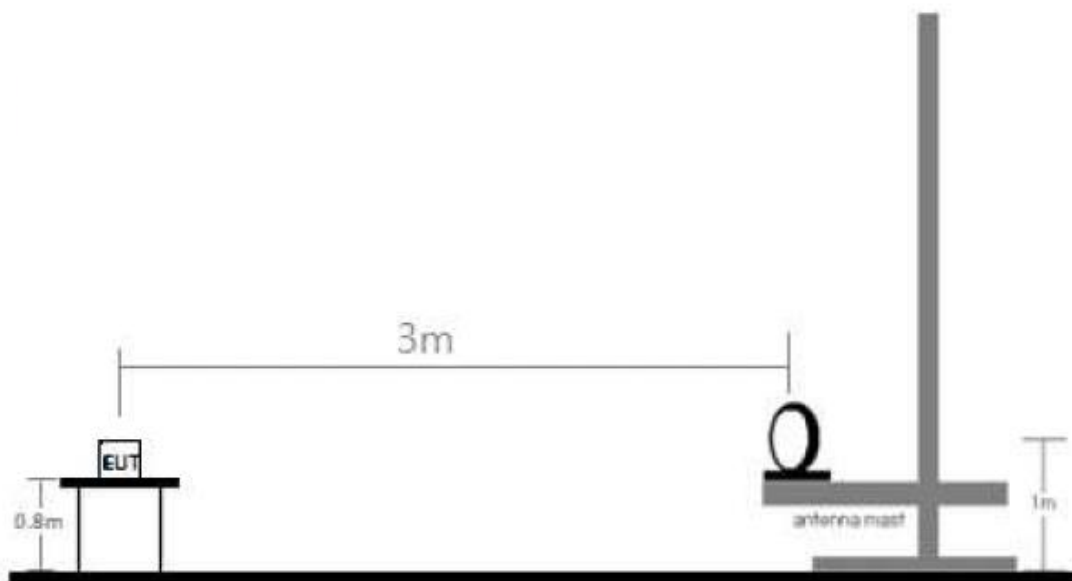
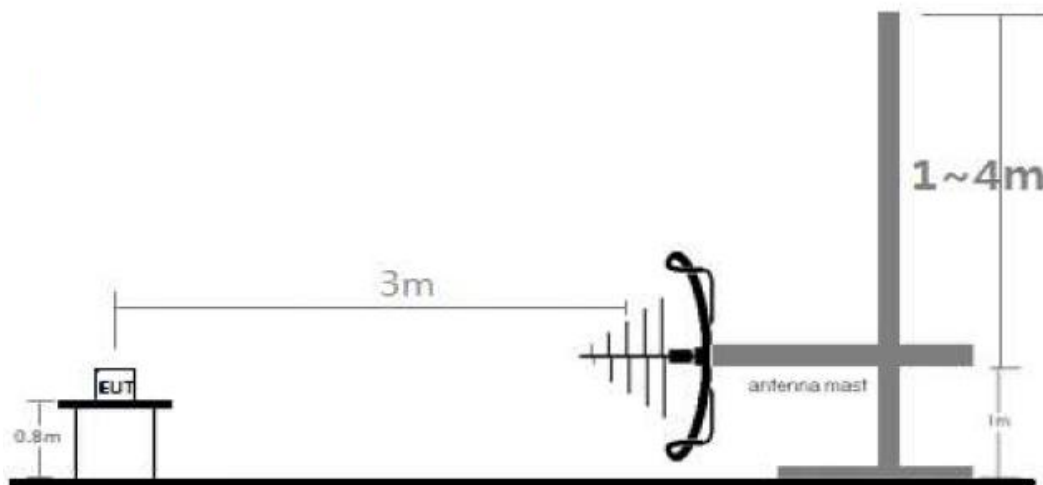


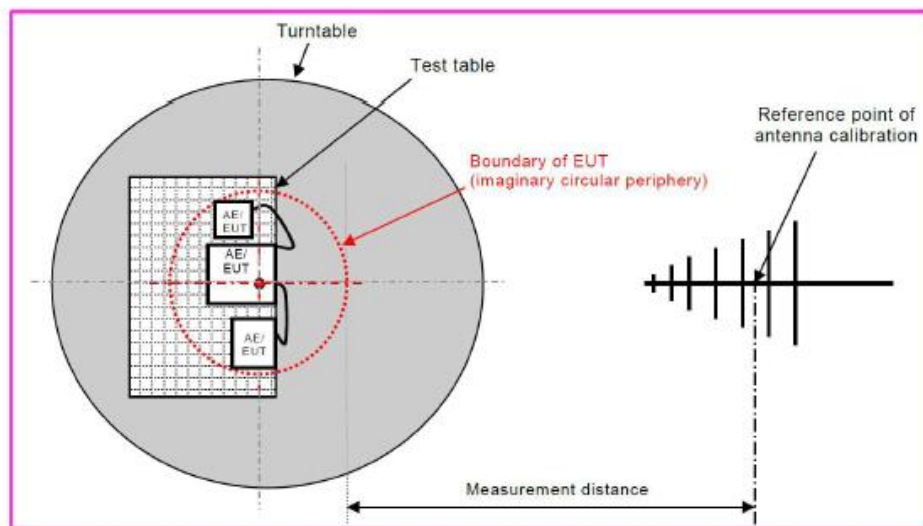
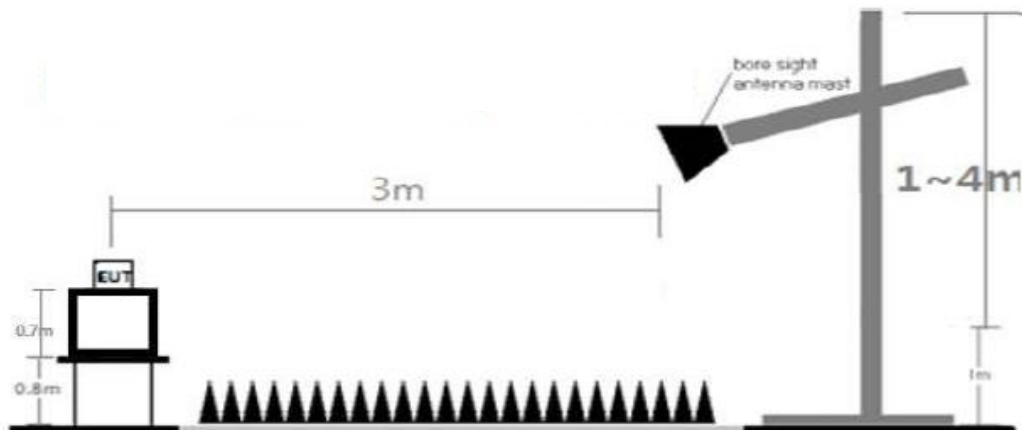
3.7.3 Test Setup



[Radiated Emission Test Setup Below 30 MHz]

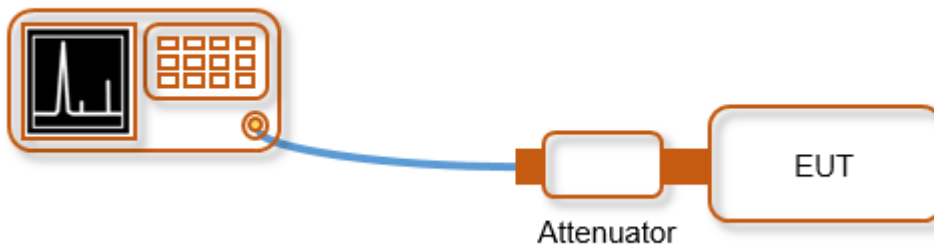


[Radiated Emission Test Setup Below 1 GHz]



[Radiated Emission Test Setup Above 1 GHz]

Spectrum Analyzer



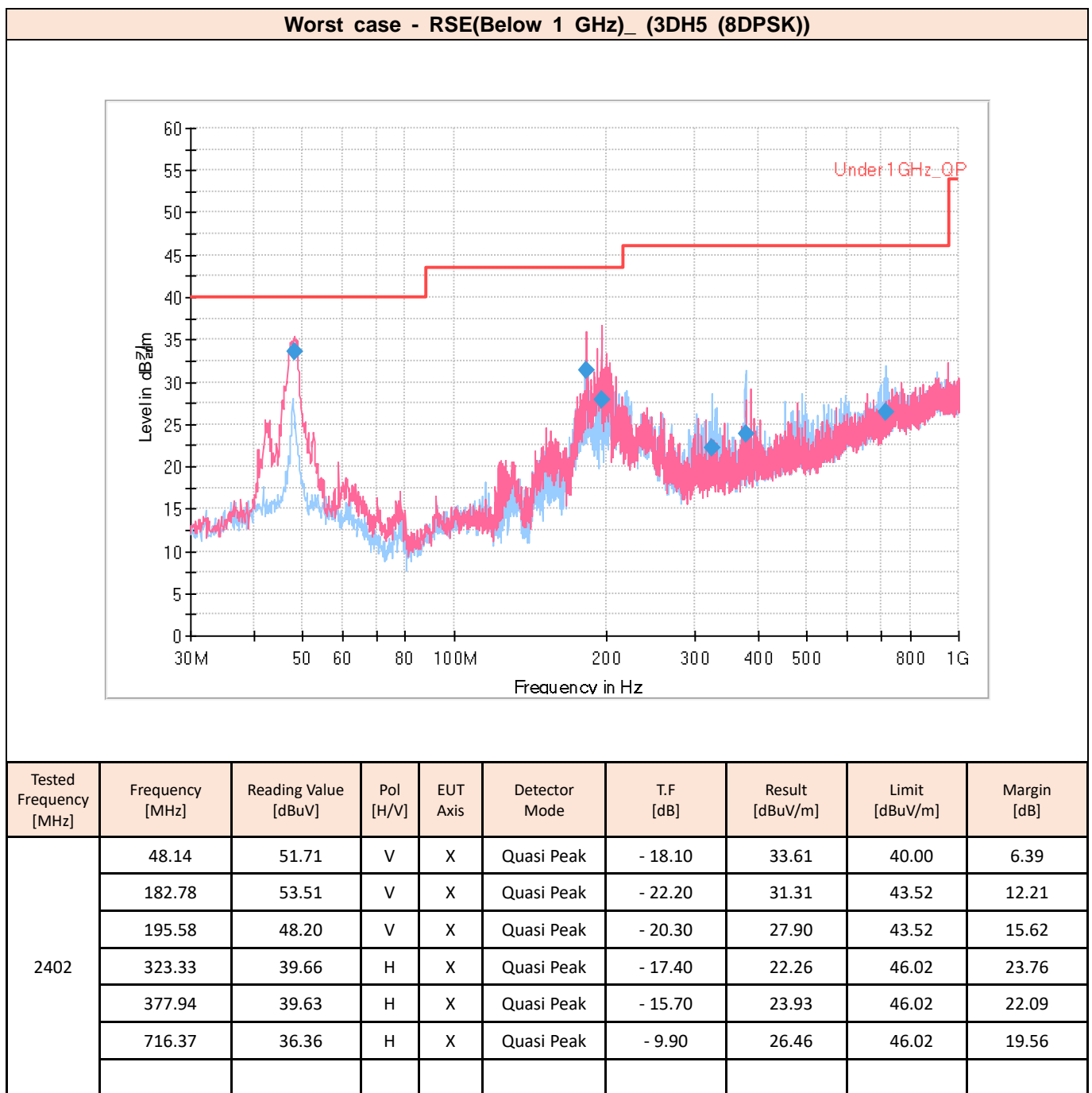
[Conducted Spurious Emission]

3.7.4 Test Result of Radiated Spurious Emission

Remarks

1. Quasi Peak(dBμV/m) = Quasi Peak Reading Value(dBμV/m) + Correction Factor(dB)
2. Total Factor(dB) = T.F (dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin(dB) = (Quasi Peak) Result (dBμV/m) – (Quasi Peak) Limit (dBμV/m)
4. Measurement Distance = 3 m.
6. DCCF = Duty Cycle Correction Factor.
7. No other spurious and harmonic emissions were found greater than listed emissions on above table

3.7.4.1 Radiated Emissions (Below 1 GHz)





3.7.4.2 Radiated Emissions (Above 1 GHz)

TM 1 (DH5 / GFSK) _ 12 V

Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBuV]	Pol [H/V]	EUT Axis	Detector Mode	DCCF [dB]	T.F [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]
2402	2 388.69	46.26	V	X	Peak	0.00	3.05	49.31	74.00	24.69
	2 388.69	46.26	V	X	Average	-24.81	3.05	24.50	54.00	29.50
	4 804.03	52.28	V	X	Peak	0.00	4.57	56.85	74.00	17.15
	4 804.03	52.28	V	X	Average	-24.81	4.57	32.05	54.00	21.95
	7 205.68	44.06	V	X	Peak	0.00	7.84	51.90	74.00	22.10
	7 205.68	44.06	V	X	Average	-24.81	7.84	27.09	54.00	26.91
2440	4 880.43	51.56	V	X	Peak	0.00	5.12	56.68	74.00	17.32
	4 880.43	51.56	V	X	Average	-24.81	5.12	31.88	54.00	22.12
	7 319.09	45.14	V	X	Peak	0.00	7.91	53.05	74.00	20.95
	7 319.09	45.14	V	X	Average	-24.81	7.91	28.25	54.00	25.75
2480	2 485.01	45.67	V	X	Peak	0.00	3.44	49.11	74.00	24.89
	2 485.01	45.67	V	X	Average	-24.81	3.44	24.30	54.00	29.70
	4 959.94	52.85	V	X	Peak	0.00	5.34	58.19	74.00	15.81
	4 959.94	52.85	V	X	Average	-24.81	5.34	33.38	54.00	20.62
	7 440.51	47.28	V	X	Peak	0.00	8.17	55.45	74.00	18.55
	7 440.51	47.28	V	X	Average	-24.81	8.17	30.65	54.00	23.35

TM 1 (DH5 / GFSK) _ 24 V

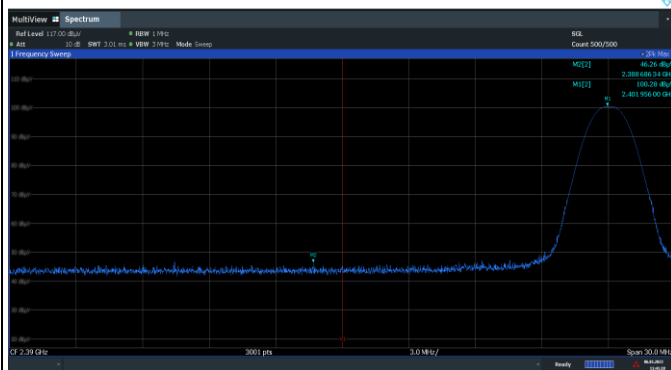
Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBuV]	Pol [H/V]	EUT Axis	Detector Mode	DCCF [dB]	T.F [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]
2402	2 389.52	45.87	V	X	Peak	0.00	3.05	48.92	74.00	25.08
	2 389.52	45.87	V	X	Average	-24.81	3.05	24.12	54.00	29.88
	4 804.06	54.34	V	X	Peak	0.00	4.57	58.91	74.00	15.09
	4 804.06	54.34	V	X	Average	-24.81	4.57	34.11	54.00	19.89
	7 205.90	44.64	V	X	Peak	0.00	7.84	52.48	74.00	21.52
	7 205.90	44.64	V	X	Average	-24.81	7.84	27.68	54.00	26.32
2440	4 879.76	51.60	V	X	Peak	0.00	5.12	56.72	74.00	17.28
	4 879.76	51.60	V	X	Average	-24.81	5.12	31.91	54.00	22.09
	7 320.51	44.94	V	X	Peak	0.00	7.92	52.86	74.00	21.14
	7 320.51	44.94	V	X	Average	-24.81	7.92	28.05	54.00	25.95
2480	2 485.20	45.28	V	X	Peak	0.00	3.44	48.72	74.00	25.28
	2 485.20	45.28	V	X	Average	-24.81	3.44	23.91	54.00	30.09
	4 960.30	52.79	V	X	Peak	0.00	5.34	58.13	74.00	15.87
	4 960.30	52.79	V	X	Average	-24.81	5.34	33.32	54.00	20.68
	7 440.16	47.24	V	X	Peak	0.00	8.17	55.41	74.00	18.59
	7 440.16	47.24	V	X	Average	-24.81	8.17	30.61	54.00	23.39



DH5 / GFSK

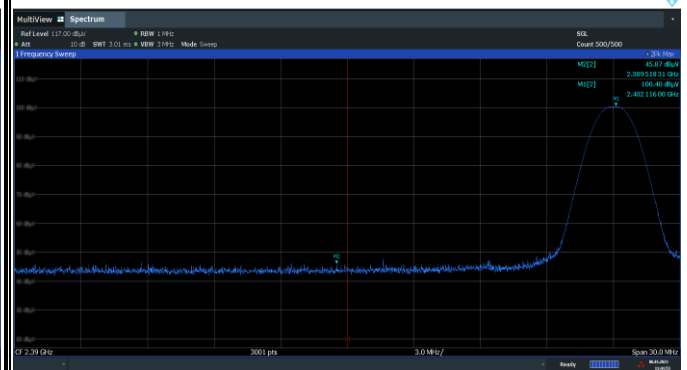
12 V

Bandedge_2 402 MHz

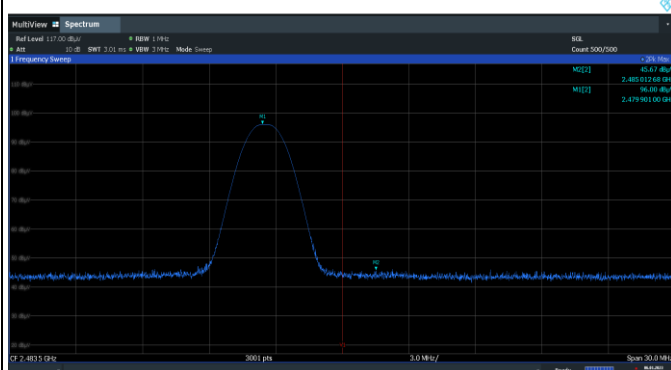


24 V

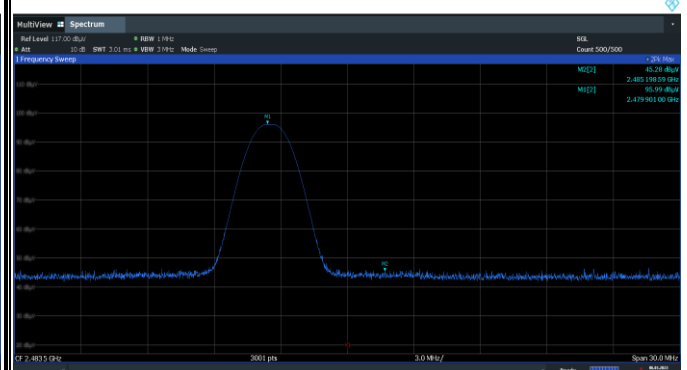
Bandedge_2 402 MHz



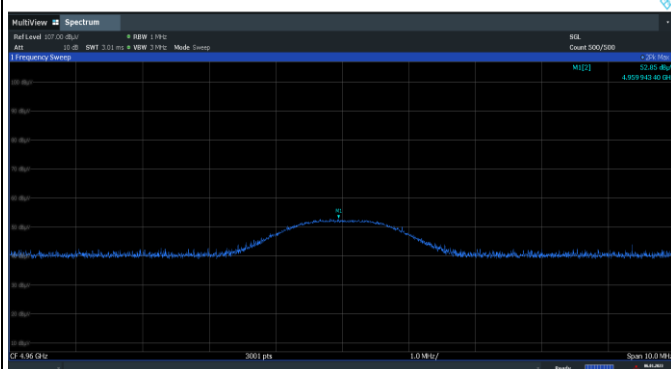
Bandedge_2 480 MHz



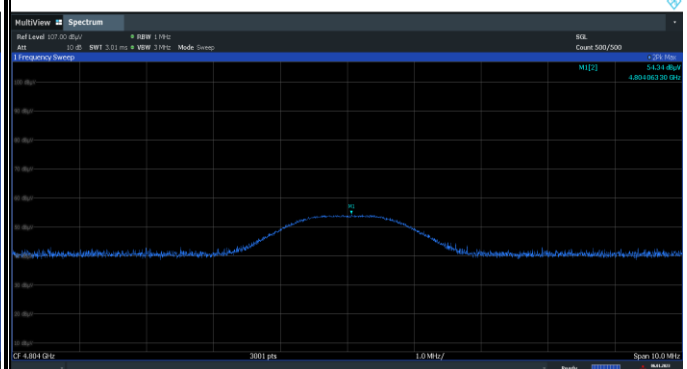
Bandedge_2 480 MHz



Spurious _ Worst case



Spurious _ Worst case





TM 2 (2DH5 / π /4DQPSK) _ 12 V

Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBuV]	Pol [H/V]	EUT Axis	Detector Mode	DCCF [dB]	T.F [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]
2402	2 389.69	45.47	V	X	Peak	0.00	3.05	48.52	74.00	25.48
	2 389.69	45.47	V	X	Average	-24.78	3.05	23.75	54.00	30.25
	4 803.68	54.25	V	X	Peak	0.00	4.57	58.82	74.00	15.18
	4 803.68	54.25	V	X	Average	-24.78	4.57	34.04	54.00	19.96
	7 205.35	45.27	V	X	Peak	0.00	7.84	53.11	74.00	20.89
	7 205.35	45.27	V	X	Average	-24.78	7.84	28.33	54.00	25.67
2440	4 879.67	51.49	V	X	Peak	0.00	5.12	56.61	74.00	17.39
	4 879.67	51.49	V	X	Average	-24.78	5.12	31.83	54.00	22.17
	7 319.67	45.84	V	X	Peak	0.00	7.91	53.75	74.00	20.25
	7 319.67	45.84	V	X	Average	-24.78	7.91	28.98	54.00	25.02
2480	2 484.88	46.52	V	X	Peak	0.00	3.44	49.96	74.00	24.04
	2 484.88	46.52	V	X	Average	-24.78	3.44	25.18	54.00	28.82
	4 959.92	52.60	V	X	Peak	0.00	5.34	57.94	74.00	16.06
	4 959.92	52.60	V	X	Average	-24.78	5.34	33.16	54.00	20.84
	7 439.68	47.38	V	X	Peak	0.00	8.17	55.55	74.00	18.45
	7 439.68	47.38	V	X	Average	-24.78	8.17	30.77	54.00	23.23

TM 2 (2DH5 / π /4DQPSK) _ 24 V

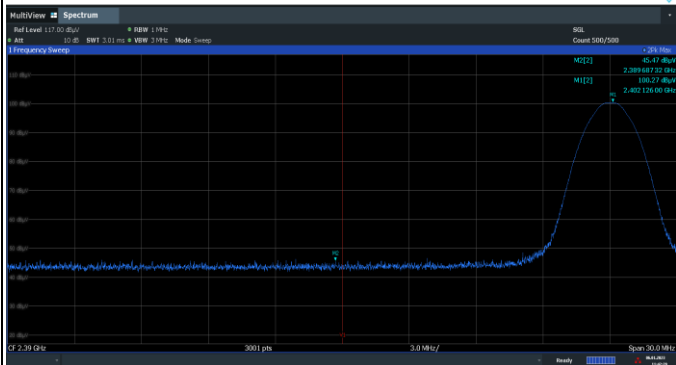
Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBuV]	Pol [H/V]	EUT Axis	Detector Mode	DCCF [dB]	T.F [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]
2402	2 388.94	45.65	V	X	Peak	0.00	3.05	48.70	74.00	25.30
	2 388.94	45.65	V	X	Average	-24.78	3.05	23.92	54.00	30.08
	4 804.41	54.21	V	X	Peak	0.00	4.58	58.79	74.00	15.21
	4 804.41	54.21	V	X	Average	-24.78	4.58	34.01	54.00	19.99
	7 206.31	45.49	V	X	Peak	0.00	7.84	53.33	74.00	20.67
	7 206.31	45.49	V	X	Average	-24.78	7.84	28.56	54.00	25.44
2440	4 880.36	51.19	V	X	Peak	0.00	5.12	56.31	74.00	17.69
	4 880.36	51.19	V	X	Average	-24.78	5.12	31.54	54.00	22.46
	7 320.55	45.79	V	X	Peak	0.00	7.92	53.71	74.00	20.29
	7 320.55	45.79	V	X	Average	-24.78	7.92	28.93	54.00	25.07
2480	2 383.73	46.38	V	X	Peak	0.00	3.04	49.42	74.00	24.58
	2 383.73	46.38	V	X	Average	-24.78	3.04	24.64	54.00	29.36
	4 959.66	52.49	V	X	Peak	0.00	5.34	57.83	74.00	16.17
	4 959.66	52.49	V	X	Average	-24.78	5.34	33.05	54.00	20.95
	7 440.46	47.46	V	X	Peak	0.00	8.17	55.63	74.00	18.37
	7 440.46	47.46	V	X	Average	-24.78	8.17	30.86	54.00	23.14



2DH5 / $\pi/4$ DQPSK

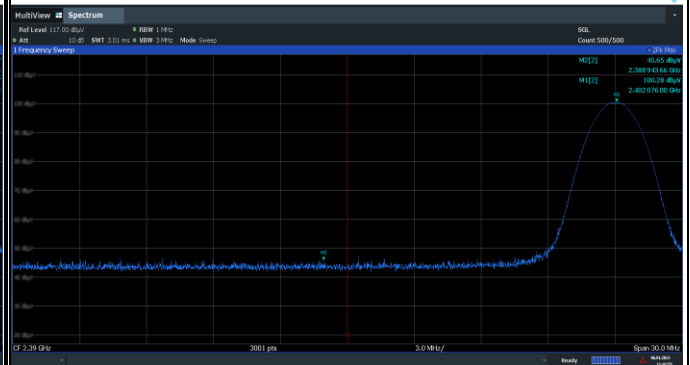
12 V

Bandedge_2 402 MHz

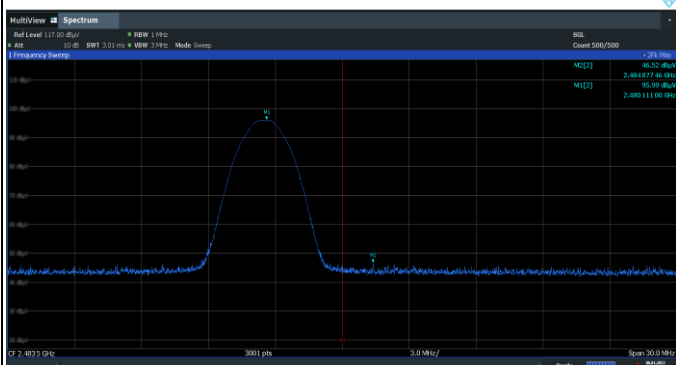


24 V

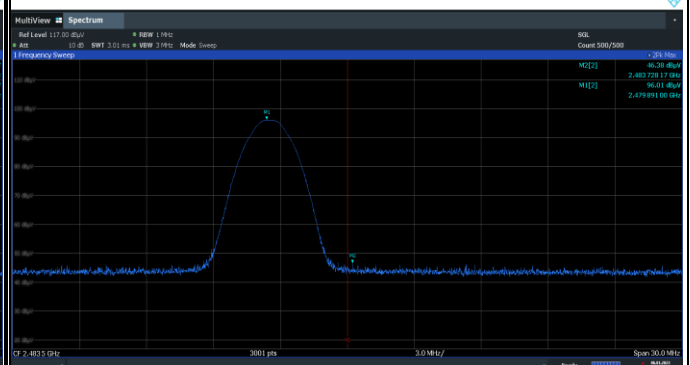
Bandedge_2 402 MHz



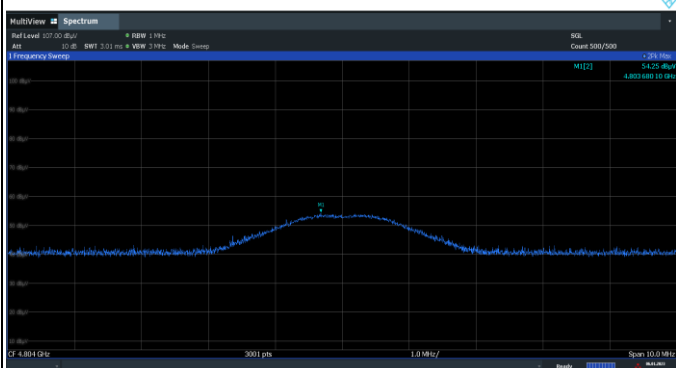
Bandedge_2 480 MHz



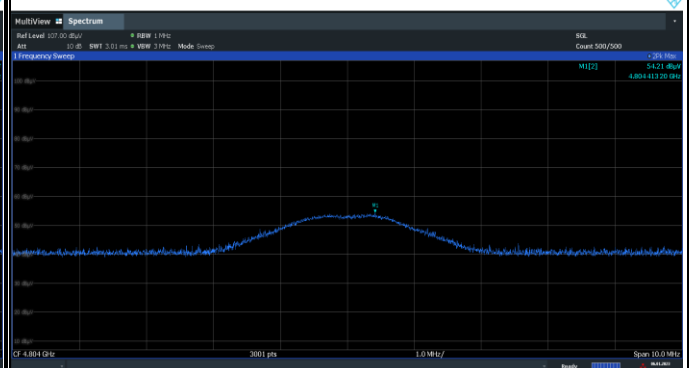
Bandedge_2 480 MHz



Spurious _ Worst case



Spurious _ Worst case





TM 3 (3DH5 / 8DPSK) _ 12 V

Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBuV]	Pol [H/V]	EUT Axis	Detector Mode	DCCF [dB]	T.F [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]
2402	2 389.76	44.90	V	X	Peak	0.00	3.05	47.95	74.00	26.05
	2 389.76	44.90	V	X	Average	-24.76	3.05	23.19	54.00	30.81
	4 803.77	49.32	V	X	Peak	0.00	4.57	53.89	74.00	20.11
	4 803.77	49.32	V	X	Average	-24.76	4.57	29.13	54.00	24.87
	7 322.75	41.48	V	X	Peak	0.00	7.92	49.40	74.00	24.60
	7 322.75	41.48	V	X	Average	-24.76	7.92	24.64	54.00	29.36
2440	4 879.81	50.93	V	X	Peak	0.00	5.12	56.05	74.00	17.95
	4 879.81	50.93	V	X	Average	-24.76	5.12	31.29	54.00	22.71
	7 319.65	45.40	V	X	Peak	0.00	7.91	53.31	74.00	20.69
	7 319.65	45.40	V	X	Average	-24.76	7.91	28.55	54.00	25.45
2480	2 484.41	45.78	V	X	Peak	0.00	3.43	49.21	74.00	24.79
	2 484.41	45.78	V	X	Average	-24.76	3.43	24.45	54.00	29.55
	4 960.46	52.27	V	X	Peak	0.00	5.34	57.61	74.00	16.39
	4 960.46	52.27	V	X	Average	-24.76	5.34	32.85	54.00	21.15
	7 440.16	47.33	V	X	Peak	0.00	8.17	55.50	74.00	18.50
	7 440.16	47.33	V	X	Average	-24.76	8.17	30.74	54.00	23.26

TM 3 (3DH5 / 8DPSK) _ 24 V

Tested Frequency [MHz]	Frequency [MHz]	Reading Value [dBuV]	Pol [H/V]	EUT Axis	Detector Mode	DCCF [dB]	T.F [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]
2402	2 389.91	46.30	V	X	Peak	0.00	3.05	49.35	74.00	24.65
	2 389.91	46.30	V	X	Average	-24.76	3.05	24.59	54.00	29.41
	4 804.43	49.85	V	X	Peak	0.00	4.58	54.43	74.00	19.57
	4 804.43	49.85	V	X	Average	-24.76	4.58	29.66	54.00	24.34
	7 320.45	42.57	V	X	Peak	0.00	7.92	50.49	74.00	23.51
	7 320.45	42.57	V	X	Average	-24.76	7.92	25.72	54.00	28.28
2440	4 879.95	50.97	V	X	Peak	0.00	5.12	56.09	74.00	17.91
	4 879.95	50.97	V	X	Average	-24.76	5.12	31.33	54.00	22.67
	7 319.89	45.35	V	X	Peak	0.00	7.91	53.26	74.00	20.74
	7 319.89	45.35	V	X	Average	-24.76	7.91	28.50	54.00	25.50
2480	2 484.28	45.95	V	X	Peak	0.00	3.43	49.38	74.00	24.62
	2 484.28	45.95	V	X	Average	-24.76	3.43	24.62	54.00	29.38
	4 960.40	52.29	V	X	Peak	0.00	5.34	57.63	74.00	16.37
	4 960.40	52.29	V	X	Average	-24.76	5.34	32.87	54.00	21.13
	7 440.28	47.10	V	X	Peak	0.00	8.17	55.27	74.00	18.73
	7 440.28	47.10	V	X	Average	-24.76	8.17	30.51	54.00	23.49

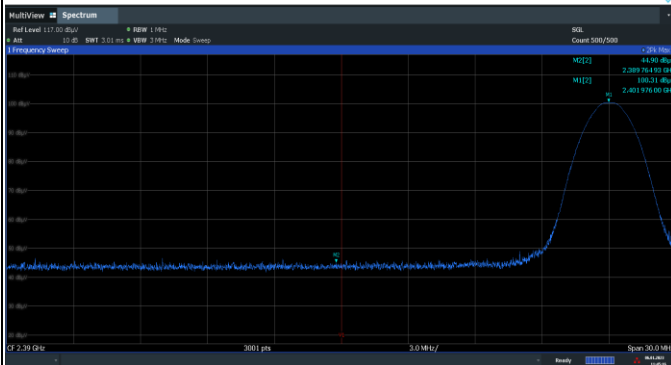


BUREAU
VERITAS

3DH5 / 8DPSK

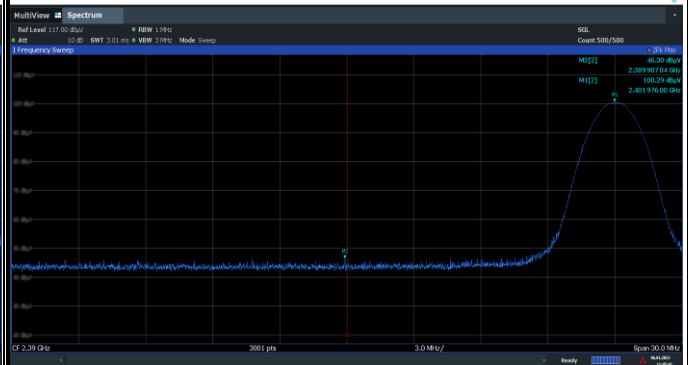
12 V

Bandedge_2 402 MHz

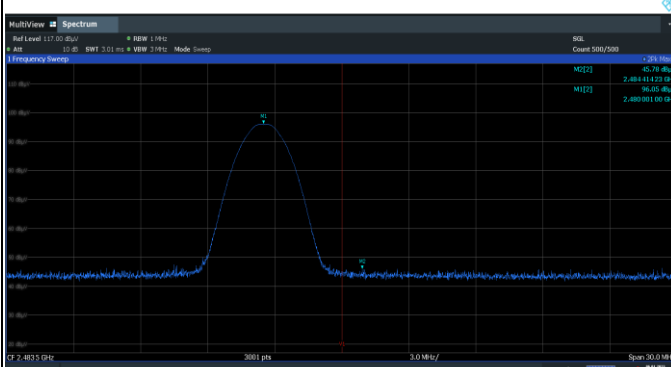


24 V

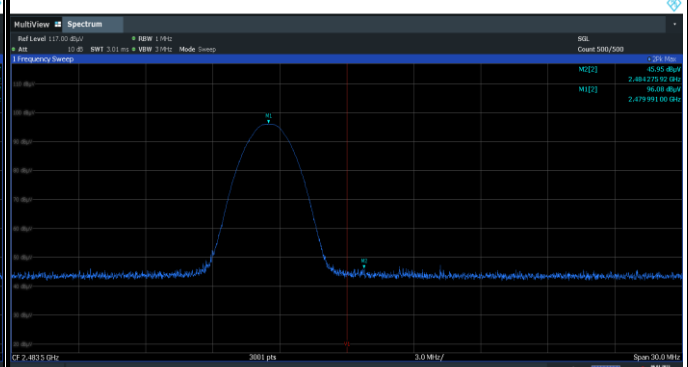
Bandedge_2 402 MHz



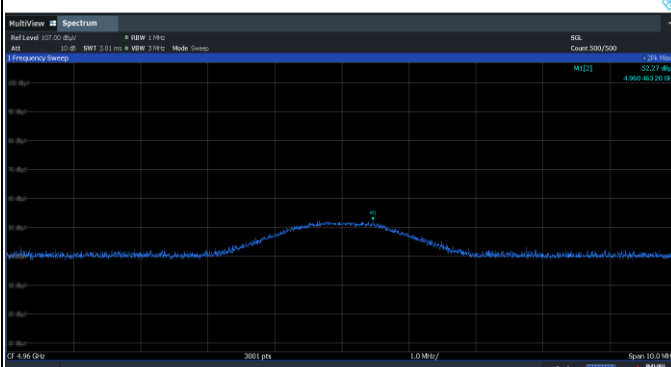
Bandedge_2 480 MHz



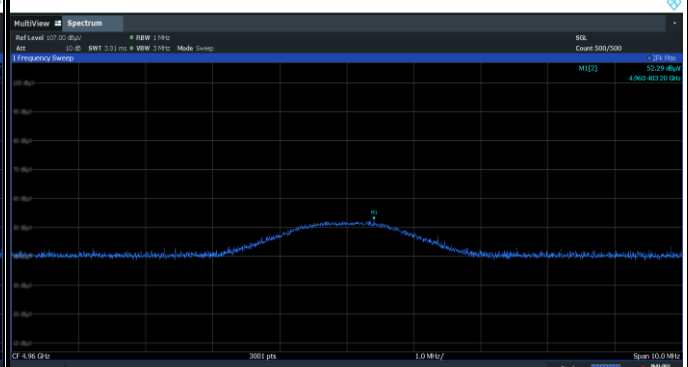
Bandedge_2 480 MHz



Spurious _ Worst case



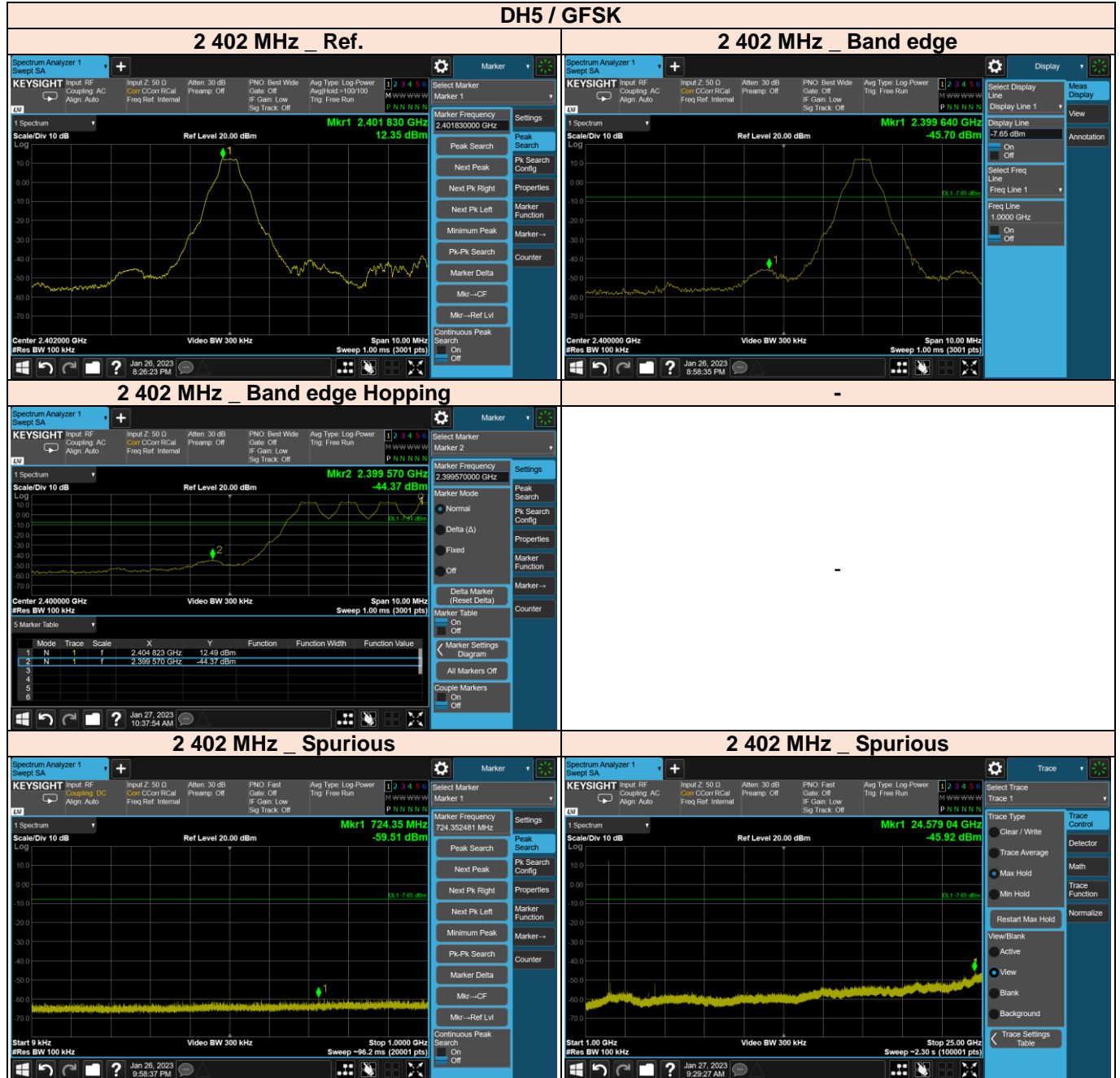
Spurious _ Worst case





3.7.5 Test Result of Conducted Spurious Emission

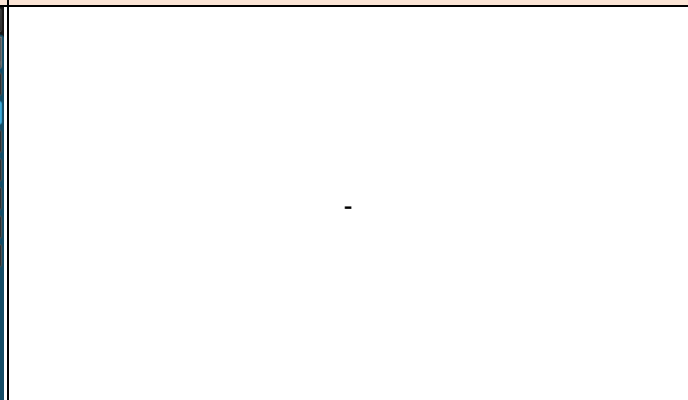
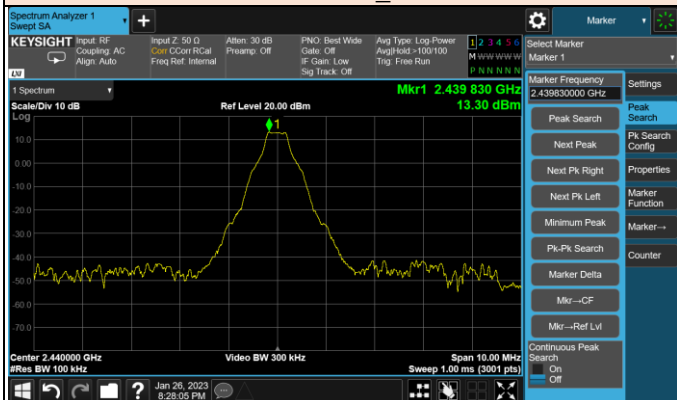
[DC 12 V Spurious Emission]



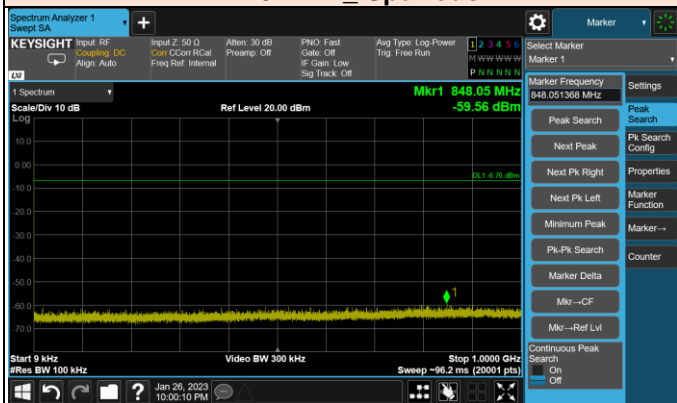


DH5 / GFSK

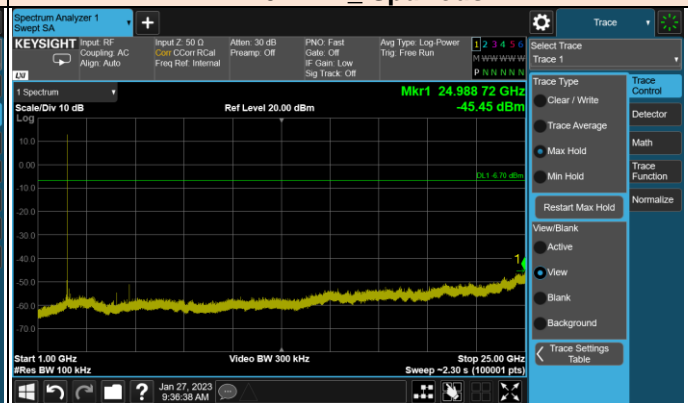
2 440 MHz _ Ref.



2 440 MHz _ Spurious



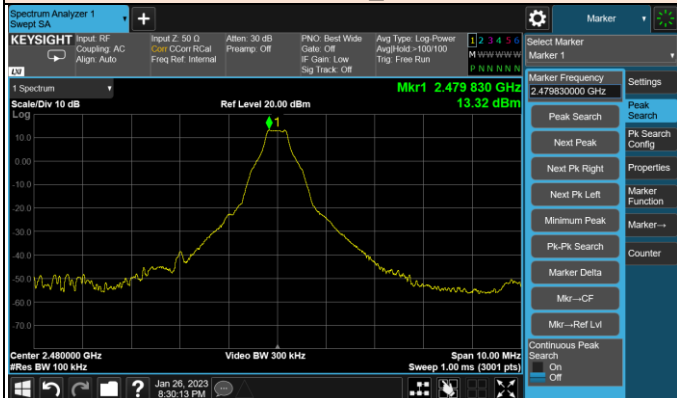
2 440 MHz _ Spurious



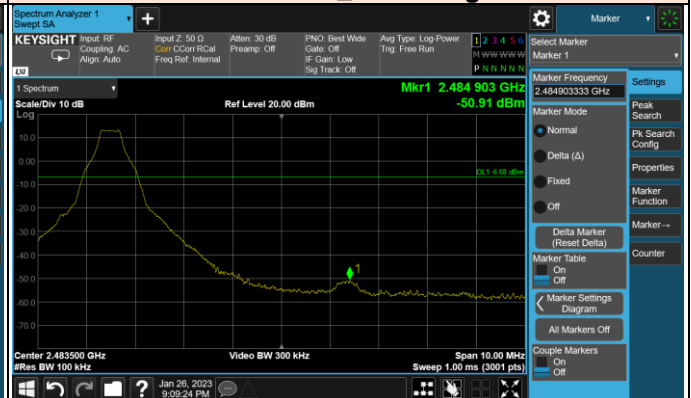


DH5 / GFSK

2 480 MHz _ Ref.



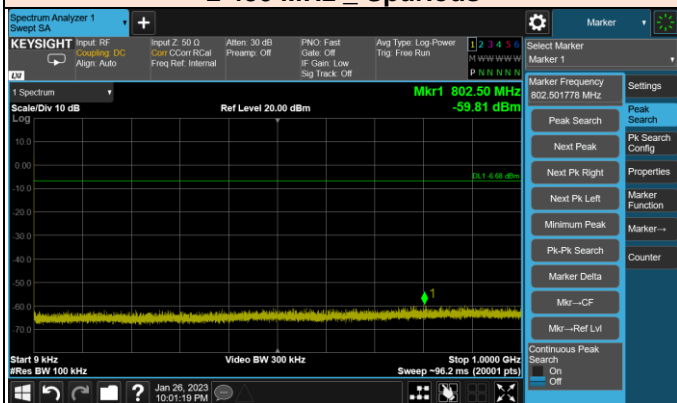
2 480 MHz _ Band edge



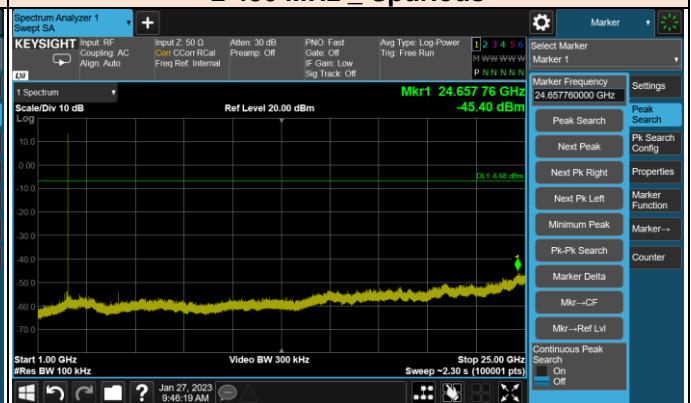
2 480 MHz _ Band edge Hopping



2 480 MHz _ Spurious



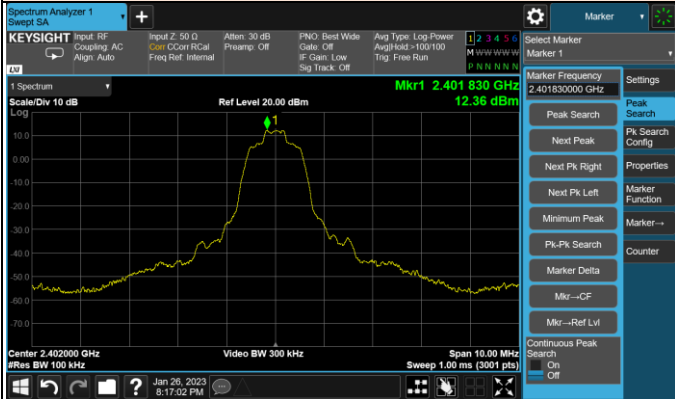
2 480 MHz _ Spurious



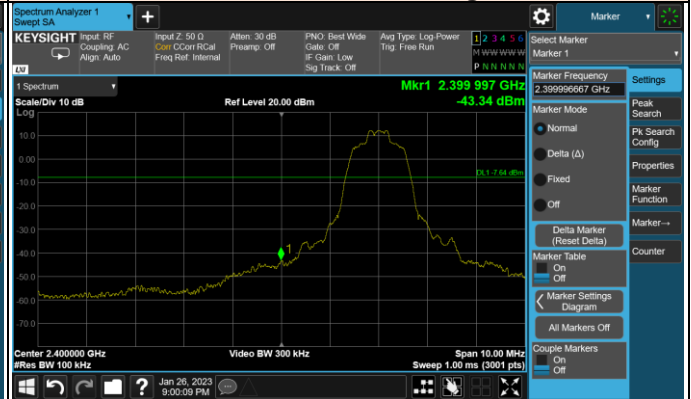


2DH5 / $\pi/4$ DQPSK

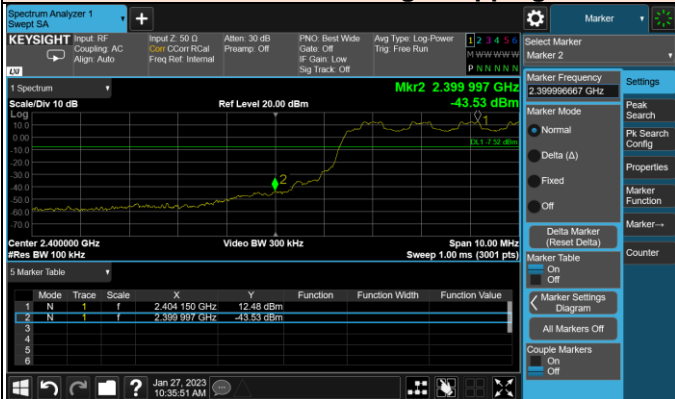
2 402 MHz _ Ref.



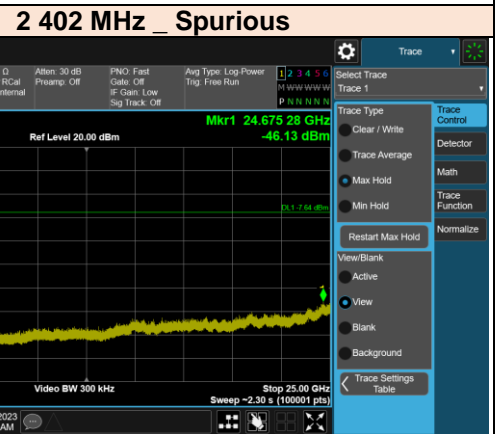
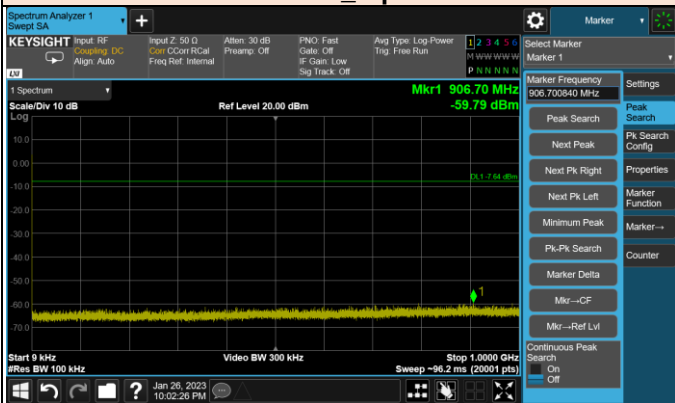
2 402 MHz _ Band edge



2 402 MHz _ Band edge Hopping



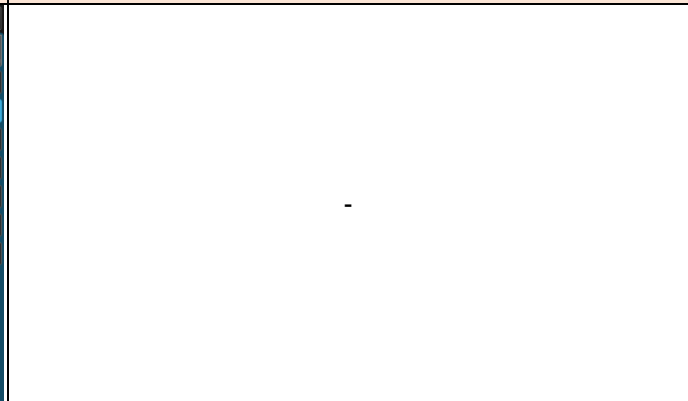
2 402 MHz _ Spurious



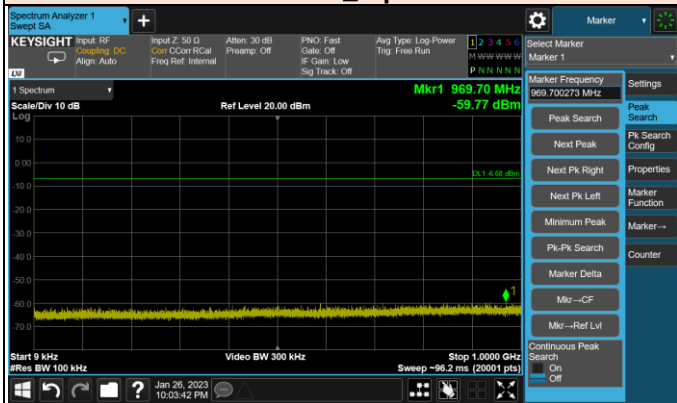


2DH5 / π /4DQPSK

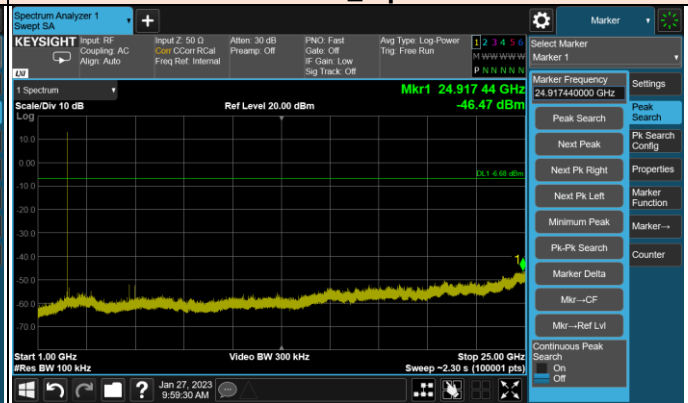
2 440 MHz _ Ref.



2 440 MHz _ Spurious



2 440 MHz _ Spurious

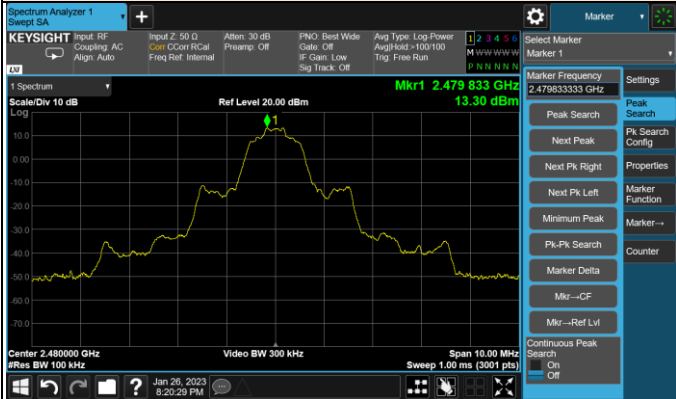




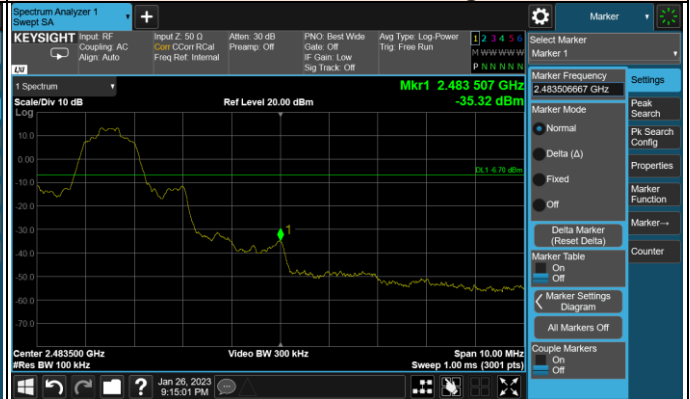
BUREAU VERITAS

2DH5 / $\pi/4$ DQPSK

2 480 MHz _ Ref.



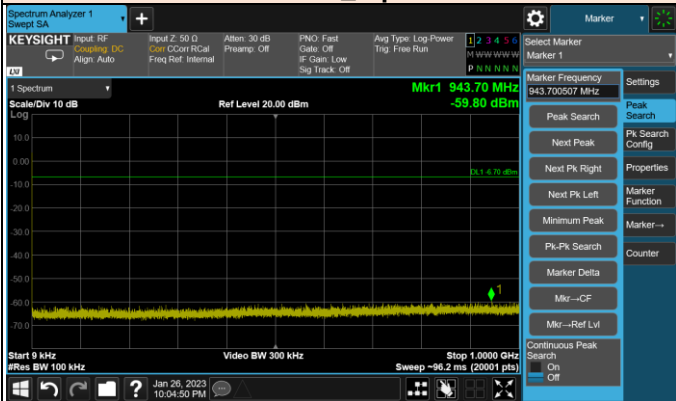
2 480 MHz _ Band edge



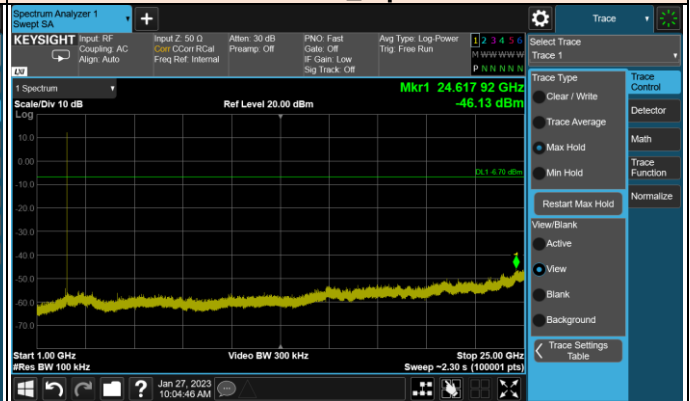
2 480 MHz _ Band edge Hopping



2 480 MHz _ Spurious



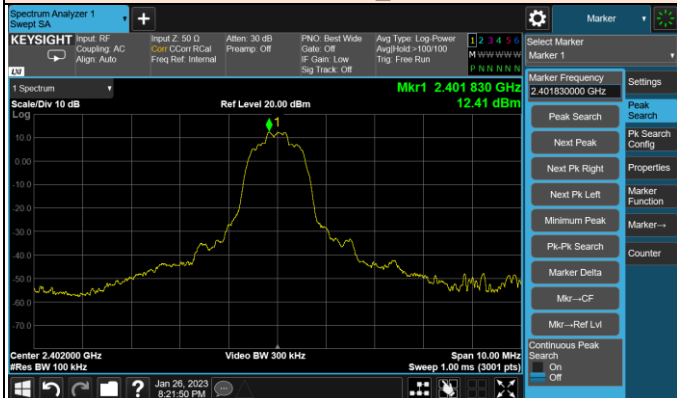
2 480 MHz _ Spurious



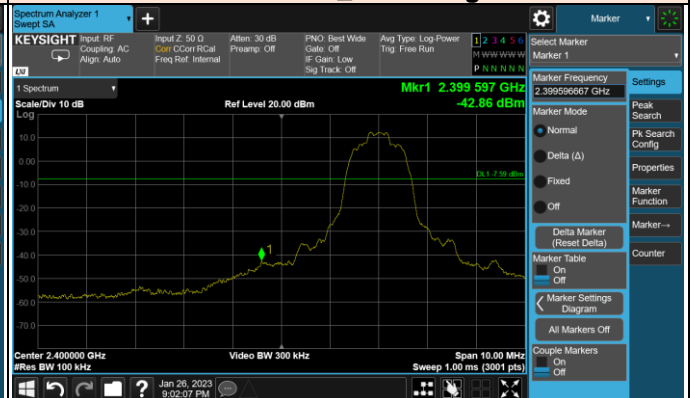


3DH5 / 8DPSK

2 402 MHz _ Ref.



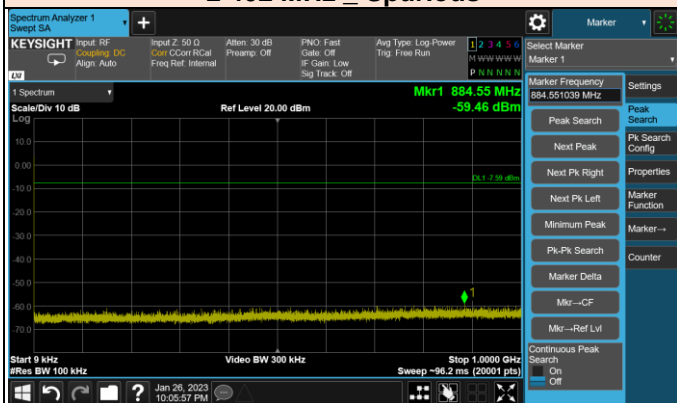
2 402 MHz _ Band edge



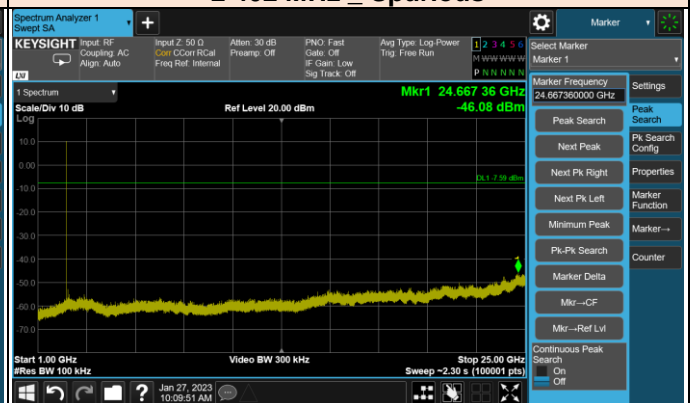
2 402 MHz _ Band edge Hopping



2 402 MHz _ Spurious



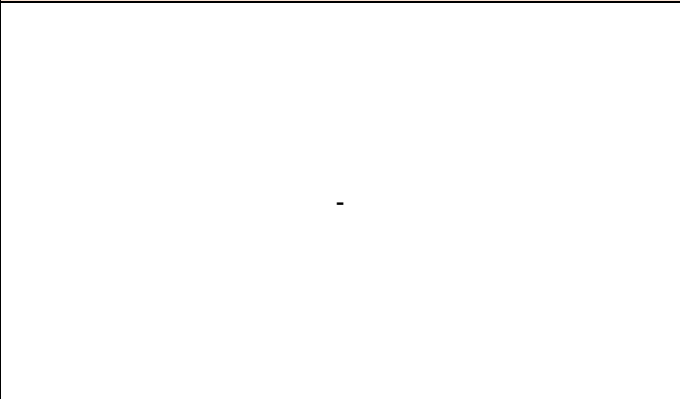
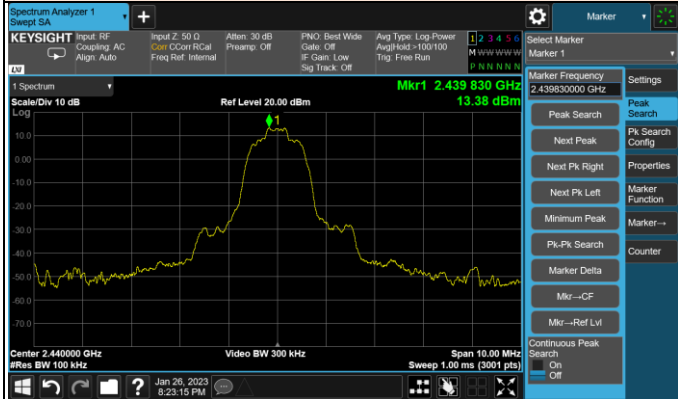
2 402 MHz _ Spurious



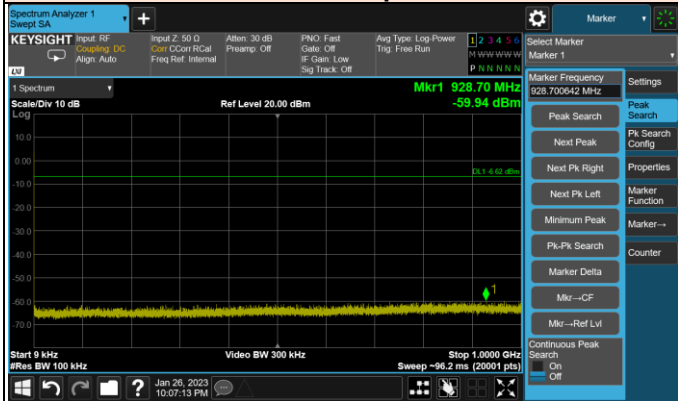


3DH5 / 8DPSK

2 440 MHz _ Ref.



2 440 MHz _ Spurious



2 440 MHz _ Spurious

