FCC Test Report

FCC ID	:	**2AD8UFTHF01**
Equipment	:	**Single Band UE Relay**
Model No.	:	**FTHF**
Brand Name	:	**Nokia**
Applicant	:	**Nokia Solutions and Networks, OY**
Address	:	**1455 W Shure Drive Arlington Heights, Illinois United States 60004**
Standard	:	**47 CFR FCC Part 27 Subpart M**
Received Date	:	**Jul. 27, 2016**
Tested Date	:	**Aug. 10 ~ Aug. 12, 2016**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FG672702	Rev. 01	Initial issue	Sep. 19, 2016

Summary of Test Results

FCC Rules	Test Items	Worst Case Measured	Limit	Result
2.1046 / 27.50(h)(2)	Output power	24.01 dBm	2 Watts(33dBm)	Pass
2.1053 / 27.53(m)(2)(v)	Radiated Emissions	-27.02 dBm	-13 dBm	Pass
2.1051 / 27.53(m)(2)(v)	Conducted Emissions	-25.563 dBm	-13 dBm	Pass
2.1051 / 27.53(m)(2)(v)	Channel Edge Measurement	-19.816 dBm	-13 dBm	Pass
27.53(m)(6)	Emission Bandwidth	19.40 MHz	N/A	Pass
2.1055 / 27.54	Frequency Stability	0.039 ppm	Fundamental emission stays within the authorized frequency block.	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

Operating Frequency (MHz)	Channel Bandwidth: 5MHz: 2622.5~2687.5 Channel Bandwidth: 10MHz: 2625~2685 Channel Bandwidth: 15MHz: 2627.5~2682.5 Channel Bandwidth: 20MHz: 2630~2680
Modulation Type	Uplink: QPSK, 16QAM, 64QAM Downlink: QPSK, 16QAM, 64QAM, 256QAM
Duplex Mode	TDD
Category	Cat 5 & Cat 6
Release Version	11
H/W Version	V01
S/W Version	01.01.02.105
TX/RX function	1TX / 4RX

1.1.2 Maximum Conducted Power and Emission Designator

Mode	Modulation	Maximum Conducted Power (W)	Emission Designator
CB: 5MHz	QPSK	0.212	4M47G7D
CB: 5MHz	16QAM	0.182	4M47W7D
CB: 5MHz	64QAM	0.181	4M46W7D
CB: 10MHz	QPSK	0.220	8M92G7D
CB: 10MHz	16QAM	0.189	8M92W7D
CB: 10MHz	64QAM	0.189	8M94W7D
CB: 15MHz	QPSK	0.252	13M4G7D
CB: 15MHz	16QAM	0.202	13M4W7D
CB: 15MHz	64QAM	0.202	13M4W7D
CB: 20MHz	QPSK	0.243	17M9G7D
CB: 20MHz	16QAM	0.214	17M8W7D
CB: 20MHz	64QAM	0.213	17M8W7D

1.1.3 Antenna Details

Ant. No.	Type	Gain (dBi)	Connector	Remark
1	Patch	11	i-Pex	---

1.1.4 EUT Operational Condition

Power Supply Type	56Vdc from POE (support unit only.) Brand Name: PHIHONG Model Name: POE16R-1AFG Power Rating: I/P: 100-240Vac, 0.8A, 50-60Hz, 32-44VA O/P: 56Vdc, 0.275A		
Operational Climatic	☒ Tnom (20°C)	☒ Tmax (60°C)	☒ Tmin (-40°C)

1.1.5 Accessories

N/A

1.1.6 Operating Channel List

Channel Bandwidth (MHz)	Channel	Frequency (MHz)
5	40915	2622.5
5	41240	2655.0
5	41565	2687.5
10	40940	2625.0
10	41240	2655.0
10	41540	2685.0
15	40965	2627.5
15	41240	2655.0
15	41515	2682.5
20	40990	2630.0
20	41240	2655.0
20	41490	2680.0

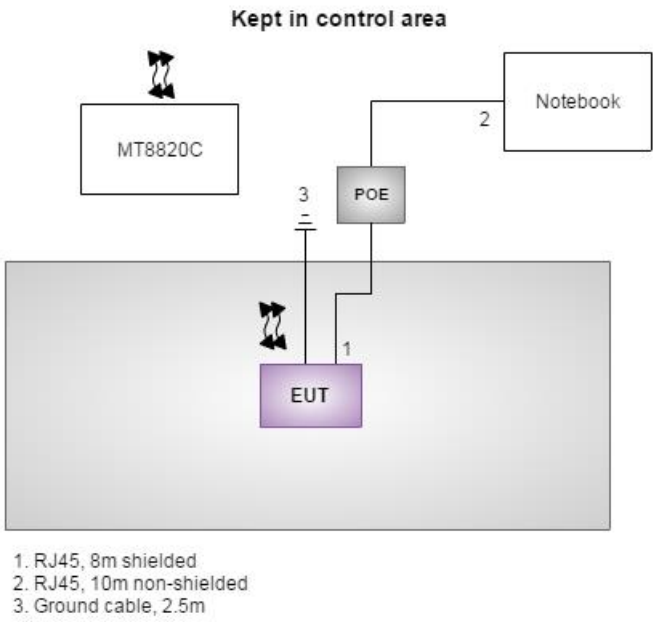
1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**S/N**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	9ZFB4X1	RJ45, 10m non-shielded w/o core.
2	POE	PHIHONG	POE16R-1AFG	---	RJ45, 8m shielded w/o core.

Note: No.2 was supplied by applicant.

1.3 Test Setup Chart

Test Setup Diagram



1. RJ45, 8m shielded
2. RJ45, 10m non-shielded
3. Ground cable, 2.5m

1.4 The Equipment List

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 13, 2015	Dec. 12, 2016
Receiver	R&S	ESR3	101658	Nov. 04, 2015	Nov. 03, 2016
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Aug. 04, 2016	Aug. 03, 2017
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 16, 2015	Dec. 15, 2016
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 04, 2015	Nov. 03, 2016
Preamplifier	EMC	EMC02325	980225	Aug. 05, 2016	Aug. 04, 2017
Preamplifier	Agilent	83017A	MY39501308	Oct. 02, 2015	Oct. 01, 2016
Preamplifier	EMC	EMC184045B	980192	Sep. 01, 2015	Aug. 31, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 10, 2015	Dec. 09, 2016
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 10, 2015	Dec. 09, 2016
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 10, 2015	Dec. 09, 2016
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 10, 2015	Dec. 09, 2016
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Mar. 28, 2016	Mar. 27, 2017
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Feb. 17, 2016	Feb. 16, 2017
Spectrum Analyzer	Agilent	N9010A	MY53400091	Sep. 14, 2015	Sep. 13, 2016
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 27, 2015	Nov. 26, 2016
Power Meter	Anritsu	ML2495A	1241002	Sep. 21, 2015	Sep. 20, 2016
Power Sensor	Anritsu	MA2411B	1207366	Sep. 21, 2015	Sep. 20, 2016
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Mar. 28, 2016	Mar. 27, 2017
AC POWER SOURCE	APC	AFC-500W	F312060012	Oct. 26, 2015	Oct. 25, 2016
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards.

47 CFR FCC Part 27 Subpart M
ANSI C63.4-2014
ANSI/TIA-603-D 2010
FCC KDB 971168 D01 Power Meas License Digital Systems v02r02
FCC KDB 971168 D02 Misc OOBE License Digital Systems v01
FCC KDB 412172 D01 Determining ERP and EIRP v01r01

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Frequency error	±34.134 Hz
Conducted emission	±2.670 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.63 dB
Temperature	±0.6 ^{o}C

2 Test Configuration

2.1 Testing Condition and Location Information

Test Item	Test Site	Ambient Condition	Tested By
RF conducted	TH01-WS	21-23°C / 62-63%	Felix Sung
Radiated Emissions	03CH01-WS	22°C / 63%	Kevin Lee

- FCC site registration No.: 181692
- IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

Test item	Channel Bandwidth	Modulation	Test channel
Output Power Conducted Emissions Occupied Bandwidth	5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM	2622.5 / 2655.0 / 2687.5 2625.0 / 2655.0 / 2685.0 2627.5 / 2655.0 / 2682.5 2630.0 / 2655.0 / 2680.0
Radiated Emission ≤ 1GHz	5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK	2655.0 2655.0 2655.0 2655.0
Radiated Emission > 1GHz	5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK	2622.5 / 2655.0 / 2687.5 2625.0 / 2655.0 / 2685.0 2627.5 / 2655.0 / 2682.5 2630.0 / 2655.0 / 2680.0
Band Edge	5 MHz 10 MHz 15 MHz 20 MHz	QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM QPSK / 16QAM / 64QAM	2622.5 / 2687.5 2625.0 / 2685.0 2627.5 / 2682.5 2630.0 / 2680.0
Frequency Stability	5 MHz 10 MHz 15 MHz 20 MHz	QPSK QPSK QPSK QPSK	2655.0 2655.0 2655.0 2655.0

3 Test Results

3.1 Output Power

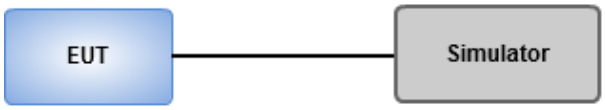
3.1.1 Limit of Output Power

Mobile stations are limited to 2.0 watts transmitter output power

3.1.2 Test Procedures

1. The EUT links up with simulator and is set to maximum output power level at low / middel / high channel.
2. Measure the output power of low / middle / high channel of the EUT

3.1.3 Test Setup



3.1.4 Test Result of Conducted power (dBm)

Band / Channel Bandwidth			CB: 5MHz		
Channel			40915	41240	41565
Frequency (MHz)			2622.5	2655.0	2687.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	21.04	**23.26**	23.21
	1	12	21.65	23.18	22.90
	1	24	22.11	23.20	22.92
	12	0	20.53	22.48	22.26
	12	6	20.85	22.49	22.2
	12	11	20.98	22.44	22.13
	25	0	20.78	22.31	22.11
16QAM	1	0	20.38	22.61	22.48
	1	12	20.98	22.59	22.24
	1	24	21.37	22.61	22.14
	12	0	19.71	21.48	21.3
	12	6	19.86	21.50	21.18
	12	11	20.01	21.46	21.2
	25	0	19.82	21.48	21.32
64QAM	1	0	20.34	22.58	22.43
	1	12	20.97	22.54	22.21
	1	24	21.34	22.58	22.11
	12	0	19.68	21.43	21.28
	12	6	19.83	21.48	21.16
	12	11	20.00	21.42	21.16
	25	0	19.80	21.43	21.38

Band / Channel Bandwidth			CB: 10MHz		
Channel			40940	41240	41540
Frequency (MHz)			2625.0	2655.0	2685.0
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	21.28	**23.42**	23.40
	1	24	22.12	23.23	23.04
	1	49	22.47	23.41	22.78
	25	0	20.97	22.54	22.3
	25	12	21.23	22.42	22.21
	25	24	21.46	22.46	22.18
	50	0	21.15	22.38	22.22
16QAM	1	0	20.56	22.77	22.62
	1	24	21.37	22.62	22.36
	1	49	21.71	22.62	22.32
	25	0	20.11	21.56	21.4
	25	12	20.36	21.44	21.46
	25	24	20.47	21.48	21.34
	50	0	20.26	21.60	21.45
64QAM	1	0	20.52	22.76	22.59
	1	24	21.36	22.60	22.34
	1	49	21.69	22.59	22.29
	25	0	20.09	21.54	21.36
	25	12	20.34	21.42	21.43
	25	24	20.42	21.44	21.30
	50	0	20.23	21.58	21.42

Band / Channel Bandwidth			CB: 15MHz		
Channel			40965	41240	41515
Frequency (MHz)			2627.5	2655.0	2682.5
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	21.79	**24.01**	23.71
	1	37	22.46	23.46	23.40
	1	74	22.71	23.55	23.47
	36	0	21.24	22.50	22.61
	36	18	21.38	22.43	22.36
	36	37	21.48	22.42	22.07
	75	0	21.37	22.64	22.35
16QAM	1	0	20.63	22.84	23.06
	1	37	21.47	22.60	22.63
	1	74	21.99	22.70	22.03
	36	0	20.19	21.69	21.58
	36	18	20.34	21.59	21.34
	36	37	20.57	21.51	21.10
	75	0	20.28	21.65	21.38
64QAM	1	0	20.61	22.81	23.06
	1	37	21.43	22.56	22.59
	1	74	21.98	22.69	21.97
	36	0	20.16	21.68	21.53
	36	18	20.31	21.57	21.30
	36	37	20.54	21.48	21.09
	75	0	20.25	21.63	21.36

Band / Channel Bandwidth			CB: 20MHz		
Channel			40990	41240	41490
Frequency (MHz)			2630.0	2655.0	2680.0
Mode	RB	RB Offset	Maximum AV Power (dBm)		
QPSK	1	0	21.67	**23.85**	23.84
	1	49	22.46	23.33	23.20
	1	99	22.94	23.49	23.01
	50	0	21.47	22.72	22.60
	50	24	21.66	22.41	22.33
	50	49	21.83	22.44	22.05
	100	0	21.63	22.64	22.54
16QAM	1	0	21.21	22.92	23.31
	1	49	21.61	22.65	22.30
	1	99	22.19	22.92	22.22
	50	0	20.37	21.63	21.70
	50	24	20.48	21.41	21.31
	50	49	20.76	21.56	21.19
	100	0	20.65	21.64	21.41
64QAM	1	0	21.09	22.88	23.29
	1	49	21.58	22.64	22.27
	1	99	22.17	22.88	22.18
	50	0	20.35	21.62	21.64
	50	24	20.43	21.38	21.28
	50	49	20.74	21.52	21.15
	100	0	20.61	21.62	21.40

3.2 Radiated Emissions

3.2.1 Limit of Radiated Emissions

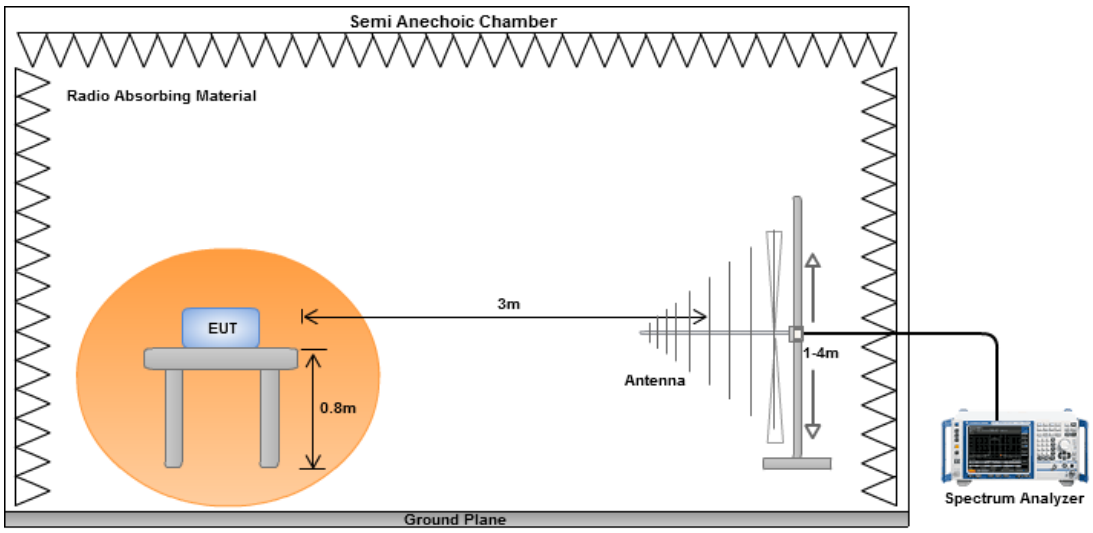
For all fixed digital user stations, the attenuation factor shall be not less than 43 + 10 log (P) dB at the channel edge.

3.2.2 Test Procedures

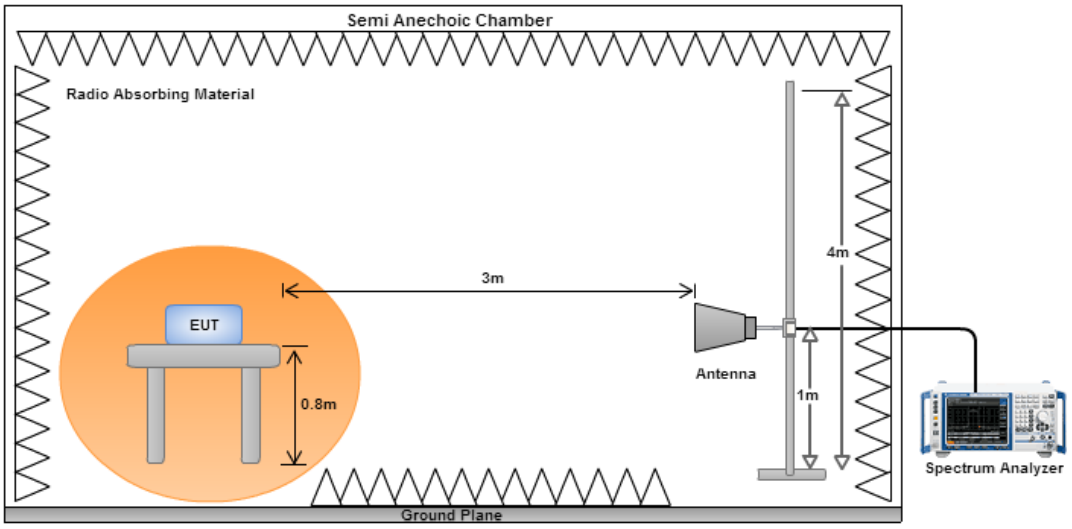
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.
4. After finding the max radiated emission, substitution method will be used for getting effective radiated power. EUT will be removed and substitution antenna will be placed at same position. Signal generator will output CW signal to substitution antenna through a RF cable. Rotate turntable and move antenna to find maximum radiated emission. Adjust output power of signal generator to let the maximum radiated emission is same as step 3. Record the output power level.
5. E.I.R.P = output power of step 4 + gain of substitution antenna – cable loss of RF cable.

3.2.3 Test Setup

Radiated Emissions below 1 GHz



Radiated Emissions above 1 GHz



3.2.4 Test Result of Radiated Emissions below 1GHz

Mode		CB: 5MHz, 1RB, Offset 0, Channel: 41240					
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
30.97	H	-53.60	-13.00	-40.60	-56.03	-39.57	-14.03
85.29	H	-57.18	-13.00	-44.18	-49.55	-56.44	-0.74
104.69	H	-57.18	-13.00	-44.18	-50.46	-57.22	0.04
230.79	H	-65.08	-13.00	-52.08	-56.60	-69.53	4.45
287.05	H	-71.35	-13.00	-58.35	-64.48	-75.65	4.30
446.13	H	-57.82	-13.00	-44.82	-55.63	-61.80	3.98
30.97	V	-47.39	-13.00	-34.39	-41.29	-33.36	-14.03
101.78	V	-47.22	-13.00	-34.22	-41.55	-47.43	0.21
199.75	V	-64.30	-13.00	-51.30	-59.75	-68.77	4.47
287.05	V	-66.29	-13.00	-53.29	-63.31	-70.59	4.30
446.13	V	-58.11	-13.00	-45.11	-56.16	-62.09	3.98
680.87	V	-64.08	-13.00	-51.08	-67.68	-67.79	3.71

Note: EIRP = S.G Power value + Correction factor.

Mode		CB: 10MHz, 1RB, Offset 0, Channel: 41240					
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
31.94	H	-53.89	-13.00	-40.89	-55.99	-40.05	-13.84
83.35	H	-56.46	-13.00	-43.46	-48.99	-55.14	-1.32
158.04	H	-66.42	-13.00	-53.42	-60.86	-65.80	-0.62
233.70	H	-67.07	-13.00	-54.07	-58.67	-71.52	4.45
289.96	H	-73.19	-13.00	-60.19	-66.40	-77.48	4.29
446.13	H	-63.94	-13.00	-50.94	-61.75	-67.92	3.98
30.00	V	-47.78	-13.00	-34.78	-42.37	-33.56	-14.22
102.75	V	-47.59	-13.00	-34.59	-41.90	-47.74	0.15
198.78	V	-60.25	-13.00	-47.25	-55.74	-64.61	4.36
296.75	V	-65.48	-13.00	-52.48	-62.40	-69.75	4.27
446.13	V	-56.95	-13.00	-43.95	-55.00	-60.93	3.98
685.72	V	-65.16	-13.00	-52.16	-68.80	-68.83	3.67

Note: EIRP = S.G Power value + Correction factor.

Mode		CB: 15MHz, 1RB, Offset 0, Channel: 41240					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-54.62	-13.00	-41.62	-57.05	-40.59	-14.03
102.75	H	-57.08	-13.00	-44.08	-50.37	-57.23	0.15
145.43	H	-65.19	-13.00	-52.19	-59.72	-63.89	-1.30
233.70	H	-67.80	-13.00	-54.80	-59.40	-72.25	4.45
446.13	H	-58.66	-13.00	-45.66	-56.47	-62.64	3.98
589.69	H	-69.33	-13.00	-56.33	-69.07	-73.02	3.69
30.00	V	-47.82	-13.00	-34.82	-42.41	-33.60	-14.22
102.75	V	-48.06	-13.00	-35.06	-42.37	-48.21	0.15
158.04	V	-63.36	-13.00	-50.36	-60.78	-62.74	-0.62
287.05	V	-66.99	-13.00	-53.99	-64.01	-71.29	4.30
446.13	V	-61.52	-13.00	-48.52	-59.57	-65.50	3.98
683.78	V	-64.86	-13.00	-51.86	-68.49	-68.55	3.69

Note: EIRP = S.G Power value + Correction factor.

Mode		CB: 20MHz, 1RB, Offset 0, Channel: 41240					
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
30.97	H	-54.70	-13.00	-41.70	-57.13	-40.67	-14.03
101.78	H	-58.88	-13.00	-45.88	-52.17	-59.09	0.21
158.04	H	-67.22	-13.00	-54.22	-61.66	-66.60	-0.62
233.70	H	-66.63	-13.00	-53.63	-58.23	-71.08	4.45
446.13	H	-61.34	-13.00	-48.34	-59.15	-65.32	3.98
686.69	H	-67.55	-13.00	-54.55	-68.48	-71.22	3.67
30.97	V	-47.44	-13.00	-34.44	-41.34	-33.41	-14.03
101.78	V	-48.30	-13.00	-35.30	-42.63	-48.51	0.21
199.75	V	-60.78	-13.00	-47.78	-56.23	-65.25	4.47
289.96	V	-66.31	-13.00	-53.31	-63.30	-70.60	4.29
446.13	V	-60.41	-13.00	-47.41	-58.46	-64.39	3.98
683.78	V	-63.98	-13.00	-50.98	-67.61	-67.67	3.69

Note: EIRP = S.G Power value + Correction factor.

3.2.5 Test Result of Radiated Emissions above 1GHz

Mode	CB: 5MHz, 1RB, Offset 0, Channel: 40915						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5249.20	H	-41.60	-13.00	-28.60	-58.90	-48.05	6.45
783.80	H	-34.56	-13.00	-21.56	-56.53	-37.69	3.13
10498.40	H	-41.03	-13.00	-28.03	-66.23	-42.40	1.37
5249.20	V	-44.13	-13.00	-31.13	60.38	-50.58	6.45
783.80	V	-34.40	-13.00	-21.40	-55.36	-37.53	3.13
10498.40	V	-44.11	-13.00	-31.11	-67.49	-45.48	1.37

Mode	CB: 5MHz, 1RB, Offset 0, Channel: 41240						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5305.60	H	-45.60	-13.00	-32.60	-62.81	-52.12	6.52
7958.40	H	-31.56	-13.00	-18.56	-54.83	-34.66	3.10
10611.20	H	-41.54	-13.00	-28.54	-66.53	-42.83	1.29
5305.60	V	-45.91	-13.00	-32.91	-62.02	-52.43	6.52
7958.40	V	-31.03	-13.00	-18.03	-53.09	-34.13	3.10
10611.20	V	-43.45	-13.00	-30.45	-66.80	-44.74	1.29

Mode	CB: 5MHz, 1RB, Offset 0, Channel: 41565						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5370.70	H	-33.67	-13.00	-20.67	-50.77	-40.28	6.61
8055.90	H	-29.63	-13.00	-16.63	-53.00	-32.79	3.16
10741.20	H	-38.37	-13.00	-25.37	-63.13	-39.58	1.21
5370.70	V	-37.55	-13.00	-24.55	-53.50	-44.16	6.61
8055.90	V	-27.33	-13.00	-14.33	-49.74	-30.49	3.16
10741.20	V	-37.30	-13.00	-24.30	-60.63	-38.51	1.21

Note: EIRP = S.G Power value + Correction factor.

Mode	CB: 10MHz, 1RB, Offset 0, Channel: 40940						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5258.32	H	-45.92	-13.00	-32.92	-63.21	-52.38	6.46
7887.48	H	-43.82	-13.00	-30.82	-66.00	-46.94	3.12
10516.64	H	-42.35	-13.00	-29.35	-67.52	-43.71	1.36
5258.32	V	-46.59	-13.00	-33.59	-62.82	-53.05	6.46
7887.48	V	-42.43	-13.00	-29.43	-63.57	-45.55	3.12
10516.64	V	-43.50	-13.00	-30.50	-66.88	-44.86	1.36

Mode	CB: 10MHz, 1RB, Offset 0, Channel: 41240						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5301.40	H	-46.74	-13.00	-33.74	-63.95	-53.26	6.52
7952.10	H	-37.61	-13.00	-24.61	-60.78	-40.71	3.10
10602.80	H	-43.10	-13.00	-30.10	-68.11	-44.40	1.30
5301.40	V	-46.72	-13.00	-33.72	-33.72	-53.24	6.52
7952.10	V	-34.39	-13.00	-21.39	-21.39	-37.49	3.10
10602.80	V	-42.77	-13.00	-29.77	-29.77	-44.07	1.30

Mode	CB: 10MHz, 1RB, Offset 0, Channel: 41540						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5361.20	H	-35.38	-13.00	-22.38	-52.50	-41.98	6.60
8041.80	**H**	**-27.02**	**-13.00**	**-14.02**	**-50.53**	**-30.16**	**3.14**
10722.40	H	-39.06	-13.00	-26.06	-63.85	-40.28	1.22
5361.20	V	-38.39	-13.00	-25.39	-54.36	-44.99	6.60
8041.80	V	-28.44	-13.00	-15.44	-50.90	-31.58	3.14
10722.40	V	-40.79	-13.00	-27.79	-64.12	-42.01	1.22

Note: EIRP = S.G Power value + Correction factor.

Mode	CB: 15MHz, 1RB, Offset 0, Channel: 40965						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
5268.60	H	-48.45	-13.00	-35.45	-65.72	-54.92	6.47
7902.90	H	-44.19	-13.00	-31.19	-66.61	-47.31	3.12
10537.20	H	-44.71	-13.00	-31.71	-69.84	-46.05	1.34
5268.60	V	-45.53	-13.00	-32.53	-61.73	-52.00	6.47
7902.90	V	-40.71	-13.00	-27.71	-62.05	-43.83	3.12
10537.20	V	-44.33	-13.00	-31.33	-67.70	-45.67	1.34

Mode	CB: 15MHz, 1RB, Offset 0, Channel: 41240						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
5296.60	H	-46.42	-13.00	-33.42	-63.64	-52.93	6.51
7944.90	H	-34.06	-13.00	-21.06	-57.12	-37.16	3.10
10593.20	H	-42.36	-13.00	-29.36	-67.38	-43.67	1.31
5296.60	V	-46.45	-13.00	-33.45	-62.58	-52.96	6.51
7944.90	V	-34.15	-13.00	-21.15	-56.03	-37.25	3.10
10593.20	V	-43.46	-13.00	-30.46	-66.81	-44.77	1.31

Mode	CB: 15MHz, 1RB, Offset 0, Channel: 41515						
Frequency (MHz)	Antenna Polarity	E.I.R.P (dBm)	Limit (dBm)	Margin (dB)	S.A Reading (dBm)	S.G Power Vaule (dBm)	Correction Factor (dB)
5351.40	H	-36.20	-13.00	-23.20	-53.33	-42.78	6.58
8027.10	H	-28.81	-13.00	-15.81	-52.46	-31.93	3.12
10702.80	H	-37.70	-13.00	-24.70	-62.52	-38.93	1.23
5351.40	V	-37.56	-13.00	-24.56	-53.55	-44.14	6.58
8027.10	V	-28.99	-13.00	-15.99	-51.50	-32.11	3.12
10702.80	V	-37.88	-13.00	-24.88	-61.21	-39.11	1.23

Note: EIRP = S.G Power value + Correction factor.

Mode	CB: 20MHz, 1RB, Offset 0, Channel: 40990						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5277.80	H	-47.53	-13.00	-34.53	-64.79	-54.01	6.48
7916.70	H	-40.84	-13.00	-27.84	-63.46	-43.95	3.11
1055.60	H	-44.13	-13.00	-31.13	-69.23	-45.46	1.33
5277.80	V	-43.88	-13.00	-30.88	-60.06	-50.36	6.48
7916.70	V	-37.50	-13.00	-24.50	-59.01	-40.61	3.11
1055.60	V	-43.79	-13.00	-30.79	-67.16	-45.12	1.33

Mode	CB:20MHz, 1RB, Offset 0, Channel: 41240						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5292.20	H	-48.05	-13.00	-35.05	-65.28	-54.55	6.50
7938.30	H	-34.31	-13.00	-21.31	-57.28	-37.41	3.10
10584.40	H	-41.78	-13.00	-28.78	-66.82	-43.09	1.31
5292.20	V	-47.67	-13.00	-34.67	-63.81	-54.17	6.50
7938.30	V	-34.80	-13.00	-21.80	-56.60	-37.90	3.10
10584.40	V	-42.50	-13.00	-29.50	-65.86	-43.81	1.31

Mode	CB:20MHz, 1RB, Offset 0, Channel: 41490						
Frequency (MHz)	**Antenna Polarity**	**E.I.R.P (dBm)**	**Limit (dBm)**	**Margin (dB)**	**S.A Reading (dBm)**	**S.G Power Vaule (dBm)**	**Correction Factor (dB)**
5292.20	H	-48.05	-13.00	-35.05	-65.28	-54.55	6.50
7938.30	H	-34.31	-13.00	-21.31	-57.28	-37.41	3.10
10584.40	H	-41.78	-13.00	-28.78	-66.82	-43.09	1.31
5292.20	V	-47.67	-13.00	-34.67	-63.81	-54.17	6.50
7938.30	V	-34.80	-13.00	-21.80	-56.60	-37.90	3.10
10584.40	V	-42.50	-13.00	-29.50	-65.86	-43.81	1.31

Note: EIRP = S.G Power value + Correction factor.

3.3 Conducted Emissions

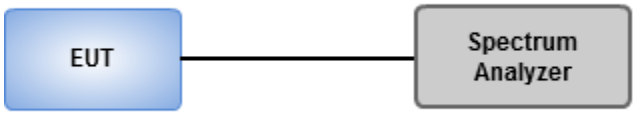
3.3.1 Limit of Conducted Emissions

For all fixed digital user stations, the attenuation factor shall be not less than 43 + 10 log (P) dB at the channel edge.

3.3.2 Test Procedures

1. Lowest, middle and highest operating channels are tested for this item.
2. Scan frequency range is from 30 MHz ~ 27 GHz.
3. Set RBW = 1MHz, VBW = 3MHz, detector = average, sweep time = auto.
4. Record the max trace value and capture the test plot of each sub frequency band.

3.3.3 Test Setup



3.3.4 Test Result of Conducted Emissions

CB: 5MHz

Mode	CB: 5MHz, QPSK	Mode	CB: 5MHz, 16QAM
Low Channel		**Low Channel**	
			
Mid. Channel		**Mid. Channel**	
			
High Channel		**High Channel**	
			

Mode	CB: 5MHz, 64QAM	Mode	---
Low Channel		**Low Channel**	
		---	
Mid. Channel		**Mid. Channel**	
		---	
High Channel		**High Channel**	
		---	

CB: 10MHz

Mode	CB: 10MHz, QPSK	Mode	CB: 10MHz, 16QAM
Low Channel		**Low Channel**	
			
Mid. Channel		**Mid. Channel**	
			
High Channel		**High Channel**	
			

Mode	CB: 10MHz, 64QAM	Mode	---
Low Channel		**Low Channel**	
	---		
Mid. Channel		**Mid. Channel**	
	---		
High Channel		**High Channel**	
	---		

CB: 15MHz

Mode	CB: 15MHz, QPSK	Mode	CB: 15MHz, 16QAM
Low Channel		Low Channel	
			
Mid. Channel		Mid. Channel	
			
High Channel		High Channel	
			

Mode	CB: 15MHz, 64QAM	Mode	---
Low Channel		**Low Channel**	
		---	
Mid. Channel		**Mid. Channel**	
		---	
High Channel		**High Channel**	
		---	

CB: 20MHz

Mode	CB: 20MHz, QPSK	Mode	CB: 20MHz, 16QAM
Low Channel		**Low Channel**	
			
Mid. Channel		**Mid. Channel**	
			
High Channel		**High Channel**	
			

Mode	CB: 20MHz, 64QAM	Mode	---
Low Channel		**Low Channel**	
		---	
Mid. Channel		**Mid. Channel**	
		---	
High Channel		**High Channel**	
		---	