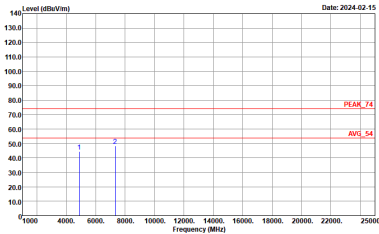
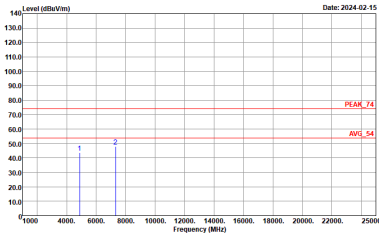
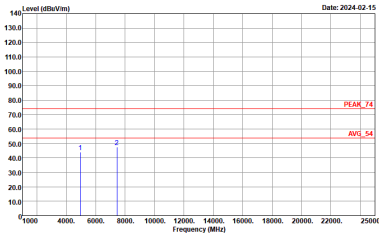
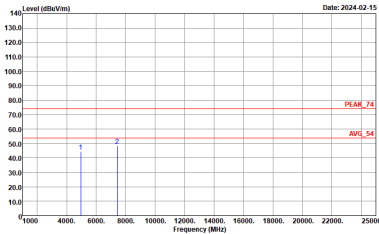




BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
6	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL :	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL :



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
6	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL :	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL :

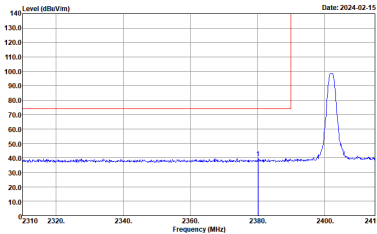
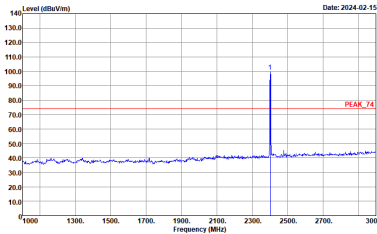


2.4GHz 2400~2483.5MHz

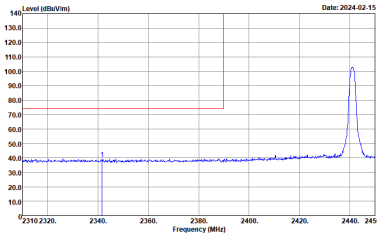
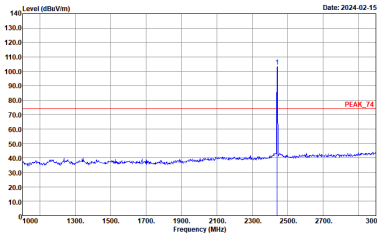
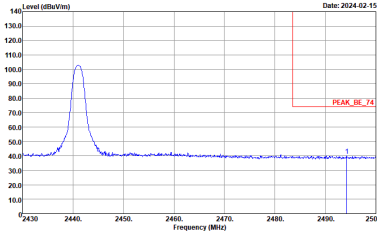
BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
7	Horizontal	Fundamental
Peak	Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

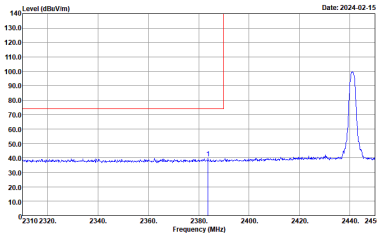
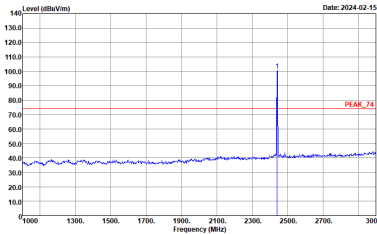
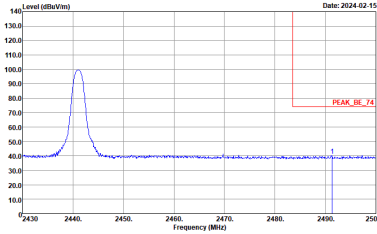


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
7	Vertical	Fundamental
Peak	 Site : 09CH20-HY Condition : PEAK_BC_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 09CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

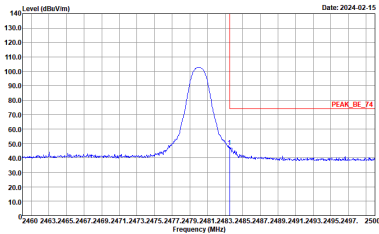
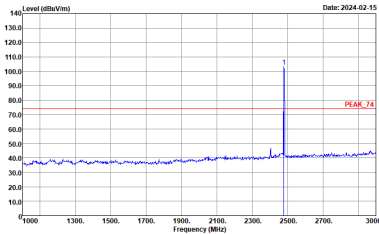


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
7	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

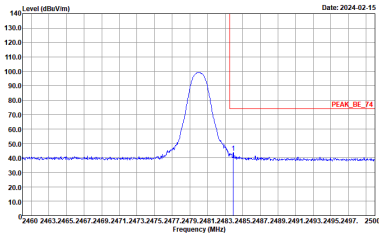
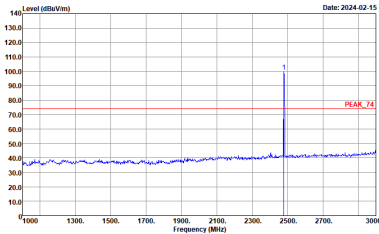


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
7	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto
Peak	 Site : 03CH20-HY Condition : PEAK_BE_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
7	Horizontal	Fundamental
Peak	 Site : 09CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 09CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
7	Vertical	Fundamental
Peak	 Site : 09CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 09CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto

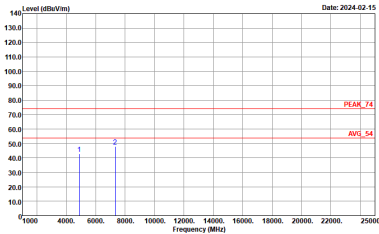
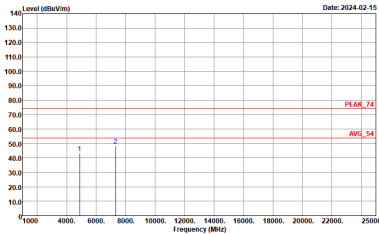


2.4GHz 2400~2483.5MHz

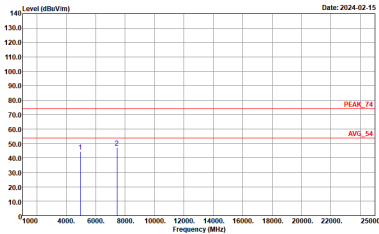
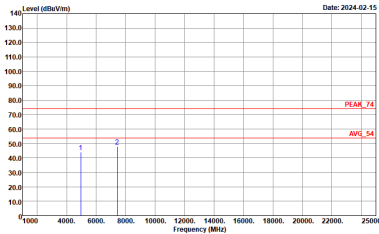
BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
7	Horizontal	Vertical
Peak Avg.	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_231030 HORIZONTAL	Site : 03CH20-HY Condition : PEAK_74 3m 9120D_02360_231030 VERTICAL



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
7	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL :	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL :



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
7	Horizontal	Vertical
Peak Avg.	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 HORIZONTAL :	 Site : 03CH20-HY Condition : PEAK_74 3m 91200_02360_231030 VERTICAL :



Emission above 18GHz
2.4GHz BT (SHF @ 1m)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT SHF	
7	Horizontal	Vertical
Peak Avg.	Level (dBuV/m) Date: 2024-04-13 Site : 03CH20-HY Condition : PEAK_74 1m SHF_1224_230710 HORIZONTAL	Level (dBuV/m) Date: 2024-04-13 Site : 03CH20-HY Condition : PEAK_74 1m SHF_1224_230710 VERTICAL

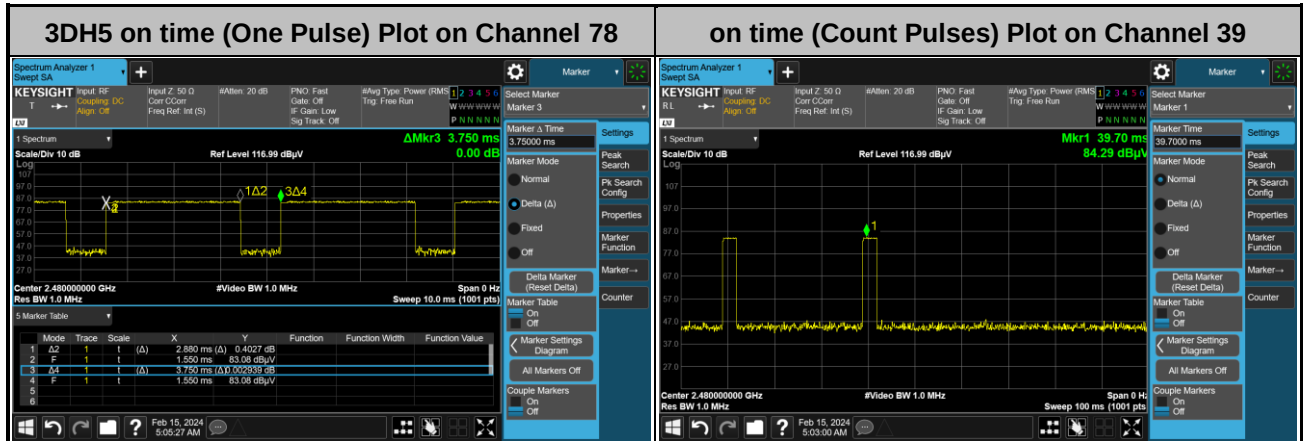


Emission below 1GHz
2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
7	Horizontal	Vertical
QP / Peak	Level (dBu/Vm) Date: 2024-02-16 Site : 03CH20-4Y Condition : QP 3m LF_55606_Z31020_200 HORIZONTAL	Level (dBu/Vm) Date: 2024-02-16 Site : 03CH20-4Y Condition : QP 3m LF_55606_Z31020_200 VERTICAL

Appendix E. Duty Cycle Plots

<Ant. 6>



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.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

$$2.88 \text{ ms} \times 20 \text{ channels} = 57.6 \text{ ms}$$

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. $[100 \text{ ms} / 57.6 \text{ ms}] = 2 \text{ hops}$

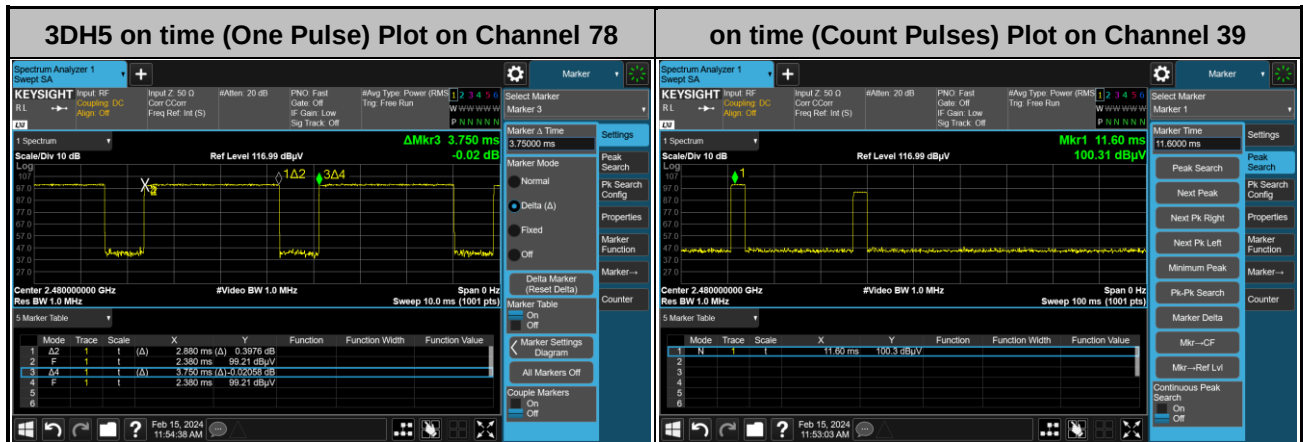
Thus, the maximum possible ON time:

$$2.88 \text{ ms} \times 2 = 5.76 \text{ ms}$$

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

$$20 \times \log(5.76 \text{ ms}/100 \text{ ms}) = -24.79 \text{ dB}$$

<Ant. 7>



Note:

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

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

$$2.88 \text{ ms} \times 20 \text{ channels} = 57.6 \text{ ms}$$

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. $[100 \text{ ms} / 57.6 \text{ ms}] = 2 \text{ hops}$

Thus, the maximum possible ON time:

$$2.88 \text{ ms} \times 2 = 5.76 \text{ ms}$$

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

$$20 \times \log(5.76 \text{ ms}/100 \text{ ms}) = -24.79 \text{ dB}$$