

APPENDIX REPORT

Project No.	SHT2010054201EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT20100542002	Model No.	A5+
Start test date	2020/10/22	Finish date	2020/10/22
Temperature	25°C	Humidity	50%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zhe

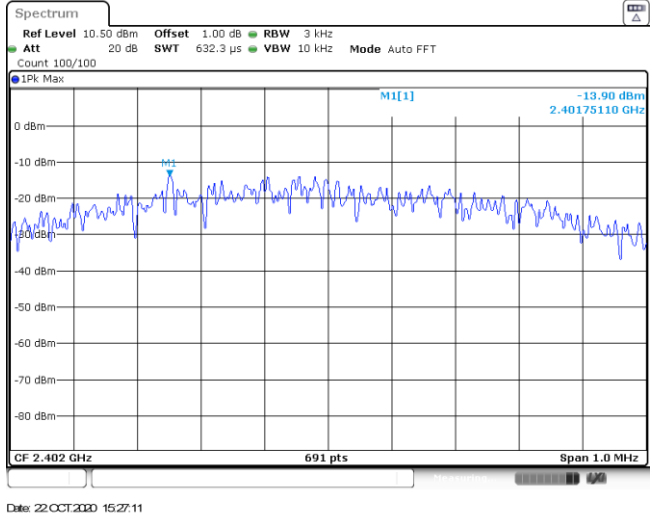
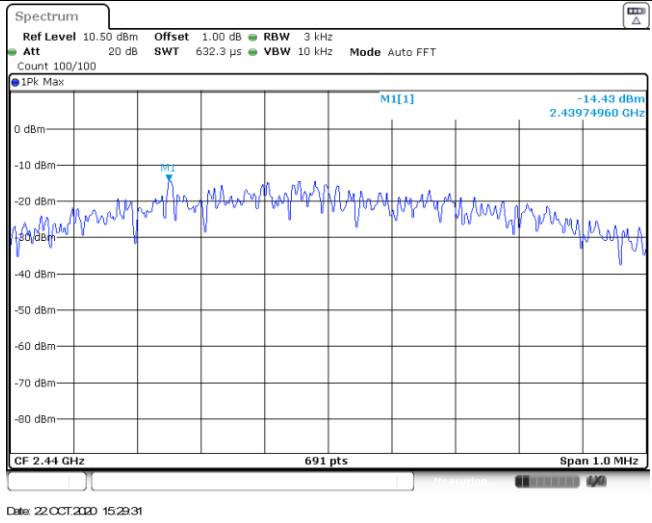
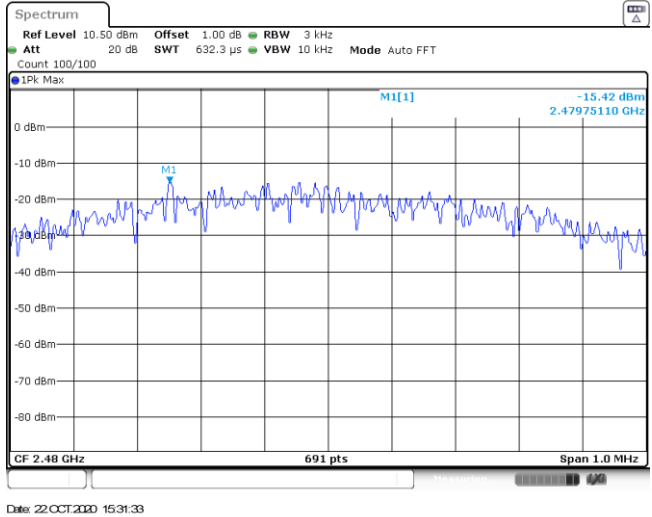
Appendix clause	Test item	Result
A	Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

Appendix A: Peak Output Power

Type	Channel	Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	2.05	2.04	≤ 30.00	Pass
	19	1.50	1.48		
	39	0.54	0.53		

Appendix B: Power Spectral Density

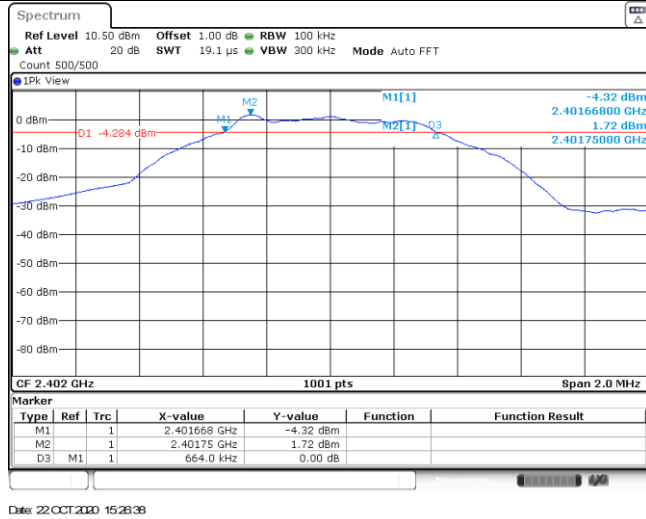
Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-13.90	≤8.00	Pass
	19	-14.43		
	39	-15.42		

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] -13.90 dBm 2.40175110 GHz CF 2.402 GHz 691 pts Span 1.0 MHz Date: 22 OCT 2020 15:27:11</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] -14.43 dBm 2.43974960 GHz CF 2.44 GHz 691 pts Span 1.0 MHz Date: 22 OCT 2020 15:29:31</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] -15.42 dBm 2.47975110 GHz CF 2.48 GHz 691 pts Span 1.0 MHz Date: 22 OCT 2020 15:31:33</p>

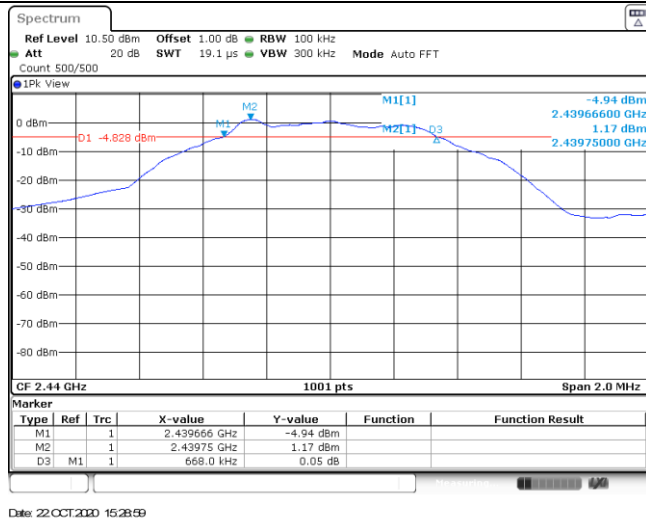
Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	664.00	≥500	Pass
	19	668.00		
	39	664.00		

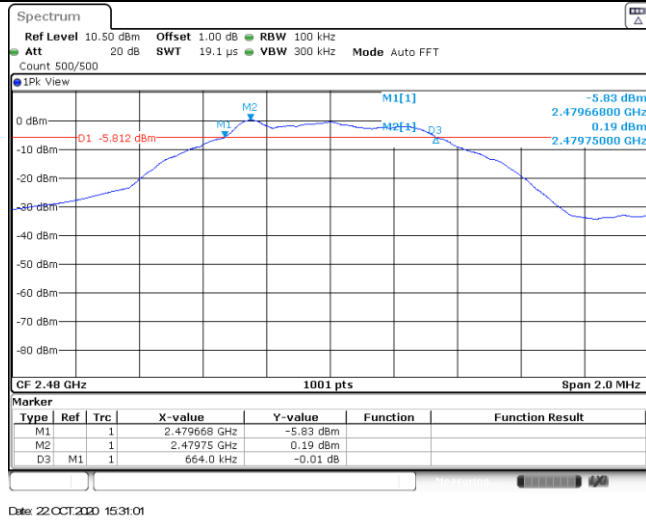
CH00



CH19



CH39



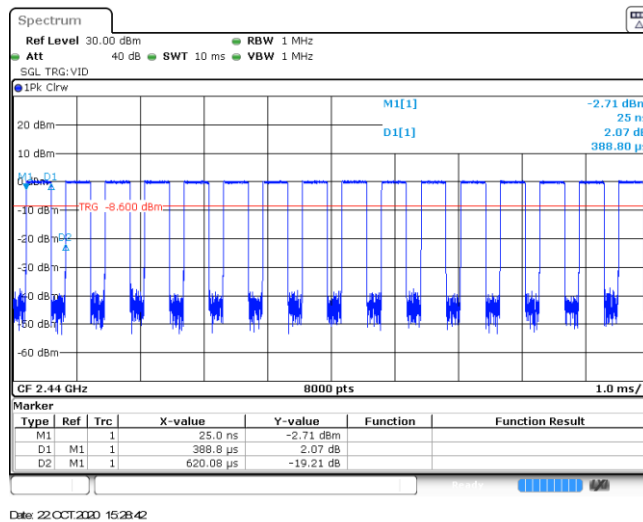
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.02	-	Pass
	19	1.02		
	39	1.02		

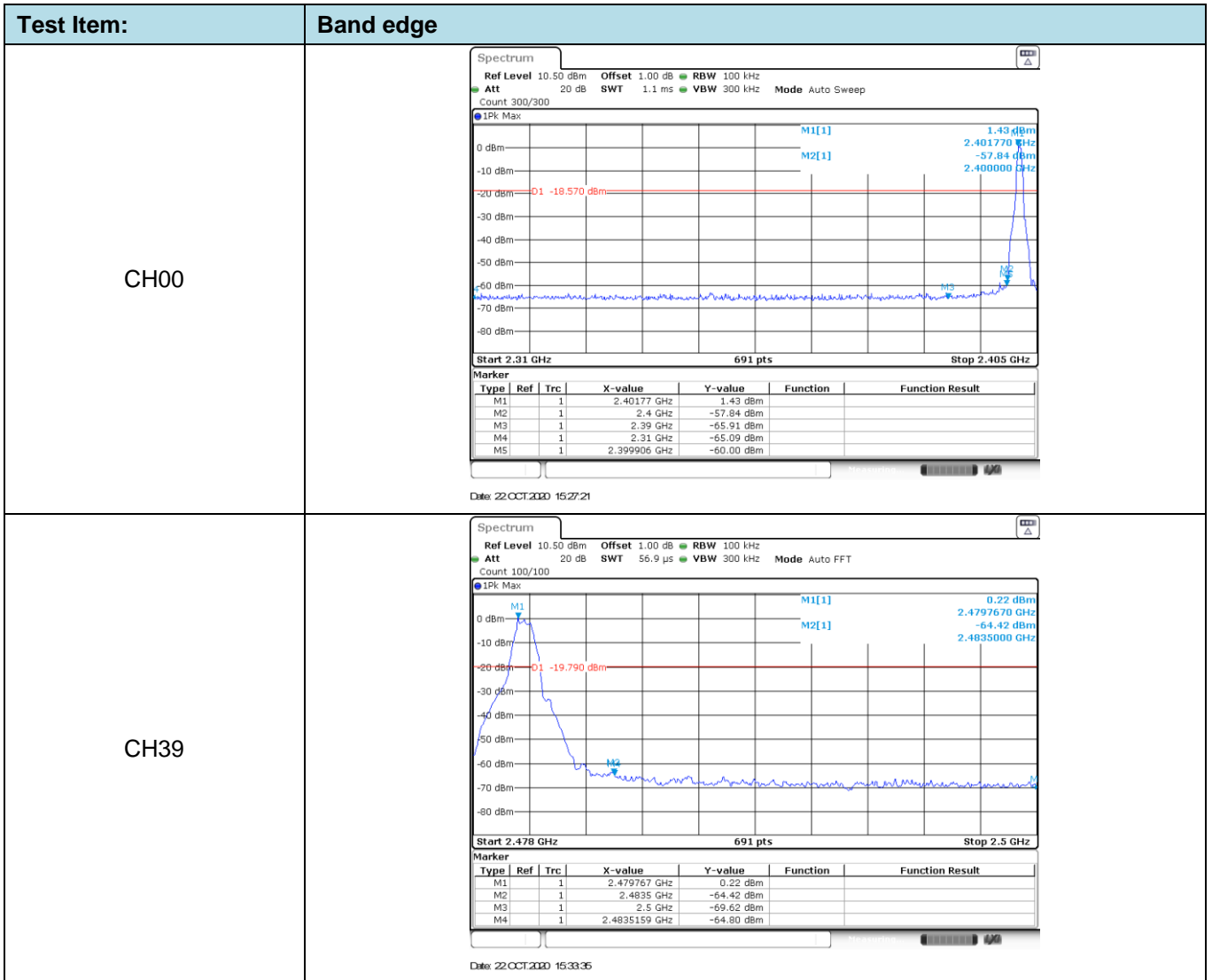
<p>CH00</p>	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500</p> <p>IPK View</p> <p>M1[1] -1.24 dBm 2.40175220 GHz 1.018981019 MHz</p> <p>CF 2.402 GHz 1001 pts Span 2.0 MHz</p> <p>Date: 22 OCT 2020 15:26:47</p>
<p>CH19</p>	<p>Ref Level 10.50 dBm Offset 1.00 dB RBW 30 kHz Att 20 dB SWT 63.3 μs VBW 100 kHz Mode Auto FFT Count 500/500</p> <p>IPK View</p> <p>M1[1] -1.79 dBm 2.43975220 GHz 1.018981019 MHz</p> <p>CF 2.44 GHz 1001 pts Span 2.0 MHz</p> <p>Date: 22 OCT 2020 15:29:07</p>
<p>CH39</p>	<p>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</p> <p>IPK View</p> <p>M1[1] -2.77 dBm 2.47975220 GHz 1.018981019 MHz</p> <p>CF 2.48 GHz 1001 pts Span 2.0 MHz</p> <p>Date: 22 OCT 2020 15:31:09</p>

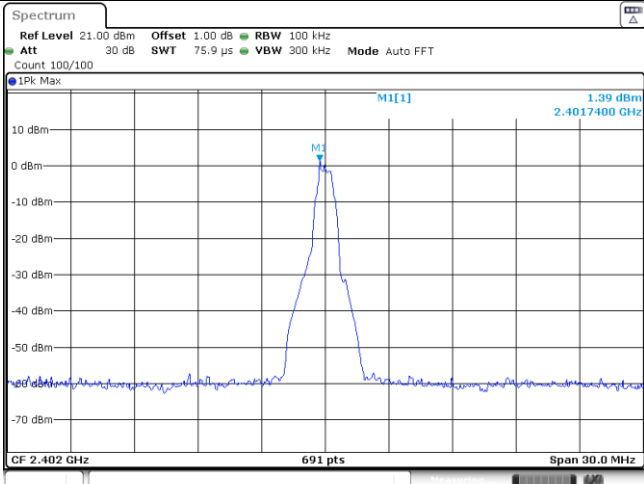
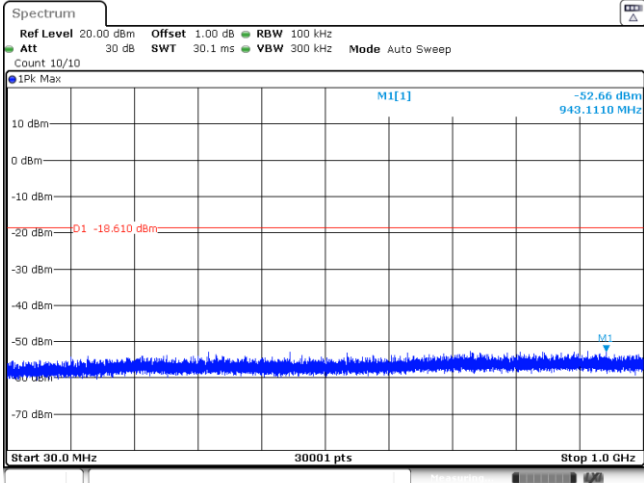
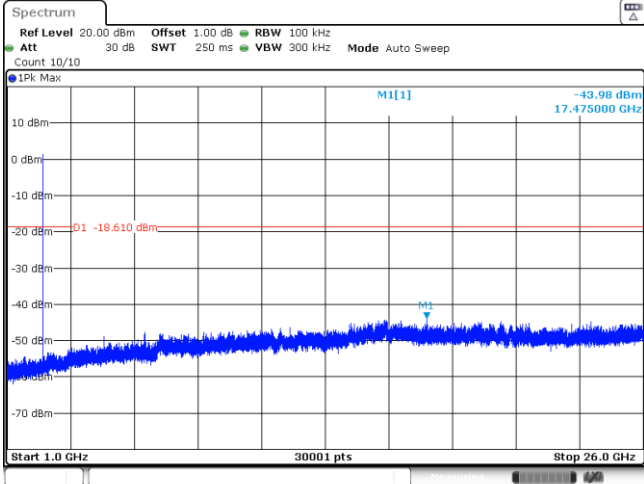
Appendix E: Duty cycle

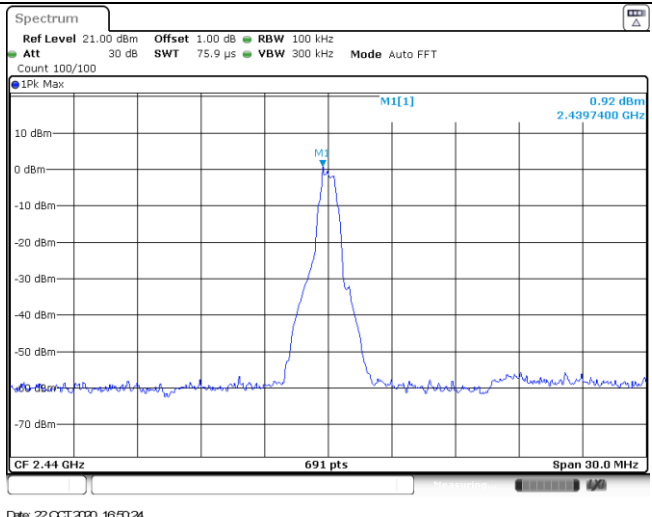
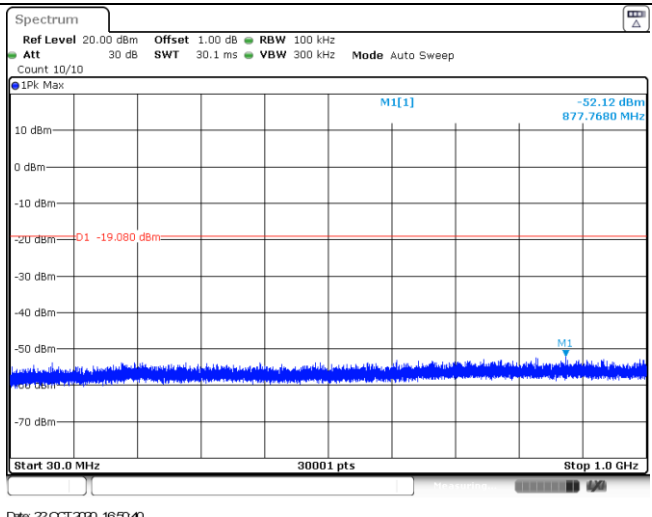
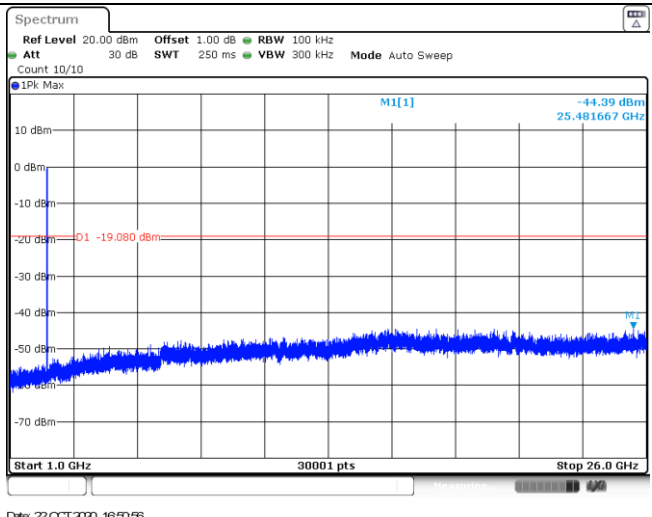
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.39	0.62	62.9%	2.6

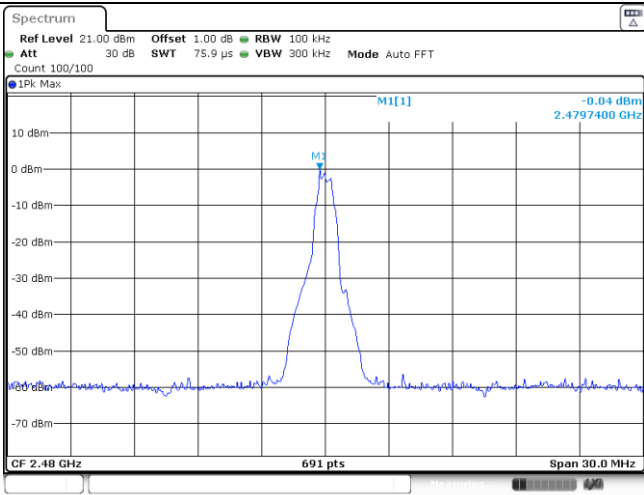
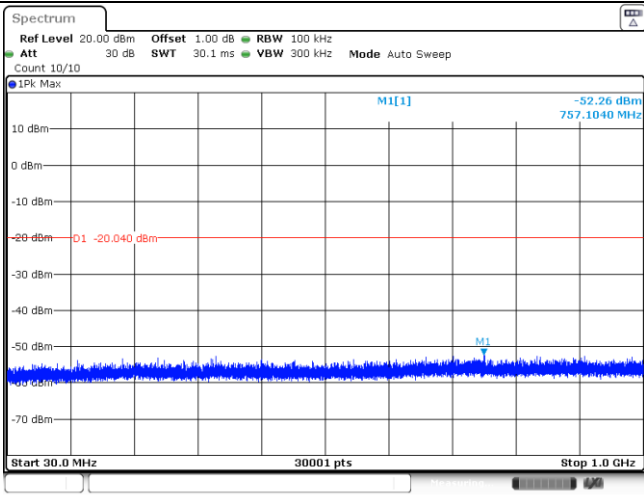
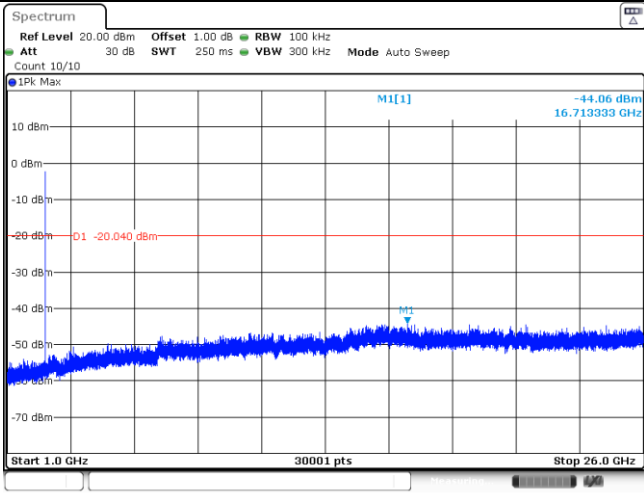


Appendix F: Band edge and Spurious Emissions (conducted)



Test Item:	SE
<p>CH00 Reference level</p>	 <p>1Pk Max: 1.39 dBm 2.4017400 GHz</p> <p>CF 2.402 GHz 691 pts Span 30.0 MHz</p> <p>Date: 22.OCT.2020 15:27:26</p>
<p>CH00 30MHz~1000MHz</p>	 <p>1Pk Max: -52.66 dBm 943.1110 MHz</p> <p>D1 -18.610 dBm</p> <p>Start 30.0 MHz 30001 pts Stop 1.0 GHz</p> <p>Date: 22.OCT.2020 15:27:43</p>
<p>CH00 1GHz~26GHz</p>	 <p>1Pk Max: -43.98 dBm 17.475000 GHz</p> <p>D1 -18.610 dBm</p> <p>Start 1.0 GHz 30001 pts Stop 26.0 GHz</p> <p>Date: 22.OCT.2020 15:28:00</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] 0.92 dBm 2.4397400 GHz CF 2.44 GHz 691 pts Span 30.0 MHz Date: 22 OCT 2020 16:50:24</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] -52.12 dBm 877.7680 MHz -20 dBm -01 -19.080 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 22 OCT 2020 16:50:40</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] -44.39 dBm 25.481667 GHz -20 dBm -01 -19.080 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 22 OCT 2020 16:50:55</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] -0.04 dBm 2.4797400 GHz CF 2.48 GHz 691 pts Span 30.0 MHz Date: 22 OCT 2020 15:33:41</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] -52.26 dBm 757.1040 MHz D1 -20.040 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 22 OCT 2020 15:33:57</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] -44.06 dBm 16.713333 GHz D1 -20.040 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 22 OCT 2020 15:34:13</p>

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