

APPENDIX REPORT

Project No.	SHT1911051203EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT19110512009	Model No.	iData K1S
Start test date	2019/12/20	Finish date	2019/12/20
Temperature	25°C	Humidity	50%
Test Engineer	Ximing.Huang	Auditor	<i>William.wang</i>

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	-4.05	-4.06	≤30.00	Pass
	19	-3.22	-3.24		
	39	-3.60	-3.61		

Appendix B: Power Spectral Density

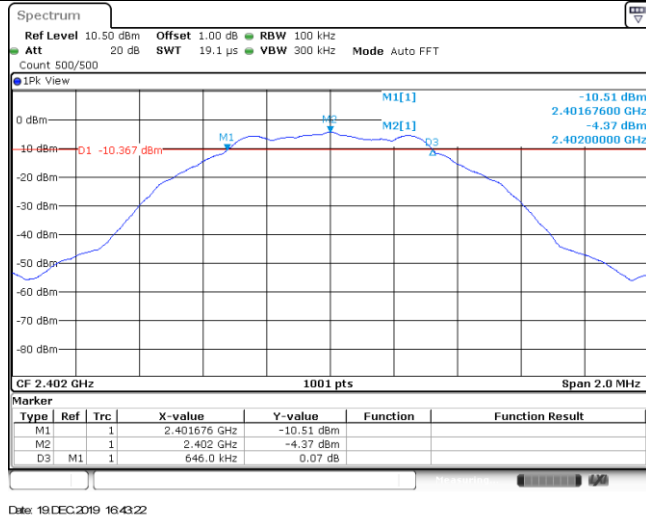
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-18.86	≤8.00	Pass
	19	-18.03		
	39	-18.40		

CH00	<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] -18.86 dBm 2.40197970 GHz M1 CF 2.402 GHz 691 pts Span 1.0 MHz Date: 19 DEC 2019 16:43:54</p>
CH19	<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] -18.03 dBm 2.43997970 GHz M1 CF 2.44 GHz 691 pts Span 1.0 MHz Date: 19 DEC 2019 16:45:48</p>
CH39	<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] -18.40 dBm 2.47997970 GHz M1 CF 2.48 GHz 691 pts Span 1.0 MHz Date: 19 DEC 2019 16:47:27</p>

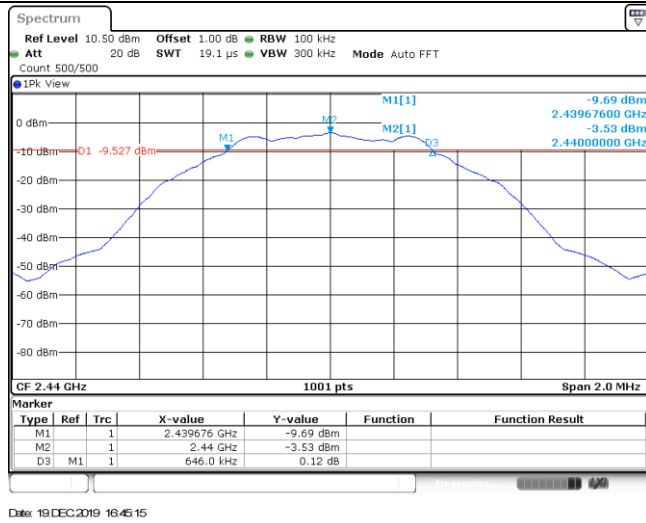
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	646.00	≥500	Pass
	19	646.00		
	39	644.00		

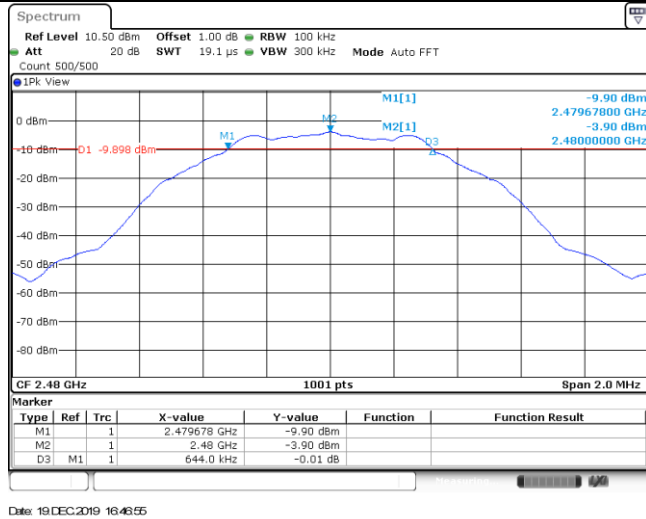
CH00



CH19



CH39



Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	0.93	-	Pass
	19	0.93		
	39	0.93		

CH00



CH19

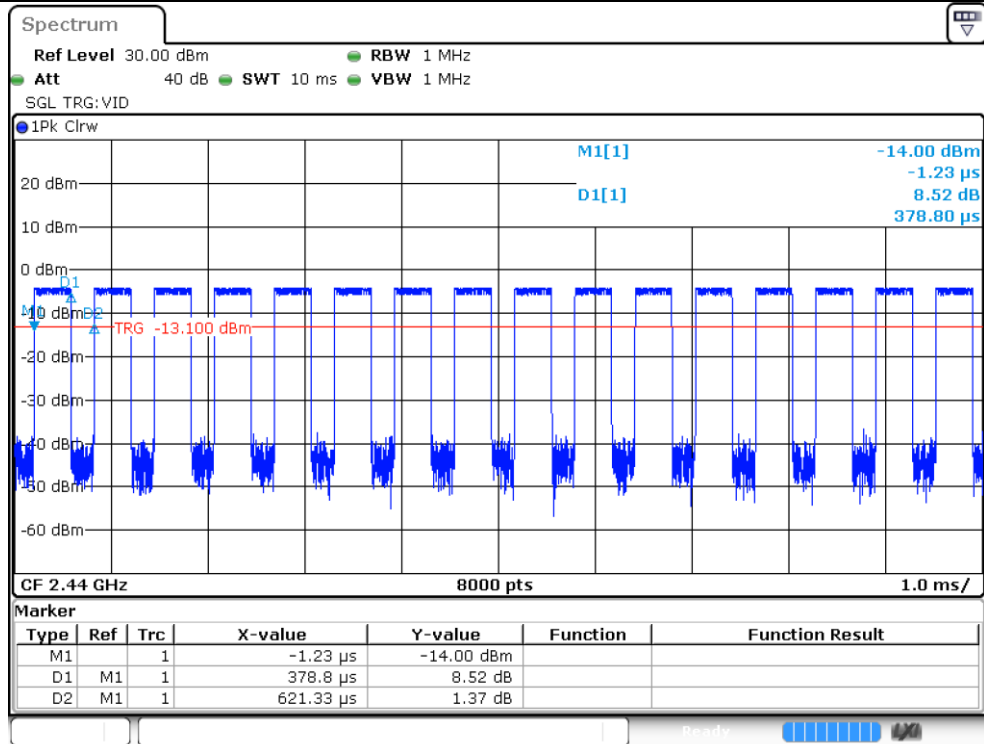


CH39



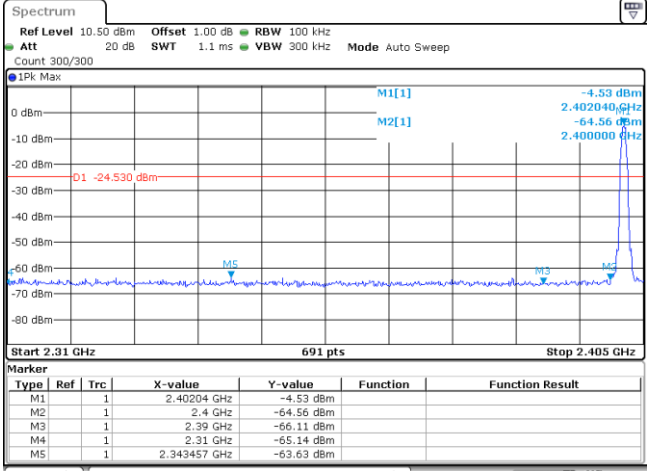
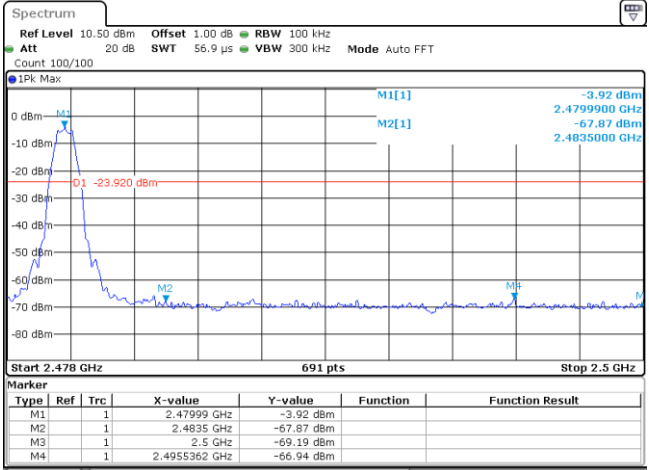
Appendix E: Duty cycle

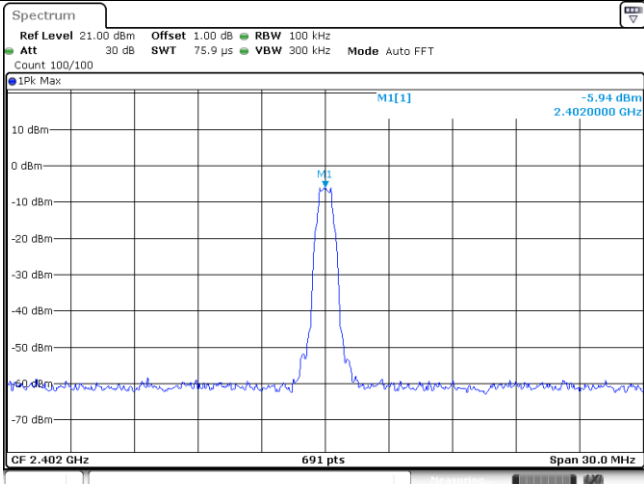
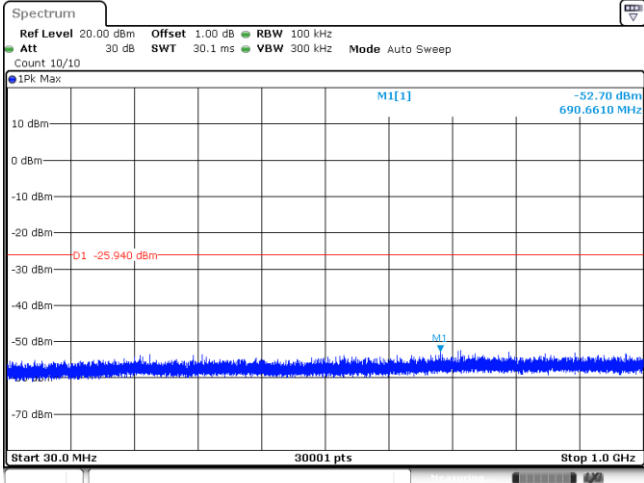
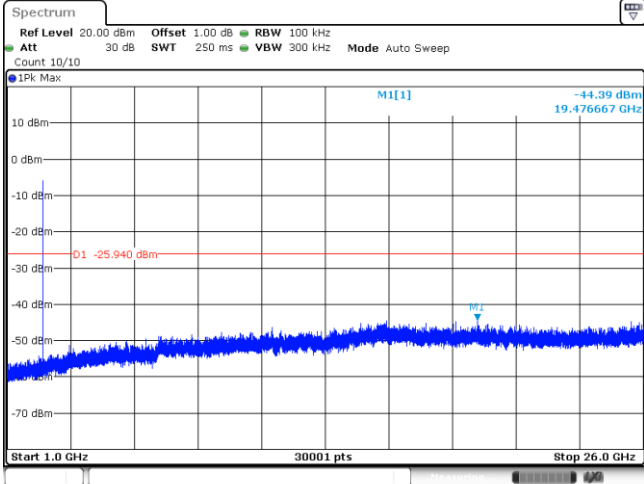
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.38	0.62	63.1%	2.6

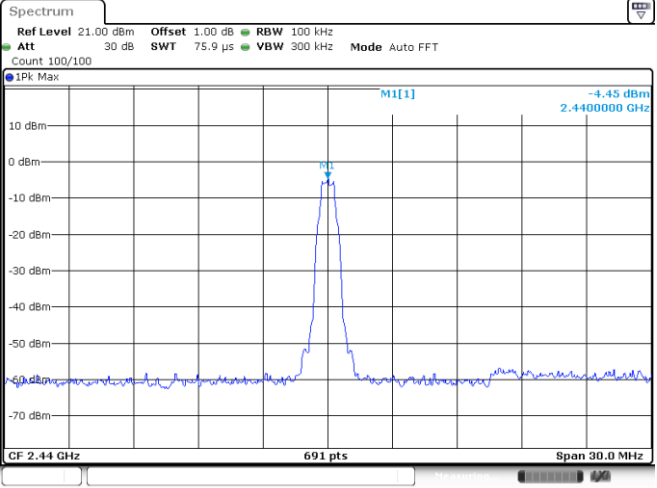
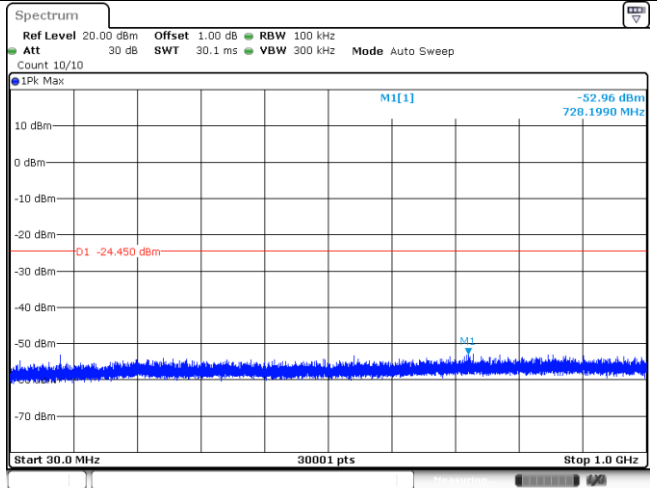
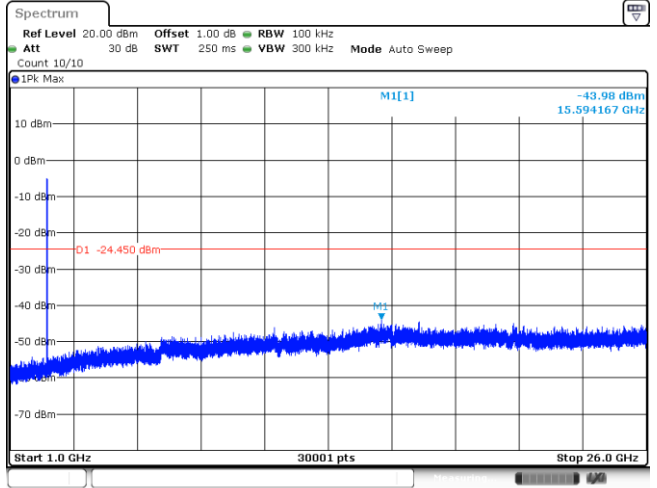


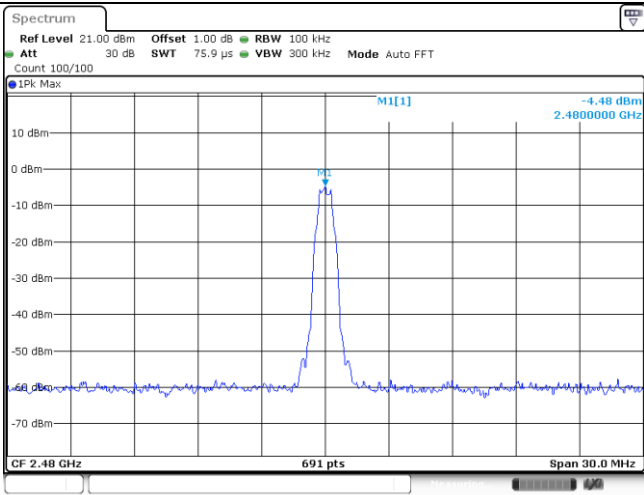
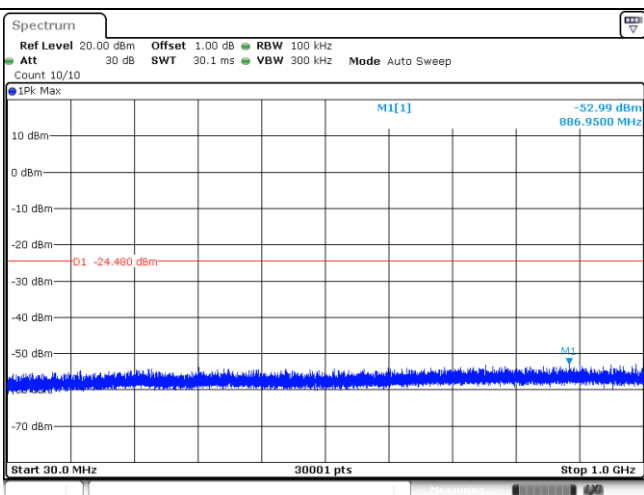
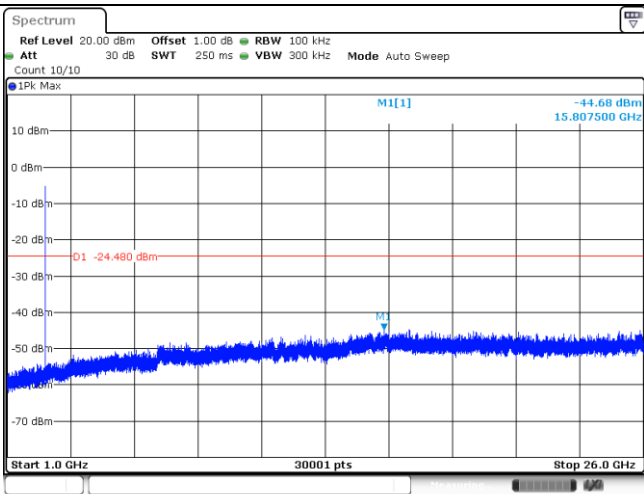
Date: 19.DEC.2019 16:48:52

Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge																																										
CH00	 <p>Marker Table for CH00:</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>-4.53 dBm</td> <td></td> <td></td> </tr> <tr> <td>M2</td> <td>1</td> <td></td> <td>2.4 GHz</td> <td>-64.56 dBm</td> <td></td> <td></td> </tr> <tr> <td>M3</td> <td>1</td> <td></td> <td>2.39 GHz</td> <td>-66.11 dBm</td> <td></td> <td></td> </tr> <tr> <td>M4</td> <td>1</td> <td></td> <td>2.31 GHz</td> <td>-65.14 dBm</td> <td></td> <td></td> </tr> <tr> <td>M5</td> <td>1</td> <td></td> <td>2.343457 GHz</td> <td>-63.63 dBm</td> <td></td> <td></td> </tr> </tbody> </table> <p>Date: 19 DEC 2019 16:44:04</p>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40204 GHz	-4.53 dBm			M2	1		2.4 GHz	-64.56 dBm			M3	1		2.39 GHz	-66.11 dBm			M4	1		2.31 GHz	-65.14 dBm			M5	1		2.343457 GHz	-63.63 dBm		
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Test Item:	SE
<p>CH00 Reference level</p>	 <p>1Pk Max: -5.94 dBm @ 2.402000 GHz</p> <p>CF 2.402 GHz, 691 pts, Span 30.0 MHz</p> <p>Date: 19 DEC 2019 16:44:12</p>
<p>CH00 30MHz~1000MHz</p>	 <p>1Pk Max: -52.70 dBm @ 690.6610 MHz</p> <p>Start 30.0 MHz, 30001 pts, Stop 1.0 GHz</p> <p>Date: 19 DEC 2019 16:44:27</p>
<p>CH00 1GHz~26GHz</p>	 <p>1Pk Max: -44.39 dBm @ 19.476667 GHz</p> <p>Start 1.0 GHz, 30001 pts, Stop 26.0 GHz</p> <p>Date: 19 DEC 2019 16:44:43</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 1PK Max M1[1] -4.45 dBm 2.440000 GHz CF 2.44 GHz 691 pts Span 30.0 MHz Date: 19 DEC 2019 16:45:54</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 1PK Max M1[1] -52.96 dBm 728.1990 MHz D1 -24.450 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 19 DEC 2019 16:46:09</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 1PK Max M1[1] -43.98 dBm 15.594167 GHz D1 -24.450 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 19 DEC 2019 16:46:25</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] -4.48 dBm 2.480000 GHz CF 2.48 GHz 691 pts Span 30.0 MHz Date: 19 DEC 2019 16:47:43</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] -52.99 dBm 886.9500 MHz D1 -24.480 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 19 DEC 2019 16:47:59</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] -44.68 dBm 15.807500 GHz D1 -24.480 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 19 DEC 2019 16:48:15</p>

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