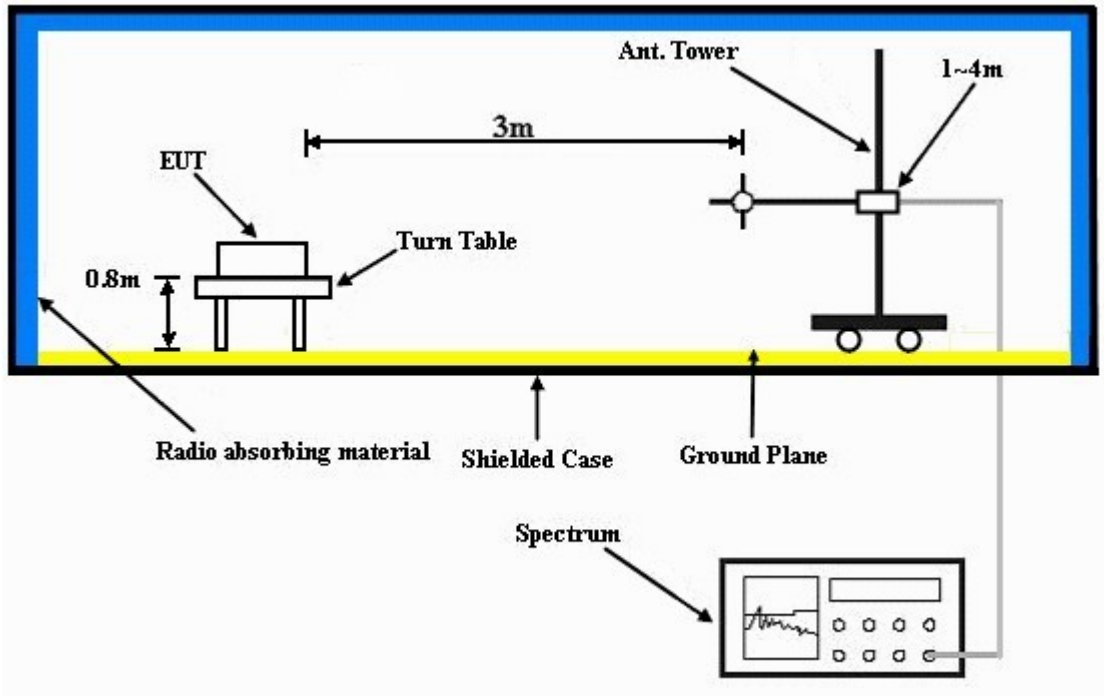
c. EIRP = Output power level of S.G – TX cable loss + Antenna gain of substitution horn. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power - 2.15dBi.

NOTE: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 1MHz/3MHz.

4.6.3 DEVIATION FROM TEST STANDARD

No deviation

4.6.4 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.6.5 TEST RESULTS

CDMA

FOR CDMA MODE:

Below 1GHz

MODE	TX channel 25	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	31.94	-64.7	-48.3	-12.4	-60.7	-13.0	-47.7
2	101.92	-56.5	-64.2	0.8	-63.4	-13.0	-50.4
3	249.66	-43.5	-54.0	5.4	-48.6	-13.0	-35.6
4	376.01	-60.0	-65.9	5.2	-60.7	-13.0	-47.7
5	500.42	-55.9	-60.5	4.9	-55.6	-13.0	-42.6
6	607.33	-61.3	-64.3	4.5	-59.8	-13.0	46.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	49.44	-56.8	-53.0	-9.8	-62.8	-13.0	-49.8
2	82.48	-55.8	-59.0	-0.7	-59.7	-13.0	-46.7
3	129.14	-56.8	-60.3	0.0	-60.3	-13.0	-47.3
4	249.66	-45.6	-53.8	5.4	-48.4	-13.0	-35.4
5	500.42	-52.4	-55.6	4.9	-50.7	-13.0	-37.7
6	613.17	-62.0	-62.1	4.5	-57.6	-13.0	-44.6

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Above 1GHz

MODE	Channel 25	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3702.50	-43.3	-39.2	7.2	-32.0	-13.0	-19.0
2	5553.75	-61.4	-50.5	6.8	-43.7	-13.0	-30.7
3	7405.00	-63.6	-46.4	4.3	-42.1	-13.0	-29.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3702.50	-42.5	-38.7	7.2	-31.5	-13.0	-18.5
2	5553.75	-57.3	-47.9	6.8	-41.1	-13.0	-28.1
3	7405.00	-61.9	-45.4	4.3	-41.1	-13.0	-28.1

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 600	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3760.00	-42.3	-37.9	7.1	-30.8	-13.0	-17.8
2	5640.00	-61.5	-50.5	6.8	-43.7	-13.0	-30.7
3	7520.00	-63.1	-45.5	4.2	-41.3	-13.0	-28.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	**3760.00**	**-38.5**	**-34.5**	**7.1**	**-27.4**	**-13.0**	**-14.4**
2	5640.00	-57.3	-47.6	6.8	-40.8	-13.0	-27.8
3	7520.00	-62.6	-45.8	4.2	-41.6	-13.0	-28.6

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 1175	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	25deg. C, 65%RH
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3817.50	-48.2	-43.6	7.1	-36.5	-13.0	-23.5
2	5726.25	-62.4	-51.3	6.7	-44.6	-13.0	-31.6
3	7635.00	-61.9	-44.1	4.2	-39.9	-13.0	-26.9
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3817.50	-45.6	-41.5	7.1	-34.4	-13.0	-21.4
2	5726.25	-57.7	-47.6	6.7	-40.9	-13.0	-27.9
3	7635.00	-63.4	-46.5	4.2	-42.3	-13.0	-29.3

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

LTE:

Below 1GHz

Channel Bandwidth: 5MHz

MODE	TX channel 26065	FREQUENCY RANGE	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	INPUT POWER	120Vac, 60 Hz
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	41.66	-59.6	-44.8	-11.1	-55.9	-13.0	-42.9
2	127.19	-48.4	-54.6	0.0	-54.6	-13.0	-41.6
3	195.23	-48.5	-59.3	4.9	-54.4	-13.0	-41.4
4	249.66	-50.0	-60.5	5.4	-55.1	-13.0	-42.1
5	383.79	-63.3	-68.8	5.2	-63.6	-13.0	-50.6
6	500.42	-63.8	-68.4	4.9	-63.5	-13.0	-50.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	45.55	-48.3	-43.7	-10.5	-54.2	-13.0	-41.2
2	131.08	-44.8	-47.9	0.0	-47.9	-13.0	-34.9
3	193.29	-51.7	-58.4	4.6	-53.8	-13.0	-40.8
4	249.66	-55.0	-63.2	5.4	-57.8	-13.0	-44.8
5	391.56	-63.0	-67.7	5.2	-62.5	-13.0	-49.5
6	500.42	-61.9	-65.1	4.9	-60.2	-13.0	-47.2

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Channel Bandwidth: 10MHz

MODE	TX channel 26090	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	**INPUT POWER**	120Vac, 60 Hz
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	35.83	-61.6	-45.7	-11.9	-57.6	-13.0	-44.6
2	127.19	-49.4	-55.6	0.0	-55.6	-13.0	-42.6
3	197.17	-48.5	-59.4	5.1	-54.3	-13.0	-41.3
4	232.16	-52.8	-64.0	5.4	-58.6	-13.0	-45.6
5	255.49	-54.4	-64.7	5.4	-59.3	-13.0	-46.3
6	500.42	-64.1	-68.7	4.9	-63.8	-13.0	-50.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	45.55	-49.4	-44.8	-10.5	-55.3	-13.0	-42.3
2	131.08	-45.3	-48.4	0.0	-48.4	-13.0	-35.4
3	191.34	-52.5	-58.8	4.4	-54.4	-13.0	-41.4
4	282.71	-59.0	-65.9	5.2	-60.7	-13.0	-47.7
5	428.50	-66.6	-69.8	5.2	-64.6	-13.0	-51.6
6	500.42	-62.8	-66.0	4.9	-61.1	-13.0	-48.1

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Channel Bandwidth: 20MHz

MODE	TX channel 26140	**FREQUENCY RANGE**	Below 1000MHz
ENVIRONMENTAL CONDITIONS	24deg. C, 65%RH	**INPUT POWER**	120Vac, 60 Hz
TESTED BY	Haru Yang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	41.66	-62.0	-47.2	-11.1	-58.3	-13.0	-45.3
2	129.14	-52.8	-58.7	0.0	-58.7	-13.0	-45.7
3	199.12	-49.5	-60.6	5.4	-55.2	-13.0	-42.2
4	255.49	-53.7	-64.0	5.4	-58.6	-13.0	-45.6
5	381.84	-63.9	-69.4	5.2	-64.2	-13.0	-51.2
6	500.42	-64.9	-69.5	4.9	-64.6	-13.0	-51.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	30.00	-43.2	-38.0	-12.6	-50.6	-13.0	-37.6
2	45.55	-48.4	-43.8	-10.5	-54.3	-13.0	-41.3
3	131.08	-45.0	-48.1	0.0	-48.1	-13.0	-35.1
4	193.29	-51.3	-58.0	4.6	-53.4	-13.0	-40.4
5	290.48	-60.4	-67.2	5.2	-62.0	-13.0	-49.0
6	500.42	-61.9	-65.1	4.9	-60.2	-13.0	-47.2

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Above 1GHz

Channel Bandwidth: 5MHz

MODE	Channel 26065	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3700.60	-35.7	-19.9	-4.6	-24.5	-13.0	-11.5
2	5550.90	-55.4	-31.9	-5.7	-37.6	-13.0	-24.6
3	7401.20	-63.7	-35.5	-6.7	-42.2	-13.0	-29.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3700.60	-42.3	-26.7	-4.6	-31.3	-13.0	-18.3
2	5550.90	-55.6	-33.6	-5.7	-39.3	-13.0	-26.3
3	7401.20	-64.1	-36.6	-6.7	-43.3	-13.0	-30.3

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 26365	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	**3760.60**	**-35.7**	**-19.6**	**-4.7**	**-24.3**	**-13.0**	**-11.3**
2	5640.90	-56.0	-32.4	-5.8	-38.2	-13.0	-25.2
3	7521.20	-62.8	-34.3	-6.8	-41.1	-13.0	-28.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3760.60	-41.7	-26.0	-4.7	-30.7	-13.0	-17.7
2	5640.90	-53.0	-33.7	-5.8	-39.5	-13.0	-26.5
3	7521.20	-62.8	-35.0	-6.8	-41.8	-13.0	-28.8

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 26665	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3820.60	-42.9	-26.5	-4.7	-31.2	-13.0	-18.2
2	5730.90	-52.7	-29.1	-5.8	-34.9	-13.0	-21.9
3	7641.20	-63.4	-34.6	-6.8	-41.4	-13.0	-28.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3820.60	-45.4	-29.5	-4.7	-34.2	-13.0	-21.2
2	5730.90	-53.5	-30.8	-5.8	-36.6	-13.0	-23.6
3	7641.20	-62.8	-34.8	-6.8	-41.6	-13.0	-28.6

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Channel Bandwidth: 10MHz

MODE	Channel 26090	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3701.00	-36.6	-20.7	-4.6	-25.3	-13.0	-12.3
2	5551.60	-56.0	-32.6	-5.7	-38.3	-13.0	-25.3
3	7402.80	-63.2	-35.0	-6.7	-41.7	-13.0	-28.7
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3701.00	-40.1	-24.5	-4.6	-29.1	-13.0	-16.1
2	5551.60	-57.0	-35.1	-5.7	-40.8	-13.0	-27.8
3	7402.80	-62.3	-34.8	-6.7	-41.5	-13.0	-28.5

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 26365	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3756.00	-38.2	-22.2	-4.6	-26.8	-13.0	-13.8
2	5634.00	-54.4	-30.8	-5.8	-36.6	-13.0	-23.6
3	7512.00	-62.6	-34.0	-6.8	-40.8	-13.0	-27.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3756.20	-40.0	-24.3	-4.6	-28.9	-13.0	-15.9
2	5634.00	-57.3	-35.0	-5.8	-40.8	-13.0	-27.8
3	7512.00	-62.9	-35.1	-6.8	-41.9	-13.0	-28.9

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 26640	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3811.00	-40.8	-24.5	-4.7	-29.2	-13.0	-16.2
2	5716.50	-55.3	-31.7	-5.8	-37.5	-13.0	-24.5
3	7622.00	-62.3	-33.6	-6.8	-40.4	-13.0	-27.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3811.00	-42.8	-26.9	-4.7	-31.6	-13.0	-18.6
2	5716.50	-54.3	-31.7	-5.8	-37.5	-13.0	-24.5
3	7622.00	-62.8	-34.9	-6.8	-41.7	-13.0	-28.7

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

Channel Bandwidth: 20MHz

MODE	Channel 26140	FREQUENCY RANGE	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3702.20	-37.2	-21.3	-4.6	-25.9	-13.0	-12.9
2	5553.30	-57.6	-34.2	-5.7	-39.9	-13.0	-26.9
3	7404.40	-62.0	-33.8	-6.7	-40.5	-13.0	-27.5
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	Freq. (MHz)	Reading (dBm)	S.G Power Value (dBm)	Correction Factor (dB)	EIRP (dBm)	Limit (dBm)	Margin (dB)
1	3702.20	-41.5	-25.9	-4.6	-30.5	-13.0	-17.5
2	5553.30	-57.2	-35.3	-5.7	-41.0	-13.0	-28.0
3	7404.40	-59.9	-32.4	-6.7	-39.1	-13.0	-26.1

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 26365	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3747.20	-36.5	-20.5	-4.6	-25.1	-13.0	-12.1
2	5620.80	-53.3	-29.7	-5.8	-35.5	-13.0	-22.5
3	7494.40	-61.5	-33.0	-6.8	-39.8	-13.0	-26.8
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3747.20	-40.0	-24.3	-4.6	-28.9	-13.0	-15.9
2	5620.80	-55.9	-33.6	-5.8	-39.4	-13.0	-26.4
3	7494.40	-61.6	-33.8	-6.8	-40.6	-13.0	-27.6

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

MODE	Channel 26590	**FREQUENCY RANGE**	Above 1000MHz
INPUT POWER	120Vac, 60 Hz	**ENVIRONMENTAL CONDITIONS**	21deg. C, 67%RH
TESTED BY	Aska Huang		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3792.20	-36.6	-20.3	-4.7	-25.0	-13.0	-12.0
2	5688.30	-56.7	-33.1	-5.8	-38.9	-13.0	-25.9
3	7584.40	-62.5	-33.8	-6.8	-40.6	-13.0	-27.6
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M							
No.	**Freq. (MHz)**	**Reading (dBm)**	**S.G Power Value (dBm)**	**Correction Factor (dB)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**
1	3792.20	-42.3	-26.4	-4.7	-31.1	-13.0	-18.1
2	5688.30	-55.9	-33.4	-5.8	-39.2	-13.0	-26.2
3	7584.40	-60.3	-32.4	-6.8	-39.2	-13.0	-26.2

REMARKS:

1. Power Value (dBm) = S.G Power Value (dBm) + Correction Factor (dB).
2. Correction Factor (dB) = Substitution Antenna Gain (dB) + Cable Loss (dB).

5 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6 INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

Copies of accreditation and authorization certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5.phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
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Hwa Ya EMC/RF/Safety/Telecom Lab:
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Email: service.adt@tw.bureauveritas.com
Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7 APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No modifications were made to the EUT by the lab during the test.

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