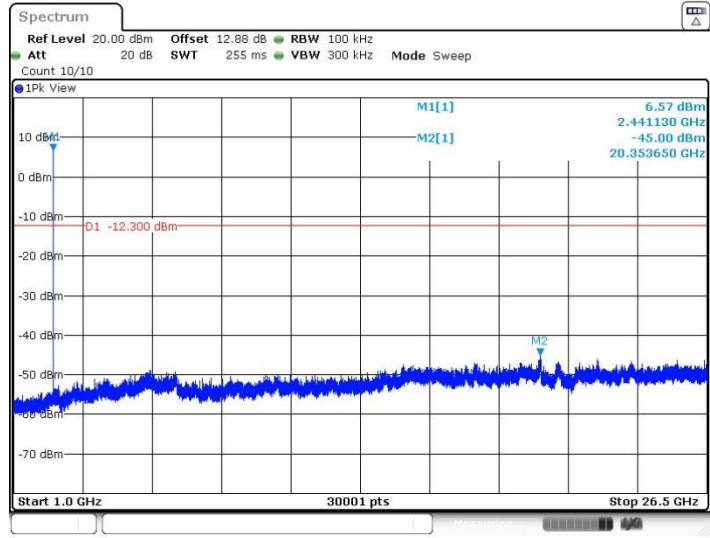


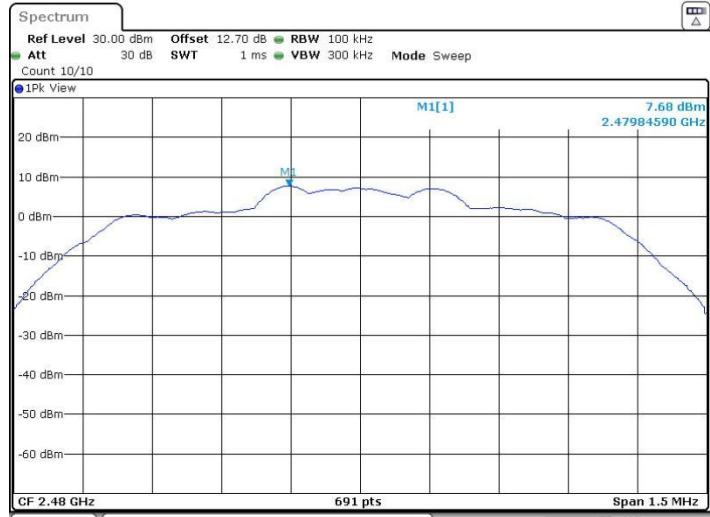


2DH1_Ant1_2441_1000~26500



Date: 29.AUG.2022 09:31:12

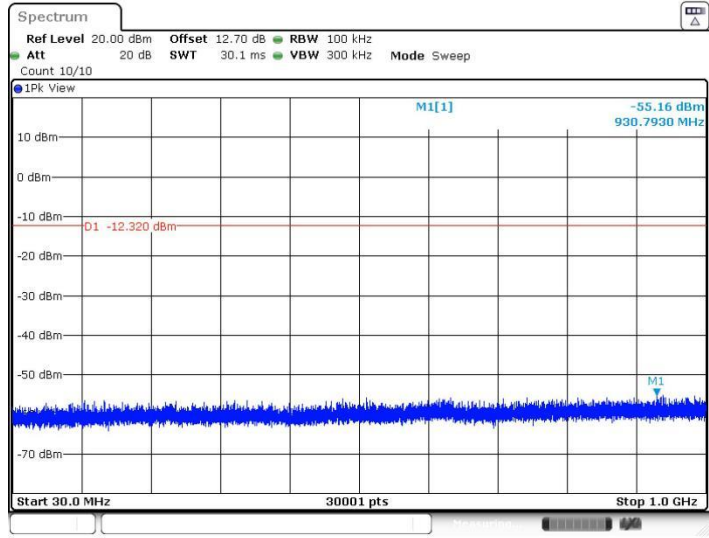
2DH1_Ant1_2480_0~Reference



Date: 29.AUG.2022 09:31:48

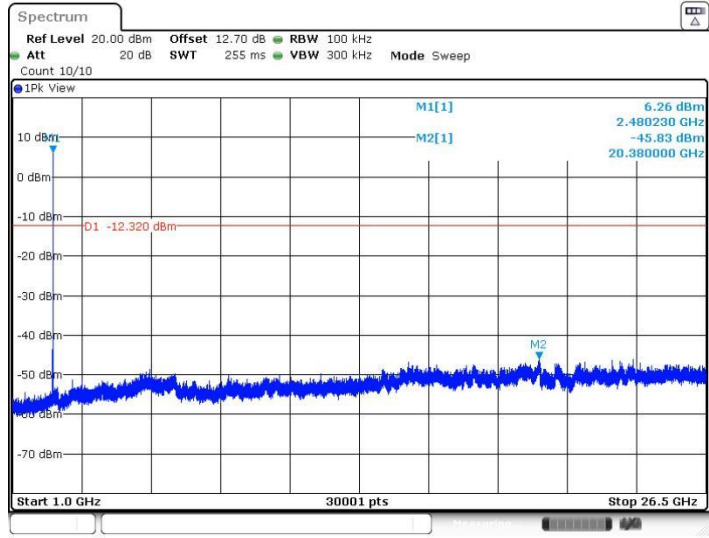


2DH1_Ant1_2480_30~1000



Date: 29.AUG.2022 09:31:55

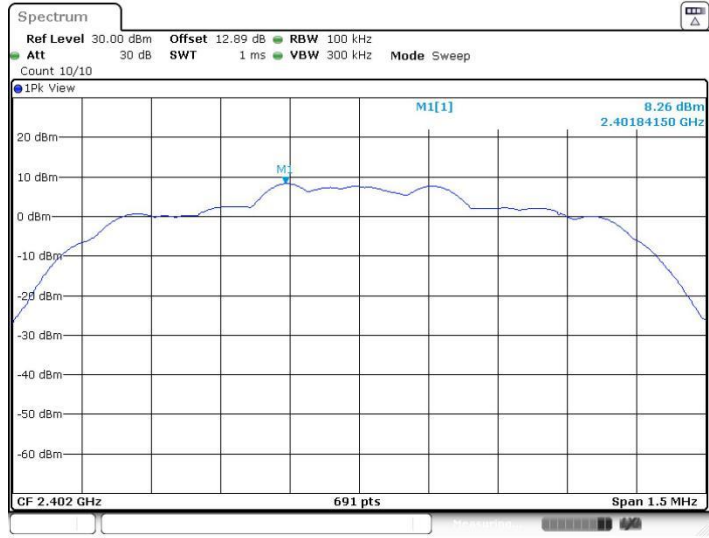
2DH1_Ant1_2480_1000~26500



Date: 29.AUG.2022 09:32:32

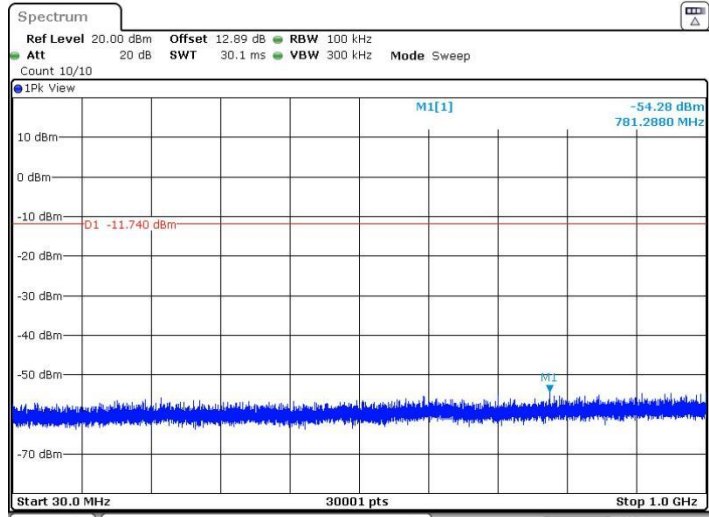


3DH1_Ant1_2402_0~Reference



Date: 29.AUG.2022 09:33:11

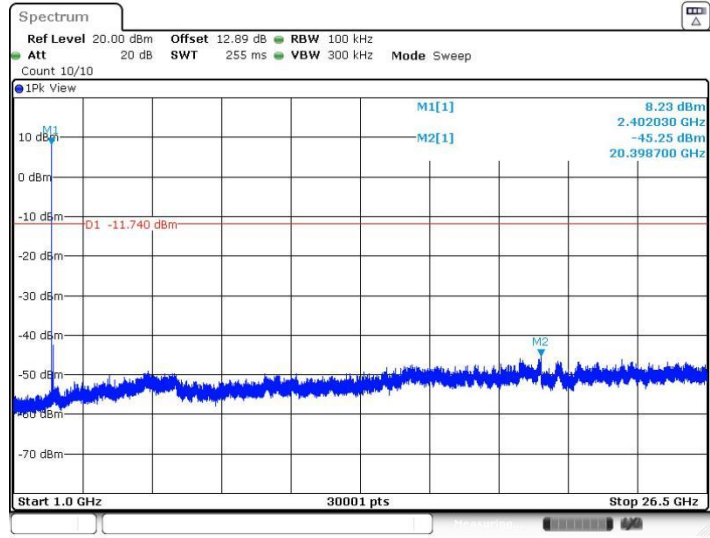
3DH1_Ant1_2402_30~1000



Date: 29.AUG.2022 09:33:17

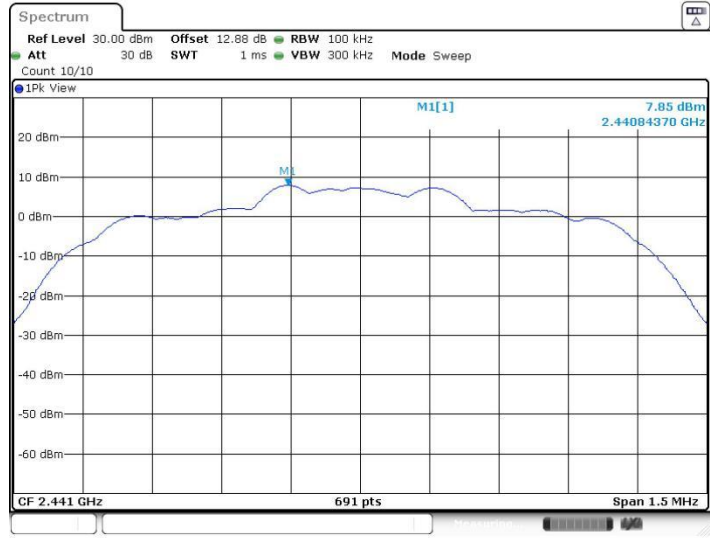


3DH1_Ant1_2402_1000~26500

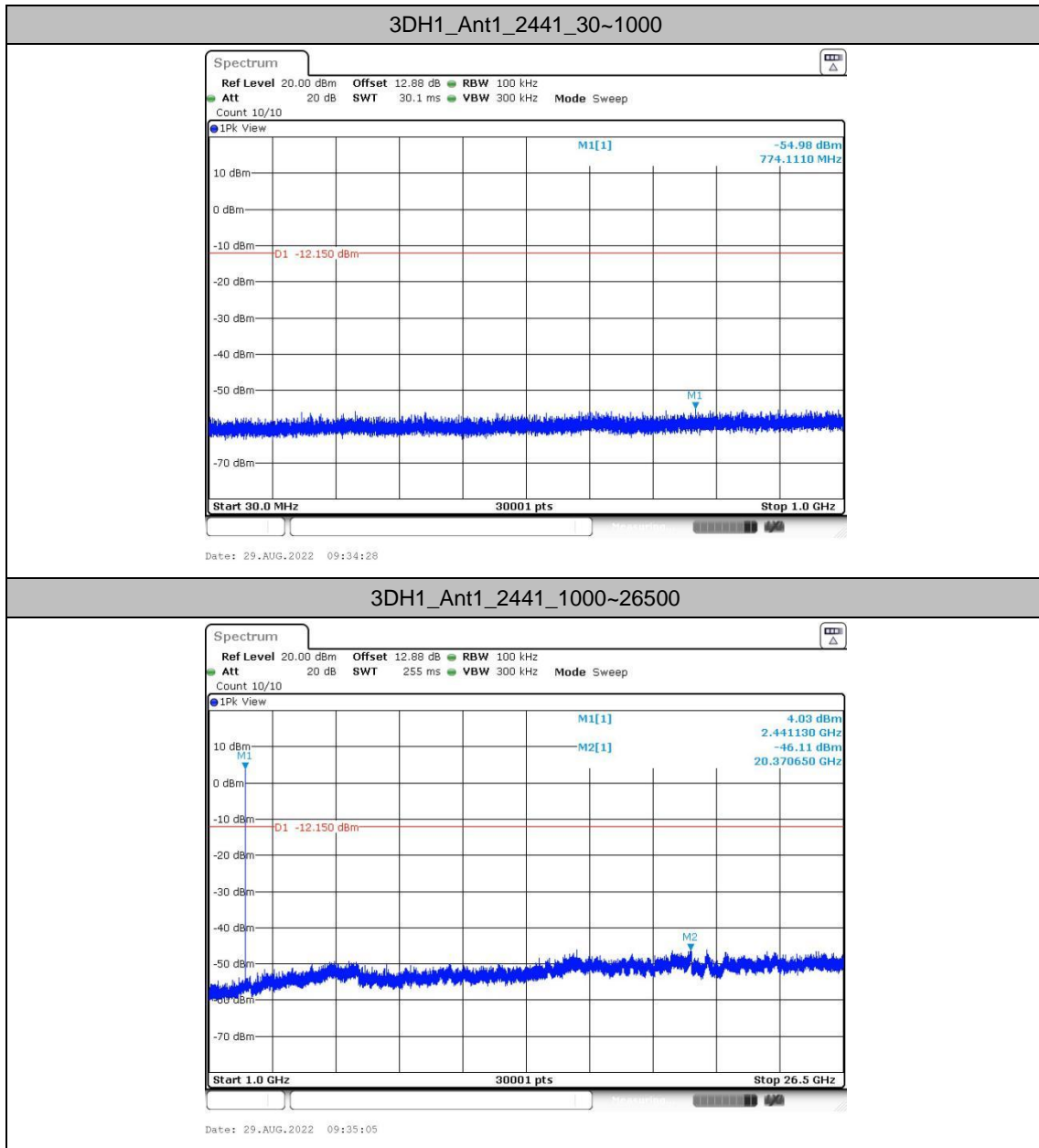


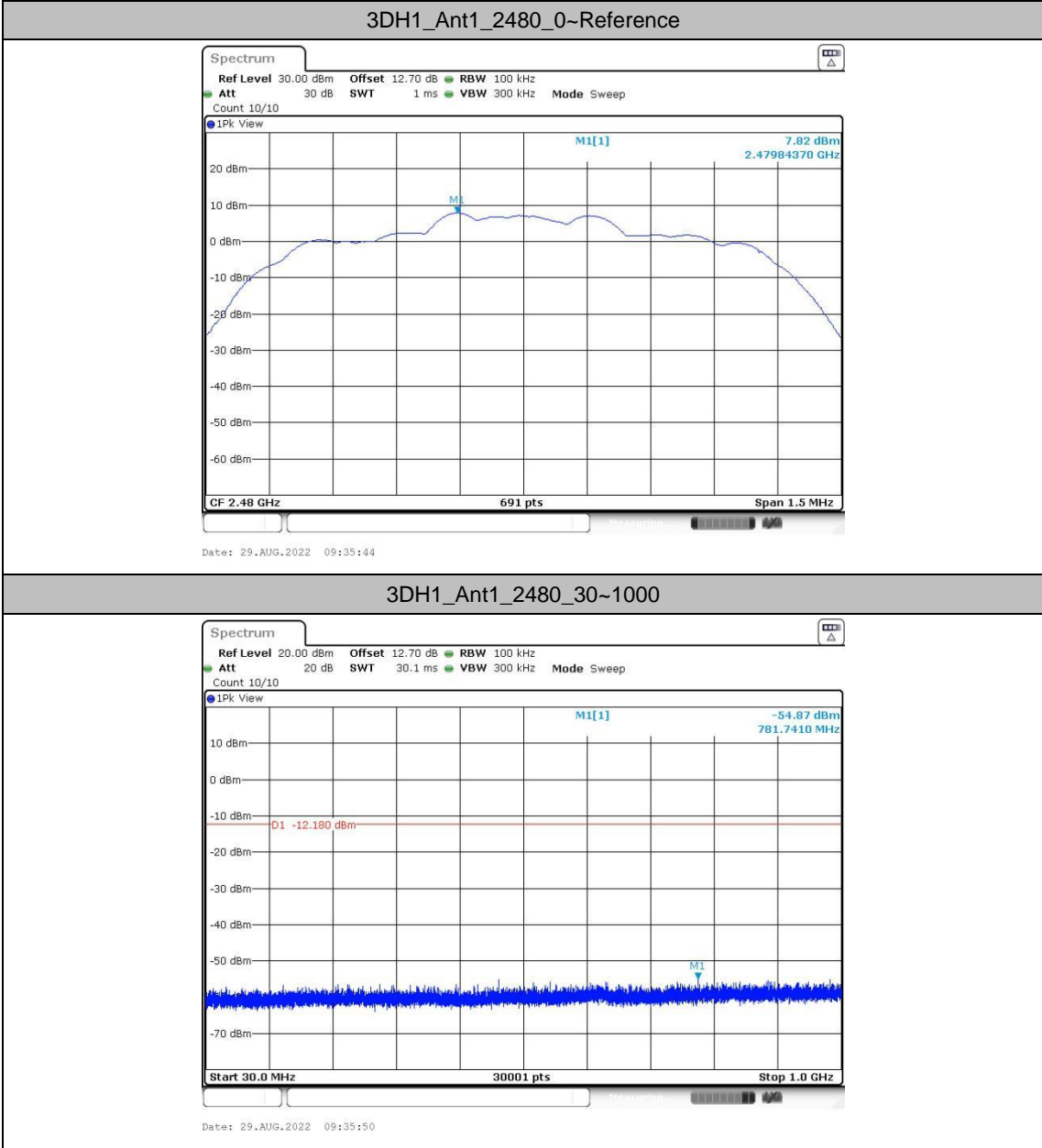
Date: 29.AUG.2022 09:33:54

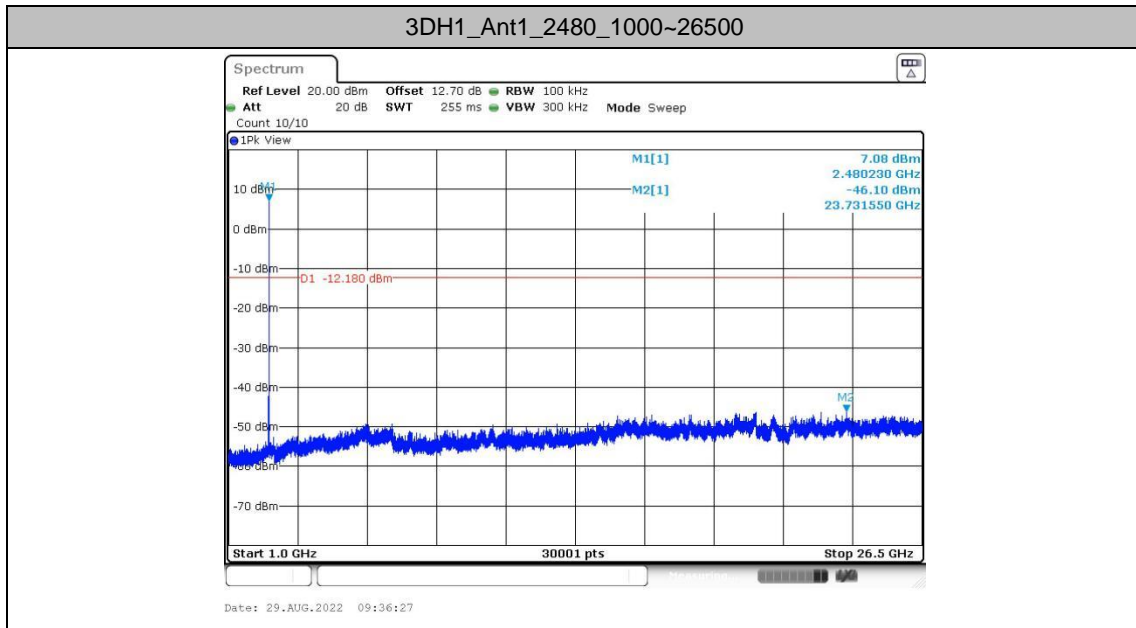
3DH1_Ant1_2441_0~Reference



Date: 29.AUG.2022 09:34:21



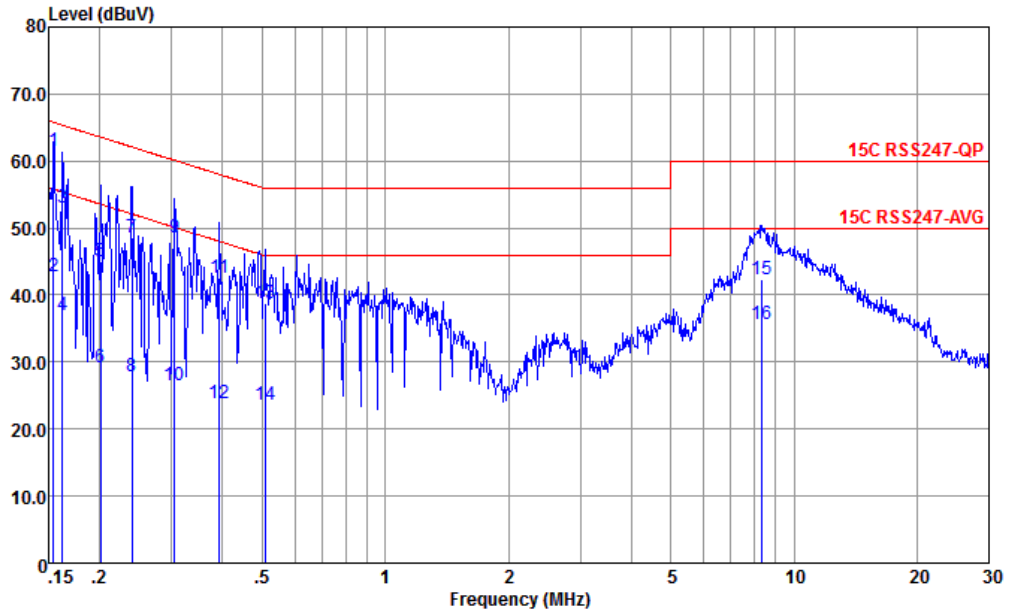






Appendix B. AC Conducted Emission Test Results

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.		

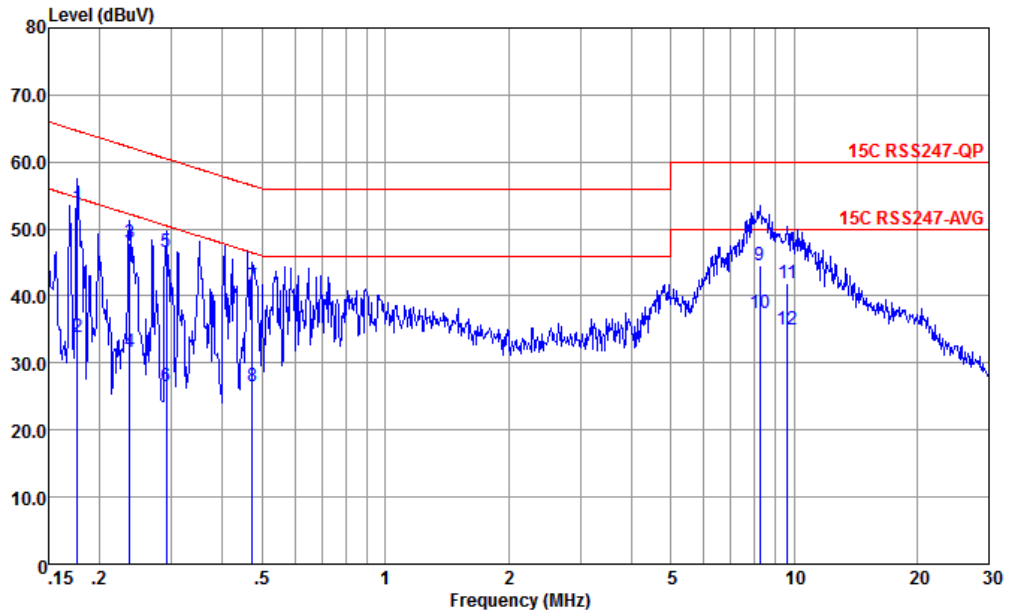


Site : CO01-KS
 Condition : 15C RSS247-QP LISN-060105-LINE LINE

	Freq	Level	Over	Limit	Read	LISN	Cable	Remark
	MHz	dBuV	Limit	Line	Level	Factor	Loss	
			dB	dBuV	dBuV	dB	dB	
1 *	0.154	61.59	-4.19	65.78	51.09	0.07	10.43	QP
2	0.154	42.69	-13.09	55.78	32.19	0.07	10.43	Average
3	0.162	53.08	-12.26	65.34	42.59	0.06	10.43	QP
4	0.162	37.08	-18.26	55.34	26.59	0.06	10.43	Average
5	0.201	45.04	-18.54	63.58	34.60	0.02	10.42	QP
6	0.201	29.24	-24.34	53.58	18.80	0.02	10.42	Average
7	0.240	48.63	-13.45	62.08	38.20	0.04	10.39	QP
8	0.240	27.93	-24.15	52.08	17.50	0.04	10.39	Average
9	0.305	48.60	-11.50	60.10	38.19	0.06	10.35	QP
10	0.305	26.60	-23.50	50.10	16.19	0.06	10.35	Average
11	0.393	42.51	-15.48	57.99	32.20	0.01	10.30	QP
12	0.393	23.91	-24.08	47.99	13.60	0.01	10.30	Average
13	0.507	38.67	-17.33	56.00	28.49	-0.03	10.21	QP
14	0.507	23.67	-22.33	46.00	13.49	-0.03	10.21	Average
15	8.367	42.39	-17.61	60.00	32.10	-0.16	10.45	QP
16	8.367	35.59	-14.41	50.00	25.30	-0.16	10.45	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 *	0.177	53.27	-11.37	64.64	42.81	0.04	10.42	QP
2	0.177	33.77	-20.87	54.64	23.31	0.04	10.42	Average
3	0.237	47.90	-14.32	62.22	37.50	0.01	10.39	QP
4	0.237	31.60	-20.62	52.22	21.20	0.01	10.39	Average
5	0.291	46.51	-13.99	60.50	36.20	-0.04	10.35	QP
6	0.291	26.61	-23.89	50.50	16.30	-0.04	10.35	Average
7	0.474	41.35	-15.10	56.45	31.20	-0.08	10.23	QP
8	0.474	26.45	-20.00	46.45	16.30	-0.08	10.23	Average
9	8.235	44.48	-15.52	60.00	34.20	-0.15	10.43	QP
10	8.235	37.48	-12.52	50.00	27.20	-0.15	10.43	Average
11	9.654	41.92	-18.08	60.00	31.50	-0.18	10.60	QP
12	9.654	34.92	-15.08	50.00	24.50	-0.18	10.60	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

Note: All modes had been tested and only the worst channel test data is shown in the report

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

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 78 2480MHz		2483.5	52.30	-21.70	74	49.53	32.34	7.25	36.82	121	139	P	H
	*	2483.5	27.51	-26.49	54	-	-	-	-	-	-	A	H
		2480	100.51	-	-	97.74	32.34	7.25	36.82	121	139	P	H
		2480	75.72	-	-	-	-	-	-	-	-	A	H
		2484.88	52.71	-21.29	74	49.94	32.34	7.25	36.82	100	101	P	V
	*	2484.88	27.92	-26.08	54	-	-	-	-	-	-	A	V
		2480	102.28	-	-	99.51	32.34	7.25	36.82	100	101	P	V
		2480	77.49	-	-	-	-	-	-	-	-	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	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 78 2480MHz		4965	43.14	-30.86	74	64.2	34	10.41	65.47	300	0	P	H
		7440	42.42	-31.58	74	60.15	35.79	12.79	66.31	300	0	P	H
		4965	41.96	-32.04	74	63.02	34	10.41	65.47	100	0	P	V
		7440	42.23	-31.77	74	59.96	35.79	12.79	66.31	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.
		(MHz)	(dBμV/m)	(dB)	Limit	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
					Line	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2.4GHz BT LF		100.81	26.97	-16.53	43.5	41.27	17.05	1.52	32.87	-	-	P	H
		170.65	28.36	-15.14	43.5	43.2	16	1.99	32.83	-	-	P	H
		250.19	27.19	-18.81	46	39.12	18.42	2.42	32.77	-	-	P	H
		362.71	24.98	-21.02	46	34.23	20.75	2.9	32.9	-	-	P	H
		616.85	28.32	-17.68	46	32.53	25.03	3.79	33.03	-	-	P	H
		774.96	31	-15	46	33.45	26.05	4.26	32.76	-	-	P	H
		44.55	28.08	-11.92	40	43.57	16.47	1.02	32.98	-	-	P	V
		167.74	26.57	-16.93	43.5	41.37	16.06	1.97	32.83	-	-	P	V
		218.18	25.97	-20.03	46	40.02	16.51	2.25	32.81	-	-	P	V
		362.71	24.73	-21.27	46	33.98	20.75	2.9	32.9	-	-	P	V
		639.16	28.29	-17.71	46	32.24	25.16	3.86	32.97	-	-	P	V
	807.94	31.27	-14.73	46	33.3	26.31	4.34	32.68	-	-	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.
		(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:

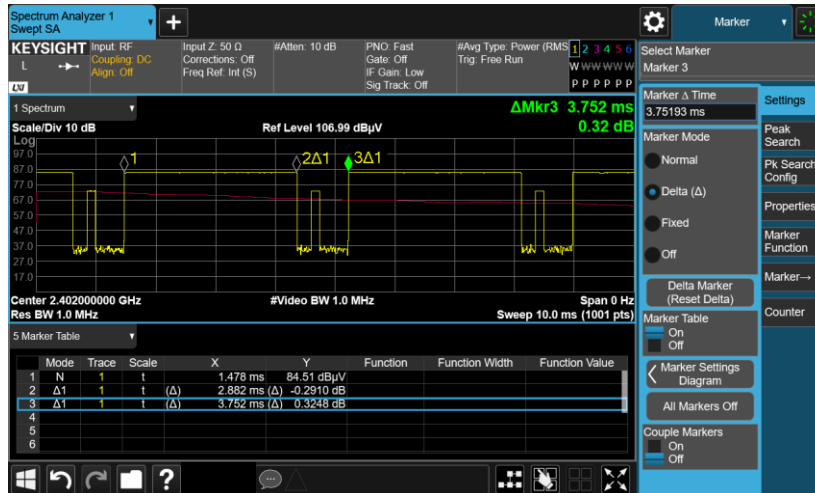
1. Level(dBμV/m)
= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)
= 43.54 (dBμV/m)
2. Over Limit(dB)
= Level(dBμV/m) – Limit Line(dBμV/m)
= 43.54(dBμV/m) – 54(dBμV/m)
= -10.46(dB)

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



Appendix D. Duty Cycle Plots

DH5 on time (One Pulse) Plot on Channel 39



DH5 on time (Count Pulses) Plot on Channel 39



Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.882 / 100 = 5.76 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.79 dB
3. DH5 has the highest duty cycle worst case and is reported.