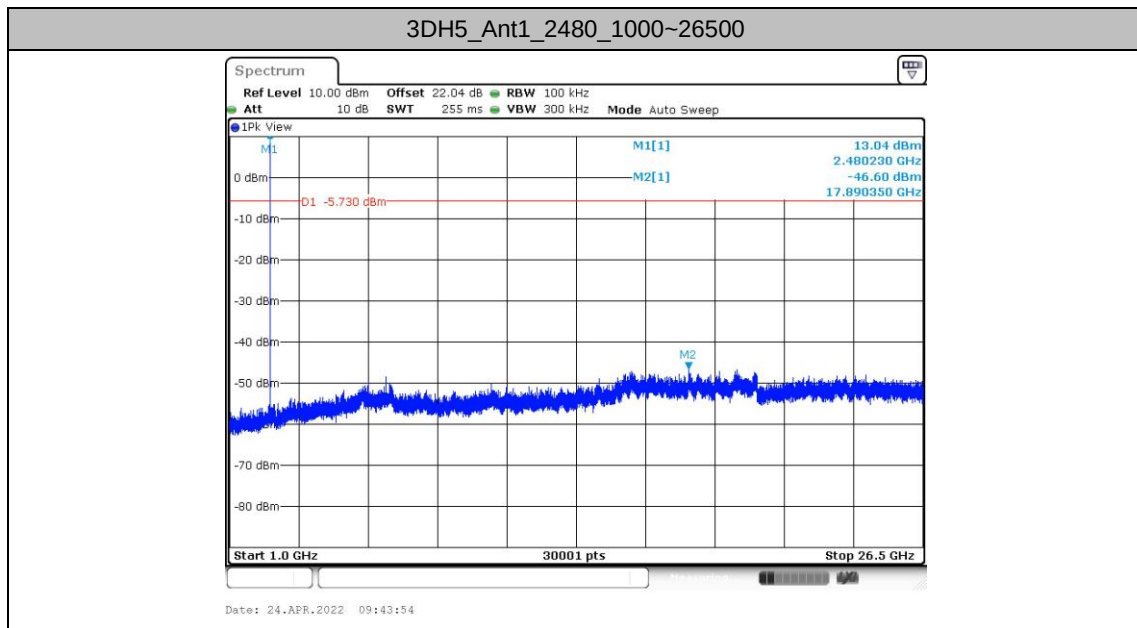
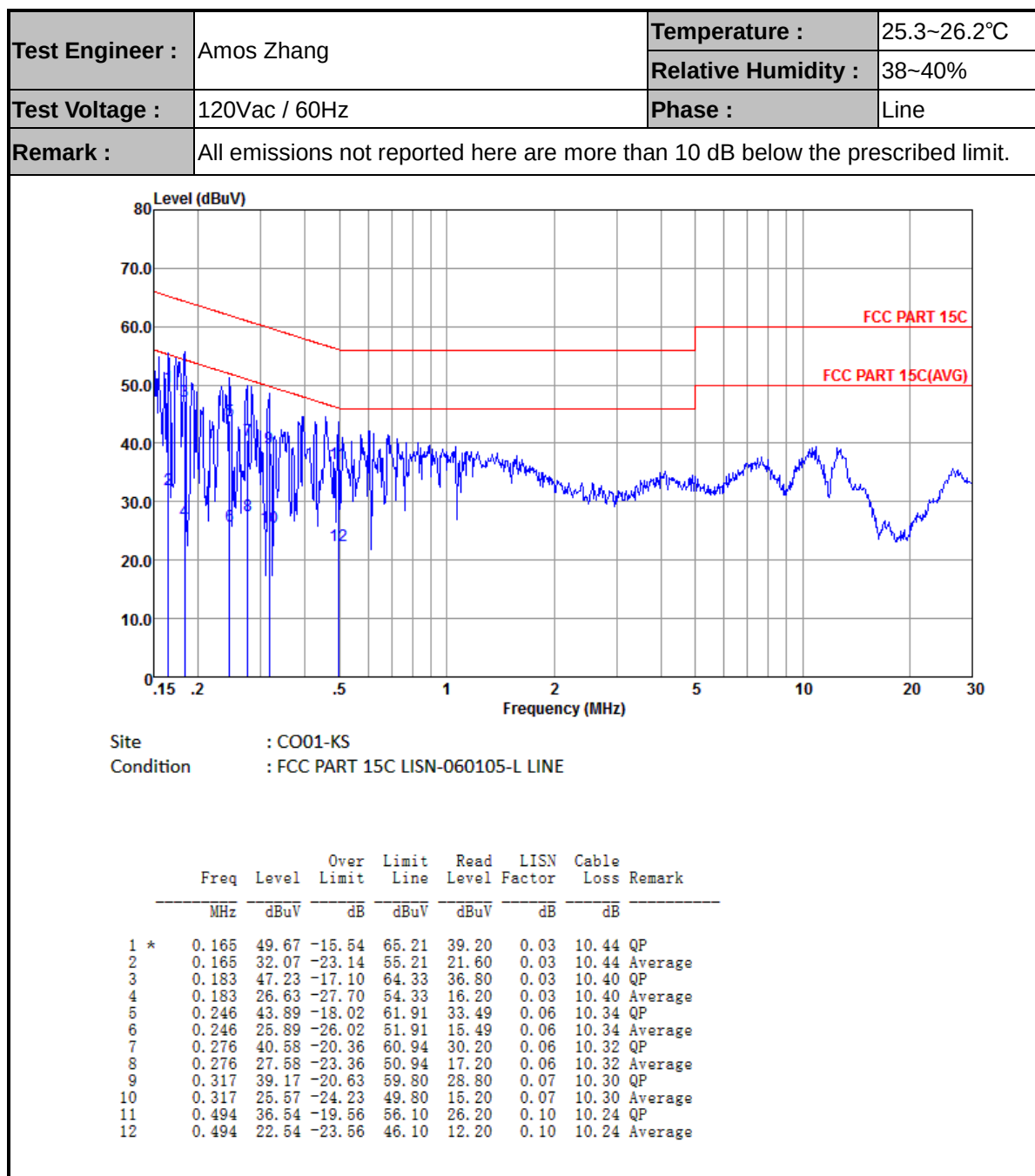




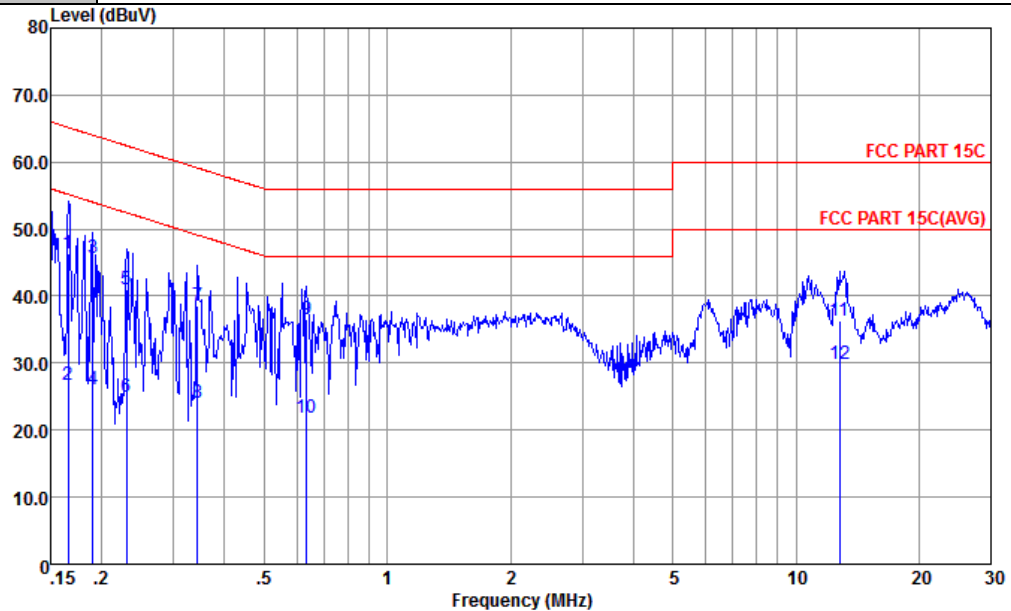


Appendix B. AC Conducted Emission Test Results





Test Engineer :	Amos Zhang	Temperature :	25.3~26.2°C
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	Phase :	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15C LISN-060105-N NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.166	46.45	-18.71	65.16	35.90	0.11	10.44	QP
2	0.166	26.85	-28.31	55.16	16.30	0.11	10.44	Average
3 *	0.190	45.69	-18.33	64.02	35.21	0.10	10.38	QP
4	0.190	26.09	-27.93	54.02	15.61	0.10	10.38	Average
5	0.230	40.94	-21.50	62.44	30.50	0.10	10.34	QP
6	0.230	25.04	-27.40	52.44	14.60	0.10	10.34	Average
7	0.343	38.59	-20.54	59.13	28.20	0.10	10.29	QP
8	0.343	23.99	-25.14	49.13	13.60	0.10	10.29	Average
9	0.634	36.55	-19.45	56.00	26.20	0.11	10.24	QP
10	0.634	21.85	-24.15	46.00	11.50	0.11	10.24	Average
11	12.784	36.25	-23.75	60.00	25.60	0.28	10.37	QP
12	12.784	29.95	-20.05	50.00	19.30	0.28	10.37	Average

Note:

- Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
- Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)



Appendix C. Radiated Spurious Emission

Only the worst results are shown in the report

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 78 2480MHz	*	2480	109.24	-	-	102.95	32.2	6.73	32.64	244	22	P	H
		2480	84.45	-	-	-	-	-	-	-	-	A	H
		2484.28	57.47	-16.53	74	51.18	32.2	6.73	32.64	244	22	P	H
		2484.28	32.68	-21.32	54	-	-	-	-	-	-	A	H
	*	2480	106.76	-	-	100.47	32.2	6.73	32.64	273	78	P	V
		2480	81.97	-	-	-	-	-	-	-	-	A	V
		2483.68	55.74	-18.26	74	49.45	32.2	6.73	32.64	273	78	P	V
		2483.68	30.95	-23.05	54	-	-	-	-	-	-	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)	Over Limit (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 78 2480MHz		4965	45.65	-28.35	74	63.85	33.9	9.61	61.71	300	0	P	H
		7440	42.69	-31.31	74	57.28	35.7	11.78	62.07	300	0	P	H
		4965	45.6	-28.4	74	63.8	33.9	9.61	61.71	100	0	P	V
		7440	42.19	-31.81	74	56.78	35.7	11.78	62.07	100	0	P	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	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	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		30.97	21.12	-18.88	40	28.72	24.32	0.89	32.81	-	-	P	H
		136.7	14.76	-28.74	43.5	29.14	16.68	1.85	32.91	-	-	P	H
		283.17	16.47	-29.53	46	27.79	18.97	2.71	33	-	-	P	H
		460.68	22.04	-23.96	46	28.83	23.01	3.43	33.23	-	-	P	H
		605.21	24.79	-21.21	46	28.39	25.75	3.93	33.28	-	-	P	H
		780.78	27.72	-18.28	46	28.16	28.12	4.46	33.02	-	-	P	H
		30.97	21.12	-18.88	40	28.72	24.32	0.89	32.81	-	-	P	V
		136.7	14.76	-28.74	43.5	29.14	16.68	1.85	32.91	-	-	P	V
		294.81	17.66	-28.34	46	28.76	19.13	2.77	33	-	-	P	V
		438.37	20.57	-25.43	46	27.85	22.52	3.35	33.15	-	-	P	V
		652.74	25.39	-20.61	46	28.4	26.21	4.08	33.3	-	-	P	V
		810.85	28.7	-17.3	46	28.67	28.37	4.54	32.88	-	-	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 over limit 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	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	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. Over Limit(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. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 55.45(dBμV/m) – 74(dBμV/m)
= -18.55(dB)

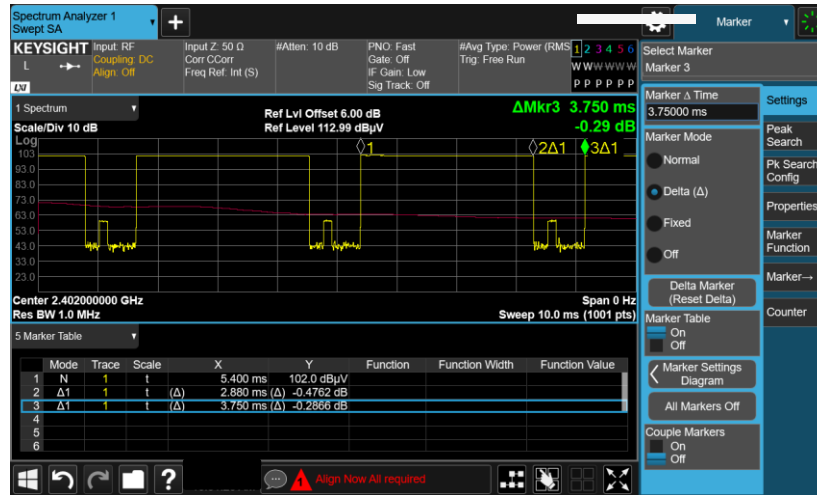
For Average Limit @ 2390MHz:

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. Over Limit(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. 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 = $20 * \log(\text{Duty cycle}) = -24.79 \text{ dB}$
3. 3DH5 has the highest duty cycle worst case and is reported.