

APPENDIX REPORT

Project No.	SHT2007069101EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT20070691001	Model No.	7WC1
Start test date	2020/8/5	Finish date	2020/8/5
Temperature	25°C	Humidity	50%
Test Engineer	Jiongsheng.Feng	Auditor	Xiaodong Zheo

Appendix clause	Test item	Result
A	Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

Appendix A: Peak Output Power

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	6.87	6.85	≤ 30.00	Pass
	19	6.82	6.80		
	39	6.45	6.44		

Appendix B: Power Spectral Density

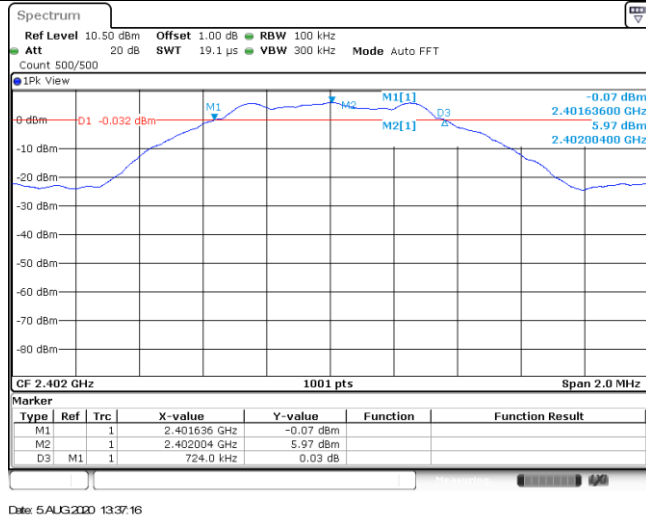
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-9.31	≤8.00	Pass
	19	-9.35		
	39	-9.63		

<p>CH00</p>	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -9.31 dBm 2.40187260 GHz CF 2.402 GHz 691 pts Span 1.0 MHz Date: 5 AUG 2020 13:37:50</p>
<p>CH19</p>	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -9.35 dBm 2.43987120 GHz CF 2.44 GHz 691 pts Span 1.0 MHz Date: 5 AUG 2020 13:40:15</p>
<p>CH39</p>	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 3 kHz Att 20 dB SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] -9.63 dBm 2.47987120 GHz CF 2.48 GHz 691 pts Span 1.0 MHz Date: 5 AUG 2020 13:41:53</p>

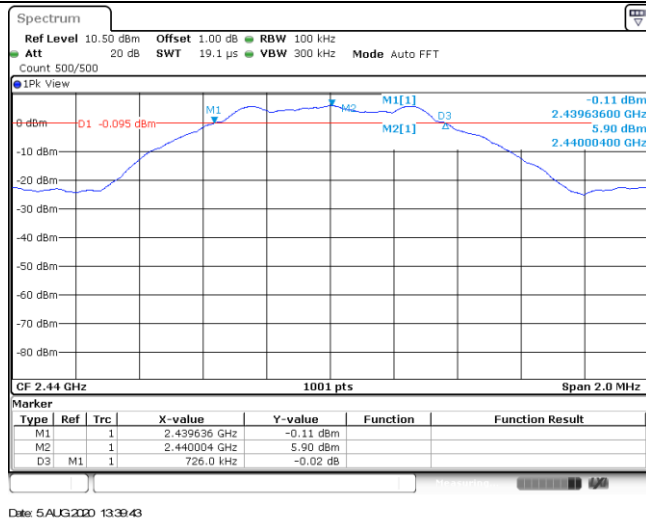
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	724.00	≥500	Pass
	19	726.00		
	39	732.00		

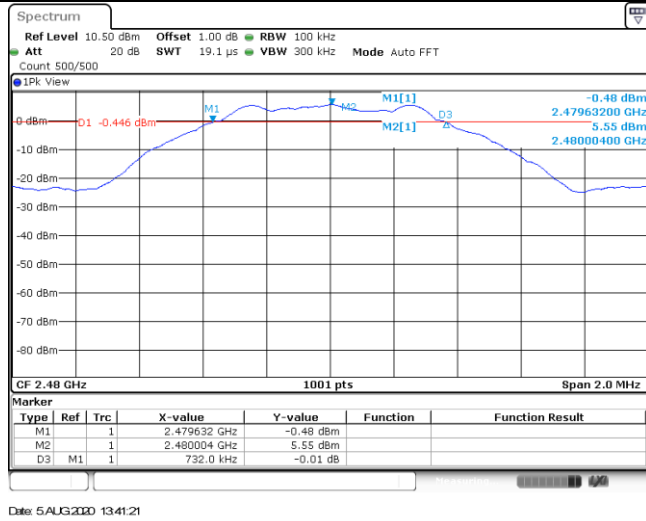
CH00



CH19



CH39



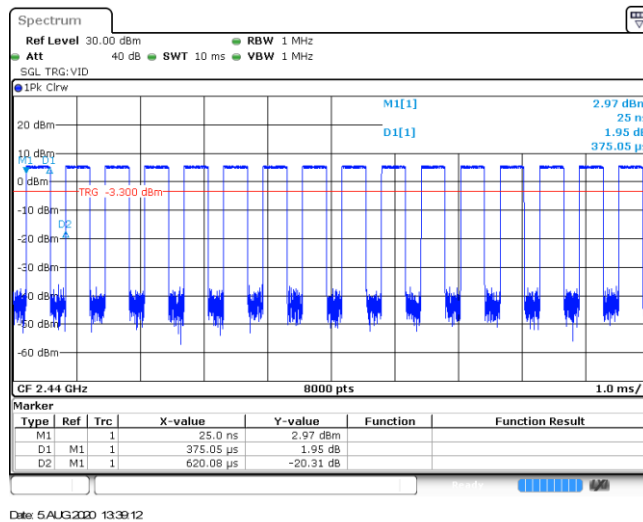
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.04	-	Pass
	19	1.04		
	39	1.04		

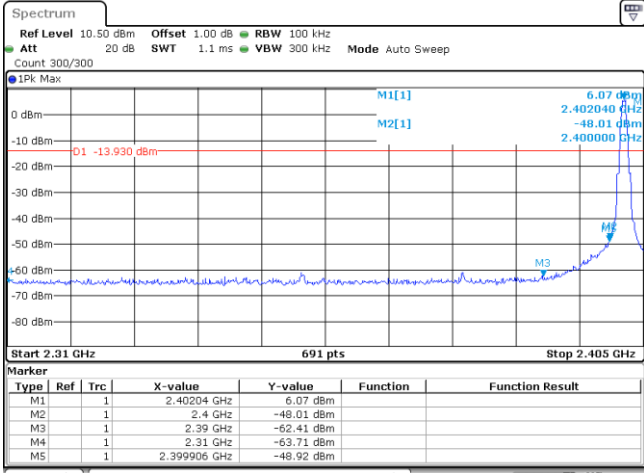
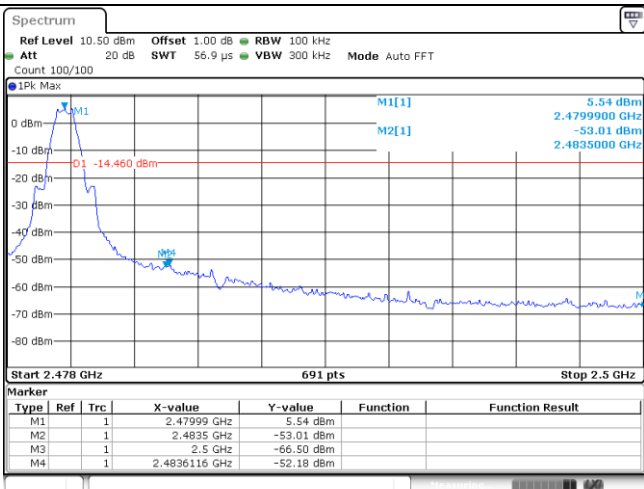
<p>CH00</p>	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.402 GHz 1001 pts Span 2.0 MHz Date: 5 AUG 2020 13:37:26</p>
<p>CH19</p>	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.44 GHz 1001 pts Span 2.0 MHz Date: 5 AUG 2020 13:39:52</p>
<p>CH39</p>	<p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500 IPK View 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm CF 2.48 GHz 1001 pts Span 2.0 MHz Date: 5 AUG 2020 13:41:30</p>

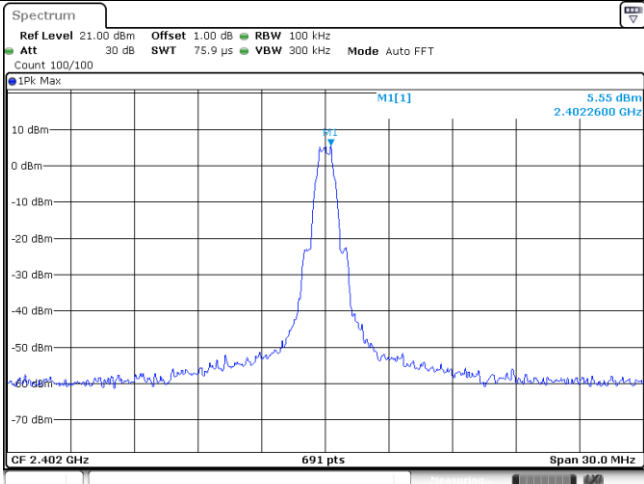
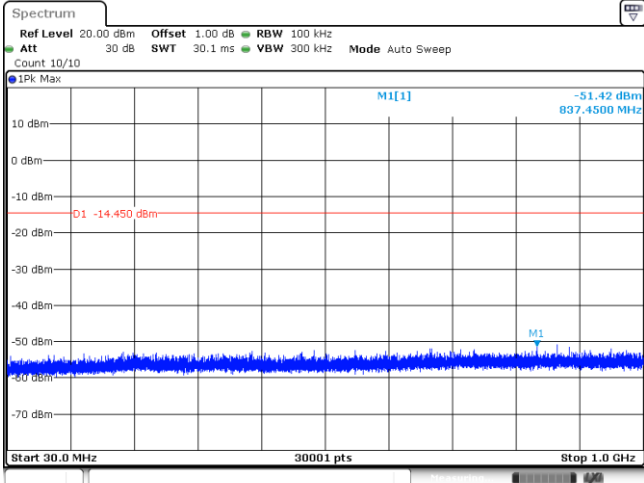
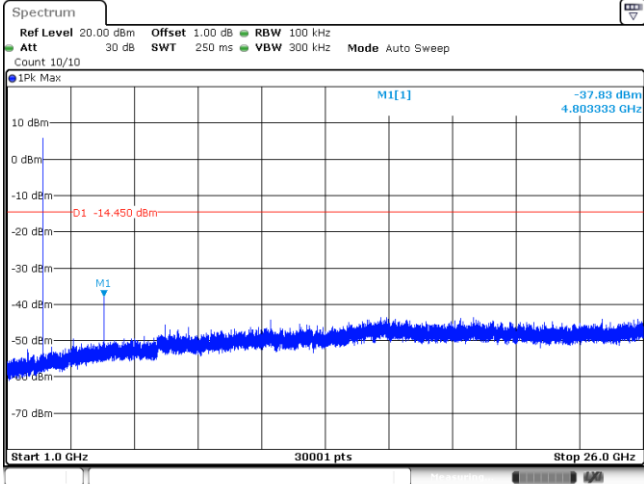
Appendix E: Duty cycle

Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.38	0.62	61.3%	2.6

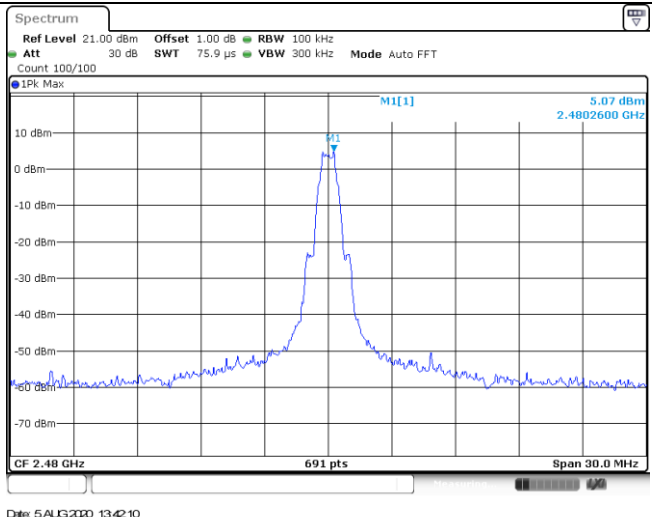
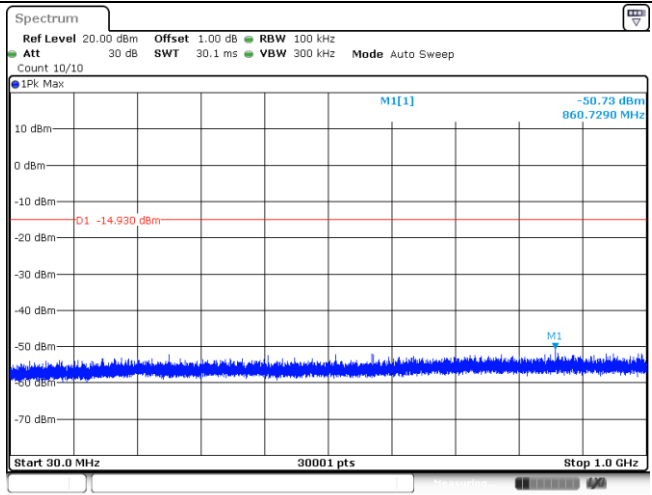
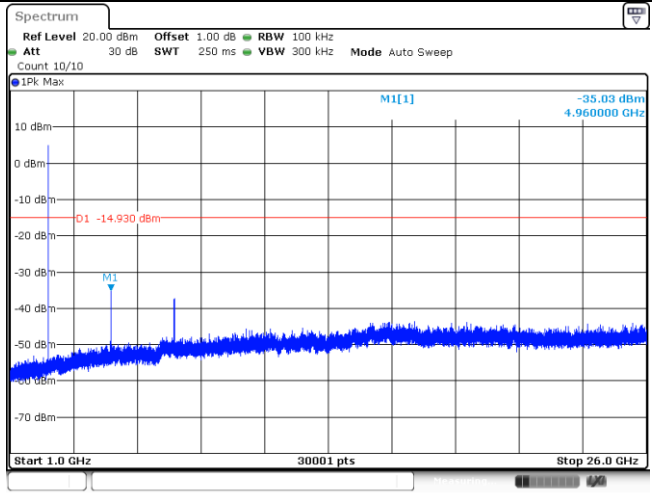


Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge																																										
<p style="text-align: center;">CH00</p>	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1Pk Max</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.40204 GHz</td> <td>6.07 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-48.01 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-62.41 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-63.71 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.399906 GHz</td> <td>-48.92 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Start 2.31 GHz 691 pts Stop 2.405 GHz Date 5AUG2010 13:38:00</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40204 GHz	6.07 dBm			M2	1		2.4 GHz	-48.01 dBm			M3	1		2.39 GHz	-62.41 dBm			M4	1		2.31 GHz	-63.71 dBm			M5	1		2.399906 GHz	-48.92 dBm		
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<p style="text-align: center;">CH39</p>	 <p>Spectrum Ref Level 10.50 dBm Offset 1.00 dB RBW 100 kHz Att 20 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 1Pk Max</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Ref</th> <th>Trc</th> <th>X-value</th> <th>Y-value</th> <th>Function</th> <th>Function Result</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>1</td> <td></td> <td>2.47999 GHz</td> <td>5.54 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4835 GHz</td> <td>-53.01 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.5 GHz</td> <td>-66.50 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.4836116 GHz</td> <td>-52.18 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Start 2.478 GHz 691 pts Stop 2.5 GHz Date 5AUG2010 13:42:03</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.47999 GHz	5.54 dBm			M2	1		2.4835 GHz	-53.01 dBm			M3	1		2.5 GHz	-66.50 dBm			M4	1		2.4836116 GHz	-52.18 dBm									
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Test Item:	SE
<p>CH00 Reference level</p>	 <p>Spectrum</p> <p>Ref Level 21.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100</p> <p>1Pk Max</p> <p>5.55 dBm 2.4022600 GHz</p> <p>CF 2.402 GHz 691 pts Span 30.0 MHz</p> <p>Date: 5 AUG 2020 13:38:03</p>
<p>CH00 30MHz~1000MHz</p>	 <p>Spectrum</p> <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10</p> <p>1Pk Max</p> <p>-51.42 dBm 837.4500 MHz</p> <p>D1 -14.450 dBm</p> <p>Start 30.0 MHz 30001 pts Stop 1.0 GHz</p> <p>Date: 5 AUG 2020 13:38:24</p>
<p>CH00 1GHz~26GHz</p>	 <p>Spectrum</p> <p>Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10</p> <p>1Pk Max</p> <p>-37.83 dBm 4.803333 GHz</p> <p>D1 -14.450 dBm</p> <p>Start 1.0 GHz 30001 pts Stop 26.0 GHz</p> <p>Date: 5 AUG 2020 13:38:40</p>

<p>CH19 Reference level</p>	<p>Spectrum Ref Level 21.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] 5.39 dBm 2.4402600 GHz CF 2.44 GHz 691 pts Span 30.0 MHz Date: 5 AUG 2020 13:40:22</p>
<p>CH19 30MHz~1000MHz</p>	<p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 IPK Max M1[1] -51.34 dBm 887.6290 MHz D1 -14.610 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 5 AUG 2020 13:40:37</p>
<p>CH19 1GHz~26GHz</p>	<p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 IPK Max M1[1] -35.33 dBm 4.880000 GHz D1 -14.610 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 5 AUG 2020 13:40:53</p>

<p>CH39 Reference level</p>	 <p>Spectrum Ref Level 21.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 IPK Max M1[1] 5.07 dBm 2.4802600 GHz CF 2.48 GHz 691 pts Span 30.0 MHz Date: 5 AUG 2020 13:42:10</p>
<p>CH39 30MHz~1000MHz</p>	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 IPK Max M1[1] -50.73 dBm 860.7290 MHz D1 -14.930 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 5 AUG 2020 13:42:25</p>
<p>CH39 1GHz~26GHz</p>	 <p>Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 IPK Max M1[1] -35.03 dBm 4.960000 GHz D1 -14.930 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 5 AUG 2020 13:42:41</p>

-----End of Report-----