

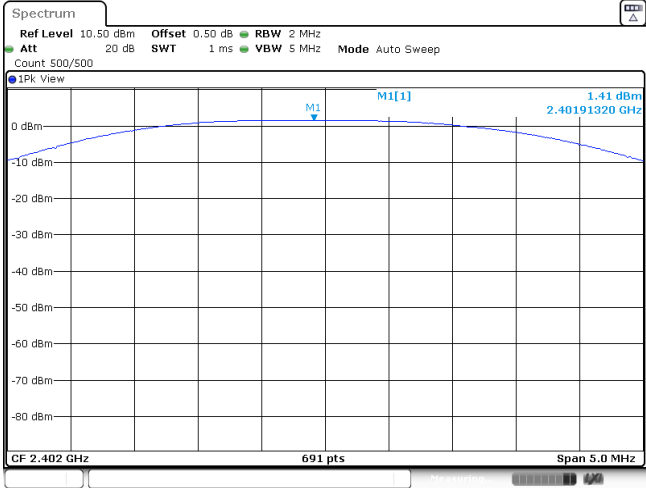
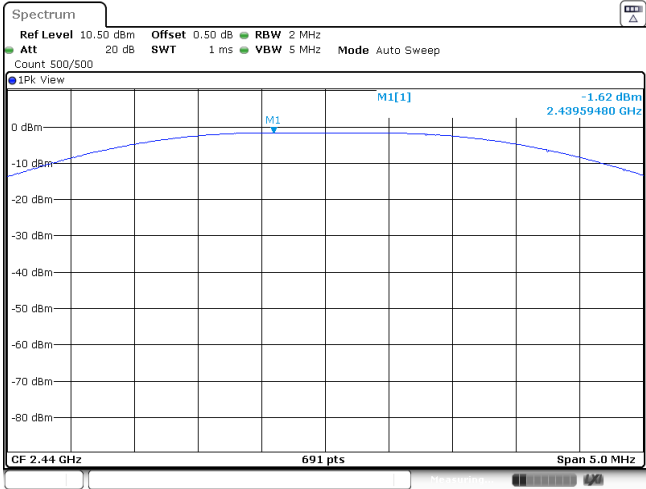
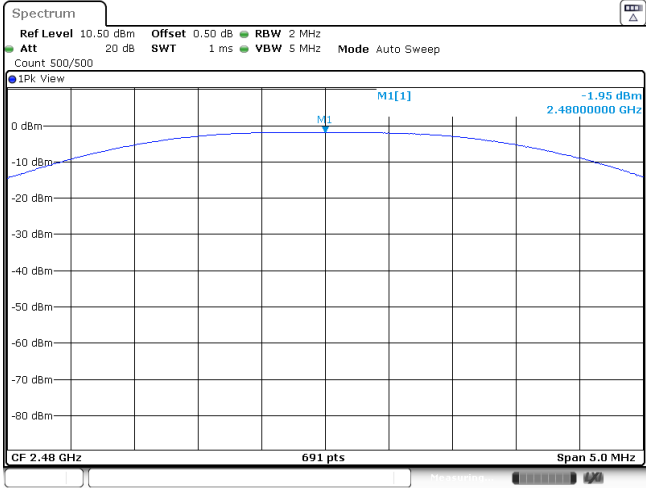
APPENDIX REPORT

Project No.	SHT2310020711EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT23100207017	Model No.	RN1L Pro
Start test date	2024/01/03	Finish date	2024/01/04
Temperature	24.5℃	Humidity	48.9%
Test Engineer	Xiangyu Wei	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

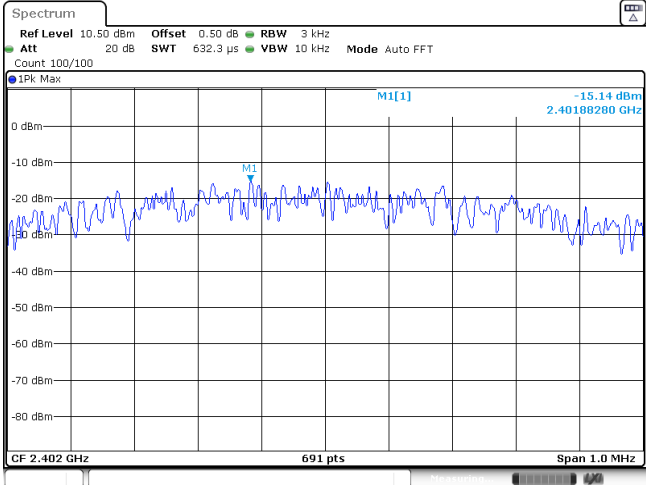
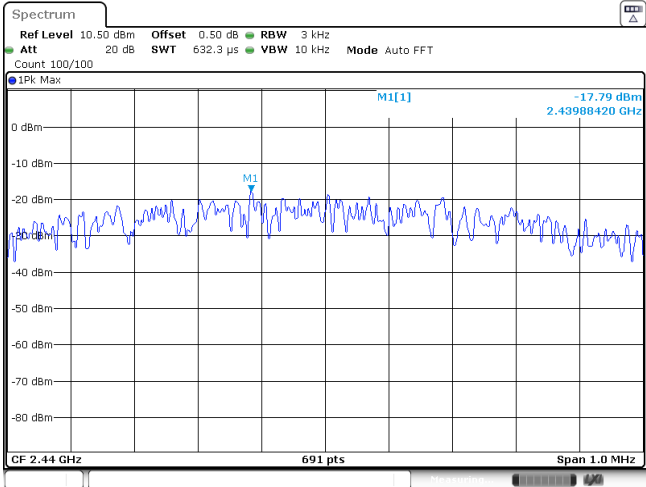
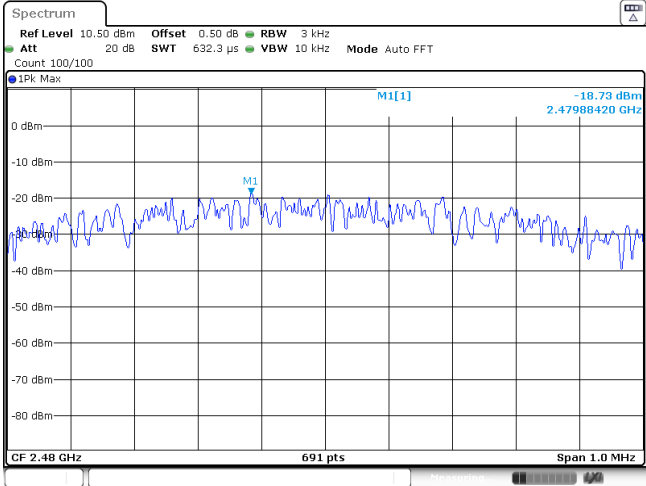
Appendix A: Peak Output Power

Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
BT-BLE	00	1.41	1.37	≤ 30.00	Pass
	19	-1.62	-1.67		
	39	-1.95	-1.99		

CH00	 Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 2 MHz Mode Auto Sweep Count 500/500 CF 2.402 GHz 691 pts Span 5.0 MHz
CH19	 Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 2 MHz Mode Auto Sweep Count 500/500 CF 2.44 GHz 691 pts Span 5.0 MHz
CH39	 Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 2 MHz Mode Auto Sweep Count 500/500 CF 2.48 GHz 691 pts Span 5.0 MHz

Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
BT-BLE	00	-15.14	≤8.00	Pass
	19	-17.79		
	39	-18.59		

CH00	 Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 3 kHz SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -15.14 dBm 2.40188280 GHz CF 2.402 GHz 691 pts Span 1.0 MHz Date: 4/23/2024 09:36:52
CH19	 Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 3 kHz SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -17.79 dBm 2.43988420 GHz CF 2.44 GHz 691 pts Span 1.0 MHz Date: 4/23/2024 09:39:44
CH39	 Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 3 kHz SWT 632.3 μs VBW 10 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -19.73 dBm 2.47988420 GHz CF 2.48 GHz 691 pts Span 1.0 MHz Date: 4/23/2024 09:41:08

Appendix C: 6dB bandwidth

Type	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
BT-BLE	00	984.00	≥500	Pass
	19	946.00		
	39	904.00		

CH00	Spectrum Ref Level 10.50 dBm Att 20 dB Offset 0.50 dB RBW 100 kHz SWT 19.1 μs VBW 300 kHz Mode Auto FFT Count 500/500 1Pk View </
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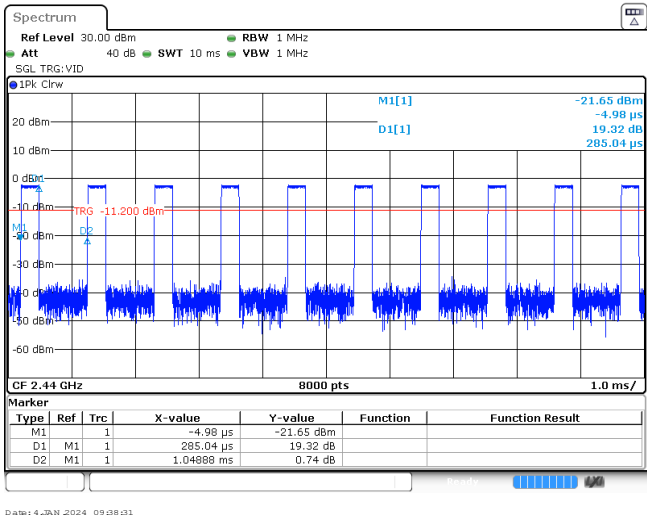
Appendix D: 99% Occupied Bandwidth

Type	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
BT-BLE	00	1.36	-	Pass
	19	1.20		
	39	1.15		

CH00	Spectrum Ref Level 10.50 dBm Offset 0.50 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 M1 M1[1] Occ Bw T1 T2 -3.39 dBm 2.40174030 GHz 1.354645355 MHz Date: 4/23/2024 09:36:03
CH19	Spectrum Ref Level 10.50 dBm Offset 0.50 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 M1 M1[1] Occ Bw T1 T2 -6.45 dBm 2.43974030 GHz 1.200799201 MHz Date: 4/23/2024 09:38:51
CH39	Spectrum Ref Level 10.50 dBm Offset 0.50 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 M1 M1[1] Occ Bw T1 T2 -6.75 dBm 2.47974030 GHz 1.152847153 MHz Date: 4/23/2024 09:40:43

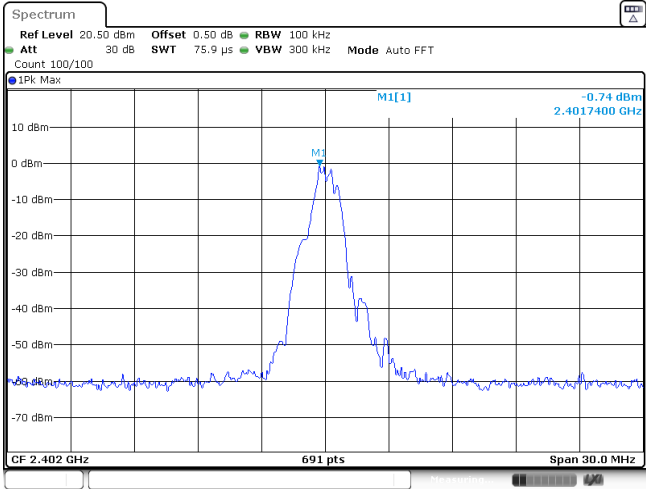
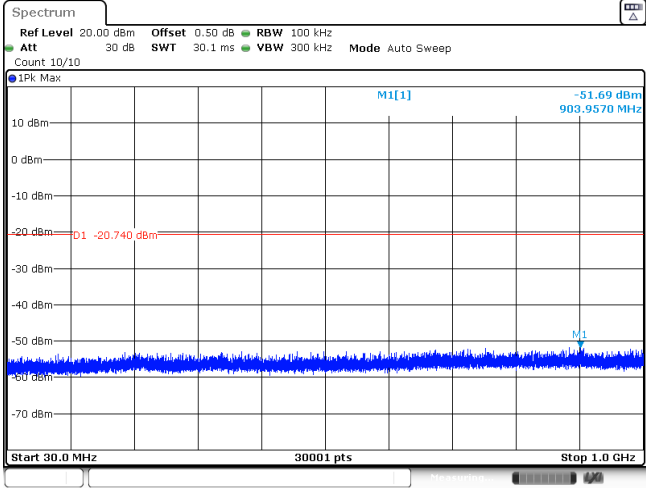
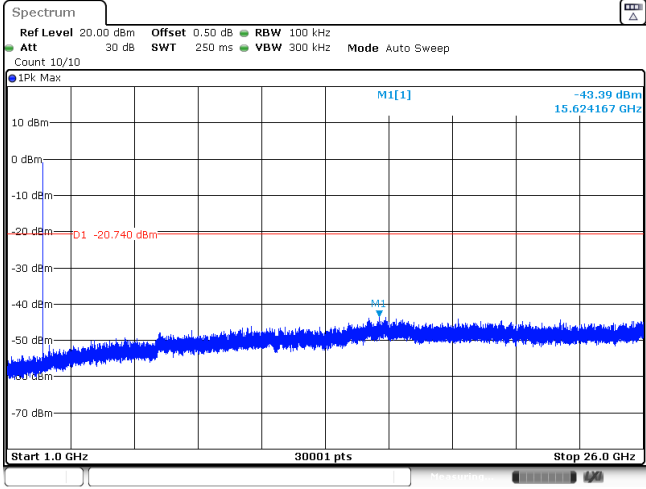
Appendix E: Duty cycle

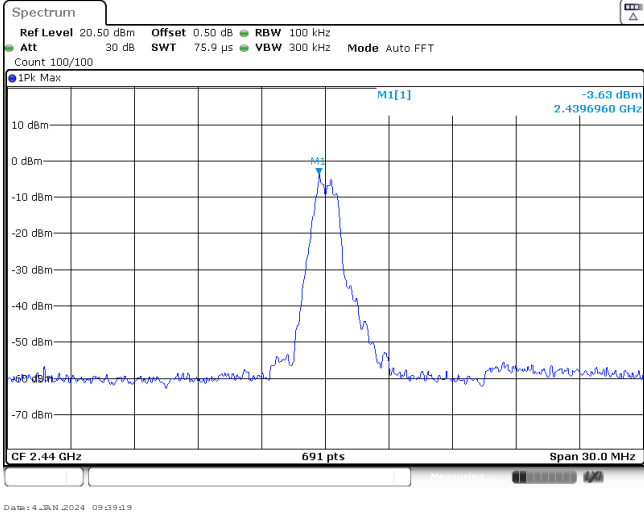
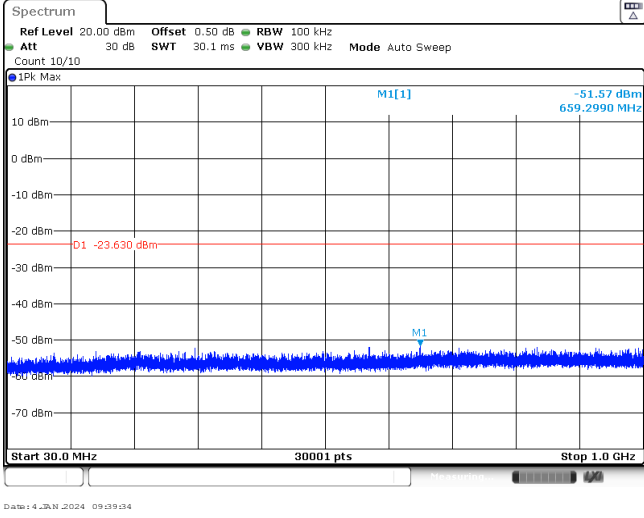
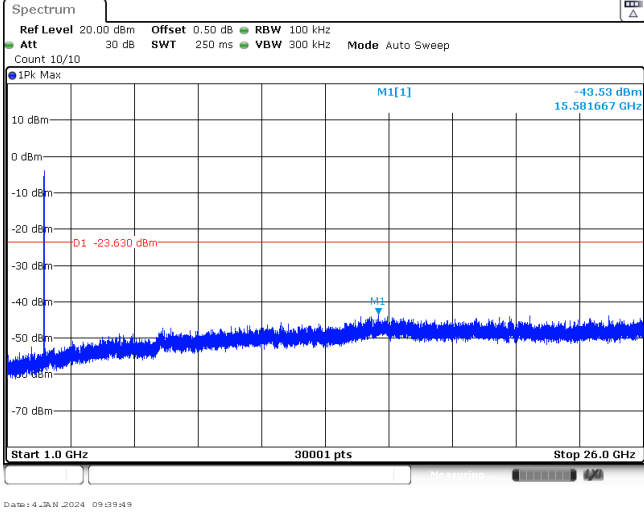
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	0.29	1.05	27.62%	3.45



Appendix F: Band edge and Spurious Emissions (conducted)

Test Item:	Band edge																																										
CH00	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 100 kHz Att 20 dB SWT 1.1 ms VBW 300 kHz Mode Auto Sweep Count 300/300 1Pk Max 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1[1] M2[1] D1 -20.100 dBm M3 M4 M5 -0.10 dBm 2.402040 GHz -48.32 dBm 2.400000 GHz Start 2.31 GHz 691 pts Stop 2.405 GHz Marker <table><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><tr><td>M1</td><td>1</td><td></td><td>2.40204 GHz</td><td>-0.10 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4 GHz</td><td>-48.32 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.39 GHz</td><td>-65.28 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.31 GHz</td><td>-65.45 dBm</td><td></td><td></td></tr><tr><td>M5</td><td>1</td><td></td><td>2.399906 GHz</td><td>-50.70 dBm</td><td></td><td></td></tr></table>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.40204 GHz	-0.10 dBm			M2	1		2.4 GHz	-48.32 dBm			M3	1		2.39 GHz	-65.28 dBm			M4	1		2.31 GHz	-65.45 dBm			M5	1		2.399906 GHz	-50.70 dBm		
Type	Ref	Trc	X-value	Y-value	Function	Function Result																																					
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M4	1		2.31 GHz	-65.45 dBm																																							
M5	1		2.399906 GHz	-50.70 dBm																																							
CH39	Spectrum Ref Level 10.50 dBm Offset 0.50 dB RBW 100 kHz Att 20 dB SWT 56.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 1Pk Max 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm -70 dBm -80 dBm M1 M2[1] D1 -23.530 dBm M3 M4 -3.53 dBm 2.4797350 GHz -61.49 dBm 2.4835000 GHz Start 2.478 GHz 691 pts Stop 2.5 GHz Marker <table><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><tr><td>M1</td><td>1</td><td></td><td>2.479735 GHz</td><td>-3.53 dBm</td><td></td><td></td></tr><tr><td>M2</td><td>1</td><td></td><td>2.4835 GHz</td><td>-61.49 dBm</td><td></td><td></td></tr><tr><td>M3</td><td>1</td><td></td><td>2.5 GHz</td><td>-69.26 dBm</td><td></td><td></td></tr><tr><td>M4</td><td>1</td><td></td><td>2.4835797 GHz</td><td>-59.40 dBm</td><td></td><td></td></tr></table>	Type	Ref	Trc	X-value	Y-value	Function	Function Result	M1	1		2.479735 GHz	-3.53 dBm			M2	1		2.4835 GHz	-61.49 dBm			M3	1		2.5 GHz	-69.26 dBm			M4	1		2.4835797 GHz	-59.40 dBm									
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M1	1		2.479735 GHz	-3.53 dBm																																							
M2	1		2.4835 GHz	-61.49 dBm																																							
M3	1		2.5 GHz	-69.26 dBm																																							
M4	1		2.4835797 GHz	-59.40 dBm																																							

Test Item:	SE
CH00 Reference level	 Spectrum Ref Level 20.50 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 75.9 μs VBW 300 kHz Mode Auto FFT Count 100/100 1Pk Max M1[1] -0.74 dBm 2.4017400 GHz CF 2.402 GHz 691 pts Span 30.0 MHz Date: 4 JAN 2024 09:37:28
CH00 30MHz~1000MHz	 Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1Pk Max M1[1] -51.69 dBm 903.9570 MHz D1 -20.740 dBm Start 30.0 MHz 30001 pts Stop 1.0 GHz Date: 4 JAN 2024 09:37:23
CH00 1GHz~26GHz	 Spectrum Ref Level 20.00 dBm Offset 0.50 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 1Pk Max M1[1] -43.39 dBm 15.624167 GHz D1 -20.740 dBm Start 1.0 GHz 30001 pts Stop 26.0 GHz Date: 4 JAN 2024 09:37:28

CH19 Reference level	
CH19 30MHz~1000MHz	
CH19 1GHz~26GHz	

CH39 Reference level	
CH39 30MHz~1000MHz	
CH39 1GHz~26GHz	

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