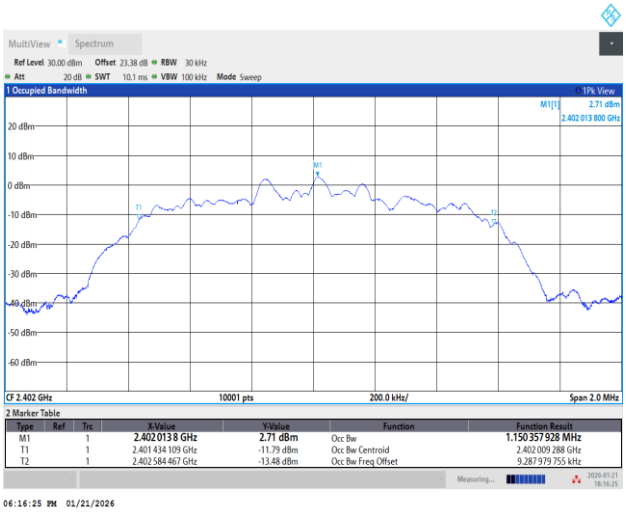
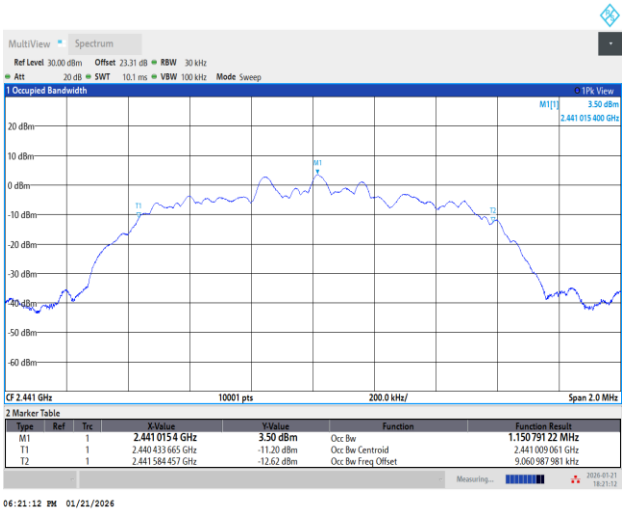
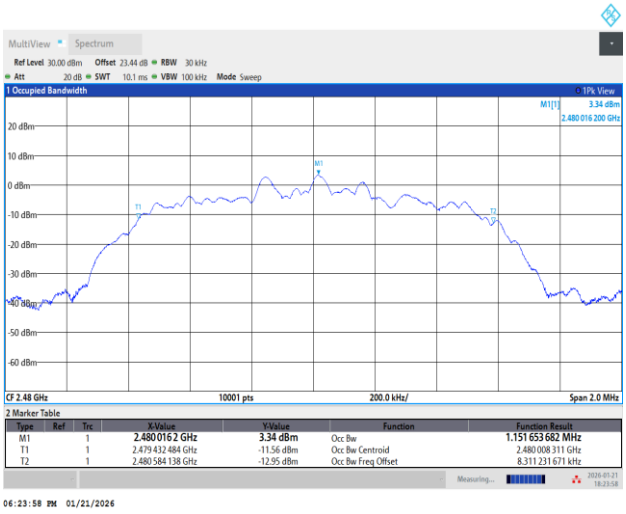
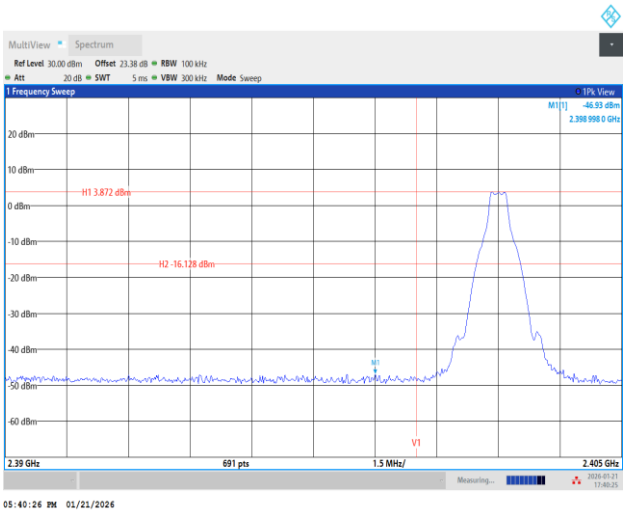
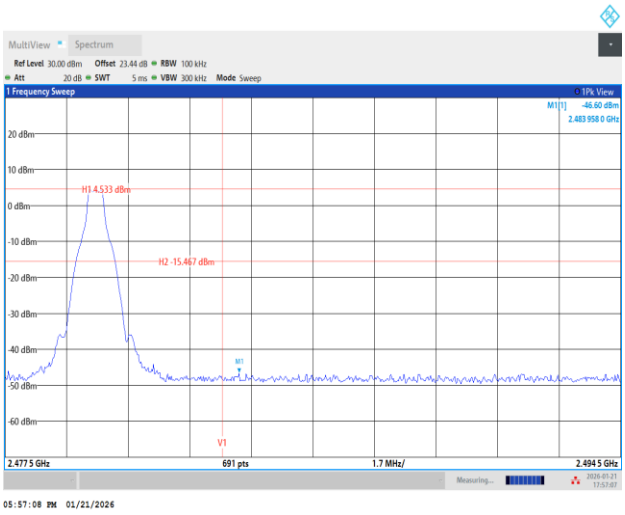
<3Mbps>

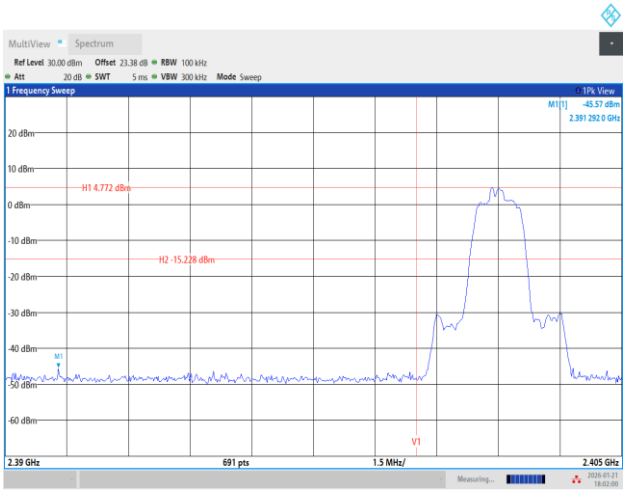
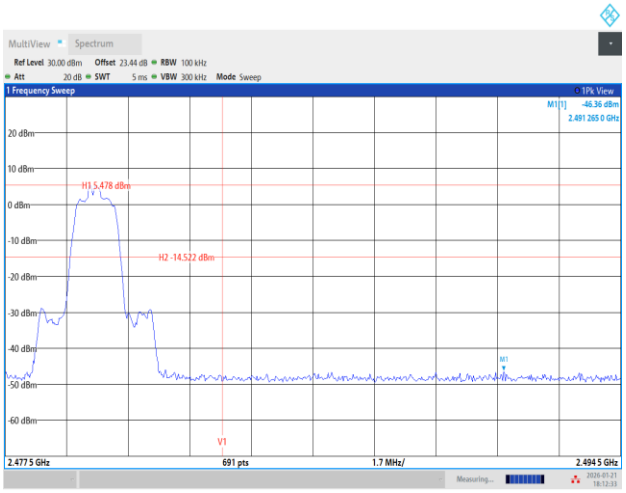
99% Occupied Bandwidth on Channel 00	99% Occupied Bandwidth on Channel 39
	
99% Occupied Bandwidth on Channel 78	
	

Band Edges

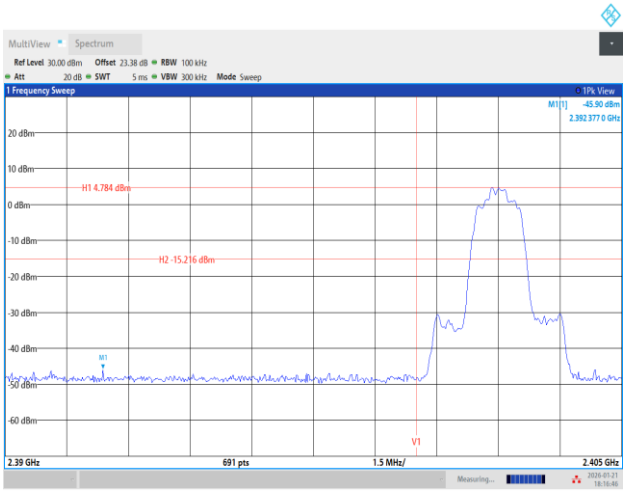
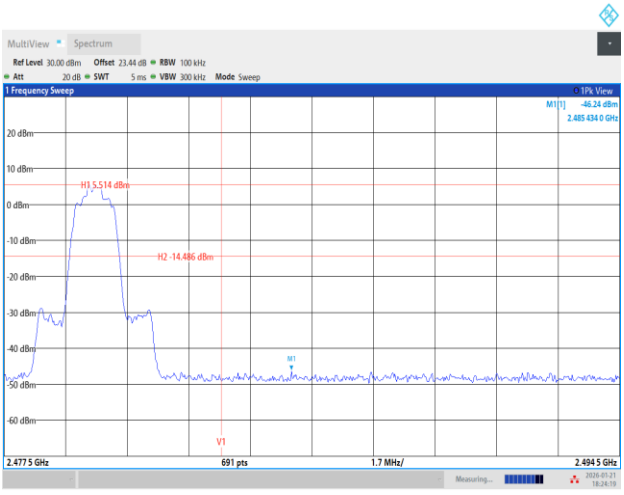
<1Mbps>

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

<2Mbps>

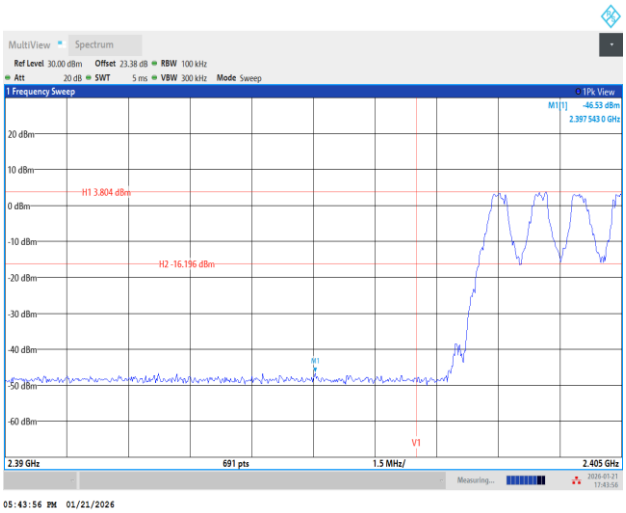
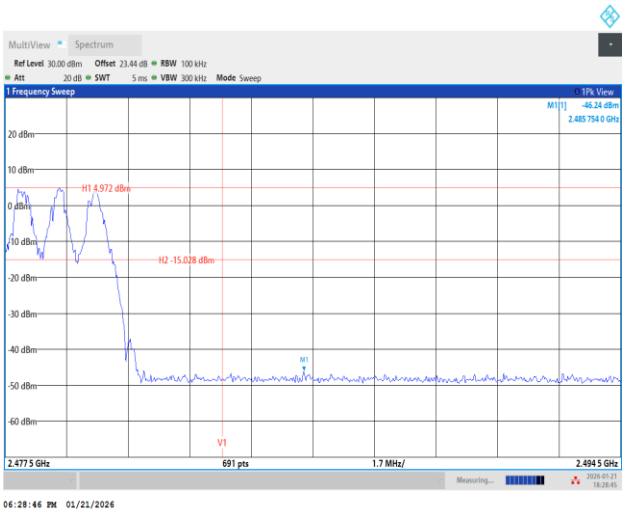
Band Edge Plot on Channel 00	Band Edge Plot on Channel 78
	

<3Mbps>

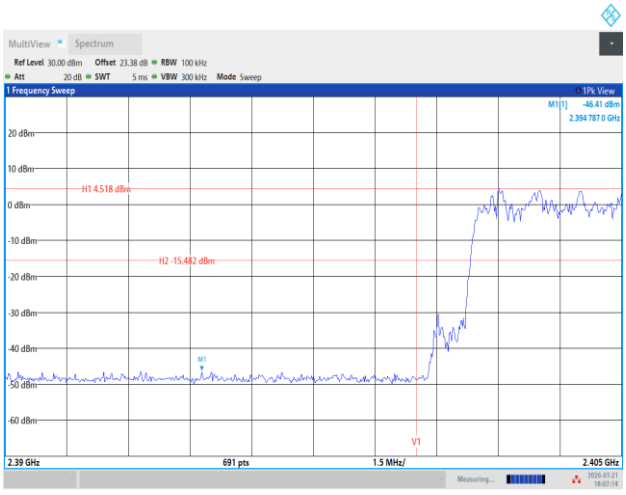
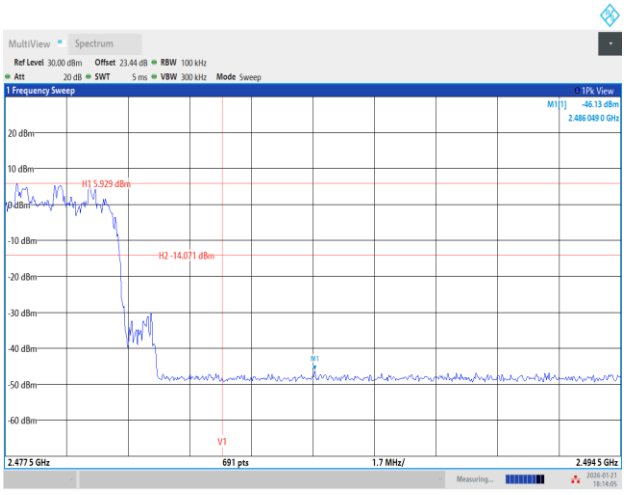
Band Edge Plot on Channel 00	Band Edge Plot on Channel 78
	

Hopping Mode Band Edges

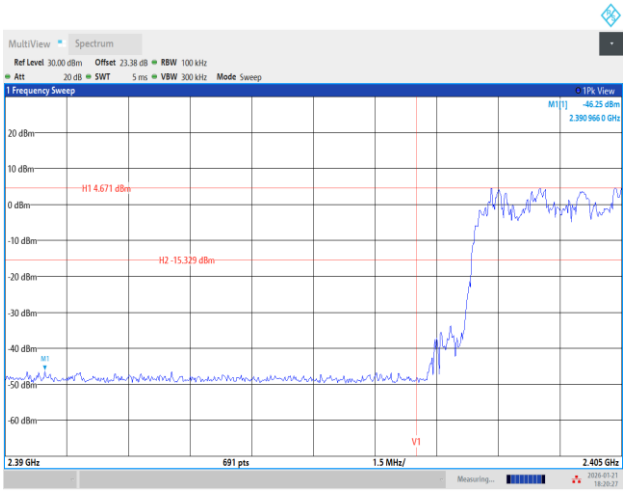
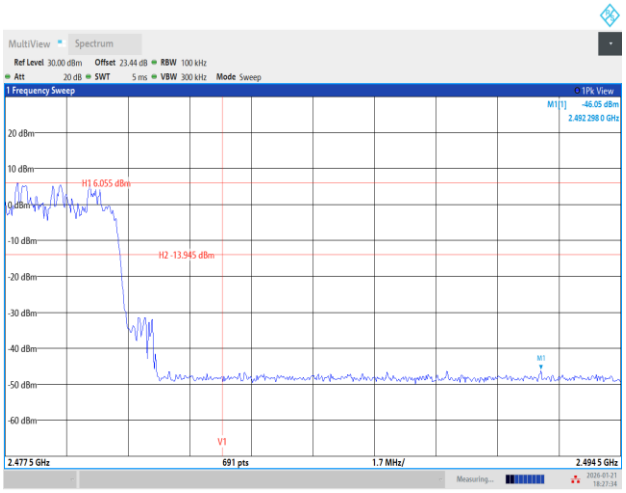
<1Mbps>

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

<2Mbps>

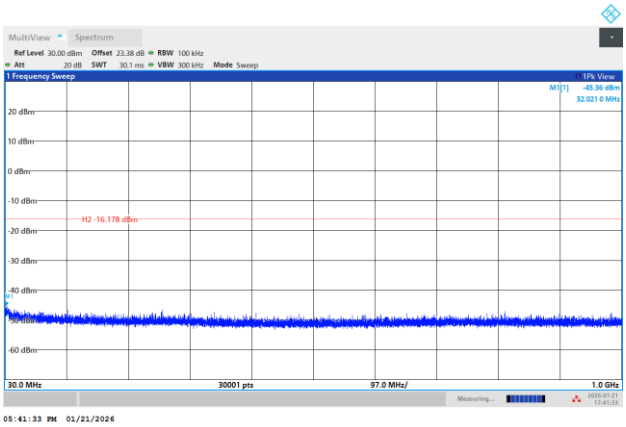
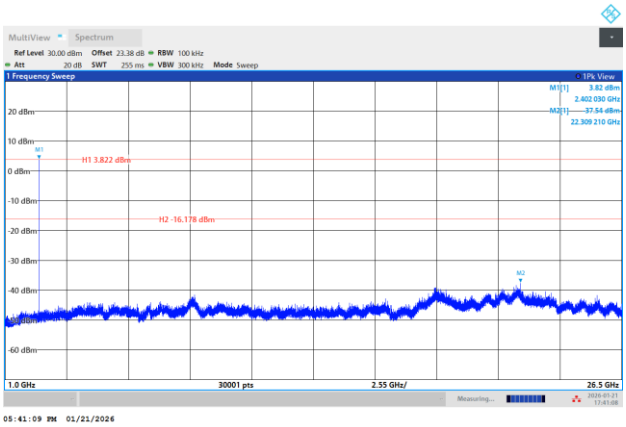
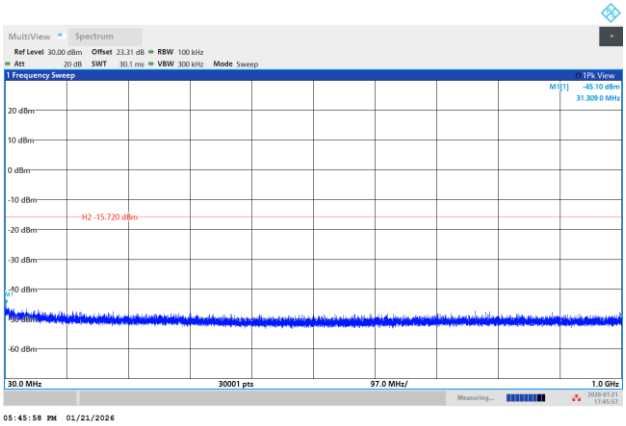
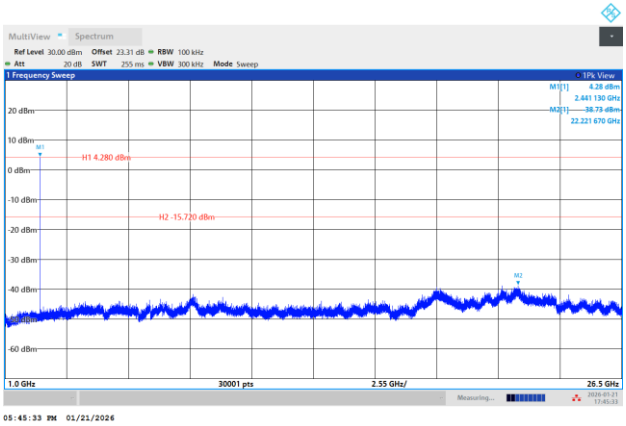
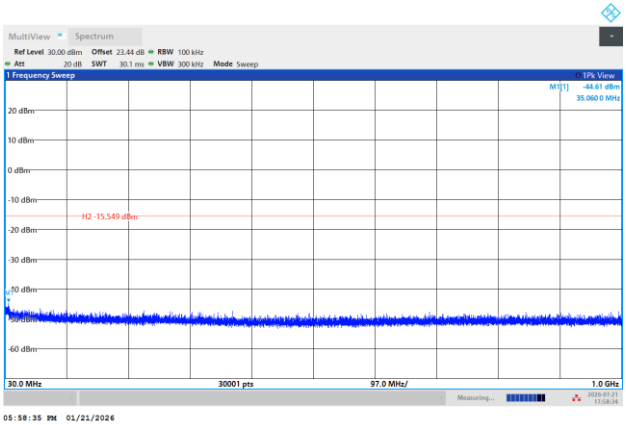
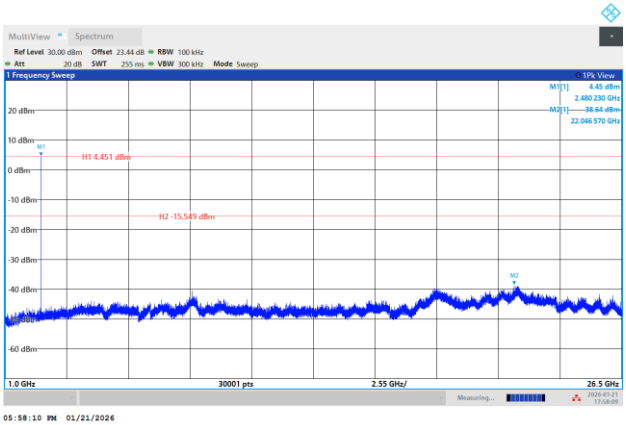
Hopping Mode Band Edge Plot on Channel 00	Hopping Mode Band Edge Plot on Channel 78
	

<3Mbps>

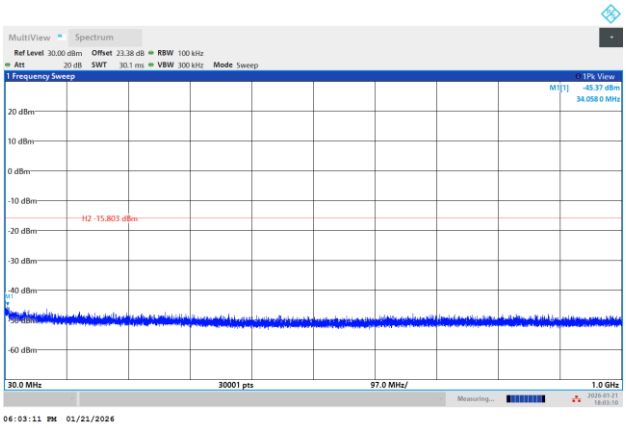
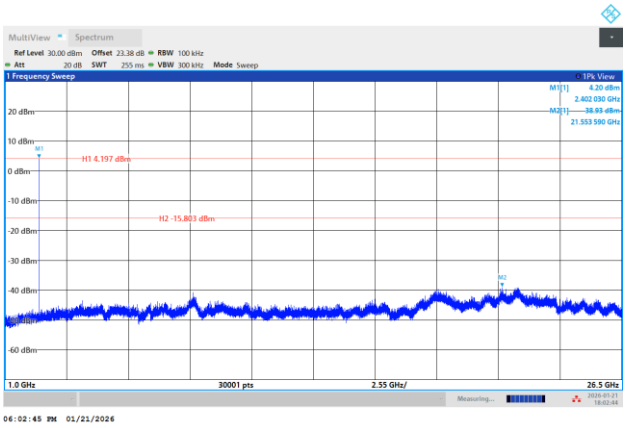
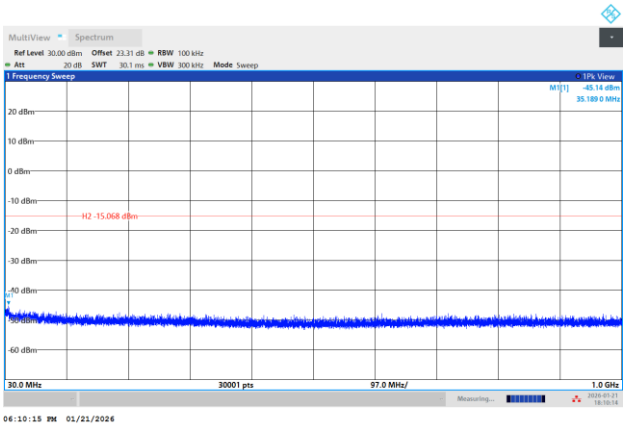
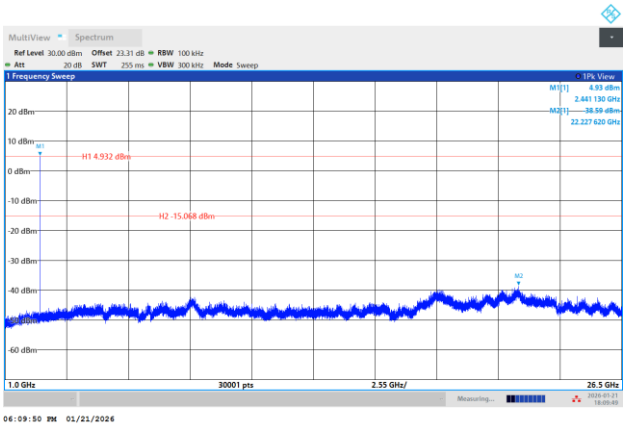
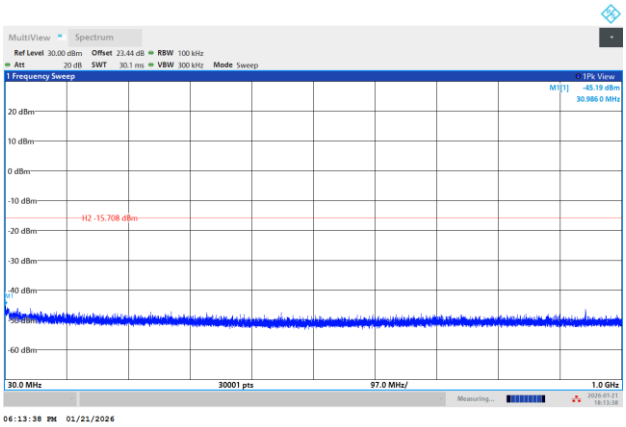
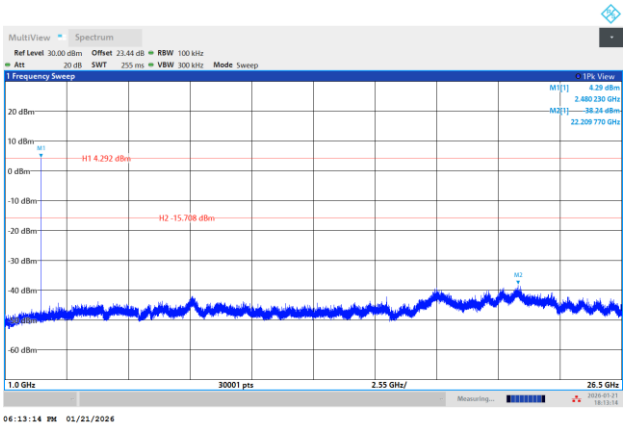
Hopping Mode Band Edge Plot on Channel 00	Hopping Mode Band Edge Plot on Channel 78
	

Conducted Spurious Emission

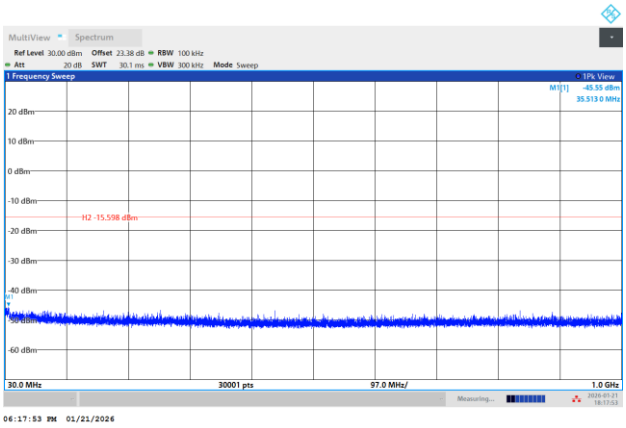
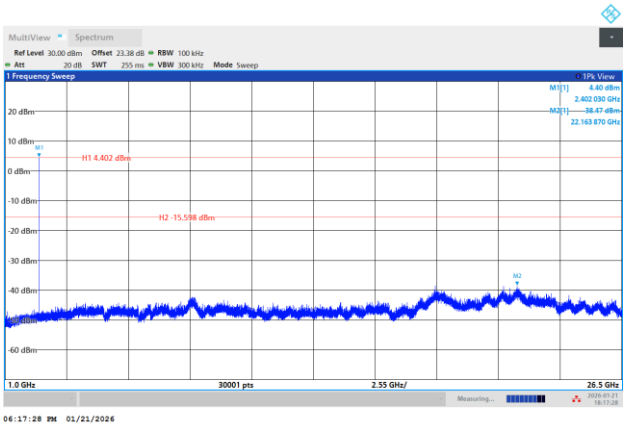
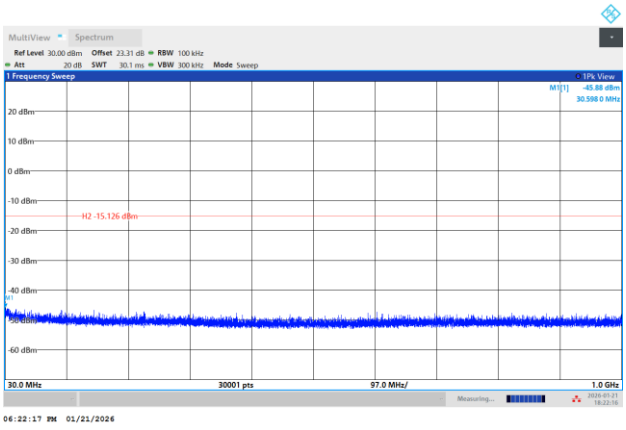
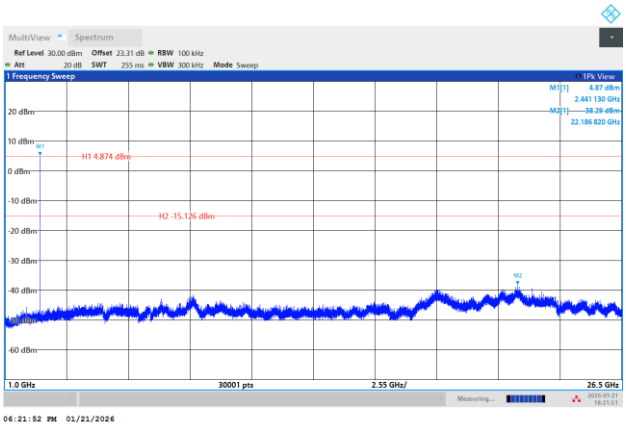
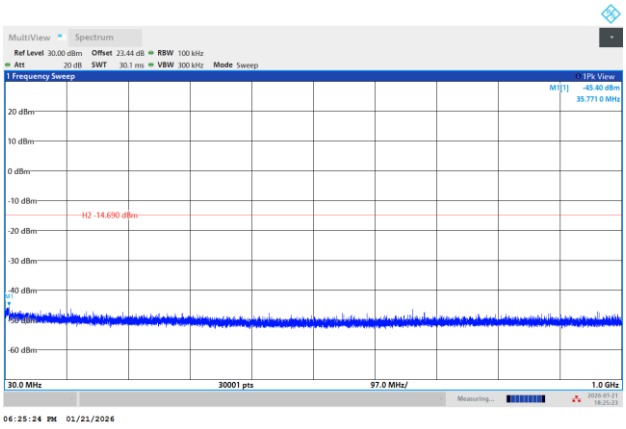
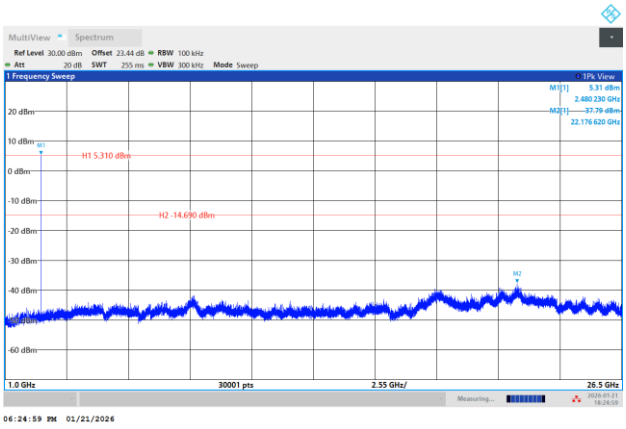
<1Mbps>

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**
	

<2Mbps>

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**
	

<3Mbps>

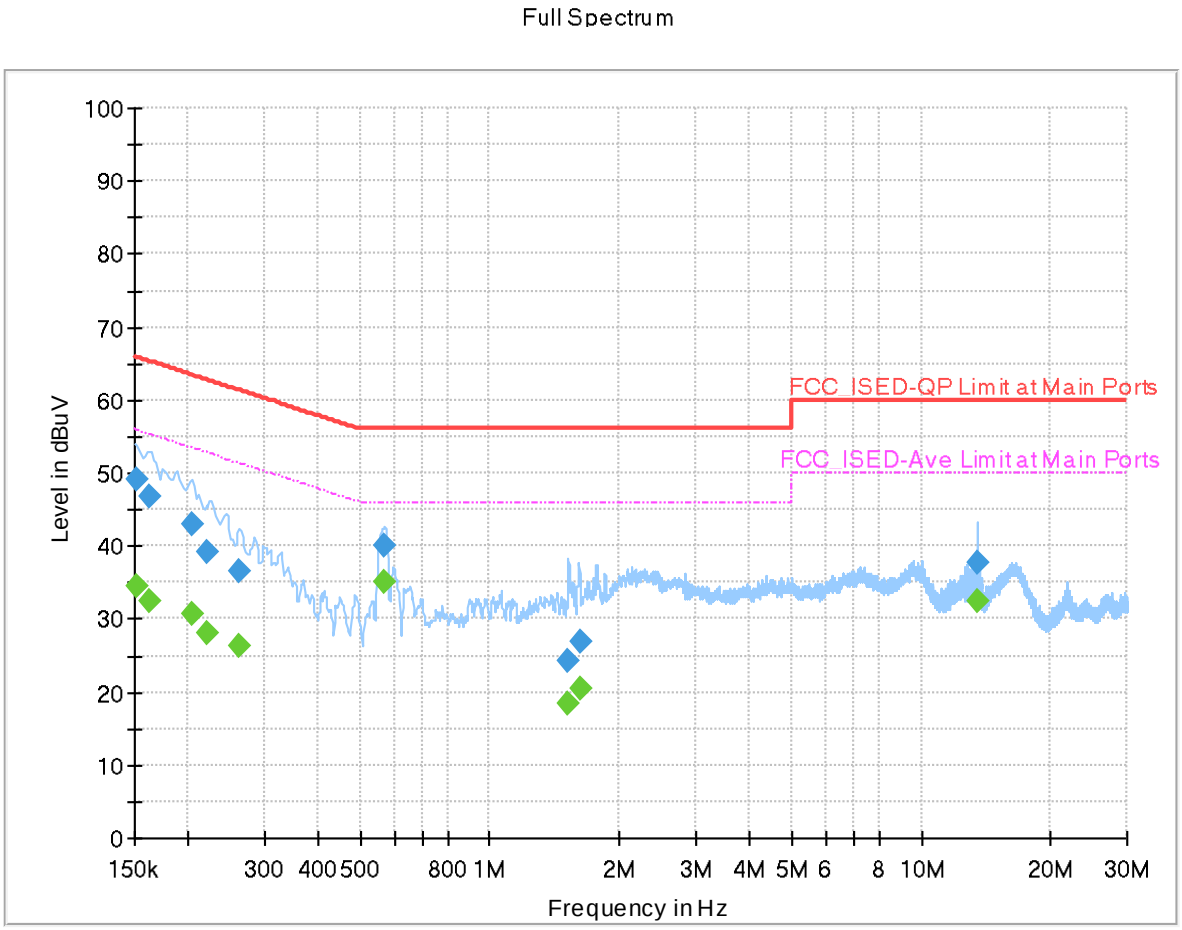
CSE Plot on Low Ch between 30MHz ~ 1 GHz	CSE Plot on Low Ch between 1GHz ~ 26.5GHz
	
CSE Plot on Mid. Ch between 30MHz ~ 1 GHz	**CSE Plot on Mid. Ch between 1GHz ~ 26.5GHz**
	
CSE Plot on High Ch between 30MHz ~ 1 GHz	**CSE Plot on High Ch between 1GHz ~ 26.5GHz**
	

Appendix B. AC Conducted Emission Test Results

Test Engineer :	Louis Chung	**Temperature :**	15.0 ~ 18.9℃
		Relative Humidity :	43.3 ~ 48.7%

EUT Information

Report NO :	5N2828
Test Mode :	Mode 1
Test Voltage :	120Vac/60Hz
Phase :	Line

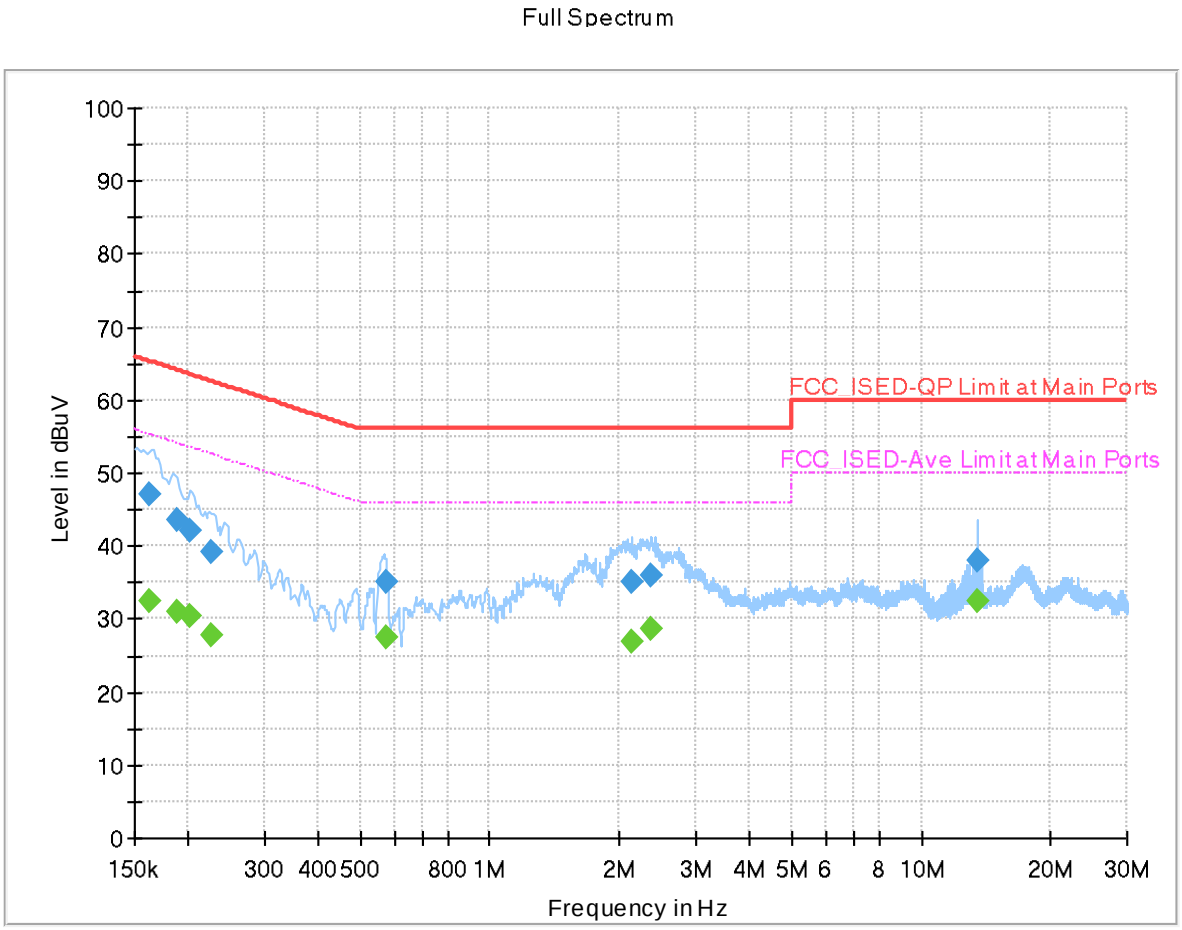


Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.151148	---	34.44	55.94	21.50	L1	ON	20.1
0.151148	49.26	---	65.94	16.68	L1	ON	20.1
0.162375	---	32.51	55.34	22.83	L1	ON	20.1
0.162375	46.76	---	65.34	18.58	L1	ON	20.1
0.203010	---	30.82	53.49	22.67	L1	ON	20.1
0.203010	43.11	---	63.49	20.38	L1	ON	20.1
0.222000	---	27.98	52.74	24.76	L1	ON	20.1
0.222000	39.12	---	62.74	23.62	L1	ON	20.1
0.263220	---	26.23	51.33	25.10	L1	ON	20.1
0.263220	36.62	---	61.33	24.71	L1	ON	20.1
0.570390	---	35.07	46.00	10.93	L1	ON	20.0
0.570390	40.20	---	56.00	15.80	L1	ON	20.0
1.516335	---	18.53	46.00	27.47	L1	ON	20.0
1.516335	24.18	---	56.00	31.82	L1	ON	20.0
1.613985	---	20.35	46.00	25.65	L1	ON	20.0
1.613985	26.92	---	56.00	29.08	L1	ON	20.0
13.560225	---	32.55	50.00	17.45	L1	ON	20.6
13.560225	37.85	---	60.00	22.15	L1	ON	20.6

EUT Information

Report NO :	5D0539
Test Mode :	Mode 1
Test Voltage :	110Vac/60Hz
Phase :	Neutral



Final_Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Line	Filter	Corr. (dB)
0.163095	---	32.38	55.31	22.93	N	ON	20.1
0.163095	47.00	---	65.31	18.31	N	ON	20.1
0.188205	---	31.02	54.12	23.10	N	ON	20.1
0.188205	43.66	---	64.12	20.46	N	ON	20.1
0.202335	---	30.51	53.51	23.00	N	ON	20.1
0.202335	42.21	---	63.51	21.30	N	ON	20.1
0.226050	---	27.71	52.59	24.88	N	ON	20.1
0.226050	39.31	---	62.59	23.28	N	ON	20.1
0.572685	---	27.55	46.00	18.45	N	ON	20.0
0.572685	35.18	---	56.00	20.82	N	ON	20.0
2.128200	---	26.90	46.00	19.10	N	ON	20.0
2.128200	35.20	---	56.00	20.80	N	ON	20.0
2.363190	---	28.59	46.00	17.41	N	ON	20.0
2.363190	35.87	---	56.00	20.13	N	ON	20.0
13.558875	---	32.44	50.00	17.56	N	ON	20.6
13.558875	38.00	---	60.00	22.00	N	ON	20.6

Appendix C. Radiated Spurious Emission Test Data

Test Engineer :	John Chuang, David Dai, and Sam Chou	**Temperature :**	17.7 ~ 20.6°C
		Relative Humidity :	64.3 ~ 70.8%

Note symbol

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

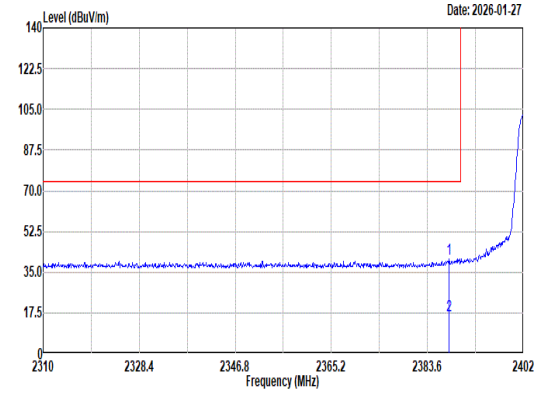
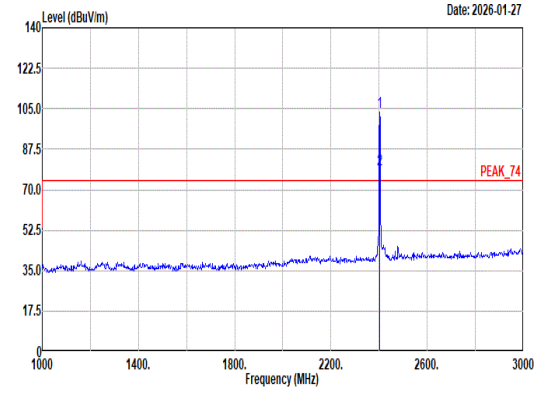
<Ant. 6>

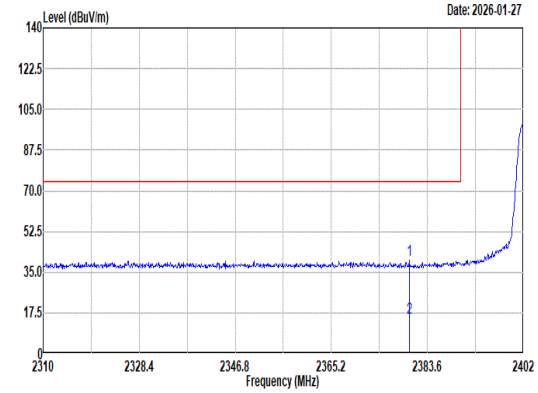
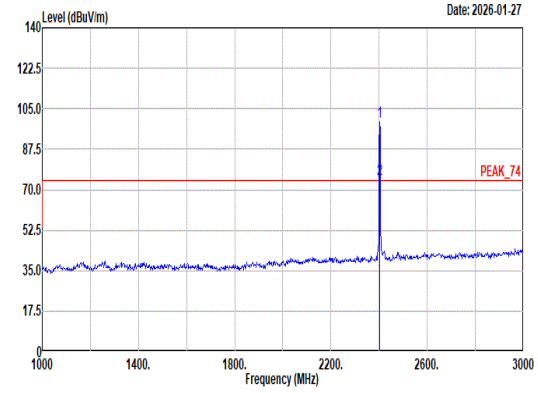
C1-1. Radiated Spurious Emission Test Modes

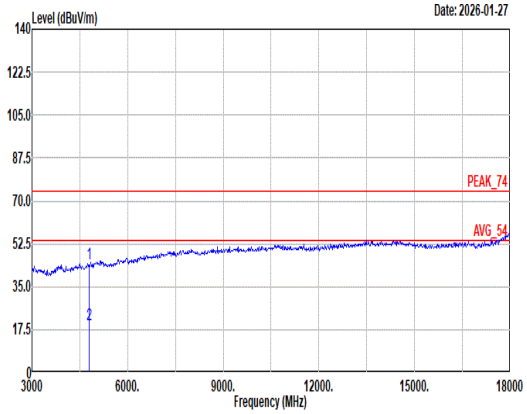
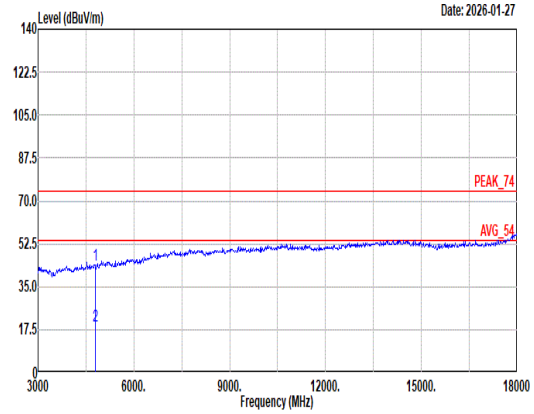
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 1	2400-2483.5	6	Bluetooth BR_GFSK	00	2402	3Mbps	-	-
Mode 2	2400-2483.5	6	Bluetooth BR_GFSK	39	2441	3Mbps	-	-
Mode 3	2400-2483.5	6	Bluetooth BR_GFSK	78	2480	3Mbps	-	-
Mode 43	2400-2483.5	6	Bluetooth BR_GFSK	78	2480	3Mbps	-	LF
Mode 44	2400-2483.5	6	Bluetooth BR_GFSK	78	2480	3Mbps	-	SHF

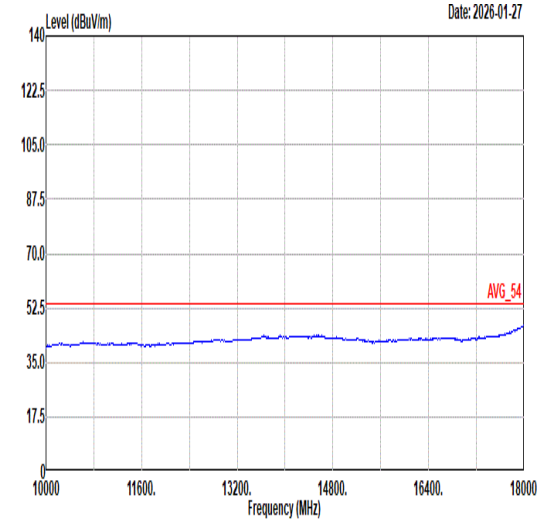
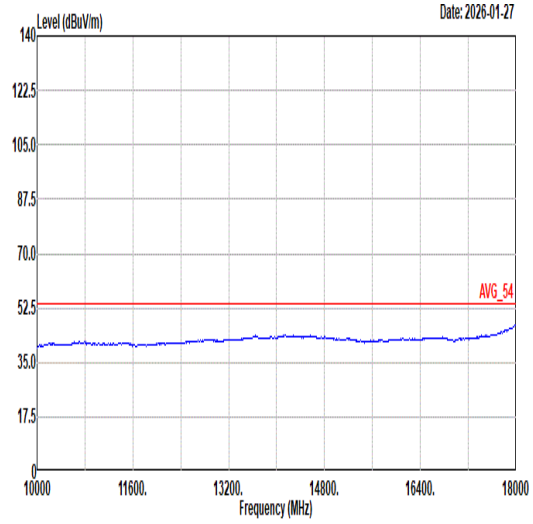
C1-2. Summary of each worse mode

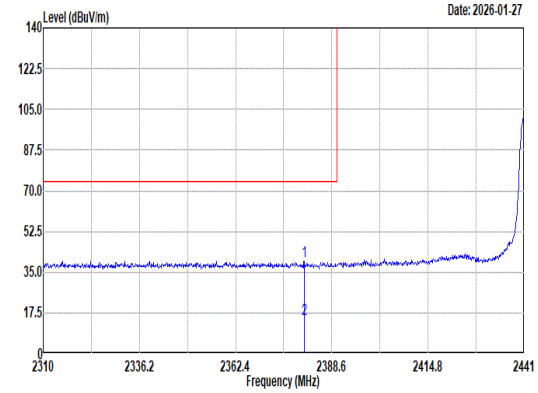
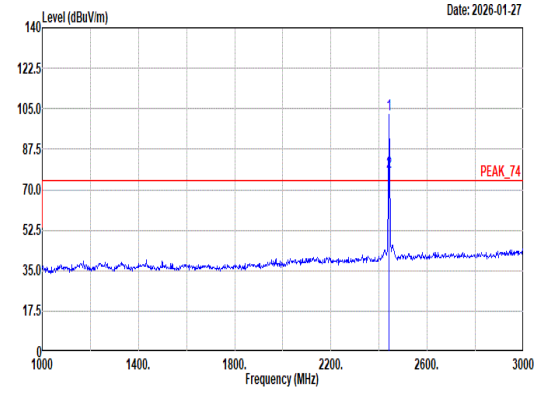
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
1	Bluetooth BR_GFSK	00	2387.74	40.88	74.00	-33.12	H	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	00	4804.00	44.56	74.00	-29.44	H	Peak	Pass	-	Harmonic
2	Bluetooth BR_GFSK	39	2492.09	40.83	74.00	-33.17	V	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	39	7323.00	49.42	74.00	-24.58	H	Peak	Pass	-	Harmonic
3	Bluetooth BR_GFSK	78	2483.52	51.19	74.00	-22.81	H	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	78	7440.00	48.64	74.00	-25.36	H	Peak	Pass	-	Harmonic
43	LF	78	53.28	32.39	40.00	-7.61	V	Peak	Pass	-	LF
44	SHF	78	23288.00	42.17	74.00	-31.83	H	Peak	Pass	-	SHF

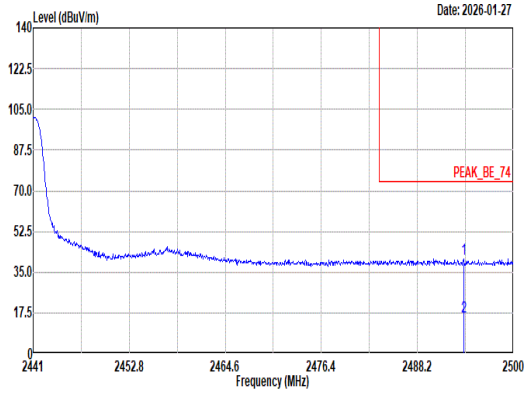
Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	6	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2387.74 40.88 74.00 -33.12 41.21 27.28 8.64 36.25 0.00 323 83 Peak 2 2387.74 16.12 54.00 -37.88 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2402.00 103.44 ------ ------ 103.64 27.40 8.66 36.26 0.00 323 83 Peak 2 2402.00 78.68 ------ ------ -- -- -- -- -- -- -- Average

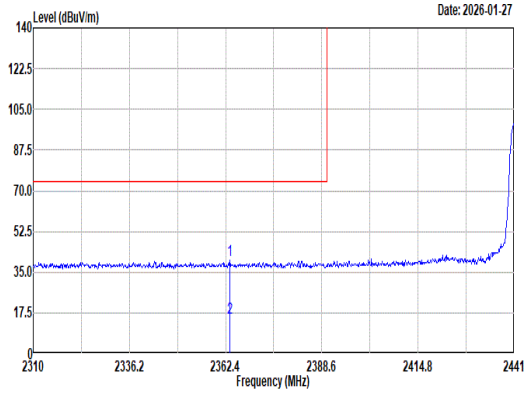
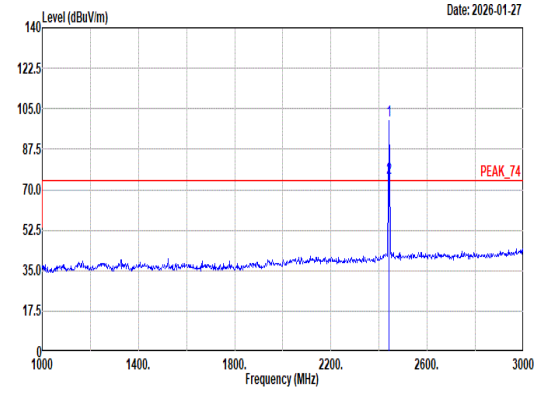
Mode	1	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	6	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2380.10 40.06 74.00 -33.94 40.49 27.20 8.62 36.25 0.00 358 12 Peak 2 2380.10 15.30 54.00 -38.70 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 99.30 ------ ------ 99.50 27.40 8.66 36.26 0.00 358 12 Peak 2 2402.00 74.54 ------ ------ -- -- -- -- -- -- -- Average

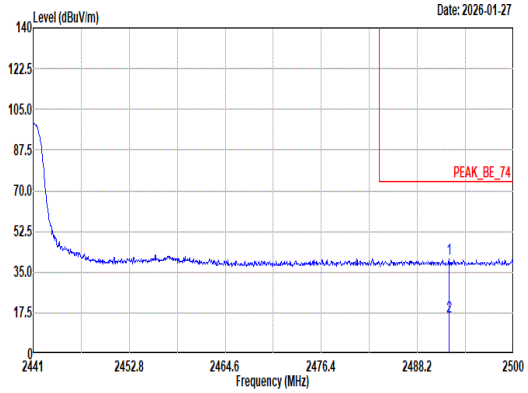
Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4804.00 44.56 74.00 -29.44 36.81 32.22 12.34 37.44 0.63 -- -- Peak 2 4804.00 19.80 54.00 -34.20 -- -- -- -- -- -- -- Average	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4804.00 43.62 74.00 -30.38 35.87 32.22 12.34 37.44 0.63 -- -- Peak 2 4804.00 18.86 54.00 -35.14 -- -- -- -- -- -- -- Average

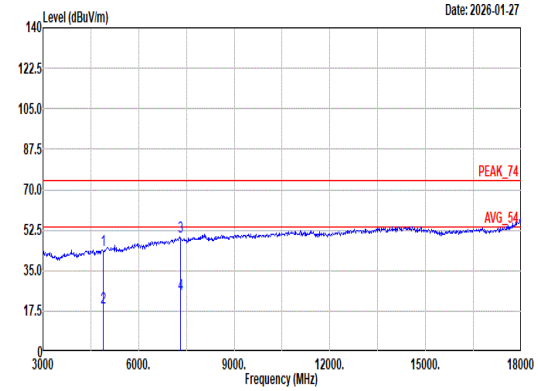
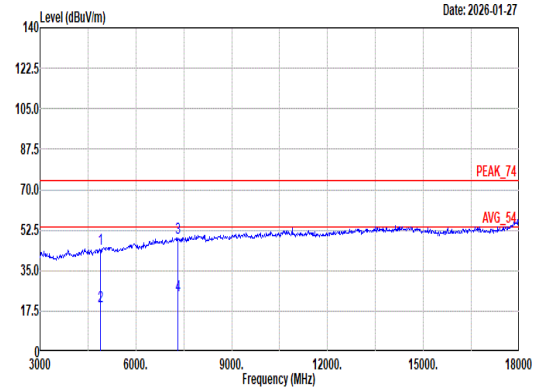
Mode	1	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	6	
Pol.	Horizontal	Vertical
10G ~18G Avg	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_251105 HORIZONTAL	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_251105 VERTICAL

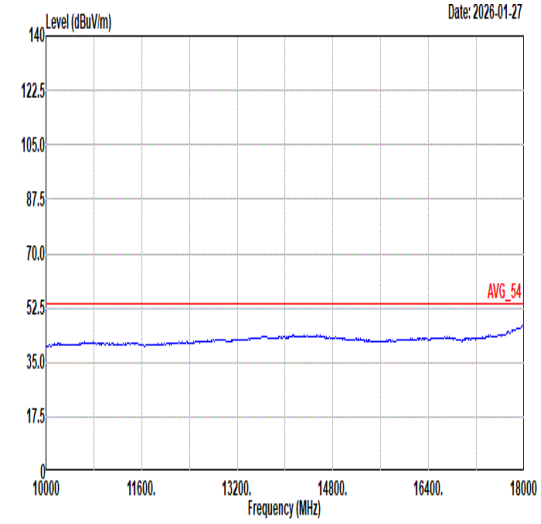
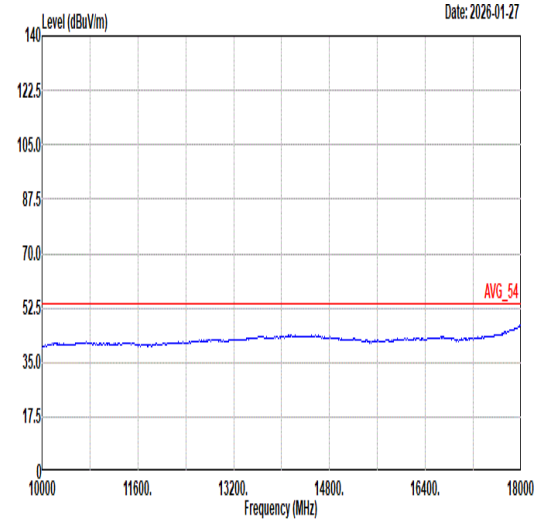
Mode	2	
	Band Edge - L	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	6	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2381.13 39.78 74.00 -34.22 40.20 27.21 8.62 36.25 0.00 270 86 Peak 2 2381.13 15.02 54.00 -38.98 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2441.00 102.24 ------ ------ 102.26 27.50 8.74 36.26 0.00 270 86 Peak 2 2441.00 77.48 ------ ------ -- -- -- -- -- -- -- Average

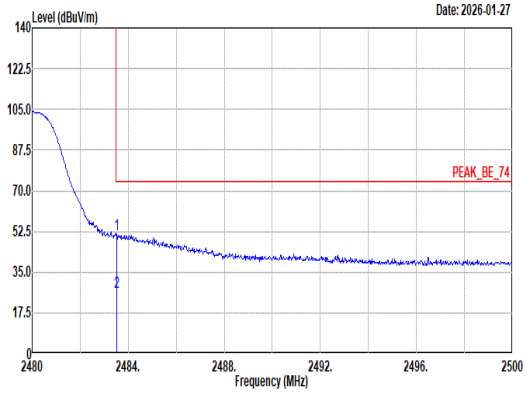
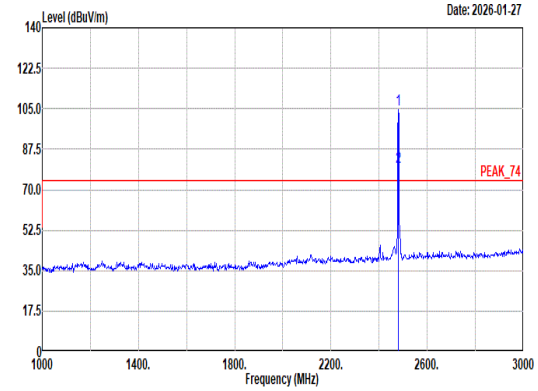
Mode	2	
	Band Edge - R	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	6	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2493.86 40.55 74.00 -33.45 40.18 27.80 8.84 36.27 0.00 270 86 Peak 2 2493.86 15.79 54.00 -38.21 -- -- -- -- -- -- -- AVERAGE	Blank

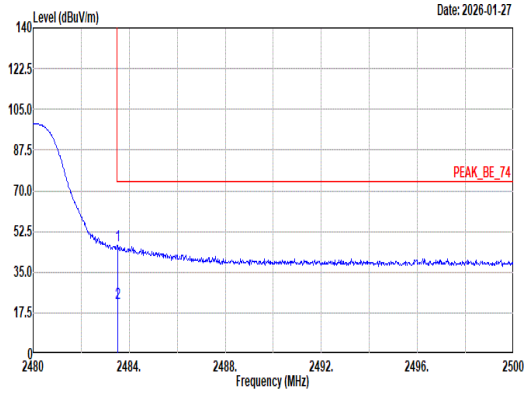
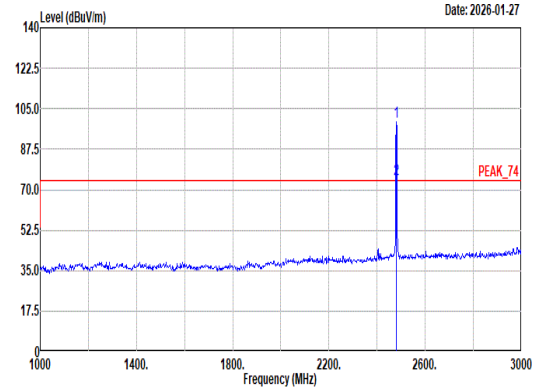
Mode	2	
	Band Edge - L	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	6	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2363.45 39.93 74.00 -34.07 40.29 27.30 8.59 36.25 0.00 400 46 Peak 2 2363.45 15.17 54.00 -38.83 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2441.00 99.76 ------ ------ 99.78 27.50 8.74 36.26 0.00 400 46 Peak 2 2441.00 75.00 ------ ------ -- -- -- -- -- -- -- Average

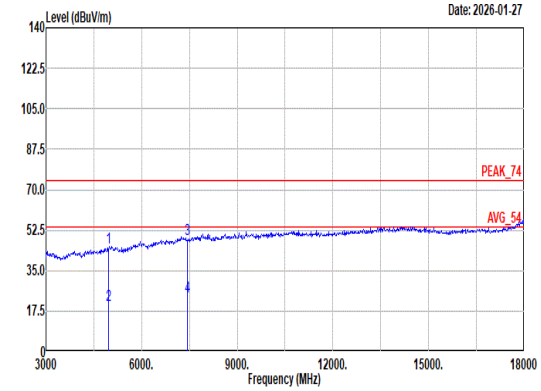
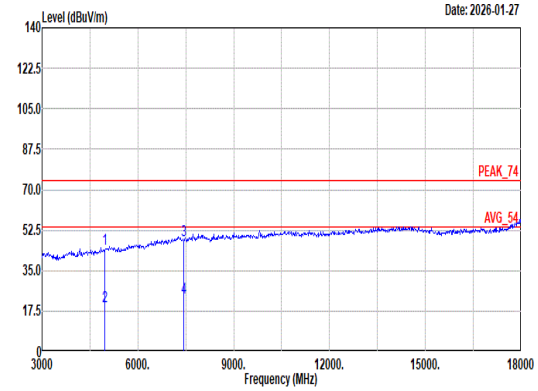
Mode	2	
	Band Edge - R	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	6	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2492.09 40.83 74.00 -33.17 40.47 27.80 8.83 36.27 0.00 400 46 Peak 2 2492.09 16.07 54.00 -37.93 -- -- -- -- -- -- -- AVERAGE	Blank

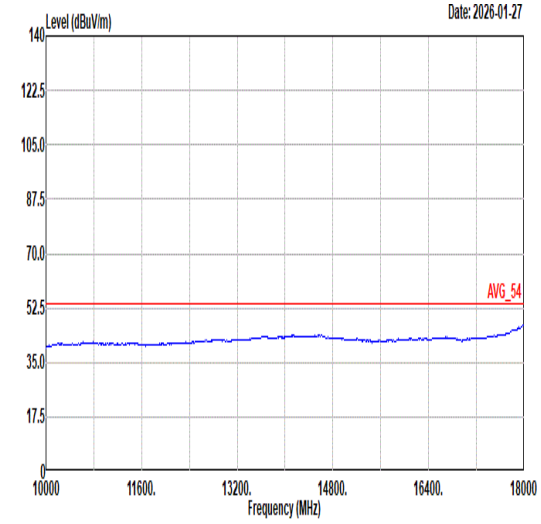
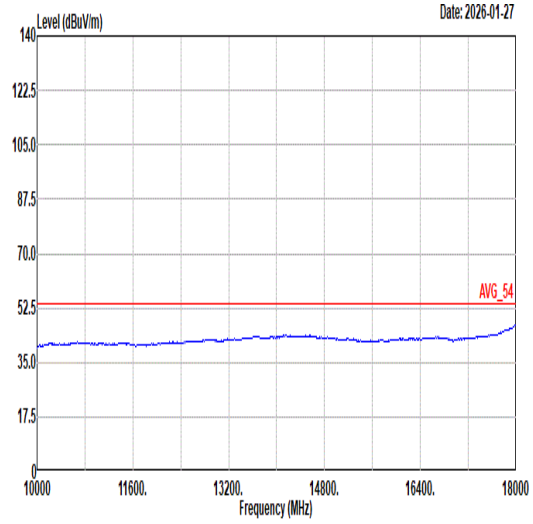
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4882.00 43.91 74.00 -30.09 35.67 32.63 12.47 37.49 0.63 -- -- Peak 2 4882.00 19.15 54.00 -34.85 -- -- -- -- -- -- -- Average 3 7323.00 49.42 74.00 -24.58 34.59 36.76 15.90 38.25 0.42 -- -- Peak 4 7323.00 24.66 54.00 -29.34 -- -- -- -- -- -- -- Average	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4882.00 44.15 74.00 -29.85 35.91 32.63 12.47 37.49 0.63 -- -- Peak 2 4882.00 19.39 54.00 -34.61 -- -- -- -- -- -- -- Average 3 7323.00 48.92 74.00 -25.08 34.09 36.76 15.90 38.25 0.42 -- -- Peak 4 7323.00 24.16 54.00 -29.84 -- -- -- -- -- -- -- Average

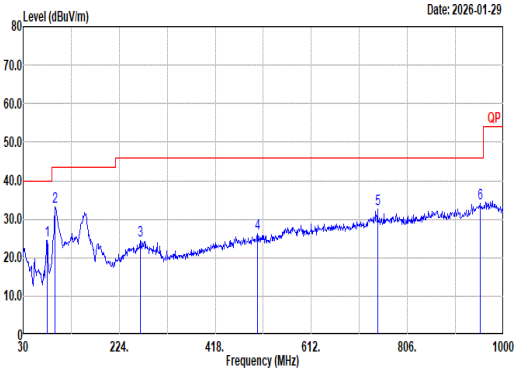
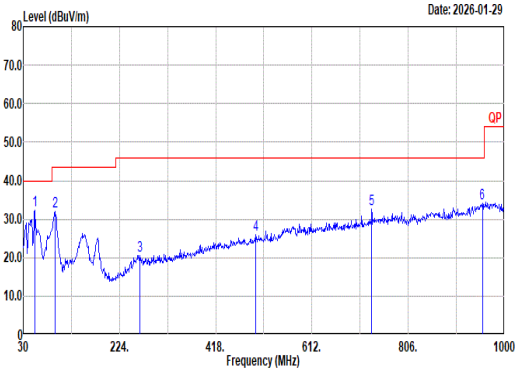
Mode	2	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	6	
Pol.	Horizontal	Vertical
10G ~18G Avg		

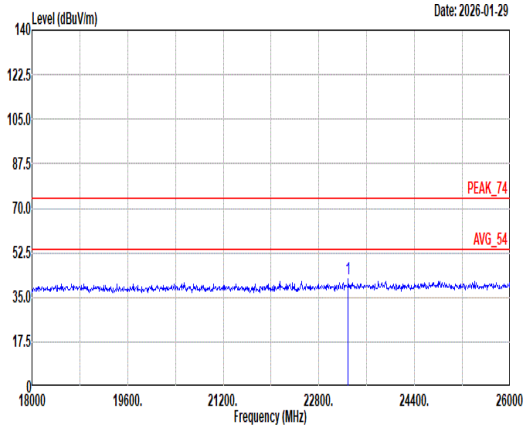
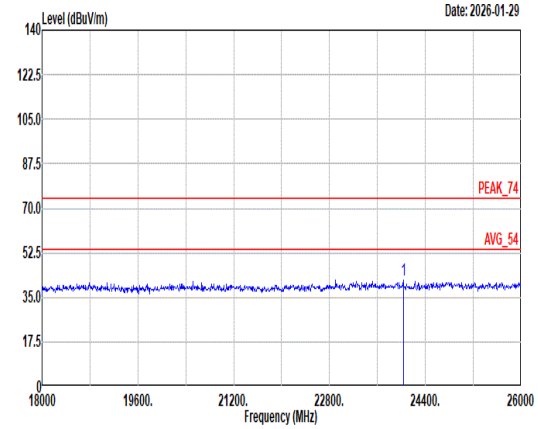
Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	6	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2483.52 51.19 74.00 -22.81 50.90 27.74 8.82 36.27 0.00 300 72 Peak 2 2483.52 26.43 54.00 -27.57 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2480.00 104.52 ------ ------ 104.28 27.70 8.81 36.27 0.00 300 72 Peak 2 2480.00 79.76 ------ ------ -- -- -- -- -- -- -- Average

Mode	3	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	6	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 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 46.28 74.00 -27.72 45.99 27.74 8.82 36.27 0.00 400 44 Peak 2 2483.52 21.52 54.00 -32.48 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 99.38 ------ ------ 99.14 27.70 8.81 36.27 0.00 400 44 Peak 2 2480.00 74.62 ------ ------ -- -- -- -- -- -- -- Average

Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	6	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4960.00 44.85 74.00 -29.15 36.12 33.06 12.59 37.54 0.62 -- -- Peak 2 4960.00 20.09 54.00 -33.91 -- -- -- -- -- -- -- Average 3 7440.00 48.64 74.00 -25.36 33.82 36.48 16.31 38.38 0.41 -- -- Peak 4 7440.00 23.88 54.00 -30.12 -- -- -- -- -- -- -- Average	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4960.00 44.54 74.00 -29.46 35.81 33.06 12.59 37.54 0.62 -- -- Peak 2 4960.00 19.78 54.00 -34.22 -- -- -- -- -- -- -- Average 3 7440.00 48.20 74.00 -25.80 33.38 36.48 16.31 38.38 0.41 -- -- Peak 4 7440.00 23.44 54.00 -30.56 -- -- -- -- -- -- -- Average

Mode	3	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	6	
Pol.	Horizontal	Vertical
10G ~18G Avg	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_251105 HORIZONTAL	 Site : 03CH20-HY Condition: AVG_54 3m HF_9120D_02360_251105 VERTICAL

Mode	43	
	LF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	6	
Pol.	Horizontal	Vertical
QP/ Peak	 Site : 03CH20-HY Condition: QP 3m Bilog_55606 & 08_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 78.50 24.53 40.00 -15.47 45.51 13.12 1.51 35.73 0.12 -- -- Peak 2 94.99 33.09 43.50 -10.41 52.35 14.64 1.70 35.70 0.10 -- -- Peak 3 266.68 24.56 46.00 -21.44 37.44 19.55 2.84 35.36 0.09 -- -- Peak 4 503.36 26.15 46.00 -19.85 32.85 24.06 3.91 34.76 0.09 -- -- Peak 5 745.86 32.72 46.00 -13.28 33.61 28.04 4.79 33.93 0.21 -- -- Peak 6 953.44 33.99 46.00 -12.01 30.66 30.79 5.41 33.17 0.30 -- -- Peak	 Site : 03CH20-HY Condition: QP 3m Bilog_55606 & 08_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 53.28 32.39 40.00 -7.61 53.45 13.31 1.24 35.76 0.15 -- -- Peak 2 94.02 31.88 43.50 -11.62 51.34 14.45 1.69 35.70 0.10 -- -- Peak 3 264.74 20.64 46.00 -25.36 33.19 19.90 2.83 35.37 0.09 -- -- Peak 4 498.51 25.98 46.00 -20.02 32.83 23.95 3.88 34.77 0.09 -- -- Peak 5 732.28 32.75 46.00 -13.25 34.04 27.74 4.74 33.98 0.21 -- -- Peak 6 955.38 34.04 46.00 -11.96 30.63 30.86 5.41 33.16 0.30 -- -- Peak

Mode	44	
	SHF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	6	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH20-HY Condition: PEAK_74 1m BBHA9170_1223_250702 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 23288.00 42.17 74.00 -31.83 44.40 39.20 28.21 60.10 -9.54 -- -- Peak	 Site : 03CH20-HY Condition: PEAK_74 1m BBHA9170_1223_250702 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 24032.00 41.94 74.00 -32.06 43.86 39.01 28.70 60.09 -9.54 -- -- Peak

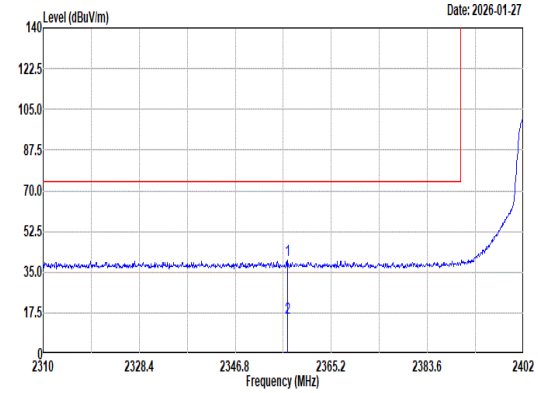
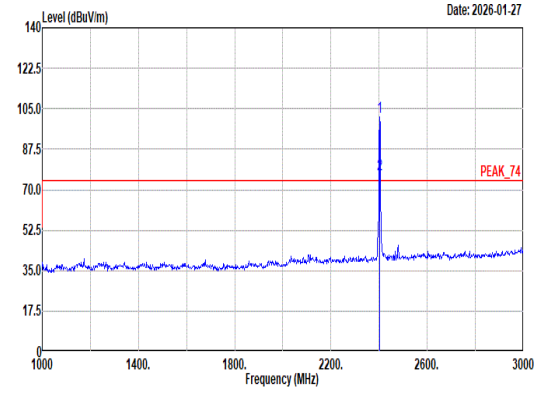
<Ant. 7>

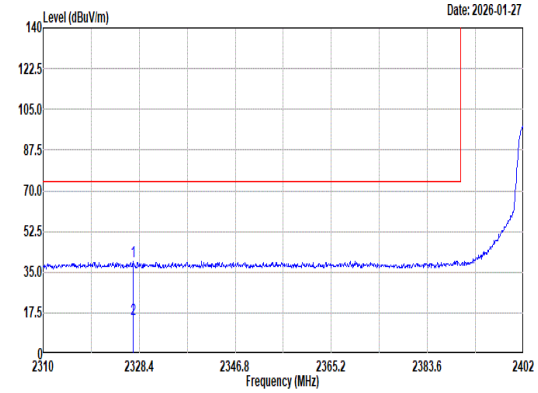
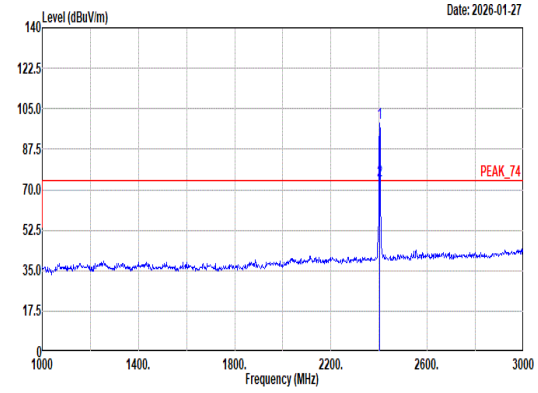
C2-1. Radiated Spurious Emission Test Modes

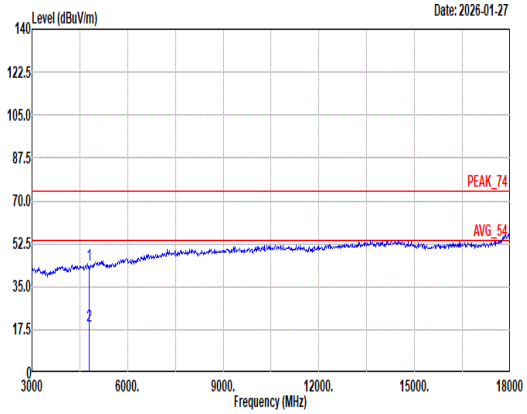
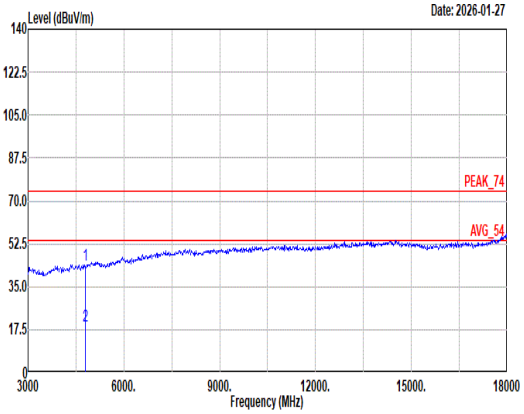
Mode	Band (MHz)	Antenna	Modulation	Channel	Frequency	Data Rate	RU	Remark
Mode 26	2400-2483.5	7	Bluetooth BR_GFSK	00	2402	3Mbps	-	-
Mode 27	2400-2483.5	7	Bluetooth BR_GFSK	39	2441	3Mbps	-	-
Mode 28	2400-2483.5	7	Bluetooth BR_GFSK	78	2480	3Mbps	-	-
Mode 49	2400-2483.5	7	Bluetooth BR_GFSK	78	2480	3Mbps	-	LF
Mode 50	2400-2483.5	7	Bluetooth BR_GFSK	78	2480	3Mbps	-	SHF

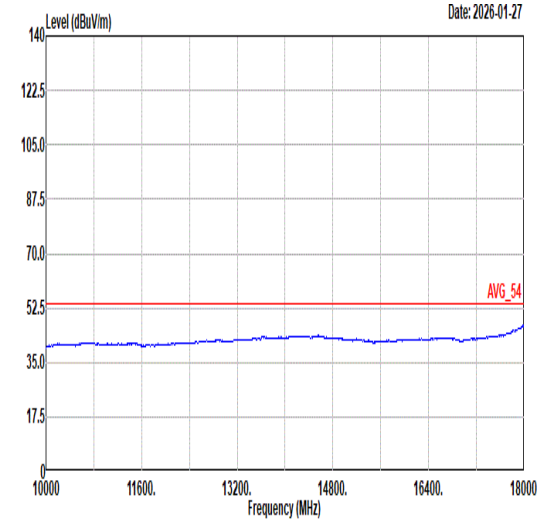
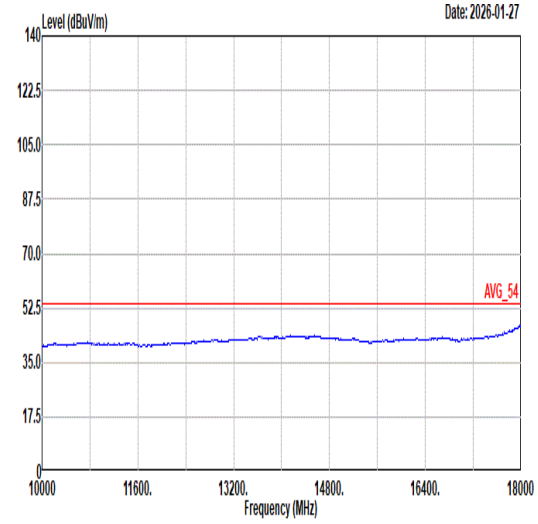
C2-2. Summary of each worse mode

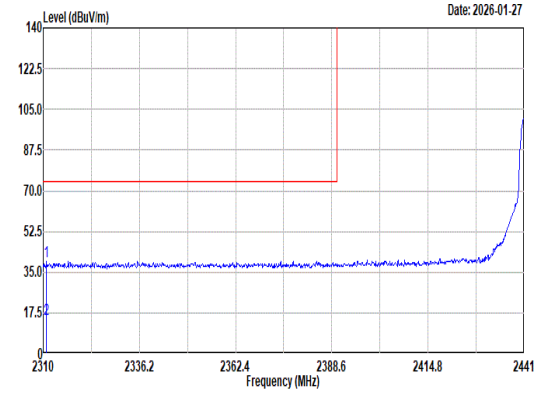
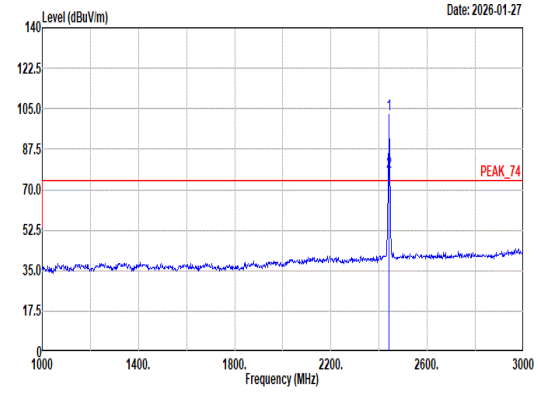
Mode	Modulation	Ch.	Freq. (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Pol.	Peak Avg.	Result	RU	Remark
26	Bluetooth BR_GFSK	00	2356.83	40.12	74.00	-33.88	H	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	00	4804.00	43.82	74.00	-30.18	H	Peak	Pass	-	Harmonic
27	Bluetooth BR_GFSK	39	2491.09	40.71	74.00	-33.29	H	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	39	7323.00	49.65	74.00	-24.35	H	Peak	Pass	-	Harmonic
28	Bluetooth BR_GFSK	78	2483.54	58.63	74.00	-15.37	H	Peak	Pass	-	Band Edge
	Bluetooth BR_GFSK	78	7440.00	49.00	74.00	-25.00	V	Peak	Pass	-	Harmonic
49	LF	78	52.31	31.07	40.00	-8.93	V	Peak	Pass	-	LF
50	SHF	78	24568.00	41.65	74.00	-32.35	H	Peak	Pass	-	SHF

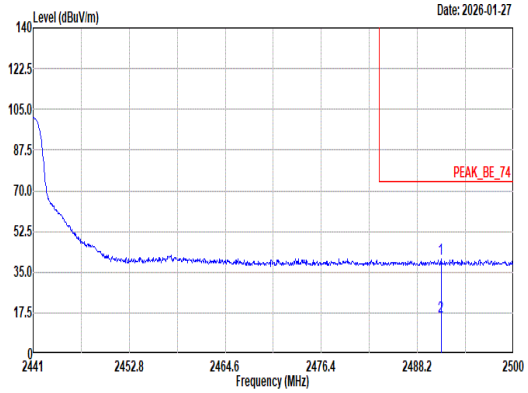
Mode	26	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2356.83 40.12 74.00 -33.88 40.49 27.30 8.58 36.25 0.00 100 239 Peak 2 2356.83 15.36 54.00 -38.64 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2402.00 101.25 ------ ------ 101.45 27.40 8.66 36.26 0.00 100 239 Peak 2 2402.00 76.49 ------ ------ -- -- -- -- -- -- -- Average

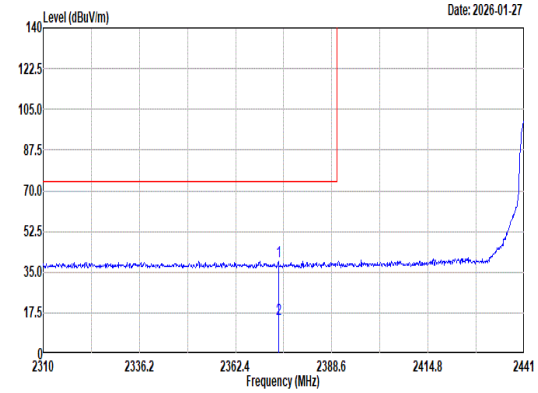
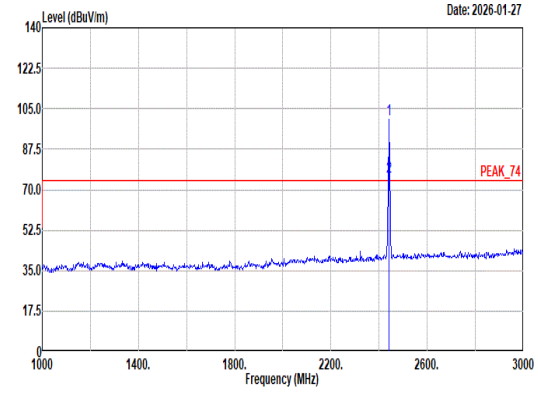
Mode	26	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2327.20 39.81 74.00 -34.19 40.34 27.20 8.52 36.25 0.00 360 119 Peak 2 2327.20 15.05 54.00 -38.95 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 98.55 ------ ------ 98.75 27.40 8.66 36.26 0.00 360 119 Peak 2 2402.00 73.79 ------ ------ -- -- -- -- -- -- -- Average

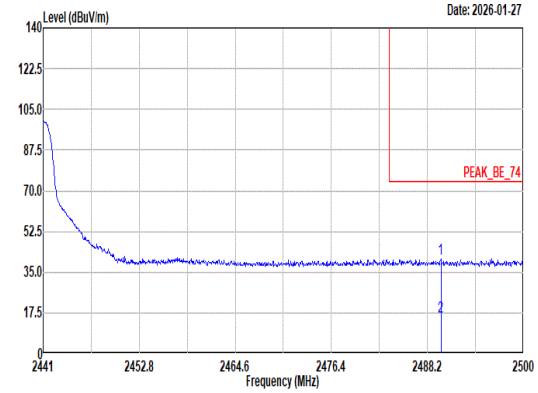
Mode	26	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4804.00 43.82 74.00 -30.18 36.07 32.22 12.34 37.44 0.63 -- -- Peak 2 4804.00 19.06 54.00 -34.94 11.31 32.22 12.34 37.44 0.63 -- -- Average	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4804.00 43.74 74.00 -30.26 35.99 32.22 12.34 37.44 0.63 -- -- Peak 2 4804.00 18.98 54.00 -35.02 11.23 32.22 12.34 37.44 0.63 -- -- Average

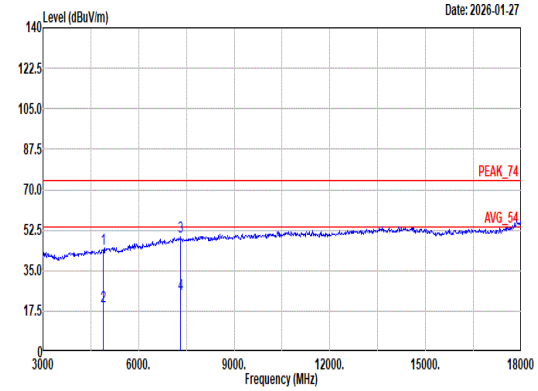
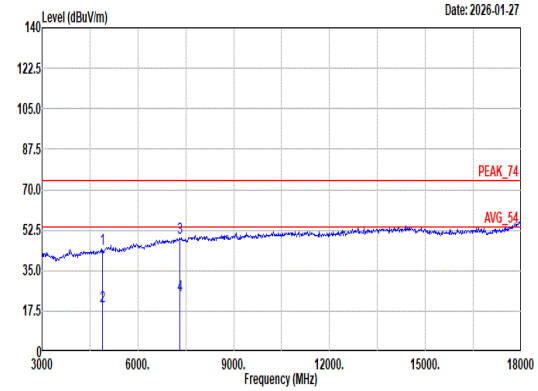
Mode	26	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH00_2402MHz	
ANT	7	
Pol.	Horizontal	Vertical
10G ~18G Avg		

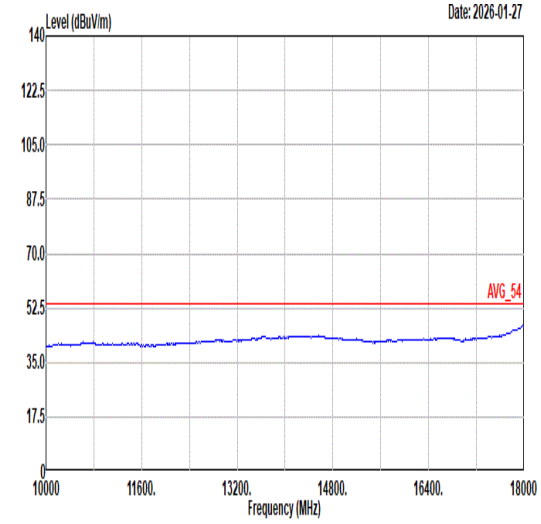
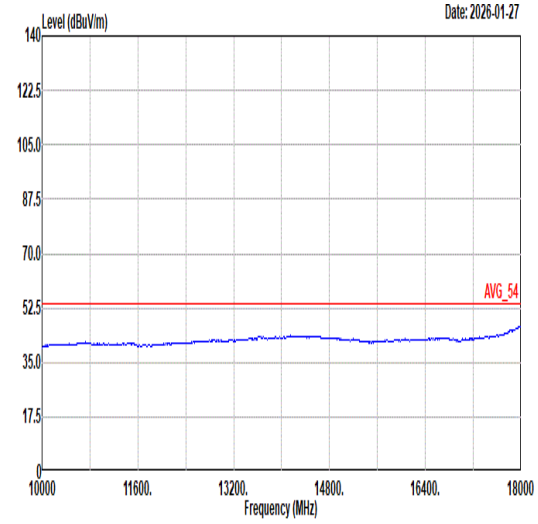
Mode	27	
	Band Edge - L	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2310.92 39.80 74.00 -34.20 40.35 27.20 8.49 36.24 0.00 102 236 Peak 2 2310.92 15.04 54.00 -38.96 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2441.00 102.25 ------ ------ 102.27 27.50 8.74 36.26 0.00 102 236 Peak 2 2441.00 77.49 ------ ------ -- -- -- -- -- -- -- Average

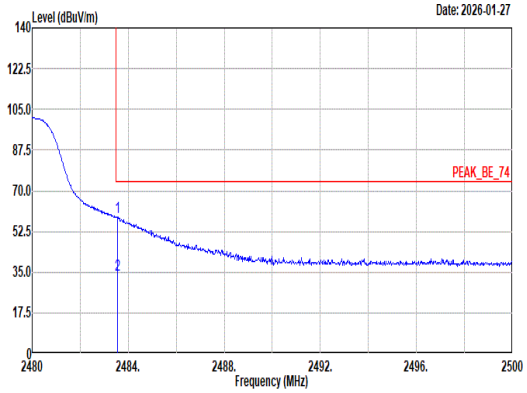
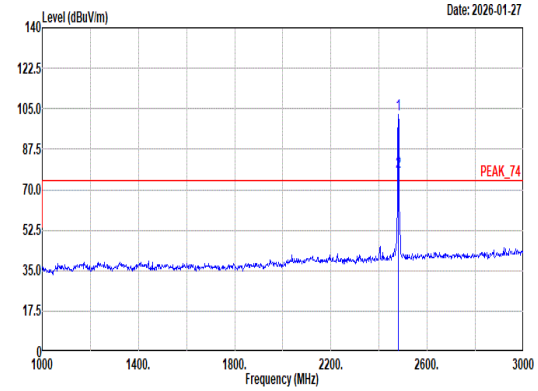
Mode	27	
	Band Edge - R	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	7	
Pol.	Horizontal	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2491.09 40.71 74.00 -33.29 40.35 27.80 8.83 36.27 0.00 102 236 Peak 2 2491.09 15.95 54.00 -38.05 -- -- -- -- -- -- -- AVERAGE	Blank

Mode	27	
	Band Edge - L	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 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 2374.06 39.81 74.00 -34.19 40.19 27.26 8.61 36.25 0.00 399 124 Peak 2 2374.06 15.05 54.00 -38.95 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 2441.00 100.42 ------ ------ 100.44 27.50 8.74 36.26 0.00 399 124 Peak 2 2441.00 75.66 ------ ------ -- -- -- -- -- -- -- Average

Mode	27	
	Band Edge - R	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 VERTICAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Limit Read Ant Cable Preamp Aux APos TPos Freq Level Line Margin Level Factor Loss Factor Factor Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 2489.85 40.66 74.00 -33.34 40.30 27.80 8.83 36.27 0.00 399 124 Peak 2 2489.85 15.90 54.00 -38.10 -- -- -- -- -- -- -- AVERAGE	Blank

Mode	27	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4882.00 44.17 74.00 -29.83 35.93 32.63 12.47 37.49 0.63 -- -- Peak 2 4882.00 19.41 54.00 -34.59 11.17 32.63 12.47 37.49 0.63 -- -- Average 3 7323.00 49.65 74.00 -24.35 34.82 36.76 15.90 38.25 0.42 -- -- Peak 4 7323.00 24.89 54.00 -29.11 10.06 36.76 15.90 38.25 0.42 -- -- Average	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4882.00 44.40 74.00 -29.60 36.16 32.63 12.47 37.49 0.63 -- -- Peak 2 4882.00 19.64 54.00 -34.36 11.40 32.63 12.47 37.49 0.63 -- -- Average 3 7323.00 49.09 74.00 -24.91 34.26 36.76 15.90 38.25 0.42 -- -- Peak 4 7323.00 24.33 54.00 -29.67 9.50 36.76 15.90 38.25 0.42 -- -- Average

Mode	27	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH39_2441MHz	
ANT	7	
Pol.	Horizontal	Vertical
10G ~18G Avg		

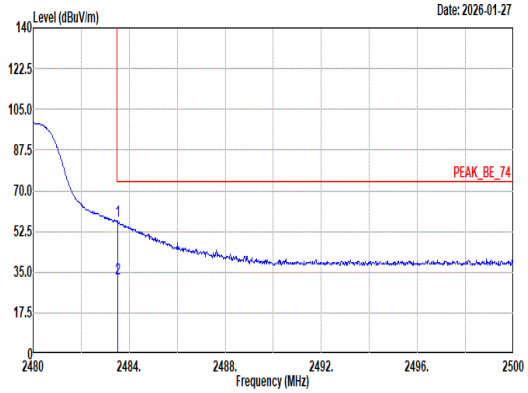
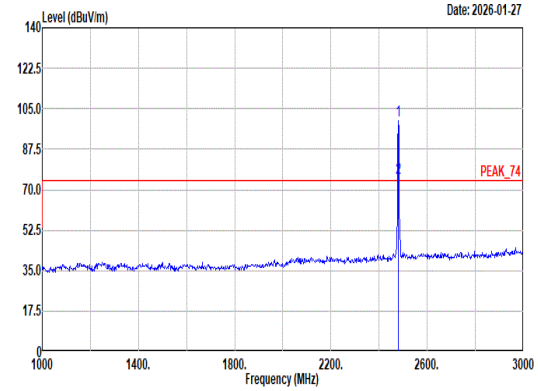
Mode	28	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	7	
Pol.	Horizontal	Fundamental
Peak		

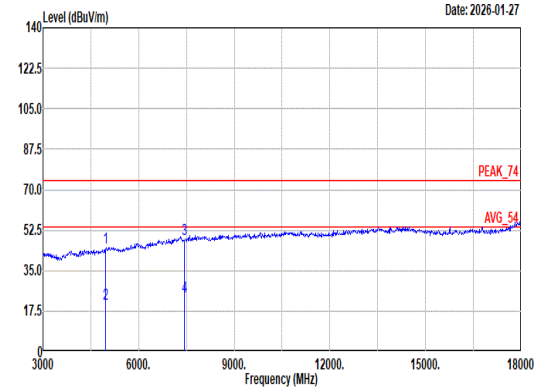
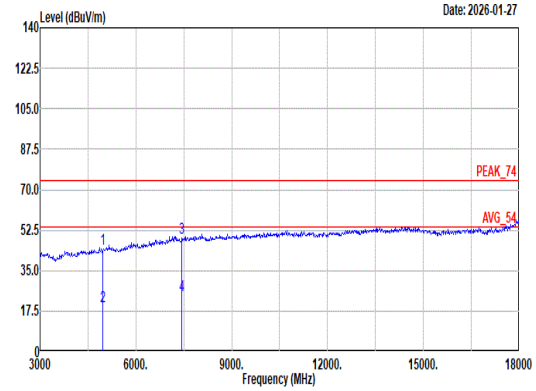
Site : 03CH20-HY
Condition: PEAK_BE_74 3m HF_9120D_02360_251105 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

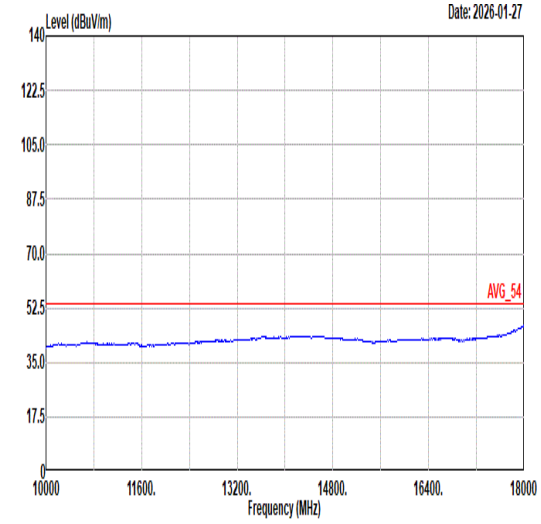
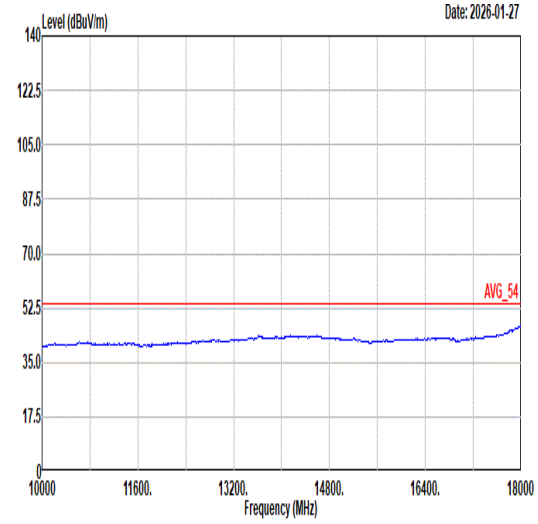
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2483.54	58.63	74.00	-15.37	58.34	27.74	8.82	36.27	0.00	100	236	Peak
2	2483.54	33.87	54.00	-20.13	--	--	--	--	--	--	--	AVERAGE

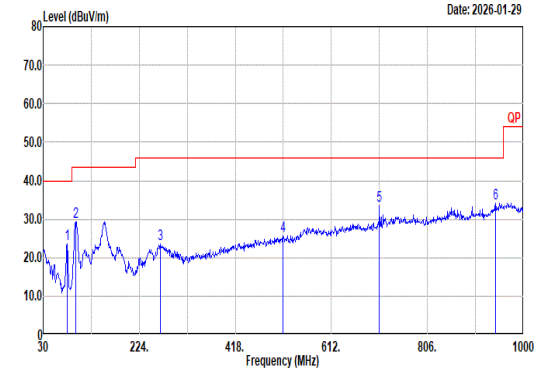
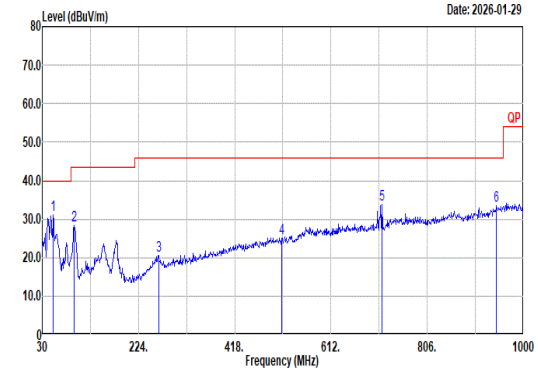
Site : 03CH20-HY
Condition: PEAK_74 3m HF_9120D_02360_251105 HORIZONTAL
: RBW:1000.000kHz VBW:3000.000kHz SWT:Auto

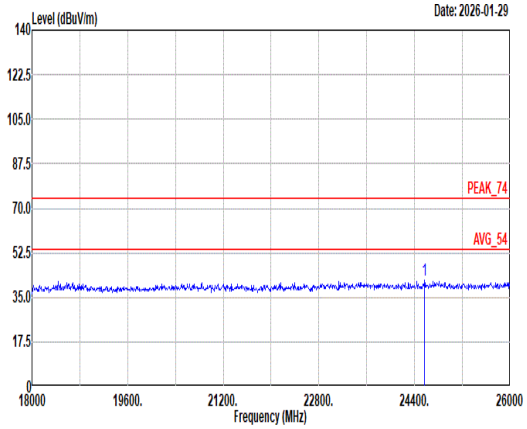
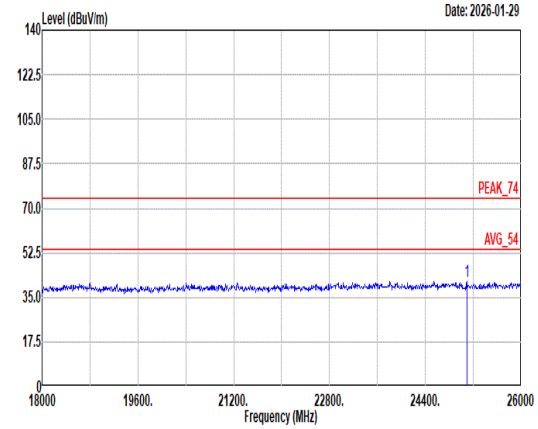
	Freq	Level	Limit Line	Margin	Read Level	Ant Factor	Cable Loss	Preamp Factor	Aux Factor	APos	TPos	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB/m	dB	dB	dB	cm	deg	
1	2480.00	102.25	------	------	102.01	27.70	8.81	36.27	0.00	100	236	Peak
2	2480.00	77.49	------	------	--	--	--	--	--	--	--	Average

Mode	28	
	Band Edge	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	7	
Pol.	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition: PEAK_BE_74 3m HF_9120D_02360_251105 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 56.91 74.00 -17.09 56.62 27.74 8.82 36.27 0.00 389 118 Peak 2 2483.52 32.15 54.00 -21.85 -- -- -- -- -- -- -- AVERAGE	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 99.66 ------ ------ 99.42 27.70 8.81 36.27 0.00 389 118 Peak 2 2480.00 74.90 ------ ------ -- -- -- -- -- -- -- Average

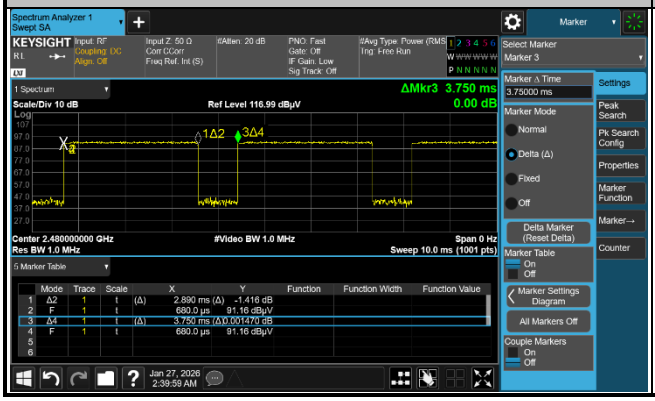
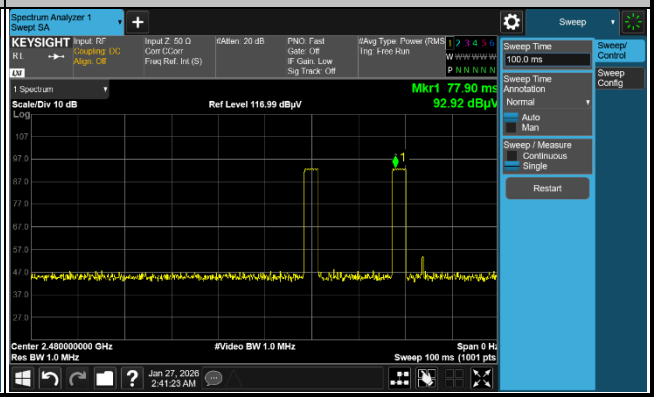
Mode	28	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	7	
Pol.	Horizontal	Vertical
Peak Avg	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark MHz dBuV/m dBuV/m dB dBuV dB/m dB dB dB cm deg 1 4960.00 45.17 74.00 -28.83 36.44 33.06 12.59 37.54 0.62 -- -- Peak 2 4960.00 20.41 54.00 -33.59 11.68 33.06 12.59 37.54 0.62 -- -- Average 3 7440.00 48.56 74.00 -25.44 33.74 36.48 16.31 38.38 0.41 -- -- Peak 4 7440.00 23.80 54.00 -30.20 8.98 36.48 16.31 38.38 0.41 -- -- Average	 Site : 03CH20-HY Condition: PEAK_74 3m HF_9120D_02360_251105 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 4960.00 44.56 74.00 -29.44 35.83 33.06 12.59 37.54 0.62 -- -- Peak 2 4960.00 19.80 54.00 -34.20 11.07 33.06 12.59 37.54 0.62 -- -- Average 3 7440.00 49.00 74.00 -25.00 34.18 36.48 16.31 38.38 0.41 -- -- Peak 4 7440.00 24.24 54.00 -29.76 9.42 36.48 16.31 38.38 0.41 -- -- Average

Mode	28	
	Harmonic	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	7	
Pol.	Horizontal	Vertical
10G ~18G Avg		

Mode	49	
	LF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	7	
Pol.	Horizontal	Vertical
QP/ Peak	 Site : 03CH20-HY Condition: QP 3m Bilog_55606 & 08_251126 HORIZONTAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark 1 78.50 23.60 40.00 -16.40 44.58 13.12 1.51 35.73 0.12 -- -- Peak 2 95.96 29.39 43.50 -14.11 48.42 14.86 1.71 35.70 0.10 -- -- Peak 3 266.68 23.66 46.00 -22.34 36.54 19.55 2.84 35.36 0.09 -- -- Peak 4 514.03 25.67 46.00 -20.33 32.19 24.15 3.96 34.72 0.09 -- -- Peak 5 709.00 33.56 46.00 -12.44 36.04 26.72 4.67 34.07 0.20 -- -- Peak 6 943.74 34.15 46.00 -11.85 31.41 30.26 5.39 33.20 0.29 -- -- Peak	 Site : 03CH20-HY Condition: QP 3m Bilog_55606 & 08_251126 VERTICAL Freq Level Limit Line Margin Read Level Ant Factor Cable Loss Preamp Factor Aux Factor APos TPos Remark 1 52.31 31.07 40.00 -8.93 51.80 13.65 1.23 35.76 0.15 -- -- Peak 2 94.02 28.38 43.50 -15.12 47.84 14.45 1.69 35.70 0.10 -- -- Peak 3 264.74 20.66 46.00 -25.34 33.21 19.90 2.83 35.37 0.09 -- -- Peak 4 512.09 25.15 46.00 -20.85 31.73 24.11 3.95 34.73 0.09 -- -- Peak 5 714.82 33.70 46.00 -12.30 35.95 26.90 4.69 34.04 0.20 -- -- Peak 6 945.68 33.46 46.00 -12.54 30.62 30.36 5.39 33.20 0.29 -- -- Peak

Mode	50	
	SHF	
	2400-2483.5_Bluetooth BR_GFSK_CH78_2480MHz	
ANT	7	
Pol.	Horizontal	Vertical
Peak	 Site : 03CH20-HY Condition: PEAK_74 1m BBHA9170_1223_250702 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 24568.00 41.65 74.00 -32.35 42.75 39.46 29.02 60.04 -9.54 -- -- Peak	 Site : 03CH20-HY Condition: PEAK_74 1m BBHA9170_1223_250702 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 25096.00 41.18 74.00 -32.82 42.18 39.51 29.33 60.30 -9.54 -- -- Peak

Appendix D. Duty Cycle Plots

3DH5 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. 3DH5 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 = 57.6 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 / 57.6 ms] = 2 hops

Thus, the maximum possible ON time:

2.89ms x 2 = 5.76 ms

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

20 x log(5.76 ms/100 ms) = -24.76 dB