

# **RF TEST REPORT**

Product Name: Duet

Model Name: HM-1005

FCC ID: 2AUCLHM-1005

Issued For : FX TECHNOLOGY LIMITED

2 Stone Buildings, Lincoln's Inn, London, United Kingdom

Issued By : Shenzhen LGT Test Service Co., Ltd. Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China

Report Number:	LGT23E031RF06
Sample Received Date:	May 18, 2023
Date of Test:	May 18, 2023 – Jul. 31, 2023
Date of Issue:	Jul. 31, 2023

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## **TEST REPORT CERTIFICATION**

Applicant:	FX TECHNOLOGY LIMITED
Address:	2 Stone Buildings, Lincoln's Inn, London, United Kingdom
Manufacturer:	UWIN INNOVATION(HONG KONG)LIMITED
Address:	ROOM D 10/F TOWER A BILLION CENTRE 1 WANG KWONG RD KOWLOON BAY KL
Product Name:	Duet
Trademark:	Linxdot
Model Name:	HM-1005
Sample Status:	Normal

APPLICABLE STANDARDS								
STANDARD	TEST RESULTS							
FCC Part 22, 24, 27	PASS							
KDB 971168 D01 v03r01, ANSI C63.26(2015)	FASS							

Prepared by:

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TESTSE Approved by: tali ( S Vita Li 冠 检 **Technical Director** 

Table of Contents	Page
1. TEST FACTORY & MEASUREMENT UNCERTAINTY	5
2. GENERAL INFORMATION	6
3. CONDUCTED OUTPUT POWER	13
4. PEAK-TO-AVERAGE RATIO	14
5. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER	15
6. OCCUPIED BANDWIDTH	17
7. CONDUCTED BAND EDGE	18
8. CONDUCTED SPURIOUS EMISSION	20
9. RADIATED SPURIOUS EMISSION	21
10. FREQUENCY STABILITY	23
APPENDIX I-TEST DATA	24
CONDUCTED OUTPUT POWER	24
FREQUENCY STABILITY	41
PEAK-TO-AVERAGE RATIO	49
OCCUPIED BANDWIDTH	111
BAND EDGE	173
OUT-OF-BAND EMISSIONS	220
RADIATED SPURIOUS EMISSION	287

## **Revision History**

Rev.	Issue Date	Contents
00	Jul. 31, 2023	Initial Issue

## 1. TEST FACTORY & MEASUREMENT UNCERTAINTY

## 1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.				
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China				
	A2LA Certificate No.: 6727.01				
Accreditation Certificate	FCC Registration No.: 746540				
	CAB ID: CN0136				

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

Parameter	Uncertainty
Occupied Channel Bandwidth	±3.2 %
RF Output Power, Conducted	±0.87dB
Power Spectral Density, Conducted	±2.11 dB
Unwanted Emission, Conducted	±0.86dB
All Emissions, Radiated (Below 1GHz)	±3.54dB
All Emissions, Radiated (1GHz-18GHz)	±4.22dB
All Emissions, Radiated (18GHz-25GHz)	±4.81dB
Temperature	±0.5°C
Humidity	±2%

Note: The measurement uncertainty is not included in the test result.

## 2. GENERAL INFORMATION

## 2.1 TECHNICAL SPECIFICATIONS AND REGULATIONS

## 2.1.1 PRODUCT DESCRIPTION

A major technical description of EUT is described as following:

Product Name:	Duet
Trademark:	Linxdot
Model Name:	HM-1005
Series Model:	N/A
Model Difference:	N/A
Frequency Bands:	U.S. Bands: LTE FDD Band 2 LTE FDD Band 4 LTE FDD Band 5 LTE FDD Band 12 LTE FDD Band 30 LTE FDD Band 66 LTE FDD Band 71
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as single chipset, SIM 1 is used to tested.
Antenna:	PIFA
Antenna gain:	LTE B2: 0.41dBi LTE B4: 0.24dBi LTE B5: -0.95dBi LTE B12: -2.51dBi LTE B17: -2.51dBi LTE B30: -0.69dBi LTE B66: 0.24dBi LTE B71: -2.51dBi
Adapter:	N/A
Battery:	Capacity: 5500mAh Rated Voltage: 3.85V
Extreme Vol. Limits:	3.465V to 4.235V (Nominal 3.85V)
Extreme Temp. Tolerance:	-0°℃ to +40°℃
Hardware Version:	N/A
Software Version:	N/A

Note: The antenna information refer the manufacturer provide report, applicable only to the tested sample identified in the report.

## 2.1.2 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD

Drog	lust Specification Subjective To This Standard
Proc	luct Specification Subjective To This Standard
	LTE Band 2:1850~1910MHz
	LTE Band 4:1710~1755MHz
	LTE Band 5: 824~849MHz
Tx Frequency	LTE Band 12: 699-716MHz
TXT requeitey	LTE Band 17:704~716MHz
	LTE Band 30: 2305-2315MHz
	LTE Band 66: 1710-1780MHz
	LTE Band 71: 663-698MHz
	LTE Band 2: 1930-1990MHz
	LTE Band 4: 2110-2155MHz
	LTE Band 5: 869-894MHz
	LTE Band 12: 729-746MHz
Rx Frequency	LTE Band 17: 734-746MHz
	LTE Band 30: 2350-2360MHz
	LTE Band 66: 2110-2200MHz
	LTE Band 71: 617-652MHz
	LTE Band 2: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz / 20MHz
	LTE Band 4: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz /20MHz
	LTE Band 5: 1.4MHz / 3MHz / 5MHz / 10MHz
	LTE Band 12: 1.4MHz / 3MHz / 5MHz / 10MHz
Bandwidth	LTE Band 17: 5MHz / 10MHz
	LTE Band 30: 5MHz / 10MHz
	LTE Band 66: 1.4MHz / 3MHz / 5MHz / 10MHz / 15MHz /20MHz
	LTE Band 71: 5MHz / 10MHz / 15MHz /20MHz
Type of Modulation	QPSK /16QAM

## 2.1.3 TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items listed below are performed according to KDB 971168 D01 v03r01 and ANSI C63.26 2015 Power Meas. License Digital Systems with maximum output power. Radiated measurements are performed by rotating the EUT in three different orthogonal test planes tofind the maximum emission.

## Remark:

- 1. The mark 'v'means that this configuration is chosen for testing
- 2. The mark '-'means that this bandwidth is not supported.
- 3. The device is investigated from 30MHz to 10 times of fundamental signal for radiated.

ITEMS	Band	I	Ban	dwic	dth (l	ИНz	)	Modu	lation		RB #		С	Test hann	
		1.4	3	5	10	15	20	QPSK	16QAM	1	Half	Full	L	М	Н
	2	v	v	v	v	v	v	V	v	v	v	v	v	v	v
	4	v	v	v	v	v	v	V	v	v	v	v	v	v	v
	5	v	v	v	v			V	v	V	v	v	v	v	v
Max. Output	12	v	v	v	v			V	v	v	v	v	v	v	v
Power	17			v	v			V	v	v	v	v	v	v	v
	30			v	v			V	v	v	v	v	v	v	v
	66	v	v	v	v	v	v	V	v	v	v	v	v	v	v
	71			v	v	v	v	V	v	v	v	v	v	v	v
	2						v	V	v	v		v	v	v	v
	4						v	V	v	v		v	v	v	v
	5				V			V	v	V		v	v	v	v
Deals	12				v			V	v	V		v	v	v	v
Peak&Avera Ratio	17				v			V	v	V		v	v	v	v
i tuto	30				v			V	v	v		v	v	v	v
	66						v	V	v	v		v	v	v	v
	71						V	V	v	V		v	v	v	v
	2	v	v	v	v	v	v	V	v			v	v	v	v
	4	v	v	v	v	v	v	V	v			v	v	v	v
	5	v	v	v	v			V	v			v	v	v	v
26dB&99%	12	v	v	v	v			V	v			v	v	v	v
Bandwidth	17			v	v			V	v			V	v	v	v
	30			v	V			V	v			V	V	V	v
	66	v	v	v	V	v	v	V	v			v	v	v	v
	71			v	v	v	v	V	v			V	v	v	v
	2	v	v	v	V	v	v	V	v	v		v	v	v	v
	4	v	v	v	v	v	v	V	v	v		V	٧	٧	v
	5	v	v	v	v			V	v	v		V	۷	۷	v
Conducted	12	v	v	v	v			V	v	v		v	v	v	v
Band Edge	17			v	v			V	v	v		V	v	v	v
	30			v	v			V	v	v		V	٧	٧	v
	66	V	v	v	v	v	v	V	V	V		V	v	v	v
	71			v	v	v	v	V	V	v		V	v	v	v

Conducted	2 4	V	V	V	V	V	V 1								
Conducted	4						V	V	V	V			V	V	V
Conducted	~	V	V	۷	V	V	V	V	V	V			V	V	V
	5	V	V	V	V			V	V	V			V	V	V
Spurious —	12	V	V	V	V			V	V	V			V	V	V
Emission	17			۷	V			V	V	V			V	V	V
	30			V	V			V	V	V			V	۷	V
	66	۷	۷	V	۷	V	V	V	V	V			V	۷	V
	71			V	۷	V	V	V	V	V			V	V	V
	2				۷			V				V		V	
	4				۷			V				V		V	
	5				۷			V				V		V	
Frequency -	12				۷			V				V		v	
Stability	17				۷			V				v		v	
	30				۷			V				v		v	
	66				۷			v				v		v	
	71				٧			V				v		v	
	2	۷	v	v	v	v	۷	V	V	v	v	V	v	۷	V
	4	V	v	v	۷	v	V	V	V	v	v	v	v	۷	v
	5	v	v	V	V			V	V	v	v	v	v	v	v
	12	v	٧	٧	٧			V	V	v	v	v	v	v	v
E.R.P.& E.I.R.P.	17			v	٧			V	V	v	v	v	v	v	v
	30			v	٧			V	V	v	v	v	v	v	v
	66	V	v	v	V	v	V	V	V	v	v	v	v	v	v
	71			v	V	v	V	V	V	v	v	v	v	v	v
	2	v	v	v	٧	v	v	V		v			v	v	v
	4	v	v	v	٧	v	v	V		v			v	v	v
	5	V	v	v	v			V		v			v	v	v
Radiated	12	V	v	v	v			v		v			v	٧	v
Spurious Emission	17			v	V			V		v			v	V	V
	30			v	v			v		v		<u> </u>	v	v	v
	66	v	v	v	v	v	V	v		v			v	v	v
-	71			V	V	V	V	V		V			v	V	V

## 2.1.4 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for filing to comply with the 47 CFR Part 2, 22, 24, 27.

## 2.1.5 SPECIAL ACCESSORIES

The battery and the charger, earphone supplied by the applicant were used as accessories and being tested with eut intended for fcc grant together.

## 2.1.6 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

## 2.1.7 EUT EXERCISE

The Transmitter was operated in the maximum output power mode through Communication Tester. The TX frequency was fixed which was for the purpose of the measurements.

## 2.1.8 CONFIGURATION OF EUT SYSTEM

The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

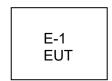


Table 2-1 Equipment Used in EUT System

Item	Equipment	Model No.	Length	Note
N/A				N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in  $\[$ <sup> $\Gamma$ </sup> Length  $\]$  column.
- (2) "YES" is means "with core"; "NO" is means "without core".

## 2.1.9MEASUREMENT INSTRUMENTS

The radiated emission testing was performed according to the procedures of ANSI C63.26 2015 and FCC CFR 47 rules of 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057.

Radiated Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2023.04.13	2024.04.12
Active loop Antenna	ETS	6502	00049544	2022.06.02	2025.06.01
Spectrum Analyzer	Keysight	N9010B	MY60242508	2023.04.10	2024.04.09
Bilog Antenna(30M-1G)	SCHWARZBE CK	VULB 9168	01447	2022.12.12	2025.12.11
Horn Antenna(1-18G)	SCHWARZBE CK	3115	10SL0060	2022.06.02	2025.06.01
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2023.04.07	2024.04.06
Wireless Communications Test Set	R&S	CMW 500	137737	2023.04.13	2024.04.12
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Testing Software		EMC-I_	V1.4.0.3_SKET		

Conducted Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
Signal Analyzer	Keysight	N9010B	MY60242508	2023.04.10	2024.04.09
Wireless Communications Test Set	R&S	CMW 500	137737	2023.04.13	2024.04.12
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2023.04.07	2024.04.06
RF Automatic Test system	MW	MW100-RFCB	MW220324LG-33	2023.04.13	2024.04.12
Temperature & Humidity	KTJ	TA218B	N.A	2023.04.24	2024.04.23
Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2023.05.10	2024.05.09
Attenuator	eastsheep	90db	N.A	2023.04.10	2024.04.09
Testing Software		MTS82	200_V2.0.0.0_MW		

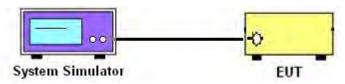
## **3. CONDUCTED OUTPUT POWER** 3.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

## **3.1.1 MEASUREMENT METHOD**

A system simulator was used to establish communication with the eut. Its parameters were set to force the eut transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

Configuration follows KDB 971168 D01 v03r01.

## 3.1.2 TEST SETUP



## 3.1.3 TEST PROCEDURES

- 1. The transmitter output port was connected to system simulator.
- 2. Set EUT at maximum power through the system simulator.
- 3. Select lowest/middle/highest channels for each band and different modulation.
- 4. Measure and record the power level from the system simulator.

## 3.1.4 TEST RESULTS

Note: Test chart See Appendix II

## 4. PEAK-TO-AVERAGE RATIO

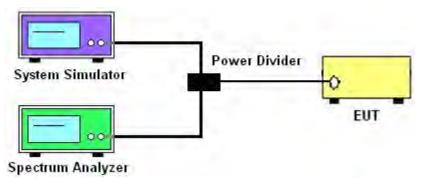
## 4.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

## 4.1.1 MEASUREMENT METHOD

Use one of the procedures presented in 4.1.3 to measure the total peak power and record as PPk. Use one of the applicable procedures presented 4.1.3 to measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

PAPR (dB) = PPk (dBm) - PAvg (dBm).

#### 4.1.2 TEST SETUP



#### 4.1.3 TEST PROCEDURES

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7 and ANSI C63.26 2015 Section 5.2.6.
- 2. The EUT was connected to spectrum and system simulator via a power divider
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Set the test probe and measure the peak and average power of the spectrum analyzer
- 5. Record the deviation as Peak to Average Ratio.

			ព	ΓE		
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	PK/AVG	PK/AVG	PK/AVG	PK/AVG	PK/AVG	PK/AVG
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto

#### 4.1.4 TEST RESULTS

Note: Test chart See Appendix II

## 5. RADIATED POWER AND EFFECTIVE ISOTROPIC RADIATED POWER

#### 5.1 DESCRIPTION OF THE ERP/EIRP MEASUREMENT

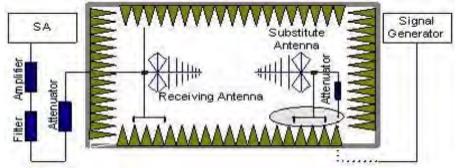
#### 5.1.1 MEASUREMENT METHOD

Effective radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems. Mobile and portable (hand-held) stations operating are limited to average ERP, Equivalent isotropic radiated power output measurements by substitution method according to ANSI C63.26 2015, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. Power Meas, Mobile and portable (hand-held) stations operating are limited to average EIRP.

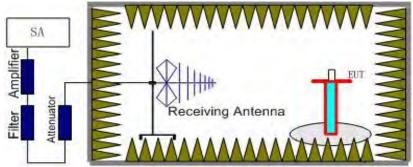
#### 5.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, RSE=Rx ( dBuV ) +CL ( dB ) +SA ( dB ) +Gain ( dBi ) -107 ( dBuV to dBm ) The SA is calibrated using following setup.



b) EUT was placed on a 1.5m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.



Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below: Power=PMea+ARpl

## 5.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01v03r01 Section 5.6 and ANSI C63.26 2015 Section 5.2.

2. The EUT was placed on a non-conductive rotating platform 1.5 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with Peak detector.

3. During the measurement, the system simulator parameters were set to force the EUTtransmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 m in both horizontally and vertically polarized orientations.

4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to ANSI C63.26 2015. The EUT was replaced by dipole antenna (substitution antenna) at same location and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. EIRP=S.G Level+ Gain-Cable loss; ERP=S.G Level+ Gain-Cable loss-2.15.

5. RB Set greater than bandwidth, VB Set spectrum analyzer Maximum support.

#### 5.1.4 TEST RESULTS

Note: Test is divided into three directions, X/Y/Z. X pattern for the worst. Note: Test chart See Appendix II

## 6. OCCUPIED BANDWIDTH

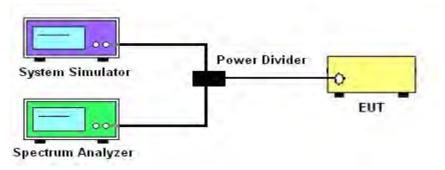
## 6.1 DESCRIPTION OF OCCUPIED BANDWIDTH MEASUREMENT

## 6.1.1 MEASUREMENT METHOD

1. The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

2. The 26 db emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 db below the maximum in-band spectral density of the modulated signal. spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

#### 6.1.2 TEST SETUP



## 6.1.3 TEST PROCEDURES

- 1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.2 and 4.3.
- 2. The EUT was connected to spectrum and system simulator via a power divider.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Set the test probe and measure the Occupied Bandwidth of the spectrum analyzer.
- 5. Measure and record the Occupied Bandwidth from the Spectrum Analyzer.

		LTE									
LTE BW	1.4M	3M	5M	10M	15M	20M					
Span	3MHz	6MHz	10MHz	20MHz	30MHz	40MHz					
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz					
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz					
Detector	PK	PK	PK	PK	PK	PK					
Trace	Max	Max	Max	Max	Max	Max					
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto					

6.1.4 MEASUREMENT RESULT Note: Test chart See Appendix II

## 7. CONDUCTED BAND EDGE

## 7.1 DESCRIPTION OF CONDUCTED BAND EDGE MEASUREMENT

#### 7.1.1 MEASUREMENT METHOD

#### 1. §22.917(a)

For operations in the 824 – 849 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

#### 2. §24.238 (a)

For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 1MHz bandwidth. However, 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

#### 3. §27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

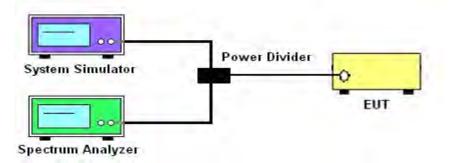
## 4. §27.53(m)(4)

For operations in the 2500 MHz ~ 2570 MHz band this section, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licenseesoperating on frequencies below 2495 MHz may also submit a documented interference complaintagainst BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

## 5. §27.53 (g)

For operations in the 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

## 7.1.2 TEST SETUP



## 7.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.

2. The EUT was connected to spectrum analyzer and system simulator via a power divider.

3. The band edges of low and high channels for the highest RF powers were measured. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

4. Set spectrum analyzer with RMS/AVG detector.

5. The RF fundamental frequency should be excluded against the limit line in the operating frquency band.

6.The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

= P(W) - [43 + 10log(P)] (dB)

= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

= -13dBm.

Band 7:

= P(W) - [55 + 10log(P)] (dB)

 $= [30 + 10\log(P)] (dBm) - [55 + 10\log(P)] (dB)$ 

= -25dBm.

			LI	ſE		
LTE BW	1.4M	3M	5M	10M	15M	20M
Span	12MHz	13MHz	15MHz	20MHz	25MHz	30MHz
RBW	30kHz	30kHz	100kHz	100kHz	300kHz	300kHz
VBW	100kHz	100kHz	300kHz	300kHz	1000kHz	1000kHz
Detector	RMS	RMS	RMS	RMS	RMS	RMS
Trace	Max	Max	Max	Max	Max	Max
Sweep Count	Auto	Auto	Auto	Auto	Auto	Auto

7.1.4 MEASUREMENT RESULT Note: Test chart See Appendix II

## 8. CONDUCTED SPURIOUS EMISSION

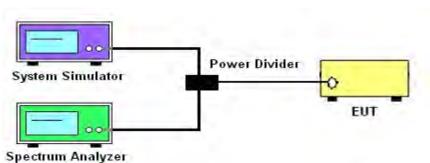
## 8.1 DESCRIPTION OF CONDUCTED SPURIOUS EMISSION MEASUREMENT

## 8.1.1 MEASUREMENT METHOD

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. For Band 7:

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $55 + 10 \log (P) dB$ .

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.



## 8.1.2 TEST SETUP

#### 8.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.

2. The EUT was connected to spectrum analyzer and system simulator via a power divider.

3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.

The path loss was compensated to the results for each measurement

4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.

5. The RF fundamental frequency should be excluded against the limit line in the operating frquency band.

6.The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

= P(W) - [43 + 10log(P)] (dB) = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

For Band 7: P(W)- [43 + 10log(P)] (dB) =-25dBm

		LTE									
LTE BW	1.4M	3M	5M	10M	15M	20M					
Span	Auto	Auto	Auto	Auto	Auto	Auto					
RBW	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz	1000kHz					
VBW	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz	3000kHz					
Detector	PK	PK	PK	PK	PK	PK					
Trace	Max	Max	Max	Max	Max	Max					

8.1.4 TEST RESULTS Note: Test chart See Appendix II

## 9. RADIATED SPURIOUS EMISSION

## 9.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

## 9.1.1 MEASUREMENT METHOD

The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least  $43 + 10 \log (P) dB$ . For Band 7 The power of any emission outside of the authorized operating frequency ranges must attenuated below the transmitter power (P) by a factor of at least  $55 + 10 \log (P) dB$ . The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

## 9.1.2 TEST SETUP

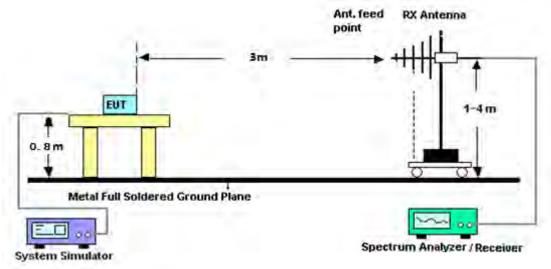
The procedure of radiated spurious emissions is as follows:

a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, RSE=Rx( dBuV )+CL( dB )+SA( dB )+Gain( dBi )-107( dBuV to dBm )The SA is calibrated using following setup.

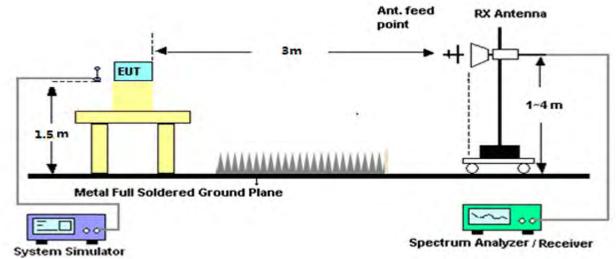
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.

Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.

The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below: Power=PMea+ARpl For radiated test from 30MHz to 1GHz



## For radiated test from above 1GHz



## 9.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 7 and ANSI C63.26 2015 Section 5.5.

2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.

3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.

4. The table was rotated 360 degrees to determine the position of the highest spurious emission.

5. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations

6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.

7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.

8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.

9. Taking the record of output power at antenna port.

10. Repeat step 7 to step 8 for another polarization.

11. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

```
The limit line is derived from 43 + 10\log(P)dB below the transmitter power P(Watts) = P(W)- [43 + 10log(P)] (dB)
```

```
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm
```

```
For Band 7:
The limit line is derived from 55 + 10log(P)dB below the transmitter power P(Watts)
= [30 + 10log(P)] (dBm) - [55 + 10log(P)] (dB)
= -25dBm
PMea=S.G Level+ Ant-Cable loss; Margin=PMea-Limit.
```

9.1.4 TEST RESULTS

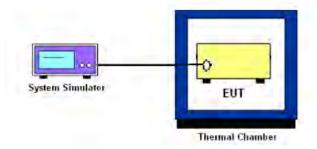
Note: Test chart See Appendix II

## 10. FREQUENCY STABILITY 10.1 DESCRIPTION OF FREQUENCY STABILITY MEASUREMENT

## 10.1.1 MEASUREMENT METHOD

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

10.1.2 TEST SETUP



## 10.1.3 TEST PROCEDURES FOR TEMPERATURE VARIATION

1. The EUT was set up in the thermal chamber and connected with the system simulator.

With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
 With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

10.1.4 TEST PROCEDURES FOR VOLTAGE VARIATION

1. The testing follows FCC KDB 971168 D01v01r03 Section 9.

2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simlator.

3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.

4. The variation in frequency was measured for the worst case.

10.1.5 TEST RESULTS

Note: Test chart See Appendix II

## **APPENDIX I-TEST DATA**

Conducted output power

Band Band2	Bandwidth (MHz) 1.4	UL Channel 18607	RB Size	RB Position #0	Modulation QPSK	Power (dBm) 24.46	Gain (dB) 0.41	EIRP (dBm) 24.87	EIRP Limit (dBm) 33.01	Verdict PASS
Band2	1.4	18607	1	#Mid	QPSK	24.53	0.41	24.94	33.01	PASS
Band2	1.4	18607	1	#Max	QPSK	24.51	0.41	24.92	33.01	PASS
Band2	1.4	18607	3	#0	QPSK	24.52	0.41	24.93	33.01	PASS
Band2	1.4	18607	3	#Mid	QPSK	24.55	0.41	24.96	33.01	PASS
Band2	1.4	18607	3	#Max	QPSK	24.55	0.41	24.96	33.01	PASS
Band2	1.4 1.4	18607	6	#0 #0	QPSK 16QAM	23.55 23.81	0.41	23.96 24.22	33.01	PASS PASS
Band2 Band2	1.4	18607 18607	1	#0 #Mid	16QAM 16QAM	23.81	0.41	24.22	33.01 33.01	PASS
Band2	1.4	18607	1	#Max	16QAM	23.80	0.41	24.21	33.01	PASS
Band2	1.4	18607	3	#0	16QAM	23.79	0.41	24.20	33.01	PASS
Band2	1.4	18607	3	#Mid	16QAM	23.79	0.41	24.20	33.01	PASS
Band2	1.4	18607	3	#Max	16QAM	23.79	0.41	24.20	33.01	PASS
Band2	1.4	18607	6	#0	16QAM	22.73	0.41	23.14	33.01	PASS
Band2 Band2	1.4	18900 18900	1	#0 #Mid	QPSK QPSK	24.55 24.59	0.41	24.96 25.00	<u>33.01</u> 33.01	PASS PASS
Band2 Band2	1.4	18900	1	#Max	QPSK QPSK	24.59	0.41	24.97	33.01	PASS
Band2	1.4	18900	3	#0	QPSK	24.53	0.41	24.94	33.01	PASS
Band2	1.4	18900	3	#Mid	QPSK	24.52	0.41	24.93	33.01	PASS
Band2	1.4	18900	3	#Max	QPSK	24.51	0.41	24.92	33.01	PASS
Band2	1.4	18900	6	#0	QPSK	23.60	0.41	24.01	33.01	PASS
Band2	1.4	18900	1	#0	16QAM	23.50	0.41	23.91	33.01	PASS
Band2	1.4	18900	1	#Mid	16QAM	23.53	0.41	23.94	33.01	PASS
Band2 Band2	1.4 1.4	18900 18900	3	#Max #0	16QAM 16QAM	23.51 23.71	0.41	23.92 24.12	33.01 33.01	PASS PASS
Band2	1.4	18900	3	#Mid	16QAM	23.68	0.41	24.09	33.01	PASS
Band2	1.4	18900	3	#Max	16QAM	23.73	0.41	24.14	33.01	PASS
Band2	1.4	18900	6	#0	16QAM	22.70	0.41	23.11	33.01	PASS
Band2	1.4	19193	1	#0	QPSK	24.40	0.41	24.81	33.01	PASS
Band2	1.4	19193	1	#Mid	QPSK	24.40	0.41	24.81	33.01	PASS
Band2 Band2	1.4 1.4	19193 19193	1	#Max #0	QPSK QPSK	24.14 24.51	0.41	24.55 24.92	33.01 33.01	PASS PASS
Band2 Band2	1.4	19193	3	#0 #Mid	QPSK	24.51	0.41	24.92	33.01	PASS
Band2	1.4	19193	3	#Max	QPSK	24.52	0.41	24.93	33.01	PASS
Band2	1.4	19193	6	#0	QPSK	23.54	0.41	23.95	33.01	PASS
Band2	1.4	19193	1	#0	16QAM	23.27	0.41	23.68	33.01	PASS
Band2	1.4	19193	1	#Mid	16QAM	23.35	0.41	23.76	33.01	PASS
Band2	1.4	19193	1	#Max	16QAM	23.28	0.41	23.69	33.01	PASS
Band2	1.4	19193	3	#0 #N/id	16QAM	23.77	0.41	24.18	33.01	PASS
Band2 Band2	1.4 1.4	19193 19193	3	#Mid #Max	16QAM 16QAM	23.76 23.77	0.41	24.17 24.18	33.01 33.01	PASS PASS
Band2	1.4	19193	6	#0	16QAM	22.68	0.41	23.09	33.01	PASS
Band2	3	18615	1	#0	QPSK	24.54	0.41	24.95	33.01	PASS
Band2	3	18615	1	#Mid	QPSK	24.61	0.41	25.02	33.01	PASS
Band2	3	18615	1	#Max	QPSK	24.65	0.41	25.06	33.01	PASS
Band2	3	18615	8	#0	QPSK	23.55	0.41	23.96	33.01	PASS
Band2	3	18615	8	#Mid	QPSK	23.58	0.41	23.99	33.01	PASS
Band2 Band2	3	18615 18615	15	#Max #0	QPSK QPSK	23.58 23.58	0.41	23.99 23.99	33.01 33.01	PASS PASS
Band2	3	18615	1	#0	16QAM	23.42	0.41	23.83	33.01	PASS
Band2	3	18615	1	#Mid	16QAM	23.38	0.41	23.79	33.01	PASS
Band2	3	18615	1	#Max	16QAM	23.42	0.41	23.83	33.01	PASS
Band2	3	18615	8	#0	16QAM	22.59	0.41	23.00	33.01	PASS
Band2	3	18615	8	#Mid	16QAM	22.58	0.41	22.99	33.01	PASS
Band2	3	18615	8	#Max	16QAM	22.57	0.41	22.98	33.01	PASS
Band2 Band2	3	18615 18900	15	#0 #0	16QAM QPSK	22.62 24.23	0.41	23.03 24.64	33.01 33.01	PASS PASS
Band2 Band2	3	18900	1	#0 #Mid	QPSK QPSK	24.23	0.41	24.64	33.01	PASS
Band2	3	18900	1	#Max	QPSK	24.10	0.41	24.51	33.01	PASS
Band2	3	18900	8	#0	QPSK	23.47	0.41	23.88	33.01	PASS
Band2	3	18900	8	#Mid	QPSK	23.50	0.41	23.91	33.01	PASS
Band2	3	18900	8	#Max	QPSK	23.49	0.41	23.90	33.01	PASS
Band2	3	18900	15	#0	QPSK 160AM	23.49	0.41	23.90	33.01	PASS
Band2 Band2	3	18900 18900	1	#0 #Mid	16QAM 16QAM	23.45 23.46	0.41	23.86 23.87	33.01 33.01	PASS PASS
Band2 Band2	3	18900	1	#Max	16QAM 16QAM	23.40	0.41	23.90	33.01	PASS
Band2	3	18900	8	#0	16QAM	22.54	0.41	22.95	33.01	PASS
Band2	3	18900	8	#Mid	16QAM	22.56	0.41	22.97	33.01	PASS
Band2	3	18900	8	#Max	16QAM	22.54	0.41	22.95	33.01	PASS
Band2	3	18900	15	#0	16QAM	22.54	0.41	22.95	33.01	PASS
Band2	3	19185	1	#0	QPSK	23.96	0.41	24.37	33.01	PASS
Band2	3	19185	1	#Mid #Max	QPSK OPSK	23.96	0.41	24.37	33.01	PASS
Band2 Band2	3	19185 19185	1 8	#Max #0	QPSK QPSK	23.93 23.46	0.41	24.34 23.87	33.01 33.01	PASS PASS
Band2	3	19185	8	#0 #Mid	QPSK QPSK	23.40	0.41	23.92	33.01	PASS
Band2	3	19185	8	#Max	QPSK	23.47	0.41	23.88	33.01	PASS
Band2	3	19185	15	#0	QPSK	23.48	0.41	23.89	33.01	PASS
Band2	3	19185	1	#0	16QAM	23.25	0.41	23.66	33.01	PASS
Band2	3	19185	1	#Mid	16QAM	23.29	0.41	23.70	33.01	PASS
Band2	3	19185	1	#Max	16QAM	23.26	0.41	23.67	33.01	PASS
Band2	3	19185	8	#0 #Mid	16QAM 16QAM	22.57 22.58	0.41	22.98 22.99	33.01 33.01	PASS PASS
Band?		10185				22.00				
Band2 Band2	3	19185 19185	8	#Max	16QAM	22.54	0.41	22.95	33.01	PASS
Band2 Band2 Band2	3					22.54 22.48	0.41	22.95 22.89	33.01 33.01	PASS PASS
Band2 Band2 Band2	3 3 3 5	19185 19185 18625	8 15 1	#Max #0 #0	16QAM 16QAM QPSK	22.48 24.40	0.41 0.41	22.89 24.81	33.01 33.01	PASS PASS
Band2 Band2	3 3 3	19185 19185	8 15	#Max #0	16QAM 16QAM	22.48	0.41	22.89	33.01	PASS

	5	18625	12	#0	QPSK	23.60	0.41	24.01	33.01	PASS
Band2	5	18625	12	#Mid	QPSK	23.60	0.41	24.01	33.01	PASS
Band2	5	18625	12	#Max	QPSK	23.62	0.41	24.03	33.01	PASS
Band2	5	18625	25	#0	QPSK 1004M	23.60	0.41	24.01	33.01	PASS
Band2 Band2	5 5	18625 18625	1	#0 #Mid	16QAM 16QAM	23.57 23.57	0.41	23.98 23.98	33.01 33.01	PASS PASS
Band2	5	18625	1	#Max	16QAM 16QAM	23.63	0.41	23.98	33.01	PASS
Band2	5	18625	12	#0	16QAM	22.57	0.41	22.98	33.01	PASS
Band2	5	18625	12	#Mid	16QAM	22.54	0.41	22.95	33.01	PASS
Band2	5	18625	12	#Max	16QAM	22.61	0.41	23.02	33.01	PASS
Band2	5	18625	25	#0	16QAM	22.58	0.41	22.99	33.01	PASS
Band2	5	18900	1	#0	QPSK	24.56	0.41	24.97	33.01	PASS
Band2	5	18900	1	#Mid	QPSK	24.57	0.41	24.98	33.01	PASS
Band2 Band2	5 5	18900 18900	1 12	#Max #0	QPSK QPSK	24.64 23.56	0.41	25.05 23.97	33.01 33.01	PASS PASS
Band2	5	18900	12	#0 #Mid	QPSK	23.50	0.41	23.97	33.01	PASS
Band2	5	18900	12	#Max	QPSK	23.58	0.41	23.99	33.01	PASS
Band2	5	18900	25	#0	QPSK	23.55	0.41	23.96	33.01	PASS
Band2	5	18900	1	#0	16QAM	23.43	0.41	23.84	33.01	PASS
Band2	5	18900	1	#Mid	16QAM	23.44	0.41	23.85	33.01	PASS
Band2	5	18900	1	#Max	16QAM	23.45	0.41	23.86	33.01	PASS
Band2	5	18900	12	#0	16QAM	22.62	0.41	23.03	33.01	PASS
Band2 Band2	5 5	18900 18900	12 12	#Mid #Max	16QAM 16QAM	22.57 22.59	0.41	22.98 23.00	33.01 33.01	PASS PASS
Band2	5	18900	25	#0	16QAM 16QAM	22.59	0.41	22.97	33.01	PASS
Band2	5	19175	1	#0	QPSK	24.19	0.41	24.60	33.01	PASS
Band2	5	19175	1	#Mid	QPSK	24.12	0.41	24.53	33.01	PASS
Band2	5	19175	1	#Max	QPSK	24.18	0.41	24.59	33.01	PASS
Band2	5	19175	12	#0	QPSK	23.59	0.41	24.00	33.01	PASS
Band2	5	19175	12	#Mid	QPSK	23.56	0.41	23.97	33.01	PASS
Band2	5	19175	12	#Max	QPSK	23.53	0.41	23.94	33.01	PASS
Band2 Band2	5 5	19175 19175	25 1	#0 #0	QPSK 16QAM	23.57 23.54	0.41	23.98 23.95	33.01 33.01	PASS PASS
Band2 Band2	5	19175	1	#0 #Mid	16QAM 16QAM	23.54 23.48	0.41	23.95	33.01	PASS
Band2	5	19175	1	#Max	16QAM	23.51	0.41	23.92	33.01	PASS
Band2	5	19175	12	#0	16QAM	22.59	0.41	23.00	33.01	PASS
Band2	5	19175	12	#Mid	16QAM	22.52	0.41	22.93	33.01	PASS
Band2	5	19175	12	#Max	16QAM	22.48	0.41	22.89	33.01	PASS
Band2	5	19175	25	#0	16QAM	22.53	0.41	22.94	33.01	PASS
Band2	10	18650	1	#0	QPSK	24.57	0.41	24.98	33.01	PASS PASS
Band2 Band2	10 10	18650 18650	1	#Mid #Max	QPSK QPSK	24.41 24.27	0.41	24.82 24.68	<u>33.01</u> 33.01	PASS
Band2	10	18650	25	#0	QPSK	23.55	0.41	23.96	33.01	PASS
Band2	10	18650	25	#Mid	QPSK	23.65	0.41	24.06	33.01	PASS
Band2	10	18650	25	#Max	QPSK	23.55	0.41	23.96	33.01	PASS
Band2	10	18650	50	#0	QPSK	23.56	0.41	23.97	33.01	PASS
Band2	10	18650	1	#0	16QAM	23.50	0.41	23.91	33.01	PASS
Band2	10	18650	1	#Mid	16QAM	23.48	0.41	23.89	33.01	PASS
Band2 Band2	10 10	18650 18650	1 25	#Max #0	16QAM 16QAM	23.60 22.57	0.41	24.01 22.98	33.01 33.01	PASS PASS
Band2	10	18650	25	#0 #Mid	16QAM	22.65	0.41	23.06	33.01	PASS
Band2	10	18650	25	#Max	16QAM	22.58	0.41	22.99	33.01	PASS
Band2	10	18650	50	#0	16QAM	22.58	0.41	22.99	33.01	PASS
Band2	10	18900	1	#0	QPSK	23.99	0.41	24.40	33.01	PASS
Band2	10	18900	1	#Mid	QPSK	24.07	0.41	24.48	33.01	PASS
Band2	10	18900	1	#Max	QPSK	24.06	0.41	24.47	33.01	PASS
Band2	10	18900	25	#0	QPSK	23.49	0.41	23.90	33.01	PASS
Band2 Band2	10 10	18900 18900	25 25	#Mid #Max	QPSK QPSK	23.52 23.43	0.41	23.93 23.84	33.01 33.01	PASS PASS
Band2	10	18900	50	#0	QPSK	23.43	0.41	23.90	33.01	PASS
Band2	10	18900	1	#0	16QAM	23.22	0.41	23.63	33.01	PASS
Band2	10	18900	1	#Mid	16QAM	23.27	0.41	23.68	33.01	PASS
Band2	10	18900	1	#Max	16QAM	23.33	0.41	23.74	33.01	PASS
Band2	10	18900	25	#0	16QAM	22.49	0.41	22.90	33.01	PASS
Band2	10	18900	25	#Mid	16QAM	22.56	0.41	22.97	33.01	PASS
Band2 Band2	<u>10</u> 10	18900 18900	25 50	#Max #0	16QAM 16QAM	22.46 22.50	0.41	22.87 22.91	<u>33.01</u> 33.01	PASS PASS
Band2 Band2	10	19150	50	#0 #0	QPSK	22.50	0.41	22.91	33.01	PASS
Band2	10	19150	1	#Mid	QPSK	24.17	0.41	24.57	33.01	PASS
Band2	10	19150	1	#Max	QPSK	24.10	0.41	24.51	33.01	PASS
Band2	10	19150	25	#0	QPSK	23.62	0.41	24.03	33.01	PASS
Band2	10	19150	25	#Mid	QPSK	23.58	0.41	23.99	33.01	PASS
Band2	10	19150	25	#Max	QPSK	23.37	0.41	23.78	33.01	PASS
Band2	10	19150	50	#0	QPSK 160AM	23.54	0.41	23.95	33.01	PASS
Band2 Band2	10 10	19150 19150	1	#0 #Mid	16QAM 16QAM	23.05 23.00	0.41	23.46 23.41	33.01 33.01	PASS PASS
Band2	10	19150	1	#Max	16QAM 16QAM	23.00	0.41	23.41	33.01	PASS
Band2	10	19150	25	#0	16QAM	22.63	0.41	23.04	33.01	PASS
Band2	10	19150	25	#Mid	16QAM	22.58	0.41	22.99	33.01	PASS
Band2	10	19150	25	#Max	16QAM	22.39	0.41	22.80	33.01	PASS
Band2	10	19150	50	#0	16QAM	22.53	0.41	22.94	33.01	PASS
Band2	15	18675	1	#0	QPSK	24.09	0.41	24.50	33.01	PASS
Band2	15	18675	1	#Mid	QPSK	24.23	0.41	24.64	33.01	PASS
Band2 Band2	15	18675	1 36	#Max	QPSK OPSK	24.09	0.41	24.50	33.01	PASS
Band2 Band2	15 15	18675 18675	36	#0 #Mid	QPSK QPSK	23.50 23.58	0.41	23.91 23.99	33.01 33.01	PASS PASS
Band2 Band2	15	18675	36	#Max	QPSK	23.58	0.41	23.99	33.01	PASS
Band2	15	18675	75	#1012	QPSK	23.55	0.41	23.97	33.01	PASS
Band2	15	18675	1	#0	16QAM	23.43	0.41	23.84	33.01	PASS
	15	18675	1	#Mid	16QAM	23.58	0.41	23.99	33.01	PASS
Band2	15	18675	1	#Max	16QAM	23.49	0.41	23.90	33.01	PASS
Band2 Band2	15	18675	36	#0	16QAM	22.55	0.41	22.96	33.01	PASS PASS
Band2 Band2 Band2 Band2 Band2			36 36	#0 #Mid	16QAM 16QAM	22.55 22.65	0.41	22.96 23.06	<u>33.01</u> 33.01	

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	#Mid         16QAM         22.72         0.41         23.13           #Max         16QAM         22.48         0.41         22.89	#Mid         16QAM         22.72         0.41         23.13         33.01           #Max         16QAM         22.48         0.41         22.89         33.01

Banck         1.4         1987         1         AD         OPSK         23.50         0.24         23.74         30           Barck         1.4         1987         1         AMA         OPSK         23.44         0.24         23.05         30           Barck         1.4         1987         1         AMA         OPSK         23.44         0.24         23.05         30           Barck         1.4         1987         3         BMMA         OPSK         23.45         0.24         23.45         30           Barck         1.4         1987         6         ATO         OPSK         23.42         0.24         22.68         30           Barck         1.4         1987         1         ATO         OPSK         23.42         0.24         22.68         30           Barck         1.4         1987         3         AMA         160AM         22.07         0.24         22.93         30           Barck         1.4         1987         3         AMA         160AM         22.67         0.24         22.93         30           Barck         1.4         1987         3         AMA         160AM         22.67	0 PASS 0 PASS 0 PASS					DD De stitten			Development of the (MILL-)	David
Banda         1.4         1987         1         #Max         OPSK         23.3         0.24         23.62         30           Banda         1.4         1987         1         #Max         OPSK         23.38         0.24         23.62         30           Banda         1.4         1987         3         #D         OPSK         23.44         0.24         23.62         30           Banda         1.4         1987         6         #D         OPSK         22.42         0.24         22.48         30           Banda         1.4         1987         1         #Max         OPSK         22.21         0.24         22.48         30           Banda         1.4         1987         3         #Max         160,AM         22.21         0.24         22.83         30           Banda         1.4         1987         3         #Max         160,AM         22.67         0.24         22.93         30           Banda         1.4         1987         3         #Max         060AM         22.67         0.24         22.93         30           Banda         1.4         1987         3         #Max         062AM         22.67	0 PASS 0 PASS		Gain (dB)	Power (dBm)	Modulation	RB Position	RB Size	UL Channel	Bandwidth (MHz)	Band Bond4
Banda         1.4.         1987         1.         #Max         OPSK         23.84         0.24         23.28         30           Banda         1.4.         1987         3.         #Mu         OPSK         23.44         0.24         23.68         30           Banda         1.4.         1987         6.         #Mu         OPSK         22.4         0.24         22.8         30           Banda         1.4.         1987         1.         #D         160AM         22.21         0.24         22.4         30           Banda         1.4.         1987         1.         #Mu         160AM         22.21         0.24         22.4         30           Banda         1.4.         1987         1.         #Mu         160AM         22.60         0.24         22.93         30           Banda         1.4.         1987         3.         #Mu         160AM         22.67         0.24         22.83         30           Banda         1.4.         20175         1.         #Mu         160AM         22.67         0.24         22.83         30           Banda         1.4.         20175         1.         #Mu         160AM	0 PASS						1			
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Banck         1.4         1967         1         #0         160AM         22.21         0.24         22.45         30           Banck         1.4         1957         1         #Mda         160AM         22.26         0.24         22.45         30           Banck         1.4         1957         1         #Mda         160AM         22.07         0.24         22.14         30           Banck         1.4         1967         3         #Mda         160AM         22.07         0.24         22.14         30           Banck         1.4         1967         6         #0         160AM         22.67         0.24         22.14         30           Banck         1.4         20175         1         #0         OPSK         23.74         0.24         23.38         30           Banck         1.4         20175         1         #Mda         OPSK         23.66         0.24         23.11         30           Banck         1.4         20175         3         #Mda         OPSK         23.86         0.24         24.10         30           Banck         1.4         20175         3         #Mda         OPSK         23										
Bandel         1.4         19967         1         mMid         160AM         22.80         0.24         22.90         30           Band4         1.4         19967         3         #0         160AM         22.11         0.24         22.74         30           Band4         1.4         19957         3         #0.1         160AM         22.11         0.24         22.95         30           Band4         1.4         19957         6         #0         160AM         22.16         0.24         22.98         30           Band4         1.4         20175         1         #0         0         PESK         23.84         0.24         22.98         30           Band4         1.4         20175         3         #0.1         OPSK         23.87         0.24         22.11         30           Band4         1.4         20175         3         #0.1         OPSK         23.87         0.24         22.11         30           Band4         1.4         20175         3         #0.1         OPSK         22.89         0.24         22.11         30           Band4         1.4         20175         3         #0.1										
Band         1.4         19957         3 $m0$ 190AM         22.11 $0.24$ 22.96         30           Band4         1.4         19957         3 $mMax$ 160AM         22.67 $0.24$ 22.98         30           Band4         1.4         19957         6 $m0$ $160AM$ 22.67 $0.24$ 22.86         30           Band4         1.4         20175         1 $m0$ $O^{PSK$ 23.74 $0.24$ 23.98         30           Band4         1.4         20175         1 $m0$ $O^{PSK$ 23.67 $0.24$ 23.91         30           Band4         1.4         20175         3 $mMax$ $O^{PSK$ 23.87 $0.24$ 24.11         30           Band4         1.4         20175         1 $mMax$ $O^{PSK$ 23.86 $0.24$ 23.12         30           Band4         1.4         20175         1 $mMax$ $0.02K$ 22.86         30         23.83         30           Band4         1.4         20175         3         <										
Banck         1.4         19857         3         #Mail         160AM         22.67         0.24         22.93         30           Banck         1.4         19857         6         #0         160AM         21.62         0.24         22.93         30           Banck         1.4         20175         1         #0         OPSK         23.74         0.24         22.98         30           Banck         1.4         20175         1         #0         OPSK         23.77         0.24         22.41         30           Banck         1.4         20175         3         #0         OPSK         23.87         0.24         24.11         30           Banck         1.4         20175         3         #0.40         OPSK         23.87         0.24         24.11         30           Banck         1.4         20175         1         #0.41         160AM         22.68         0.24         24.11         30           Banck         1.4         20175         1         #0.41         160AM         22.69         0.24         22.81         30           Banck         1.4         20175         3         #0.41         160AM										
			-							
Band4         1.4         20175         1         #0         OPSK         23.74         0.24         23.98         30           Band4         1.4         20175         1         #Max         OPSK         23.27         0.24         23.33         30           Band4         1.4         20175         3         #Md         OPSK         23.37         0.24         24.11         30           Band4         1.4         20175         3         #Md         OPSK         23.87         0.24         24.11         30           Band4         1.4         20175         1         #Md         OPSK         23.87         0.24         24.10         30           Band4         1.4         20175         1         #Mdx         1160AM         22.89         0.24         22.87         30           Band4         1.4         20175         3         #Mdx         1160AM         22.63         0.24         22.31         30           Band4         1.4         20175         3         #Mdx         1160AM         23.00         0.24         22.30         30           Band4         1.4         20363         1         #Mdx         1160AM										
Band4         1.4         20175         1         #Mid         OPSK         23.69         0.24         23.93         30           Band4         1.4         20175         3         #00         OPSK         23.87         0.24         23.51         30           Band4         1.4         20175         3         #Mid         OPSK         23.87         0.24         24.11         30           Band4         1.4         20175         6         #0         OPSK         23.86         0.24         23.12         30           Band4         1.4         20175         1         #0         OPSK         22.86         0.24         22.83         30           Band4         1.4         20175         1         #Mid         160AM         22.67         0.24         22.83         30           Band4         1.4         20175         3         #Mid         160AM         22.07         0.24         22.31         30           Band4         1.4         20175         6         #0         160AM         22.06         0.24         22.37         30           Band4         1.4         20393         1         #Mid         OPSK         2			-							
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Band4         1.4         20175         3         #Mid         QPSK         23.87         0.24         24.11         30           Band4         1.4         20175         6         #0         QPSK         23.88         0.24         24.10         30           Band4         1.4         20175         1         #0         160AM         22.52         0.24         22.86         30           Band4         1.4         20175         1         #Mid         160AM         22.59         0.24         22.87         30           Band4         1.4         20175         3         #Mid         160AM         23.07         0.24         23.34         30           Band4         1.4         20175         3         #Mid         160AM         23.09         0.24         23.34         30           Band4         1.4         20175         6         #0         160AM         22.40         0.24         23.34         30         16         160AM         23.35         0.24         22.66         30           Band4         1.4         20393         3         #Mid         OPSK         23.57         0.24         22.40         24.402         30			-							
Band4         1.4         20175         6         #0         QPSK         22.88         0.24         23.12         30           Band4         1.4         20175         1         #Mkd         160AM         22.57         0.24         22.86         30           Band4         1.4         20175         1         #Mkd         160AM         22.63         0.24         22.87         30           Band4         1.4         20175         3         #Mkd         160AM         23.01         0.24         23.34         30           Band4         1.4         20175         3         #Mkd         160AM         23.06         0.24         23.34         30           Band4         1.4         20175         6         #D         160AM         22.06         0.24         23.01         30           Band4         1.4         20393         1         #Mkd         CPSK         23.10         0.24         23.67         0.30         30           Band4         1.4         20393         1         #Mkd         CPSK         24.00         0.24         24.05         30           Band4         1.4         20393         1         #Mkd										
Band4         1.4         20175         1         #00         160AM         22.62         0.24         22.86         30           Band4         1.4         20175         1         #Mad         160AM         22.63         0.24         22.87         30           Band4         1.4         20175         3         #Mad         160AM         22.07         0.24         22.31         30           Band4         1.4         20175         3         #Max         160AM         22.06         0.24         22.34         30           Band4         1.4         20175         6         #0         160AM         22.06         0.24         22.86         30           Band4         1.4         20393         1         #Max         0PSK         22.53         0.24         22.86         30           Band4         1.4         20393         1         #Max         0PSK         22.70         30         0           Band4         1.4         20393         3         #Max         0PSK         22.01         0.24         24.24         30           Band4         1.4         20393         3         #Max         0PSK         22.01 <t< td=""><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			-							
Band4         1.4         20175         1         #Mdx         160AM         22.63         0.24         22.83         30           Band4         1.4         20175         3         #0         160AM         23.07         0.24         22.87         30           Band4         1.4         20175         3         #Md         160AM         23.01         0.24         23.34         30           Band4         1.4         20175         3         #Md         160AM         22.04         0.24         23.30         30           Band4         1.4         20333         1         #Max         160AM         22.44         0.24         22.88         30           Band4         1.4         20393         1         #Md         QPSK         23.72         0.24         24.02         30           Band4         1.4         20393         3         #Md         QPSK         23.00         0.24         24.25         30           Band4         1.4         20393         3         #Mdx         QPSK         24.00         0.24         24.25         30           Band4         1.4         20393         3         #Mdx         QPSK <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
Band4         14         20175         1         #Max         160AM         22.63         0.24         22.87         30           Band4         1.4         20175         3         #Md         160AM         23.07         0.24         23.31         30           Band4         1.4         20175         3         #Mdx         160AM         23.06         0.24         23.30         30           Band4         1.4         20175         6         #0         160AM         22.06         0.24         22.28         30           Band4         1.4         20393         1         #Mdx         QPSK         23.51         0.24         22.96         30           Band4         1.4         20393         1         #Mdx         QPSK         23.78         0.24         24.02         30           Band4         1.4         20393         3         #Mdx         QPSK         24.01         0.24         24.25         30           Band4         1.4         20393         1         #Mdx         QPSK         24.01         0.24         24.22         30         0           Band4         1.4         20393         1         #Mdx										
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Band4         1.4         20393         3         #Mid         QPSK         24.01         0.24         24.25         30           Band4         1.4         20393         6         #0         QPSK         24.02         0.24         24.26         30           Band4         1.4         20393         1         #0         160AM         22.46         0.24         22.70         30           Band4         1.4         20393         1         #Mid         160AM         22.47         0.24         22.72         30           Band4         1.4         20393         1         #Mid         160AM         22.47         0.24         22.71         30           Band4         1.4         20393         3         #Mid         160AM         23.17         0.24         23.41         30           Band4         1.4         20393         6         #0         160AM         22.20         0.24         23.43         30           Band4         3         19965         1         #Mid         QPSK         22.20         0.24         23.03         30           Band4         3         19965         1         #Mid         QPSK         22										
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Band4         1.4         20393         1         #0         16QAM         22.46         0.24         22.70         30           Band4         1.4         20393         1         #Mid         16QAM         22.47         0.24         22.71         30           Band4         1.4         20393         3         #0         16QAM         22.47         0.24         22.71         30           Band4         1.4         20393         3         #Mid         16QAM         23.15         0.24         22.31         30           Band4         1.4         20393         3         #Mid         16QAM         23.17         0.24         23.43         30           Band4         1.4         20393         6         #0         16QAM         22.00         0.24         22.44         30           Band4         3         19965         1         #Mid         QPSK         22.96         0.24         23.03         30           Band4         3         19965         8         #Mid         QPSK         22.40         0.24         22.63         30           Band4         3         19965         8         #Mid         QPSK         22.										
Band4         1.4         20393         1         #Mid         16QAM         22.48         0.24         22.72         30           Band4         1.4         20393         3         #0         16QAM         22.47         0.24         22.71         30           Band4         1.4         20393         3         #0         16QAM         23.15         0.24         23.39         30           Band4         1.4         20393         3         #Mid         16QAM         23.17         0.24         23.41         30           Band4         1.4         20393         6         #0         16QAM         23.17         0.24         23.43         30           Band4         3         19965         1         #Mid         QPSK         22.20         0.24         23.50         30           Band4         3         19965         1         #Mid         QPSK         22.40         0.24         22.64         30           Band4         3         19965         8         #Mod         QPSK         22.39         0.24         22.64         30           Band4         3         19965         1         #Midx         QPSK         22.40			-							
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Band4         1.4         20393         3         #Mid         16QAM         23.17         0.24         23.41         30           Band4         1.4         20393         6         #0         16QAM         22.19         0.24         23.43         30           Band4         3         19965         1         #0         OPSK         22.20         0.24         22.44         30           Band4         3         19965         1         #Mid         OPSK         22.96         0.24         23.20         30           Band4         3         19965         1         #Mid         OPSK         22.96         0.24         22.64         30           Band4         3         19965         8         #0         OPSK         22.39         0.24         22.63         30           Band4         3         19965         15         #0         OPSK         22.36         0.24         22.65         30           Band4         3         19965         1         #0         16QAM         22.16         0.24         22.32         30           Band4         3         19965         1         #Mid         16QAM         22.16										
Band4         1.4         20393         3         #Max         16QAM         23.19         0.24         23.43         30           Band4         1.4         20393         6         #0         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Md         QPSK         22.96         0.24         23.50         30           Band4         3         19965         1         #Mdx         QPSK         22.79         0.24         23.03         30           Band4         3         19965         8         #Max         QPSK         22.79         0.24         22.64         30           Band4         3         19965         8         #Max         QPSK         22.39         0.24         22.63         30           Band4         3         19965         15         #0         QPSK         22.36         0.24         22.65         30           Band4         3         19965         1         #Mia         16QAM         22.15         0.24         22.39         30           Band4         3         19965         1         #Mia         16QAM         21.41			-							
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $										
Band4         3         19965         1         #Mid         OPSK         22.96         0.24         23.20         30           Band4         3         19965         8         #0         OPSK         22.79         0.24         22.64         30           Band4         3         19965         8         #Mid         OPSK         22.39         0.24         22.64         30           Band4         3         19965         8         #Max         QPSK         22.36         0.24         22.63         30           Band4         3         19965         1         #Max         QPSK         22.36         0.24         22.65         30           Band4         3         19965         1         #Mo         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Mid         16QAM         22.17         0.24         22.39         30           Band4         3         19965         8         #Mo         16QAM         21.47         0.24         21.70         30           Band4         3         19965         8         #Max         16QAM         21.47										
Band4         3         19965         1         #Max         QPSK         22.79         0.24         23.03         30           Band4         3         19965         8         #0         QPSK         22.40         0.24         22.63         30           Band4         3         19965         8         #Muid         QPSK         22.39         0.24         22.63         30           Band4         3         19965         15         #0         QPSK         22.36         0.24         22.60         30           Band4         3         19965         1         #0         QPSK         22.41         0.24         22.44         30           Band4         3         19965         1         #Muid         16QAM         22.15         0.24         22.44         30           Band4         3         19965         1         #Muax         16QAM         22.15         0.24         22.39         30           Band4         3         19965         8         #Muid         16QAM         21.46         0.24         21.71         30           Band4         3         19965         8         #Muax         16QAM         21.46										
Band4         3         19965         8         #0         QPSK         22.40         0.24         22.64         30           Band4         3         19965         8         #Mid         QPSK         22.39         0.24         22.60         30           Band4         3         19965         15         #0         QPSK         22.36         0.24         22.65         30           Band4         3         19965         1         #0         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Mid         16QAM         22.00         0.24         22.44         30           Band4         3         19965         1         #Mid         16QAM         22.08         0.24         22.32         30           Band4         3         19965         8         #0         16QAM         21.47         0.24         21.70         30           Band4         3         19965         8         #Mid         16QAM         21.41         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38										
Band4         3         19965         8         #Mid         QPSK         22.39         0.24         22.63         30           Band4         3         19965         8         #Max         QPSK         22.36         0.24         22.60         30           Band4         3         19965         15         #0         QPSK         22.21         0.24         22.60         30           Band4         3         19965         1         #0         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Mid         16QAM         22.08         0.24         22.32         30           Band4         3         19965         8         #Mid         16QAM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.46         0.24         21.65         30           Band4         3         19965         15         #0         16QAM         21.48         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38			-				-			
Band4         3         19965         8         #Max         QPSK         22.36         0.24         22.60         30           Band4         3         19965         15         #0         QPSK         22.41         0.24         22.65         30           Band4         3         19965         1         #0         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Max         16QAM         22.15         0.24         22.32         30           Band4         3         19965         1         #Max         16QAM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.46         0.24         21.70         30           Band4         3         19965         8         #Mid         16QAM         21.46         0.24         21.70         30           Band4         3         19965         15         #0         16QAM         21.48         0.24         21.62         30           Band4         3         20175         1         #Max         16QAM         21.38										
Band4         3         19965         15         #0         QPSK         22.41         0.24         22.65         30           Band4         3         19965         1         #0         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Mid         16QAM         22.15         0.24         22.39         30           Band4         3         19965         1         #Max         16QAM         22.08         0.24         22.32         30           Band4         3         19965         8         #0         16QAM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.47         0.24         21.70         30           Band4         3         19965         15         #0         16QAM         21.41         0.24         21.62         30           Band4         3         20175         1         #Mid         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.42										
Band4         3         19965         1         #0         16QAM         22.20         0.24         22.44         30           Band4         3         19965         1         #Mid         16QAM         22.15         0.24         22.39         30           Band4         3         19965         1         #Max         16QAM         22.15         0.24         22.32         30           Band4         3         19965         8         #0         16QAM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.47         0.24         21.70         30           Band4         3         19965         15         #0         16QAM         21.41         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.66         30           Band4         3         20175         8         #0         QPSK         22.91										
Band4         3         19965         1         #Mid         16QAM         22.15         0.24         22.39         30           Band4         3         19965         1         #Max         16QAM         22.08         0.24         22.32         30           Band4         3         19965         8         #0         16QAM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.47         0.24         21.70         30           Band4         3         19965         8         #Max         16QAM         21.41         0.24         21.65         30           Band4         3         19965         15         #0         16QAM         21.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.16         30           Band4         3         20175         8         #Mid         QPSK         22.92										
Band4         3         19965         1         #Max         16QAM         22.08         0.24         22.32         30           Band4         3         19965         8         #0         160AM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.46         0.24         21.70         30           Band4         3         19965         8         #Max         16QAM         21.41         0.24         21.65         30           Band4         3         19965         15         #0         16QAM         21.38         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.42         0.24         23.15         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.16         30           Band4         3         20175         8         #Mid         QPSK         22.92										
Band4         3         19965         8         #0         16QAM         21.47         0.24         21.71         30           Band4         3         19965         8         #Mid         16QAM         21.46         0.24         21.70         30           Band4         3         19965         8         #Max         16QAM         21.41         0.24         21.65         30           Band4         3         19965         15         #0         16QAM         21.38         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Max         QPSK         23.46         0.24         23.70         30           Band4         3         20175         1         #Max         QPSK         23.46         0.24         23.15         30           Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.92										
Band4         3         19965         8         #Mid         16QAM         21.46         0.24         21.70         30           Band4         3         19965         8         #Max         16QAM         21.41         0.24         21.65         30           Band4         3         19965         15         #0         16QAM         21.38         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.66         30           Band4         3         20175         1         #Max         QPSK         23.42         0.24         23.66         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.15         30           Band4         3         20175         8         #Max         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.89										
Band4         3         19965         8         #Max         16QAM         21.41         0.24         21.65         30           Band4         3         19965         15         #0         16QAM         21.38         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.60         30           Band4         3         20175         1         #Max         QPSK         23.42         0.24         23.66         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.66         30           Band4         3         20175         8         #Max         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #Max         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #Max         QPSK         22.92										
Band4         3         19965         15         #0         16QAM         21.38         0.24         21.62         30           Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.70         30           Band4         3         20175         1         #Mid         QPSK         23.42         0.24         23.66         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.15         30           Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.15         30           Band4         3         20175         8         #Max         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #Max         QPSK         22.32         <										
Band4         3         20175         1         #0         QPSK         23.38         0.24         23.62         30           Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.70         30           Band4         3         20175         1         #Max         QPSK         23.46         0.24         23.70         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.16         30           Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.16         30           Band4         3         20175         8         #Max         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #0         16QAM         22.32         0.24         22.56         30           Band4         3         20175         1         #Mid         16QAM         22.31         <										
Band4         3         20175         1         #Mid         QPSK         23.46         0.24         23.70         30           Band4         3         20175         1         #Max         QPSK         23.46         0.24         23.70         30           Band4         3         20175         1         #Max         QPSK         23.42         0.24         23.66         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.15         30           Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #0         16QAM         22.31         0.24         22.56         30           Band4         3         20175         1         #Max         16QAM         22.33										
Band4         3         20175         1         #Max         QPSK         23.42         0.24         23.66         30           Band4         3         20175         8         #0         QPSK         22.91         0.24         23.15         30           Band4         3         20175         8         #Mid         QPSK         22.91         0.24         23.16         30           Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.89         0.24         23.13         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #0         16QAM         22.32         0.24         22.56         30           Band4         3         20175         1         #Mid         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         <										
Band4         3         20175         8         #0         QPSK         22.91         0.24         23.15         30           Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.15         30           Band4         3         20175         8         #Max         QPSK         22.92         0.24         23.16         30           Band4         3         20175         8         #Max         QPSK         22.89         0.24         23.13         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #0         160AM         22.32         0.24         22.56         30           Band4         3         20175         1         #Mid         16QAM         22.33         0.24         22.57         30           Band4         3         20175         1         #Max         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #0         16QAM         21.92										
Band4         3         20175         8         #Mid         QPSK         22.92         0.24         23.16         30           Band4         3         20175         8         #Max         QPSK         22.89         0.24         23.16         30           Band4         3         20175         15         #0         QPSK         22.89         0.24         23.16         30           Band4         3         20175         1         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #0         16QAM         22.32         0.24         22.56         30           Band4         3         20175         1         #Mid         16QAM         22.31         0.24         22.55         30           Band4         3         20175         1         #Max         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.92										
Band4         3         20175         8         #Max         QPSK         22.89         0.24         23.13         30           Band4         3         20175         15         #0         QPSK         22.92         0.24         23.13         30           Band4         3         20175         1         #0         16QAM         22.32         0.24         23.16         30           Band4         3         20175         1         #0         16QAM         22.32         0.24         22.56         30           Band4         3         20175         1         #Max         16QAM         22.31         0.24         22.55         30           Band4         3         20175         1         #Max         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.92         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91										
Band4         3         20175         15         #0         QPSK         22.92         0.24         23.16         30           Band4         3         20175         1         #0         16QAM         22.32         0.24         22.56         30           Band4         3         20175         1         #Mid         16QAM         22.31         0.24         22.55         30           Band4         3         20175         1         #Mid         16QAM         22.33         0.24         22.55         30           Band4         3         20175         1         #Max         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.89         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91										
Band4         3         20175         1         #0         16QAM         22.32         0.24         22.56         30           Band4         3         20175         1         #Mid         16QAM         22.31         0.24         22.55         30           Band4         3         20175         1         #Mid         16QAM         22.33         0.24         22.55         30           Band4         3         20175         1         #Max         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.92         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91         0.24         22.13         30           Band4         3         20175         15         #0         16QAM         21.91         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.98										
Band4         3         20175         1         #Mid         16QAM         22.31         0.24         22.55         30           Band4         3         20175         1         #Max         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.99         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.91         0.24         22.12         30           Band4         3         20375         15         #0         16QAM         21.98         0.24         22.22         30           Band4         3         20385         1         #0         QPSK         23.51										
Band4         3         20175         1         #Max         16QAM         22.33         0.24         22.57         30           Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.98         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.98         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.98         0.24         22.22         30           Band4         3         20385         1         #0         QPSK         23.51         0.24         23.75         30										
Band4         3         20175         8         #0         16QAM         21.92         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.89         0.24         22.16         30           Band4         3         20175         8         #Mid         16QAM         21.89         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.98         0.24         22.22         30           Band4         3         20385         1         #0         QPSK         23.51         0.24         23.75         30										
Band4         3         20175         8         #Mid         16QAM         21.89         0.24         22.13         30           Band4         3         20175         8         #Max         16QAM         21.91         0.24         22.13         30           Band4         3         20175         15         #Max         16QAM         21.91         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.98         0.24         22.22         30           Band4         3         20385         1         #0         QPSK         23.51         0.24         23.75         30										
Band4         3         20175         8         #Max         16QAM         21.91         0.24         22.15         30           Band4         3         20175         15         #0         16QAM         21.98         0.24         22.22         30           Band4         3         20385         1         #0         QPSK         23.51         0.24         23.75         30										
Band4         3         20175         15         #0         16QAM         21.98         0.24         22.22         30           Band4         3         20385         1         #0         QPSK         23.51         0.24         23.75         30										
Band4 3 20385 1 #0 QPSK 23.51 0.24 23.75 30										
Band4         3         20385         1         #Mid         QPSK         23.54         0.24         23.78         30           Band4         3         20385         1         #Mid         QPSK         23.54         0.24         23.78         30										
Band4         3         20385         1         #Max         QPSK         23.55         0.24         23.79         30           Band4         3         20385         8         #0         DPSK         23.04         0.24         23.19         30										
Band4 3 20385 8 #0 QPSK 22.94 0.24 23.18 30										
Band4 3 20385 8 #Mid QPSK 22.97 0.24 23.21 30										
Band4 3 20385 8 #Max QPSK 23.01 0.24 23.25 30										
Band4 3 20385 15 #0 QPSK 23.00 0.24 23.24 30										
Band4 3 20385 1 #0 16QAM 22.88 0.24 23.12 30										
Band4 3 20385 1 #Mid 16QAM 22.95 0.24 23.19 30										
Band4 3 20385 1 #Max 160AM 22.93 0.24 23.17 30										
Band4 3 20385 8 #0 160AM 22.03 0.24 22.27 30										
Band4 3 20385 8 #Mid 16QAM 22.03 0.24 22.27 30										
Band4         3         20385         8         #Max         16QAM         22.03         0.24         22.27         30										
Band4 3 20385 15 #0 16QAM 22.04 0.24 22.28 30										
Band4 5 19975 1 #0 QPSK 23.07 0.24 23.31 30										
Band4         5         19975         1         #Mid         QPSK         22.94         0.24         23.18         30										
Band4         5         19975         1         #Max         QPSK         23.04         0.24         23.28         30										
Band4         5         19975         12         #0         QPSK         22.42         0.24         22.66         30										
Band4 5 19975 12 #Mid QPSK 22.38 0.24 22.62 30		22.62								
Band4 5 19975 12 #Max QPSK 22.40 0.24 22.64 30	0 PASS					#Max	10	10075	E	Pond4

Band4	5	19975	25	#0	QPSK	22.42	0.24	22.66	30	PASS
Band4	5	19975	1	#0	16QAM	22.45	0.24	22.69	30	PASS
Band4	5	19975	1	#Mid	16QAM	22.30	0.24	22.54	30	PASS
Band4	5	19975	1	#Max	16QAM	22.39	0.24	22.63	30	PASS
Band4	5	19975	12	#0	16QAM	21.39	0.24	21.63	30	PASS
Band4	5	19975	12	#Mid	16QAM	21.34	0.24	21.58	30	PASS
Band4 Band4	5	19975	12	#Max	16QAM	21.34	0.24	21.58	30	PASS
Band4 Band4	5	19975	25	#0	16QAM 16QAM	21.34	0.24	21.65	30	PASS
Band4	5	20175	1	#0	QPSK	23.96	0.24	24.20	30	PASS
Band4	5	20175	1	#Mid	QPSK	23.94	0.24	24.18	30	PASS
Band4	5	20175	1	#Max	QPSK	24.01	0.24	24.25	30	PASS
Band4	5	20175	12	#0	QPSK	22.95	0.24	23.19	30	PASS
Band4	5	20175	12	#Mid	QPSK	22.93	0.24	23.17	30	PASS
Band4	5	20175	12	#Max	QPSK	22.95	0.24	23.19	30	PASS
Band4	5	20175	25	#0	QPSK	22.95	0.24	23.19	30	PASS
Band4	5	20175	1	#0	16QAM	23.23	0.24	23.47	30	PASS
Band4	5	20175	1	#Mid	16QAM	23.23	0.24	23.47	30	PASS
Band4	5	20175	1	#Max	16QAM	23.32	0.24	23.56	30	PASS
Band4	5	20175	12	#0	16QAM	22.01	0.24	22.25	30	PASS
Band4	5	20175	12	#Mid	16QAM	22.00	0.24	22.24	30	PASS
Band4	5	20175	12	#Max	16QAM	21.98	0.24	22.22	30	PASS
Band4	5	20175	25	#0	16QAM	21.93	0.24	22.17	30	PASS
	5	20175	25	#0 #0			0.24		30	PASS
Band4					QPSK	23.89		24.13		
Band4	5	20375	1	#Mid	QPSK	24.03	0.24	24.27	30	PASS
Band4	5	20375	1	#Max	QPSK	24.17	0.24	24.41	30	PASS
Band4	5	20375	12	#0	QPSK	23.03	0.24	23.27	30	PASS
Band4	5	20375	12	#Mid	QPSK	23.04	0.24	23.28	30	PASS
Band4	5	20375	12	#Max	QPSK	23.03	0.24	23.27	30	PASS
Band4	5	20375	25	#0	QPSK	23.07	0.24	23.31	30	PASS
Band4	5	20375	1	#0	16QAM	23.45	0.24	23.69	30	PASS
Band4	5	20375	1	#Mid	16QAM	23.46	0.24	23.70	30	PASS
Band4	5	20375	1	#Max	16QAM	23.55	0.24	23.79	30	PASS
Band4	5	20375	12	#0	16QAM	21.99	0.24	22.23	30	PASS
Band4	5	20375	12	#Mid	16QAM	22.00	0.24	22.24	30	PASS
Band4	5	20375	12	#Max	16QAM	22.00	0.24	22.24	30	PASS
Band4	5	20375	25	#0	16QAM	22.02	0.24	22.25	30	PASS
		20000		#0		23.61				
Band4	10		<u>1</u> 1		QPSK		0.24	23.85	30	PASS
Band4	10	20000		#Mid	QPSK	23.53	0.24	23.77	30	PASS
Band4	10	20000	1	#Max	QPSK	23.70	0.24	23.94	30	PASS
Band4	10	20000	25	#0	QPSK	22.40	0.24	22.64	30	PASS
Band4	10	20000	25	#Mid	QPSK	22.49	0.24	22.73	30	PASS
Band4	10	20000	25	#Max	QPSK	22.47	0.24	22.71	30	PASS
Band4	10	20000	50	#0	QPSK	22.47	0.24	22.71	30	PASS
Band4	10	20000	1	#0	16QAM	22.43	0.24	22.67	30	PASS
Band4	10	20000	1	#Mid	16QAM	22.37	0.24	22.61	30	PASS
Band4	10	20000	1	#Max	16QAM	22.57	0.24	22.81	30	PASS
Band4	10	20000	25	#0	16QAM	21.40	0.24	21.64	30	PASS
Band4	10	20000	25	#Mid	16QAM	21.46	0.24	21.70	30	PASS
Band4	10	20000	25	#Max	16QAM	21.50	0.24	21.74	30	PASS
Band4	10	20000	50	#0	16QAM	21.30	0.24	21.68	30	PASS
	10		1	#0		23.98				PASS
Band4		20175			QPSK		0.24	24.22	30	
Band4	10	20175	1	#Mid	QPSK	24.06	0.24	24.30	30	PASS
Band4	10	20175	1	#Max	QPSK	24.06	0.24	24.30	30	PASS
Band4	10	20175	25	#0	QPSK	22.92	0.24	23.16	30	PASS
Band4	10	20175	25	#Mid	QPSK	22.91	0.24	23.15	30	PASS
Band4	10	20175	25	#Max	QPSK	22.86	0.24	23.10	30	PASS
Band4	10	20175	50	#0	QPSK	22.88	0.24	23.12	30	PASS
Band4	10	20175	1	#0	16QAM	23.22	0.24	23.46	30	PASS
Band4	10	20175	1	#Mid	16QAM	23.32	0.24	23.56	30	PASS
Band4	10	20175	1	#Max	16QAM	23.38	0.24	23.62	30	PASS
Band4	10	20175	25	#0	16QAM	21.92	0.24	22.16	30	PASS
Band4	10	20175	25	#Mid	16QAM	21.94	0.24	22.18	30	PASS
Band4	10	20175	25	#Max	16QAM	21.86	0.24	22.10	30	PASS
Band4	10	20175	50	#0	16QAM	21.88	0.24	22.12	30	PASS
Band4	10	20350	1	#0	QPSK	23.20	0.24	23.44	30	PASS
Band4	10	20350	1	#Mid	QPSK	23.58	0.24	23.82	30	PASS
Band4	10	20350	1	#Max	QPSK	23.65	0.24	23.89	30	PASS
Band4 Band4	10	20350	25	#0	QPSK	22.85	0.24	23.09	30	PASS
Band4 Band4	10	20350	25	#Mid	QPSK QPSK	22.05	0.24	23.18	30	PASS
Band4	10	20350	25	#Max	QPSK	22.87	0.24	23.11	30	PASS
Band4	10	20350	50	#0	QPSK 1604M	22.93	0.24	23.17	30	PASS
Band4	10	20350	1	#0	16QAM	23.06	0.24	23.30	30	PASS
Band4	10	20350	1	#Mid	16QAM	23.09	0.24	23.33	30	PASS
Band4	10	20350	1	#Max	16QAM	23.24	0.24	23.48	30	PASS
Band4	10	20350	25	#0	16QAM	21.90	0.24	22.14	30	PASS
Band4	10	20350	25	#Mid	16QAM	21.73	0.24	21.97	30	PASS
Band4	10	20350	25	#Max	16QAM	21.87	0.24	22.11	30	PASS
Band4	10	20350	50	#0	16QAM	21.93	0.24	22.17	30	PASS
Band4	15	20025	1	#0	QPSK	23.45	0.24	23.69	30	PASS
Band4	15	20025	1	#Mid	QPSK	23.61	0.24	23.85	30	PASS
	15	20025	1	#Max	QPSK	23.81	0.24	24.05	30	PASS
Band4		20025	36	#0	QPSK	22.34	0.24	22.58	30	PASS
Band4 Band4	15			#Mid	QPSK	22.46	0.24	22.30	30	PASS
Band4	15			#IVIIU		22.46				
Band4 Band4	15	20025	36	#BA						
Band4 Band4 Band4	15 15	20025 20025	36	#Max	QPSK		0.24	22.78	30	PASS
Band4 Band4 Band4 Band4	15 15 15	20025 20025 20025	36 75	#0	QPSK	22.47	0.24	22.71	30	PASS
Band4 Band4 Band4 Band4 Band4	15 15 15 15 15	20025 20025 20025 20025	36 75 1	#0 #0	QPSK 16QAM	22.47 22.70	0.24 0.24	22.71 22.94	30 30	PASS PASS
Band4 Band4 Band4 Band4 Band4 Band4	15 15 15 15 15 15	20025 20025 20025 20025 20025 20025	36 75 1 1	#0 #0 #Mid	QPSK 16QAM 16QAM	22.47 22.70 22.67	0.24 0.24 0.24	22.71 22.94 22.91	30 30 30	PASS PASS PASS
Band4 Band4 Band4 Band4 Band4	15 15 15 15 15 15 15	20025 20025 20025 20025	36 75 1 1 1	#0 #0 #Mid #Max	QPSK 16QAM	22.47 22.70	0.24 0.24	22.71 22.94	30 30	PASS PASS PASS PASS
Band4 Band4 Band4 Band4 Band4 Band4	15 15 15 15 15 15	20025 20025 20025 20025 20025 20025	36 75 1 1	#0 #0 #Mid	QPSK 16QAM 16QAM	22.47 22.70 22.67	0.24 0.24 0.24	22.71 22.94 22.91	30 30 30	PASS PASS PASS
Band4 Band4 Band4 Band4 Band4 Band4 Band4	15 15 15 15 15 15 15	20025 20025 20025 20025 20025 20025 20025	36 75 1 1 1	#0 #0 #Mid #Max	QPSK 16QAM 16QAM 16QAM	22.47 22.70 22.67 22.82	0.24 0.24 0.24 0.24	22.71 22.94 22.91 23.06	30 30 30 30	PASS PASS PASS PASS

Band4	15	20025	75	#0	16QAM	21.48	0.24	21.72	30	PASS
Band4	15	20175	1	#0	QPSK	23.61	0.24	23.85	30	PASS
Band4	15	20175	1	#Mid	QPSK	23.77	0.24	24.01	30	PASS
Band4	15	20175	1	#Max	QPSK	23.69	0.24	23.93	30	PASS
Band4	15	20175	36	#0	QPSK	22.79	0.24	23.03	30	PASS
Band4	15	20175	36	#Mid	QPSK	22.89	0.24	23.13	30	PASS
Band4	15	20175	36	#Max	QPSK	22.87	0.24	23.11	30	PASS
Band4	15	20175	75	#0	QPSK	22.85	0.24	23.09	30	PASS
Band4	15	20175	1	#0	16QAM	22.86	0.24	23.10	30	PASS
Band4	15	20175	1	#Mid	16QAM	22.85	0.24	23.09	30	PASS
Band4	15	20175	1	#Max	16QAM	22.93	0.24	23.17	30	PASS
Band4	15	20175	36	#0	16QAM	21.89	0.24	22.13	30	PASS
Band4	15	20175	36	#Mid	16QAM	21.99	0.24	22.23	30	PASS
Band4	15	20175	36	#Max	16QAM	21.97	0.24	22.21	30	PASS
Band4	15	20175	75	#0	16QAM	21.86	0.24	22.10	30	PASS
Band4	15	20325	1	#0	QPSK	23.69	0.24	23.93	30	PASS
Band4	15	20325	1	#Mid	QPSK	23.40	0.24	23.64	30	PASS
Band4	15	20325	1	#Max	QPSK	23.61	0.24	23.85	30	PASS
Band4	15	20325	36	#0	QPSK	22.80	0.24	23.04	30	PASS
Band4	15	20325	36	#Mid	QPSK	22.89	0.24	23.13	30	PASS
Band4	15	20325	36	#Max	QPSK	22.94	0.24	23.18	30	PASS
Band4	15	20325	75	#0	QPSK	22.87	0.24	23.11	30	PASS
Band4	15	20325	1	#0	16QAM	22.59	0.24	22.83	30	PASS
Band4	15	20325	1	#Mid	16QAM	22.62	0.24	22.86	30	PASS
Band4	15	20325	1	#Max	16QAM	22.69	0.24	22.93	30	PASS
Band4	15	20325	36	#0	16QAM	21.81	0.24	22.05	30	PASS
Band4	15	20325	36	#Mid	16QAM	21.84	0.24	22.08	30	PASS
Band4	15	20325	36	#Max	16QAM	21.91	0.24	22.15	30	PASS
Band4	15	20325	75	#0	16QAM	21.91	0.24	22.15	30	PASS
Band4	20	20050	1	#0	QPSK	23.32	0.24	23.56	30	PASS
Band4	20	20050	1	#Mid	QPSK	23.25	0.24	23.49	30	PASS
Band4	20	20050	1	#Max	QPSK	23.50	0.24	23.74	30	PASS
Band4	20	20050	50	#0	QPSK	22.44	0.24	22.68	30	PASS
Band4	20	20050	50	#Mid	QPSK	22.62	0.24	22.86	30	PASS
Band4	20	20050	50	#Max	QPSK	22.74	0.24	22.98	30	PASS
Band4	20	20050	100	#0	QPSK	22.56	0.24	22.80	30	PASS
Band4	20	20050	1	#0	16QAM	22.34	0.24	22.58	30	PASS
Band4	20	20050	1	#Mid	16QAM	22.61	0.24	22.85	30	PASS
Band4	20	20050	1	#Max	16QAM	22.88	0.24	23.12	30	PASS
Band4	20	20050	50	#0	16QAM	21.49	0.24	21.73	30	PASS
Band4	20	20050	50	#Mid	16QAM	21.69	0.24	21.93	30	PASS
Band4	20	20050	50	#Max	16QAM	21.78	0.24	22.02	30	PASS
Band4	20	20050	100	#0	16QAM	21.58	0.24	21.82	30	PASS
Band4	20	20175	1	#0	QPSK	23.06	0.24	23.30	30	PASS
Band4	20	20175	1	#Mid	QPSK	23.46	0.24	23.70	30	PASS
Band4	20	20175	1	#Max	QPSK	23.39	0.24	23.63	30	PASS
Band4	20	20175	50	#0	QPSK	22.84	0.24	23.08	30	PASS
Band4	20	20175	50	#Mid	QPSK	22.96	0.24	23.20	30	PASS
Band4	20	20175	50	#Max	QPSK	22.92	0.24	23.16	30	PASS
Band4	20	20175	100	#0	QPSK	22.84	0.24	23.08	30	PASS
Band4	20	20175	1	#0	16QAM	22.23	0.24	22.47	30	PASS
Band4	20	20175	1	#Mid	16QAM	22.61	0.24	22.85	30	PASS
Band4	20	20175	1	#Max	16QAM	22.63	0.24	22.87	30	PASS
Band4	20	20175	50	#0	16QAM	21.80	0.24	22.04	30	PASS
Band4	20	20175	50	#Mid	16QAM	21.92	0.24	22.16	30	PASS
Band4	20	20175	50	#Max	16QAM	21.86	0.24	22.10	30	PASS
Band4	20	20175	100	#0	16QAM	21.82	0.24	22.06	30	PASS
Band4	20	20300	1	#0	QPSK	23.21	0.24	23.45	30	PASS
Band4	20	20300	1	#Mid	QPSK	23.28	0.24	23.52	30	PASS
Band4	20	20300	1	#Max	QPSK	23.40	0.24	23.64	30	PASS
Band4	20	20300	50	#0	QPSK	22.87	0.24	23.11	30	PASS
Band4	20	20300	50	#Mid	QPSK	22.92	0.24	23.16	30	PASS
Band4	20	20300	50	#Max	QPSK	22.86	0.24	23.10	30	PASS
Band4	20	20300	100	#0	QPSK	22.86	0.24	23.10	30	PASS
Band4	20	20300	1	#0	16QAM	22.61	0.24	22.85	30	PASS
Band4 Band4	20	20300	1	#Mid	16QAM	22.67	0.24	22.91	30	PASS
20.101	20	20300	1	#Max	16QAM	22.79	0.24	23.03	30	PASS
Band4		20000								
Band4 Band4		20300	50	#∩	160AM	21 89	() 24	22.13	.30	PASS
Band4	20	20300	50 50	#0 #Mid	16QAM 16QAM	21.89 21.94	0.24	22.13 22.18	30	PASS
		20300 20300 20300	50 50 50	#0 #Mid #Max	16QAM 16QAM 16QAM	21.89 21.94 21.88	0.24 0.24 0.24	22.13 22.18 22.12	30 30 30	PASS PASS PASS