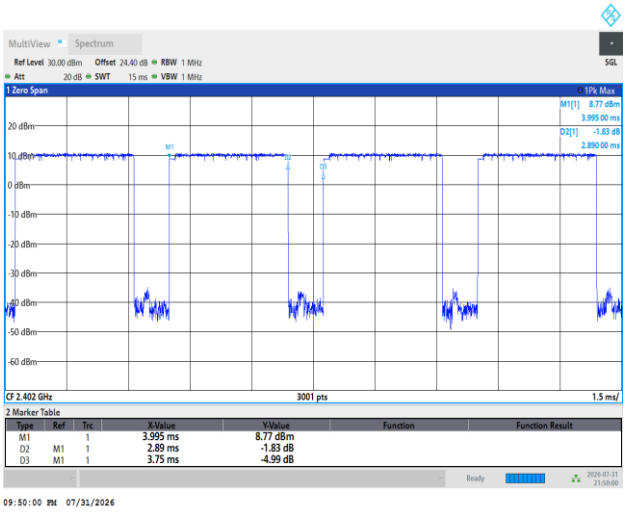
Dwell Time

Package Transfer Time Plot



Remark:

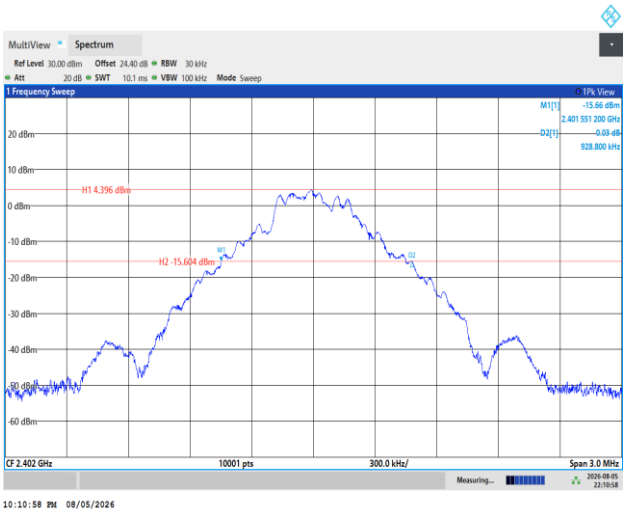
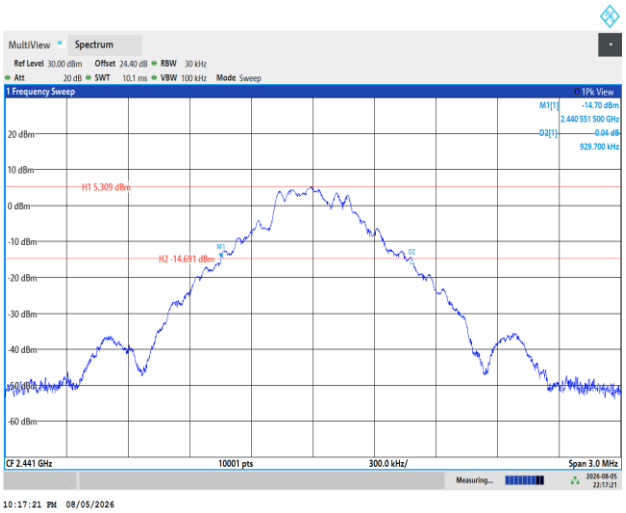
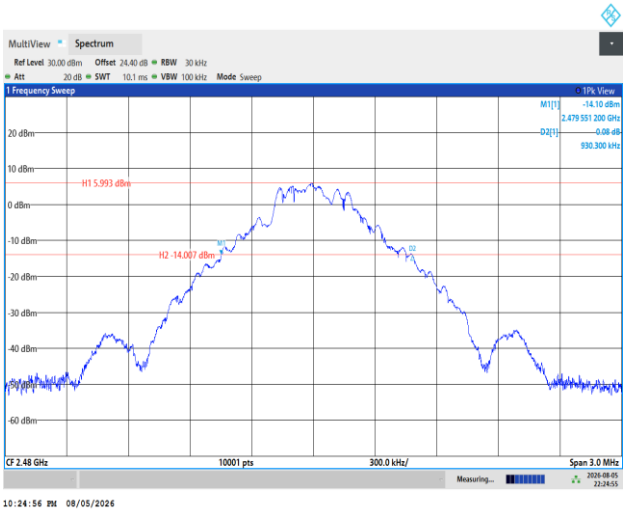
4 In normal mode, hopping rate is 1600 hops/s with 6 slots in 79 hopping channels. With channel hopping rate (1600 / 6 / 79) in Occupancy Time Limit (0.4 x 79) (s),Hops Over Occupancy Time comes to (1600 / 6 / 79) x (0.4 x 79) = 106.67 hops.

5 In AFH mode, hopping rate is 800 hops/s with 6 slots in 20 hopping channels. With channel hopping rate (800 / 6 / 20) in Occupancy Time Limit (0.4 x 20) (s), Hops Over Occupancy Time comes to (800 / 6 / 20) x (0.4 x 20) = 53.33 hops.

6 Dwell Time(s) = Hops Over Occupancy Time (hops) x Package Transfer Time

20dB Bandwidth

<1Mbps>

20 dB Bandwidth Plot in Channel 00	20 dB Bandwidth Plot in Channel 39
	
20 dB Bandwidth Plot in Channel 78	
	

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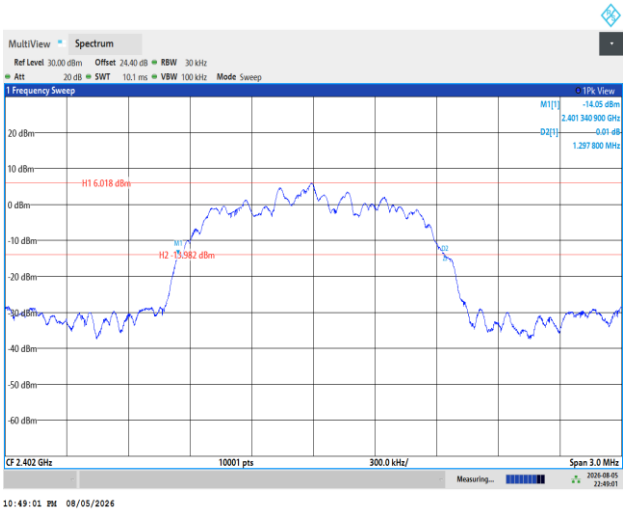
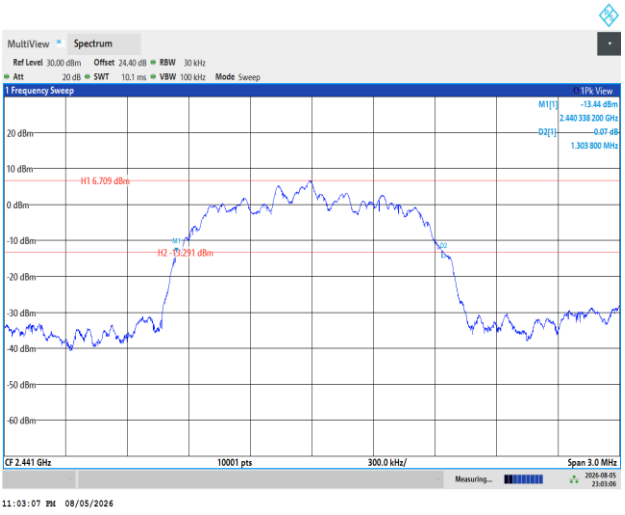
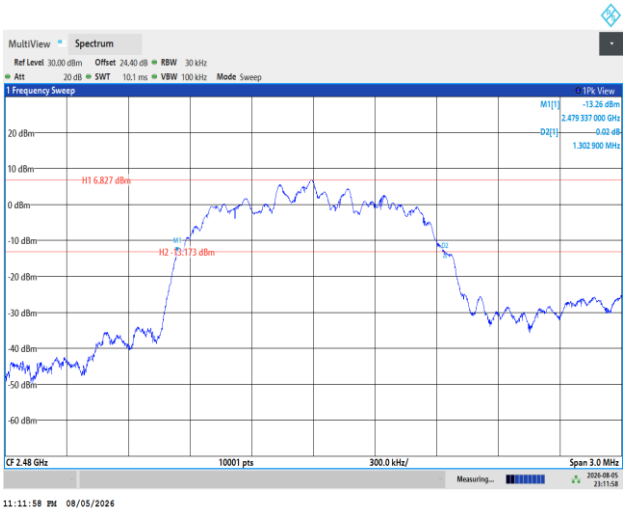
20 dB Bandwidth Plot in Channel 00	20 dB Bandwidth Plot in Channel 39
	
20 dB Bandwidth Plot in Channel 78	
	

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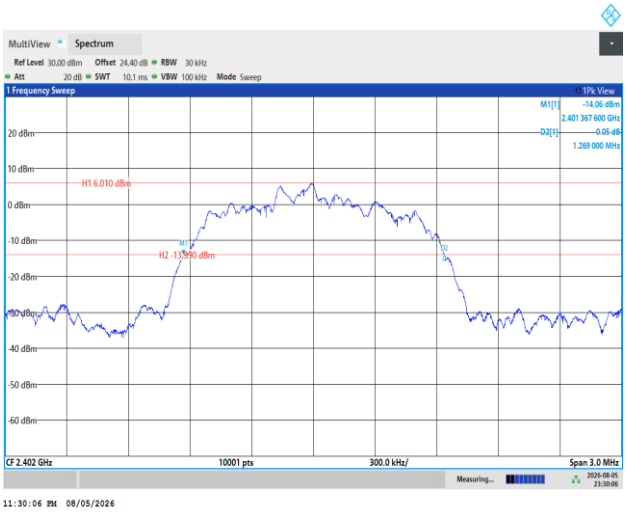
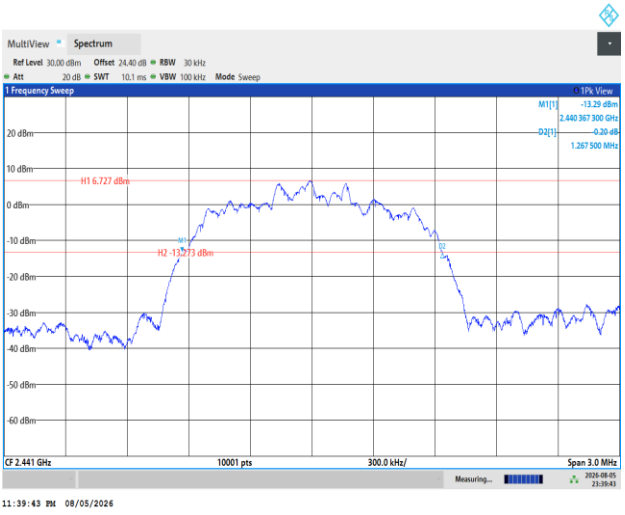
20 dB Bandwidth Plot in Channel 00	20 dB Bandwidth Plot in Channel 39
	
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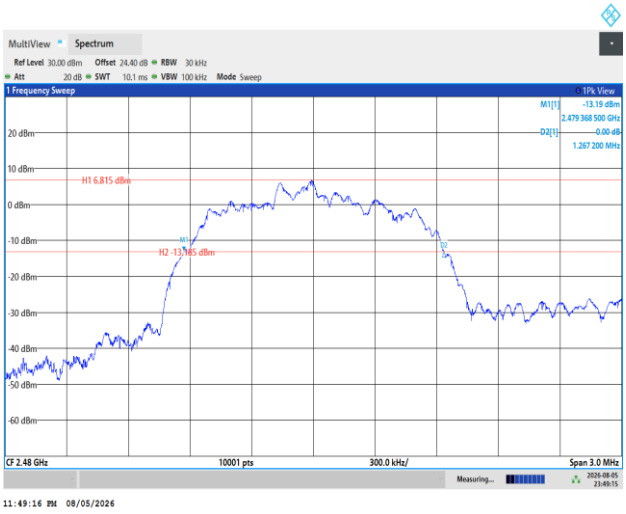	

99% Occupied Bandwidth

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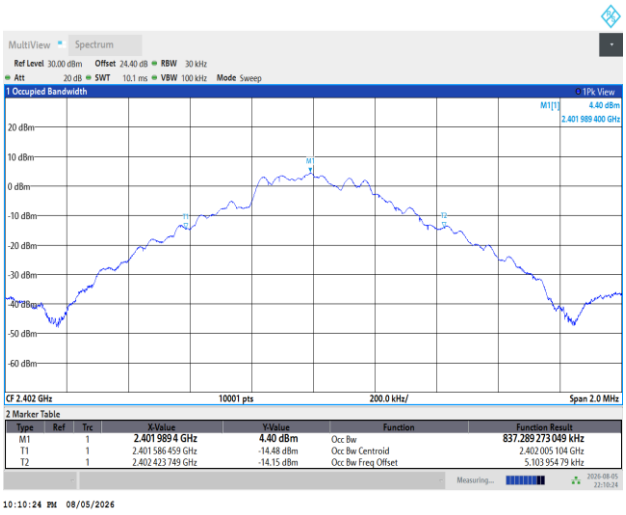
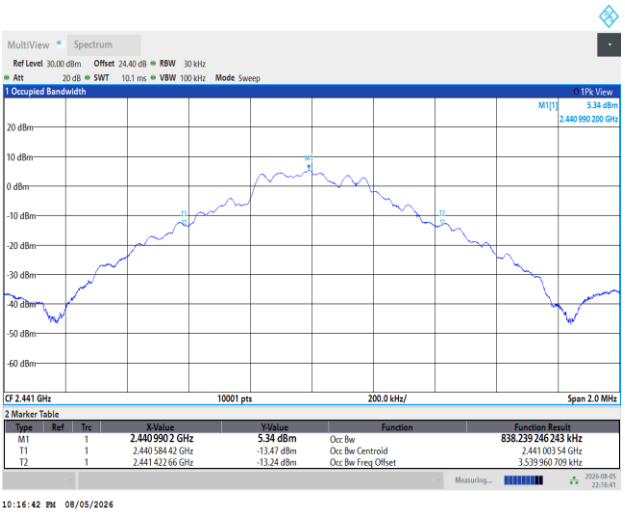
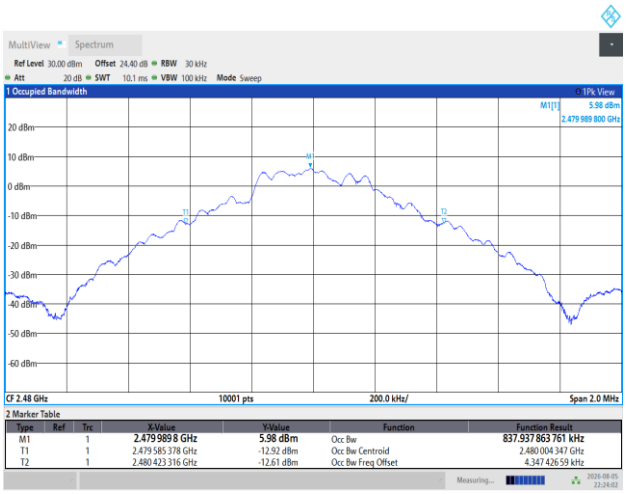
99% Occupied Bandwidth on Channel 00	99% Occupied Bandwidth on Channel 39
	
99% Occupied Bandwidth on Channel 78	
	

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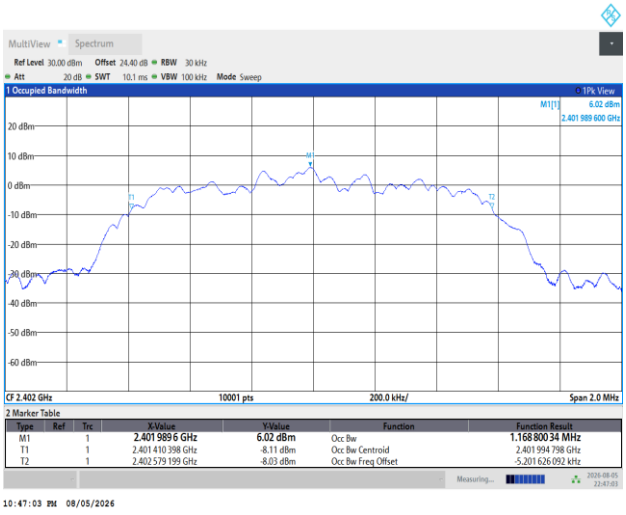
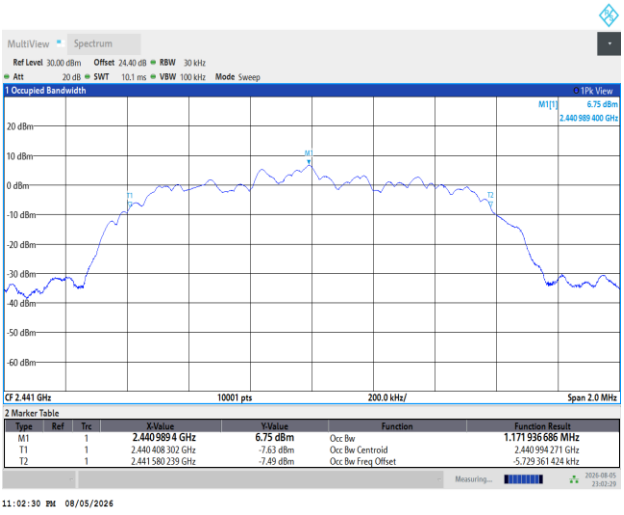
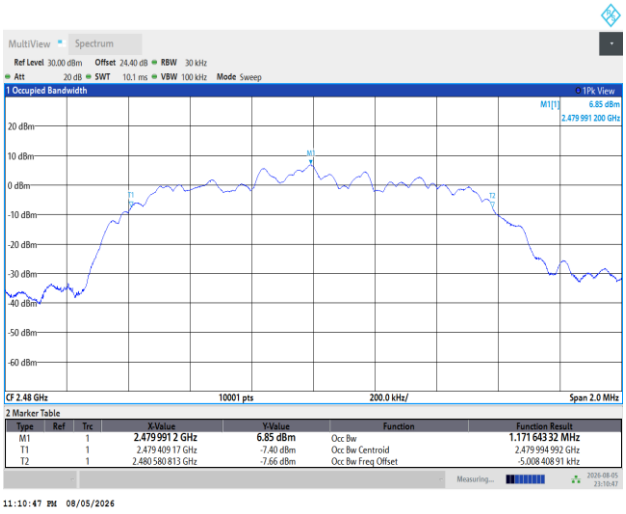
99% Occupied Bandwidth on Channel 00	99% Occupied Bandwidth on Channel 39
	
99% Occupied Bandwidth on Channel 78	
	

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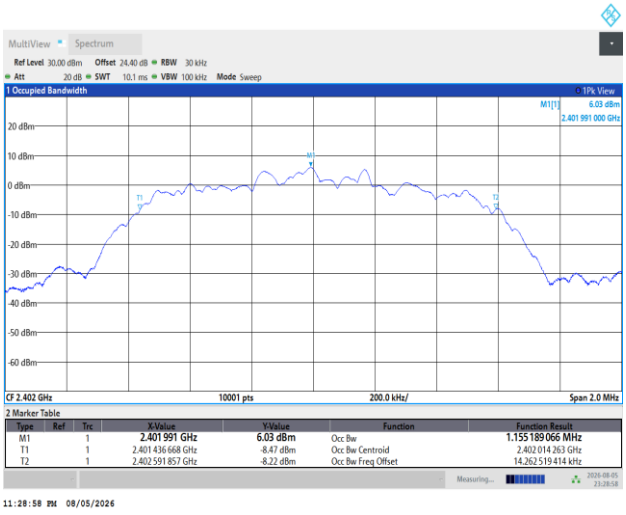
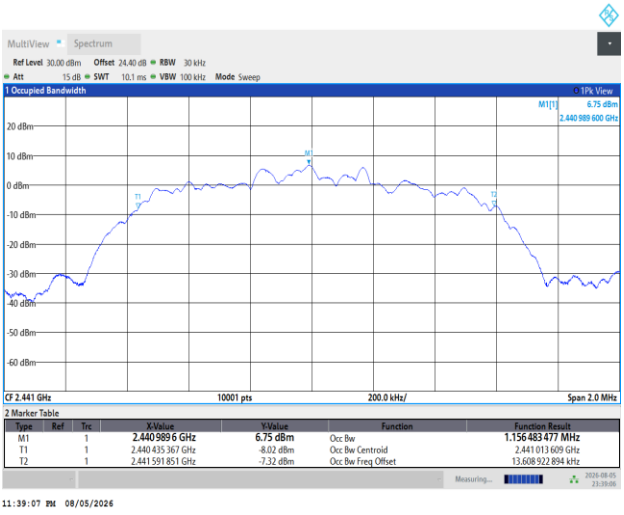
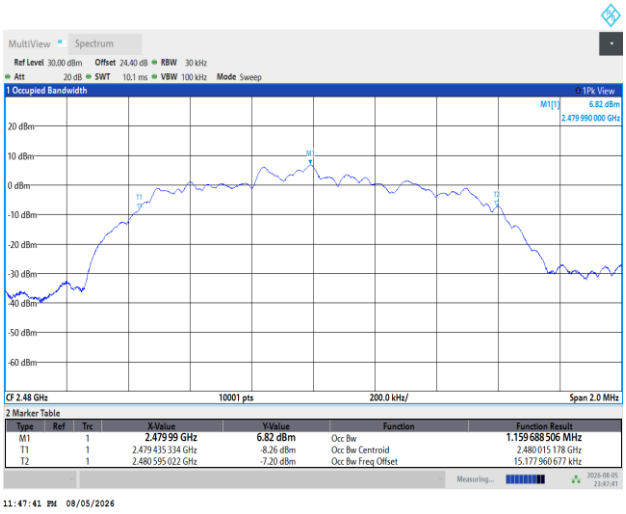
99% Occupied Bandwidth on Channel 00	99% Occupied Bandwidth on Channel 39
	
99% Occupied Bandwidth on Channel 78	
	

Band Edges

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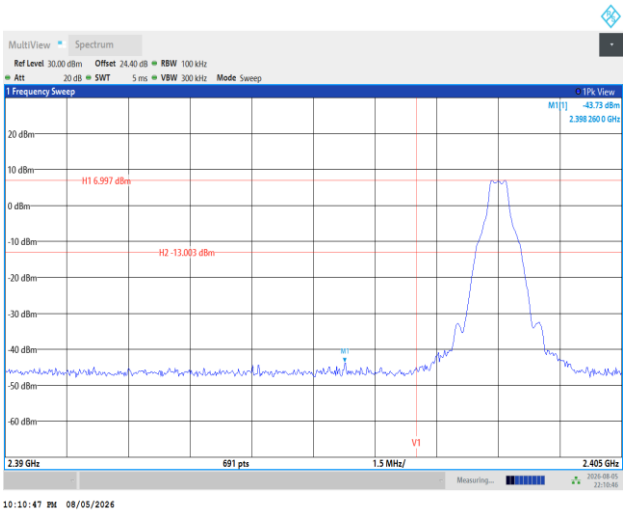
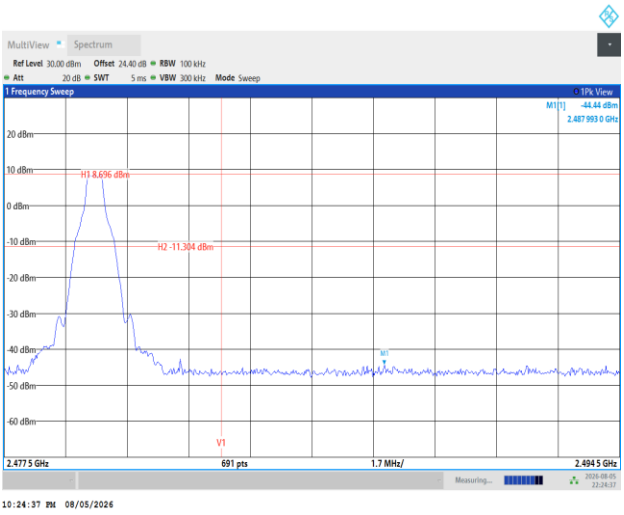
Band Edge Plot on Channel 00	Band Edge Plot on Channel 78
	

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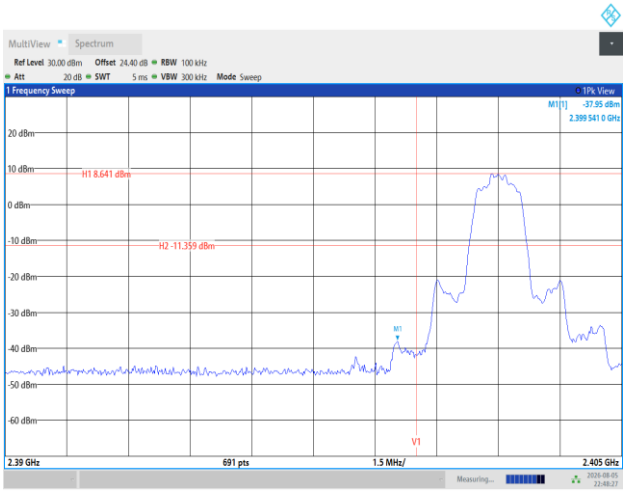
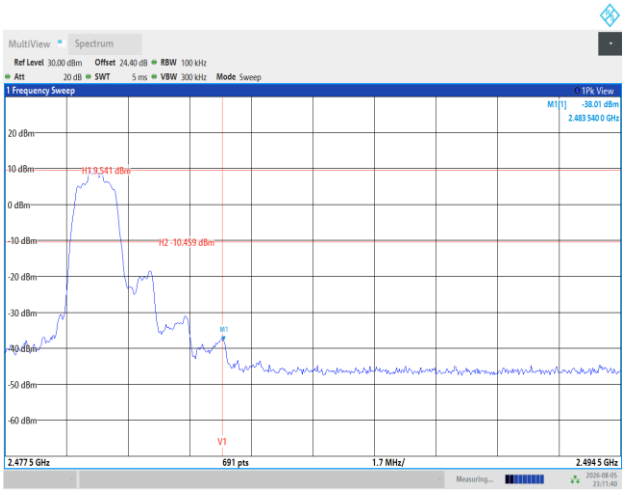
Band Edge Plot on Channel 00	Band Edge Plot on Channel 78
	

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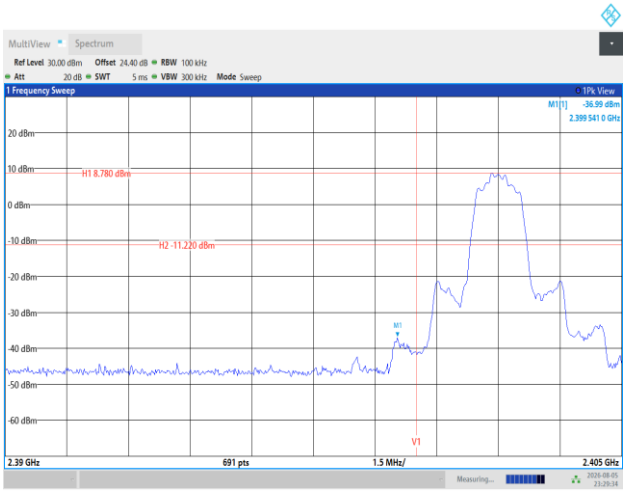
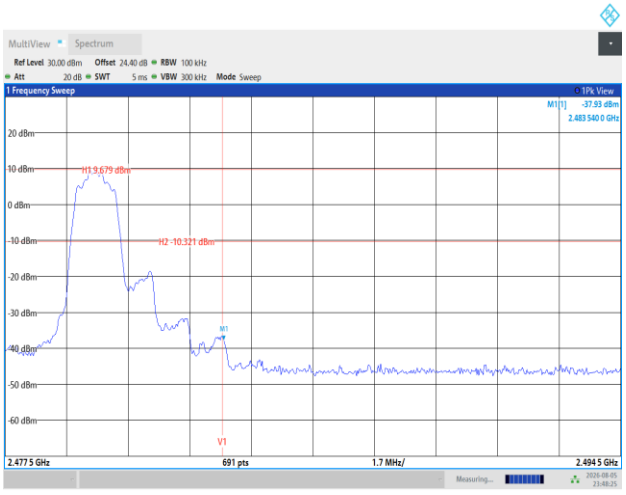
Band Edge Plot on Channel 00	Band Edge Plot on Channel 78
	

Hopping Mode Band Edges

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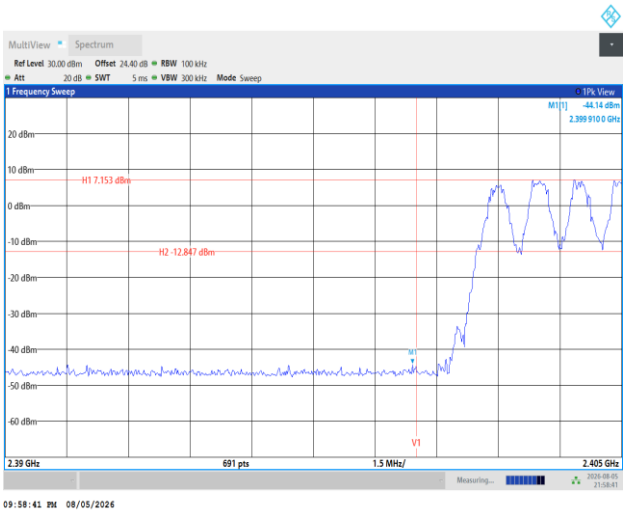
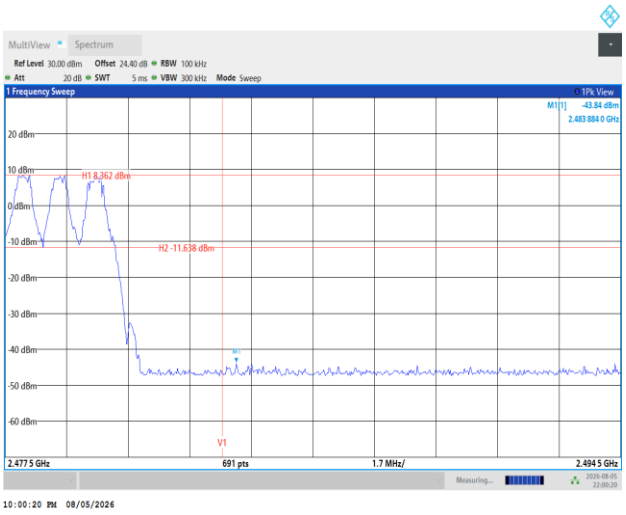
Hopping Mode Band Edge Plot on Channel 00	Hopping Mode Band Edge Plot on Channel 78
	

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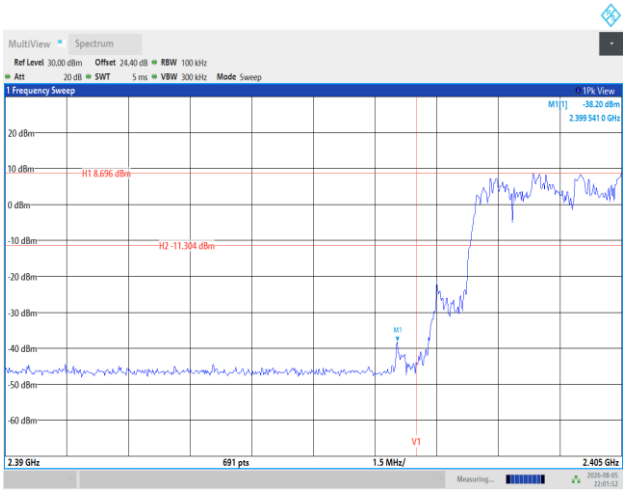
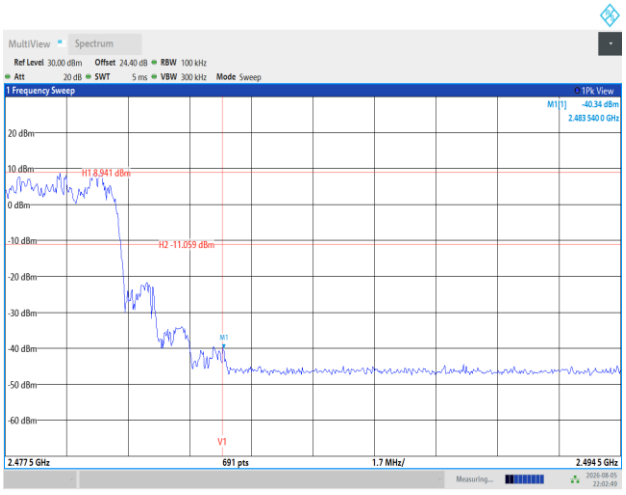
Hopping Mode Band Edge Plot on Channel 00	Hopping Mode Band Edge Plot on Channel 78
	

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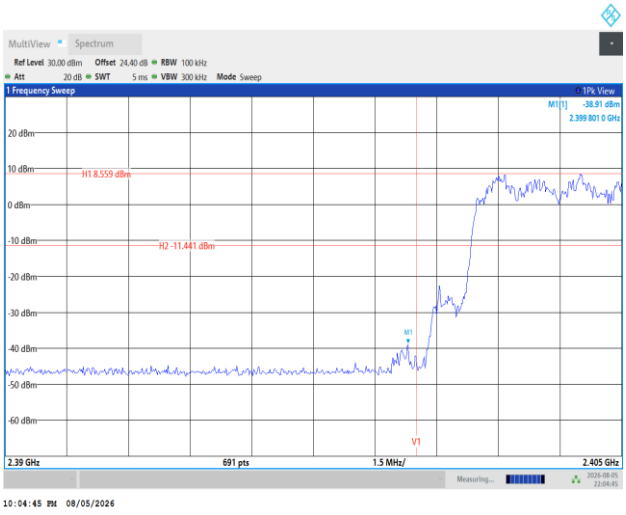
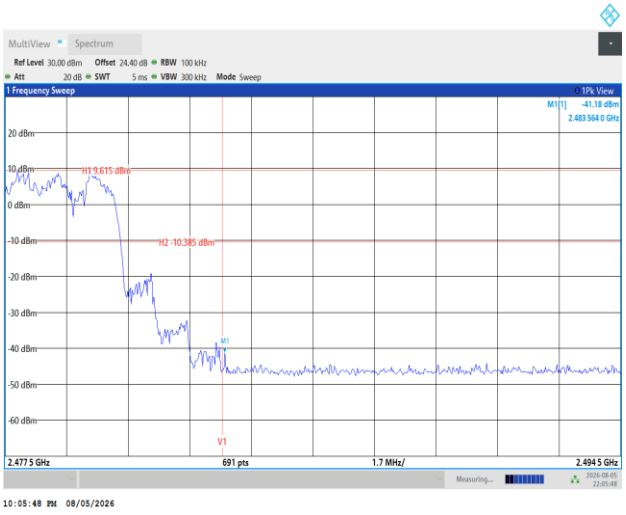
Hopping Mode Band Edge Plot on Channel 00	Hopping Mode Band Edge Plot on Channel 78
	

Conducted Spurious Emission

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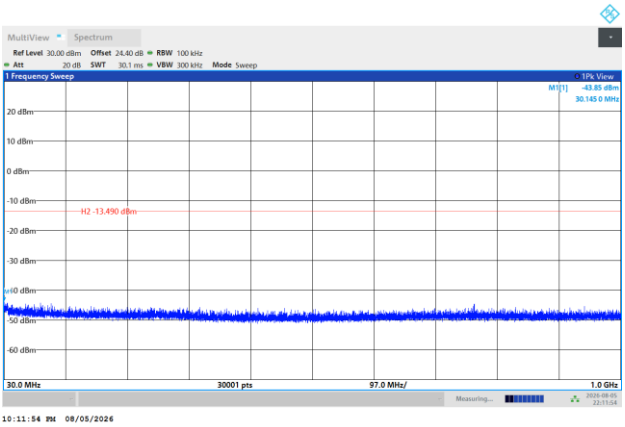
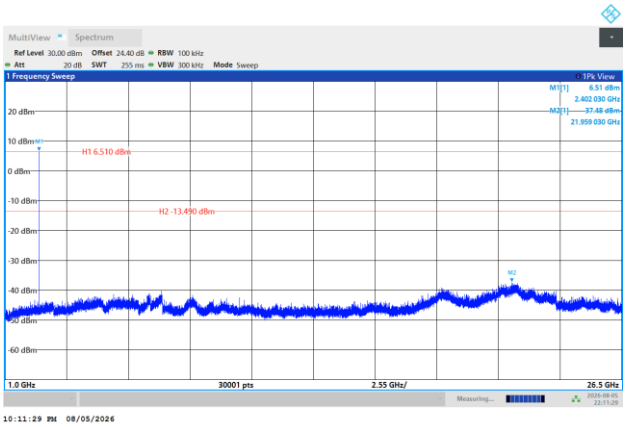
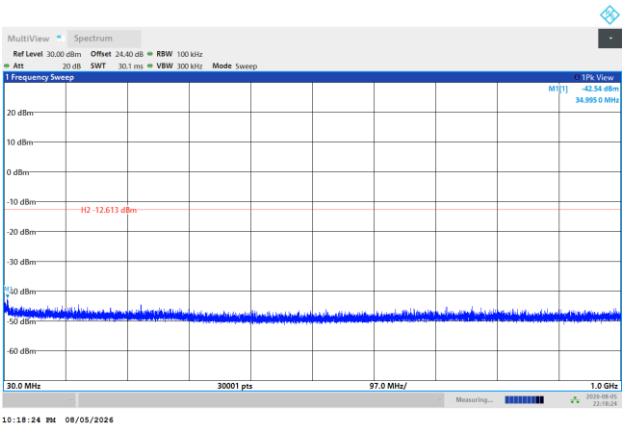
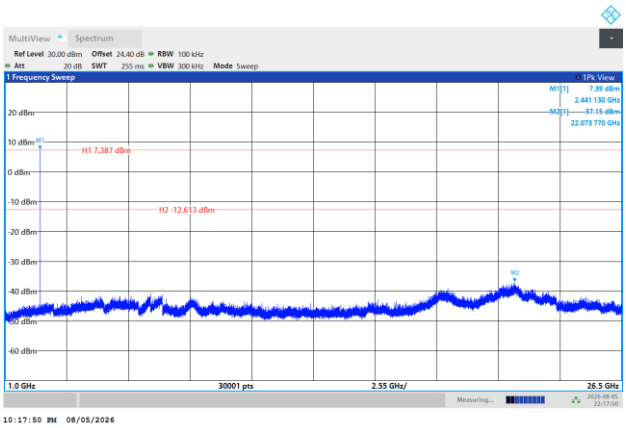
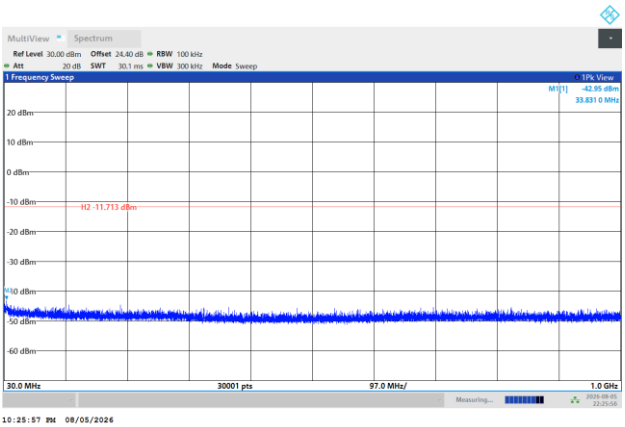
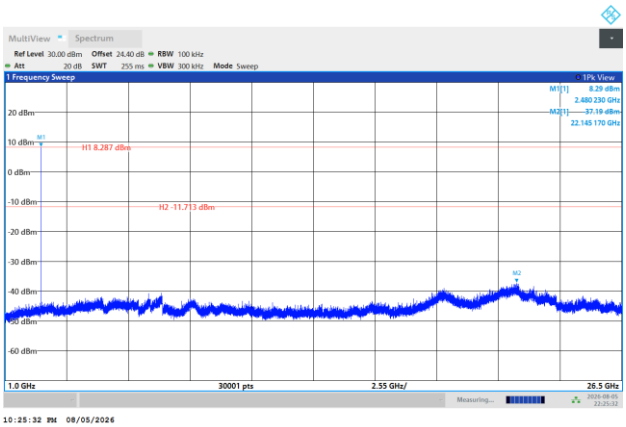
CSE Plot on Low Ch between 30MHz ~ 1 GHz	CSE Plot on Low Ch between 1GHz ~ 26.5GHz
	
CSE Plot on Mid. Ch between 30MHz ~ 1 GHz	**CSE Plot on Mid. Ch between 1GHz ~ 26.5GHz**
	
CSE Plot on High Ch between 30MHz ~ 1 GHz	**CSE Plot on High Ch between 1GHz ~ 26.5GHz**
	

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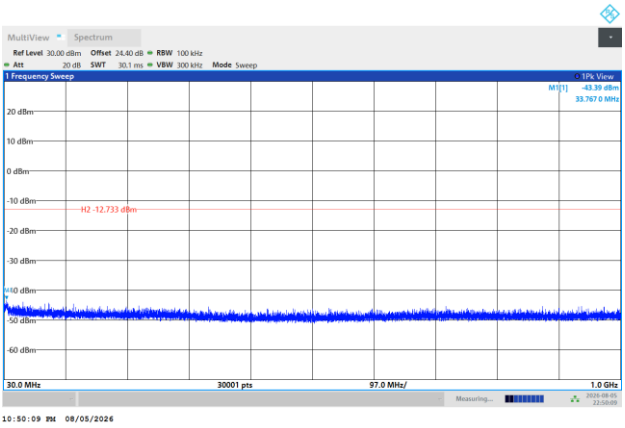
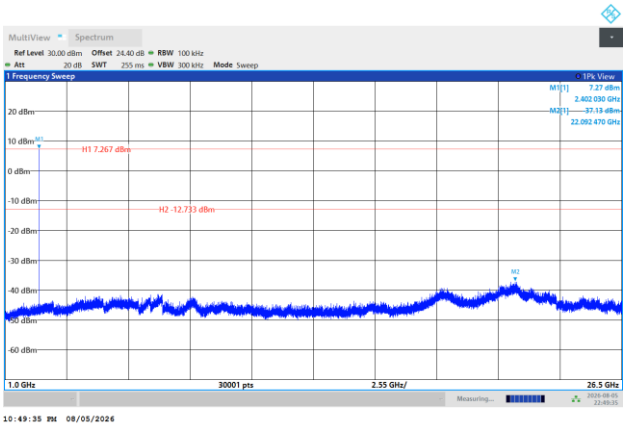
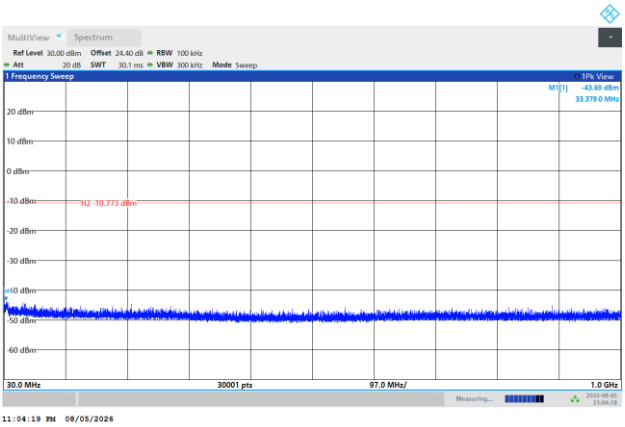
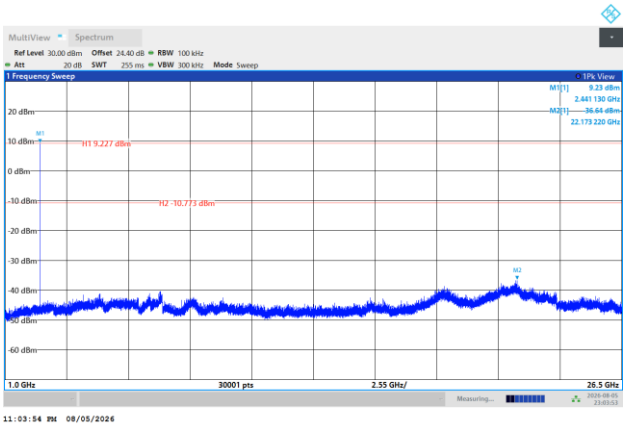
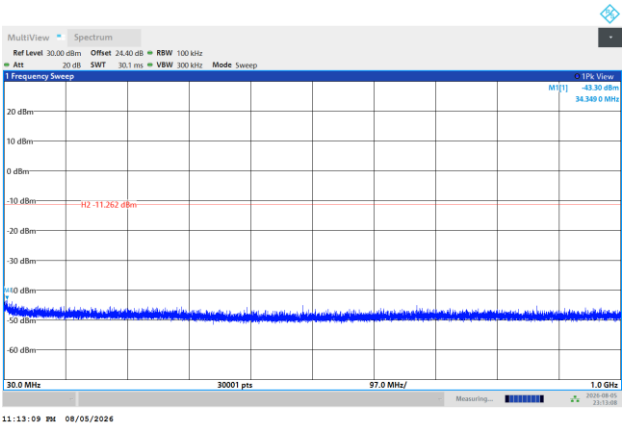
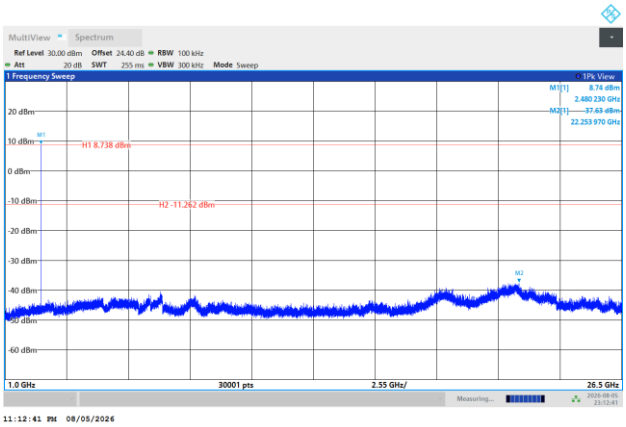
CSE Plot on Low Ch between 30MHz ~ 1 GHz	CSE Plot on Low Ch between 1GHz ~ 26.5GHz
	
CSE Plot on Mid. Ch between 30MHz ~ 1 GHz	**CSE Plot on Mid. Ch between 1GHz ~ 26.5GHz**
	
CSE Plot on High Ch between 30MHz ~ 1 GHz	**CSE Plot on High Ch between 1GHz ~ 26.5GHz**
	

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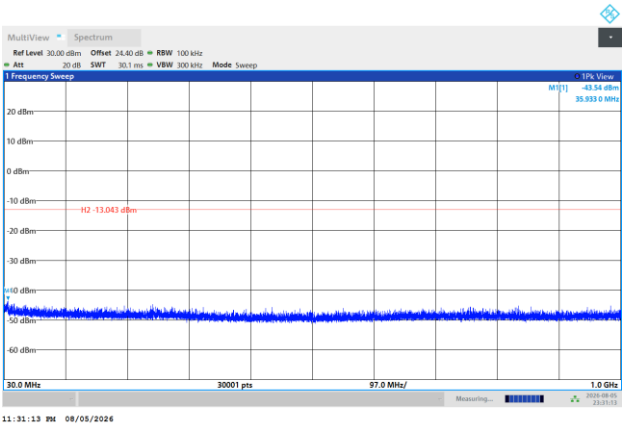
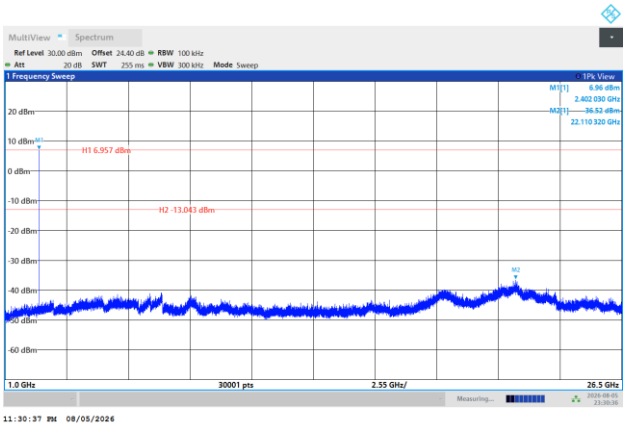
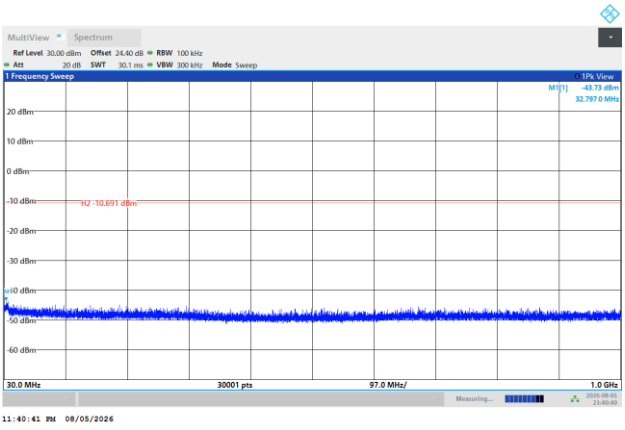
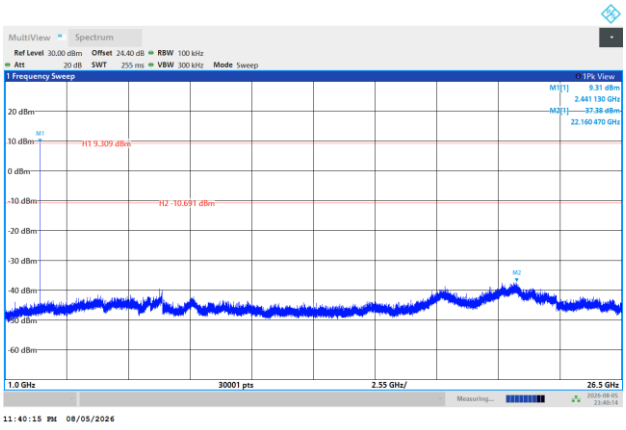
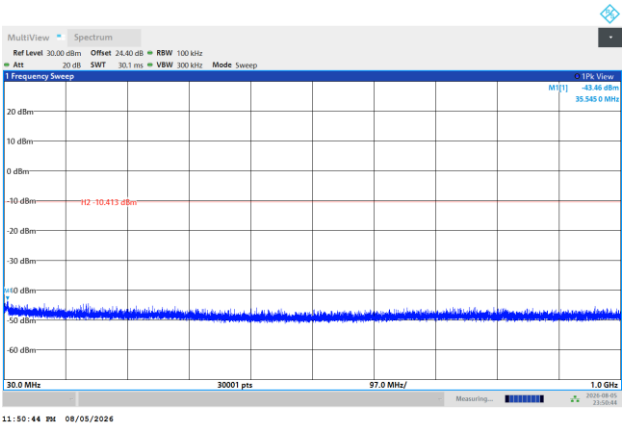
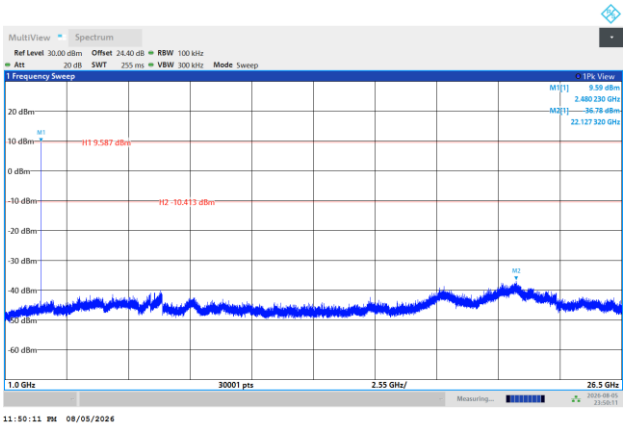
CSE Plot on Low Ch between 30MHz ~ 1 GHz	CSE Plot on Low Ch between 1GHz ~ 26.5GHz
	
CSE Plot on Mid. Ch between 30MHz ~ 1 GHz	**CSE Plot on Mid. Ch between 1GHz ~ 26.5GHz**
	
CSE Plot on High Ch between 30MHz ~ 1 GHz	**CSE Plot on High Ch between 1GHz ~ 26.5GHz**
	

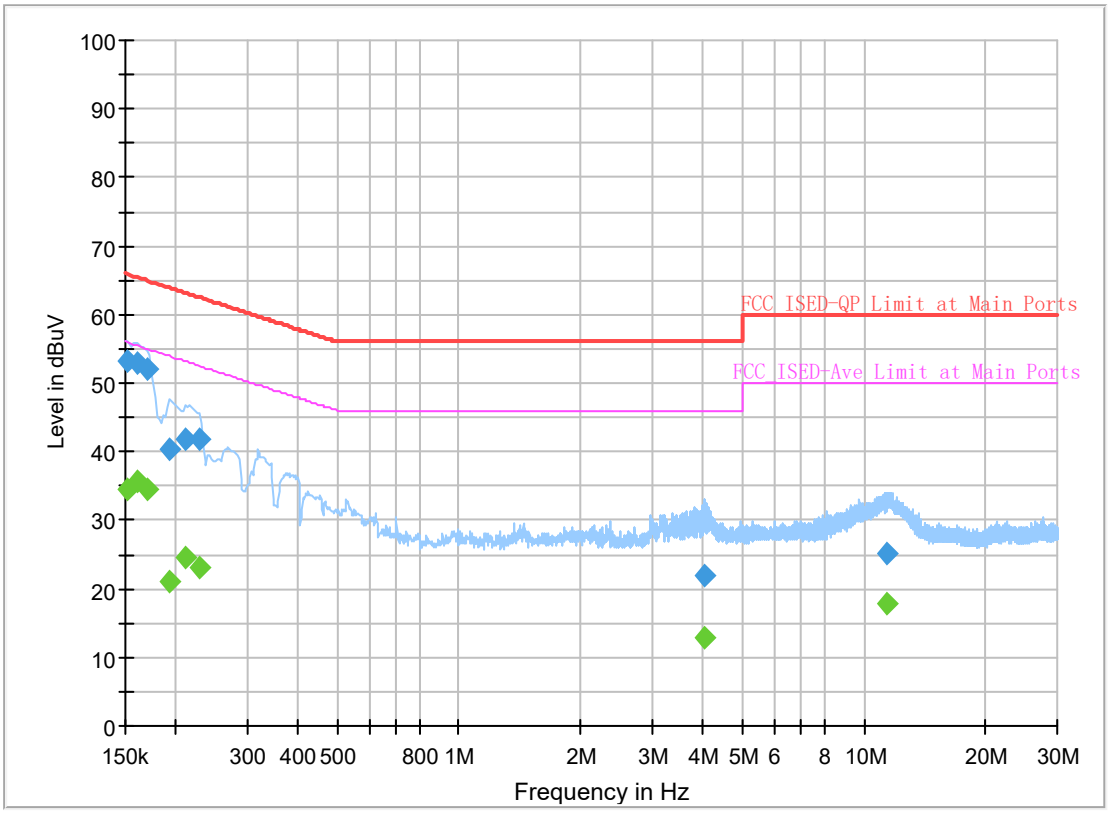
Appendix B. AC Conducted Emission Test Results

Test Engineer :	Brian Chen	**Temperature :**	23~26℃
		Relative Humidity :	45~55%

EUT Information

Report NO :	670105
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

Full Spectrum



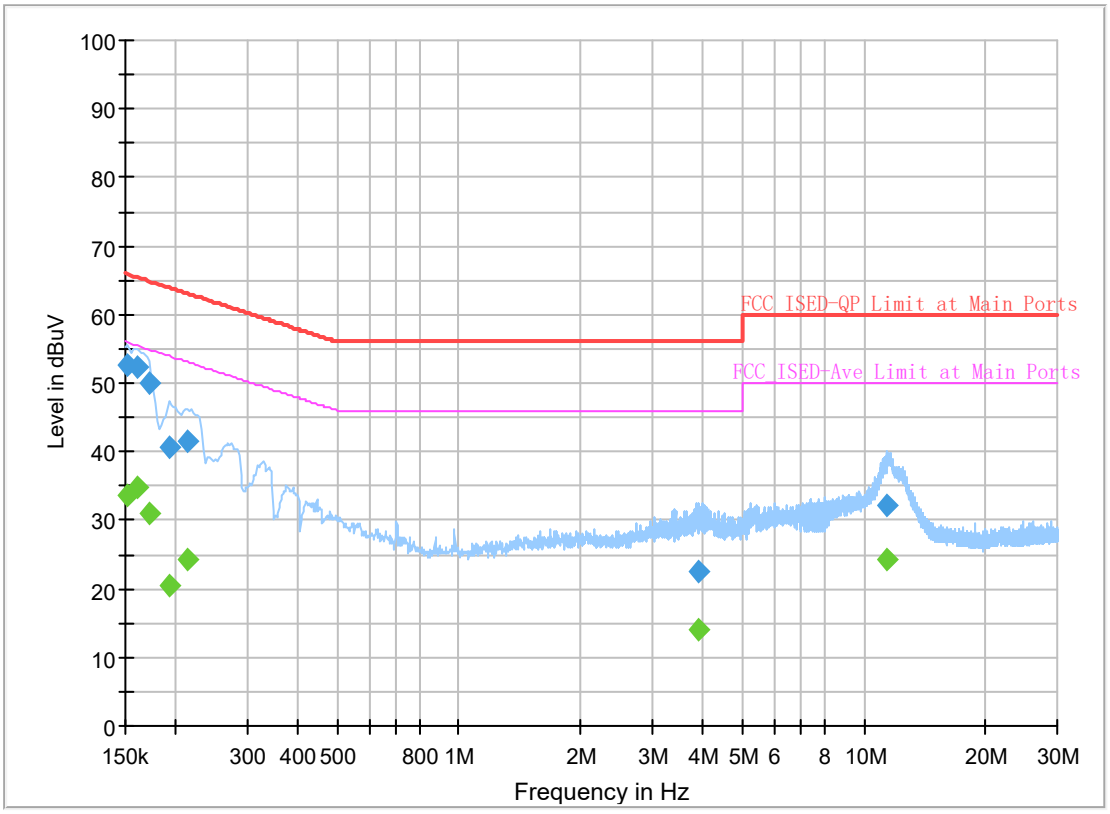
Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	34.54	55.88	21.34	L1	OFF	19.7
0.152250	53.34	---	65.88	12.54	L1	OFF	19.7
0.161250	---	35.67	55.40	19.73	L1	OFF	19.7
0.161250	53.02	---	65.40	12.38	L1	OFF	19.7
0.170610	---	34.40	54.93	20.53	L1	OFF	19.7
0.170610	51.94	---	64.93	12.99	L1	OFF	19.7
0.192750	---	20.95	53.92	32.97	L1	OFF	19.7
0.192750	40.32	---	63.92	23.60	L1	OFF	19.7
0.210750	---	24.60	53.18	28.58	L1	OFF	19.7
0.210750	41.82	---	63.18	21.36	L1	OFF	19.7
0.228750	---	23.22	52.50	29.28	L1	OFF	19.7
0.228750	41.83	---	62.50	20.67	L1	OFF	19.7
4.056000	---	13.00	46.00	33.00	L1	OFF	19.9
4.056000	22.07	---	56.00	33.93	L1	OFF	19.9
11.395500	---	17.79	50.00	32.21	L1	OFF	20.4
11.395500	25.02	---	60.00	34.98	L1	OFF	20.4

EUT Information

Report NO :	670105
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Neutral

Full Spectrum



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.152250	---	33.74	55.88	22.14	N	OFF	19.8
0.152250	52.55	---	65.88	13.33	N	OFF	19.8
0.161250	---	34.89	55.40	20.51	N	OFF	19.8
0.161250	52.34	---	65.40	13.06	N	OFF	19.8
0.172500	---	31.05	54.84	23.79	N	OFF	19.8
0.172500	50.06	---	64.84	14.78	N	OFF	19.8
0.192750	---	20.49	53.92	33.43	N	OFF	19.8
0.192750	40.51	---	63.92	23.41	N	OFF	19.8
0.213000	---	24.19	53.09	28.90	N	OFF	19.8
0.213000	41.51	---	63.09	21.58	N	OFF	19.8
3.882750	---	14.10	46.00	31.90	N	OFF	19.9
3.882750	22.51	---	56.00	33.49	N	OFF	19.9
11.366250	---	24.35	50.00	25.65	N	OFF	20.5
11.366250	32.30	---	60.00	27.70	N	OFF	20.5

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Jack Cheng, Ray Lung	**Temperature :**	21.1 ~ 25.7°C
		Relative Humidity :	55.8 ~ 63.2%

Note symbol

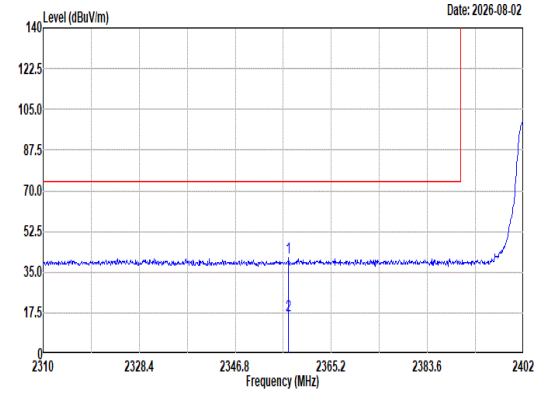
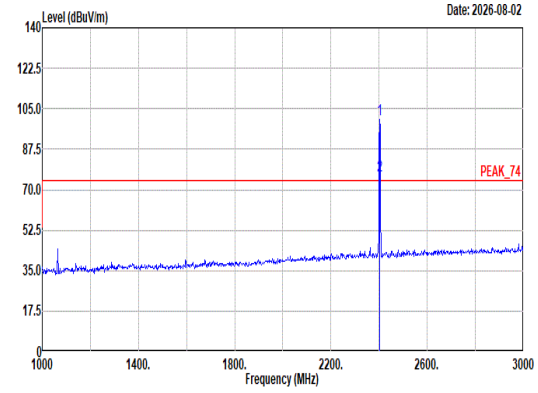
-L	**Low channel location**
-R	**High channel location**

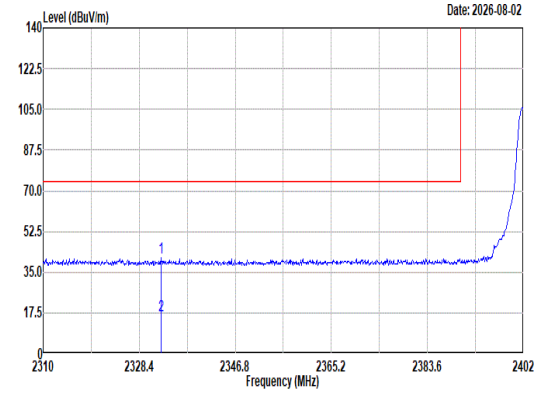
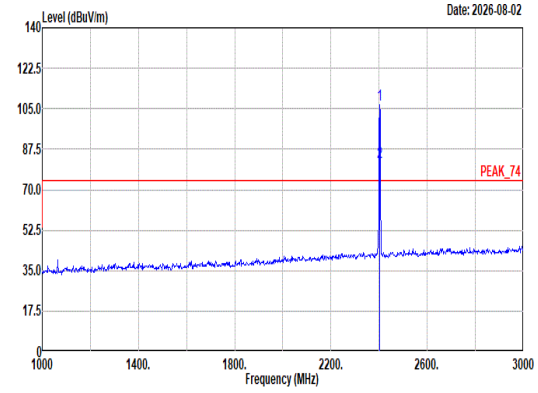
C1-1.Radiated Spurious Emission Test Modes

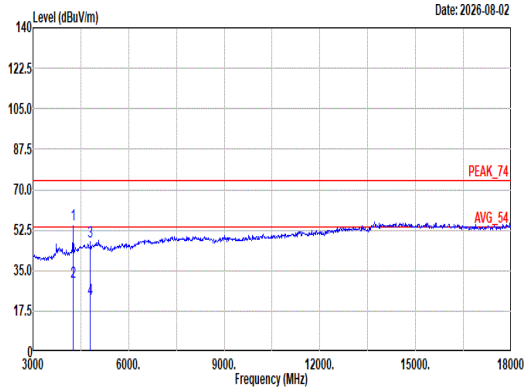
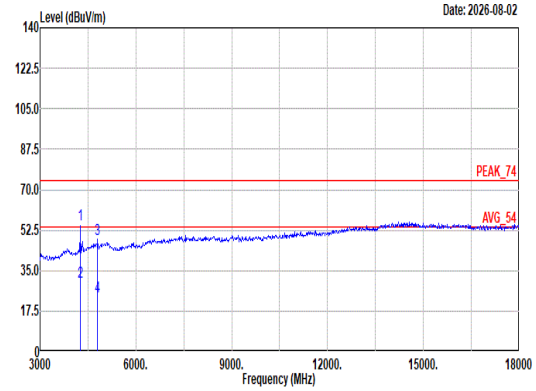
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	8	Bluetooth BR_GFSK	00	2402	3Mbps	-	-
Mode 2	2400-2483.5	8	Bluetooth BR_GFSK	39	2441	3Mbps	-	-
Mode 3	2400-2483.5	8	Bluetooth BR_GFSK	78	2480	3Mbps	-	-
Mode 4	2400-2483.5	8	Bluetooth BR_GFSK	78	2480	3Mbps	-	LF
Mode 5	2400-2483.5	8	Bluetooth BR_GFSK	78	2480	3Mbps	-	SHF

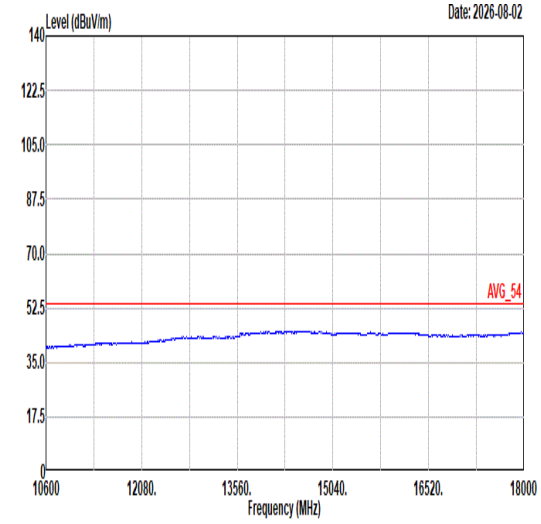
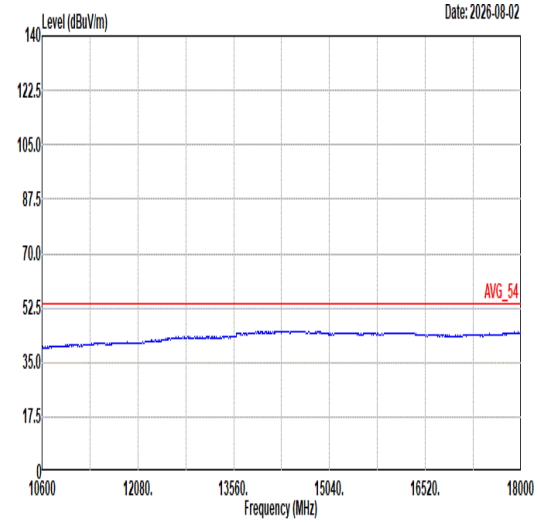
C1-2.Summary of each worse mode

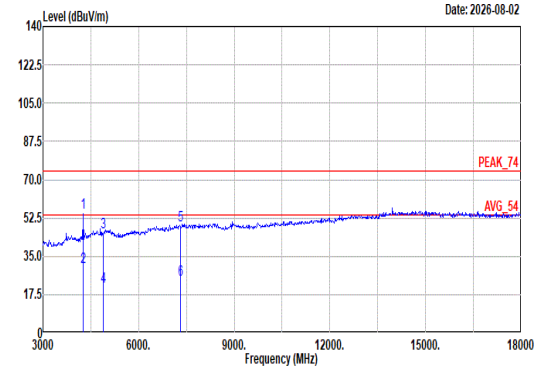
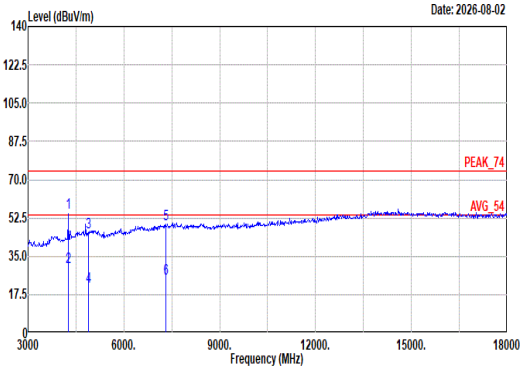
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	Bluetooth BR_GFSK	00	2332.54	41.03	74.00	-32.97	V	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	00	4260.00	55.05	74.00	-18.95	V	Peak	Pass	-	Harmonic
2	Bluetooth BR_GFSK	39	-	-	-	-	-	-	-	-	Band Edge
	Bluetooth BR_GFSK	39	4257.00	54.87	74.00	-19.13	V	Peak	Pass	-	Harmonic
3	Bluetooth BR_GFSK	78	2483.52	62.65	74.00	-11.35	V	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	78	4257.00	55.54	74.00	-18.46	V	Peak	Pass	-	Harmonic
4	LF	78	532.46	37.77	46.00	-8.23	V	Peak	Pass	-	LF
5	SHF	78	23602.13	39.90	74.00	-34.10	V	Peak	Pass	-	SHF

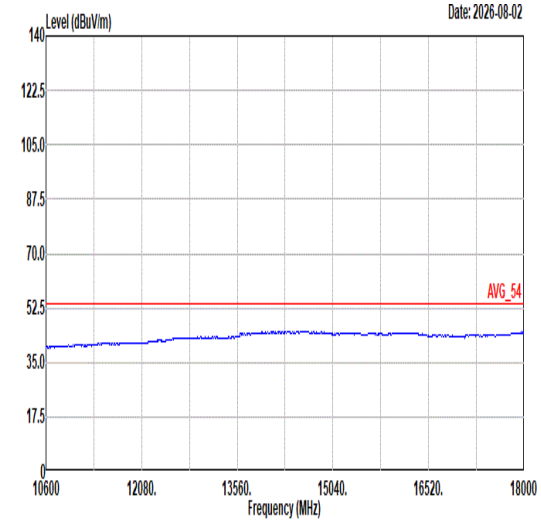
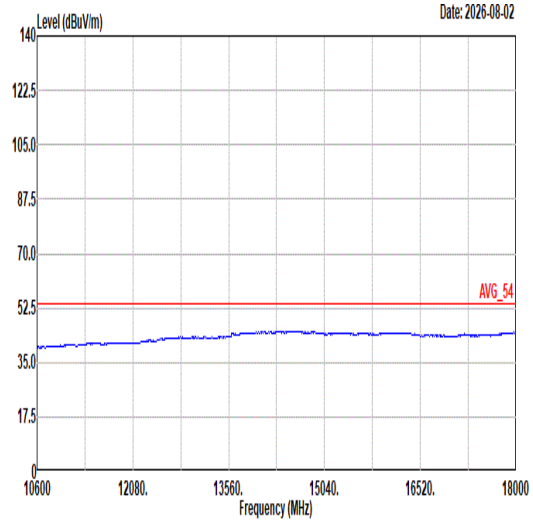
Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	8	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2357.01 40.97 74.00 -33.03 37.88 26.87 8.44 32.81 0.59 300 122 Peak 2 2357.01 16.21 54.00 -37.79 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 100.61 ------ ------ 97.60 26.72 8.53 32.84 0.60 300 122 Peak 2 2402.00 75.85 ------ ------ -- -- -- -- -- -- -- Average

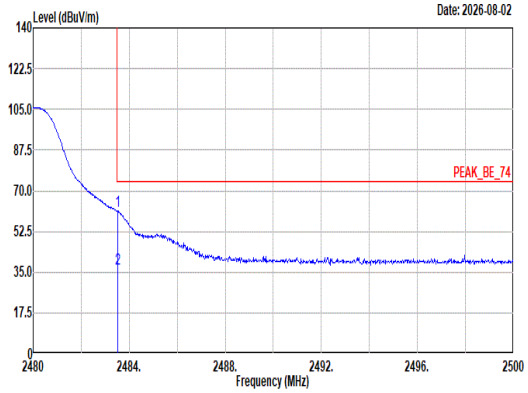
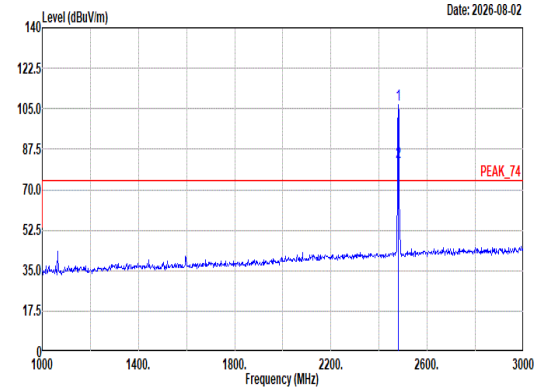
Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	8	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2332.54 41.03 74.00 -32.97 37.96 26.87 8.40 32.79 0.59 218 308 Peak 2 2332.54 16.27 54.00 -37.73 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 106.66 ------ ------ 103.65 26.72 8.53 32.84 0.60 218 308 Peak 2 2402.00 81.90 ------ ------ -- -- -- -- -- -- -- Average

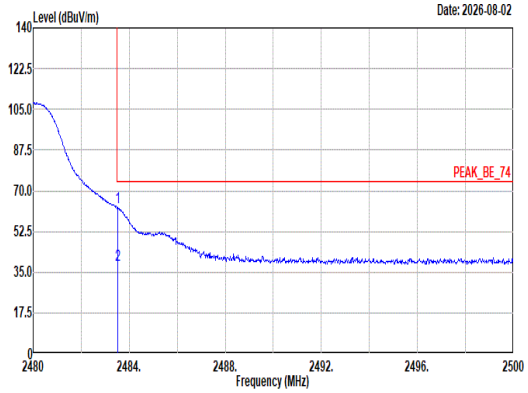
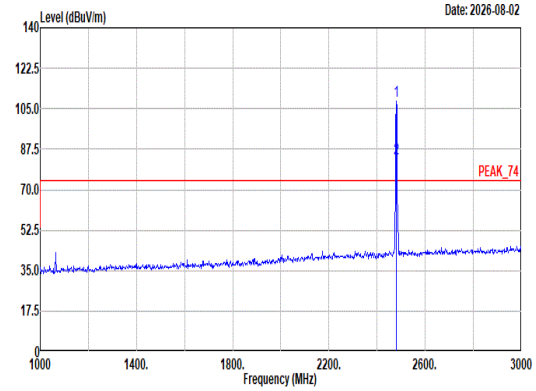
Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	8	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4260.00 54.89 74.00 -19.11 45.31 30.32 11.39 34.35 2.22 202 121 Peak 2 4260.00 30.13 54.00 -23.87 -- -- -- -- -- -- -- Average 3 4804.00 47.43 74.00 -26.57 34.76 32.21 12.13 34.11 2.44 -- -- Peak 4 4804.00 22.67 54.00 -31.33 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4260.00 55.05 74.00 -18.95 45.47 30.32 11.39 34.35 2.22 118 28 Peak 2 4260.00 30.29 54.00 -23.71 -- -- -- -- -- -- -- Average 3 4804.00 48.69 74.00 -25.31 36.02 32.21 12.13 34.11 2.44 -- -- Peak 4 4804.00 23.93 54.00 -30.07 -- -- -- -- -- -- -- Average

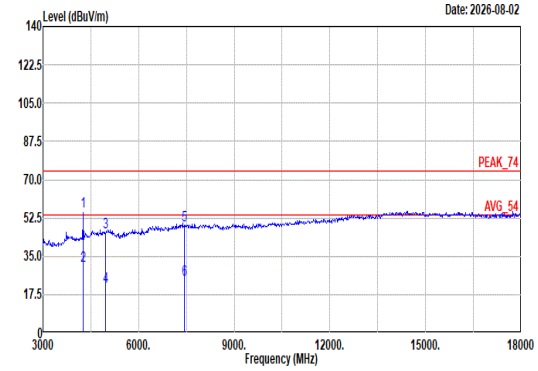
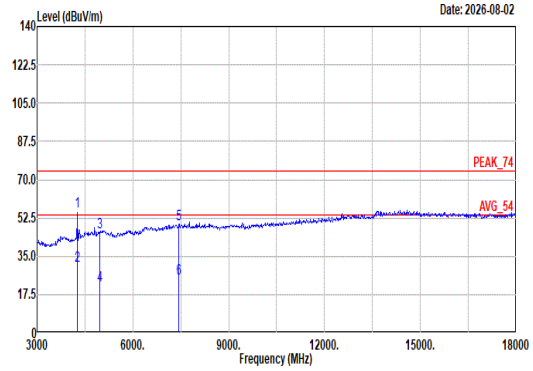
Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	8	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

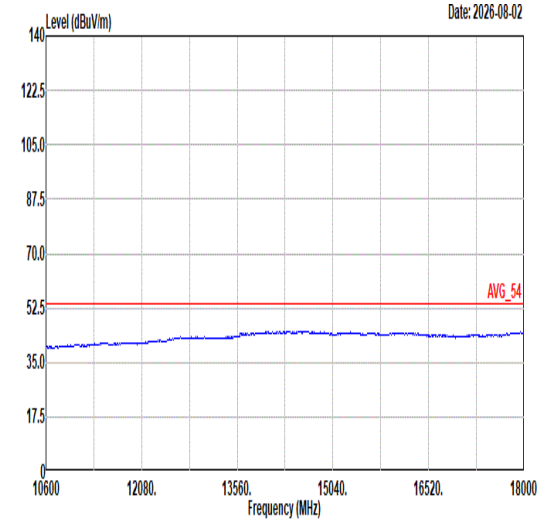
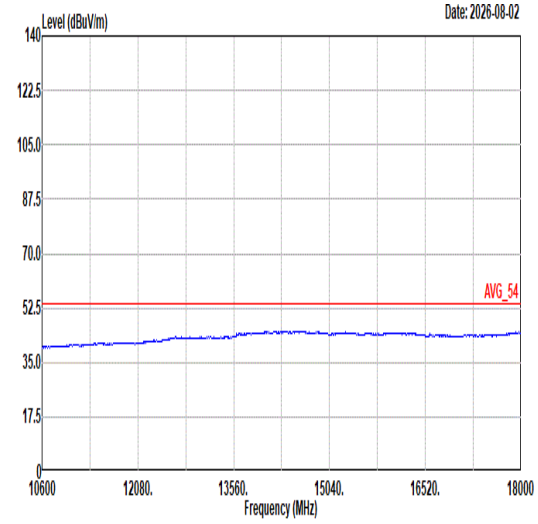
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	8	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 54.69 74.00 -19.31 45.13 30.31 11.38 34.35 2.22 207 112 Peak 2 4257.00 29.93 54.00 -24.07 -- -- -- -- -- -- -- Average 3 4882.00 45.93 74.00 -28.07 33.02 32.36 12.27 34.09 2.37 -- -- Peak 4 4882.00 21.17 54.00 -32.83 -- -- -- -- -- -- -- Average 5 7323.00 48.97 74.00 -25.03 32.14 36.74 15.07 36.38 1.40 -- -- Peak 6 7323.00 24.21 54.00 -29.79 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 54.87 74.00 -19.13 45.31 30.31 11.38 34.35 2.22 137 25 Peak 2 4257.00 30.11 54.00 -23.89 -- -- -- -- -- -- -- Average 3 4882.00 45.89 74.00 -28.11 32.98 32.36 12.27 34.09 2.37 -- -- Peak 4 4882.00 21.13 54.00 -32.87 -- -- -- -- -- -- -- Average 5 7323.00 49.64 74.00 -24.36 32.81 36.74 15.07 36.38 1.40 -- -- Peak 6 7323.00 24.88 54.00 -29.12 -- -- -- -- -- -- -- Average

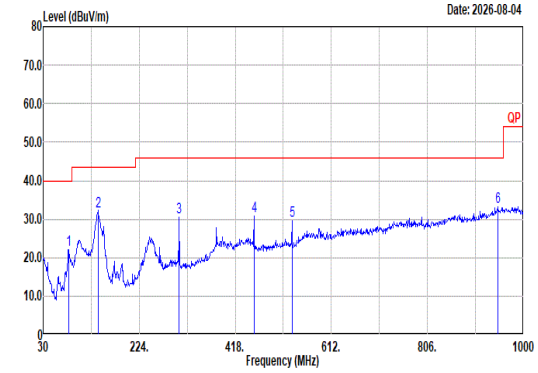
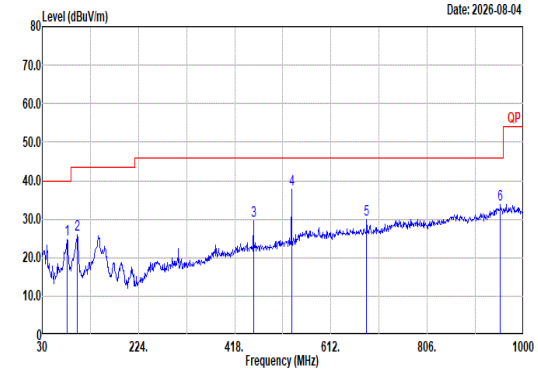
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	8	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

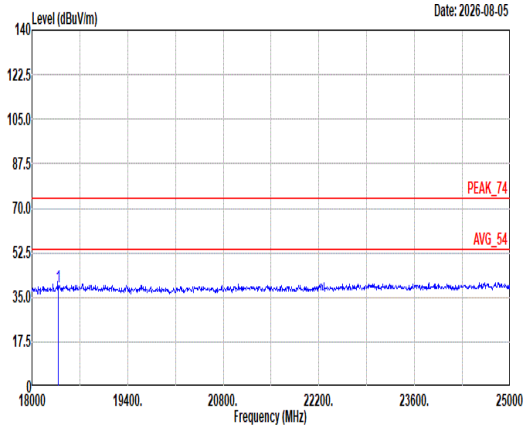
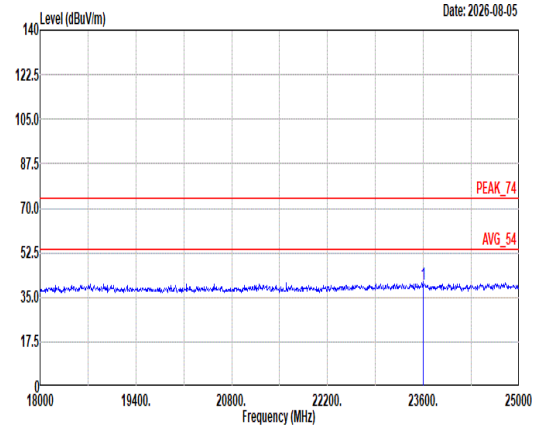
Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	8	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.52 61.27 74.00 -12.73 58.19 26.67 8.68 32.89 0.62 101 60 Peak 2 2483.52 36.51 54.00 -17.49 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2480.00 106.54 ------ ------ 103.53 26.60 8.68 32.89 0.62 101 60 Peak 2 2480.00 81.78 ------ ------ -- -- -- -- -- -- -- Average

Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	8	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.52 62.65 74.00 -11.35 59.57 26.67 8.68 32.89 0.62 161 270 Peak 2 2483.52 37.89 54.00 -16.11 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2480.00 108.24 ------ ------ 105.23 26.60 8.68 32.89 0.62 161 270 Peak 2 2480.00 83.48 ------ ------ -- -- -- -- -- -- -- Average

Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	8	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.33 74.00 -18.67 45.77 30.31 11.38 34.35 2.22 198 124 Peak 2 4257.00 30.57 54.00 -23.43 -- -- -- -- -- -- -- Average 3 4960.00 46.13 74.00 -27.87 32.85 32.64 12.41 34.07 2.30 -- -- Peak 4 4960.00 21.37 54.00 -32.63 -- -- -- -- -- -- -- Average 5 7440.00 49.14 74.00 -24.86 32.06 36.82 15.20 36.42 1.48 -- -- Peak 6 7440.00 24.38 54.00 -29.62 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.54 74.00 -18.46 45.98 30.31 11.38 34.35 2.22 120 27 Peak 2 4257.00 30.78 54.00 -23.22 -- -- -- -- -- -- -- Average 3 4960.00 46.16 74.00 -27.84 32.88 32.64 12.41 34.07 2.30 -- -- Peak 4 4960.00 21.40 54.00 -32.60 -- -- -- -- -- -- -- Average 5 7440.00 49.41 74.00 -24.59 32.33 36.82 15.20 36.42 1.48 -- -- Peak 6 7440.00 24.65 54.00 -29.35 -- -- -- -- -- -- -- Average

Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	8	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

Mode	4	
	LF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	8	
Pol.	Horizontal	Vertical
QP/ Peak	 Site : 03CH21-HY Condition: QP 3m LF_63303&001_251126 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 81.41 22.12 40.00 -17.88 39.47 13.70 1.52 32.71 0.14 -- -- Peak 2 140.58 32.15 43.50 -11.35 45.21 17.48 2.02 32.69 0.13 -- -- Peak 3 304.51 30.38 46.00 -15.62 40.60 19.36 2.99 32.72 0.15 -- -- Peak 4 455.83 30.85 46.00 -15.15 36.67 23.23 3.68 32.87 0.14 -- -- Peak 5 532.46 29.57 46.00 -16.43 34.13 24.18 4.00 32.91 0.17 -- -- Peak 6 947.62 33.25 46.00 -12.75 28.07 30.98 5.33 31.45 0.32 -- -- Peak	 Site : 03CH21-HY Condition: QP 3m LF_63303&001_251126 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 80.44 24.81 40.00 -15.19 42.25 13.62 1.51 32.71 0.14 -- -- Peak 2 100.81 25.88 43.50 -17.62 40.48 16.29 1.70 32.71 0.12 -- -- Peak 3 455.83 29.46 46.00 -16.54 35.28 23.23 3.68 32.87 0.14 -- -- Peak 4 532.46 37.77 46.00 -8.23 42.33 24.18 4.00 32.91 0.17 -- -- Peak 5 683.78 30.01 46.00 -15.99 31.37 26.77 4.52 32.87 0.22 -- -- Peak 6 953.44 33.83 46.00 -12.17 28.37 31.18 5.34 31.39 0.33 -- -- Peak

Mode	5	
	SHF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	8	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH21-HY Condition: PEAK_74 1m BBHA9170_1450 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 18386.59 38.95 74.00 -35.05 48.96 38.72 24.48 63.67 -9.54 -- -- PEAK	 Site : 03CH21-HY Condition: PEAK_74 1m BBHA9170_1450 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 23602.13 39.90 74.00 -34.10 41.62 39.89 28.03 60.10 -9.54 -- -- PEAK

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Jack Cheng, Ray Lung	**Temperature :**	21.1 ~ 25.7°C
		Relative Humidity :	55.8 ~ 63.2%

Note symbol

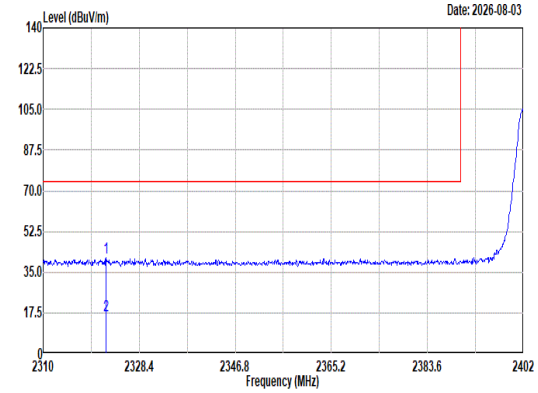
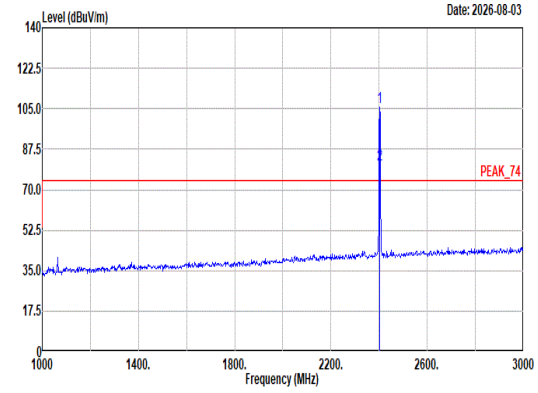
-L	**Low channel location**
-R	**High channel location**

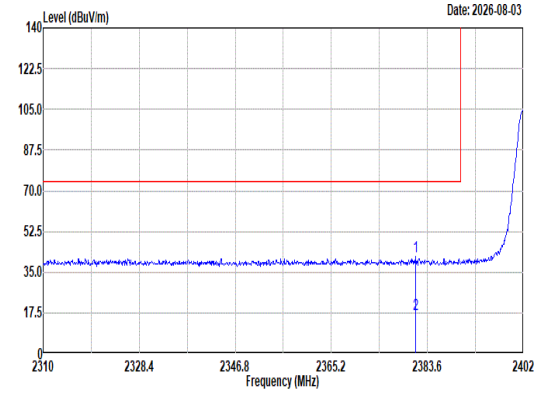
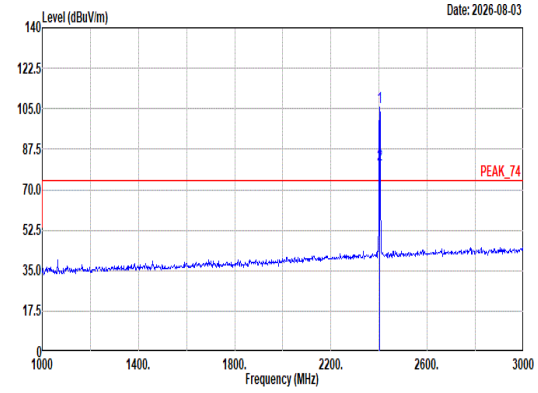
C2-1.Radiated Spurious Emission Test Modes

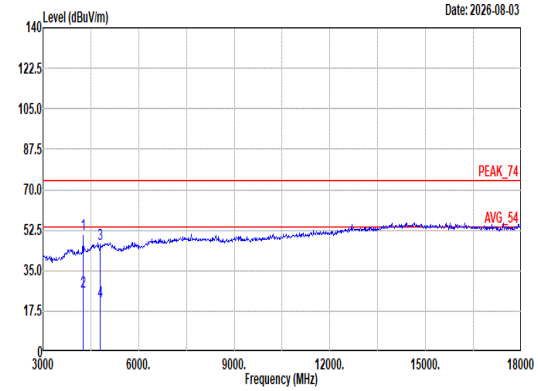
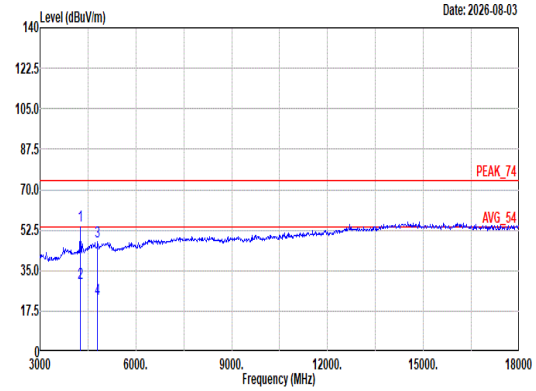
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 14	2400-2483.5	9	Bluetooth BR_GFSK	00	2402	3Mbps	-	-
Mode 15	2400-2483.5	9	Bluetooth BR_GFSK	39	2441	3Mbps	-	-
Mode 16	2400-2483.5	9	Bluetooth BR_GFSK	78	2480	3Mbps	-	-
Mode 17	2400-2483.5	9	Bluetooth BR_GFSK	78	2480	3Mbps	-	LF
Mode 18	2400-2483.5	9	Bluetooth BR_GFSK	78	2480	3Mbps	-	SHF

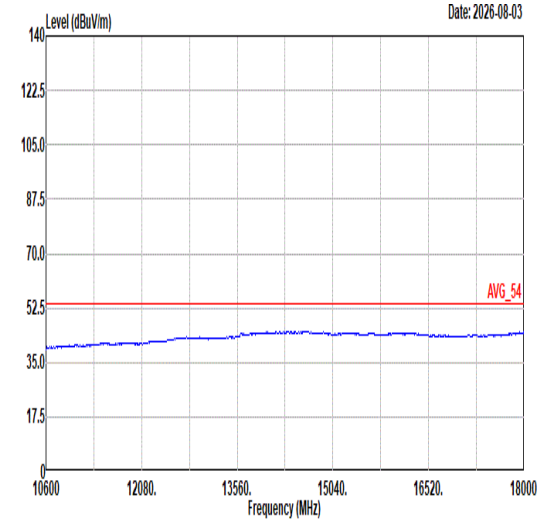
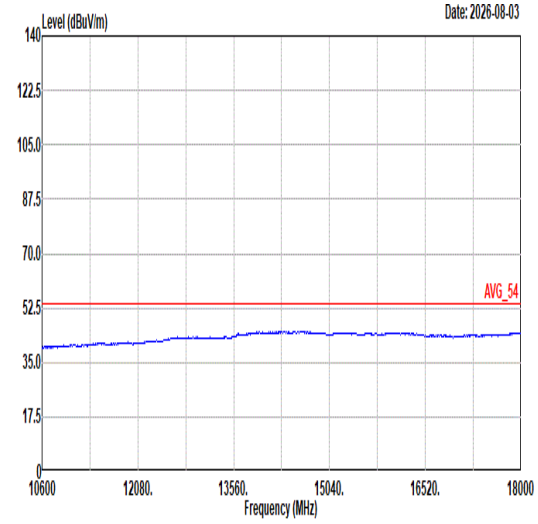
C2-2.Summary of each worse mode

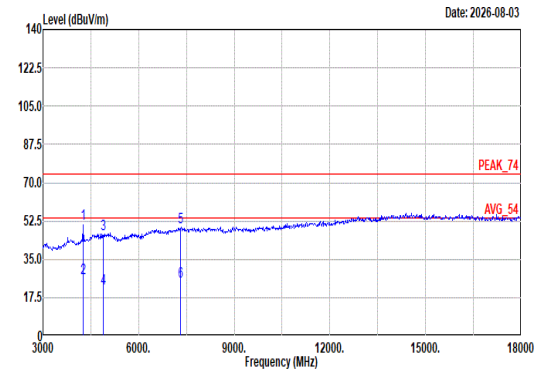
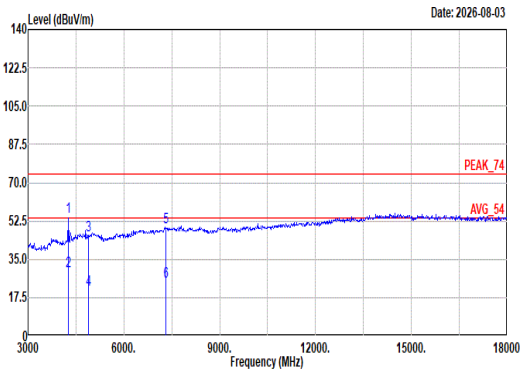
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
14	Bluetooth BR_GFSK	00	2381.30	41.49	74.00	-32.51	V	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	00	4257.00	54.43	74.00	-19.57	V	Peak	Pass	-	Harmonic
15	Bluetooth BR_GFSK	39	-	-	-	-	-	-	-	-	Band Edge
	Bluetooth BR_GFSK	39	4257.00	54.59	74.00	-19.41	V	Peak	Pass	-	Harmonic
16	Bluetooth BR_GFSK	78	2483.58	61.04	74.00	-12.96	H	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	78	4257.00	54.82	74.00	-19.18	V	Peak	Pass	-	Harmonic
17	LF	78	532.46	38.22	46.00	-7.78	V	Peak	Pass	-	LF
18	SHF	78	24614.50	40.08	74.00	-33.92	V	Peak	Pass	-	SHF

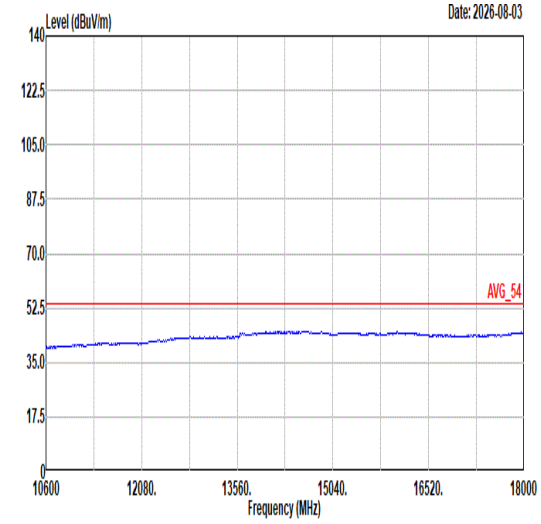
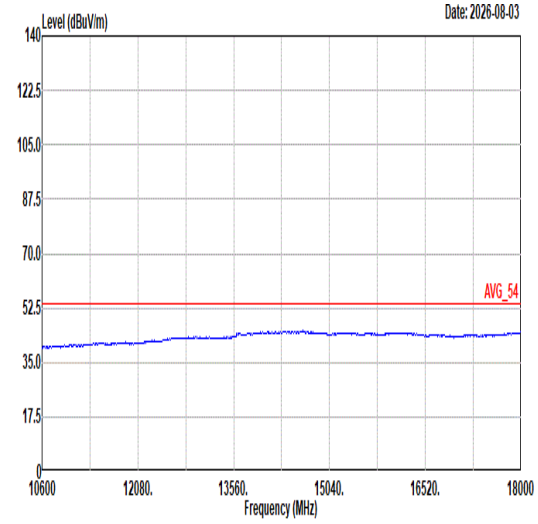
Mode	14	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	9	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2322.05 40.99 74.00 -33.01 37.84 26.98 8.37 32.79 0.59 100 84 Peak 2 2322.05 16.23 54.00 -37.77 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 105.79 ------ ------ 102.78 26.72 8.53 32.84 0.60 100 84 Peak 2 2402.00 81.03 ------ ------ -- -- -- -- -- -- -- Average

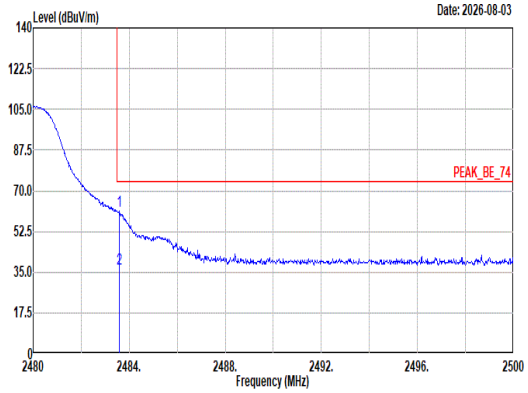
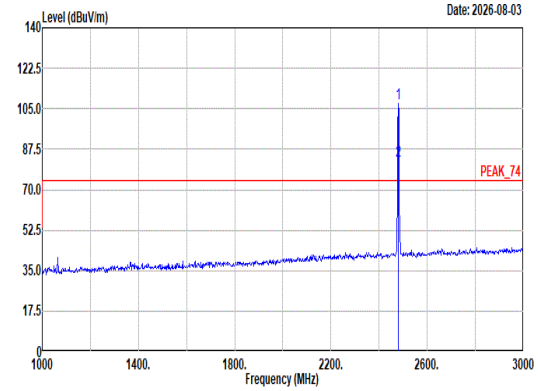
Mode	14	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	9	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2381.30 41.49 74.00 -32.51 38.53 26.69 8.49 32.82 0.60 400 103 Peak 2 2381.30 16.73 54.00 -37.27 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 105.55 ------ ------ 102.54 26.72 8.53 32.84 0.60 400 103 Peak 2 2402.00 80.79 ------ ------ -- -- -- -- -- -- -- Average

Mode	14	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	9	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 50.58 74.00 -23.42 41.02 30.31 11.38 34.35 2.22 155 61 Peak 2 4257.00 25.82 54.00 -28.18 -- -- -- -- -- -- -- Average 3 4804.00 46.45 74.00 -27.55 33.78 32.21 12.13 34.11 2.44 -- -- Peak 4 4804.00 21.69 54.00 -32.31 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 54.43 74.00 -19.57 44.87 30.31 11.38 34.35 2.22 125 0 Peak 2 4257.00 29.67 54.00 -24.33 -- -- -- -- -- -- -- Average 3 4804.00 47.38 74.00 -26.62 34.71 32.21 12.13 34.11 2.44 -- -- Peak 4 4804.00 22.62 54.00 -31.38 -- -- -- -- -- -- -- Average

Mode	14	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	9	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

Mode	15	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	9	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 51.09 74.00 -22.91 41.53 30.31 11.38 34.35 2.22 188 52 Peak 2 4257.00 26.33 54.00 -27.67 -- -- -- -- -- -- -- Average 3 4882.00 46.62 74.00 -27.38 33.71 32.36 12.27 34.09 2.37 -- -- Peak 4 4882.00 21.86 54.00 -32.14 -- -- -- -- -- -- -- Average 5 7323.00 49.57 74.00 -24.43 32.74 36.74 15.07 36.38 1.40 -- -- Peak 6 7323.00 24.81 54.00 -29.19 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 54.59 74.00 -19.41 45.03 30.31 11.38 34.35 2.22 117 0 Peak 2 4257.00 29.83 54.00 -24.17 -- -- -- -- -- -- -- Average 3 4882.00 45.83 74.00 -28.17 32.92 32.36 12.27 34.09 2.37 -- -- Peak 4 4882.00 21.07 54.00 -32.93 -- -- -- -- -- -- -- Average 5 7323.00 49.50 74.00 -24.50 32.67 36.74 15.07 36.38 1.40 -- -- Peak 6 7323.00 24.74 54.00 -29.26 -- -- -- -- -- -- -- Average

Mode	15	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	9	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

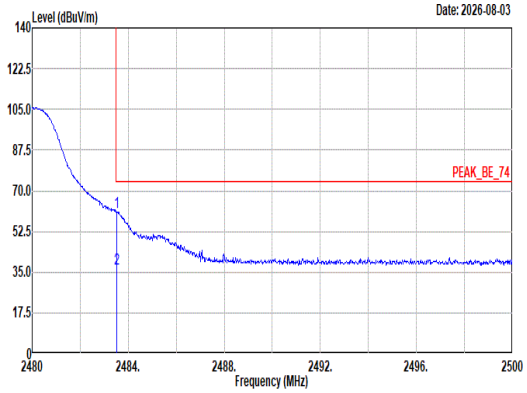
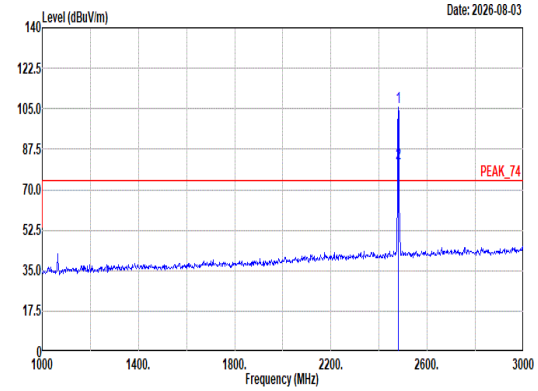
Mode	16	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	9	
Pol.	Horizontal	Fundamental
Peak		

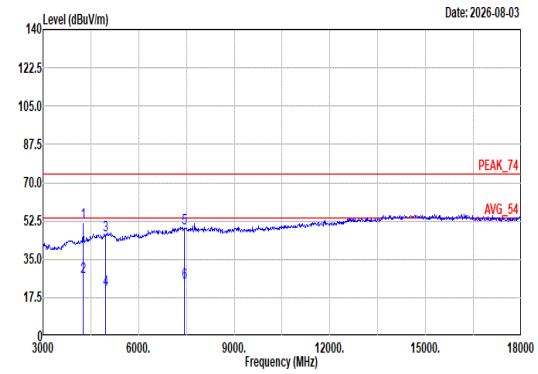
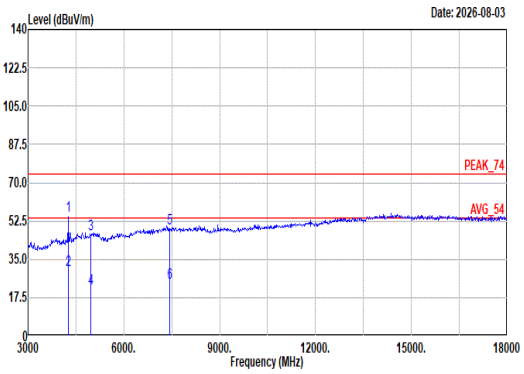
Site : 03CH21-HY
Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

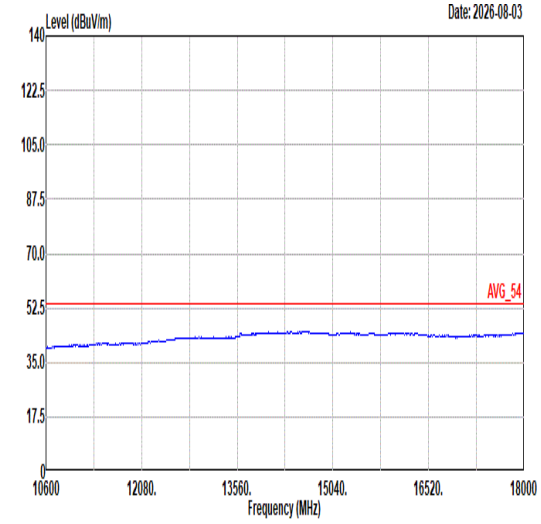
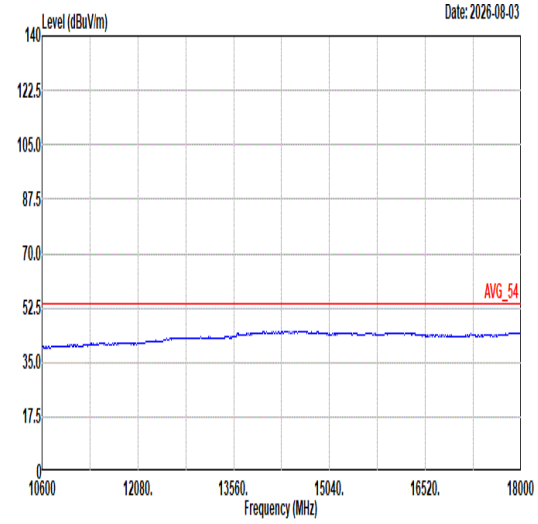
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2483.58	61.04	74.00	-12.96	57.96	26.67	8.68	32.89	0.62	113	267	Peak
2	2483.58	36.28	54.00	-17.72	--	--	--	--	--	--	--	AVERAGE

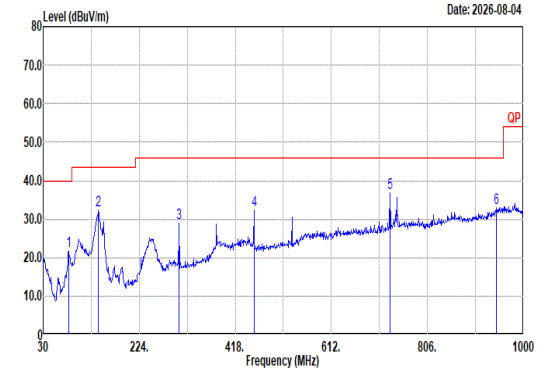
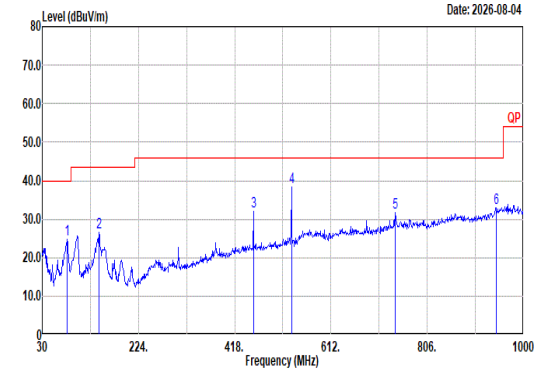
Site : 03CH21-HY
Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

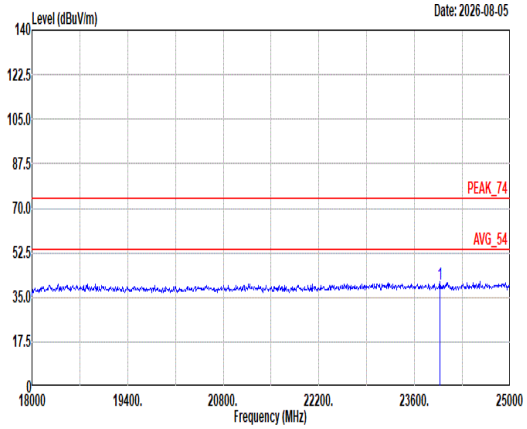
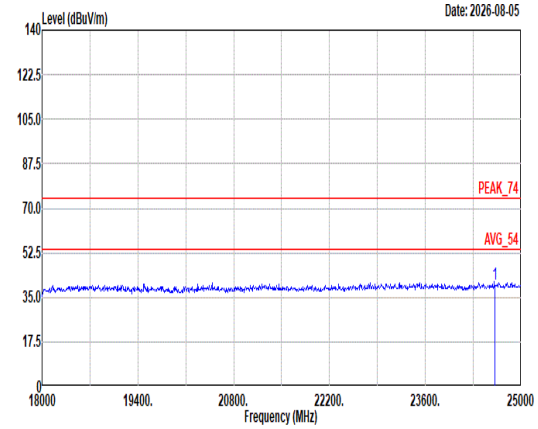
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2480.00	107.00	------	------	103.99	26.60	8.68	32.89	0.62	113	267	Peak
2	2480.00	82.24	------	------	--	--	--	--	--	--	--	Average

Mode	16	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	9	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.52 60.97 74.00 -13.03 57.89 26.67 8.68 32.89 0.62 333 108 Peak 2 2483.52 36.21 54.00 -17.79 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2480.00 105.90 ------ ------ 102.89 26.60 8.68 32.89 0.62 333 108 Peak 2 2480.00 81.14 ------ ------ -- -- -- -- -- -- -- Average

Mode	16	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	9	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 51.69 74.00 -22.31 42.13 30.31 11.38 34.35 2.22 111 58 Peak 2 4257.00 26.93 54.00 -27.07 -- -- -- -- -- -- -- Average 3 4960.00 45.94 74.00 -28.06 32.66 32.64 12.41 34.07 2.30 -- -- Peak 4 4960.00 21.18 54.00 -32.82 -- -- -- -- -- -- -- Average 5 7440.00 49.26 74.00 -24.74 32.18 36.82 15.20 36.42 1.48 -- -- Peak 6 7440.00 24.50 54.00 -29.50 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 54.82 74.00 -19.18 45.26 30.31 11.38 34.35 2.22 119 0 Peak 2 4257.00 30.06 54.00 -23.94 -- -- -- -- -- -- -- Average 3 4960.00 46.60 74.00 -27.40 33.32 32.64 12.41 34.07 2.30 -- -- Peak 4 4960.00 21.84 54.00 -32.16 -- -- -- -- -- -- -- Average 5 7440.00 49.10 74.00 -24.90 32.02 36.82 15.20 36.42 1.48 -- -- Peak 6 7440.00 24.34 54.00 -29.66 -- -- -- -- -- -- -- Average

Mode	16	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	9	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

Mode	17	
	LF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	9	
Pol.	Horizontal	Vertical
QP/ Peak	 Site : 03CH21-HY Condition: QP 3m LF_63303&001_251126 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 81.41 21.64 40.00 -18.36 38.99 13.70 1.52 32.71 0.14 -- -- Peak 2 141.55 32.33 43.50 -11.17 45.36 17.50 2.03 32.69 0.13 -- -- Peak 3 304.51 28.95 46.00 -17.05 39.17 19.36 2.99 32.72 0.15 -- -- Peak 4 455.83 32.33 46.00 -13.67 38.15 23.23 3.68 32.87 0.14 -- -- Peak 5 730.34 36.89 46.00 -9.11 36.94 27.83 4.68 32.79 0.23 -- -- Peak 6 944.71 32.81 46.00 -13.19 27.91 30.75 5.32 31.48 0.31 -- -- Peak	 Site : 03CH21-HY Condition: QP 3m LF_63303&001_251126 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 80.44 24.72 40.00 -15.28 42.16 13.62 1.51 32.71 0.14 -- -- Peak 2 144.46 26.48 43.50 -17.02 39.54 17.43 2.05 32.68 0.14 -- -- Peak 3 455.83 32.05 46.00 -13.95 37.87 23.23 3.68 32.87 0.14 -- -- Peak 4 532.46 38.22 46.00 -7.78 42.78 24.18 4.00 32.91 0.17 -- -- Peak 5 741.98 31.69 46.00 -14.31 31.26 28.25 4.71 32.77 0.24 -- -- Peak 6 945.68 32.98 46.00 -13.02 28.01 30.81 5.32 31.47 0.31 -- -- Peak

Mode	18	
	SHF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	9	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH21-HY Condition: PEAK_74 1m BBHA9170_1450 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 23975.83 40.03 74.00 -33.97 41.86 39.55 28.26 60.10 -9.54 -- -- PEAK	 Site : 03CH21-HY Condition: PEAK_74 1m BBHA9170_1450 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 24614.50 40.08 74.00 -33.92 41.00 40.06 28.63 60.07 -9.54 -- -- PEAK

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	Jack Cheng, Ray Lung	**Temperature :**	21.1 ~ 25.7°C
		Relative Humidity :	55.8 ~ 63.2%

Note symbol

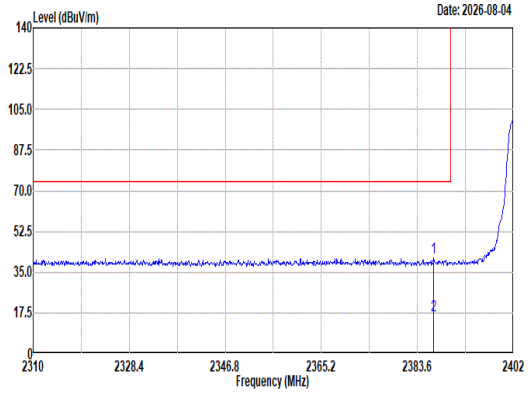
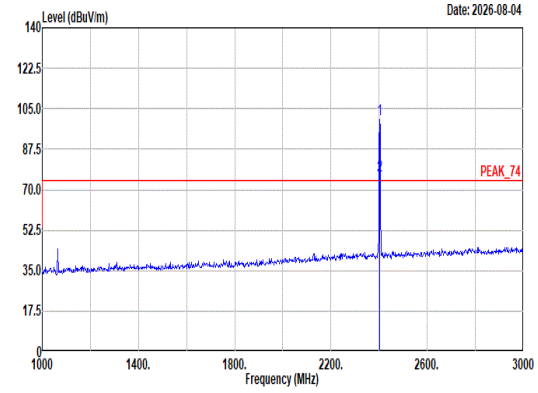
-L	**Low channel location**
-R	**High channel location**

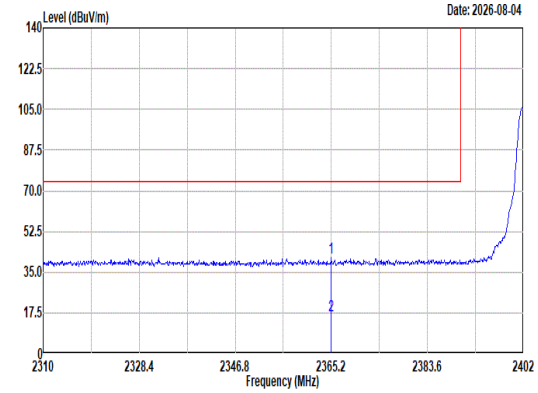
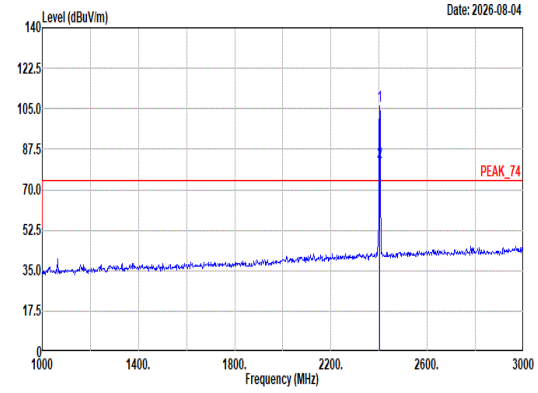
C3-1.Radiated Spurious Emission Test Modes

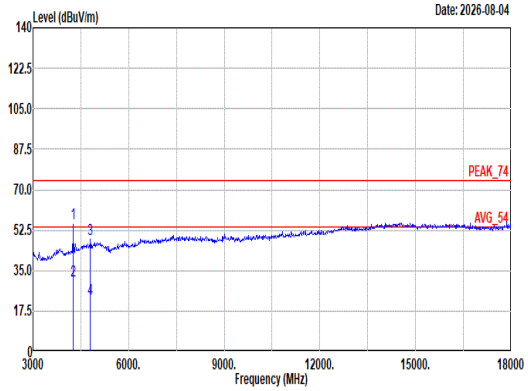
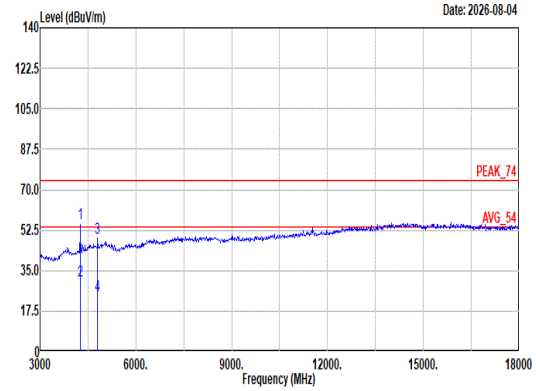
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 27	2400-2483.5	BF 8+9	Bluetooth BR_GFSK	00	2402	3Mbps	-	-
Mode 28	2400-2483.5	BF 8+9	Bluetooth BR_GFSK	39	2441	3Mbps	-	-
Mode 29	2400-2483.5	BF 8+9	Bluetooth BR_GFSK	78	2480	3Mbps	-	-
Mode 30	2400-2483.5	BF 8+9	Bluetooth BR_GFSK	39	2441	3Mbps	-	LF
Mode 31	2400-2483.5	BF 8+9	Bluetooth BR_GFSK	39	2441	3Mbps	-	SHF

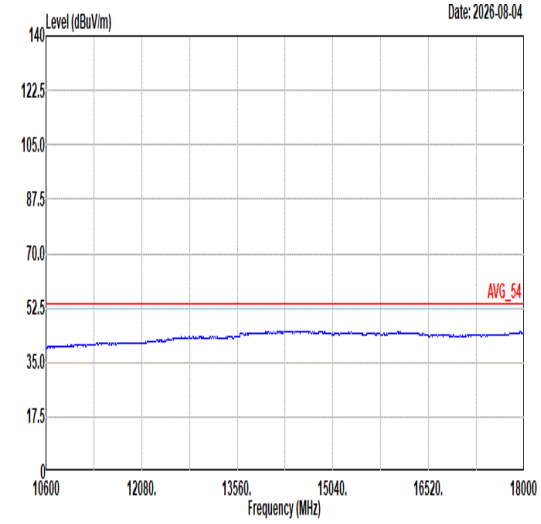
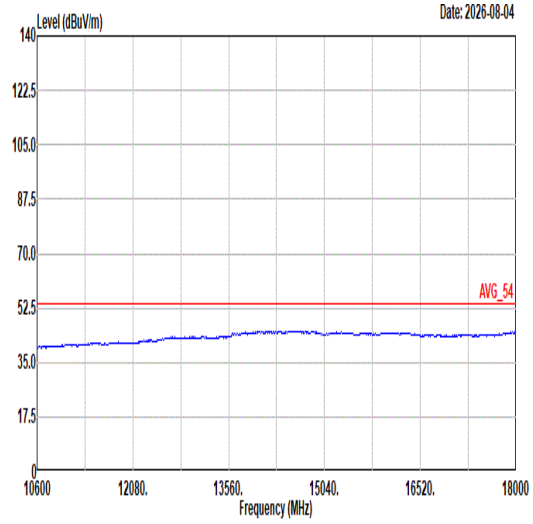
C3-2.Summary of each worse mode

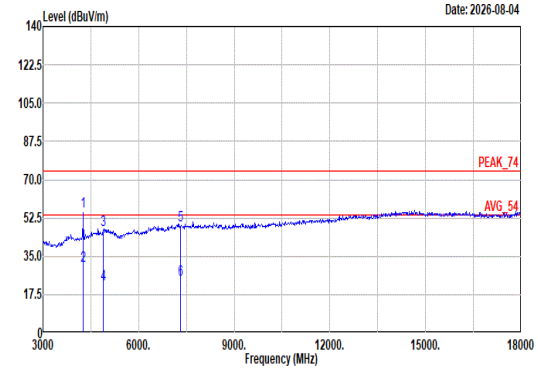
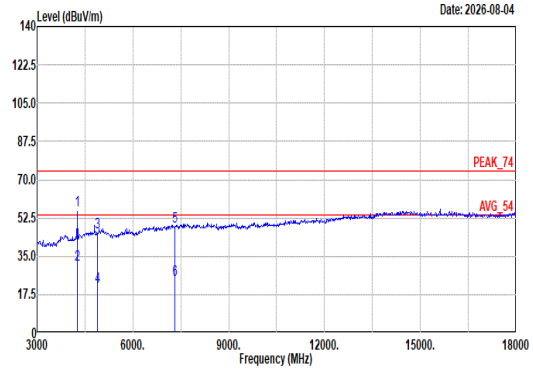
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
27	Bluetooth BR_GFSK	00	2365.20	41.32	74.00	-32.68	V	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	00	4257.00	55.53	74.00	-18.47	V	Peak	Pass	-	Harmonic
28	Bluetooth BR_GFSK	39	-	-	-	-	-	-	-	-	Band Edge
	Bluetooth BR_GFSK	39	4257.00	55.98	74.00	-18.02	V	Peak	Pass	-	Harmonic
29	Bluetooth BR_GFSK	78	2483.64	55.11	74.00	-18.89	V	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	78	4257.00	55.83	74.00	-18.17	H	Peak	Pass	-	Harmonic
30	LF	39	532.46	35.55	46.00	-10.45	V	Peak	Pass	-	LF
31	SHF	39	24805.04	40.20	74.00	-33.80	H	Peak	Pass	-	SHF

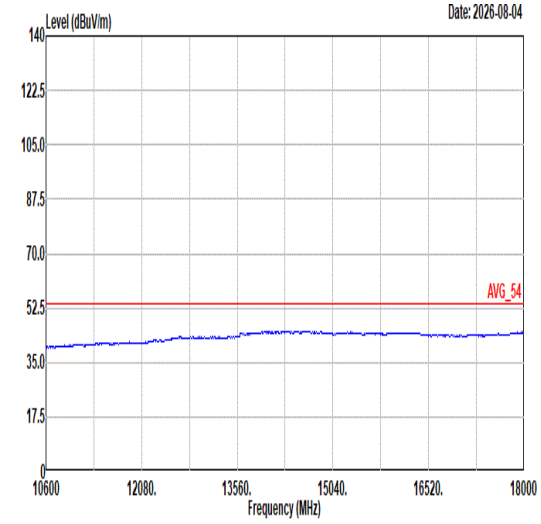
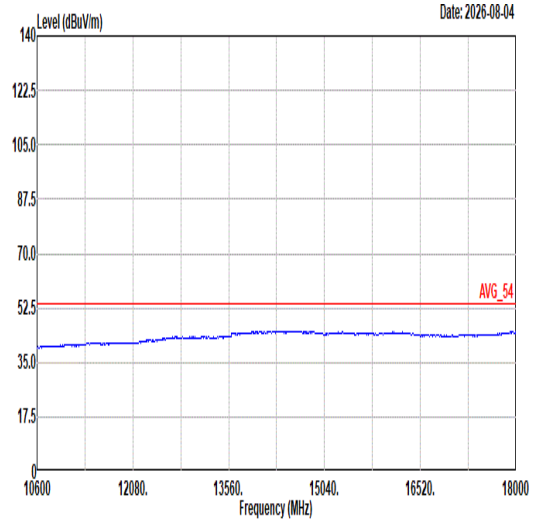
Mode	27	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	BF 8+9	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2386.73 40.96 74.00 -33.04 38.06 26.63 8.50 32.83 0.60 100 120 Peak 2 2386.73 16.20 54.00 -37.80 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 100.60 ------ ------ 97.59 26.72 8.53 32.84 0.60 100 120 Peak 2 2402.00 75.84 ------ ------ -- -- -- -- -- -- -- Average

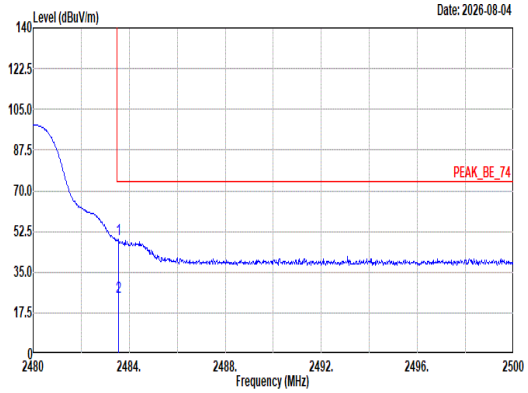
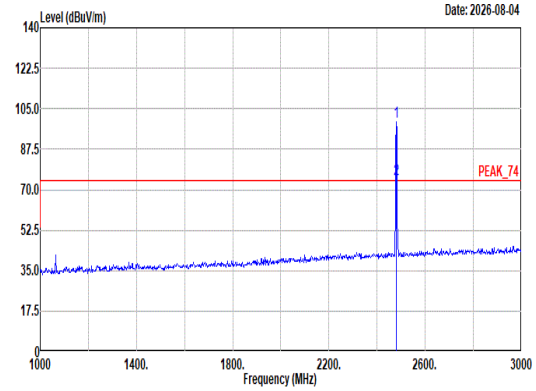
Mode	27	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	BF 8+9	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2365.20 41.32 74.00 -32.68 38.18 26.90 8.46 32.81 0.59 218 311 Peak 2 2365.20 16.56 54.00 -37.44 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2402.00 106.43 ------ ------ 103.42 26.72 8.53 32.84 0.60 218 311 Peak 2 2402.00 81.67 ------ ------ -- -- -- -- -- -- -- Average

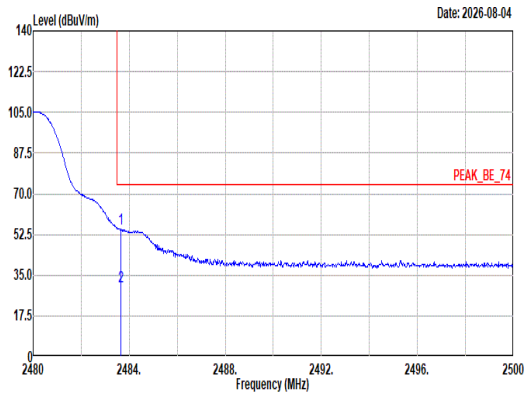
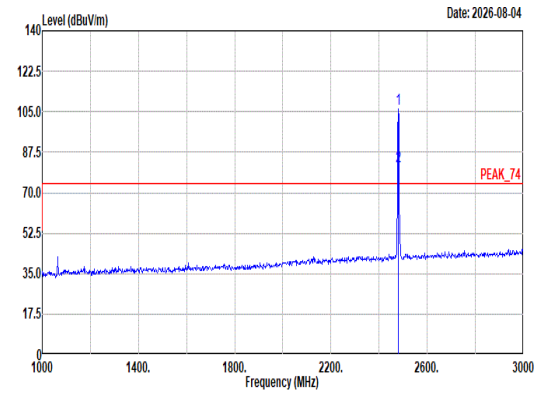
Mode	27	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.34 74.00 -18.66 45.78 30.31 11.38 34.35 2.22 288 21 Peak 2 4257.00 30.58 54.00 -23.42 -- -- -- -- -- -- -- Average 3 4804.00 48.45 74.00 -25.55 35.78 32.21 12.13 34.11 2.44 207 51 Peak 4 4804.00 22.69 54.00 -31.31 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.53 74.00 -18.47 45.97 30.31 11.38 34.35 2.22 148 28 Peak 2 4257.00 30.77 54.00 -23.23 -- -- -- -- -- -- -- Average 3 4804.00 49.21 74.00 -24.79 36.54 32.21 12.13 34.11 2.44 298 48 Peak 4 4804.00 24.45 54.00 -29.55 -- -- -- -- -- -- -- Average

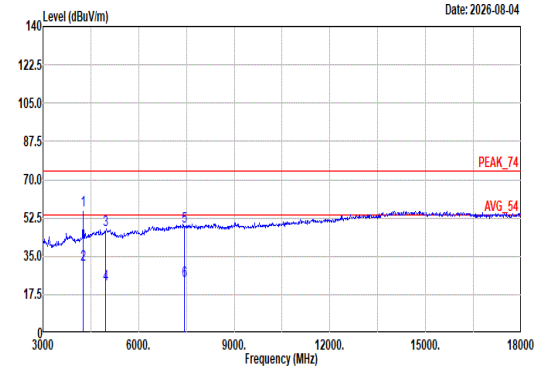
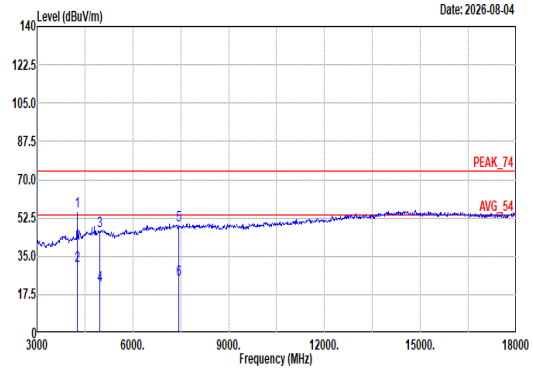
Mode	27	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

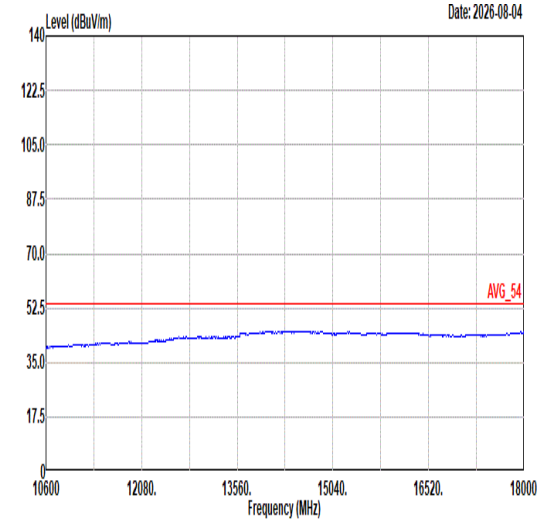
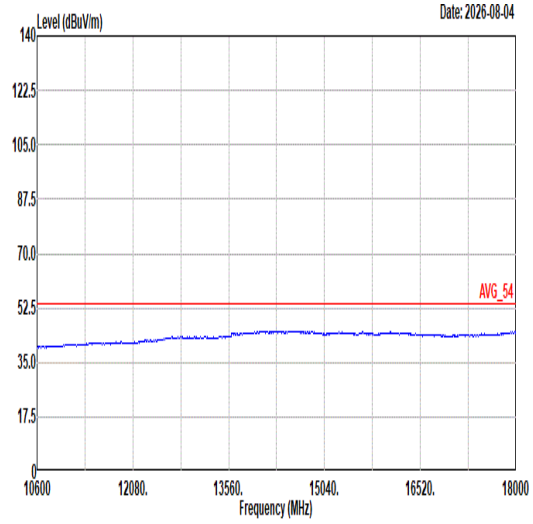
Mode	28	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.44 74.00 -18.56 45.88 30.31 11.38 34.35 2.22 288 22 Peak 2 4257.00 30.68 54.00 -23.32 -- -- -- -- -- -- -- Average 3 4882.00 46.93 74.00 -27.07 34.02 32.36 12.27 34.09 2.37 -- -- Peak 4 4882.00 22.17 54.00 -31.83 -- -- -- -- -- -- -- Average 5 7323.00 49.01 74.00 -24.99 32.18 36.74 15.07 36.38 1.40 -- -- Peak 6 7323.00 24.25 54.00 -29.75 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.98 74.00 -18.02 46.42 30.31 11.38 34.35 2.22 136 27 Peak 2 4257.00 31.22 54.00 -22.78 -- -- -- -- -- -- -- Average 3 4882.00 45.84 74.00 -28.16 32.93 32.36 12.27 34.09 2.37 -- -- Peak 4 4882.00 21.08 54.00 -32.92 -- -- -- -- -- -- -- Average 5 7323.00 48.85 74.00 -25.15 32.02 36.74 15.07 36.38 1.40 -- -- Peak 6 7323.00 24.09 54.00 -29.91 -- -- -- -- -- -- -- Average

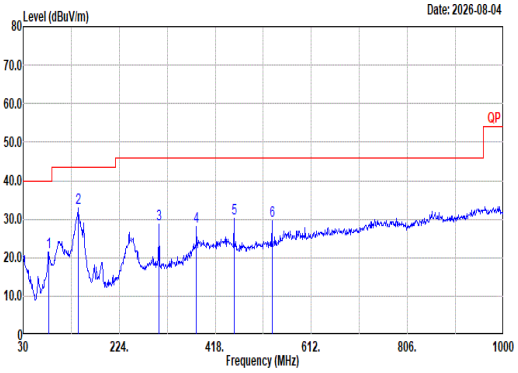
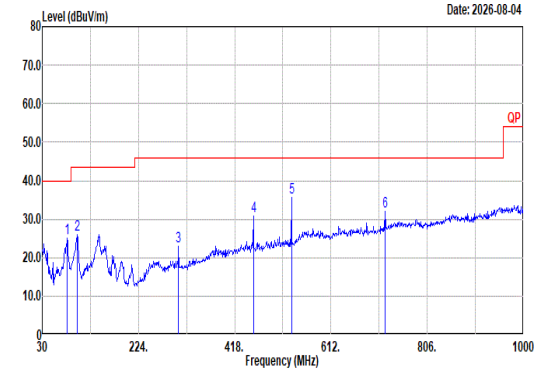
Mode	28	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

Mode	29	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	BF 8+9	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.54 49.10 74.00 -24.90 46.02 26.67 8.68 32.89 0.62 100 196 Peak 2 2483.54 24.34 54.00 -29.66 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2480.00 99.11 ------ ------ 96.10 26.60 8.68 32.89 0.62 100 196 Peak 2 2480.00 74.35 ------ ------ -- -- -- -- -- -- -- Average

Mode	29	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	BF 8+9	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH21-HY Condition: PEAK_BE_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.64 55.11 74.00 -18.89 52.03 26.67 8.68 32.89 0.62 311 0 Peak 2 2483.64 30.35 54.00 -23.65 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2480.00 106.17 ------ ------ 103.16 26.60 8.68 32.89 0.62 311 0 Peak 2 2480.00 81.41 ------ ------ -- -- -- -- -- -- -- Average

Mode	29	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.83 74.00 -18.17 46.27 30.31 11.38 34.35 2.22 292 23 Peak 2 4257.00 31.07 54.00 -22.93 -- -- -- -- -- -- -- Average 3 4960.00 46.91 74.00 -27.09 33.63 32.64 12.41 34.07 2.30 -- -- Peak 4 4960.00 22.15 54.00 -31.85 -- -- -- -- -- -- -- Average 5 7440.00 48.68 74.00 -25.32 31.60 36.82 15.20 36.42 1.48 -- -- Peak 6 7440.00 23.92 54.00 -30.08 -- -- -- -- -- -- -- Average	 Site : 03CH21-HY Condition: PEAK_74 3m DRH18-E_LE2C03A18EN_250807 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4257.00 55.53 74.00 -18.47 45.97 30.31 11.38 34.35 2.22 133 26 Peak 2 4257.00 30.77 54.00 -23.23 -- -- -- -- -- -- -- Average 3 4960.00 46.55 74.00 -27.45 33.27 32.64 12.41 34.07 2.30 -- -- Peak 4 4960.00 21.79 54.00 -32.21 -- -- -- -- -- -- -- Average 5 7440.00 48.92 74.00 -25.08 31.84 36.82 15.20 36.42 1.48 -- -- Peak 6 7440.00 24.16 54.00 -29.84 -- -- -- -- -- -- -- Average

Mode	29	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
10.6G ~18G Avg	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 HORIZONTAL	 Site : 03CH21-HY Condition: AVG_54 3m DRH18-E_LE2C03A18EN_250807 VERTICAL

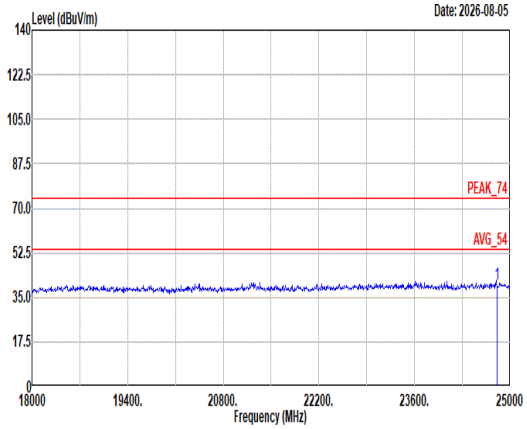
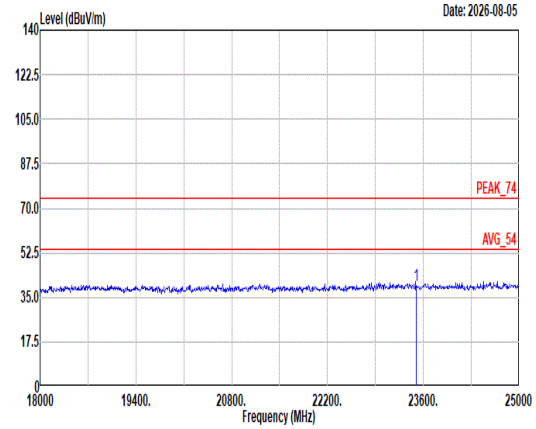
Mode	30	
	LF	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
QP/ Peak		

Site : 03CH21-HY
Condition: QP 3m LF_63303&001_251126 HORIZONTAL

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	81.41	21.35	40.00	-18.65	38.70	13.70	1.52	32.71	0.14	--	--	Peak
2	140.58	32.88	43.50	-10.62	45.94	17.48	2.02	32.69	0.13	--	--	Peak
3	304.51	28.82	46.00	-17.18	39.04	19.36	2.99	32.72	0.15	100	222	
4	380.17	27.94	46.00	-18.06	36.02	21.15	3.37	32.77	0.17	100	222	
5	455.83	30.31	46.00	-15.69	36.13	23.23	3.68	32.87	0.14	--	--	Peak
6	532.46	29.44	46.00	-16.56	34.00	24.18	4.00	32.91	0.17	200	211	

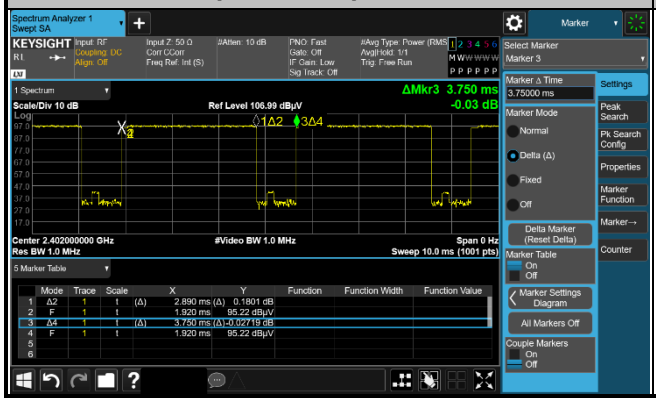
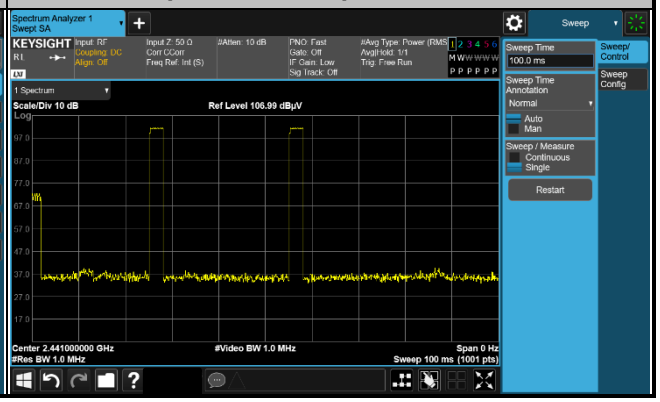
Site : 03CH21-HY
Condition: QP 3m LF_63303&001_251126 VERTICAL

	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	80.44	24.98	40.00	-15.02	42.42	13.62	1.51	32.71	0.14	--	--	Peak
2	100.81	25.93	43.50	-17.57	40.53	16.29	1.70	32.71	0.12	--	--	Peak
3	304.51	23.02	46.00	-22.98	33.24	19.36	2.99	32.72	0.15	--	--	Peak
4	455.83	30.65	46.00	-15.35	36.47	23.23	3.68	32.87	0.14	--	--	Peak
5	532.46	35.55	46.00	-10.45	40.11	24.18	4.00	32.91	0.17	--	--	Peak
6	721.61	32.08	46.00	-13.92	32.69	27.32	4.65	32.81	0.23	--	--	Peak

Mode	31	
	SHF	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	BF 8+9	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH21-HY Condition: PEAK_74 1m BBHA9170_1450 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 24805.04 40.20 74.00 -33.80 41.07 40.11 28.74 60.18 -9.54 -- -- PEAK	 Site : 03CH21-HY Condition: PEAK_74 1m BBHA9170_1450 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 23497.54 39.77 74.00 -34.23 41.85 39.60 27.96 60.10 -9.54 -- -- PEAK

Appendix D. Duty Cycle Plots

<ANT8>

DH5 on time (One Pulse) Plot on Channel 39	on time (Count Pulses) Plot on Channel 39
	

Note:

1. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.89 / 100 = 5.78 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.76 dB
3. **DH5** has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

2.89 ms x 20 channels = 57.8 ms

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. [100 ms / 57.8 ms] = 2 hops

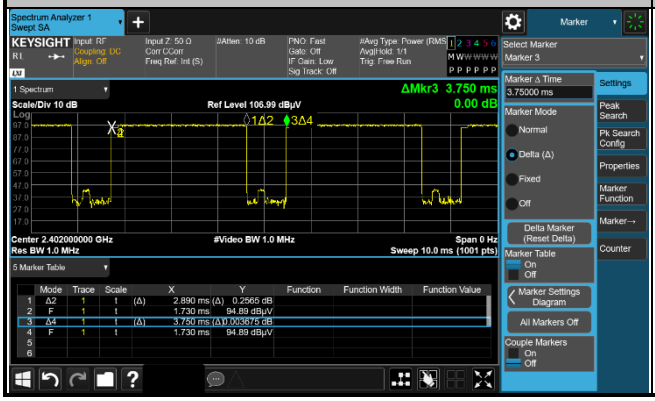
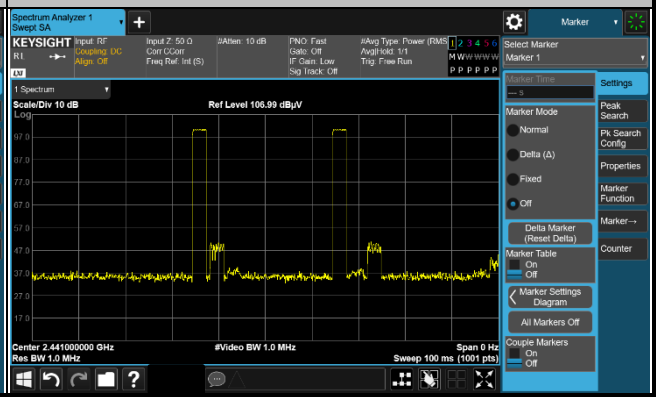
Thus, the maximum possible ON time:

2.89 ms x 2 = 5.78 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(5.78 ms/100 ms) = -24.76 dB

<ANT9>

DH5 on time (One Pulse) Plot on Channel 39	on time (Count Pulses) Plot on Channel 39
	

Note:

4. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.89 / 100 = 5.78 %
5. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.76 dB
6. **DH5** has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

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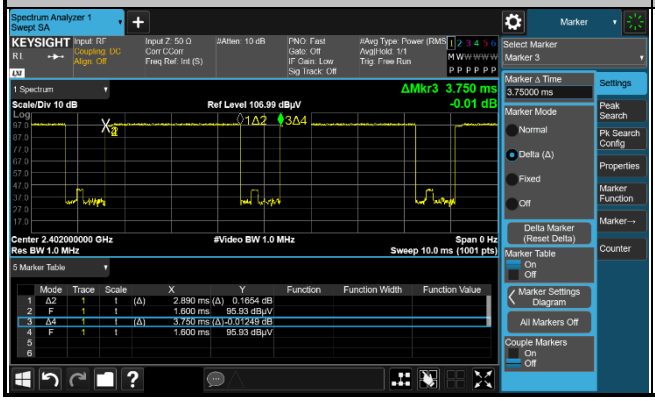
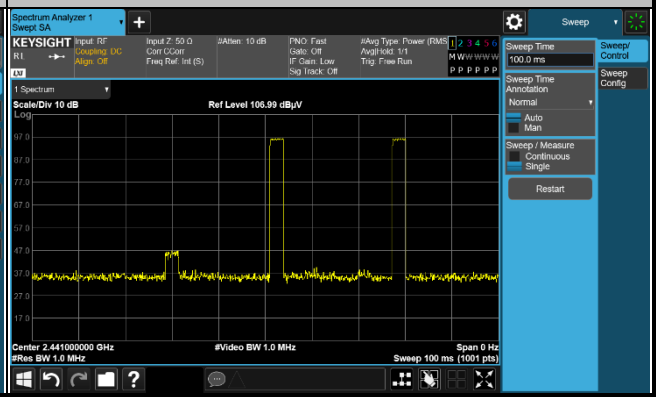
Thus, the maximum possible ON time:

2.89 ms x 2 = 5.78 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(5.78 ms/100 ms) = -24.76 dB

<TXBF ANT8+9>

DH5 on time (One Pulse) Plot on Channel 39	on time (Count Pulses) Plot on Channel 39
	

Note:

7. Worst case Duty cycle = on time/100 milliseconds = 2 * 2.89 / 100 = 5.74 %
8. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -24.76 dB
9. **DH5** has the highest duty cycle worst case and is reported.

Duty Cycle Correction Factor Consideration for AFH mode:

Bluetooth normal hopping rate is 1600Hz and reduced to 800Hz in AFH mode; due to the reduced number of hopping frequencies, with the same packet configuration the dwell time in each channel frequency within 100msec period is longer in AFH mode than normal mode.

In AFH mode, the minimum hopping frequencies are 20, to get the longest dwell time DH5 packet is observed; the on time period to have DH5 packet completing one hopping sequence is

2.89 ms x 20 channels = 57.4 ms

There cannot be 2 complete hopping sequences within 100ms period, considering the random hopping behavior, maximum 2 hops can be possibly observed within the period. [100 ms / 57.4 ms] = 2 hops

Thus, the maximum possible ON time:

2.89 ms x 2 = 5.74 ms

Worst case Duty Cycle Correction factor, which is derived from the maximum possible ON time,

20 x log(5.74 ms/100 ms) = -24.76 dB