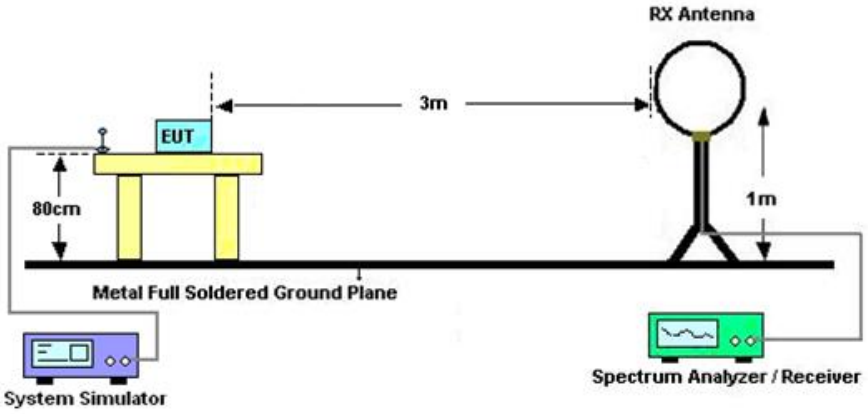
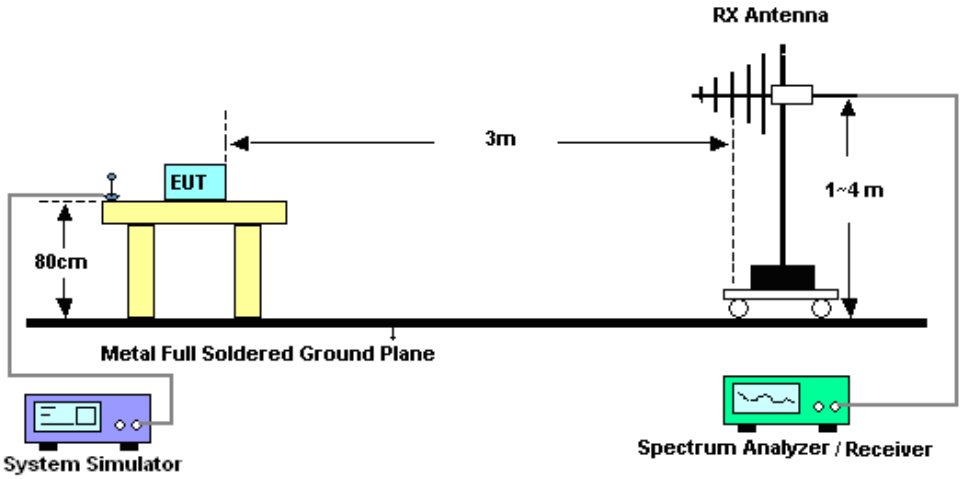
3.8.4 Test Setup

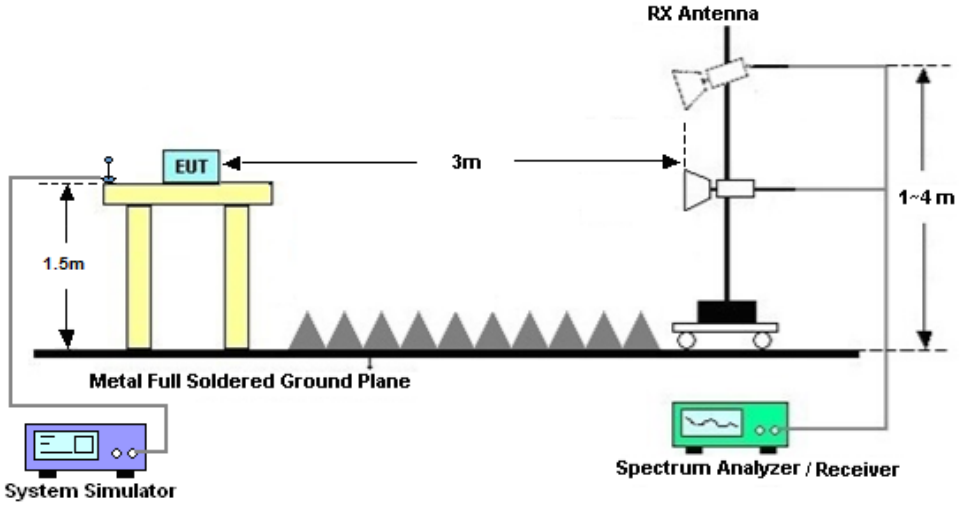
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.8.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.8.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix C&D.

3.8.7 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic or 40GHz, whichever is lower)

Please refer to Appendix C&D.

3.8.8 Duty cycle correction factor for average measurement

Please refer to Appendix E.

3.9 AC Conducted Emission Measurement

3.9.1 Limit of AC Conducted Emission

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

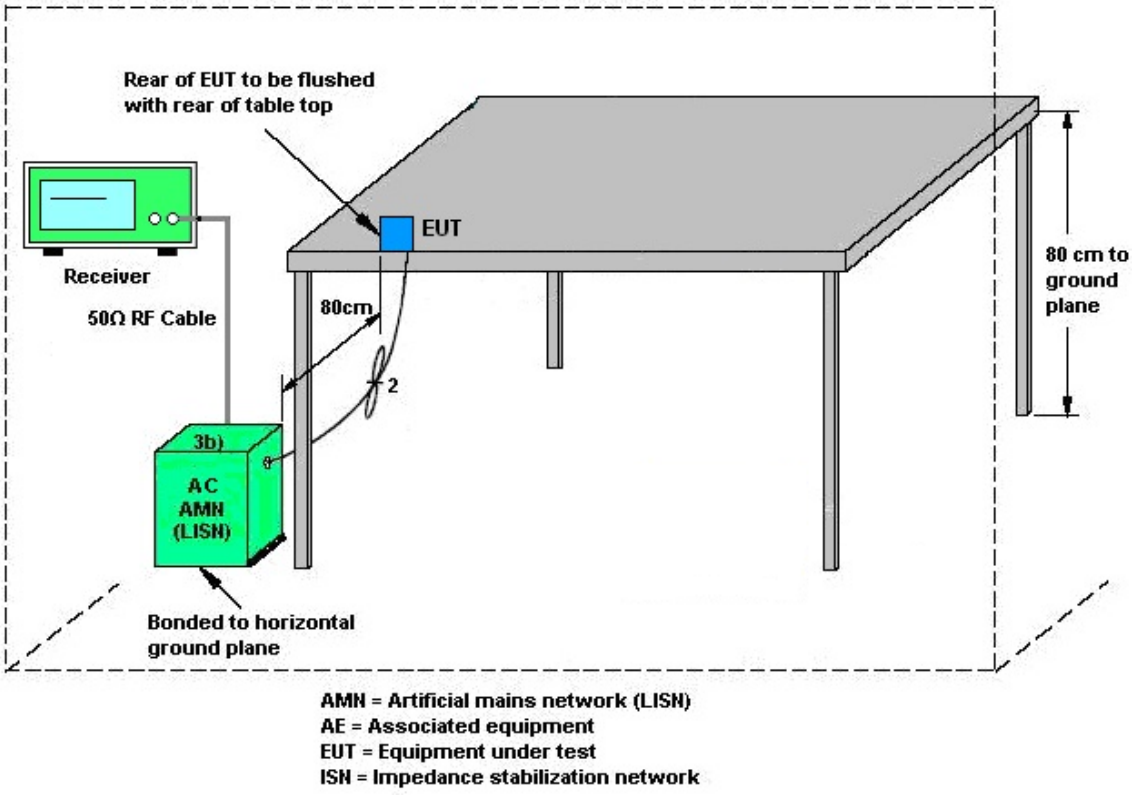
3.9.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.9.3 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

3.9.4 Test Setup



AMN = Artificial mains network (LISN)
AE = Associated equipment
EUT = Equipment under test
ISN = Impedance stabilization network

3.9.5 Test Result of AC Conducted Emission

Please refer to Appendix B.

3.10 Antenna Requirements

3.10.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.10.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.10.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 07, 2022	Feb. 21, 2023~ Feb. 22, 2023	Apr. 06, 2023	Conducted (TH01-SZ)
Pulse Power Senor	Anritsu	MA2411B	1339473	30MHz~40GHz	Dec. 27, 2022	Feb. 21, 2023~ Feb. 22, 2023	Dec. 26, 2023	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 27, 2022	Feb. 21, 2023~ Feb. 22, 2023	Dec. 26, 2023	Conducted (TH01-SZ)
Attenuator	MICROWAV	EMVE2214-10	2	30MHz-26.5GHz	Feb. 22, 2022	Feb. 21, 2023~ Feb. 22, 2023	Feb. 22, 2023	Conducted (TH01-SZ)
Attenuator	MICROWAV	EMVE2214-10	2	30MHz-26.5GHz	Feb. 22, 2023		Feb. 22, 2024	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 07, 2022	Feb. 14, 2023~ Mar. 03, 2023	Jul. 06, 2023	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 28, 2022	Feb. 14, 2023~ Mar. 03, 2023	Jul. 27, 2024	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Sep. 28, 2021	Feb. 14, 2023~ Mar. 03, 2023	Sep. 27, 2023	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 07, 2022	Feb. 14, 2023~ Mar. 03, 2023	Jul. 06, 2023	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 07, 2022	Feb. 14, 2023~ Mar. 03, 2023	Jul. 06, 2023	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 09, 2022	Feb. 14, 2023~ Mar. 03, 2023	Apr. 08, 2023	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 19, 2022	Feb. 14, 2023~ Mar. 03, 2023	Oct. 18, 2023	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 19, 2022	Feb. 14, 2023~ Mar. 03, 2023	Oct. 18, 2023	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 19, 2022	Feb. 14, 2023~ Mar. 03, 2023	Oct. 18, 2023	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010003043	N/A	Nov. 10, 2022	Feb. 14, 2023~ Mar. 03, 2023	Nov. 10, 2023	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Feb. 14, 2023~ Mar. 03, 2023	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Feb. 14, 2023~ Mar. 03, 2023	NCR	Radiation (03CH02-SZ)
EMI Receiver	R&S	ESR7	102297	9kHz~7GHz;	Jul. 06, 2022	Feb. 16, 2023	Jul. 05, 2023	Conduction (CO02-SZ)
AC LISN	R&S	ENV216	101499	9kHz~30MHz	Jul. 06, 2022	Feb. 16, 2023	Jul. 05, 2023	Conduction (CO02-SZ)
AC Power Source	CHROMA	61601	616010002470	100Vac~250Vac	Nov. 10, 2022	Feb. 16, 2023	Nov. 09, 2023	Conduction (CO02-SZ)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	±1.34 dB
Conducted Emissions	±1.34 dB
Occupied Channel Bandwidth	±0.13 %

Uncertainty of Conducted Emission Measurement (150 kHz ~ 30 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.7dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.0dB

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	5.1dB

---------- THE END ----------

Appendix A. Conducted Test Results

Appendix A. Test Result of Conducted Test Items

Test Engineer:	Chen Ran	Temperature:	21~25	°C
Test Date:	2023/2/21~2023/2/22	Relative Humidity:	51~54	%

TEST RESULTS DATA
20dB and 99% Occupied Bandwidth and Hopping Channel Separation

Mod.	Data Rate	NTX	CH.	Freq. (MHz)	20db BW (MHz)	99% Bandwidth (MHz)	Hopping Channel Separation Measurement (MHz)	Hopping Channel Separation Measurement Limit (MHz)	Pass/Fail
DH	1Mbps	1	0	2402	0.854	0.753	0.999	0.5692	Pass
DH	1Mbps	1	39	2441	0.854	0.753	1.003	0.5692	Pass
DH	1Mbps	1	78	2480	0.854	0.753	1.003	0.5692	Pass
2DH	2Mbps	1	0	2402	1.250	1.140	0.999	0.8336	Pass
2DH	2Mbps	1	39	2441	1.250	1.143	1.003	0.8336	Pass
2DH	2Mbps	1	78	2480	1.250	1.140	1.003	0.8336	Pass
3DH	3Mbps	1	0	2402	1.246	1.140	0.999	0.8307	Pass
3DH	3Mbps	1	39	2441	1.246	1.140	1.003	0.8307	Pass
3DH	3Mbps	1	78	2480	1.246	1.143	0.999	0.8307	Pass

TEST RESULTS DATA
Dwell Time

Mod.	Hopping Channel Number Rate	Hops Over Occupancy Time(hops)	Package Transfer Time (msec)	Dwell Time (sec)	Limits (sec)	Pass/Fail
Nomal	79	106.67	2.9029	0.31	0.4	Pass
AFH	20	53.33	2.9029	0.15	0.4	Pass

TEST RESULTS DATA
Peak Power Table

DH	CH.	NTX	Peak Power (dBm)	Power Limit (dBm)	Test Result
DH5	0	1	9.86	20.97	Pass
	39	1	**9.90**	20.97	Pass
	78	1	9.85	20.97	Pass
2DH5	0	1	**10.10**	20.97	Pass
	39	1	10.09	20.97	Pass
	78	1	9.93	20.97	Pass
3DH5	0	1	10.11	20.97	Pass
	39	1	**10.17**	20.97	Pass
	78	1	9.94	20.97	Pass

TEST RESULTS DATA
Average Power Table
(Reporting Only)

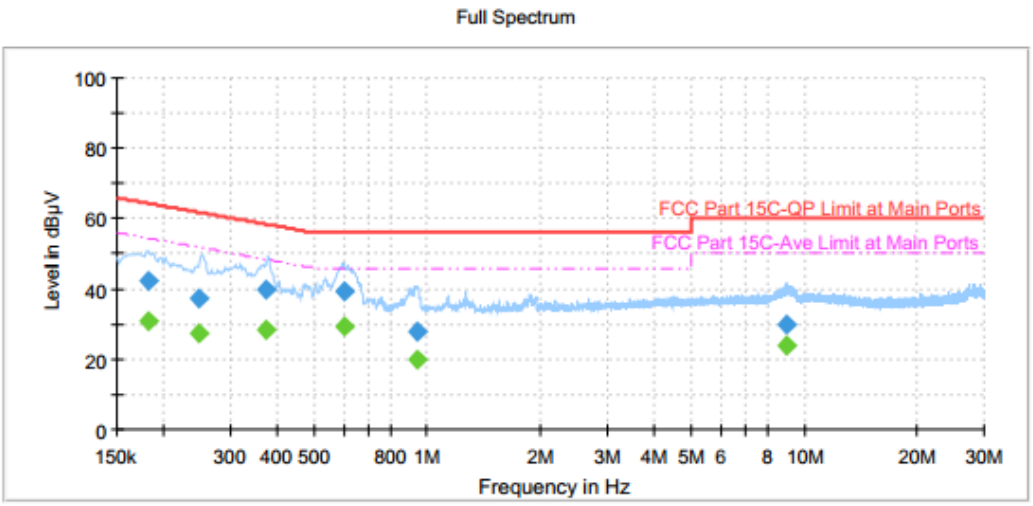
DH	CH.	NTX	Average Power (dBm)	Duty Factor (dB)
DH5	0	1	9.70	2.39
	39	1	**9.80**	2.39
	78	1	9.70	2.39
2DH5	0	1	**8.50**	2.41
	39	1	**8.50**	2.41
	78	1	8.20	2.41
3DH5	0	1	**8.50**	2.39
	39	1	**8.50**	2.39
	78	1	8.20	2.39

TEST RESULTS DATA
Number of Hopping Frequency

Number of Hopping (Channel)	Adaptive Frequency Hopping (Channel)	Limits (Channel)	Pass/Fail
79	20	> 15	Pass

Appendix B. AC Conducted Emission Test Results

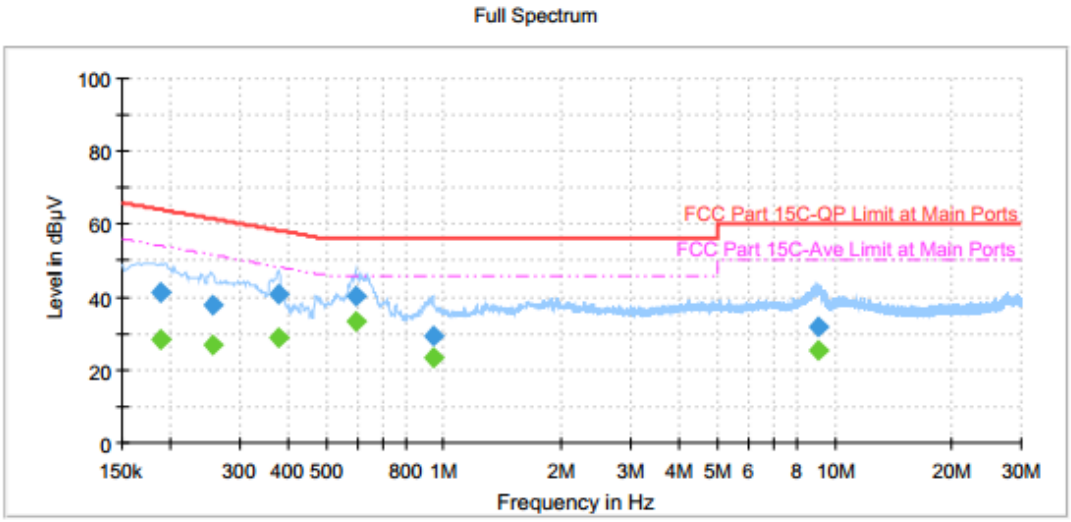
Test Engineer :	TaoZhang	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.182850	42.09	---	64.36	22.27	L1	OFF	19.7
0.182850	---	30.80	54.36	23.55	L1	OFF	19.7
0.249000	37.34	---	61.79	24.45	L1	OFF	19.7
0.249000	---	27.12	51.79	24.67	L1	OFF	19.7
0.375000	39.72	---	58.39	18.67	L1	OFF	19.7
0.375000	---	28.56	48.39	19.82	L1	OFF	19.7
0.602250	39.31	---	56.00	16.69	L1	OFF	19.8
0.602250	---	29.43	46.00	16.57	L1	OFF	19.8
0.939660	27.66	---	56.00	28.34	L1	OFF	19.8
0.939660	---	19.75	46.00	26.25	L1	OFF	19.8
8.963250	29.70	---	60.00	30.30	L1	OFF	20.0
8.963250	---	24.11	50.00	25.89	L1	OFF	20.0

Test Engineer :	TaoZhang	**Temperature :**	22~25℃
		Relative Humidity :	50~55%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)	Margin (dB)	Line	Filter	Corr. (dB)
0.188250	41.15	---	64.11	22.97	N	OFF	19.7
0.188250	---	28.49	54.11	25.63	N	OFF	19.7
0.255750	37.91	---	61.57	23.66	N	OFF	19.7
0.255750	---	26.74	51.57	24.82	N	OFF	19.7
0.377340	41.04	---	58.34	17.30	N	OFF	19.7
0.377340	---	28.82	48.34	19.51	N	OFF	19.7
0.596220	40.30	---	56.00	15.70	N	OFF	19.7
0.596220	---	33.24	46.00	12.76	N	OFF	19.7
0.939570	29.26	---	56.00	26.74	N	OFF	19.7
0.939570	---	23.42	46.00	22.58	N	OFF	19.7
9.060000	31.82	---	60.00	28.18	N	OFF	20.0
9.060000	---	25.43	50.00	24.57	N	OFF	20.0

Appendix C. Radiated Spurious Emission

Test Engineer :	Shun ping You	Temperature :	24~25°C
		Relative Humidity :	48~49%

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH00 2402MHz		2382.87	46.05	-27.95	74	39.12	32.35	6.37	31.79	137	133	P	H
		2382.87	21.26	-32.74	54	-	-	-	-	137	133	A	H
	*	2402	104.9	-	-	97.83	32.36	6.44	31.73	137	133	P	H
	*	2402	80.11	-	-	-	-	-	-	137	133	A	H
		2379.3	47.33	-26.67	74	40.4	32.35	6.37	31.79	100	240	P	V
		2379.3	22.54	-31.46	54	-	-	-	-	100	240	A	V
	*	2402	100.77	-	-	93.7	32.36	6.44	31.73	100	240	P	V
	*	2402	75.98	-	-	-	-	-	-	100	240	A	V
BT CH 78 2480MHz	*	2480	104.95	-	-	97.59	32.39	6.53	31.56	139	138	P	H
	*	2480	80.16	-	-	-	-	-	-	139	138	A	H
		2486.16	47.49	-26.51	74	40.13	32.39	6.53	31.56	139	138	P	H
		2486.16	22.7	-31.3	54	-	-	-	-	139	138	A	H
	*	2480	98.83	-	-	91.47	32.39	6.53	31.56	100	333	P	V
	*	2480	74.04	-	-	-	-	-	-	100	333	A	V
		2488.8	47.62	-26.38	74	40.25	32.4	6.53	31.56	100	333	P	V
		2488.8	22.83	-31.17	54	-	-	-	-	100	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

BT	Note	Frequency (MHz)	Level (dBμV/m)	Margin (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH 00 2402MHz		4804	44.13	-29.87	74	58.15	34.41	9.47	57.9	-	-	P	H
		4804	19.34	-34.66	54	-	-	-	-	-	-	A	H
		4804	45.78	-28.22	74	59.8	34.41	9.47	57.9	-	-	P	V
		4804	20.99	-33.01	54	-	-	-	-	-	-	A	V
BT CH 39 2441MHz		4882	42.13	-31.87	74	56.13	34.37	9.53	57.9	-	-	P	H
		4882	17.34	-36.66	54	-	-	-	-	-	-	A	H
		7323	45	-29	74	57.24	36.04	11.24	59.52	-	-	P	H
		7323	20.21	-33.79	54	-	-	-	-	-	-	A	H
		4882	42.68	-31.32	74	56.68	34.37	9.53	57.9	-	-	P	V
		4882	17.89	-36.11	54	-	-	-	-	-	-	A	V
		7323	44.44	-29.56	74	56.68	36.04	11.24	59.52	-	-	P	V
		7323	19.65	-34.35	54	-	-	-	-	-	-	A	V
BT CH 78 2480MHz		4960	42.55	-31.45	74	56.54	34.32	9.59	57.9	-	-	P	H
		4960	17.76	-36.24	54	-	-	-	-	-	-	A	H
		7440	45.13	-28.87	74	57.76	35.94	11.29	59.86	-	-	P	H
		7440	20.34	-33.66	54	-	-	-	-	-	-	A	H
		4960	43.17	-30.83	74	57.16	34.32	9.59	57.9	-	-	P	V
		4960	18.38	-35.62	54	-	-	-	-	-	-	A	V
		7440	43.74	-30.26	74	56.37	35.94	11.29	59.86	-	-	P	V
		7440	18.95	-35.05	54	-	-	-	-	-	-	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

2.4GHz BT (LF)

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		62.98	22.62	-17.38	40	37.39	18.31	1.79	34.87	-	-	P	H
		159.01	27.78	-15.72	43.5	41.66	18.45	2.37	34.7	-	-	P	H
		239.52	34.44	-11.56	46	48.95	17.24	2.95	34.7	-	-	P	H
		363.68	27.49	-18.51	46	38.11	20.55	3.4	34.57	-	-	P	H
		452.92	25.74	-20.26	46	33.99	22.79	3.46	34.5	-	-	P	H
		726.46	30.5	-15.5	46	33.81	27.36	3.73	34.4	-	-	P	H
		31.94	28.15	-11.85	40	43.64	18.01	1.24	34.74	-	-	P	V
		110.51	30.71	-12.79	43.5	47.65	15.76	2.08	34.78	-	-	P	V
		157.07	25.13	-18.37	43.5	38.9	18.57	2.36	34.7	-	-	P	V
		237.58	29.04	-16.96	46	43.63	17.17	2.94	34.7	-	-	P	V
		517.91	28.54	-17.46	46	35.97	23.65	3.42	34.5	-	-	P	V
		798.24	34.4	-11.6	46	36.51	27.83	4.36	34.3	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is Margin line.
P/A	Peak or Average
H/V	Horizontal or Vertical

A calculation example for radiated spurious emission is shown as below:

BT	Note	Frequency	Level	Margin	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
					Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 00 2402MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) =

Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

3. Margin (dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Margin (dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Margin (dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

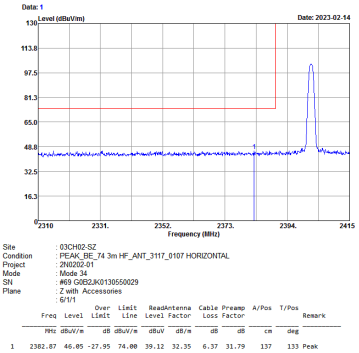
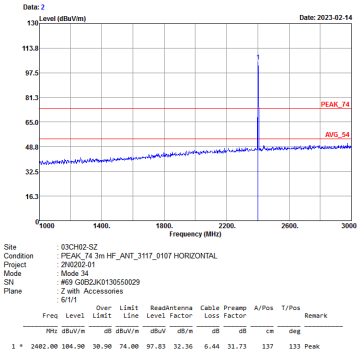
= -10.46(dB)

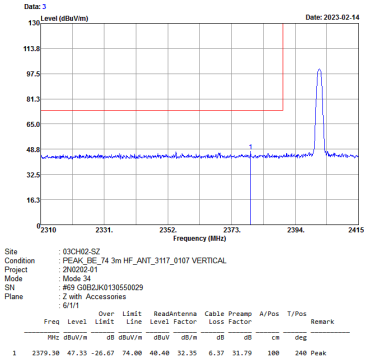
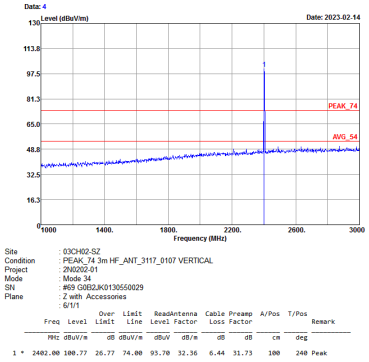
Both peak and average measured complies with the limit line, so test result is “PASS”.

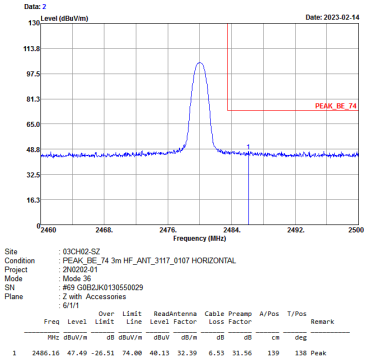
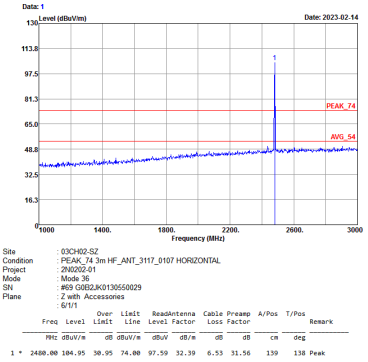
Appendix D. Radiated Spurious Emission Plots

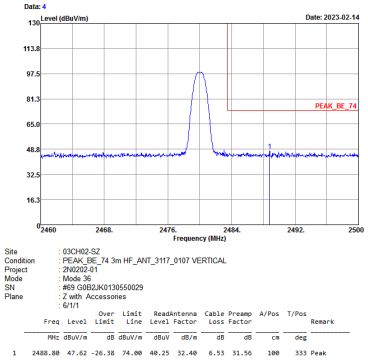
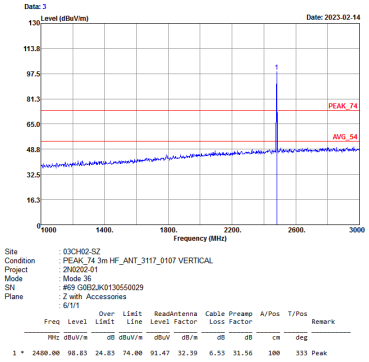
2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH00 2402MHz	
	Horizontal	Fundamental
Peak		

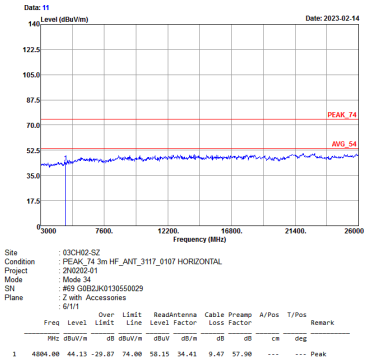
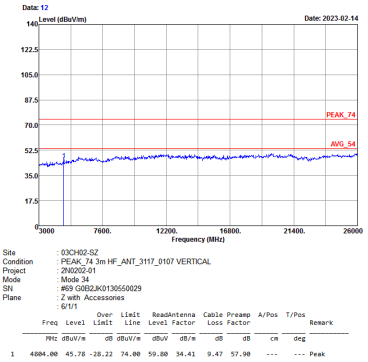
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH00 2402MHz	
	Vertical	Fundamental
Peak		

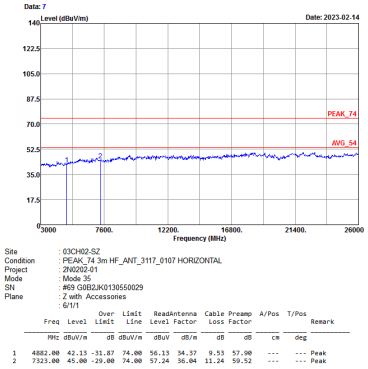
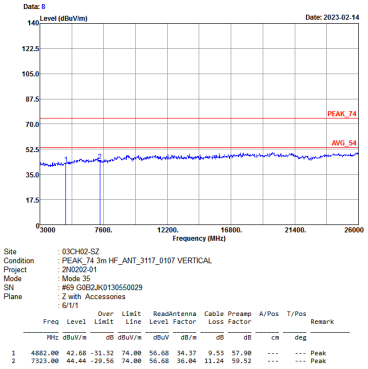
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak		

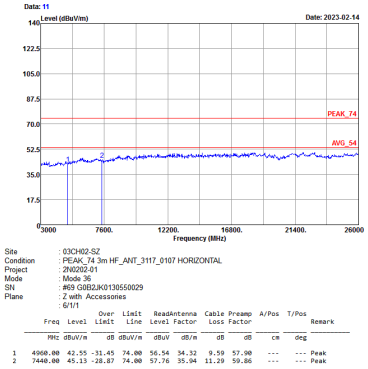
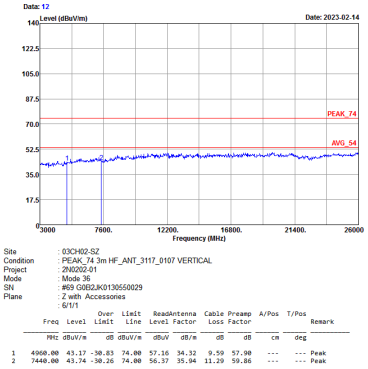
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
Peak		

2.4GHz 2400~2483.5MHz

BT (Harmonic @ 3m)

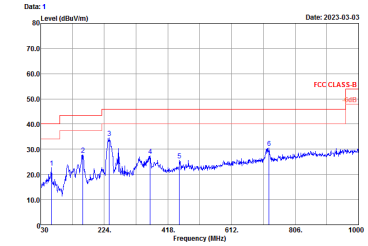
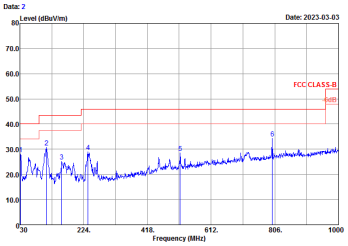
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH00 2402MHz	
	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 HORIZONTAL Project : ZN0202-01 Mode : Mode 34 SN : #69 G0B2JK0130550029 Plane : Z with Accessories : 6/1/1 Freq Level Over Limit Limit ReadAntenna Level Factor Cable Loss Factor Preamp A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 4804.00 44.13 -29.87 74.00 58.15 34.41 9.47 57.90 --- --- Peak	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 VERTICAL Project : ZN0202-01 Mode : Mode 34 SN : #69 G0B2JK0130550029 Plane : Z with Accessories : 6/1/1 Freq Level Over Limit Limit ReadAntenna Level Factor Cable Loss Factor Preamp A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 4804.00 45.78 -28.22 74.00 59.80 34.41 9.47 57.90 --- --- Peak

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH39 2441MHz	
	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 HORIZONTAL Project : 2N0202-01 Mode : Mode 35 SN : #69 G0B2JK0130550029 Plane : 2 with Accessories : 6/1/1 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 4882.00 42.13 -31.87 74.00 56.13 34.37 9.53 57.90 --- --- Peak 2 7323.00 45.00 -29.00 74.00 57.24 36.04 11.24 59.52 --- --- Peak	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 VERTICAL Project : 2N0202-01 Mode : Mode 35 SN : #69 G0B2JK0130550029 Plane : 2 with Accessories : 6/1/1 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Preamp Factor A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 4882.00 42.68 -31.32 74.00 56.68 34.37 9.53 57.90 --- --- Peak 2 7323.00 44.44 -29.56 74.00 56.68 36.04 11.24 59.52 --- --- Peak

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
Peak Avg.	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 HORIZONTAL Project : 2N0202-01 Mode : Mode 36 SN : #69 G0B2JK0130550029 Plane : Z with Accessories : 6/1/1 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 4960.00 42.55 -31.45 74.00 56.54 34.32 9.59 57.90 --- --- Peak 2 7440.00 45.13 -28.87 74.00 57.76 35.94 11.29 59.86 --- --- Peak	 Site : 03CH02-SZ Condition : PEAK_74 3m HF_ANT_3117_0107 VERTICAL Project : 2N0202-01 Mode : Mode 36 SN : #69 G0B2JK0130550029 Plane : Z with Accessories : 6/1/1 Freq Level Over Limit Limit Line ReadAntenna Level Factor Cable Loss Factor Preamp A/Pos T/Pos Remark MHz dBuV/m dB dBuV/m dBuV dB/m dB dB cm deg 1 4960.00 43.17 -30.83 74.00 57.16 34.32 9.59 57.90 --- --- Peak 2 7440.00 43.74 -30.26 74.00 56.37 35.94 11.29 59.86 --- --- Peak

Emission below 1GHz

2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
	BT LF	
	Horizontal	Vertical
QP / Peak		

Site : 03CH02-SZ
Condition : FCC CLASS-B 3m VULB9168-01003 HORIZONTAL
Project : 2N0202-01
Mode : Mode 37
SN : #69 GB2JK0130550029
Plane : Z with Accessories
: 6/1/1

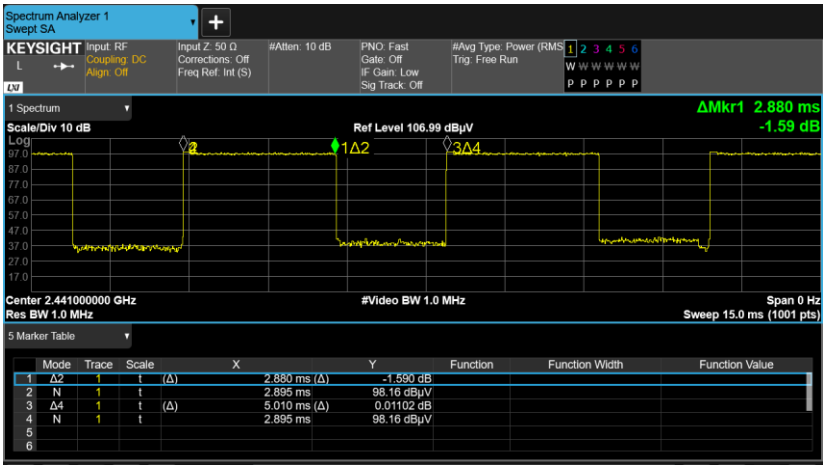
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	62.98	22.62	-17.38	40.00	37.39	18.31	1.79	34.87	---	---	Peak
2	159.01	27.78	-15.72	43.50	41.66	18.45	2.37	34.70	---	---	Peak
3	239.52	34.44	-11.56	46.00	48.95	17.24	2.95	34.70	---	---	Peak
4	363.68	27.49	-18.51	46.00	38.11	20.55	3.40	34.57	---	---	Peak
5	452.92	25.74	-20.26	46.00	33.99	22.79	3.46	34.50	---	---	Peak
6	726.46	30.50	-15.50	46.00	33.81	27.36	3.73	34.40	---	---	Peak

Site : 03CH02-SZ
Condition : FCC CLASS-B 3m VULB9168-01003 VERTICAL
Project : 2N0202-01
Mode : Mode 37
SN : #69 GB2JK0130550029
Plane : Z with Accessories
: 6/1/1

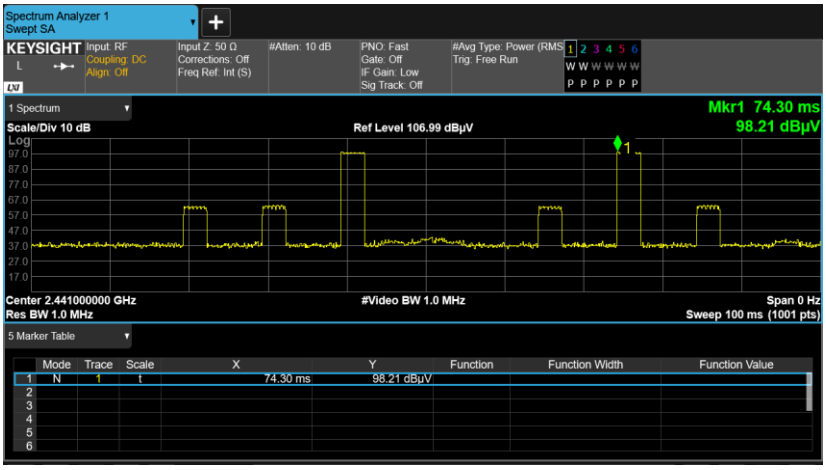
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	51.94	28.15	-11.85	40.00	45.64	18.01	1.24	34.74	---	---	Peak
2	110.51	30.71	-12.79	43.50	47.65	15.76	2.06	34.78	---	---	Peak
3	157.07	25.13	-18.37	43.50	38.00	18.57	2.36	34.70	---	---	Peak
4	237.58	29.04	-16.96	46.00	43.63	17.17	2.94	34.70	---	---	Peak
5	517.91	28.54	-17.46	46.00	35.97	23.05	3.42	34.50	---	---	Peak
6	798.24	34.40	-11.60	46.00	36.51	27.83	4.36	34.30	---	---	Peak

Appendix E. Duty Cycle Plots

3DH5 on time (One Pulse) Plot on Channel 39



3DH5 on time (Count Pulses) Plot on Channel 39



Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.88 / 100 = 5.76 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.79 dB
3. 3DH5 has the highest duty cycle worst case and is reported.