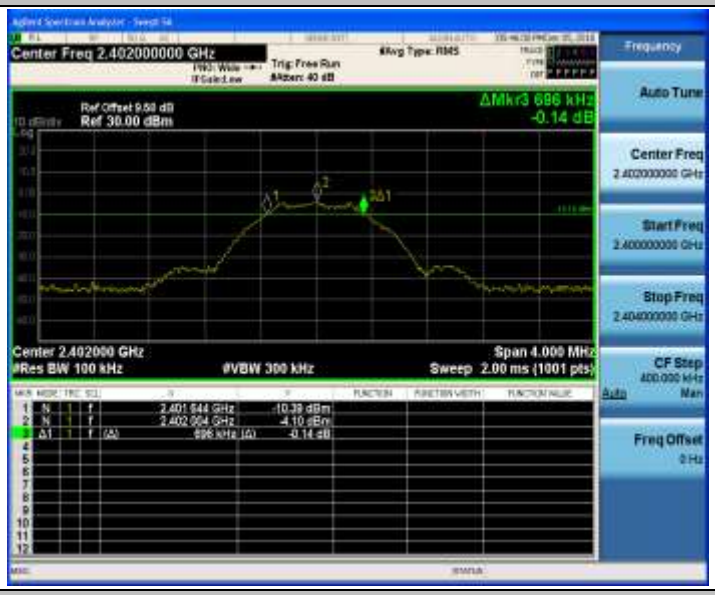
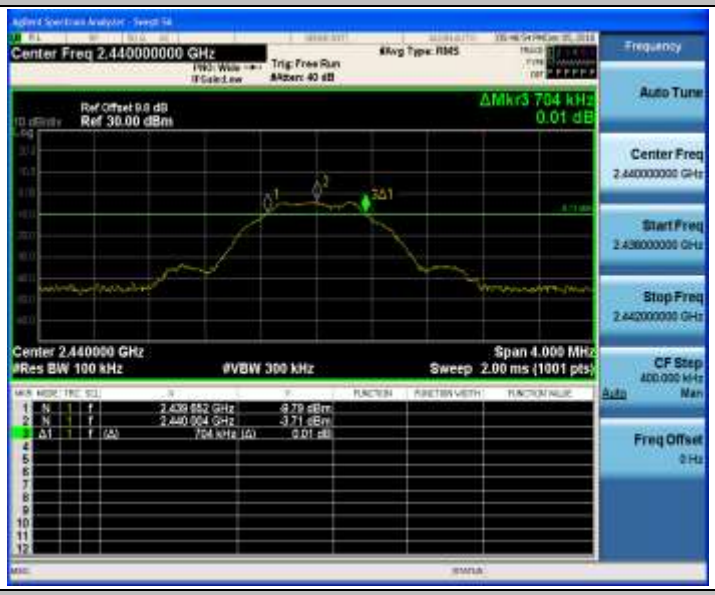
Appendix for Test report

Appendix A: DTS Bandwidth

Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT4.2	Ant1	2402	0.696	2401.644	2402.340	---	PASS
		2440	0.704	2439.652	2440.356	---	PASS
		2480	0.708	2479.640	2480.348	---	PASS

Test Graphs

BLE_BT4.2_Ant1_2402

BLE_BT4.2_Ant1_2440

BLE_BT4.2_Ant1_2480

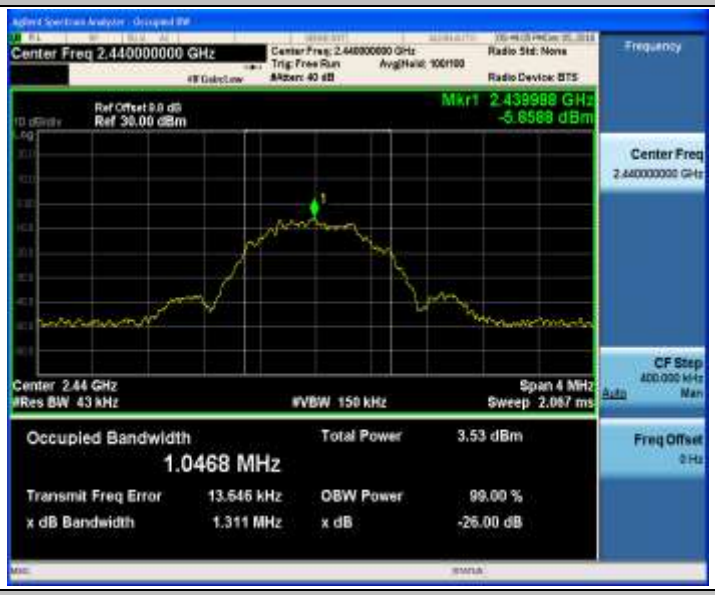
Appendix B: Occupied Channel Bandwidth

Test Result

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_BT4.2	Ant1	2402	1.0444	2401.490	2402.534	---	PASS
		2440	1.0468	2439.490	2440.537	---	PASS
		2480	1.0428	2479.490	2480.533	---	PASS

Test Graphs

BLE_BT4.2_Ant1_2402

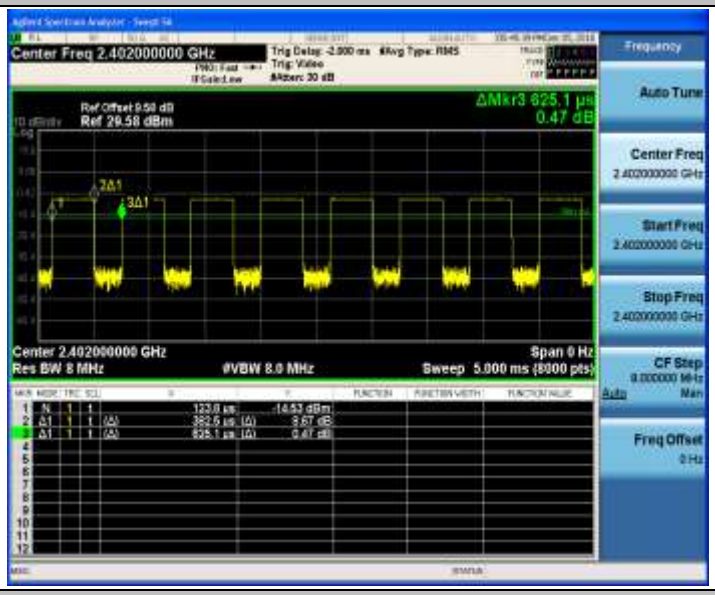
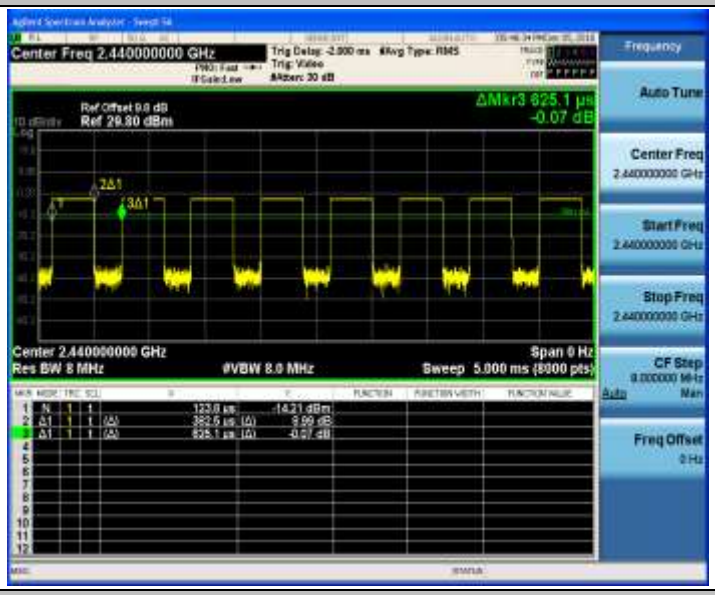
BLE_BT4.2_Ant1_2440

BLE_BT4.2_Ant1_2480

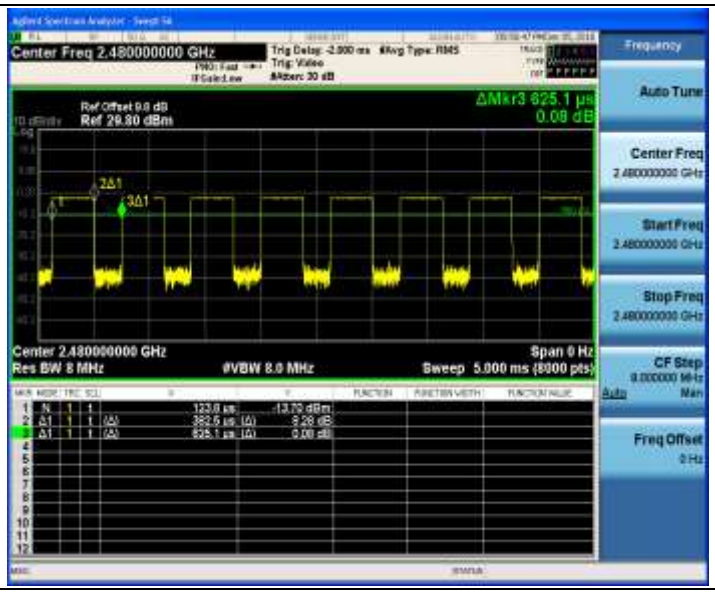
Appendix C: Duty Cycle

Test Result

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
BLE_BT4.2	Ant1	2402	0.38	0.63	61.20
		2440	0.38	0.63	61.20
		2480	0.38	0.63	61.20

Test Graphs

BLE_BT4.2_Ant1_2402

BLE_BT4.2_Ant1_2440

BLE_BT4.2_Ant1_2480



Appendix D: Maximum Peak conducted output power

Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.2	Ant1	2402	-2.91	30	PASS
		2440	-2.56	30	PASS
		2480	-2.47	30	PASS

Test Graphs

BLE_BT4.2_Ant1_2402

BLE_BT4.2_Ant1_2440

BLE_BT4.2_Ant1_2480

Appendix E: Maximum power spectral density

Test Result

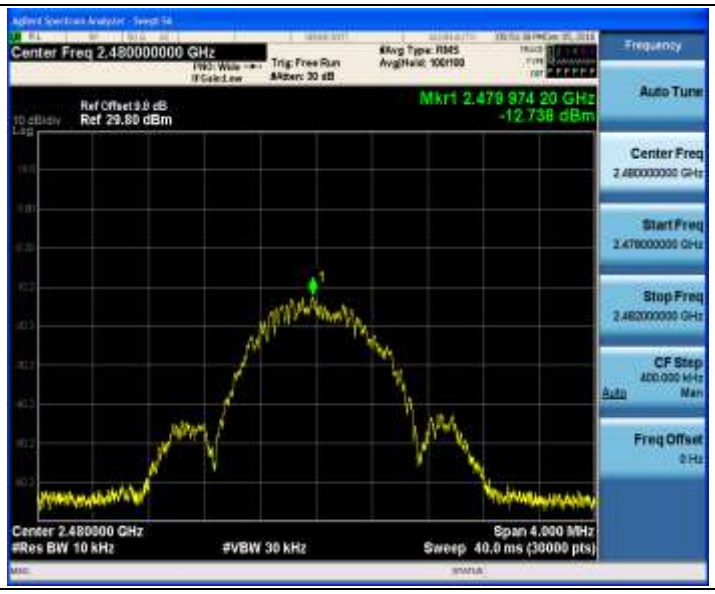
TestMode	Antenna	Channel	Result[dBm/10KHz]	Limit[dBm/3KHz]	Verdict
BLE_BT4.2	Ant1	2402	-13.2	8	PASS
		2440	-12.78	8	PASS
		2480	-12.74	8	PASS

Test Graphs

BLE_BT4.2_Ant1_2402

BLE_BT4.2_Ant1_2440

BLE_BT4.2_Ant1_2480

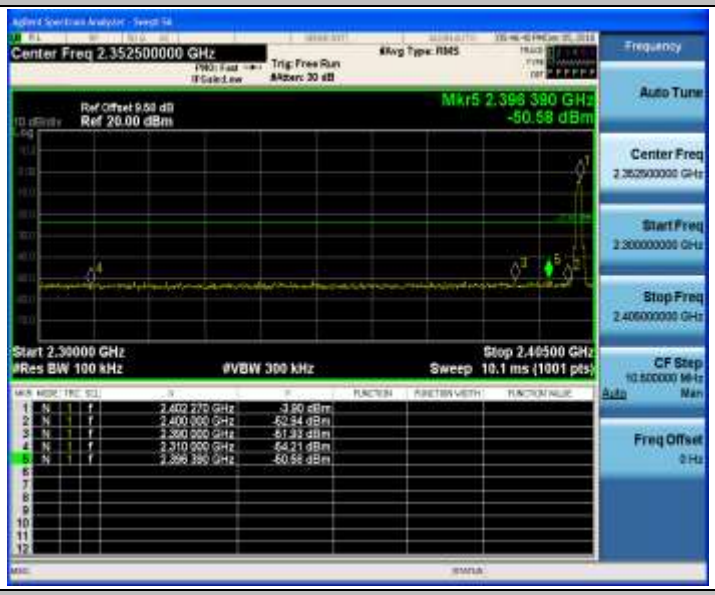
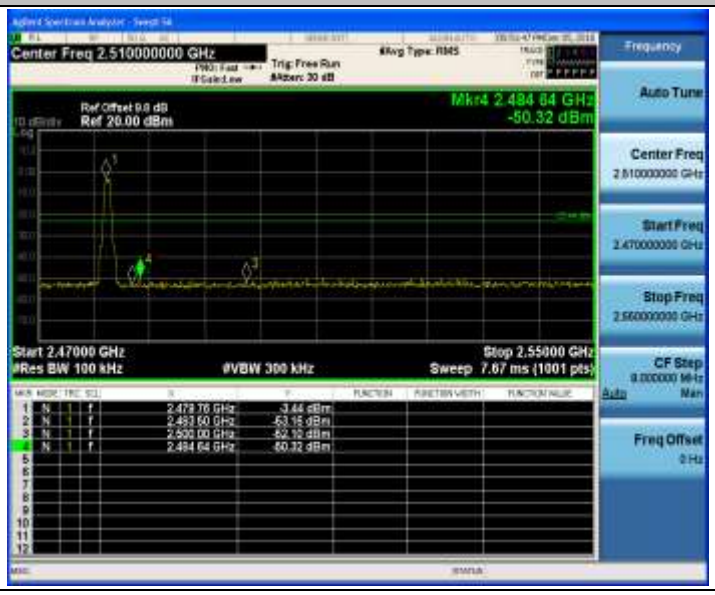


Appendix F: Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.2	Ant1	Low	2402	-3.90	-50.58	-23.9	PASS
		High	2480	-3.44	-50.32	-23.44	PASS

Test Graphs

BLE_BT4.2_Ant1_Low_2402

BLE_BT4.2_Ant1_High_2480


Appendix G: Conducted Spurious Emission

Test Result

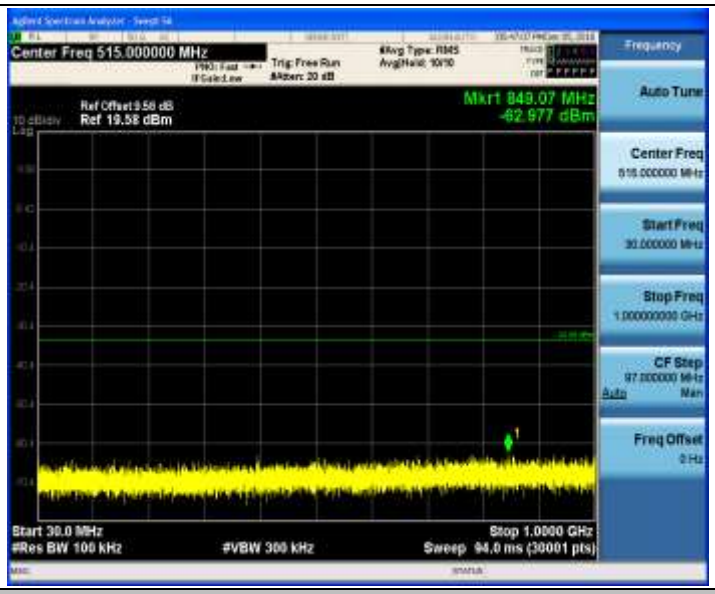
TestMode	Antenna	Channel	FreqRange	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_BT4.2	Ant1	2402	Reference	-4.08	-4.08	---	PASS
			0.009~30	0.009~30	-74.33	-44.08	PASS
			30~1000	30~1000	-62.98	-34.08	PASS
			1000~26500	1000~26500	-37.33	-34.08	PASS
		2440	Reference	-3.85	-3.85	---	PASS
			0.009~30	0.009~30	-74.11	-43.85	PASS
			30~1000	30~1000	-62.33	-33.85	PASS
			1000~26500	1000~26500	-36.51	-33.85	PASS
		2480	Reference	-3.62	-3.62	---	PASS
			0.009~30	0.009~30	-73.71	-43.62	PASS
			30~1000	30~1000	-62.01	-33.62	PASS
			1000~26500	1000~26500	-36.83	-33.62	PASS

Test Graphs

BLE_BT4.2_Ant1_2402_0~Reference

BLE_BT4.2_Ant1_2402_0.009~30

BLE_BT4.2_Ant1_2402_30~1000

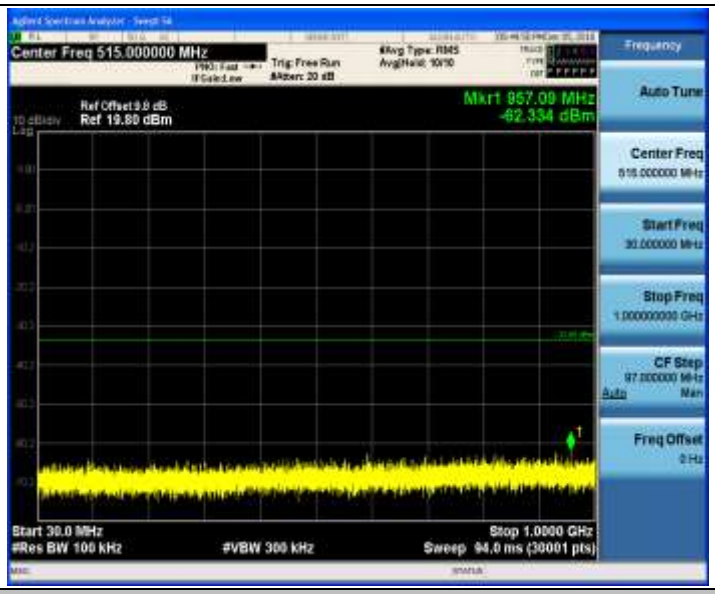


BLE_BT4.2_Ant1_2402_1000~26500

BLE_BT4.2_Ant1_2440_0~Reference

BLE_BT4.2_Ant1_2440_0.009~30

BLE_BT4.2_Ant1_2440_30~1000

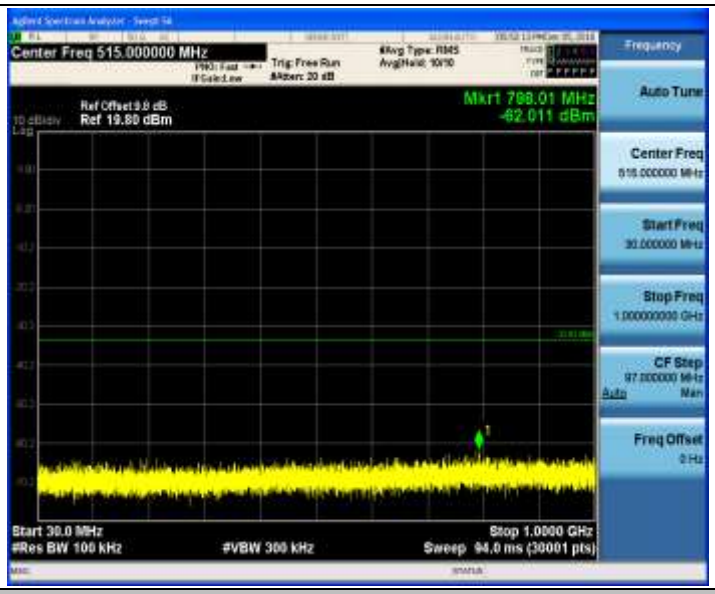


BLE_BT4.2_Ant1_2440_1000~26500

BLE_BT4.2_Ant1_2480_0~Reference

BLE_BT4.2_Ant1_2480_0.009~30

BLE_BT4.2_Ant1_2480_30~1000



BLE_BT4.2_Ant1_2480_1000~26500

Appendix H: Radiated Spurious Emission & Spurious in Restricted Band

Note: We tested all modes, but the data presented below is the worst case.

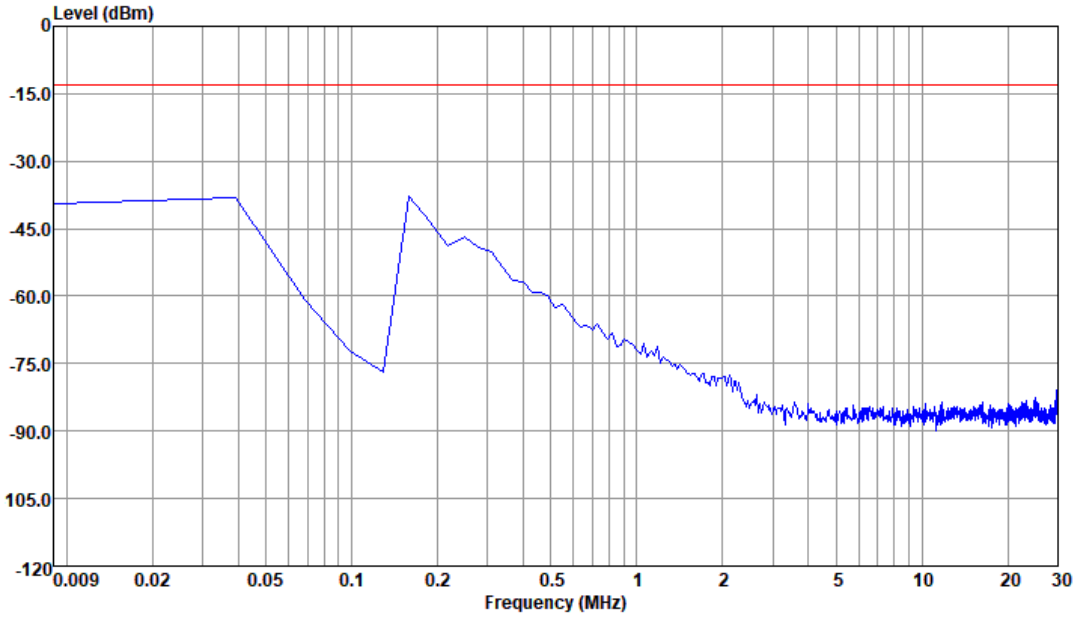
Below 1GHz, RBW = 100 kHz, VBW = 300 kHz.

Above 1GHz, RBW = 1 MHz, VBW = 3 MHz.

The simultaneous transmission has been considered

1.1 Part 1: Testing Range of “9 kHz to 30MHz”

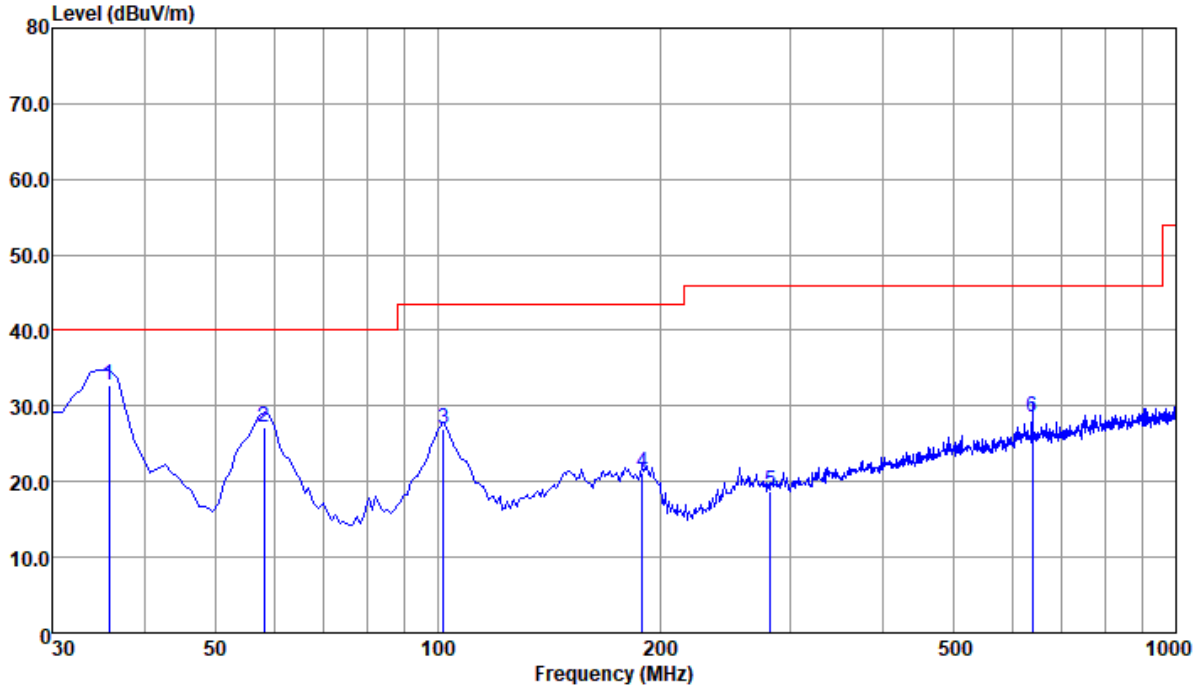
Note 1: The test results and plot for testing range of “9 kHz to 30 MHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.



1.2 Part 2: Testing Range of “30 MHz to 1 GHz”

Note 1: The test results and plot for testing range of “30 MHz to 1 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The emissions in this range are mainly from the Platform Device (Notepad PC and its ancillary components).



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 pp	35.82	32.78	-7.22	40.00	43.13	20.92	0.33	31.60	QP
2	58.13	27.15	-12.85	40.00	45.52	12.74	0.49	31.60	QP
3	101.78	26.95	-16.55	43.50	40.76	16.82	0.87	31.50	QP
4	189.08	21.19	-22.31	43.50	35.51	15.38	1.54	31.24	QP
5	282.20	18.79	-27.21	46.00	28.94	18.93	1.98	31.06	QP
6	638.19	28.57	-17.43	46.00	32.00	24.65	3.12	31.20	QP

Note:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

1.3 Part 3: Testing Range of “1GHz to 3GHz”

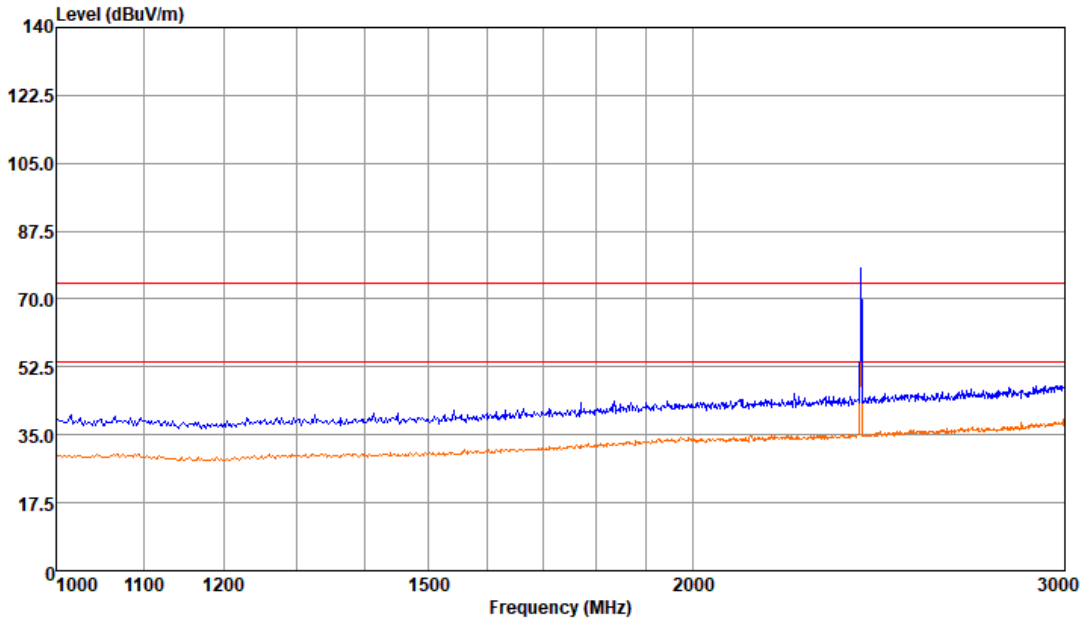
Note 1: The testing range of “1GHz to 3 GHz” is for checking radiated emissions located in restricted bands near the EUT operating bands.

Note 2: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBμV/m) and Average Limit (54 dBμV/m).

Note 3: The peak spike exceeds the limit line is EUT’s operating frequency.

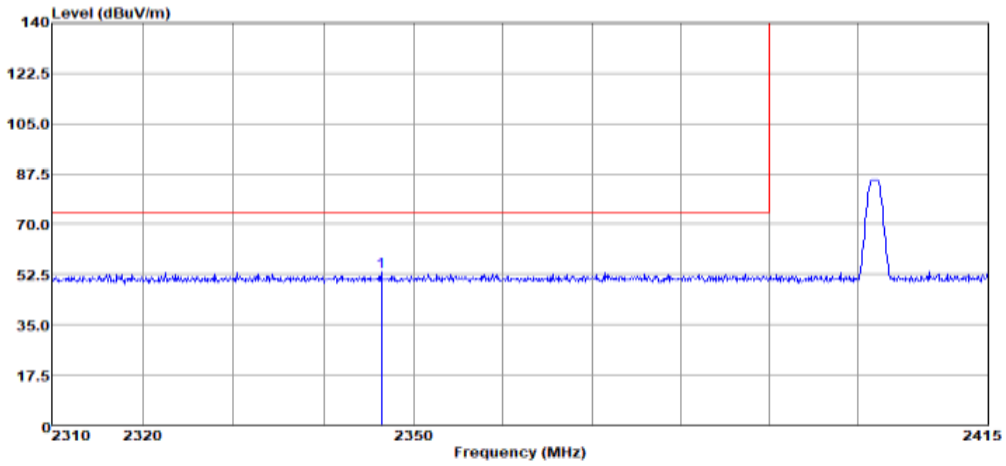
Test Mode:

1.3.1Test Mode: TM1



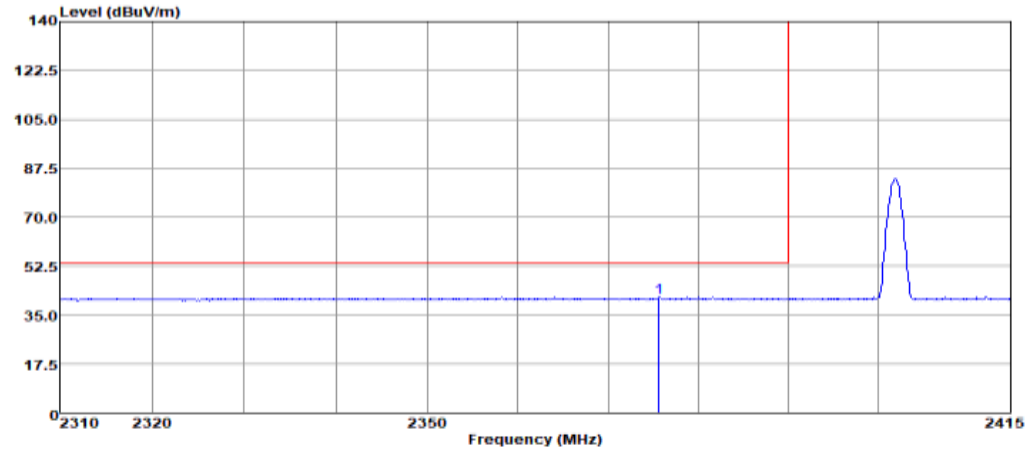
1.3.1.1 Channel 0

MEASUREMENT RESULT: PK Detector



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 pp	2346.44	53.36	-20.64	74.00	48.08	31.55	6.73	33.00	Peak

MEASUREMENT RESULT: AV Detector



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 pp	2375.63	41.32	-12.68	54.00	567.59	-500.00	6.73	33.00	Average

Note2:

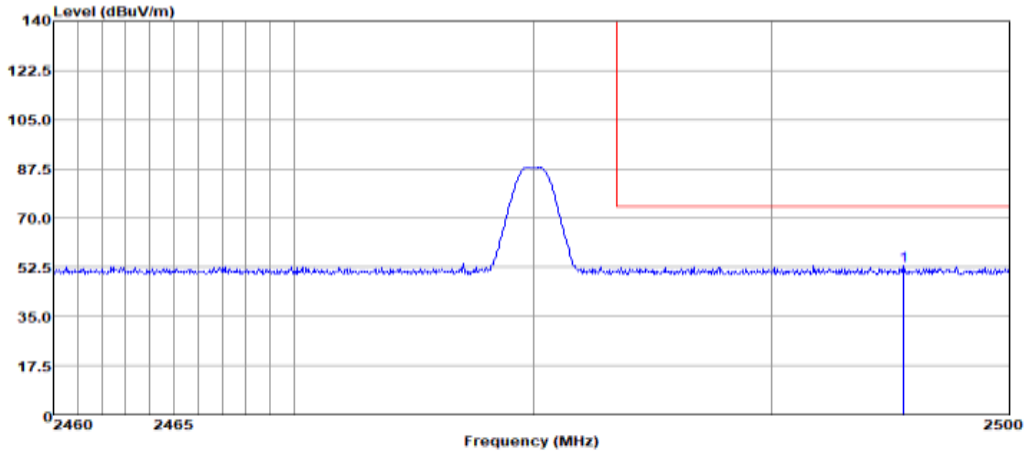
1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

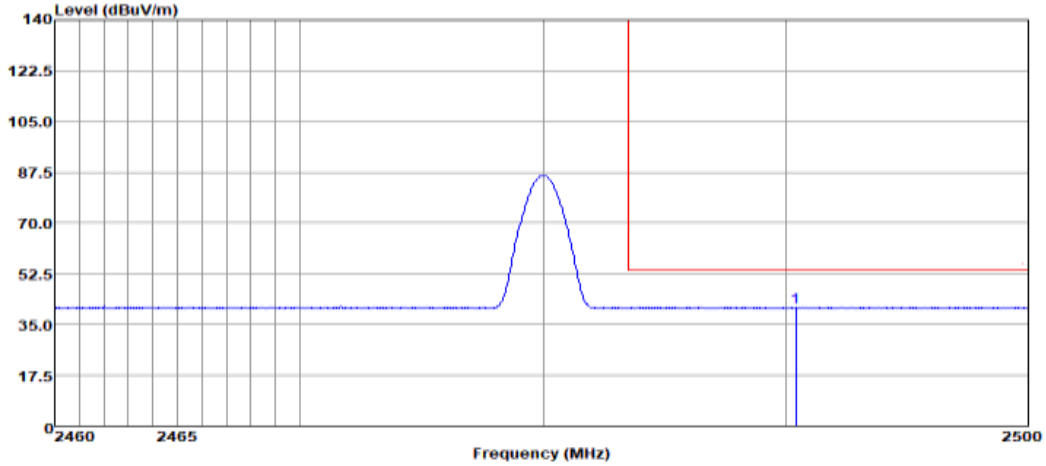
1.3.1.2 Channel 39

MEASUREMENT RESULT: PK Detector



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 pp	2495.56	53.12	-20.88	74.00	47.28	31.93	6.91	33.00	Peak

MEASUREMENT RESULT: AV Detector



	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1 pp	2490.40	41.10	-12.90	54.00	35.26	31.93	6.91	33.00	Average

Note2:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

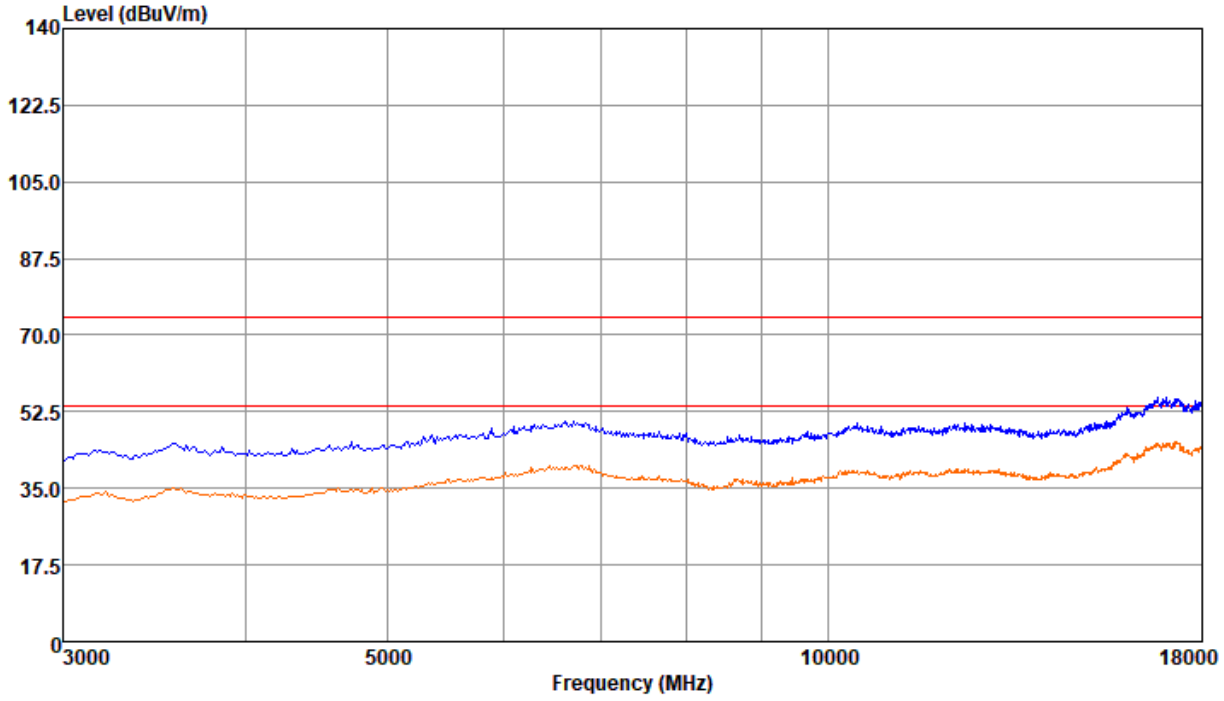
2, Margin=Limit - Level

1.4 Part 4: Testing Range of “3 GHz to 18 GHz”

Note 1: The test results and plot for testing range of “3 GHz to 18 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “3 GHz to 18 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).

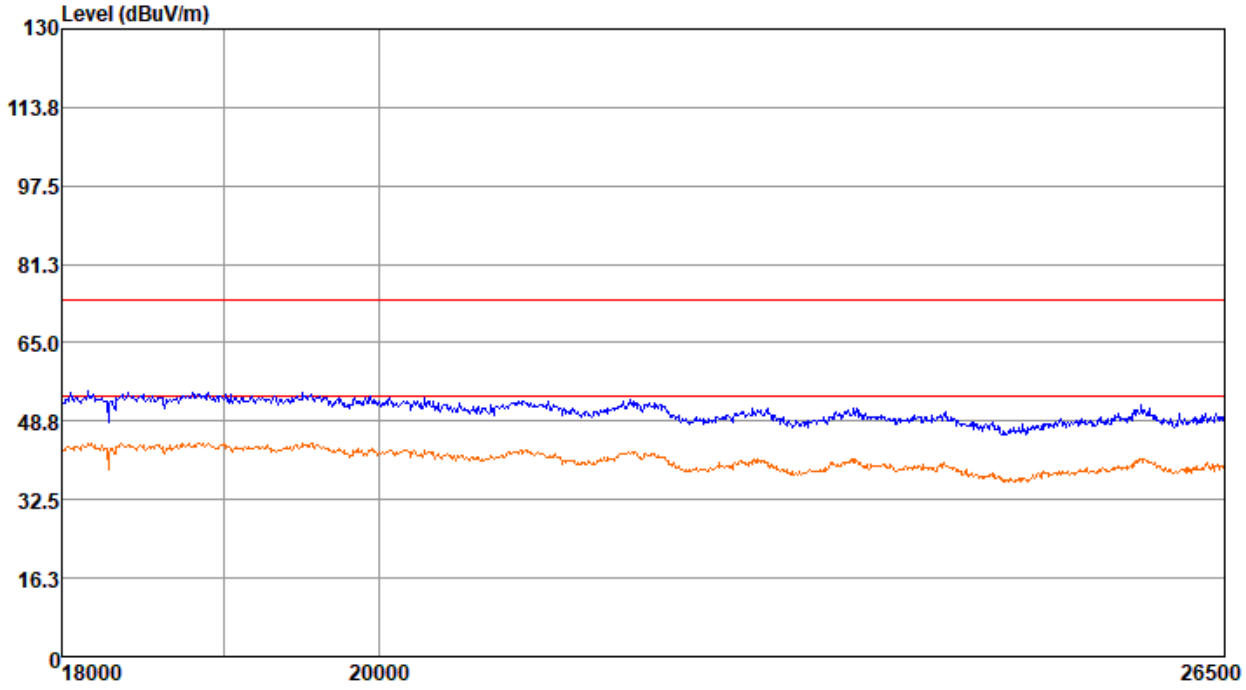


1.5 Part 5: Testing Range of “18 GHz to 26.5 GHz”

Note 1: The test results and plot for testing range of “18 GHz to 26.5 GHz” showed as below is the WORST case for all Test Modes and Channels. This range will not be presented for each Test Mode and each Channel.

Note 2: The testing range of “18 GHz to 26.5 GHz” is for checking radiated emissions located in restricted bands faraway from the EUT operating bands.

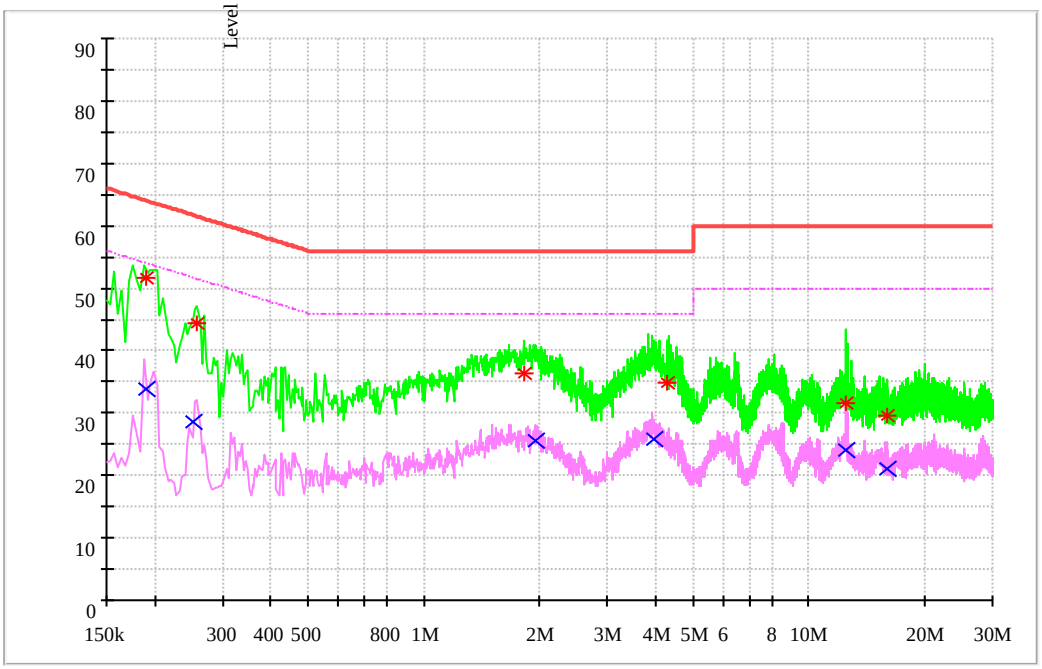
Note 3: Two limits are required in the testing range above 1 GHz, that is Peak limit (74 dBµV/m) and Average Limit (54 dBµV/m).



Appendix I: Conducted Emission at Power Port

Note: RBW =9 kHz, VBW = 30 kHz

Channel 0



MEASUREMENT RESULT: PK Detector

Frequency (MHz)	Level (dB µ V)	Limit (dB µ V)	Transd. (dB)	Margin (dB)	Line	PE
0.189432	51.66	64.06	9.7	12.4	L1	FLO
0.255978	44.37	61.56	9.7	17.19	N	FLO
1.817547	36.34	56	9.8	19.66	L1	FLO
4.287246	34.8	56	10	21.2	L1	FLO
12.491764	31.53	60	10.8	28.47	L1	FLO
16.009874	29.62	60	11.4	30.38	N	FLO

MEASUREMENT RESULT: AV Detector

Frequency (MHz)	Level (dB μ V)	Limit (dB μ V)	Transd. (dB)	Margin (dB)	Line	PE
0.190566	33.76	54.01	20.25	9.7	L1	FLO
0.252388	28.56	51.67	23.11	9.7	N	FLO
1.958867	25.49	46	20.51	9.8	L1	FLO
3.938346	25.71	46	20.29	10.1	N	FLO
12.496564	24.15	50	25.85	10.8	L1	FLO
15.95576	21.12	50	28.88	11.3	N	FLO

Note2:

1, Level =Reading level by receiver + Transd (Antenna factor + cable loss – preamplifier gain)

The reading level is calculated by software which is not shown in the sheet.

2, Margin=Limit - Level

END