

APPENDIX REPORT

Project No.	SHT2103026501EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT21030265003	Model No.	HET-BA1611
Start test date	2021-03-19	Finish date	2021-03-19
Temperature	22.9°C	Humidity	40%
Test Engineer	Hailey Chen	Auditor	Xiaodong Zheo

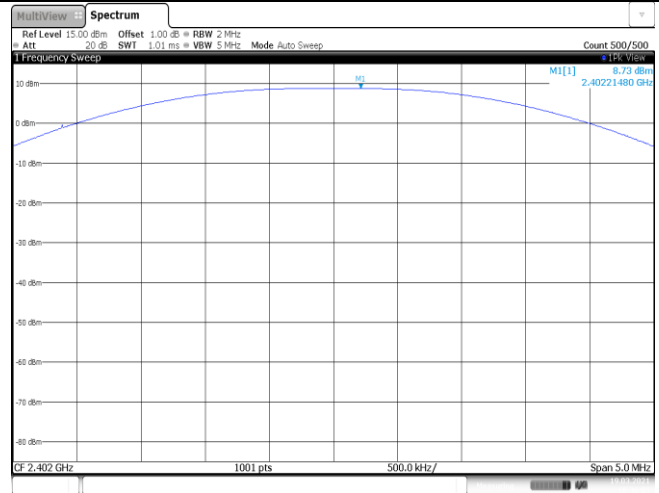
Appendix clause	Test item	Result
A	Peak Output Power	PASS
B	Power Spectral Density	PASS
C	6 dB Bandwidth	PASS
D	99% Occupied Bandwidth	PASS
E	Duty cycle	PASS
F	Band edge and Spurious Emissions (conducted)	PASS

Appendix A: Peak Output Power

Type	Channel	1Mbps		2Mbps		Limit (dBm)	Result
		Output power (dBm)	Average Output power (dBm)	Output power (dBm)	Average Output power (dBm)		
BT-BLE	00	8.73	8.71	8.73	8.72	≤ 30.00	Pass
	19	8.72	8.70	8.67	8.65		
	39	8.60	8.59	8.66	8.64		

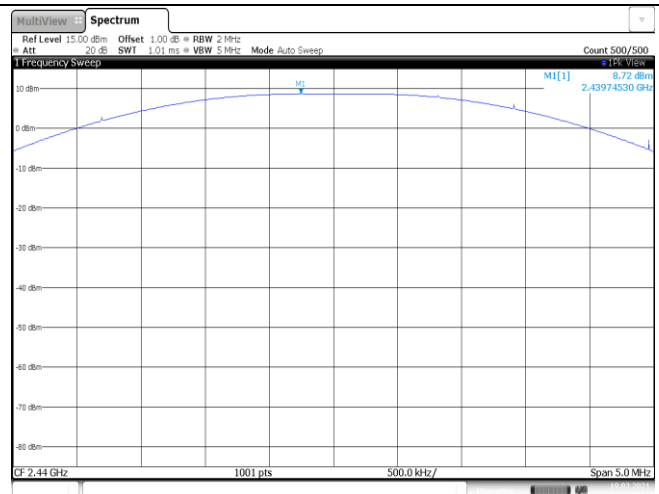
1Mbps

CH00



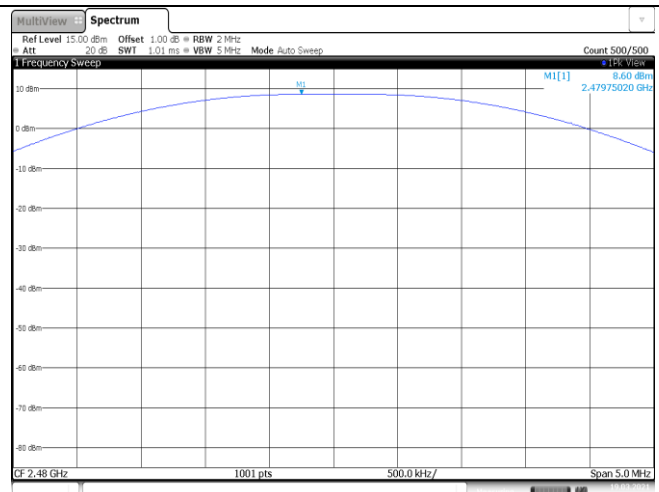
Date: 19-MAR-2021 16:06:04

CH19

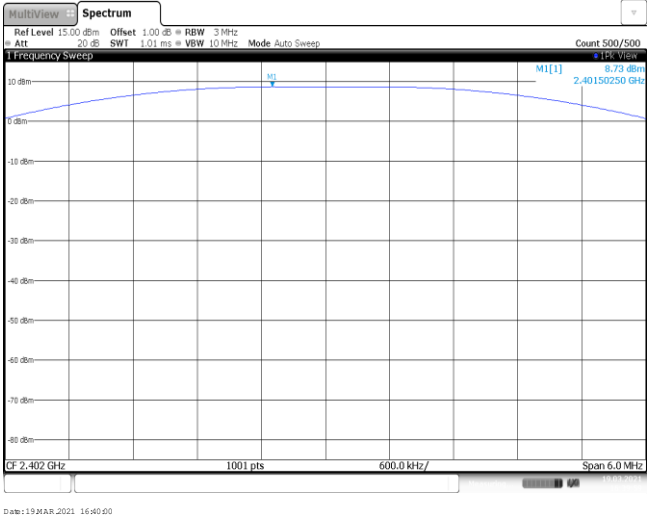
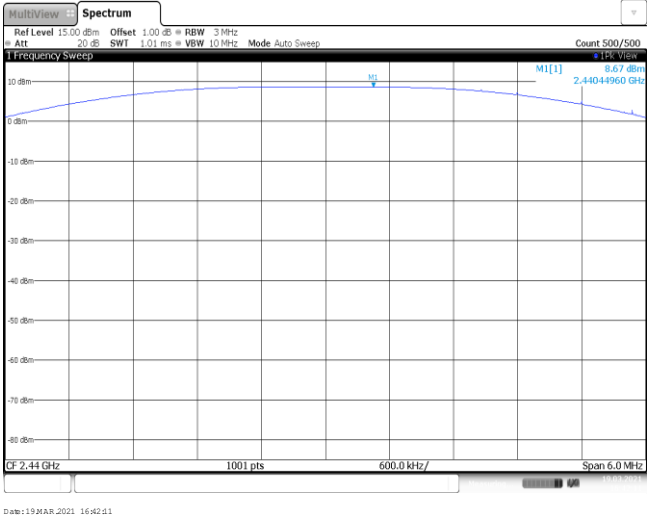
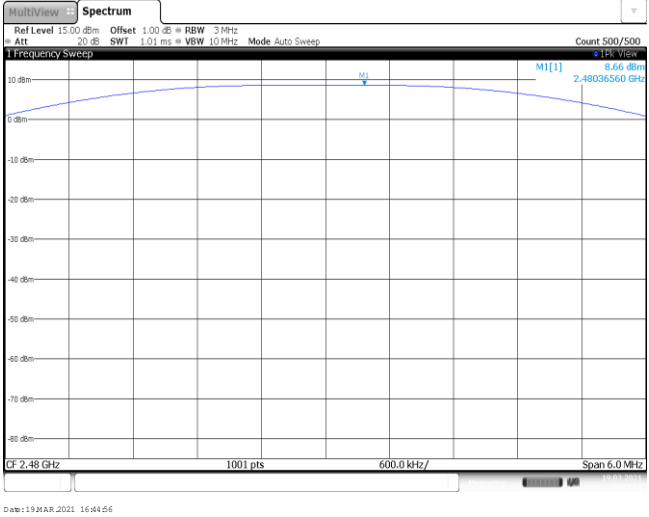


Date: 19-MAR-2021 16:07:03

CH39

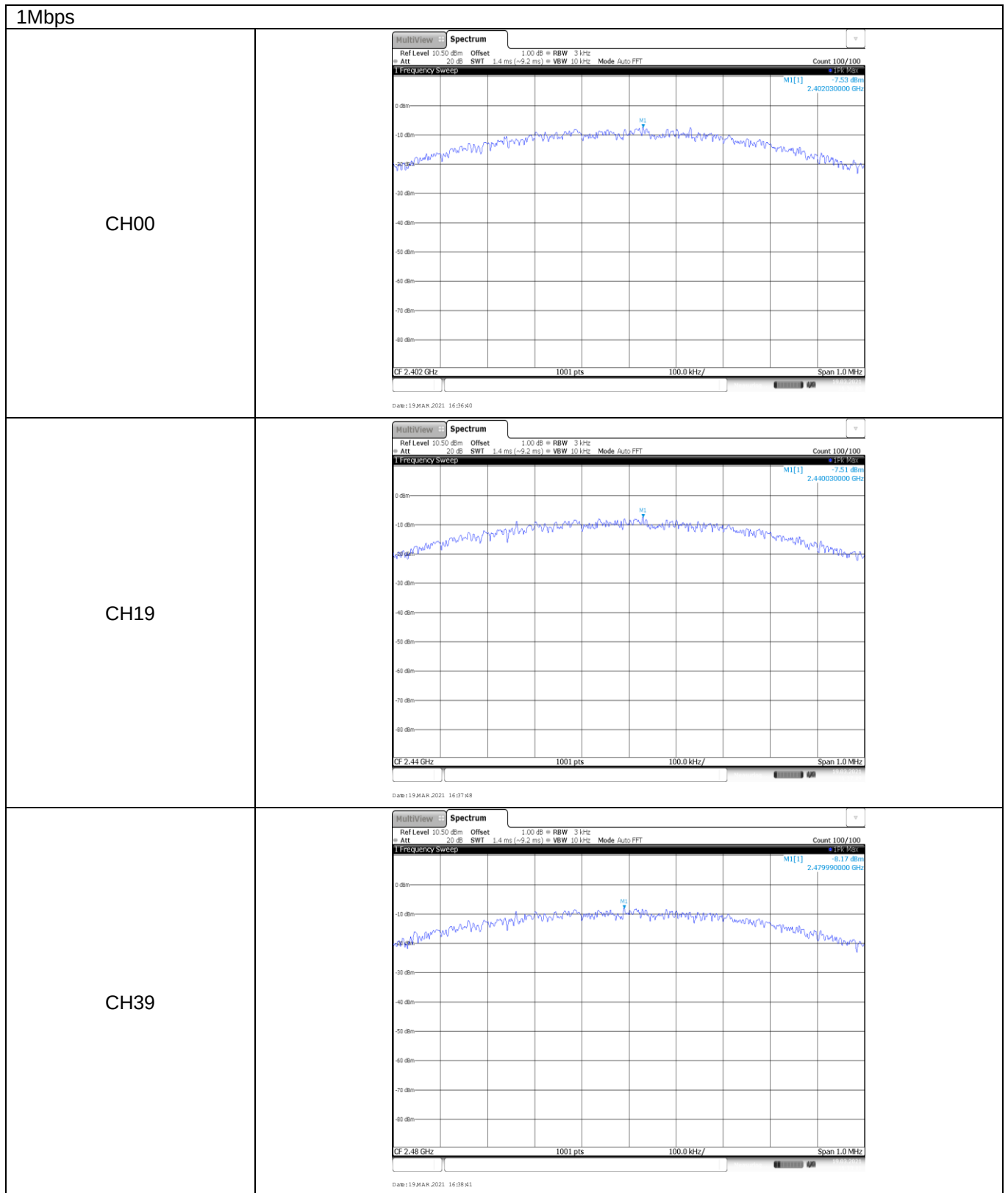


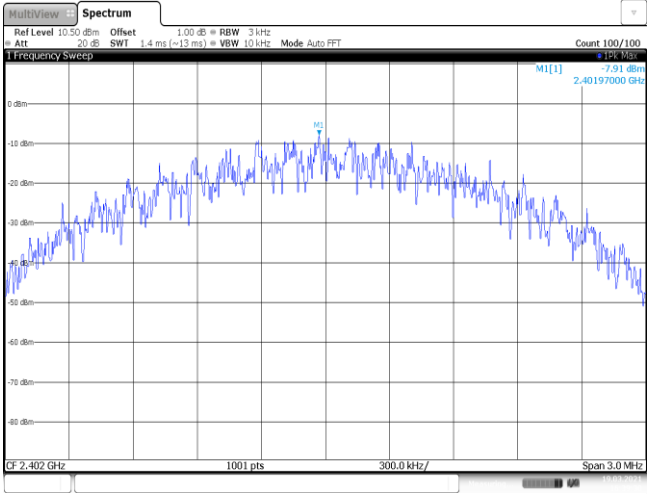
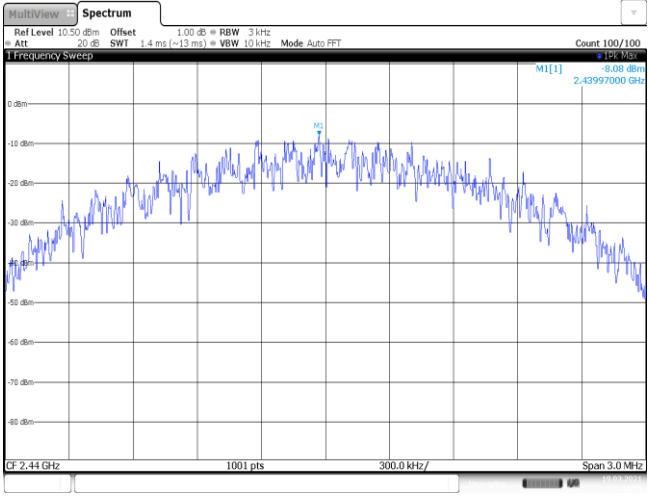
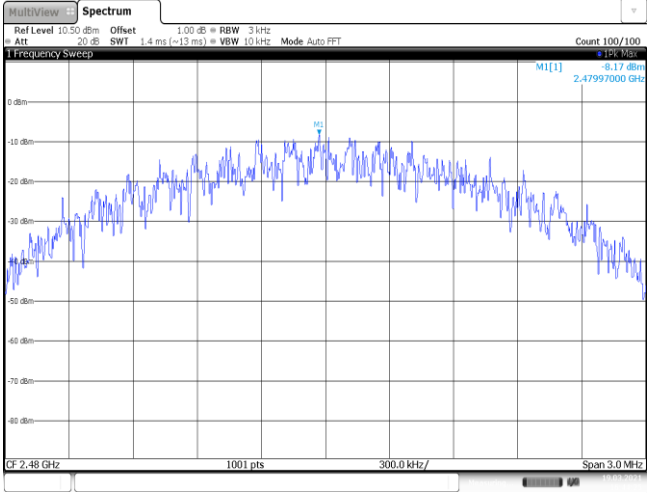
Date: 19-MAR-2021 16:08:25

2Mbps	CH00 
	CH19 
	CH39 

Appendix B: Power Spectral Density

Type	Channel	Power Spectral Density(dBm/3KHz)		Limit (dBm/3KHz)	Result
		1Mbps	2Mbps		
BT-BLE	00	-7.53	-7.91	≤8.00	Pass
	19	-7.51	-8.08		
	39	-8.17	-8.17		



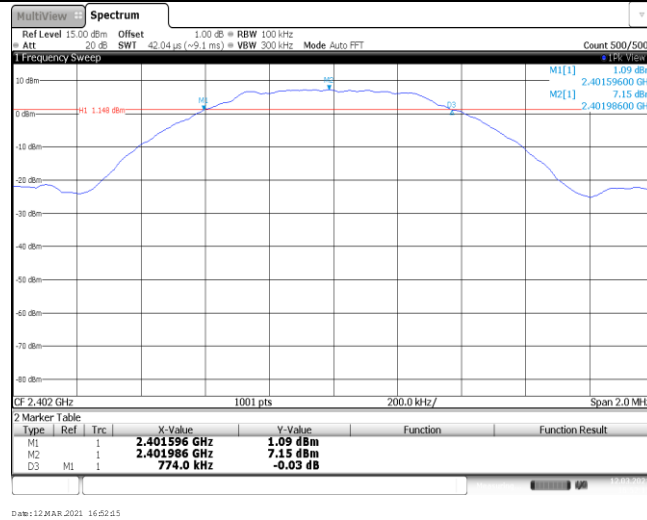
2Mbps	CH00 
	CH19 
	CH39 

Appendix C: 6dB bandwidth

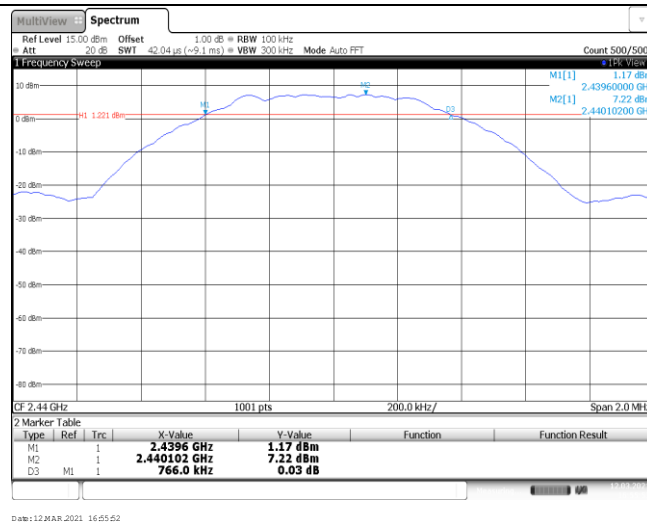
Type	Channel	6dB Bandwidth(kHz)		Limit (kHz)	Result
		1Mbps	2Mbps		
BT-BLE	00	774.00	1310.00	≥500	Pass
	19	766.00	1305.00		
	39	778.00	1320.00		

1Mbps

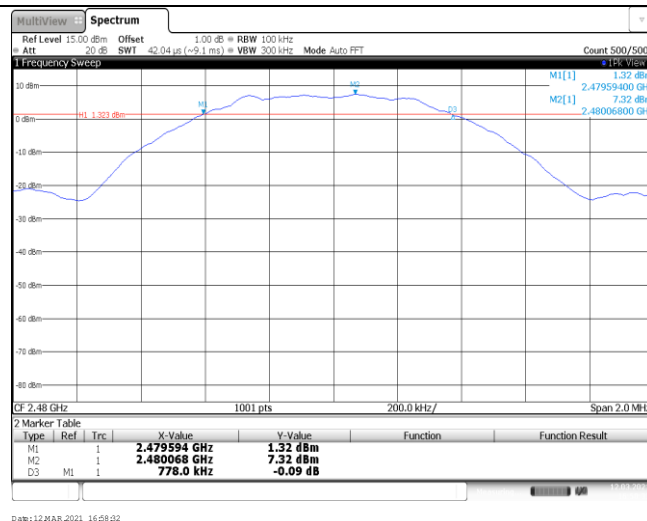
CH00



CH19

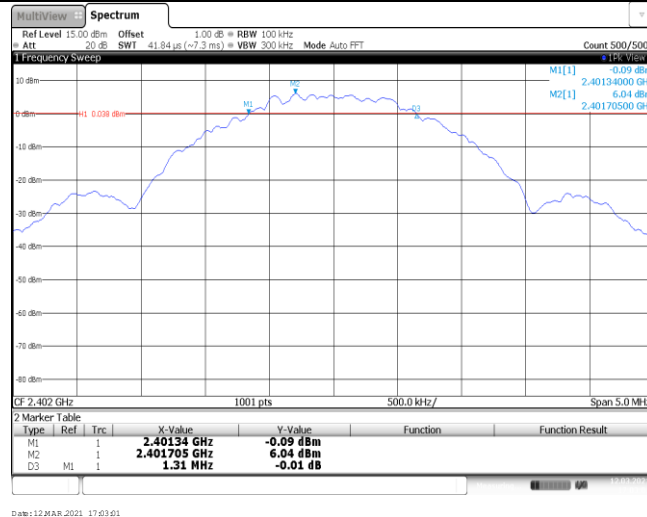


CH39

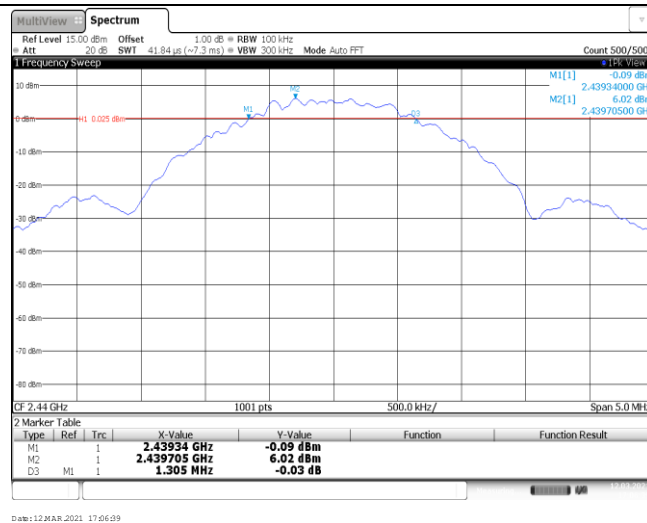


2Mbps

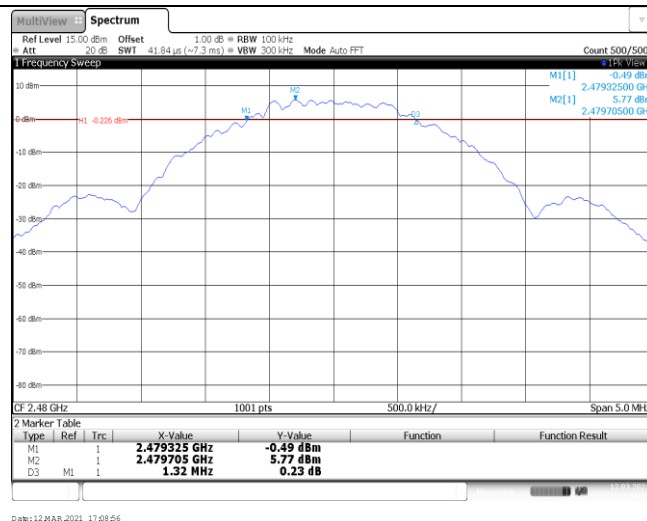
CH00



CH19



CH39

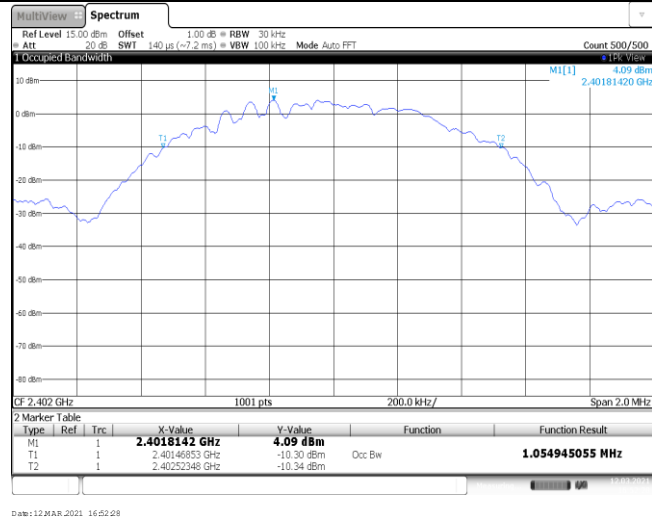


Appendix D: 99% Occupied Bandwidth

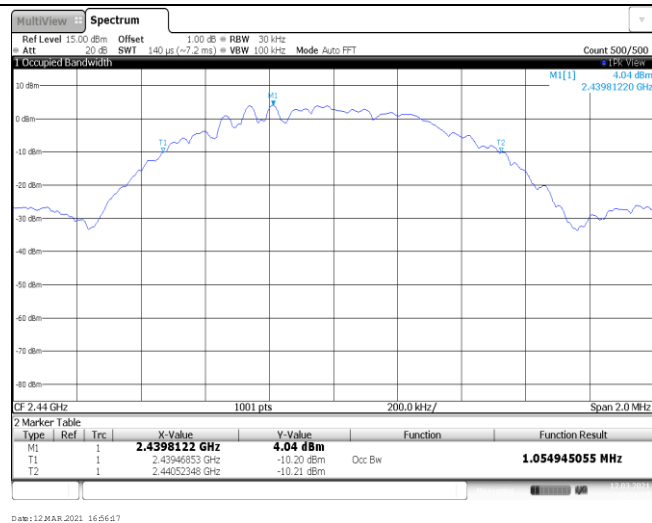
Type	Channel	99% Occupied Bandwidth(MHz)		Limit (kHz)	Result
		1Mbps	2Mbps		
BT-BLE	00	1.06	2.17	-	Pass
	19	1.06	2.18		
	39	1.07	2.20		

1Mbps

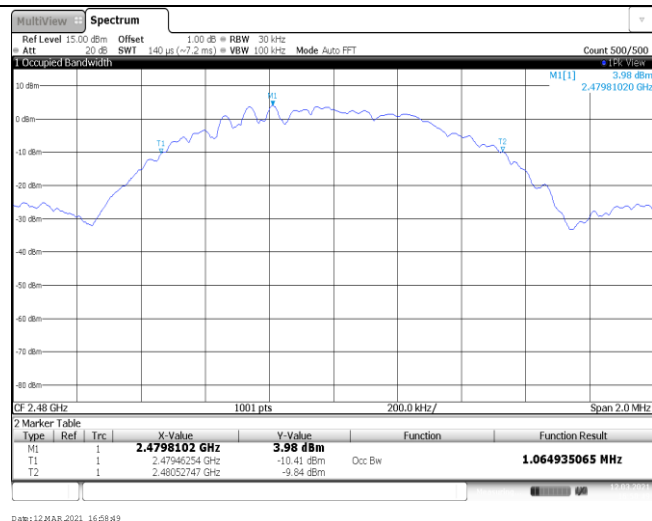
CH00



CH19

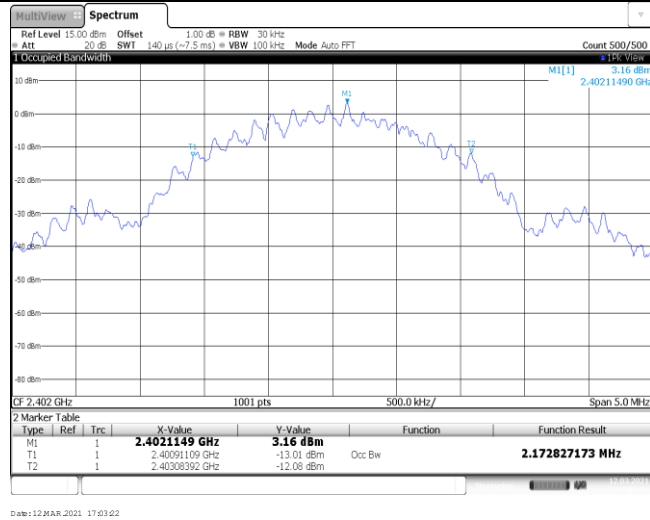


CH39

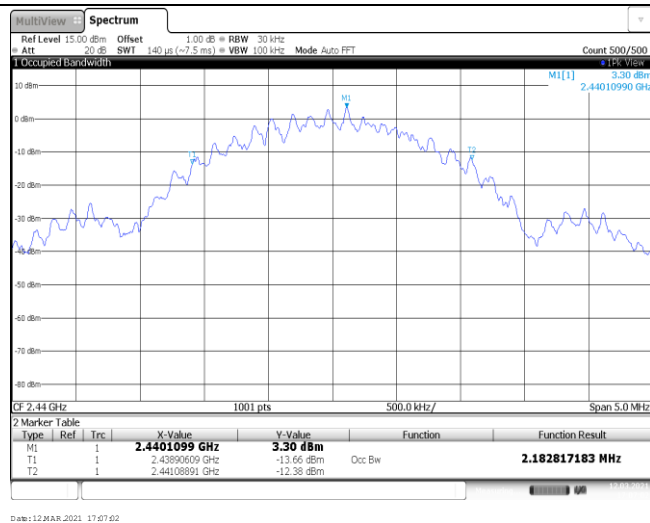


2Mbps

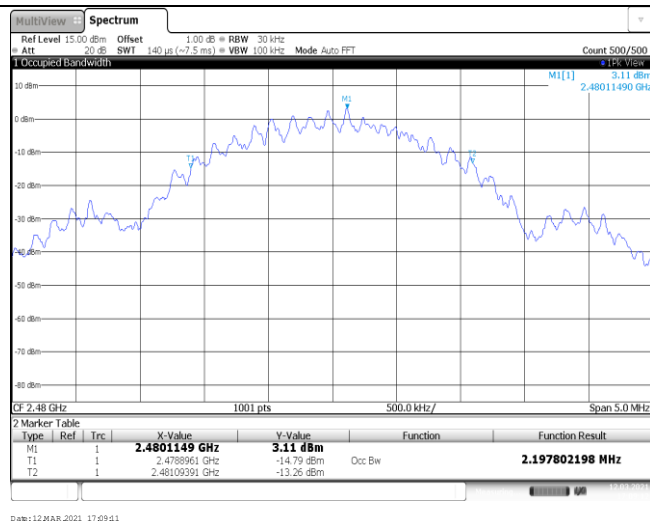
CH00



CH19

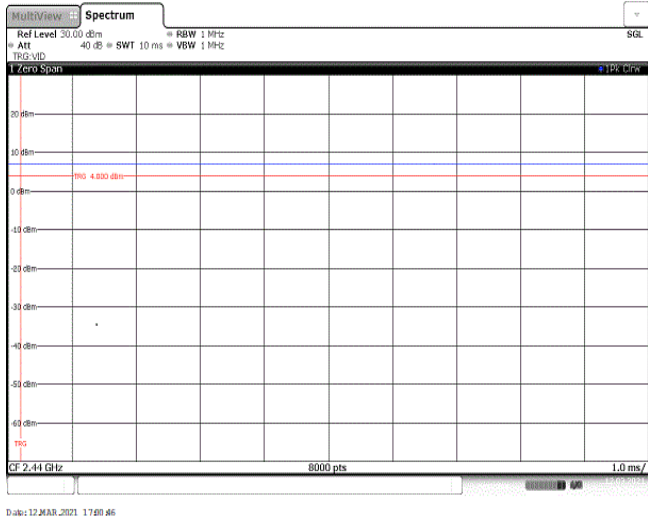


CH39



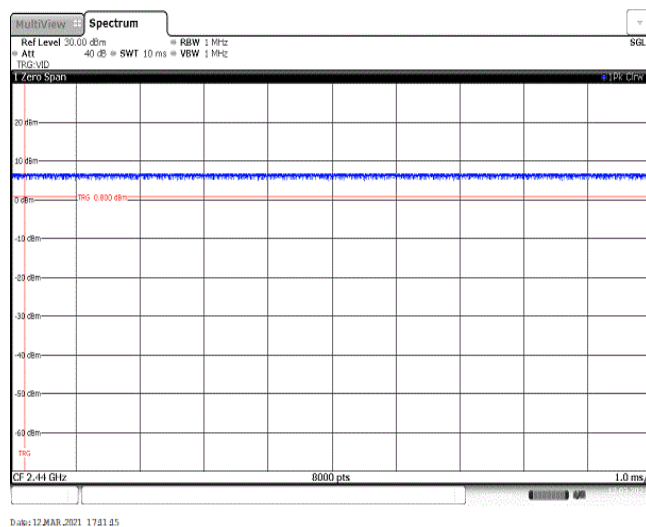
Appendix E: Duty cycle

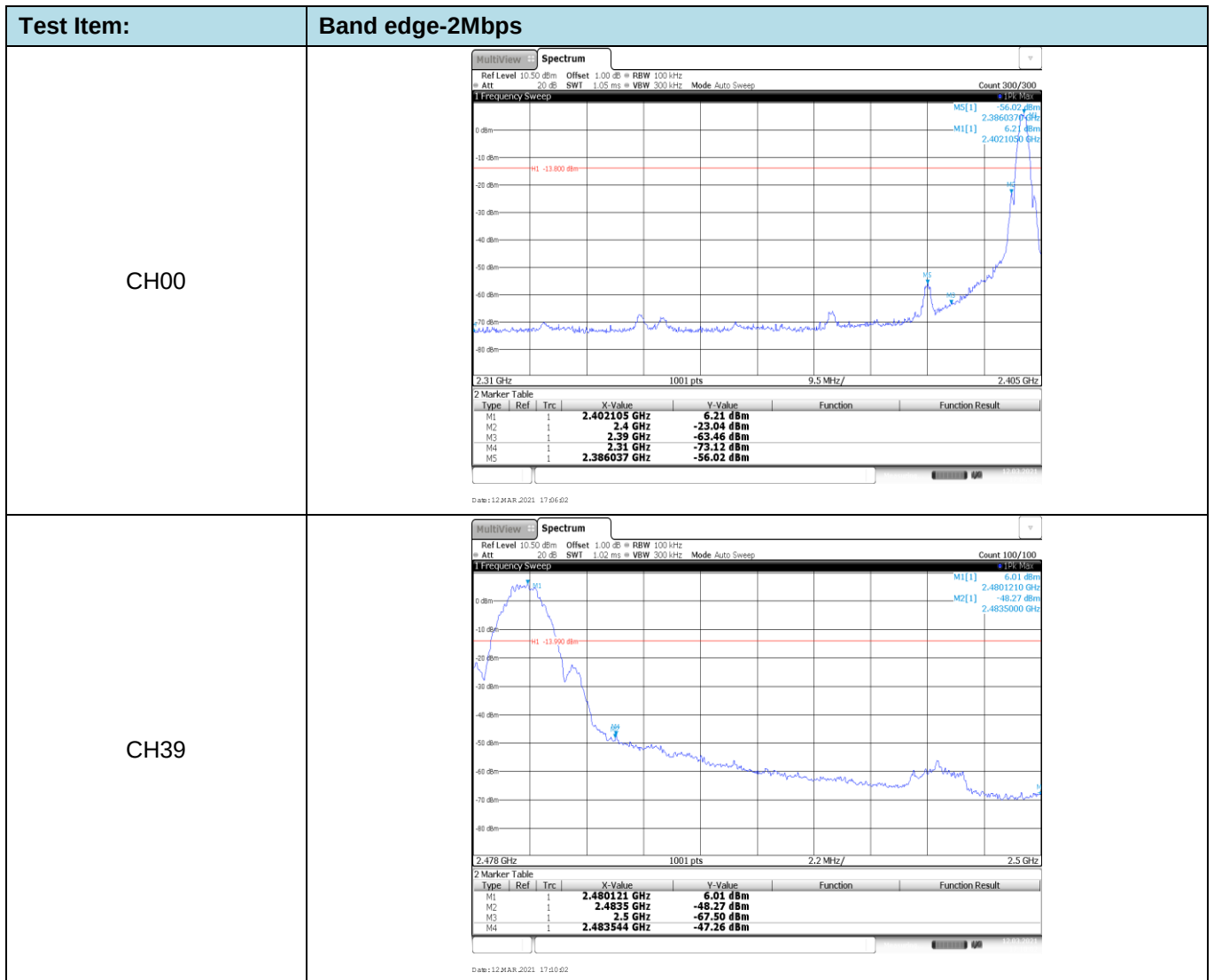
1Mbps				
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	1.00	1.00	100%	1.0

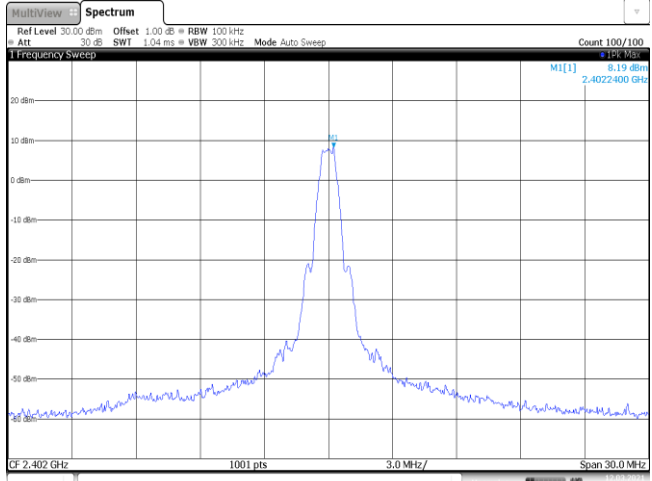
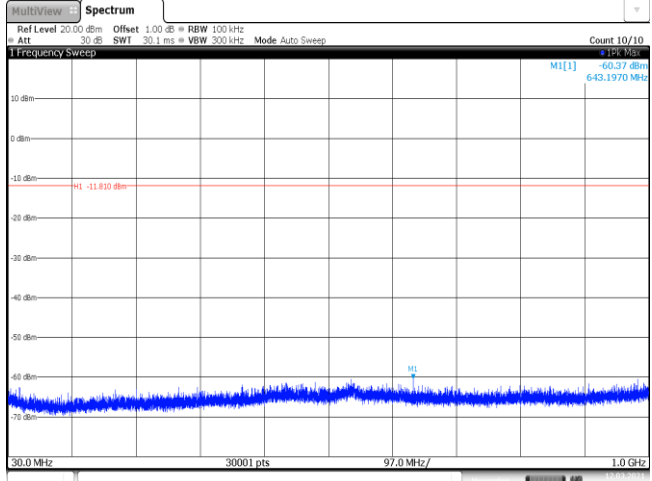
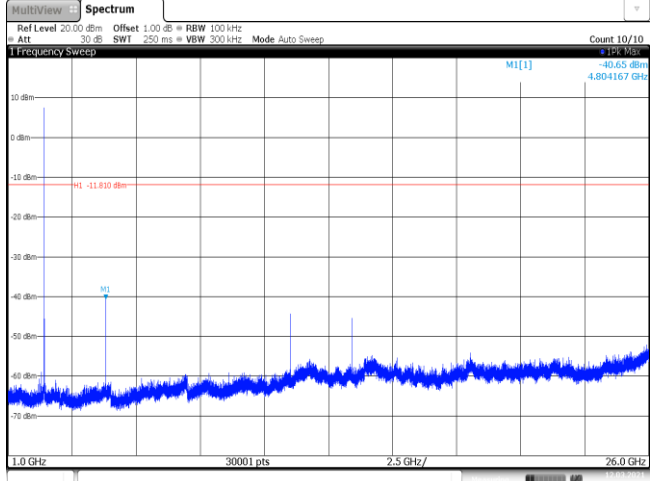


2Mbps

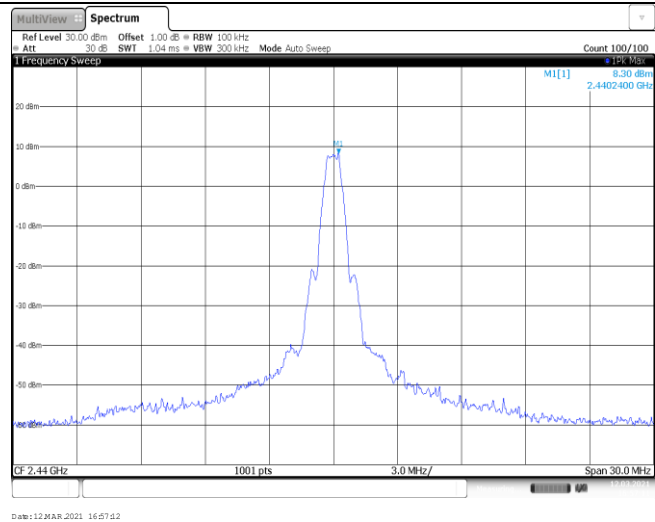
Test Frequency (MHz)	T _{on} time for single burst (ms)	T _{period} (ms)	Duty cycle	1/T _{on} time (kHz)
2440	1.00	1.00	100%	1.0



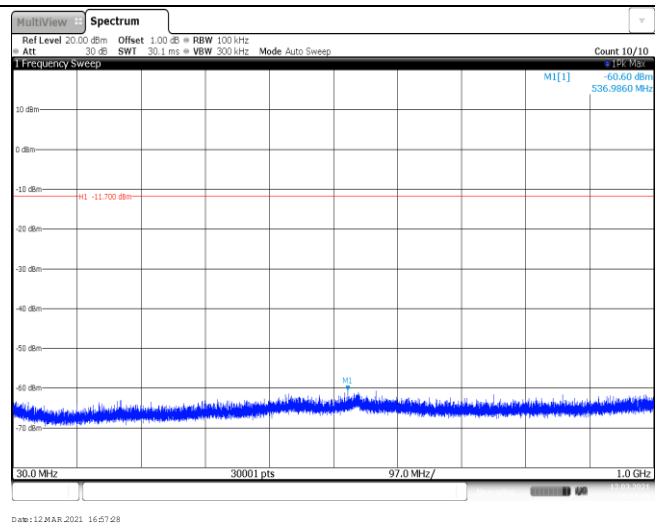


Test Item:	SE-1Mbps
CH00 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] 8.19 dBm 2.4022400 GHz 2.402 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12 MAR 2021 16:53:01
CH00 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.37 dBm 643.1970 MHz 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 12 MAR 2021 16:53:17
CH00 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -40.65 dBm 4.804167 GHz 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 12 MAR 2021 16:53:24

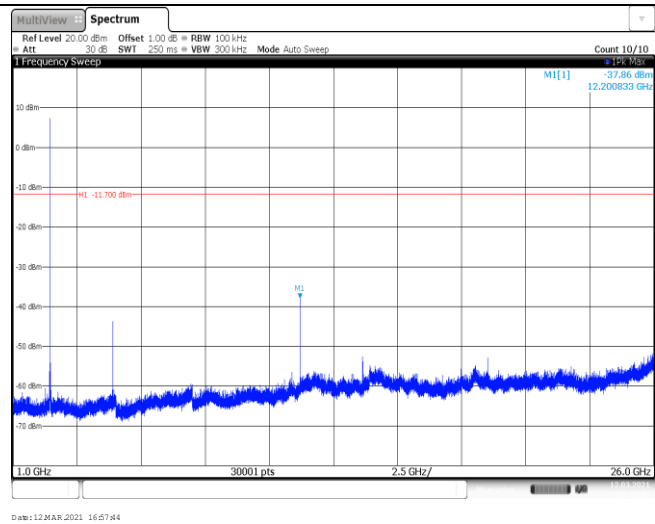
CH19
Reference level



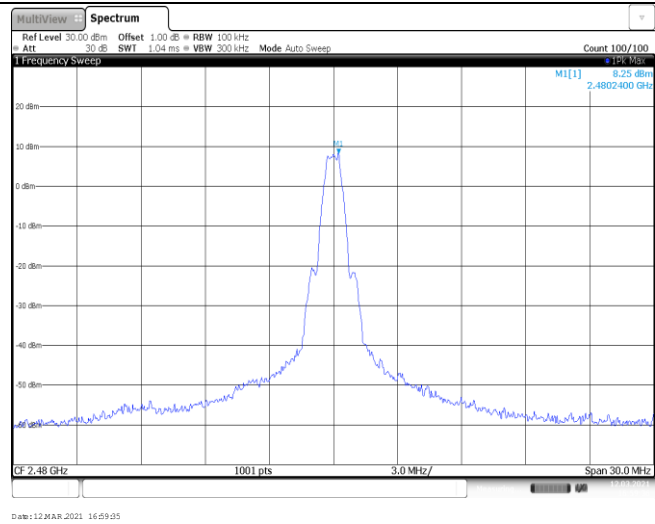
CH19
30MHz~1000MHz



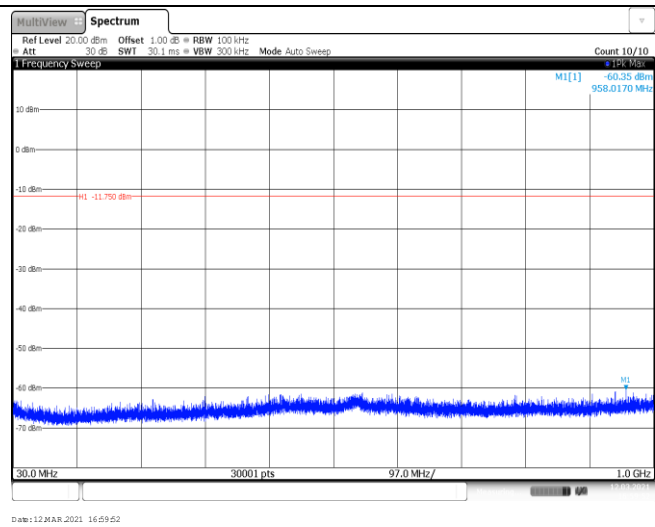
CH19
1GHz~26GHz



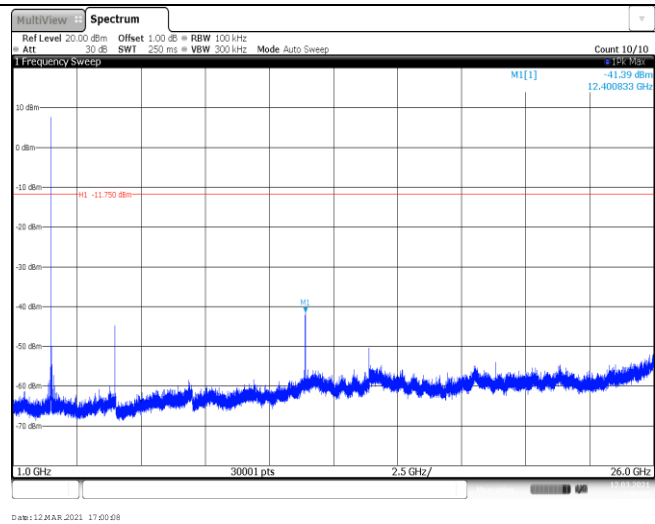
CH39
Reference level

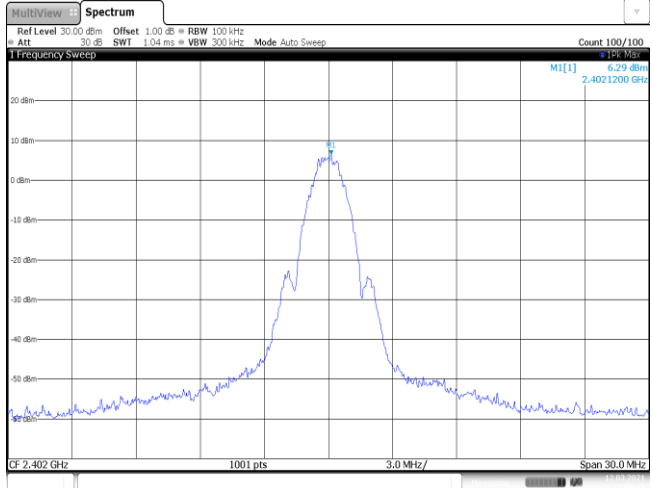
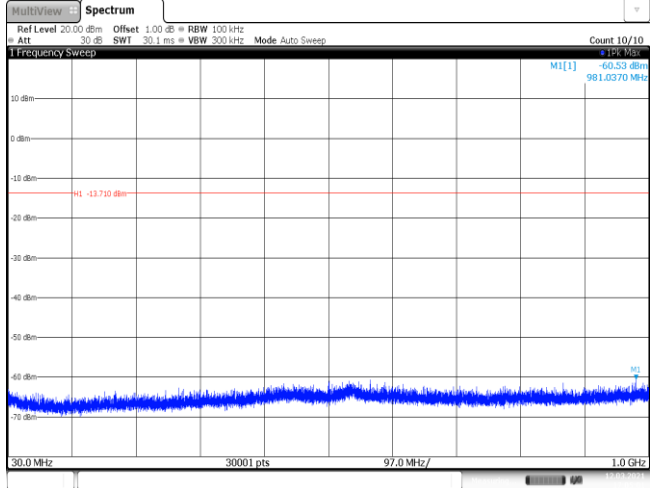
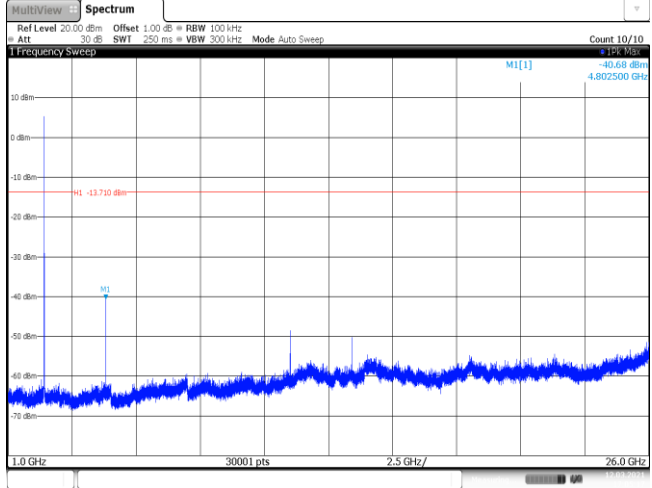


CH39
30MHz~1000MHz

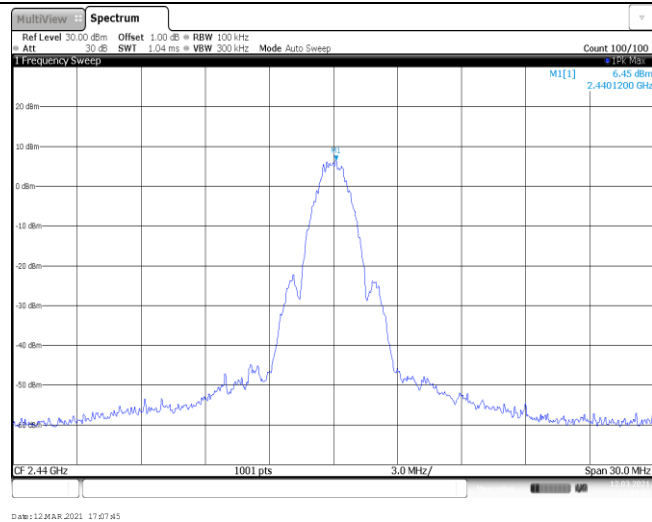


CH39
1GHz~26GHz

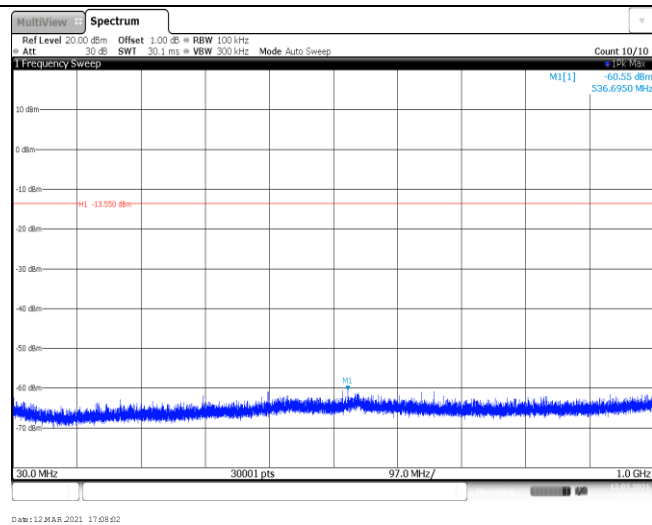


Test Item:	SE-2Mbps
CH00 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 MI[1] 6.29 dBm 2.4021200 GHz Date: 12 MAR 2021 17:04:44
CH00 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -60.53 dBm 981.6370 MHz Date: 12 MAR 2021 17:05:00
CH00 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 MI[1] -60.68 dBm 4.802500 GHz Date: 12 MAR 2021 17:05:17

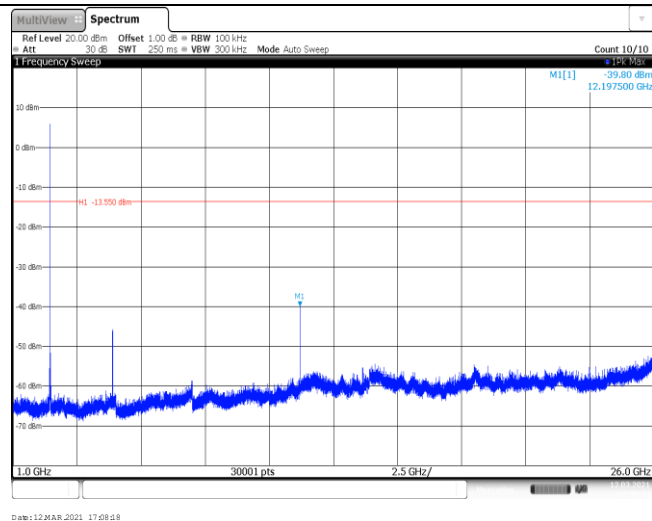
CH19
Reference level

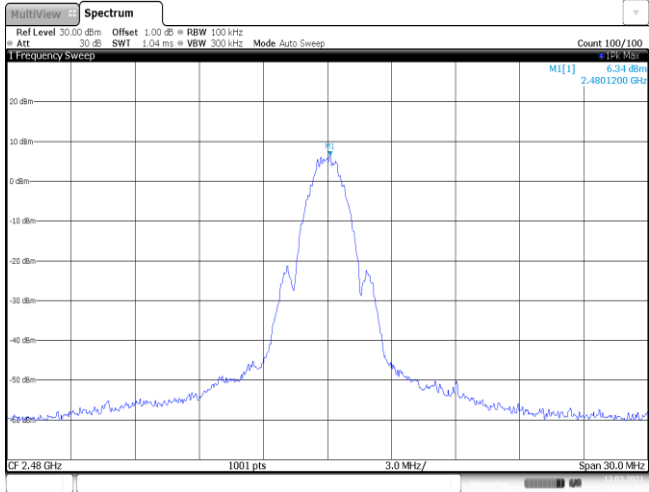
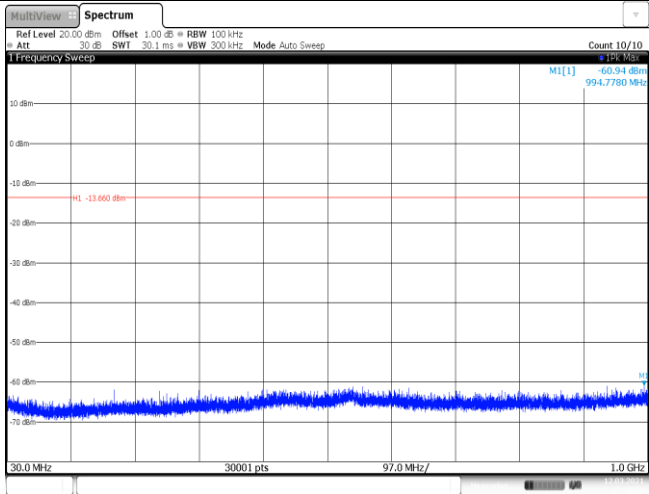
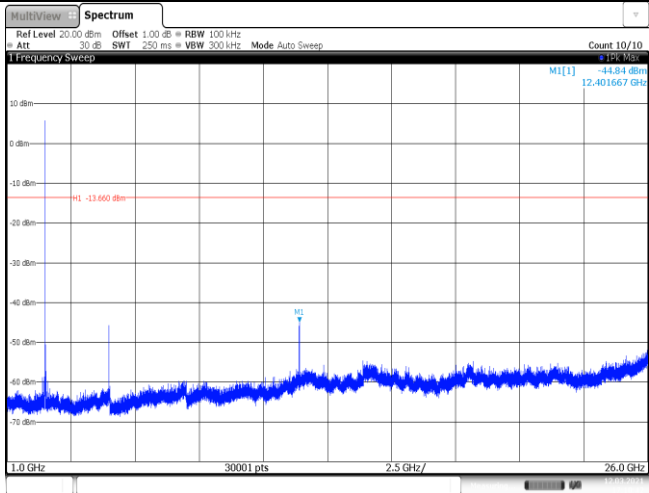


CH19
30MHz~1000MHz



CH19
1GHz~26GHz



CH39 Reference level	 Ref Level 30.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 1.04 ms VBW 300 kHz Mode Auto Sweep Count 100/100 M1[1] 6.34 dBm 2.4801200 GHz CF 2.48 GHz 1001 pts 3.0 MHz/ Span 30.0 MHz Date: 12 MAR 2021 17:10:19
CH39 30MHz~1000MHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 30.1 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -60.94 dBm 994.7780 MHz h1 -13.660 dBm 30.0 MHz 30001 pts 97.0 MHz/ 1.0 GHz Date: 12 MAR 2021 17:10:25
CH39 1GHz~26GHz	 Ref Level 20.00 dBm Offset 1.00 dB BW 100 kHz Att 30 dB SWI 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 M1[1] -44.84 dBm 12.401667 GHz h1 -13.660 dBm 1.0 GHz 30001 pts 2.5 GHz/ 26.0 GHz Date: 12 MAR 2021 17:10:42

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