APPENDIX REPORT

Project No.	SHT2208193404EW	Radio Specification	Bluetooth BLE
Test sample No.	YPHT22081934002	Model No.	NeoPix 320
Start test date	2022-08-29	Finish date	2022-08-29
Temperature	25.2 ℃	Humidity	41%
Test Engineer	Xiaoxiao Li	Auditor	Xiaodong Zheo

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

Test rate	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
	00	7.32	7.28		
1Mbps	19	8.59	8.55	≤ 30.00	Pass
	39	9.08	8.93		
	00	7.19	7.16		
2Mbps	19	8.89	8.85	≤ 30.00	Pass
	39	9.29	9.24		

Appendix A: Peak Output Power

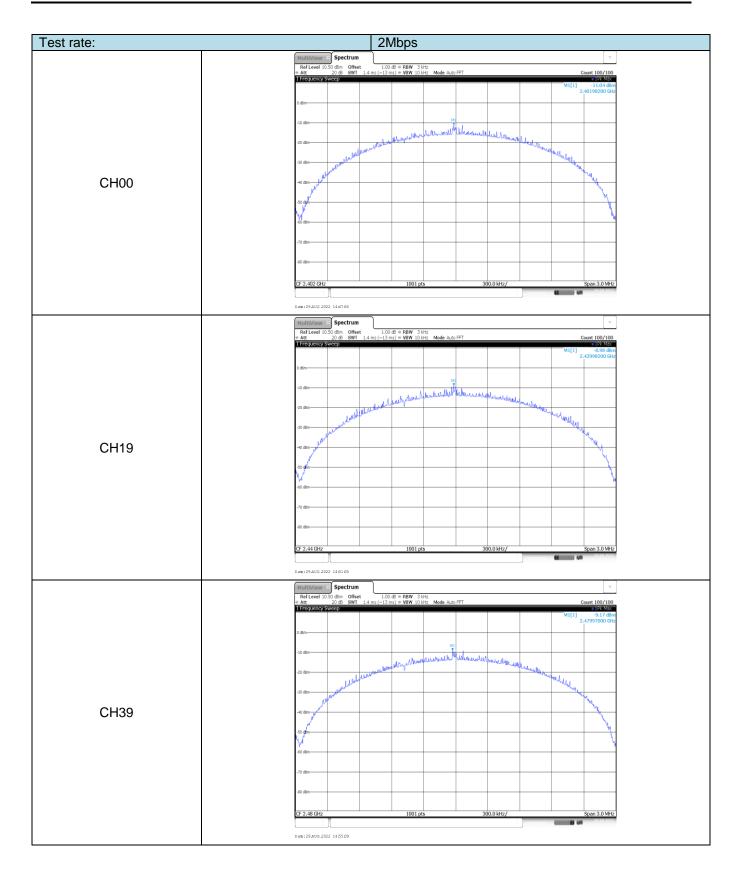
est rate:		1Mbps			
	MultiView 🗄 Spectrum				v
	Ref Level 10.50 dBm Offset Att 20 dB SWT 1 Frequency Sweep	1.00 dB = RBW 2 MHz 1.01 ms = VBW 5 MHz Mod	e Auto Sweep		Count 500/500
	1 Frequency Sweep				1Pk View
			MI		M1[1] 7.32 dBm 2.40204000 GHz
	0 d8m				
	-10 dBm				
	-20 dBm				
	-30 d8m				
CH00	-40 d8m				
	-50 dBm				
	-60 d8m				
	-70 dBm				
	-80 d8m				
	CF 2.402 GHz	1001 pt	<u> </u>	500.0 kHz/	Span 5.0 MHz
				- Measur	20.08.2022
	Date:29.AUG 2022 14:34:12				
	MultiView 🗄 Spectrum				Ψ.
	Ref Level 10.50 dbm Offset Att 20 dB SWT 1 Frequency Sweep	1.00 dB = RBW 2 MHz 1.01 ms = VBW 5 MHz Mod	e Auto Sweep		Count 500/500
	1 Frequency Sweep				• 1Pk View M1[1] 8,59 dBm
					2.44003000 GHz
	0 dBm				
	-10 dBm				
	-20 dBm				
	-30 d8m				
CH19					
Спія	-40 d8m				
	-50 d8m				
	-60 d8m				
	- and Galerin				
	-70 dBm				
	-80 dBm				
	CF 2.44 GHz	1001 pt	\$	500.0 kHz/	Span 5.0 MHz
				Measur	(1)
	Date:29.AUG 2022 14:39:23				,
	MultiView :: Spectrum				∇
	Ref Level 20.00 dBm Offset Att 30 dB SWT 1 Frequency Sweep	1.01 ms ⊕ VBW 5 MHz Mod	e Auto Sweep		Count 500/500 • 1Pk View
					M1[1] 9.08 dBm 2.48008490 GHz
	10 dBm		MI	+	
	0 dBm				
	-10 d8m				
	an at-				
	-20 d8m				
CH39	-30 d8m				
	-40 d8m				
	-50 d8m				
	-60 d8m				
	-70 d8m				
	CF 2.48 GHz	1001 pt	5	500.0 kHz/	Span 5.0 MHz
	Date: 29AUG 2022 14x4:01				
	Dem: 25 AUG 2022 14 94 01				

est rate:	2Mbps
	MultiView 🗄 Spectrum 🗸
	Ref Level 10.50 dbm Offset 1.00 db = RBW 31 Mit # Att 20.db SWF 1.01 m s = VBW 101 Mitz Mode Auto Sweep Count 500/500 I Fréquency Sweep #15% Vein
	1 Frequency Sweep
	D dm 2.40212000 GHz
	0.000
	-10 dbn
	-10 den
CH00	40 dan
01100	
	50 das-
	40 den
	-70 d8m
	40 dbn
	CF 2.402 GHz 1001 pts 1.0 MHz/ Span 10.0 MHz
	Date: 29.400 2022 14.46.98
	MultiView 😳 Spectrum
	Ref Level 20:00 dbm Offset 1:00 db RBW 31/Hz # Att 30:db SWF 1:01 ms VEW 10/Hz Mode Auto Sweep Count 500/500 # Frequency Sweep \$1:81 VEW \$1:82 VEW \$1:82 VEW \$1:82 VEW
	M1[1] 8.89 dBm
	2,44001000 GH2
	10 dan
	D din
	-10 dim
	20 dbm
CH19	-10 d8m
OTTO	
	40 dbn
	-51 dm
	40.08m
	-70 dbn
	CF 2.44 GHz 1001 pts 1.0 MHz/ Span 10.0 MHz
	Date:29AUG 2022 1420.29
	MultiView 🗄 Spectrum
	Ref Level 2000 dbm Offset 1:00 db = RBW 3MHz Count 500/500 e Att 30 db SWT 10 Hz Mode Auto Sweep Count 500/500
	M1[1] 9.29 dBm
	10 dbm
	0 din
	-10 dan
CH39	-20 dBm
	-10 dan
	-40 dbn
	110.001
	50 dbm
	40 dbm
	-70 dbm
	CF 2.48 GHz 1001 pts 1.0 MHz/ Span 10.0 MHz
	CF 2.48 GHz 1001 pts 1.0 MHz/ Span 10.0 MHz

Appendix B: Power Spectral Density

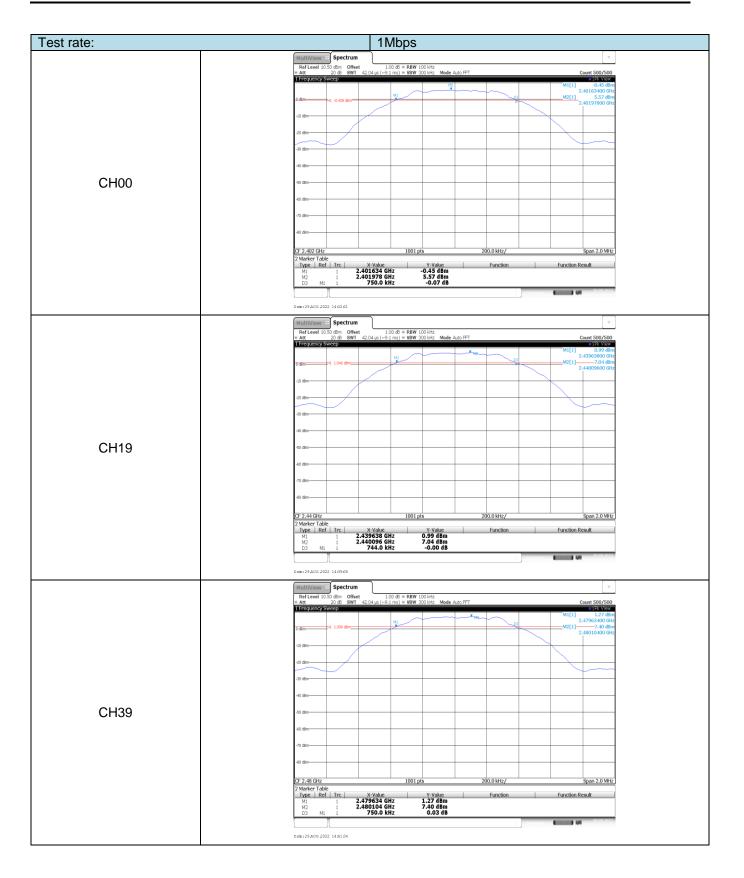
Test rate	Channel	Power Spectral Density(dBm/3KHz)	Limit (dBm/3KHz)	Result
	00	-9.09		
1Mbps	19	-7.57	≤8.00	Pass
	39	-6.87		
	00	-11.04		
2Mbps	19	-8.98	≤8.00	Pass
	39	-9.17		

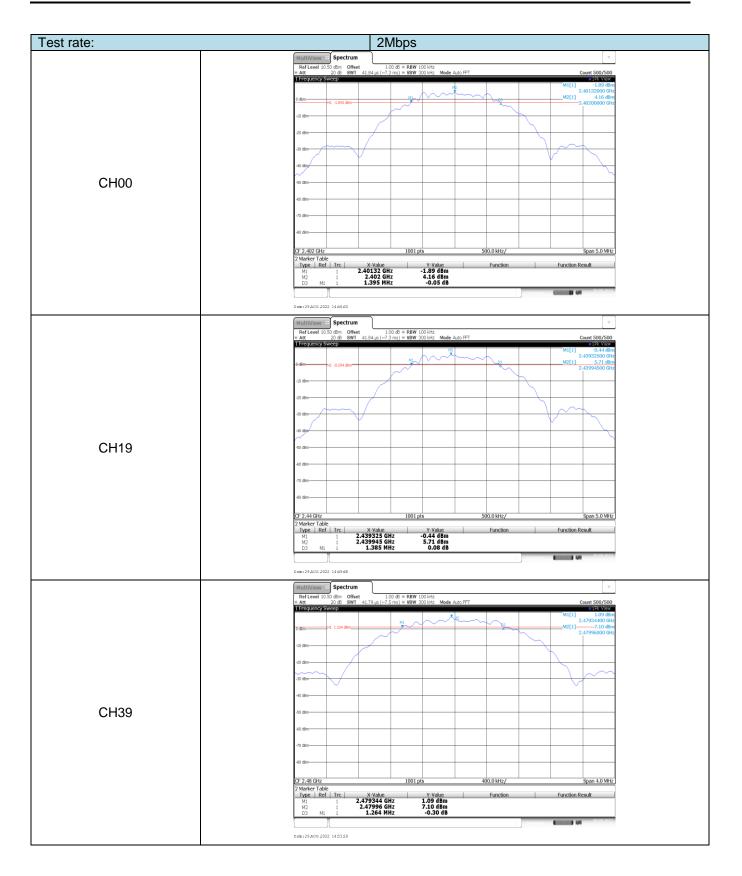
est rate:	1Mbps	
	MultiView Spectrum	Ψ.
	RefLevel 0.50 dBm Offset 1.00 dB ⊕ RBW 31/Hz mode Auto FFT Count ■ Att 2:00 SWT 1.4 ms[<+9.2 ms]	nt 100/100
	1 Frequency Sweep MI[1]	 1Pk Max -9.09 dBm 999000 GHz
	0.05m	799000 GHZ
	-10 days	
	15 day man war and the second of the second	140Ma
		WV INN
	-30 dbm	
CH00	-40 dBm-	
01100		
	-50 dBm	
	40 dkm	
	-70 dbn	
	40 dkn	
	CF 2.402 GHz 1001 pts 100.0 kHz/ Span	an 1.0 MHz
	Date: 29 AUG 2022 14:32:53	
	MultiView 🗄 Spectrum	v
	Ref Level 10.50 dBm Offset 1.00 dB = RBW 3 kHz	nt 100/100
	1 Frequency Sweep	 1Pk Max -7.57 dBm
	2.4399	993000 GHz
	0 dBm	
	12 ac and a start and a	
	13 ac many many more and a second and the second an	M
	Promethy and a second	
	-30 dbm	
CH19	-40 dbn	
СПІЭ	-40 U001	
	-50 den	
	-50 dbm	
	-70 dbm.	
	-00 dBm	
	CF 2.44 GHz 1001 pts 100.0 kHz/ Span	an 1.0 MHz
	Date: 29AUG 2022 14:40:91	
	NutbitView Spectrum RefLevel 1050 dbm Ofdex 1.00 dB = RBW 3 kHz a Att 20 dB SWT 1.4 ms (-9.2 ms) = WBW 10 kHz Mode AutoFFT Count	nt 100/100
	1 Frequency Sweep	 19k Max -6.87 dBm
	2,4000	027000 GHz
	D dām M1	
	15 da	
	www.www.www.	Maria
	provide the second se	#W 1046
	-30 dBm	
CH30		
CH39	-40 dbn	
	-50 dBm	
	40 dbn-	
	-70 dBm-	
	40 dbn	
		an 1.0 MHz
	Newsring (1111) (40	29.09.2022
	Dam: 29.40G 2022 14:44:16	
I		



Appendix C: 6dB bandwidth

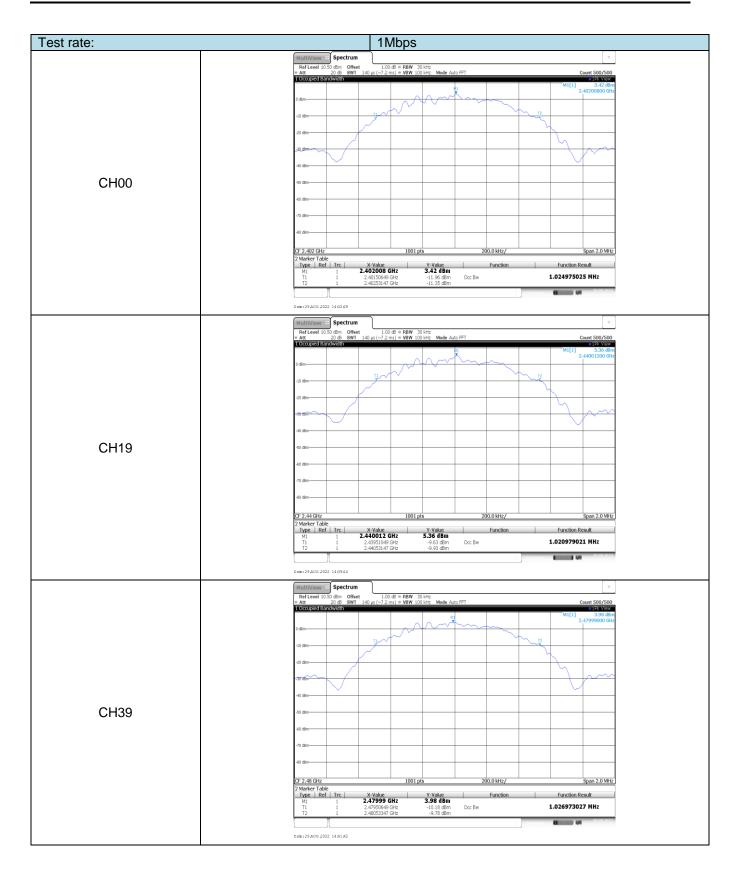
Туре	Channel	6dB Bandwidth(kHz)	Limit (kHz)	Result
	00	750.00		
1Mbps	19	744.00	≥500	Pass
	39	750.00		
	00	1395.00		
2Mbps	19	1385.00	≥500	Pass
	39	1264.00		

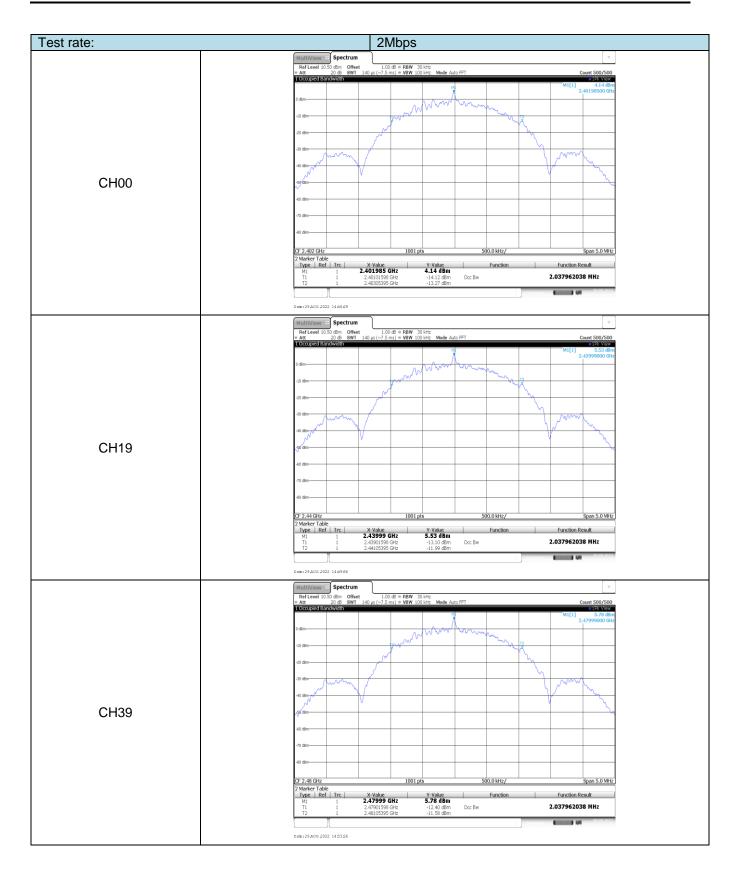




Appendix D: 99% Occupied Bandwidth

Test rate	Channel	99% Occupied Bandwidth(MHz)	Limit (kHz)	Result
	00	1.02		
1Mbps	19	1.02	-	Pass
	39	1.03		
	00	2.04		
2Mbps	19	2.04	-	Pass
	39	2.04		

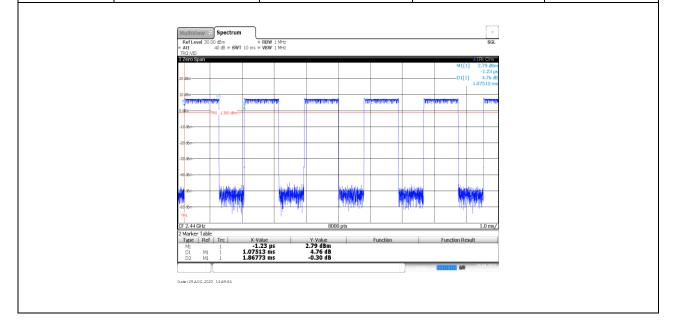




Appendix E: Duty cycle

Test Rate:		1Mbps		
Test Frequency (MHz)	Ton time for single burst (ms)	Tperiod (ms)	Duty cycle	1/Ton time (kHz)
2440	2.13	2.49	85.5%	0.5
	MultiView Spectrum Rof Level 30.00 dm		Scl.	

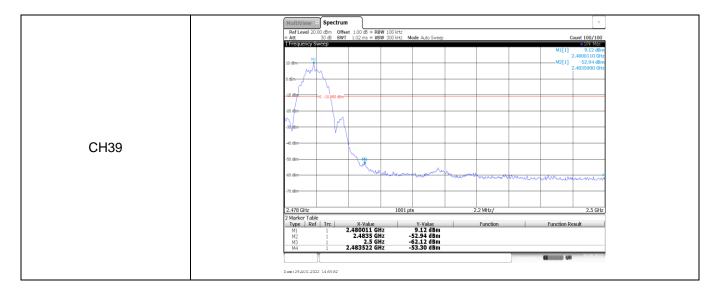
Test Rate:		2Mbps		
Test Frequency (MHz)	Ton time for single burst (ms)	Tperiod (ms)	Duty cycle	1/Ton time (kHz)
2440	1.08	1.87	57.8%	0.9

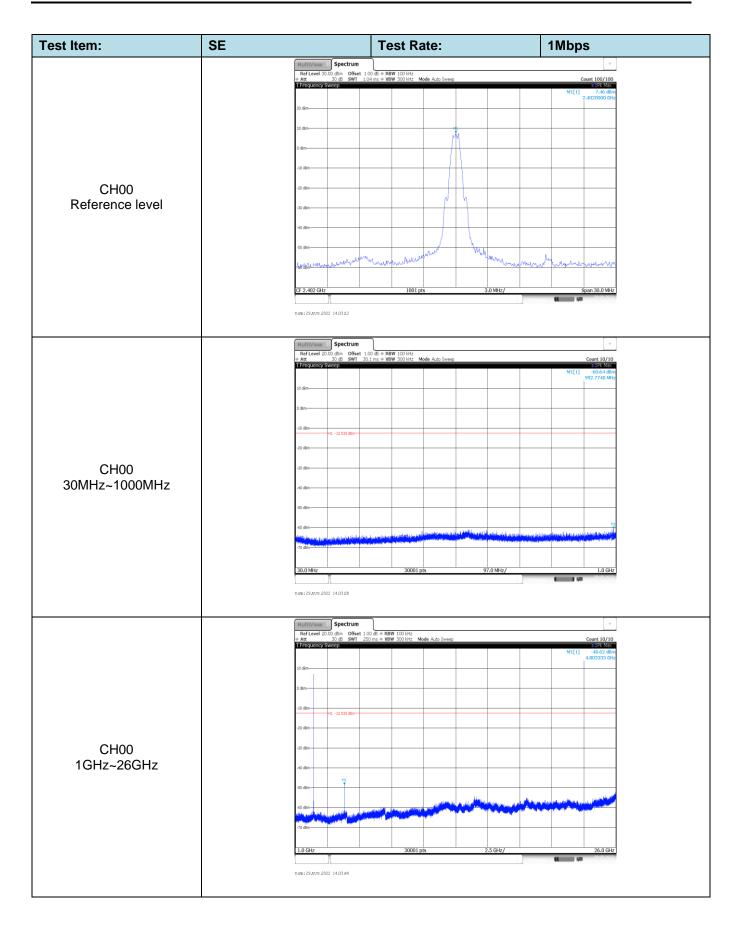


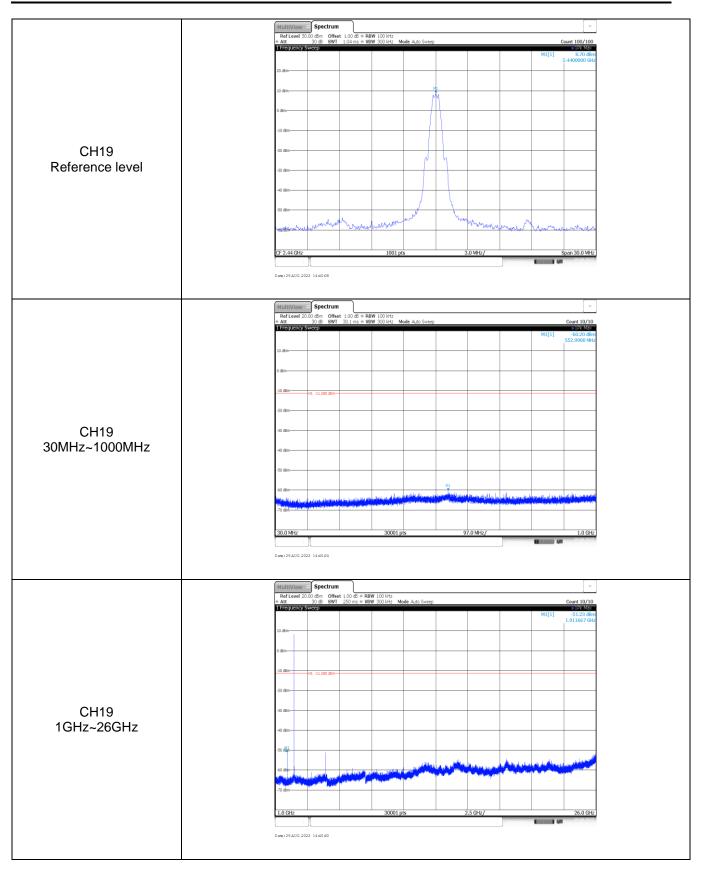
Test Item:	Band edge			Test F	Rate:			1	Mbp	S
		Ref Level 10.50 dBm Att 20 dB	Constant Con	B = RBW 100 kHz	Z. Mada Auto Cours					v Count 300/300
		1 Frequency Sweep	5₩1 1.05 n	15 = VBW 300 kH2	z mode Auto Swee	p			M1[1]	 19k Max 7.23 dBm 2.4020100 GHz
		-10 dBm	0 dła						M2[1]	-54.80 dBm 2.4000000 GHz
		-20 dBm		_						
		-30 dBm								
CH00		-50 dBm		_						
		-60 d8m 4 620 d8 0,22- (104,32 (11) (11,31)	-		ىلىچىتايورۇپ و، سىيادىر اورىرىمەر	ala kan ta an	anontalismantes	with of the domestic	martenal	and the second sec
		-80 d8m			01 pts		0.5 MHz/			2.405 GHz
		2 Marker Table <u>Type Ref Trc</u> M1 1 M2 1	X-\ 2.402	alue 01 GHz 2.4 GHz 39 GHz 31 GHz	V-Value 7.23 dBm -54.80 dBm -67.29 dBm -69.06 dBm		Function		Function R	
		M3 1 M4 1 M5 1	2 2.3999	31 GHz 65 GHz	-69.06 dBm -54.67 dBm			Measuring	6	29.00.2022
			trum							Ψ
		Ref Level 10.50 dBm Att 20 dB 1 Frequency Sweep	Offset 1.00 (SWT 1.02 n	B = RBW 100 kH2 is = VBW 300 kH2	z Mode Auto Swee	p			M1[1]	Count 100/100 10k Max 8.84 dBm
		0 d8m							M2[1]	2.4800110 GHz
		-10 dBm +11 -11.16	0 dBm							
		-30 d8m								
CH39		-40 d8m -50 d8m								
		-60 d8m	- Mark	2 Khangalangalangal	n marine to	hunner	mann	monor	nament	manant
		-70 d8m								
		2.478 GHz 2 Marker Table			01 pts		2.2 MHz/			2.5 GHz
		Type Ref Trc M1 1 1 M2 1 1 M3 1 1 M4 1 1	2.4800 2.48 2.48	alue 11 GHz 35 GHz 2.5 GHz 04 GHz	V-Value 8.84 dBm -59.27 dBm -67.04 dBm -57.12 dBm		Function		Function R	esult
		Date: 29 AUG 2022 14 344						Measuring	() (A	29.08.2022

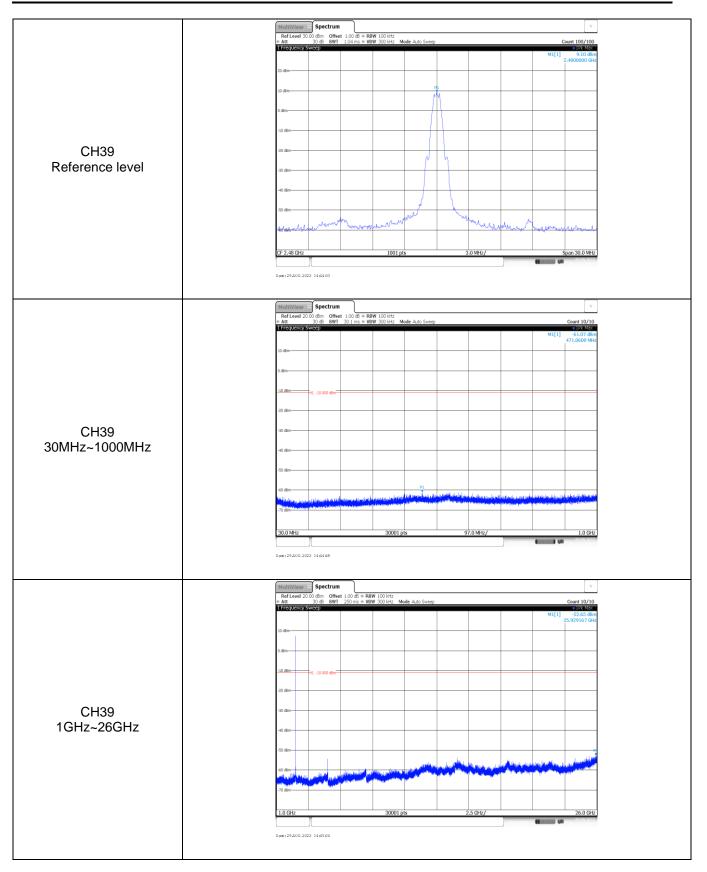
Appendix F: Band edge and Spurious Emissions (conducted)

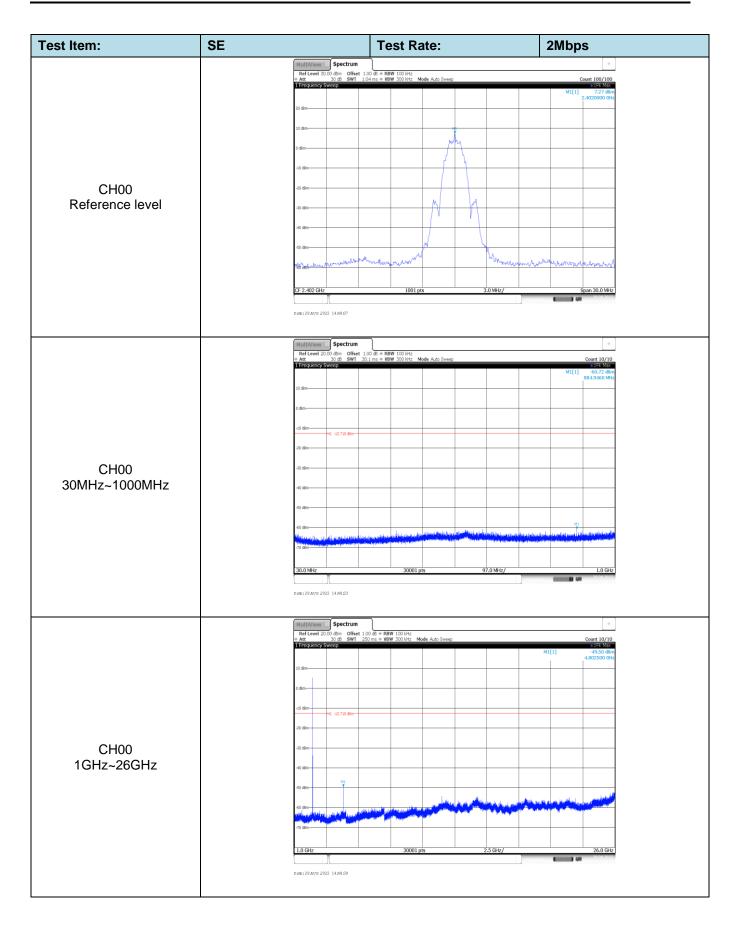
Test Item:	Band edge		Test Rate:			2Mbps	
CH00		Ref Level 10.50 dBm Offset 1.00 Att 20 dB SWT 1.05	0 dB ⊕ RBW 100 kHz ims ⊕ VBW 300 kHz M	nde âuto Sween		c	v Count 300/300
	- - - - - - -	18 dbn				MI(1) 3	10k Max 7, 10k Max 2.4020100, GHz -26,15 dBm 4000000 GHz -86,15 dBm 4000000 GHz
	4	28.68 00000000000000000000000000000000000			المرينية المستريب ال	hours water to	
	2	M1 1 2.40 M2 1 M3 1 M4 1	-Value 2001 GHz 2.4 GHz - 2.39 GHz - 2.31 GHz - 1965 GHz -	Y-Value 7.18 dBm 26.15 dBm 56.71 dBm 70.53 dBm 26.52 dBm	9,5 MHz/	Function Re	
		ame:29.AUG 2022 14.x8:00			Maas	1000 (UUUUU) (AA	29.08.2022

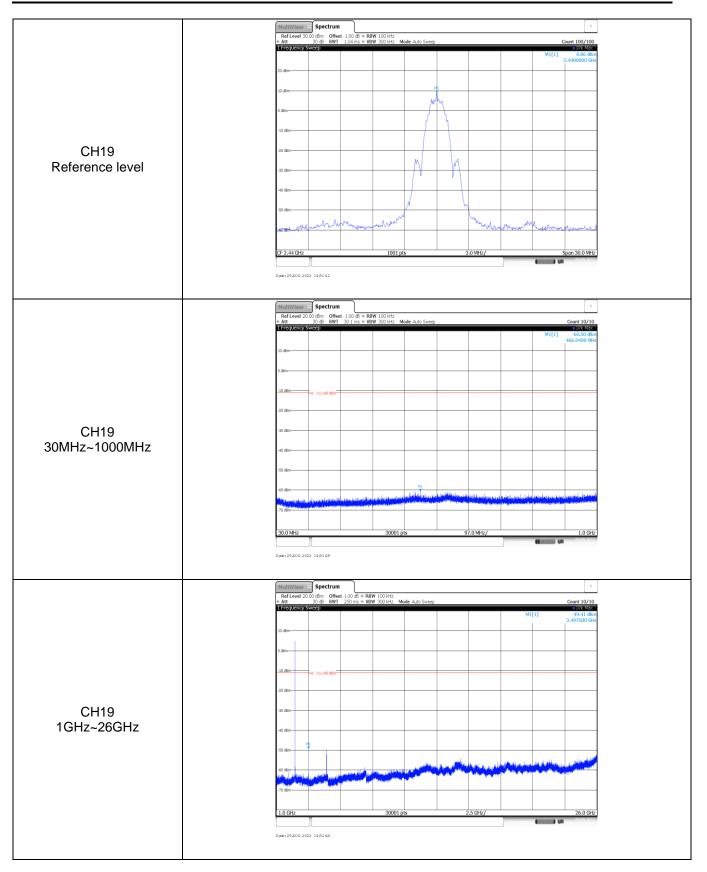


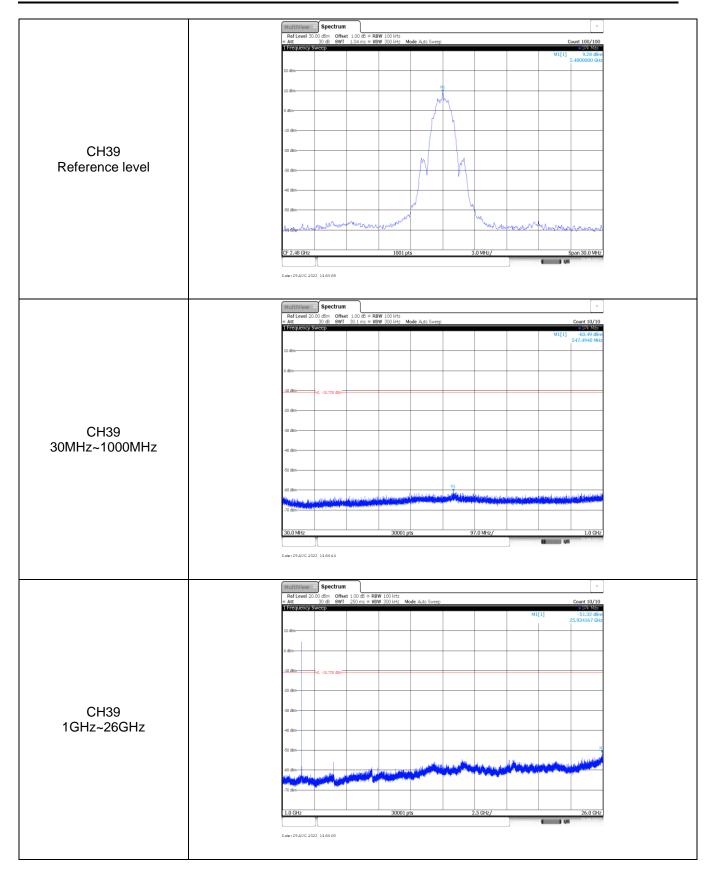












-----End of Report------