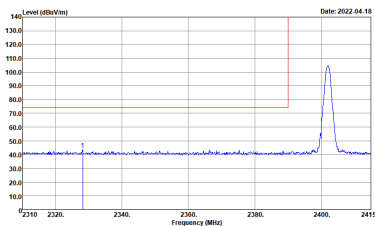
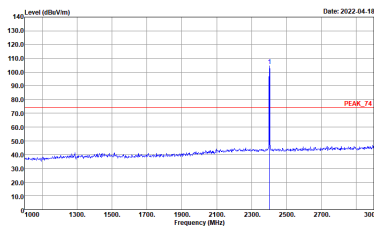




<1Mbps>

2.4GHz 2400~2483.5MHz
BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
3	Horizontal	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120d_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH11-HY Condition : PEAK_74 3m 9120d_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
3	Vertical	Fundamental
Peak	<p>Site : 03CH11-11Y Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH11-11Y Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
3	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
3	Horizontal	Fundamental
Peak	<p>Site: 03CH11-1Y Condition: PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site: 03CH11-1Y Condition: PEAK_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
3	Vertical	Fundamental
Peak	<p>Site: 03CH11-11Y Condition: PEAK_BE_74 3m 91200_1326_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site: 03CH11-11Y Condition: PEAK_74 3m 91200_1326_20211025 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



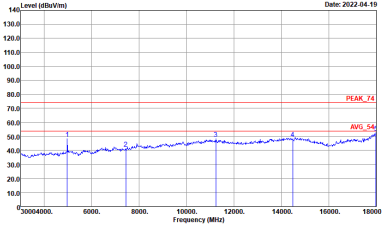
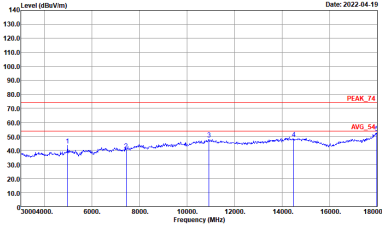
2.4GHz 2400~2483.5MHz
BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#FY Condition : PEAK_74 3m HORN 9120D-HF_1326 HORIZONTAL</p>	<p>Site : 03CH11-#FY Condition : PEAK_74 3m HORN 9120D-HF_1326 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m HORN 9120D-HF_1326 HORIZONTAL</p>	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m HORN 9120D-HF_1326 VERTICAL</p>

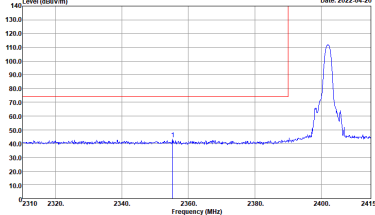
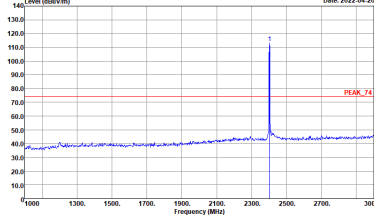


BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
3	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



<3Mbps>

2.4GHz 2400~2483.5MHz
BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
3	Horizontal	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 9120d_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	 <p>Site : 03CH11-HY Condition : PEAK_74 3m 9120d_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
3	Vertical	Fundamental
Peak	<p>Site : 03CH11-11Y Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH11-11Y Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>

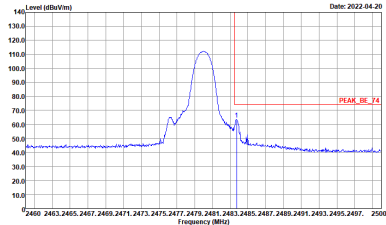
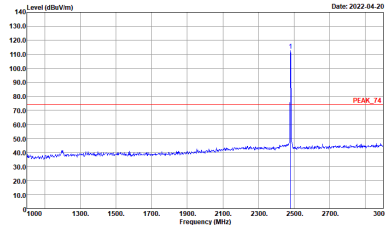


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
3	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
3	Horizontal	Fundamental
Peak	 <p>Date: 2022-04-20</p> <p>Site : 03CH11-1Y Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Date: 2022-04-20</p> <p>Site : 03CH11-1Y Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



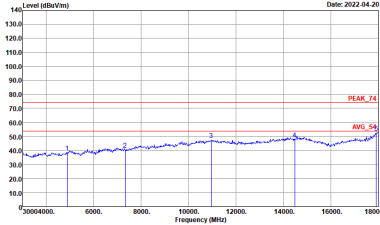
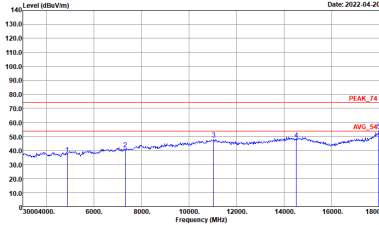
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



2.4GHz 2400~2483.5MHz
BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#FY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	<p>Site : 03CH11-#FY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
3	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>

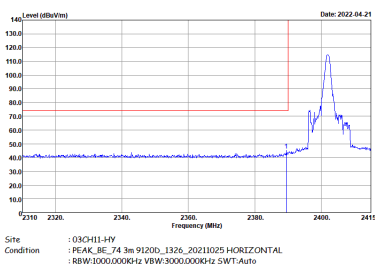
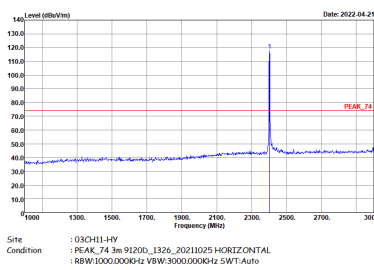


MIMO <Ant. 4+3>

<1Mbps>

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
4+3	Horizontal	Fundamental
Peak		



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
4+3	Vertical	Fundamental
Peak	<p>Site : 03CH11-11Y Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Site : 03CH11-11Y Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>

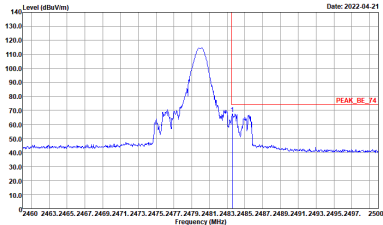
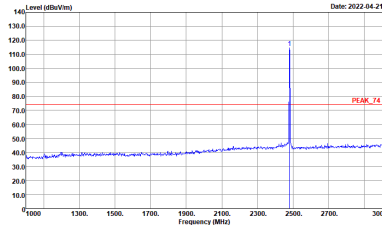


BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
4+3	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
4+3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
4+3	Horizontal	Fundamental
Peak	 <p>Site : 03CH11-11Y Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>	 <p>Site : 03CH11-11Y Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto</p>



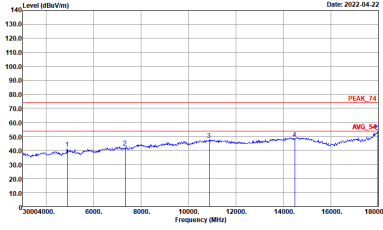
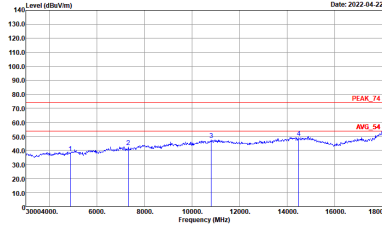
BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
4+3	Vertical	Fundamental
Peak	<p>Date: 2022-04-21</p> <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>	<p>Date: 2022-04-21</p> <p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto</p>



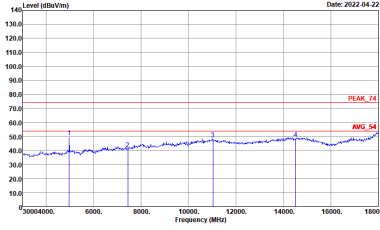
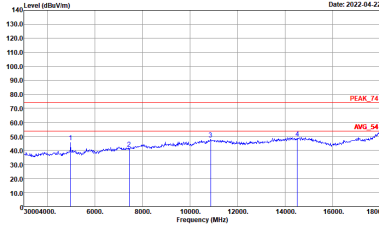
2.4GHz 2400~2483.5MHz
BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
4+3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#FY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	<p>Site : 03CH11-#FY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
4+3	Horizontal	Vertical
<p>Peak Avg.</p>	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
4+3	Horizontal	Vertical
Peak Avg.	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>	 <p>Site : 03CH11-#Y Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



<3Mbps>

2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
4+3	Horizontal	Fundamental
Peak	<p>Site : 03CHI-HY Condition : PEAK_86_74 3m 91200_1326_20211025 HORIZONTAL</p>	<p>Site : 03CHI-HY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH00 2402MHz	
4+3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : *PEAK_BE_74 3m 91200_1326_20211025 VERTICAL</p>	<p>Site : 03CH11-HY Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
4+3	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH39 2441MHz	
4+3	Vertical	Fundamental
Peak	<p>Date: 2022-04-21</p> <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL</p>	<p>Date: 2022-04-21</p> <p>Site : 03CH11-HY Condition : PEAK_74 3m 91200_1326_20211025 VERTICAL</p>
Peak	<p>Date: 2022-04-21</p> <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m 91200_1326_20211025 VERTICAL</p>	Left blank



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
4+3	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : *PEAK_BE_74 3m 91200_1326_20211025 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : *PEAK_74 3m 91200_1326_20211025 HORIZONTAL</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	BT CH78 2480MHz	
4+3	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : *PEAK_BE_74 3m 91200_1326_20211025 VERTICAL</p>	<p>Site : 03CH11-HY Condition : *PEAK_74 3m 91200_1326_20211025 VERTICAL</p>



2.4GHz 2400~2483.5MHz
BT (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH00 2402MHz	
4+3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-1HY Condition : PEAK_74 3m HORN 9120D-HF_1326 HORIZONTAL</p>	<p>Site : 03CH11-1HY Condition : PEAK_74 3m HORN 9120D-HF_1326 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH39 2441MHz	
4+3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m HORN 9120D-HF_1326 HORIZONTAL</p>	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m HORN 9120D-HF_1326 VERTICAL</p>



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	BT CH78 2480MHz	
4+3	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m HORN 9120D-HF_1326 HORIZONTAL</p>	<p>Site : 03CH11-#Y Condition : *PEAK_74 3m HORN 9120D-HF_1326 VERTICAL</p>

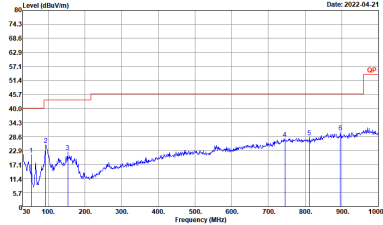
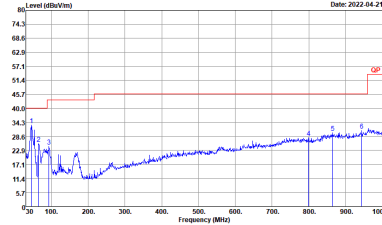


2.4GHz BT (SHF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT SHF	
4+3	Horizontal	Vertical
QP / Peak	<p>Site : 03CH11-HY Condition : PEAK_74 1m SHF ANT_9170_00993 HORIZONTAL</p>	<p>Site : 03CH11-HY Condition : PEAK_74 1m SHF ANT_9170_00993 VERTICAL</p>



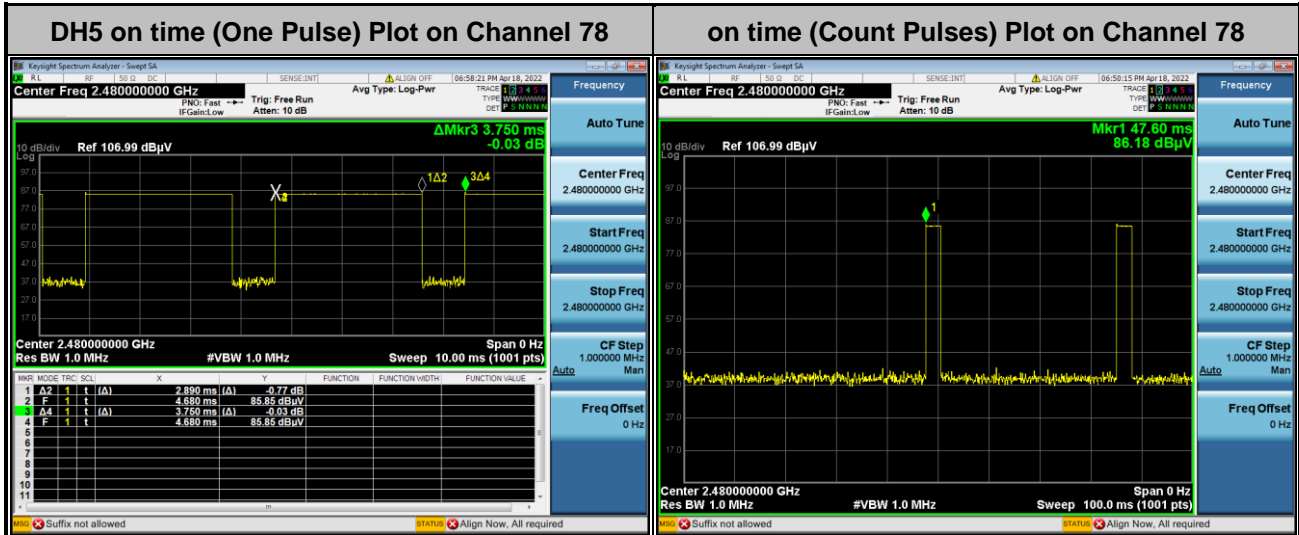
Emission below 1GHz
2.4GHz BT (LF)

BT	2.4GHz 2400~2483.5MHz	
ANT	BT LF	
4+3	Horizontal	Vertical
QP / Peak	 <p>Site : 03CH11-HY Condition : QP 3m BE-LOG 35414-211009 HORIZONTAL</p>	 <p>Site : 03CH11-HY Condition : QP 3m BE-LOG 35414-211009 VERTICAL</p>

Appendix E. Duty Cycle Plots

<Ant. 4>

<1Mbps>



Note:

1. Worst case Duty cycle = on time/100 milliseconds = $2 * 2.89 / 100 = 5.78 \%$
2. Worst case Duty cycle correction factor = $20 * \log(\text{Duty cycle}) = -24.76 \text{ dB}$
3. DH5 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 1MHz 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

$$2.89 \text{ ms} \times 20 \text{ channels} = 57.8 \text{ ms}$$

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. $[100 \text{ ms} / 57.8 \text{ ms}] = 2 \text{ hops}$

Thus, the maximum possible ON time:

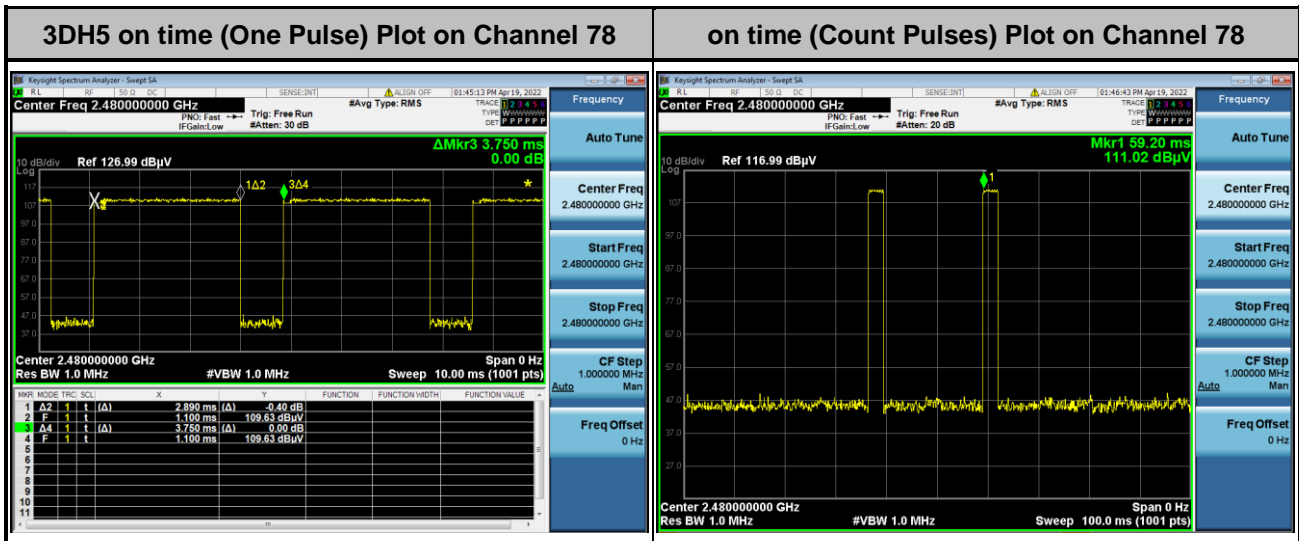
$$2.89 \text{ ms} \times 2 = 5.78 \text{ ms}$$

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

$$20 \times \log(5.78 \text{ ms}/100 \text{ ms}) = -24.76 \text{ dB}$$



<3Mbps>



Note:

1. Worst case Duty cycle = on time/100 milliseconds = $2 * 2.89 / 100 = 5.78 \%$
2. Worst case Duty cycle correction factor = $20 * \log(\text{Duty cycle}) = -24.76 \text{ dB}$
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.

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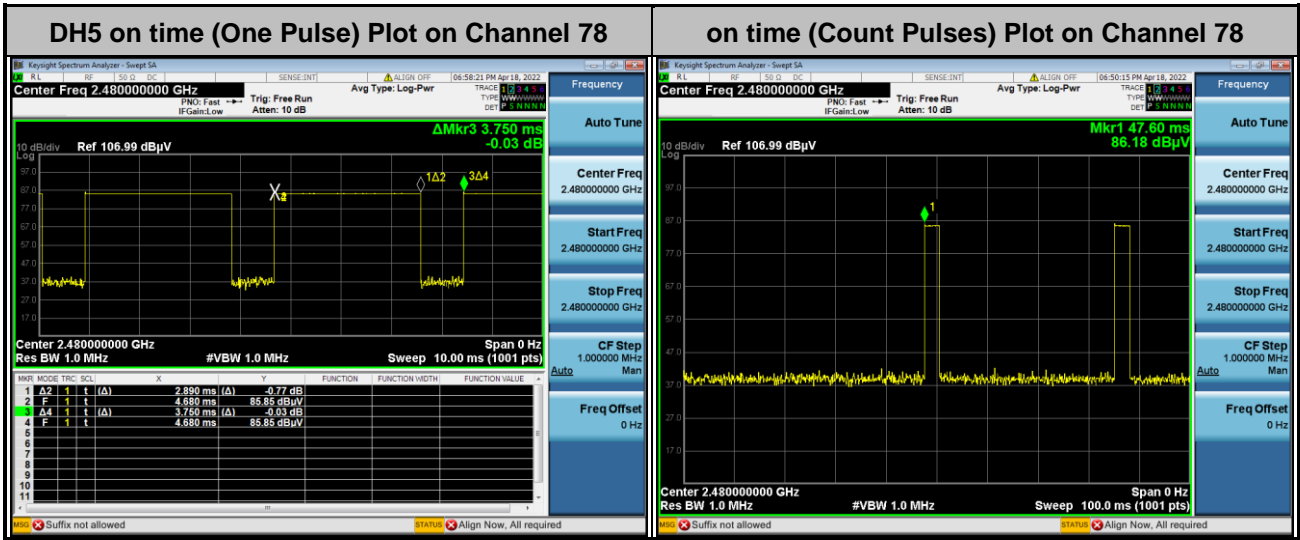
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<Ant. 3>

<1Mbps>



Note:

1. Worst case Duty cycle = on time/100 milliseconds = $2 * 2.88 / 100 = 5.78 \%$
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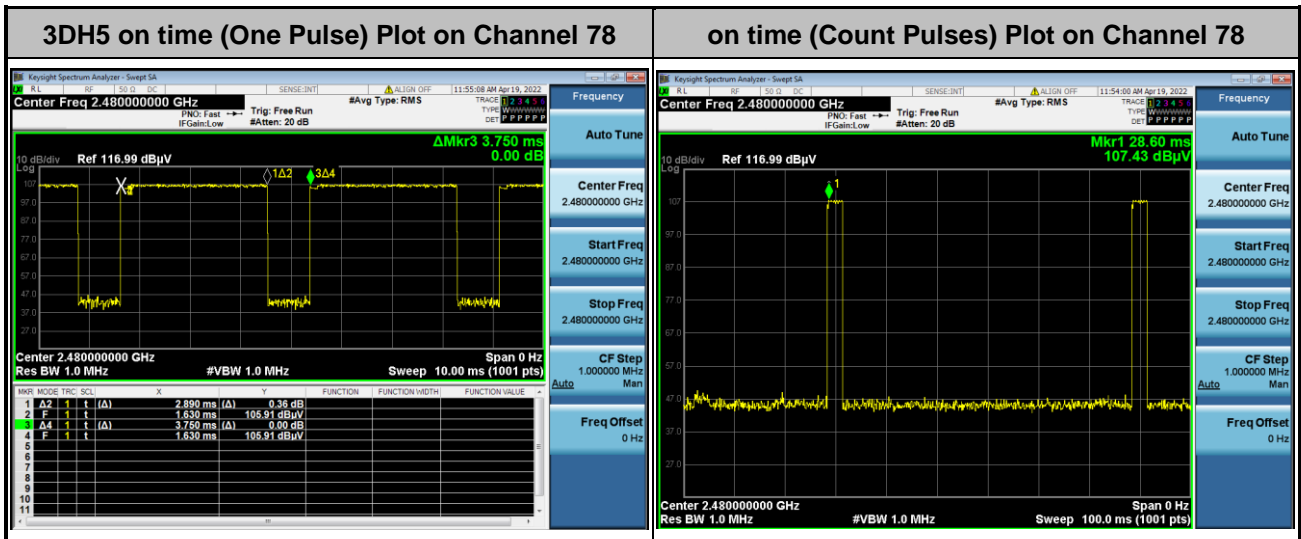
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<3Mbps>



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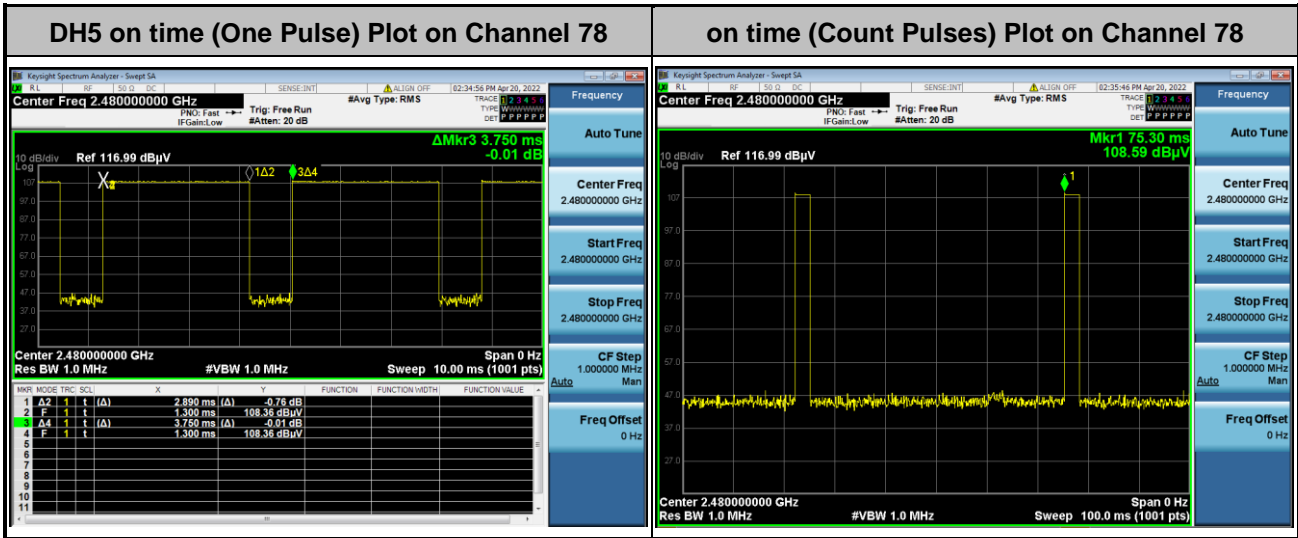
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MIMO <Ant. 4+3>

<1Mbps>



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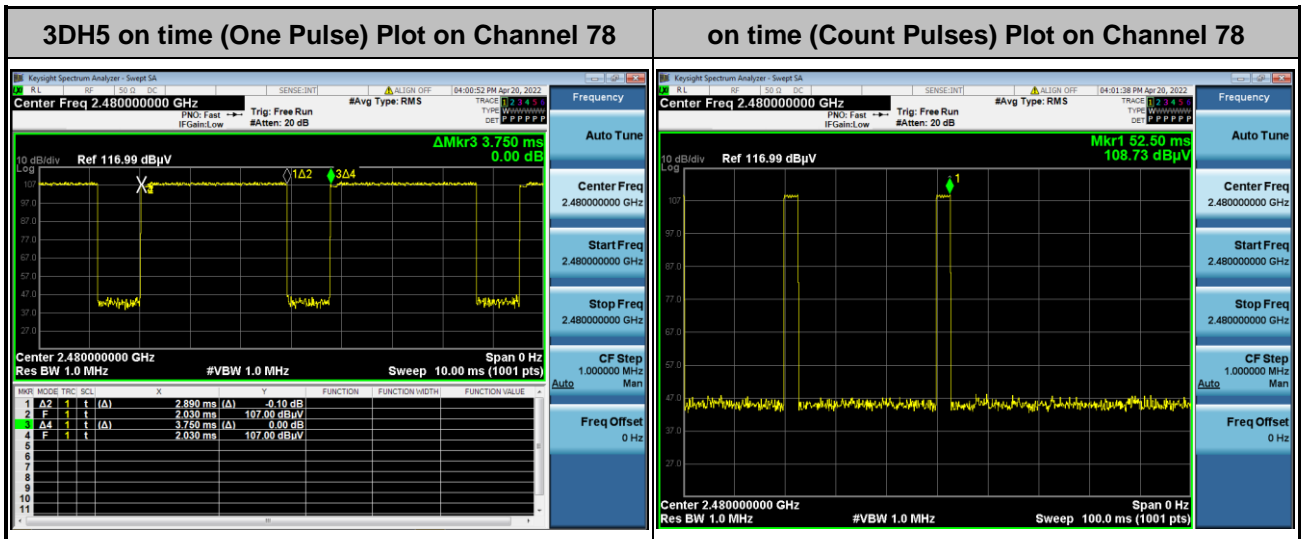
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<3Mbps>



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—————THE END—————