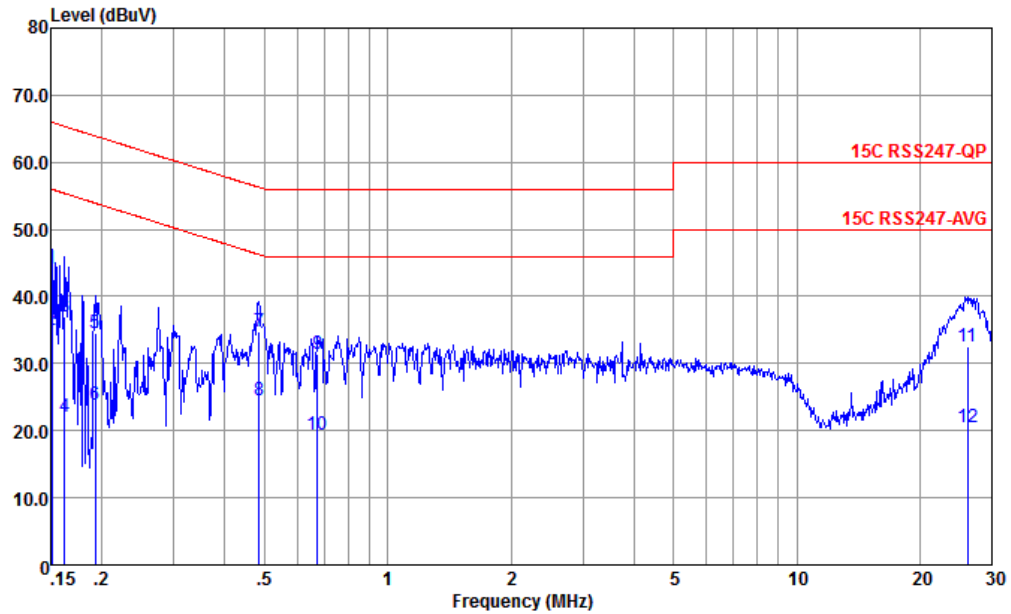




Appendix B. AC Conducted Emission Test Results

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

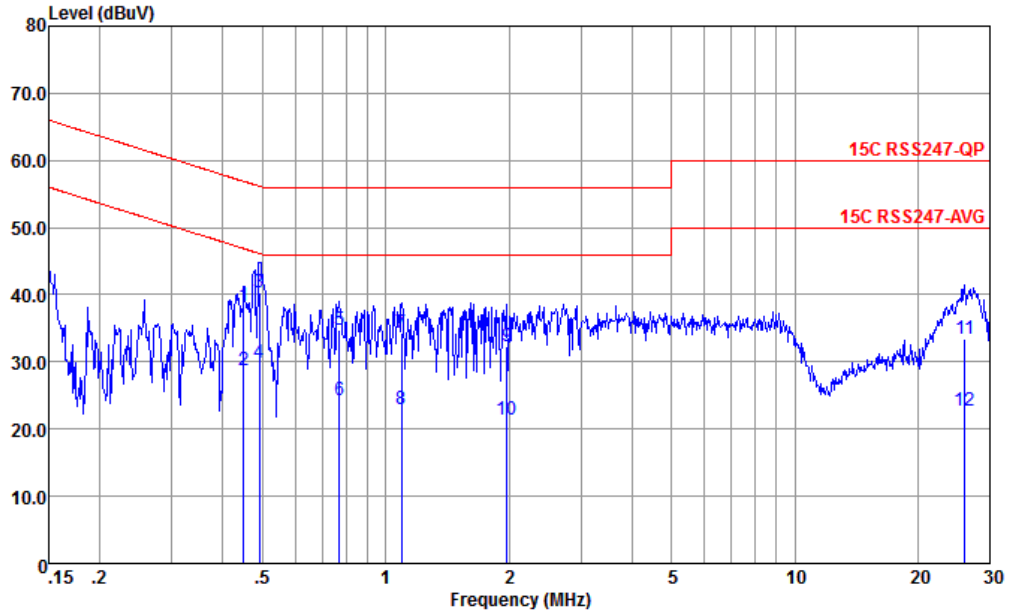


Site : CO01-KS
 Condition : 15C RSS247-QP LISN-060105-LINE LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.151	44.05	-21.91	65.96	33.50	0.07	10.48	QP
2 *	0.151	35.05	-20.91	55.96	24.50	0.07	10.48	Average
3	0.162	37.10	-28.24	65.34	26.59	0.06	10.45	QP
4	0.162	22.00	-33.34	55.34	11.49	0.06	10.45	Average
5	0.192	34.60	-29.33	63.93	24.19	0.03	10.38	QP
6	0.192	23.90	-30.03	53.93	13.49	0.03	10.38	Average
7	0.484	34.82	-21.45	56.27	24.60	-0.02	10.24	QP
8	0.484	24.42	-21.85	46.27	14.20	-0.02	10.24	Average
9	0.672	31.35	-24.65	56.00	21.19	-0.08	10.24	QP
10	0.672	19.36	-26.64	46.00	9.20	-0.08	10.24	Average
11	26.139	32.44	-27.56	60.00	22.20	-0.34	10.58	QP
12	26.139	20.44	-29.56	50.00	10.20	-0.34	10.58	Average



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 : 15C RSS247-QP LISN-060105-NEUTRAL NEUTRAL

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1	0.449	38.38	-18.51	56.89	28.20	-0.07	10.25	QP
2	0.449	28.68	-18.21	46.89	18.50	-0.07	10.25	Average
3 *	0.491	40.36	-15.78	56.14	30.20	-0.08	10.24	QP
4	0.491	29.76	-16.38	46.14	19.60	-0.08	10.24	Average
5	0.771	34.74	-21.26	56.00	24.60	-0.10	10.24	QP
6	0.771	24.34	-21.66	46.00	14.20	-0.10	10.24	Average
7	1.094	34.32	-21.68	56.00	24.20	-0.11	10.23	QP
8	1.094	23.02	-22.98	46.00	12.90	-0.11	10.23	Average
9	1.980	32.31	-23.69	56.00	22.20	-0.12	10.23	QP
10	1.980	21.41	-24.59	46.00	11.30	-0.12	10.23	Average
11	26.001	33.43	-26.57	60.00	23.20	-0.35	10.58	QP
12	26.001	22.83	-27.17	50.00	12.60	-0.35	10.58	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 case is shown in the report.

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 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 CH00 2402MHz		2384.23	48.12	-25.88	74	45.26	32.31	7.1	36.55	129	79	P	H
	*	2384.23	23.33	-30.67	54	-	-	-	-	-	-	A	H
		2402	87.65	-	-	84.63	32.4	7.13	36.51	129	79	P	H
		2402	62.86	-	-	-	-	-	-	-	-	A	H
		2376.95	49.07	-24.93	74	46.24	32.31	7.07	36.55	226	347	P	V
	*	2376.95	24.28	-29.72	54	-	-	-	-	-	-	A	V
		2402	90.72	-	-	87.7	32.4	7.13	36.51	226	347	P	V
		2402	65.93	-	-	-	-	-	-	-	-	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 00 2402MHz		4800	39.28	-34.72	74	60.33	34	10.2	65.25	300	0	P	H
		4800	40.55	-33.45	74	61.6	34	10.2	65.25	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		83.35	16.64	-23.36	40	34.24	13.82	1.38	32.8	-	-	P	H
		189.08	23.68	-19.82	43.5	38.8	15.63	2.09	32.84	-	-	P	H
		248.25	21.72	-24.28	46	33.78	18.3	2.41	32.77	-	-	P	H
		321	24.09	-21.91	46	34.44	19.79	2.73	32.87	-	-	P	H
		442.25	23.24	-22.76	46	30.65	22.4	3.21	33.02	-	-	P	H
		782.72	27.58	-18.42	46	29.95	26.11	4.28	32.76	-	-	P	H
		60.07	16.75	-23.25	40	35.91	12.58	1.16	32.9	-	-	P	V
		135.73	24.35	-19.15	43.5	38.81	16.6	1.77	32.83	-	-	P	V
		205.57	27.44	-16.06	43.5	42.33	15.76	2.18	32.83	-	-	P	V
		317.12	26.63	-19.37	46	37.08	19.7	2.71	32.86	-	-	P	V
		530.52	23.06	-22.94	46	28.06	24.52	3.52	33.04	-	-	P	V
		784.66	27.35	-18.65	46	29.7	26.13	4.28	32.76	-	-	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		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
CH 00		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H
2402MHz													

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)

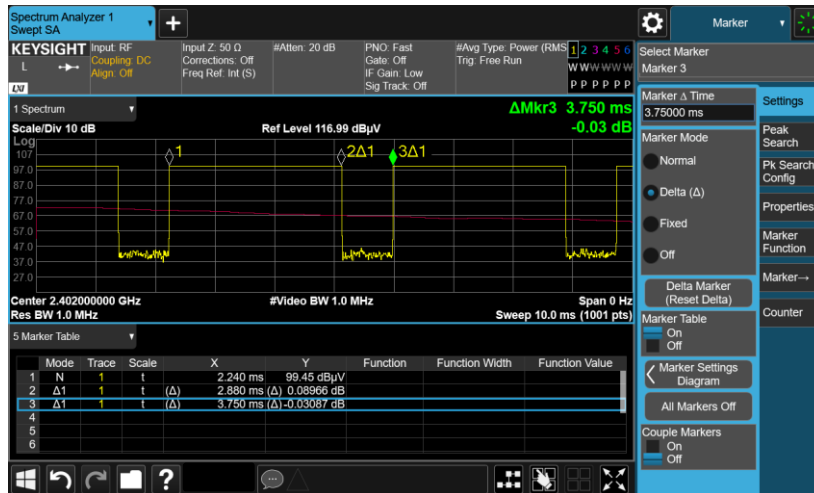
For Average Limit @ 2390MHz:

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)

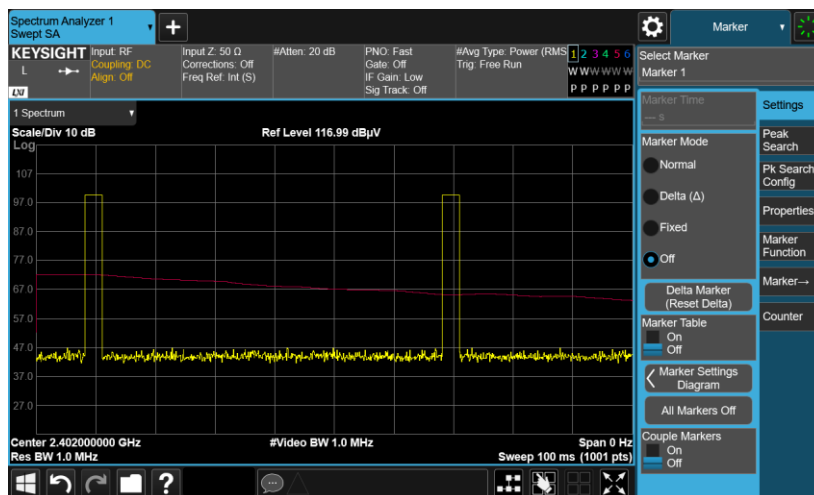
Both peak and average measured complies with the limit line, so test result is “PASS”.

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.