

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

Offset 1.2dB = Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

1 Duty Cycle and Antenna Gain

Modulation Type	Frequency (MHz)	Duty Cycle	Correction Factor(dB)	Antenna Gain(dBi)
GFSK(DH5)	2402	77.07%	1.13	-2.5
π4/DQPSK(2DH5)	2402	63.47%	1.97	-2.5
8DPSK(3DH5)	2402	77.07%	1.13	-2.5
Note: Correction Factor=10*log(1/Duty Cycle)				

2 Conducted Power

Modulation type	Conducted Peak Power(dBm)		
	2402MHz	2441MHz	2480MHz
GFSK	11.49	11.67	11.57
π4DQPSK	10.99	11.01	11.19
8DPSK	11.23	11.36	11.40

Test on the worst case:

Modulation type	Conducted Peak Power(dBm)		
	2402MHz	2441MHz	2480MHz
GFSK	--	11.89	--

3 Occupied Bandwidth 20dB Bandwidth Modulation type: GFSK

Carrier frequency (MHz)	20dB Bandwidth(kHz)
2402	0.942
2441	0.942
2480	0.942



Modulation: GFSK 2402MHz



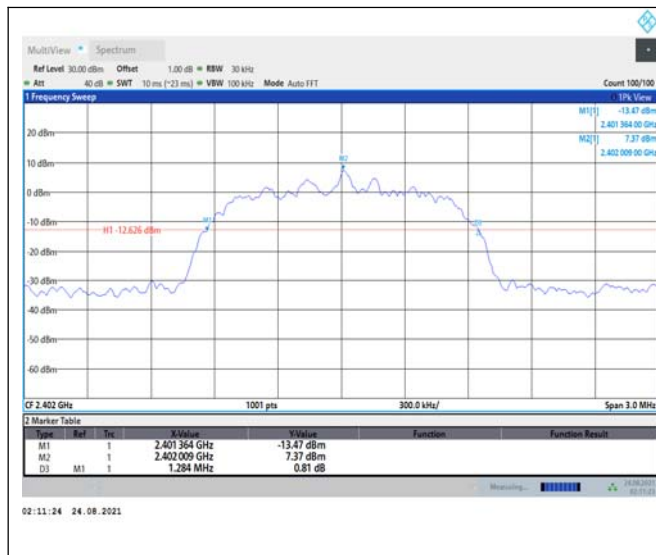
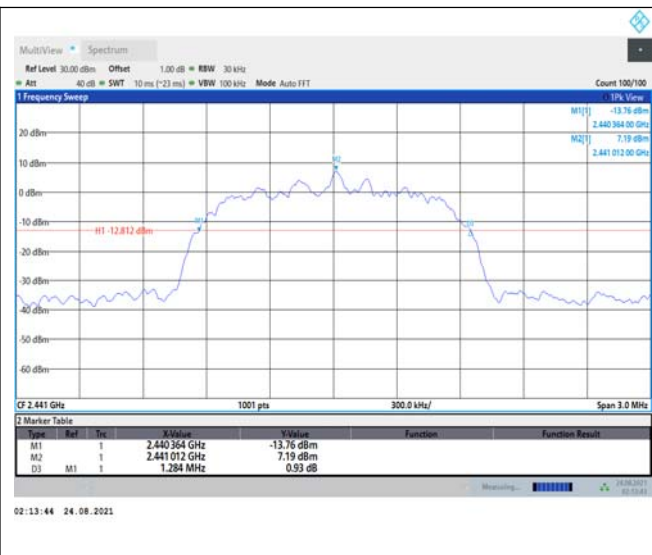
Modulation: GFSK 2441MHz



Modulation: GFSK 2480MHz

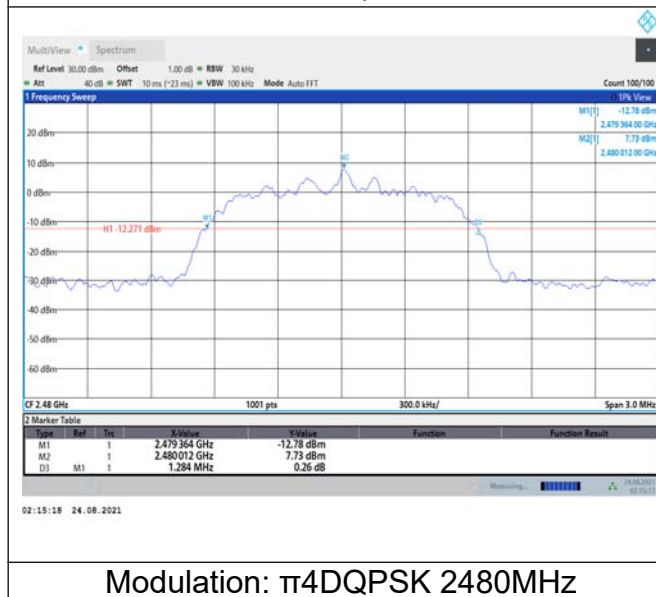
Modulation type: $\pi/4$ DQPSK

Carrier frequency (MHz)	20dB Bandwidth(kHz)
2402	1.284
2441	1.284
2480	1.284



Modulation: $\pi/4$ DQPSK 2402MHz

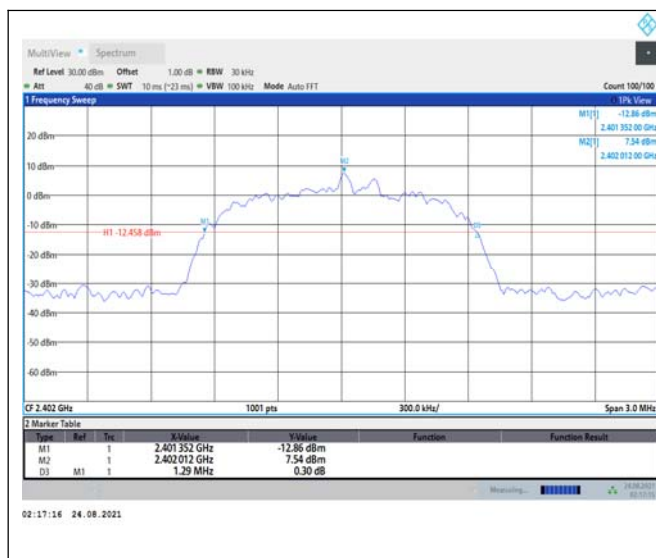
Modulation: $\pi/4$ DQPSK 2441MHz



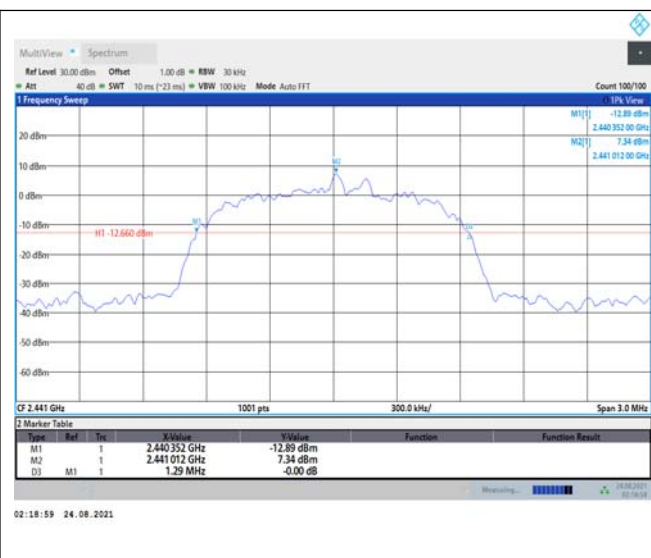
Modulation: $\pi/4$ DQPSK 2480MHz

Modulation type: 8DPSK

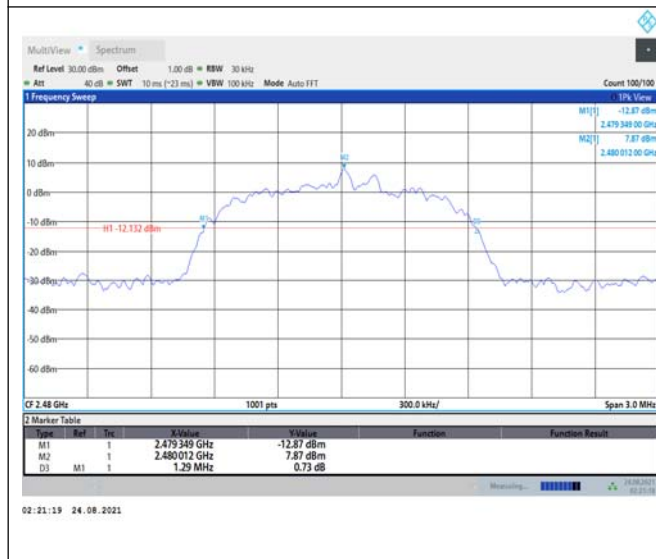
Carrier frequency (MHz)	20dB Bandwidth(kHz)
2402	1.290
2441	1.290
2480	1.290



Modulation: 8DPSK 2402MHz



Modulation: 8DPSK 2441MHz

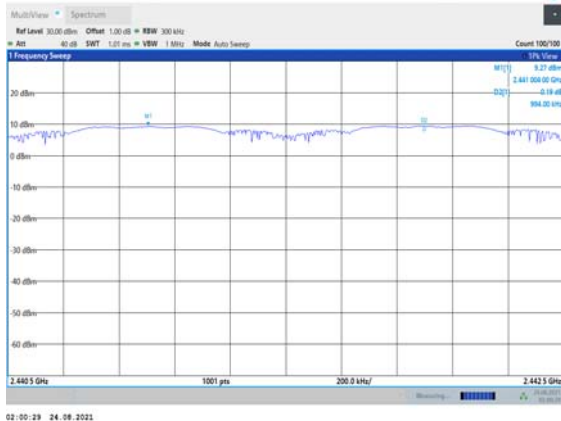


Modulation: 8DPSK 2480MHz

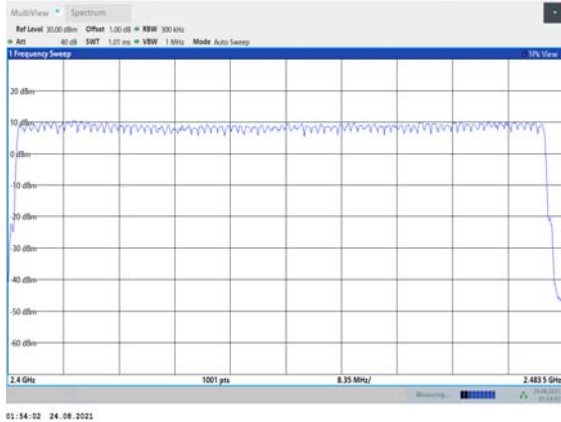
4 Hopping Frequency Separation

Modulation type: GFSK

Channel separation

Op-mode	Channel separation (MHz)
Hopping mode	1
	

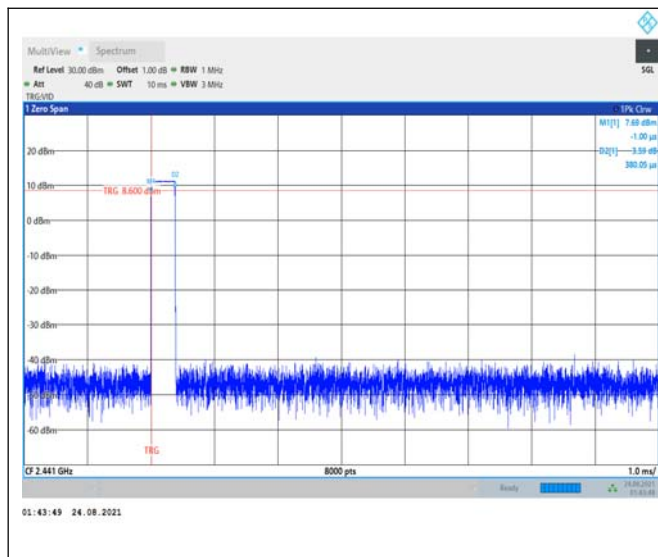
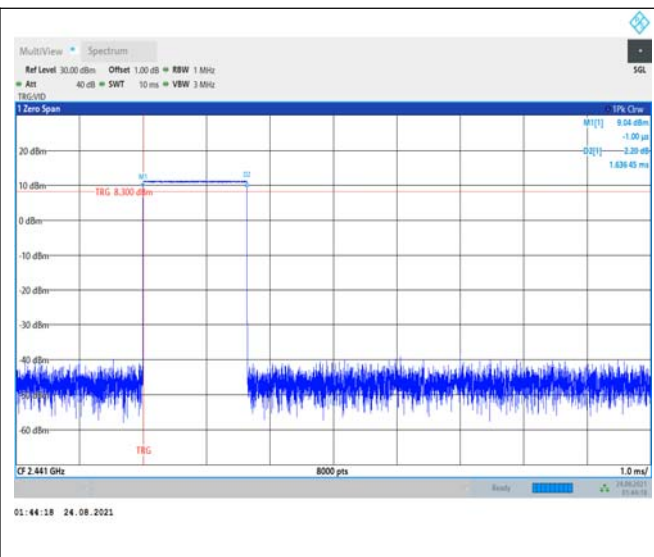
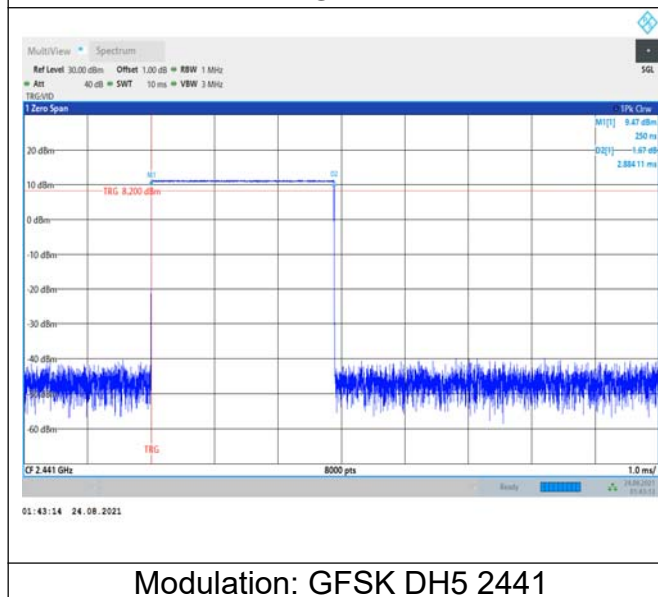
Number of Hopping Frequencies

Op-mode	Result
Hopping mode	79
	

5 Dwell Time

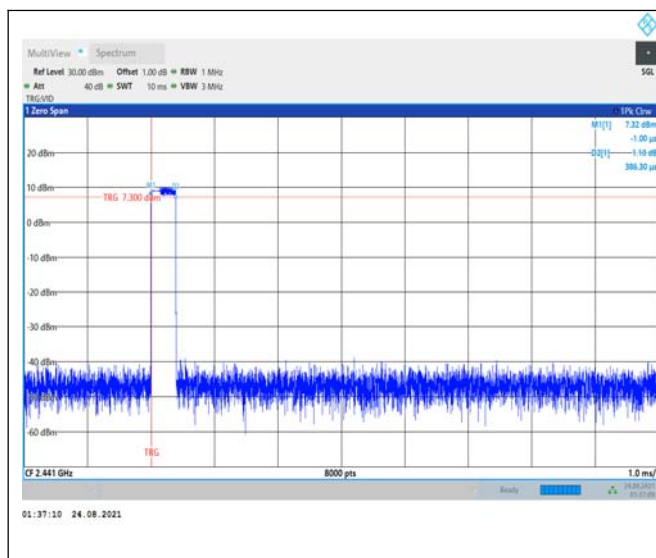
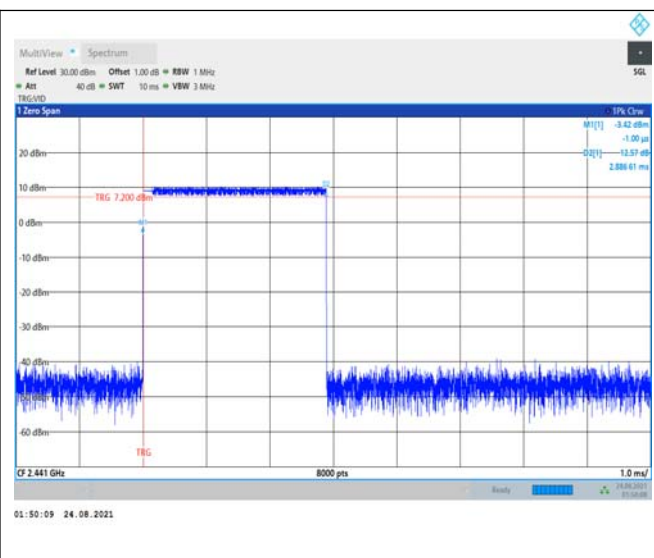
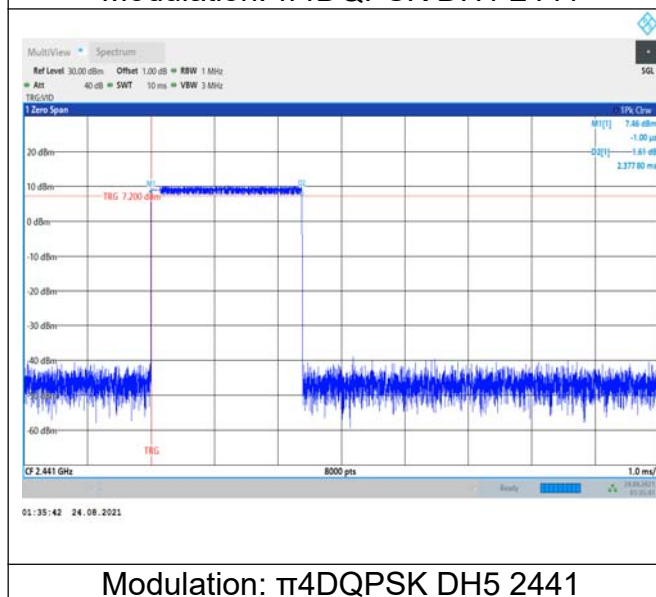
Modulation type: GFSK

Packet type	BurstWidth(μ s)	TotalHops[Num]	Dwell time(ms)
DH1	380	330	125
DH3	1640	210	344
DH5	2880	100	288



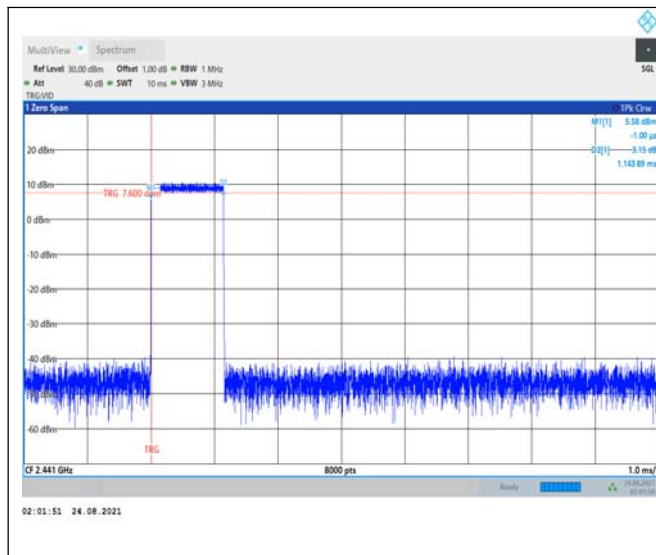
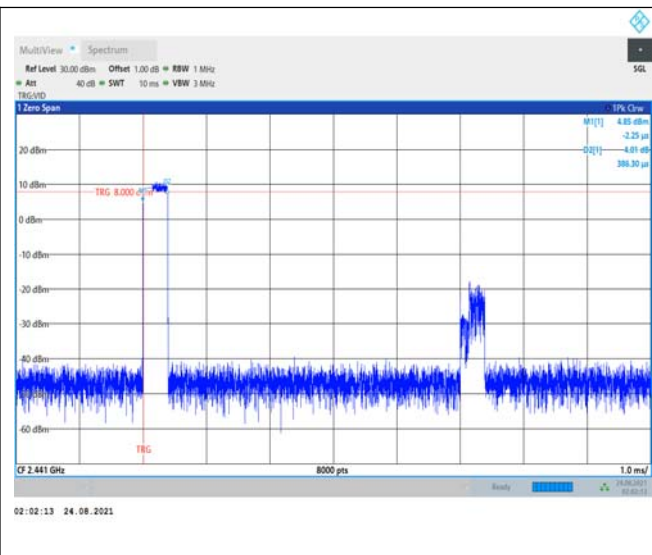
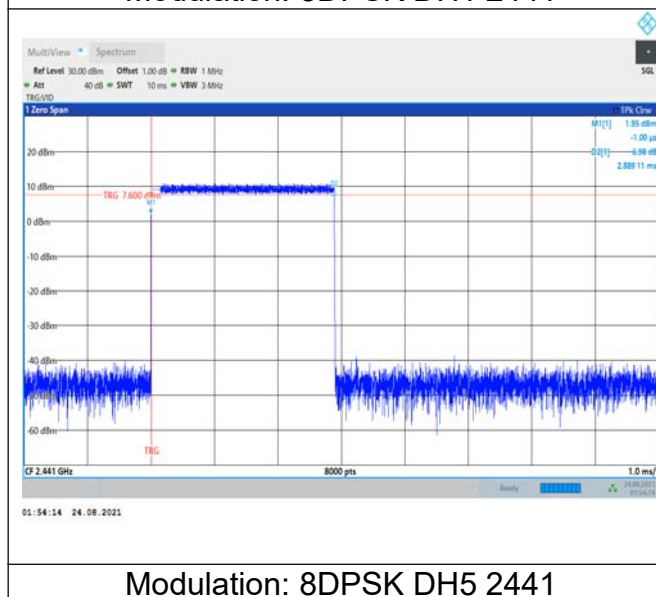
Modulation type: $\pi/4$ DQPSK

Packet type	Time slot length(μ s)	TotalHops[Num]	Dwell time(ms)
DH1	390	330	127
DH3	2890	110	318
DH5	2380	70	166



Modulation type: 8DPSK

Packet type	Time slot length(μ s)	TotalHops[Num]	Dwell time(ms)
DH1	1140	320	366
DH3	390	140	54
DH5	2890	80	231



Modulation type: GFSK



CH0(Hopping off)

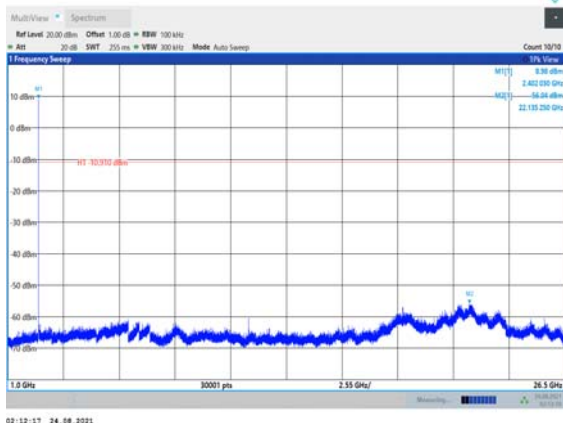
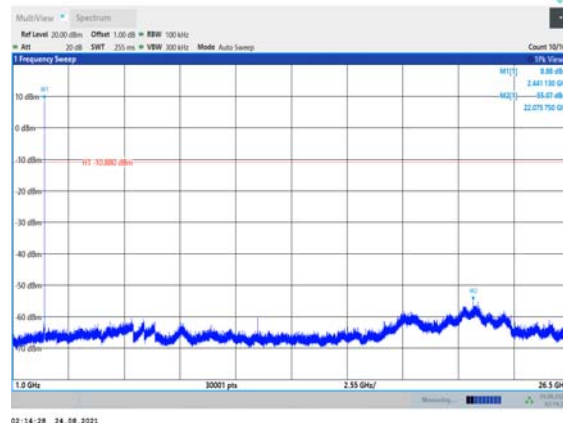
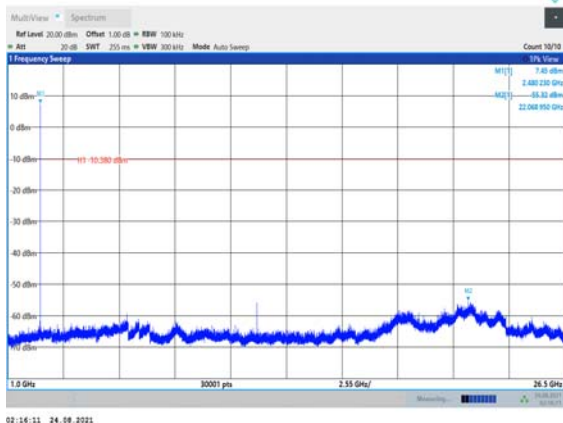


CH39(Hopping off)

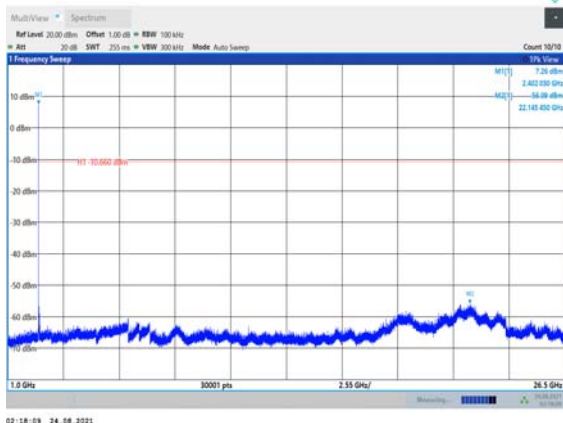


CH78(Hopping off)

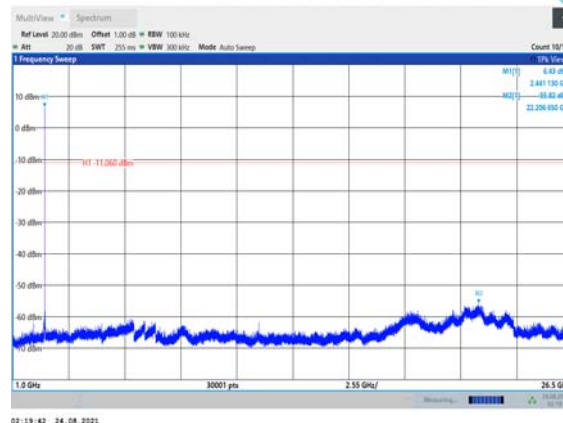
Modulation type: $\pi/4$ DQPSK



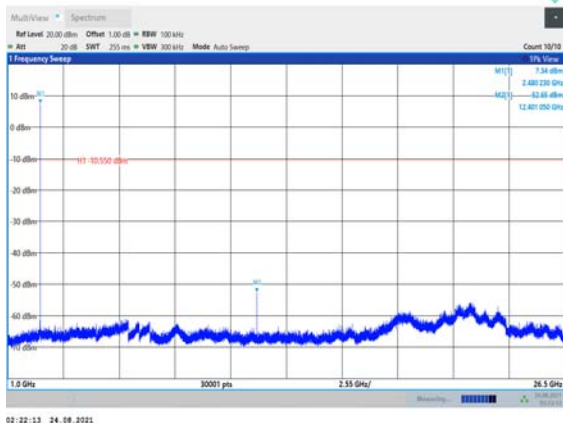
Modulation type: 8DPSK



CH0(Hopping off)



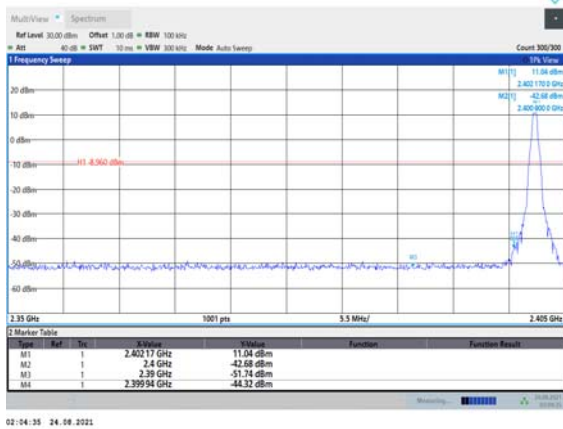
CH39(Hopping off)



CH78(Hopping off)

7 Band Edge measurement

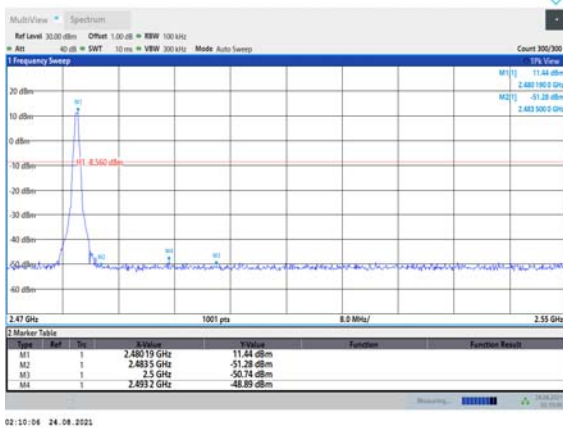
Modulation type: GFSK



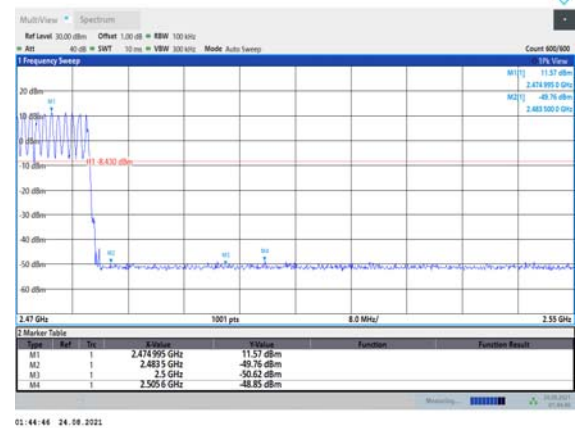
CH0(Hopping off)



CH0(Hopping on)

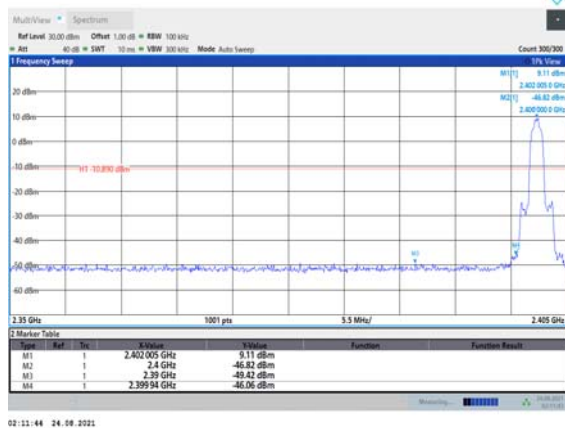


CH78(Hopping off)

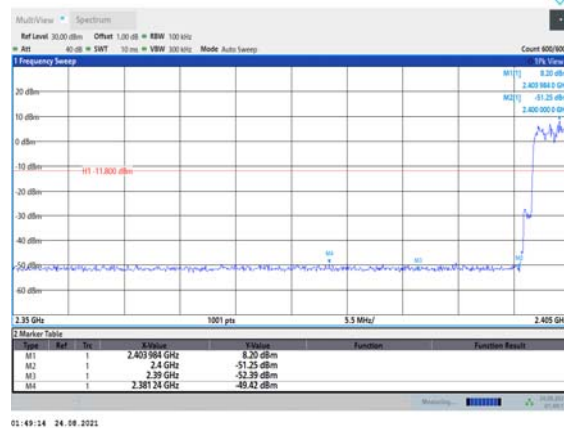


CH78(Hopping on)

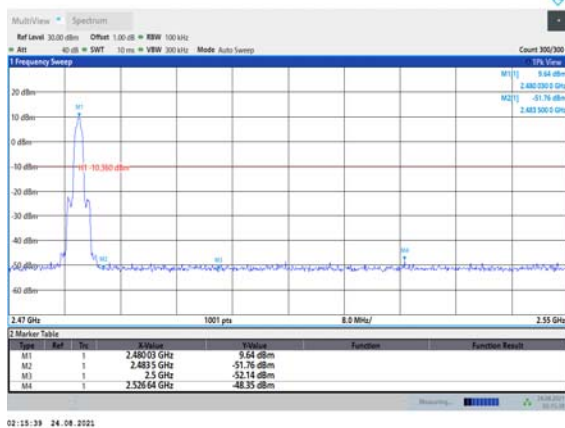
Modulation type: $\pi/4$ DQPSK



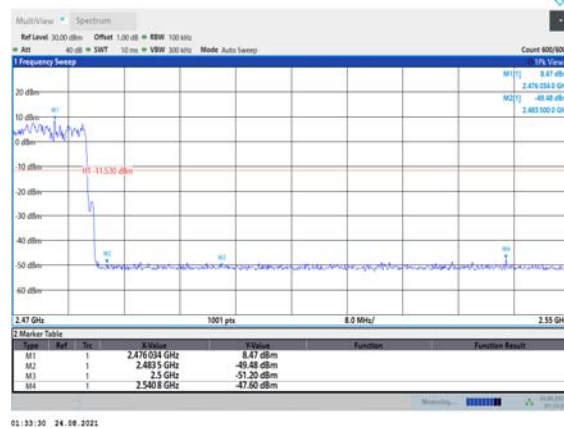
CH0(Hopping off)



CH0(Hopping on)

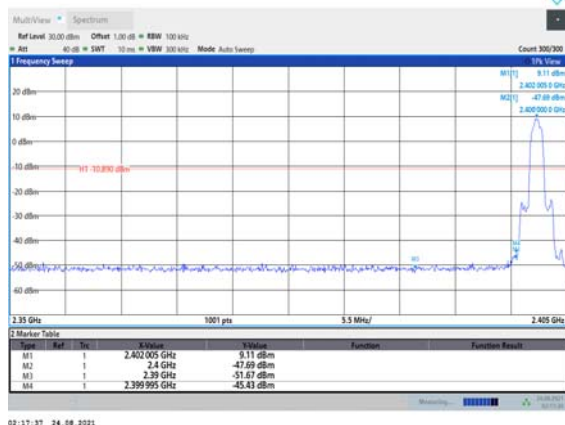


CH78(Hopping off)

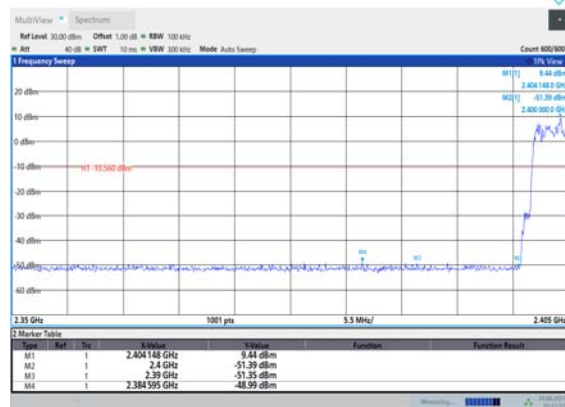


CH78(Hopping on)

Modulation type: 8DPSK



02:17:37 24.08.2021



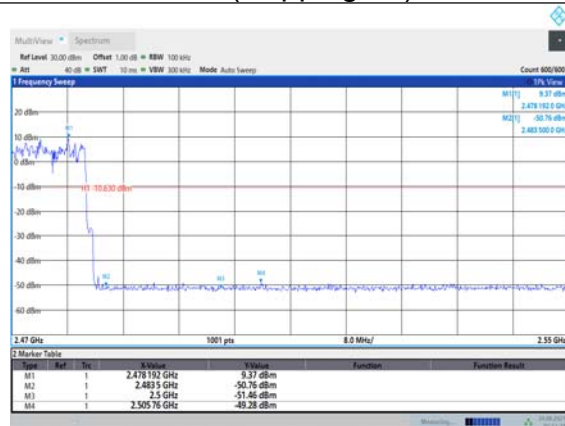
01:51:57 24.08.2021

CH0(Hopping off)

CH0(Hopping on)



02:21:40 24.08.2021



01:51:35 24.08.2021

CH78(Hopping off)

CH78(Hopping on)