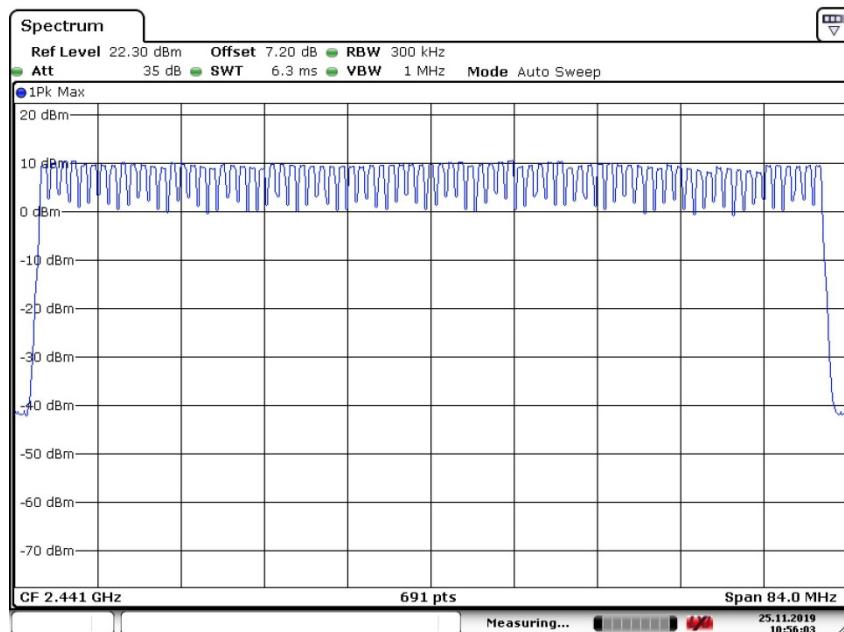


Number of Hopping Frequencies

Offset 7.2dB = Power Divider 6dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

Op-mode	Result
Hopping mode	79



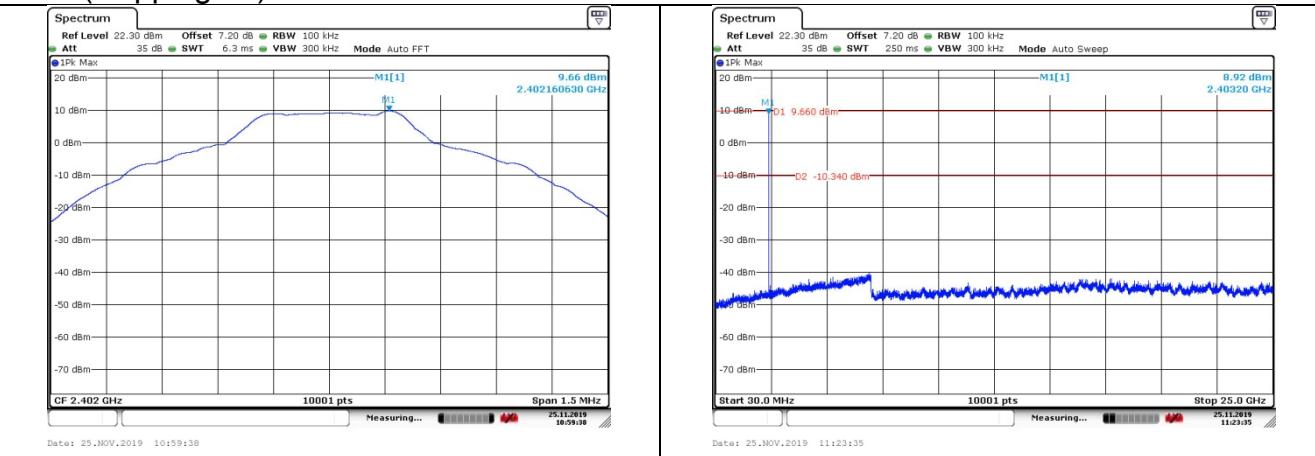
Op-mode: Hopping mode

Conducted out of band emission measurement

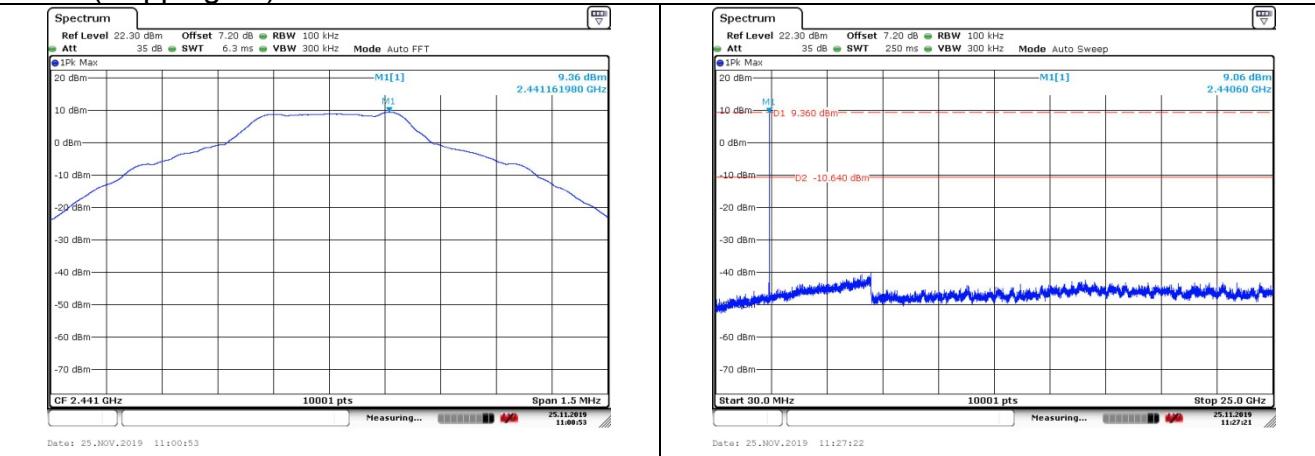
Offset 7.2dB = Power Divider 6dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

GFSK

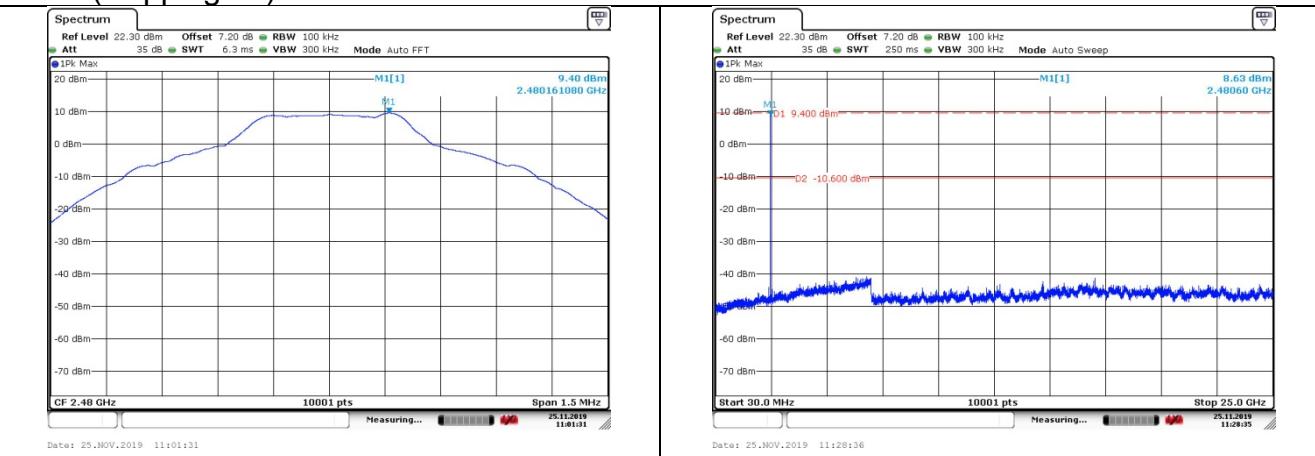
CH0 (Hopping off)



CH39(Hopping off)

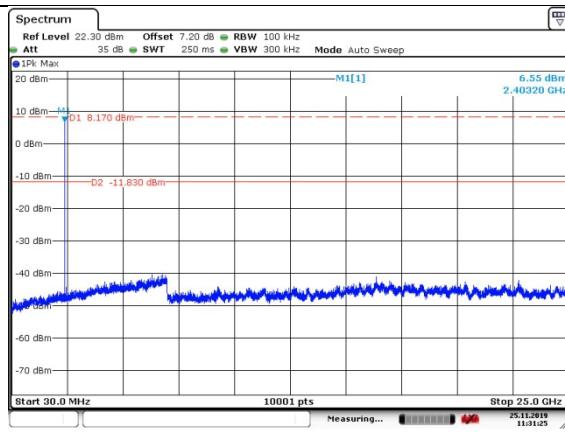
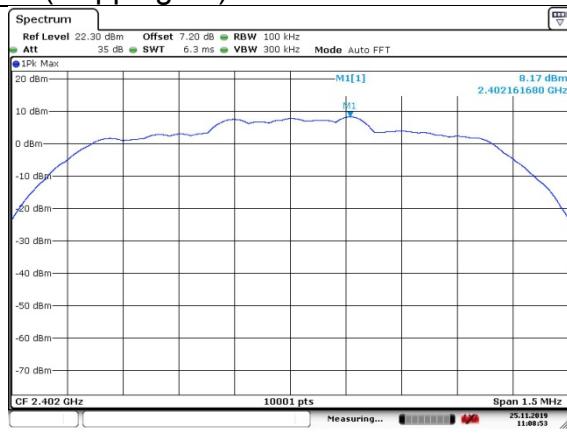


CH78(Hopping off)

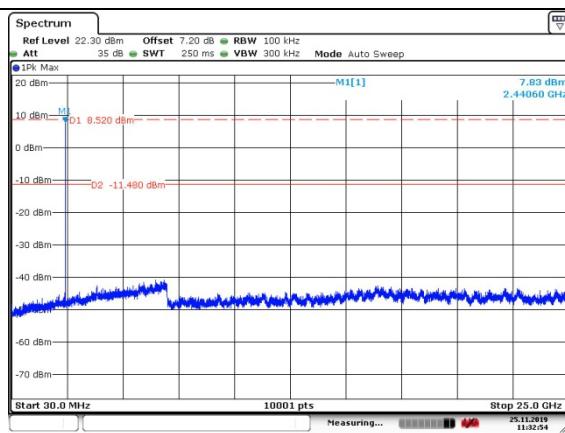
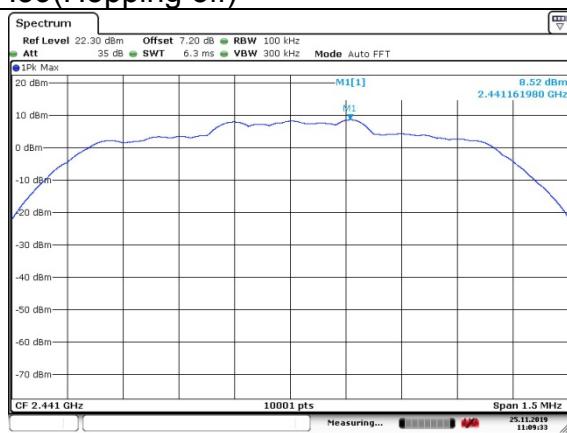


π/4DQPSK

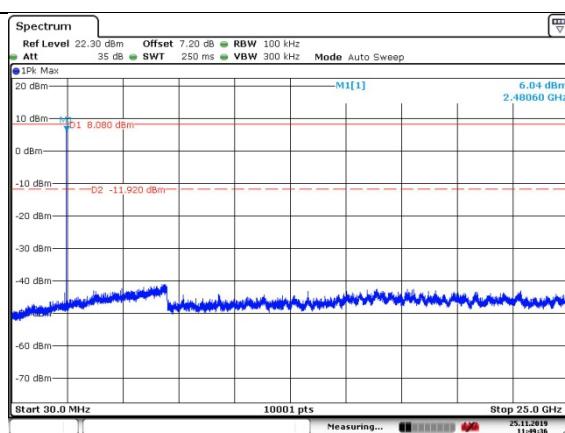
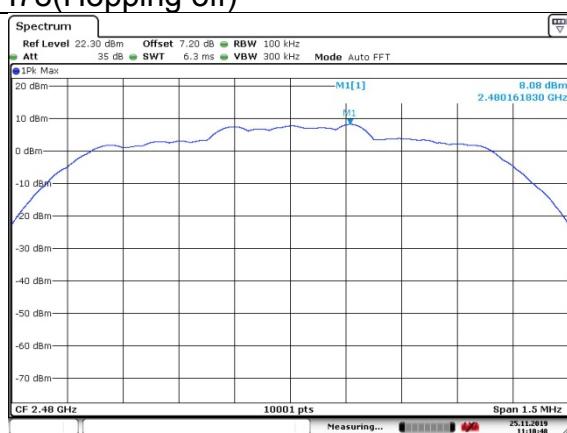
CH0 (Hopping off)



CH39(Hopping off)

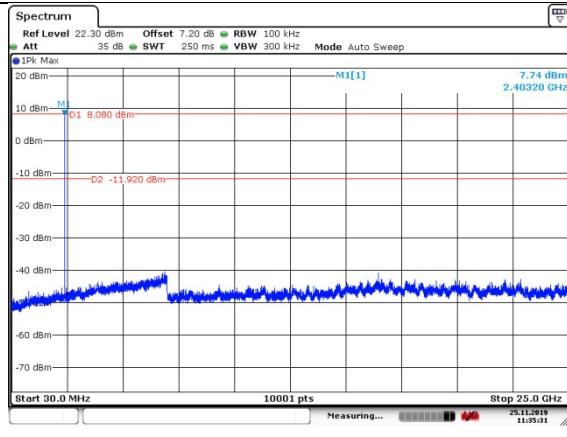
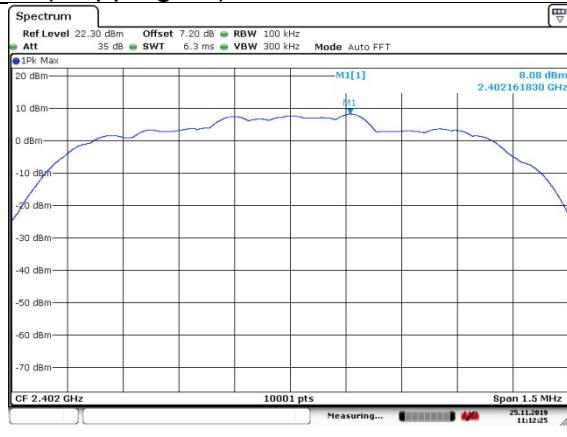


CH78(Hopping off)

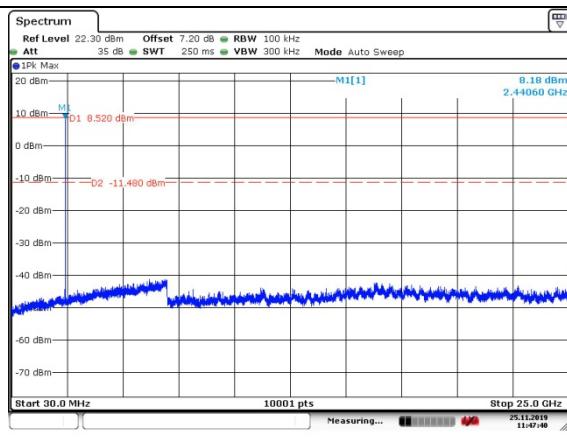
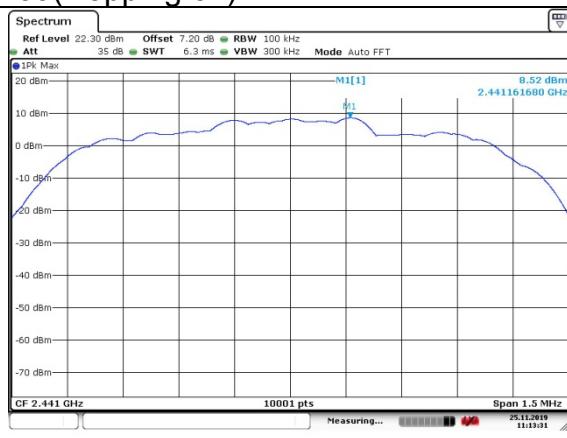


8DPSK

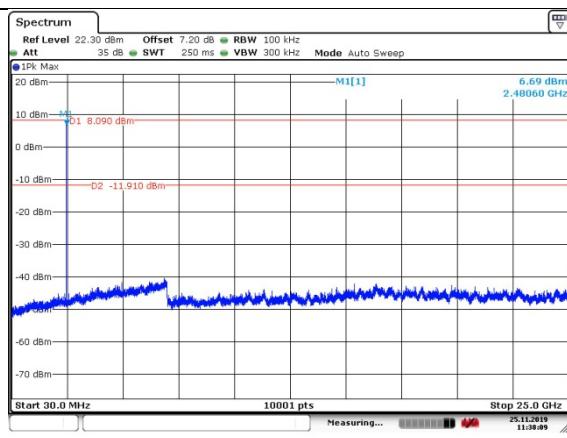
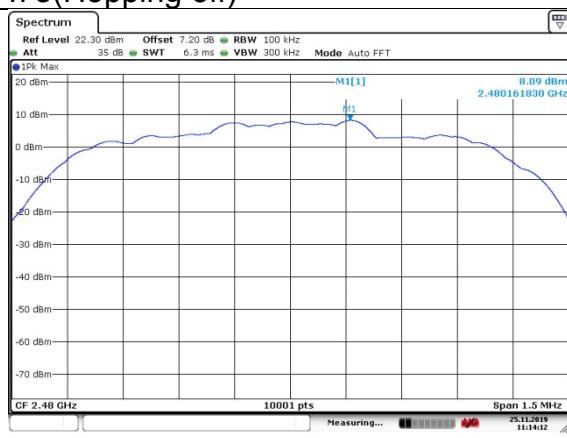
CH0 (Hopping off)



CH39(Hopping off)



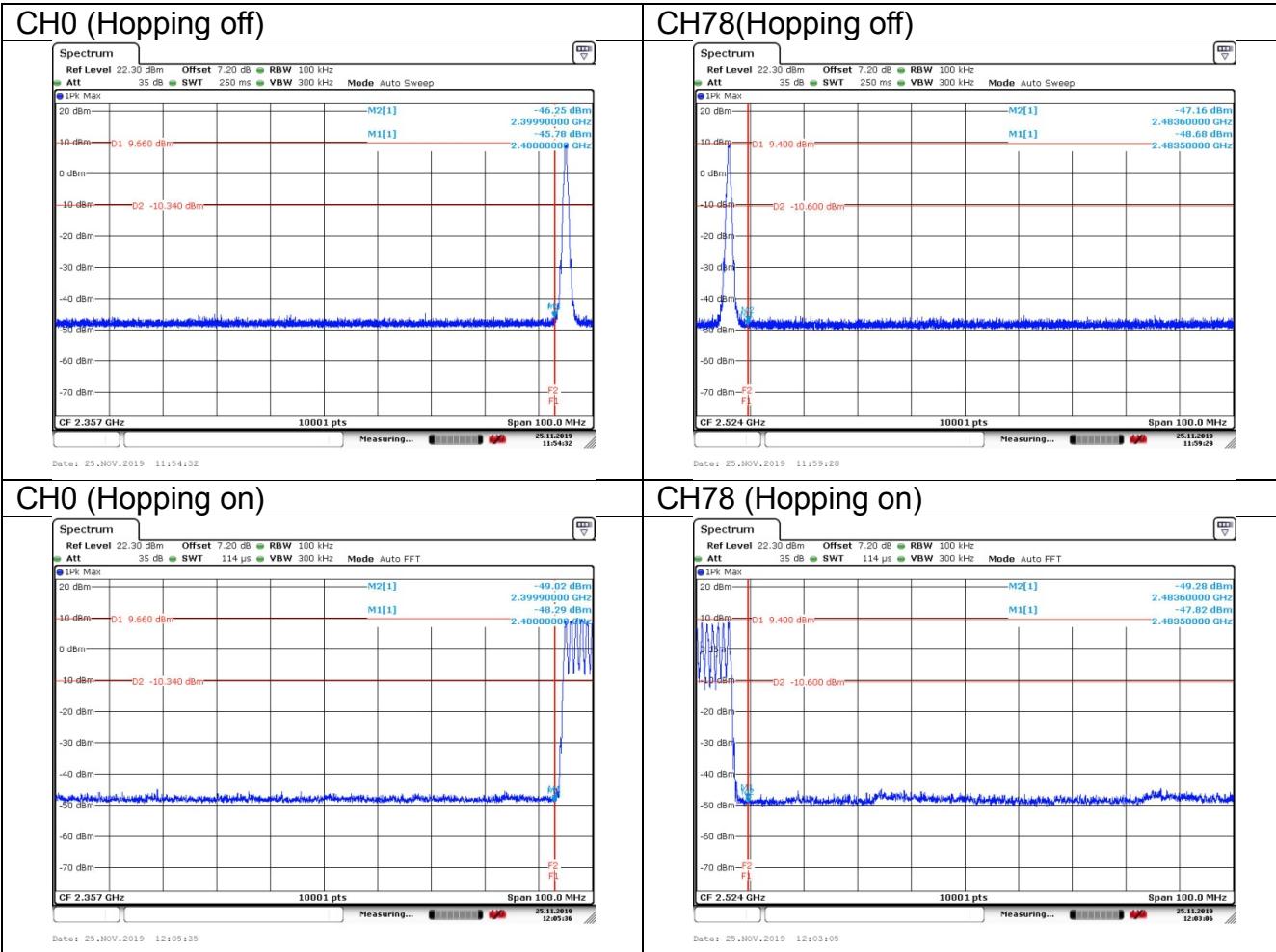
CH78(Hopping off)



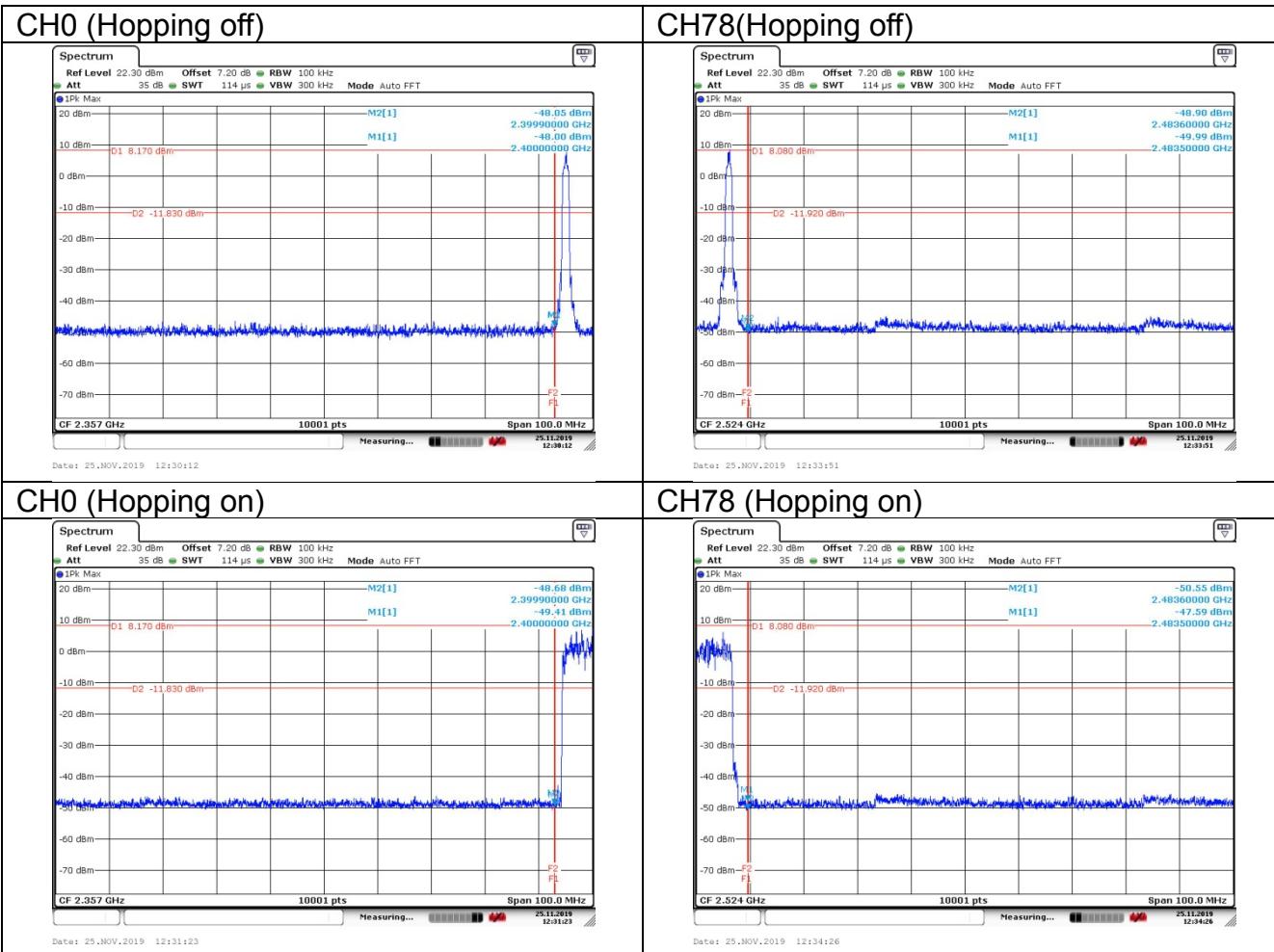
Band Edge measurement

Offset 7.2dB = Power Divider 6dB+ Temporary antenna connector loss 0.2dB+ Cable loss 1.0dB

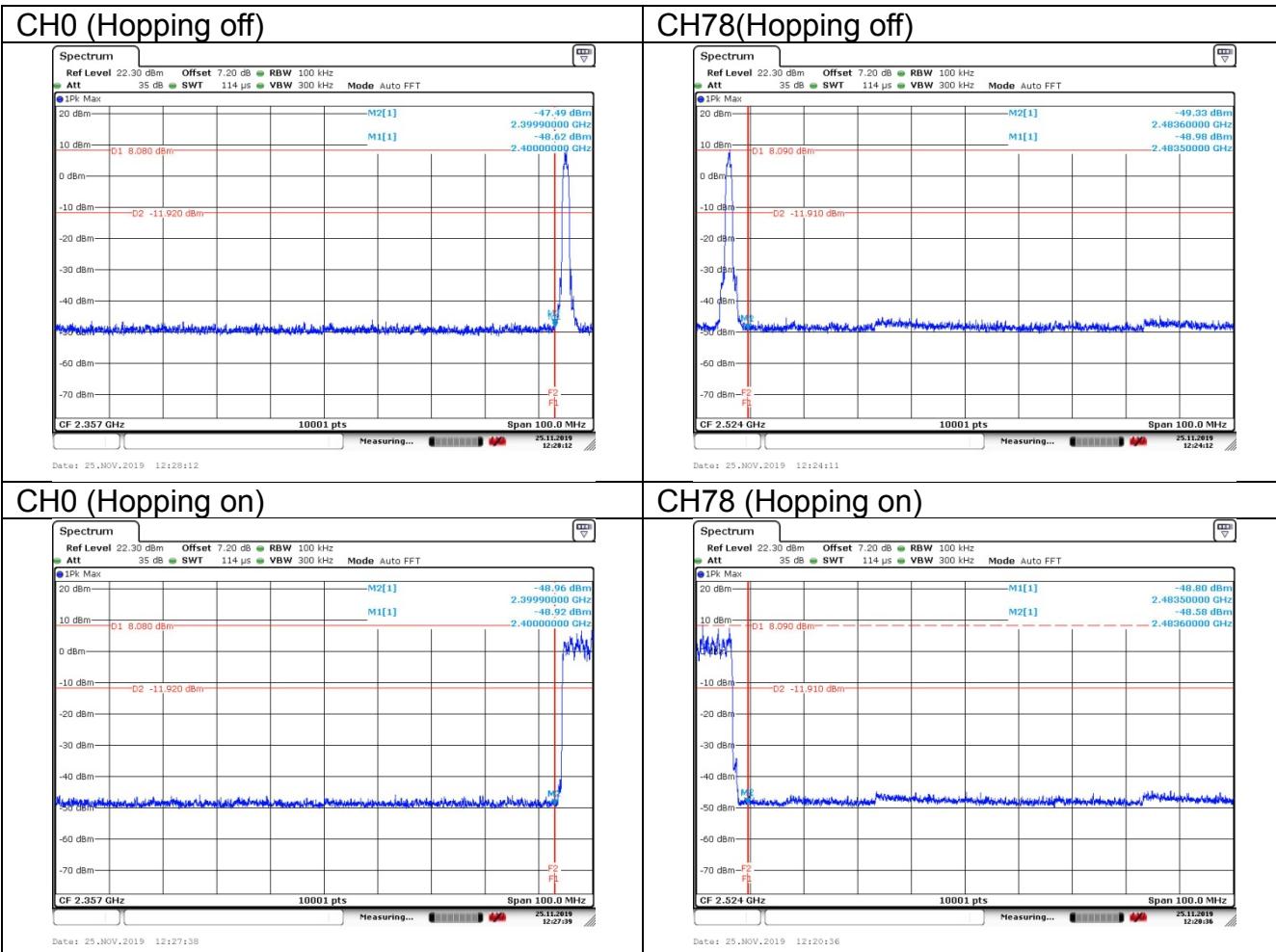
GFSK



$\pi/4$ DQPSK



8DPSK



APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Emission Band Edge

The worst case attitude: The eut lay down.

The measurement results are obtained as described below:

Measure Level = Reading Level + cable loss + antenna factor

Sample calculation: (96.87 dB_{uV/m}) = (62.87 dB_{μV}) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2402MHz.

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dB _{uV/m})	Reading Level (dB _{uV})	Over Limit (dB)	Limit (dB _{uV/m})	cable loss (dB)	antenna factor (dB)
1	2402	96.87	62.87	N/A	N/A	8.90	25.10
2	2390	56.42	22.42	-17.58	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dB _{uV/m})	Reading Level (dB _{uV})	Over Limit (dB)	Limit (dB _{uV/m})	cable loss (dB)	antenna factor (dB)
1	2402	91.38	57.38	N/A	N/A	8.90	25.10
2	2390	52.55	18.55	-21.45	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	86.59	52.59	N/A	N/A	8.90	25.10
2	2390	46.30	12.30	-7.70	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	87.11	53.11	N/A	N/A	8.90	25.10
2	2390	45.89	11.89	-8.11	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	94.67	60.67	N/A	N/A	8.90	25.10
2	2483.5	56.74	22.74	-17.26	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	89.65	55.65	N/A	N/A	8.90	25.10
2	2483.5	52.14	18.14	-21.86	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	88.43	54.43	N/A	N/A	8.90	25.10
2	2483.5	46.08	12.08	-7.92	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: GFSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	86.47	52.47	N/A	N/A	8.90	25.10
2	2483.5	44.75	10.75	-9.25	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: π/4DQPSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	94.35	60.35	N/A	N/A	8.90	25.10
2	2390	56.08	22.08	-17.92	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: π/4DQPSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	91.15	57.15	N/A	N/A	8.90	25.10
2	2390	54.84	20.84	-19.16	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: π/4DQPSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	88.25	54.25	N/A	N/A	8.90	25.10
2	2390	44.88	10.88	-9.12	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: π/4DQPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	84.34	50.34	N/A	N/A	8.90	25.10
2	2390	44.69	10.69	-9.31	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: π/4DQPSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level	Reading Level	Over Limit	Limit (dBuV/m)	cable loss	antenna factor

		(dBuV/m)	(dBuV)	(dB)		(dB)	(dB)
1	2480	95.19	61.19	N/A	N/A	8.90	25.10
2	2483.5	58.35	24.35	-15.65	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: π/4DQPSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	90.89	56.89	N/A	N/A	8.90	25.10
2	2483.5	53.30	19.30	-20.70	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: π/4DQPSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	86.08	52.08	N/A	N/A	8.90	25.10
2	2483.5	45.97	11.97	-8.03	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: π/4DQPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	86.55	52.55	N/A	N/A	8.90	25.10
2	2483.5	45.43	11.43	-8.57	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: 8DPSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	94.00	60.00	N/A	N/A	8.90	25.10

2	2390	59.23	25.23	-14.77	74.00	8.90	25.10
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Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	90.96	56.96	N/A	N/A	8.90	25.10
2	2390	53.13	19.13	-20.87	74.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: 8DPSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	85.94	51.94	N/A	N/A	8.90	25.10
2	2390	45.41	11.41	-8.59	54.00	8.90	25.10

Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	84.96	50.96	N/A	N/A	8.90	25.10
2	2390	45.46	11.46	-8.54	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Vertical

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	94.40	60.40	N/A	N/A	8.90	25.10
2	2483.5	57.13	23.13	-16.87	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Peak

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	90.68	56.68	N/A	N/A	8.90	25.10
2	2483.5	55.32	21.32	-18.68	74.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Vertical

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	86.47	52.47	N/A	N/A	8.90	25.10
2	2483.5	45.10	11.10	-8.90	54.00	8.90	25.10

Carrier frequency (MHz): 2480

Channel No.:78

Test Mode: 8DPSK

Polarity: Horizontal

Detector: Average

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2480	86.54	52.54	N/A	N/A	8.90	25.10
2	2483.5	45.66	11.66	-8.34	54.00	8.90	25.10

Sample Calculations

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{mea}} + A_{Rpl}$$

Sample calculation: $(26.09 \text{ dB}\mu\text{V/m}) = (47.09 \text{ dB}\mu\text{V}) + (-21.0 \text{ dB/m})$, the corresponding frequency is 30.533500MHz.

The worst case attitude: The eut lay down.

For GFSK

Channel No.:0

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	A_{Rpl} (dB)	P_{mea} (dBuV/m)
30.533500	26.09	40.00	Vertical	-21.0	47.09
33.977000	15.02	40.00	Vertical	-20.0	35.02
67.830000	27.68	40.00	Vertical	-21.0	48.68
84.514000	19.86	40.00	Vertical	-22.4	42.26
171.862500	23.56	43.50	Vertical	-20.5	44.06
905.231000	19.64	46.00	Vertical	-1.4	21.04

For π/4DQPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
30.873000	24.40	40.00	Vertical	-20.9	45.30
68.266500	28.05	40.00	Vertical	-21.1	49.15
85.969000	19.36	40.00	Vertical	-21.9	41.26
171.523000	23.62	40.00	Vertical	-20.6	44.22
173.317500	23.48	43.50	Vertical	-20.5	43.98
936.174000	19.97	46.00	Vertical	-1.0	20.97

For 8DPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
30.291000	26.55	40.00	Vertical	-21.1	47.65
33.298000	17.53	40.00	Vertical	-20.2	37.73
68.169500	28.18	40.00	Vertical	-21.1	49.28
86.163000	18.95	40.00	Vertical	-21.9	40.85
170.989500	23.28	43.50	Vertical	-20.6	43.88
173.366000	23.50	43.50	Vertical	-20.5	44.00

For GFSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
30.000000	26.08	40.00	Vertical	-21.2	47.28
59.536500	16.62	40.00	Vertical	-18.3	34.92
69.382000	28.49	40.00	Vertical	-21.4	49.89
85.920500	19.25	40.00	Vertical	-21.9	41.15
172.008000	23.17	43.50	Vertical	-20.5	43.67
173.220500	23.14	43.50	Vertical	-20.5	43.64

For π/4DQPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
31.552000	21.90	40.00	Vertical	-20.7	42.60
69.236500	28.99	40.00	Vertical	-21.4	50.39
85.047500	19.63	40.00	Vertical	-22.2	41.83
172.832500	22.65	43.50	Vertical	-20.5	43.15
173.996500	22.78	43.50	Vertical	-20.4	43.18
954.507000	20.13	46.00	Vertical	-0.8	20.93

For 8DPSK
Channel No.:39

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
30.921500	22.78	40.00	Vertical	-20.9	43.68
59.342500	17.07	40.00	Vertical	-18.3	35.37
67.927000	28.64	40.00	Vertical	-21.0	49.64
70.934000	28.27	40.00	Vertical	-21.8	50.07
173.899500	22.47	43.50	Vertical	-20.4	42.87
949.220500	19.97	46.00	Vertical	-0.9	20.87

For GFSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
31.503500	21.78	40.00	Vertical	-20.7	42.48
59.924500	16.86	40.00	Vertical	-18.4	35.26
69.576000	28.96	40.00	Vertical	-21.5	50.46
86.308500	19.14	40.00	Vertical	-21.8	40.94
172.638500	22.10	43.50	Vertical	-20.5	42.60
173.899500	22.24	43.50	Vertical	-20.4	42.64

For π/4DQPSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
30.727500	23.00	40.00	Vertical	-20.9	43.90
58.809000	18.05	40.00	Vertical	-18.2	36.25
69.430500	29.27	40.00	Vertical	-21.5	50.77
173.075000	21.82	43.50	Vertical	-20.5	42.32
173.802500	22.06	43.50	Vertical	-20.4	42.46
941.315000	20.03	46.00	Vertical	-1.0	21.03

For 8DPSK
Channel No.:78

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
30.048500	24.66	40.00	Vertical	-21.2	45.86
58.081500	18.49	40.00	Vertical	-18.1	36.59
69.333500	29.49	40.00	Vertical	-21.4	50.89
70.303500	29.21	40.00	Vertical	-21.7	50.91
85.532500	19.22	40.00	Vertical	-22.1	41.32
937.144000	19.88	46.00	Vertical	-1.0	20.88

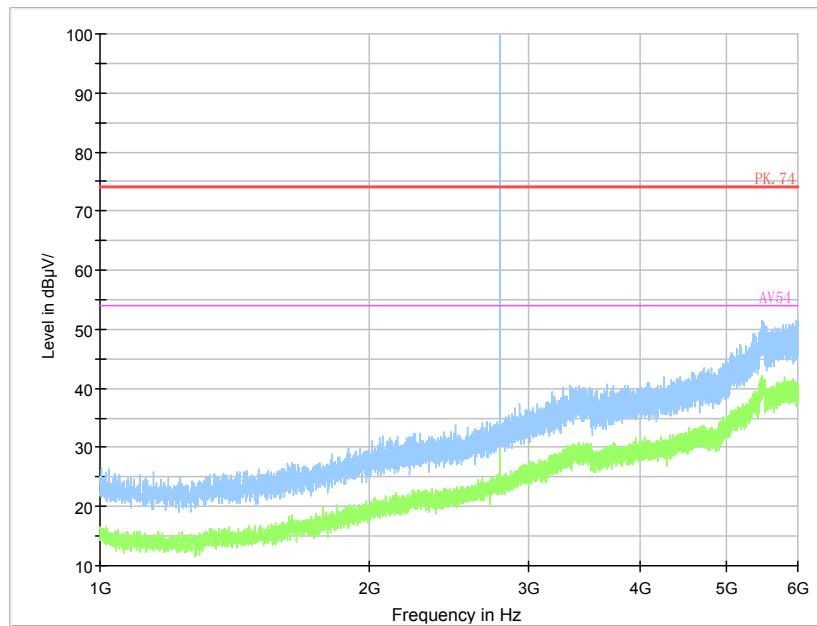
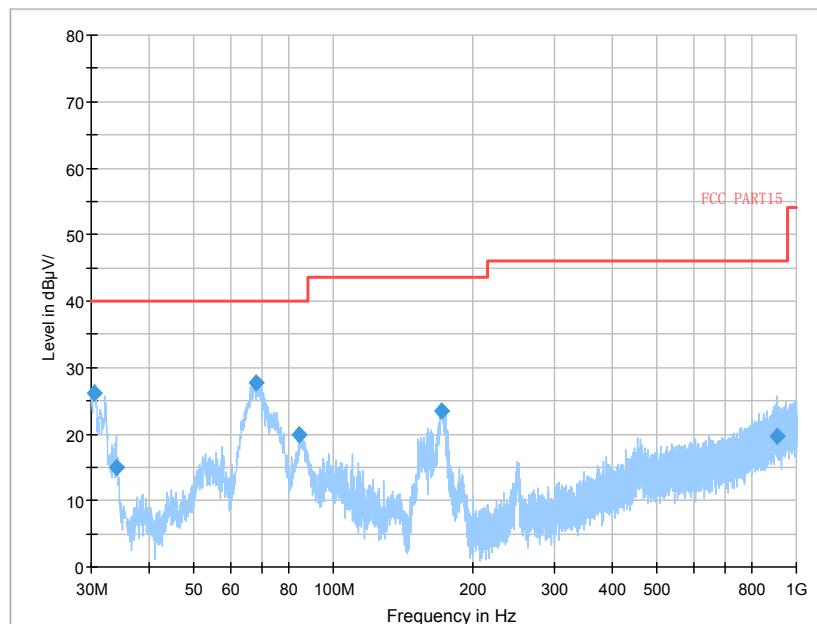
Test with secondary supplyworst point:

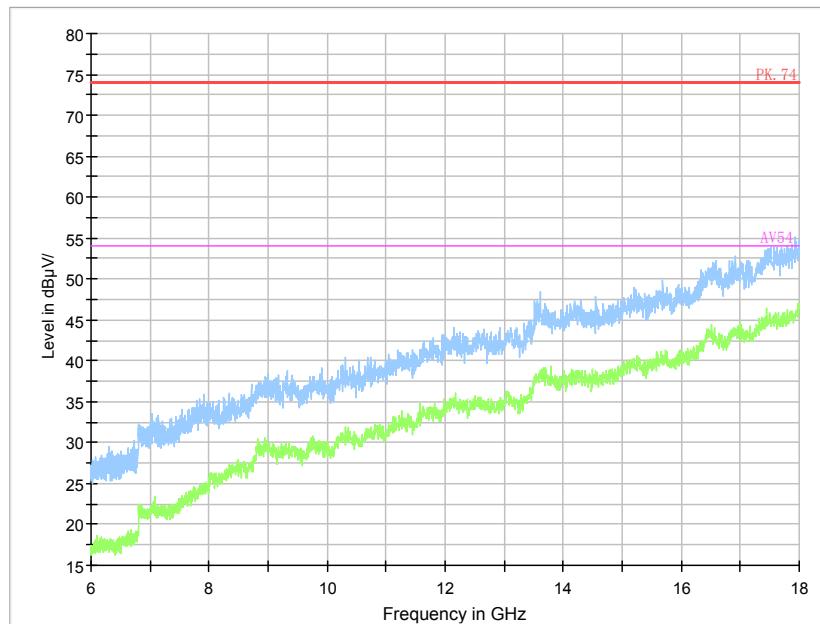
For π/4DQPSK
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Polarity	ARpl (dB)	Pmea (dBuV/m)
53.813500	25.43	40.00	Vertical	-17.6	43.03
55.608000	24.46	40.00	Vertical	-17.8	42.26
66.520500	25.88	40.00	Vertical	-20.5	46.38
70.206500	29.63	40.00	Vertical	-21.7	51.33
82.574000	24.60	40.00	Vertical	-23.1	47.70
153.966000	21.14	43.50	Vertical	-21.4	42.54

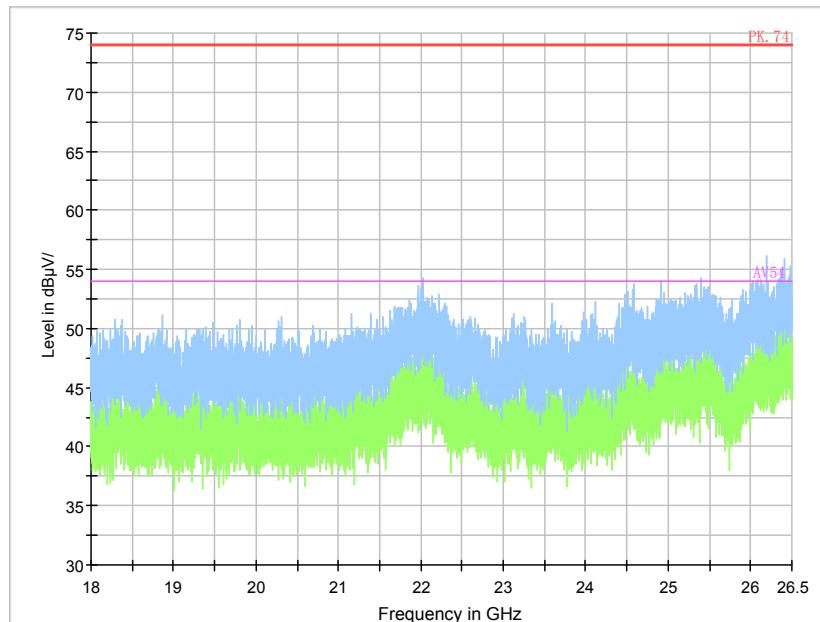
Carrier frequency (MHz): 2402

Channel No.:0

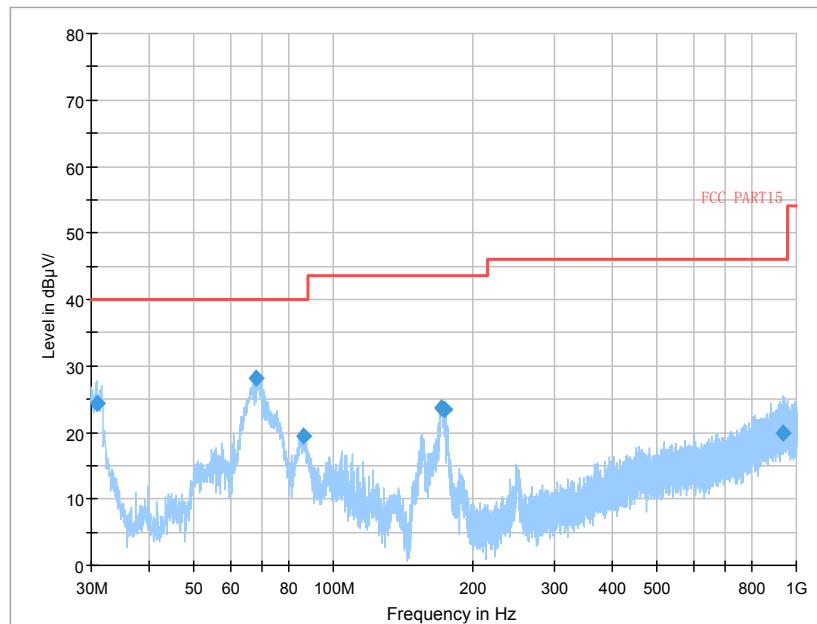




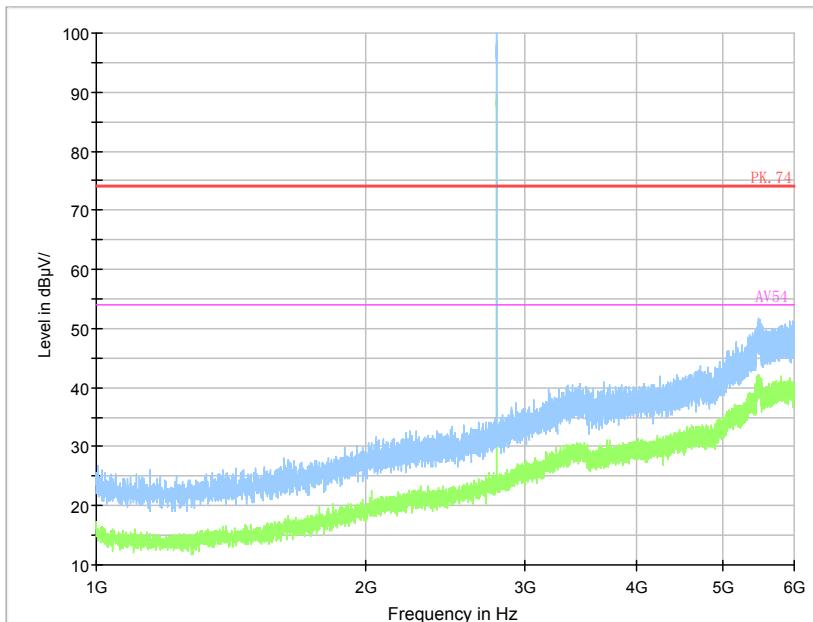
Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK



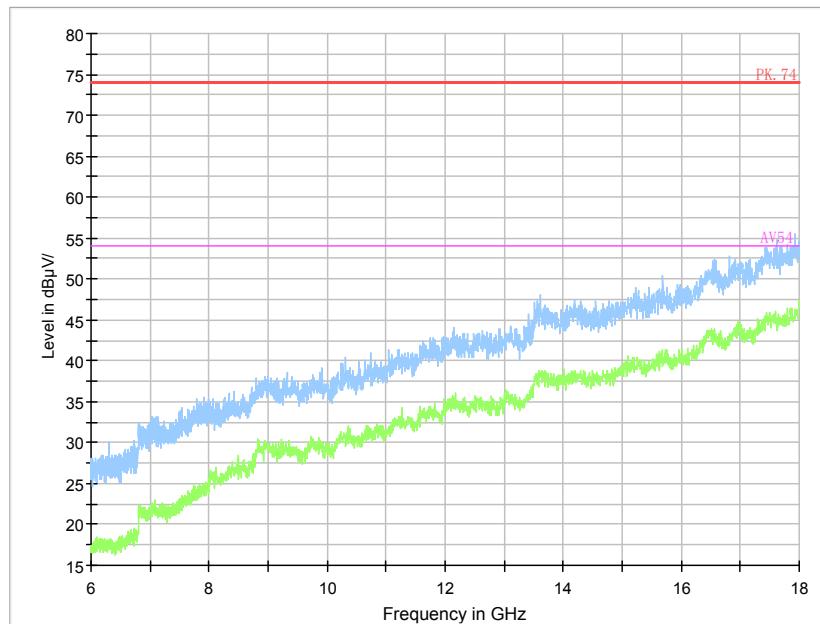
FrequencyRange: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK



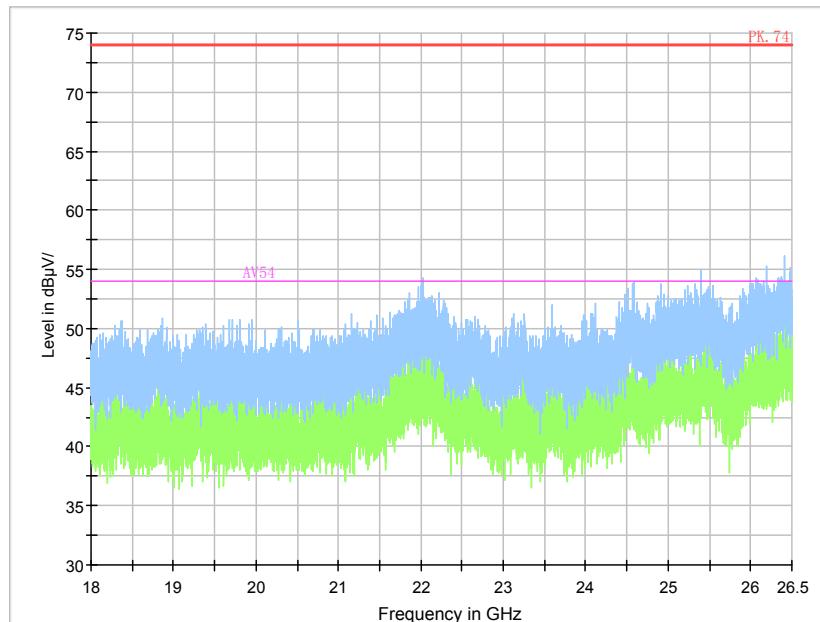
Frequency Range: 30MHz-1000 MHz
 Detector: QP mode
 Modulation type: $\pi/4$ DQPSK



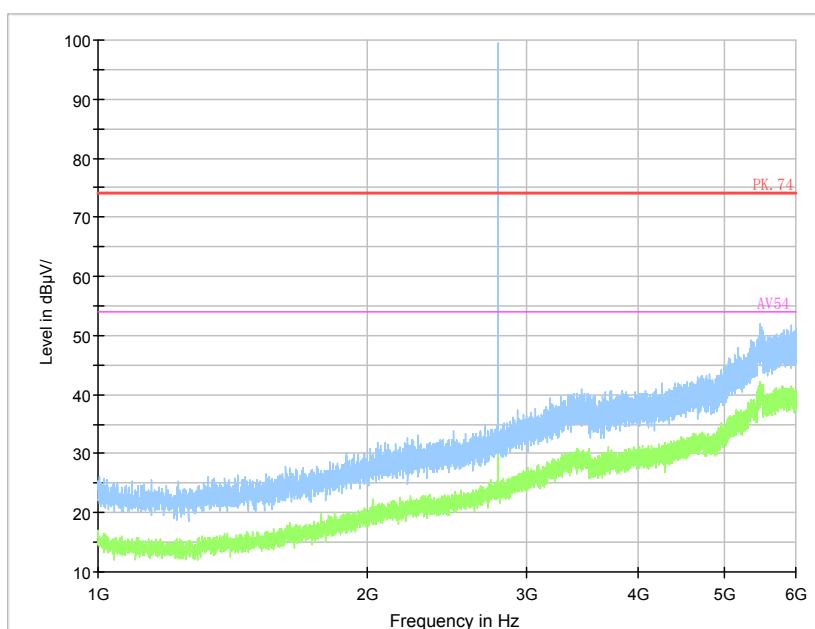
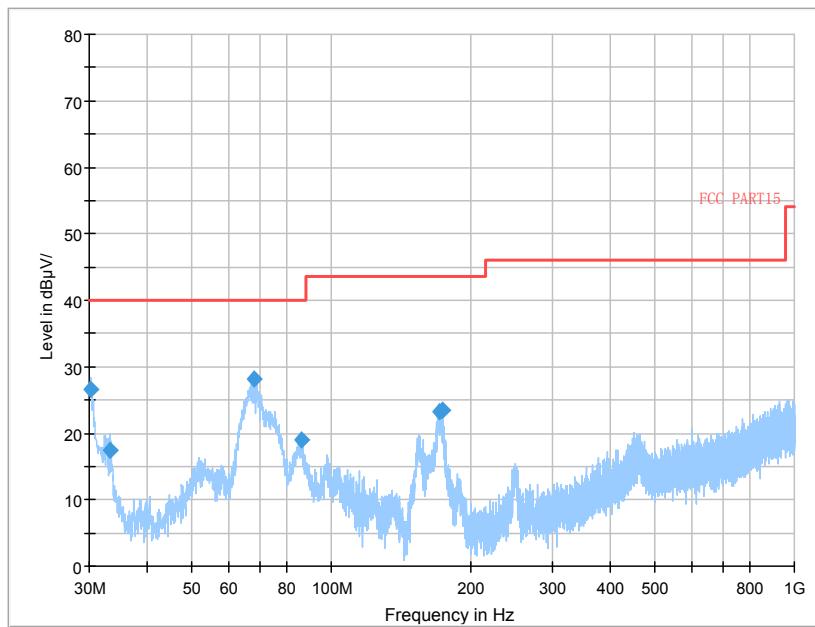
Frequency Range:
 1GHz-6GHz
 Detector: Av mode and PK mode
 Modulation type: $\pi/4$ DQPSK

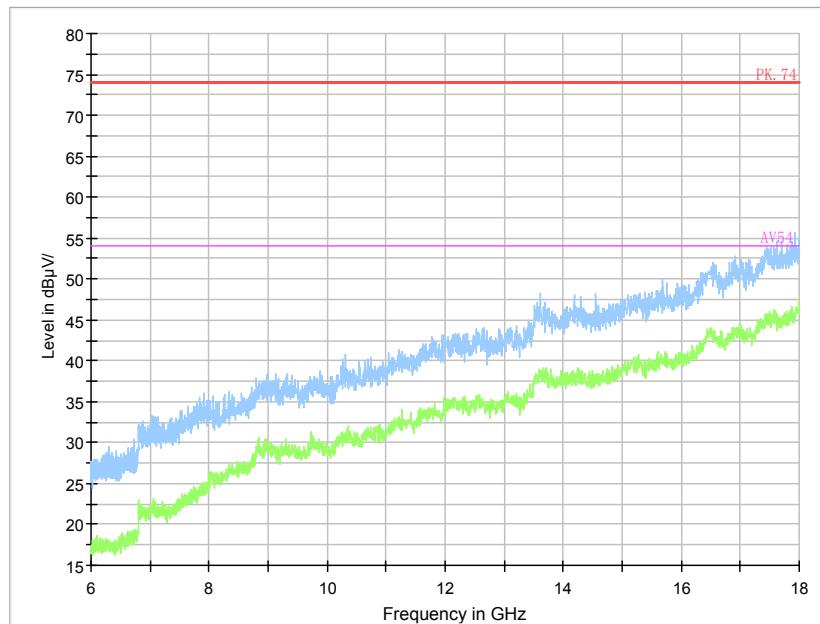


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

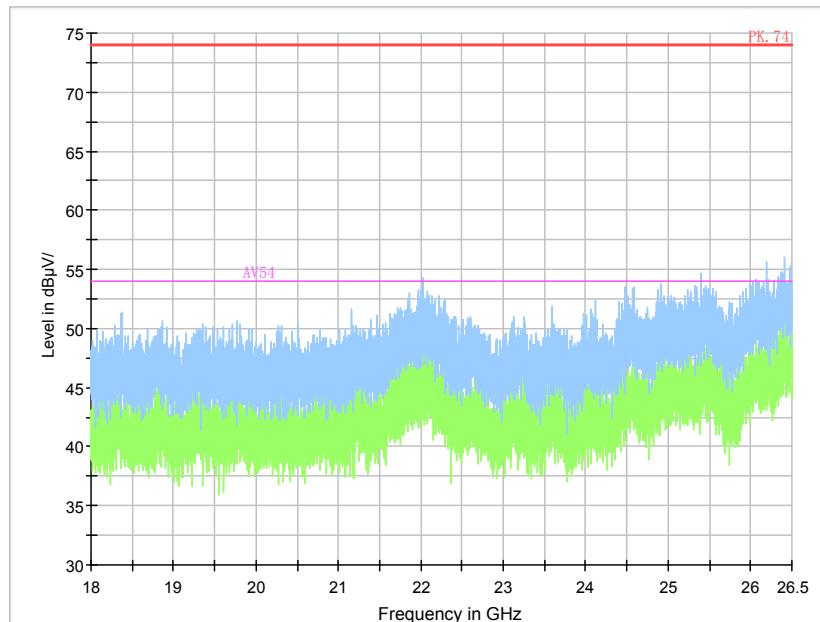


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK





Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK



Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

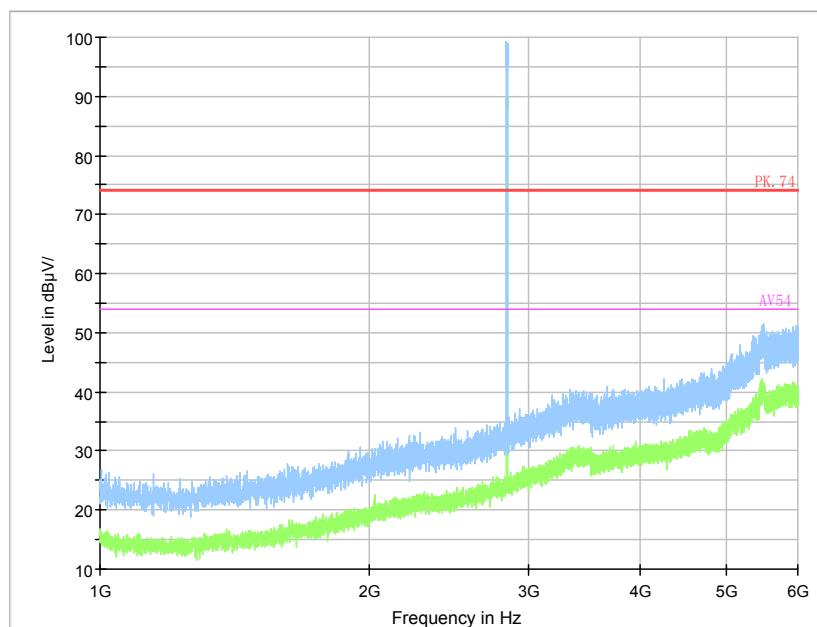
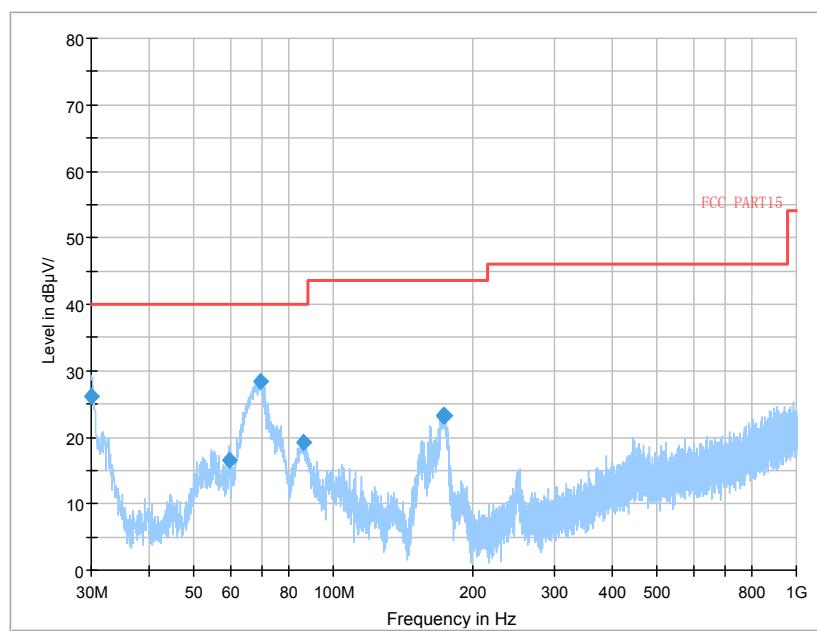
Carrier frequency (MHz): 2441

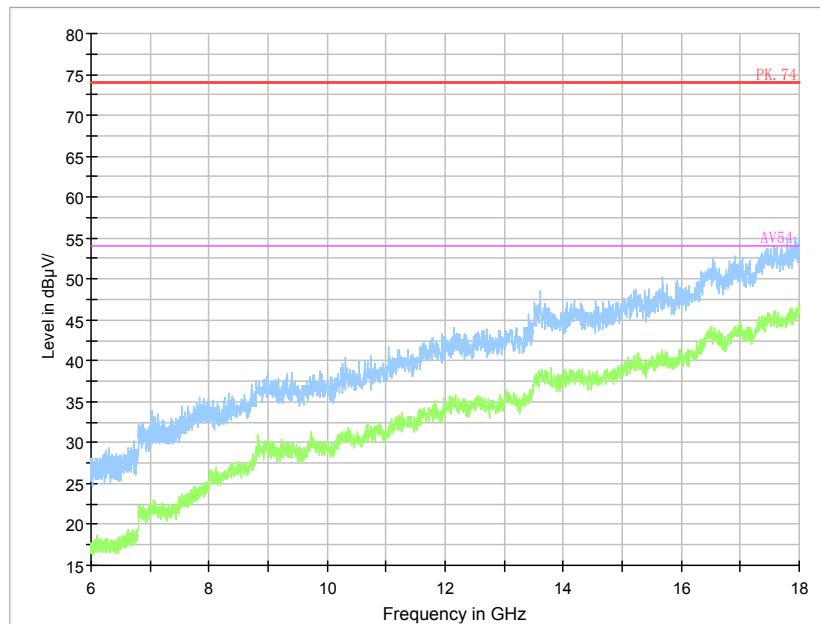
The State Radio_monitoring_center Testing Center (SRTC)
Tel: 86-10-5799 6183
Fax: 86-10-57996388

Page number: 63 of 79

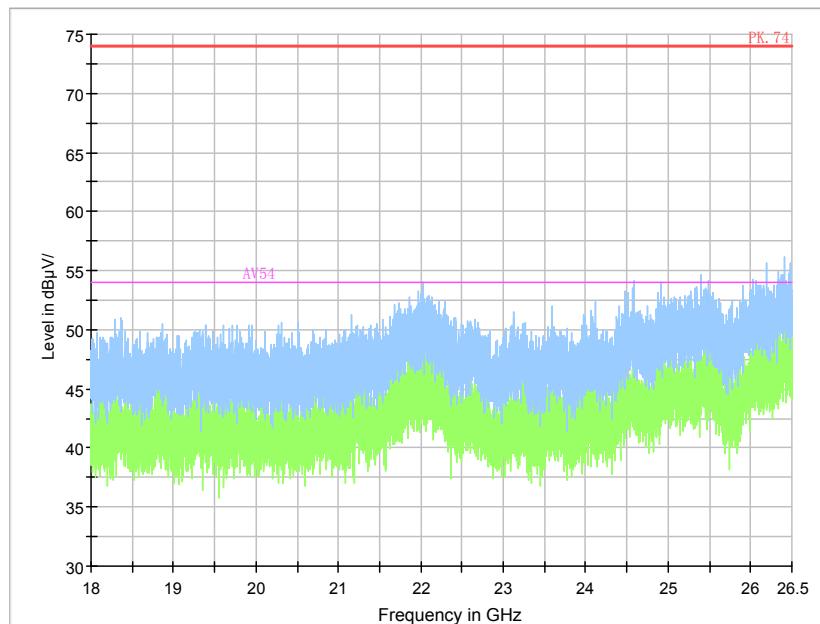
V3.0.0

Channel No.:39

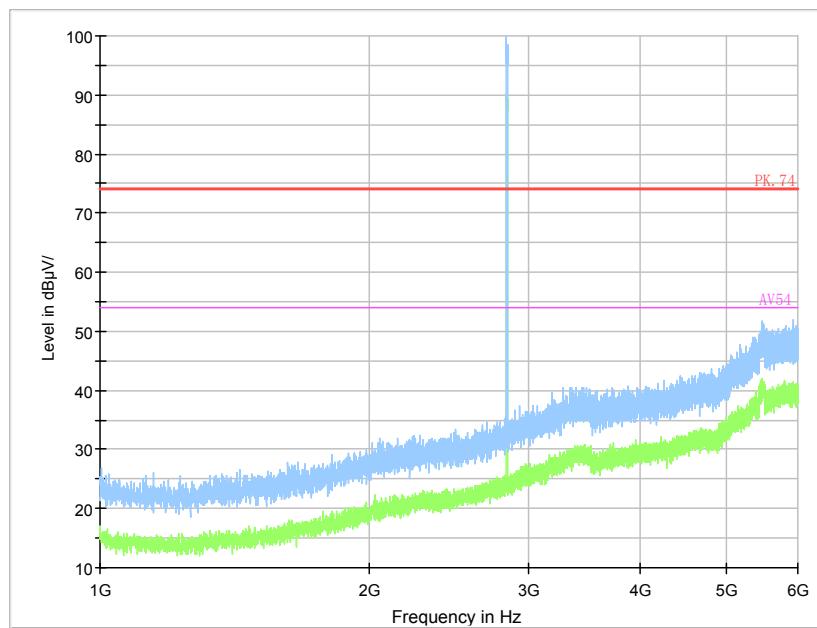
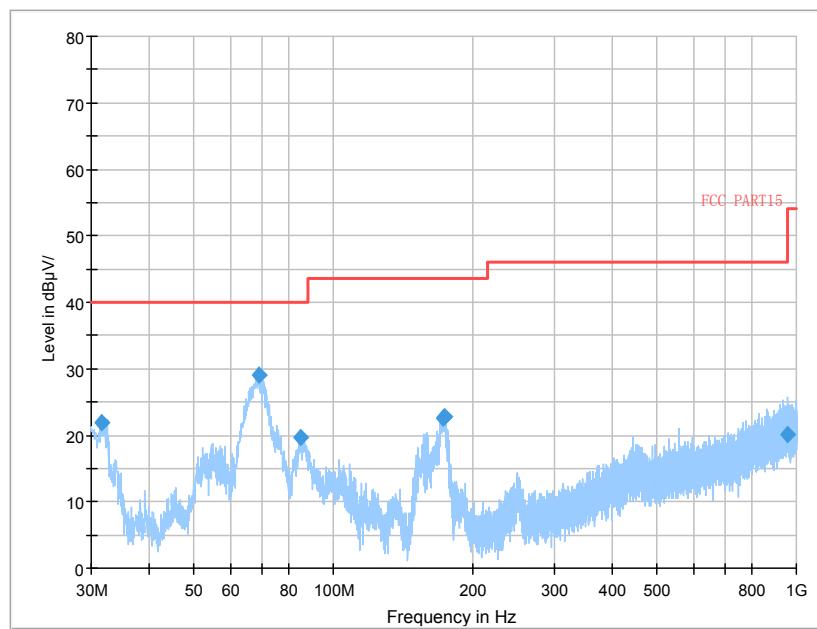


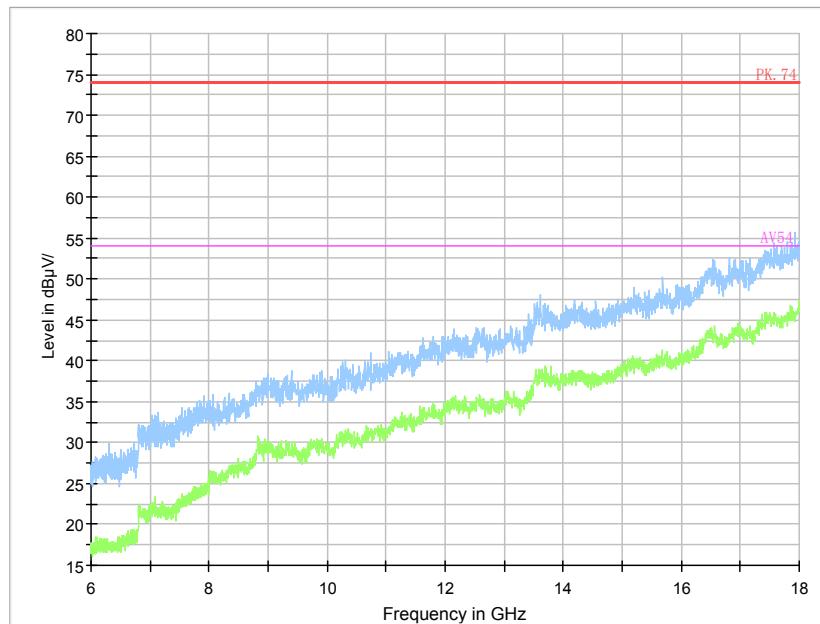


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

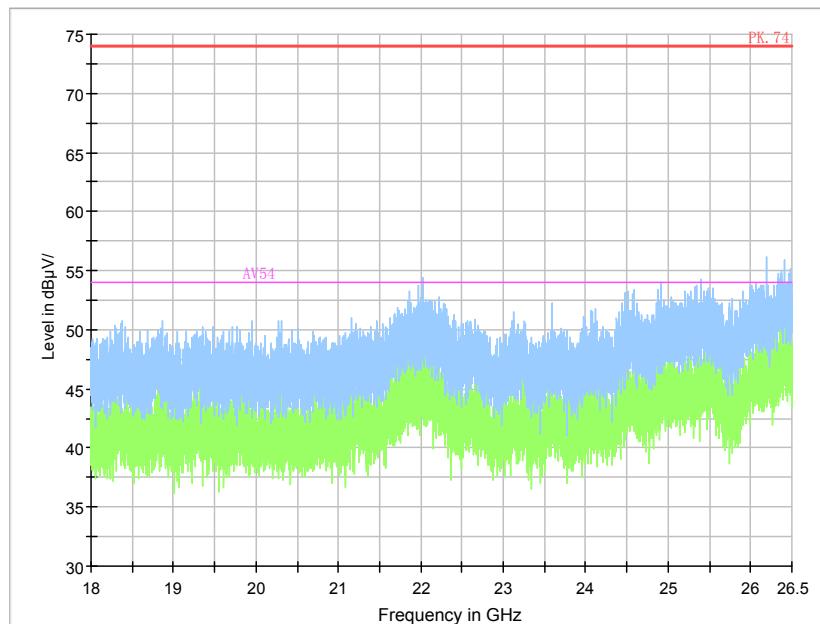


FrequencyRange: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK

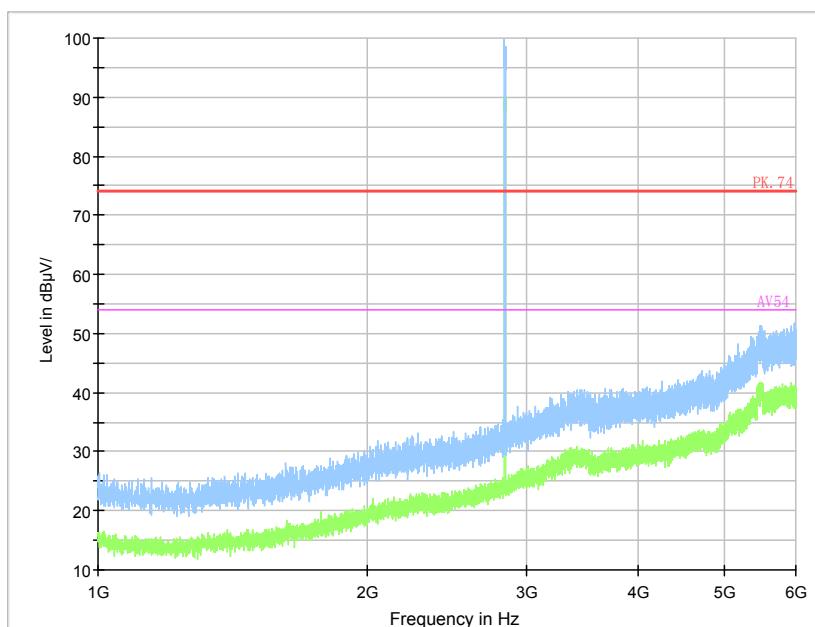
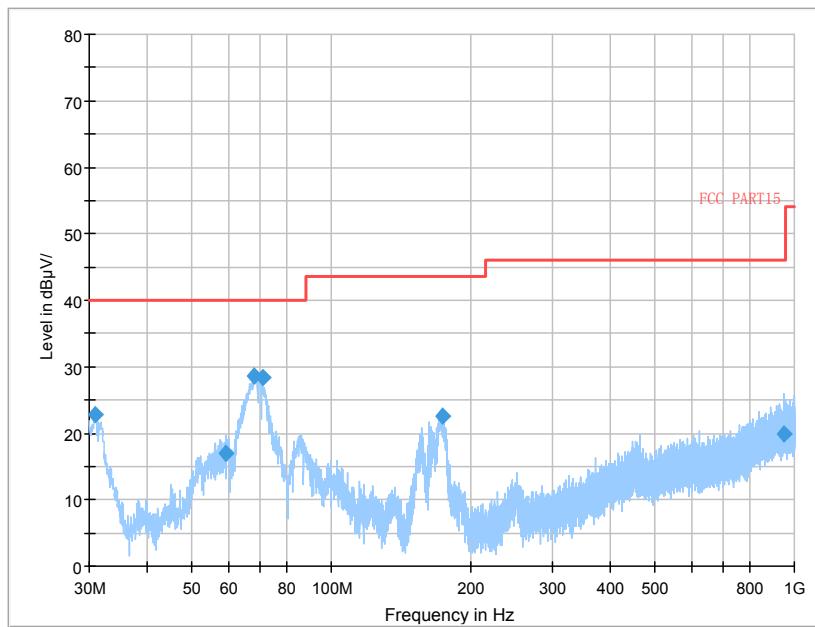


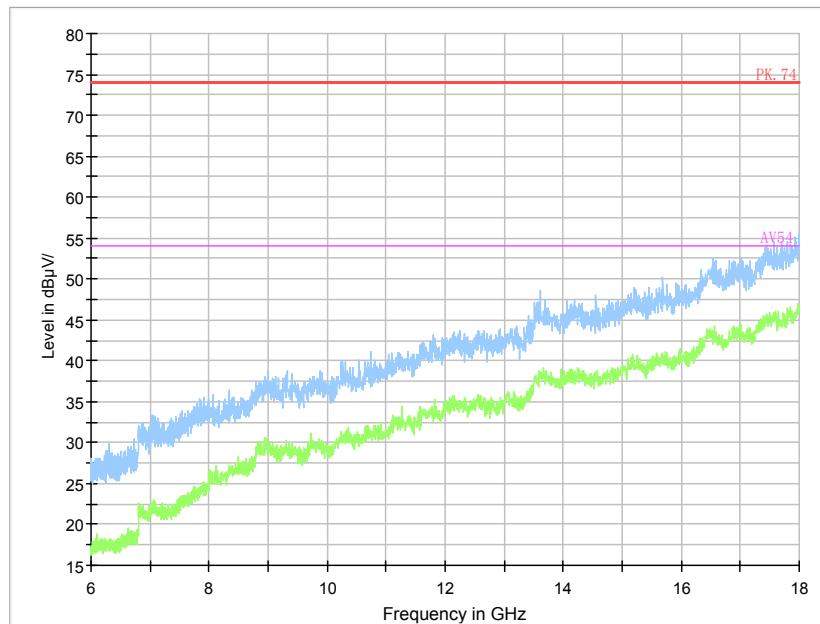


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK

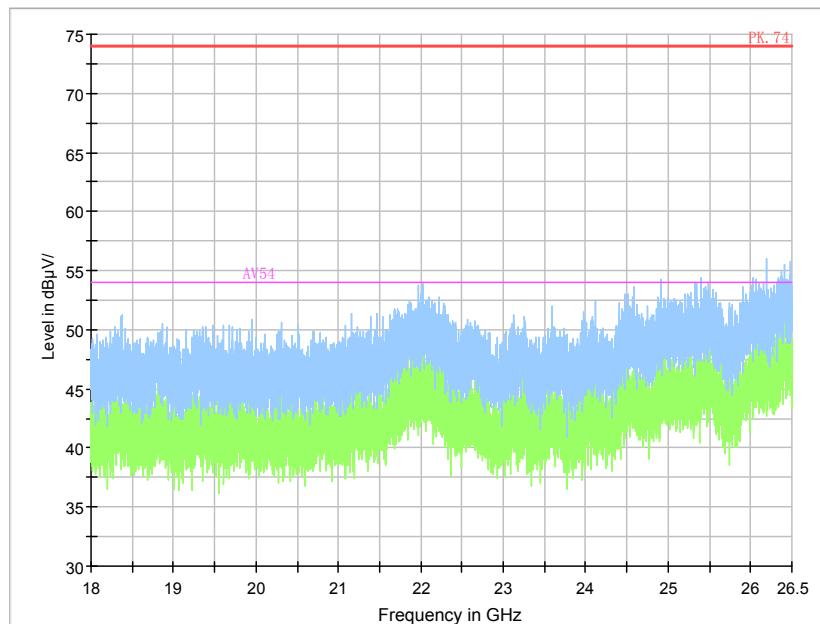


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK



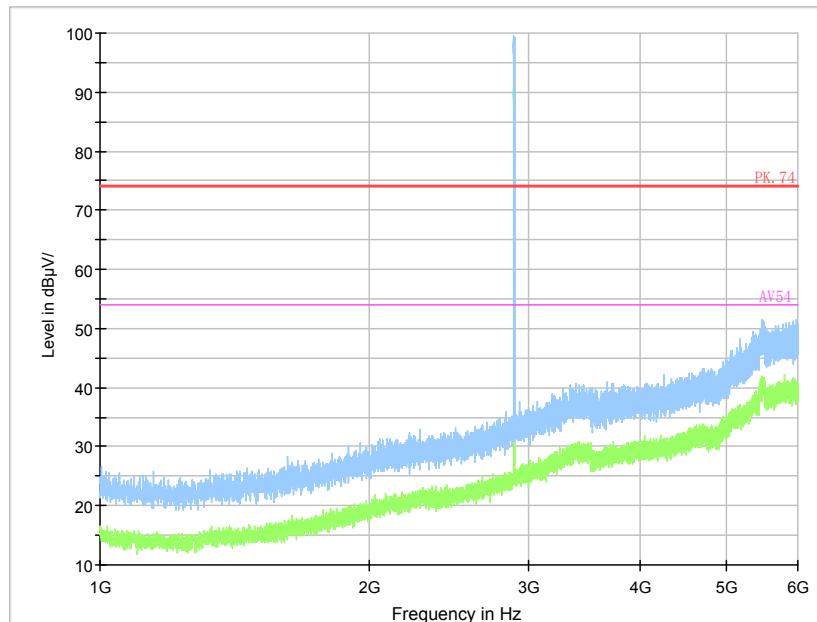
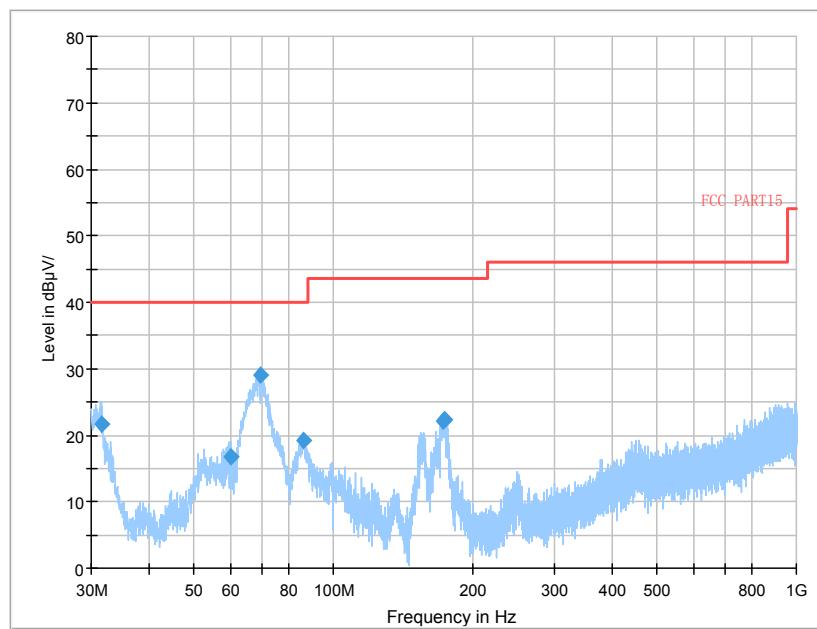


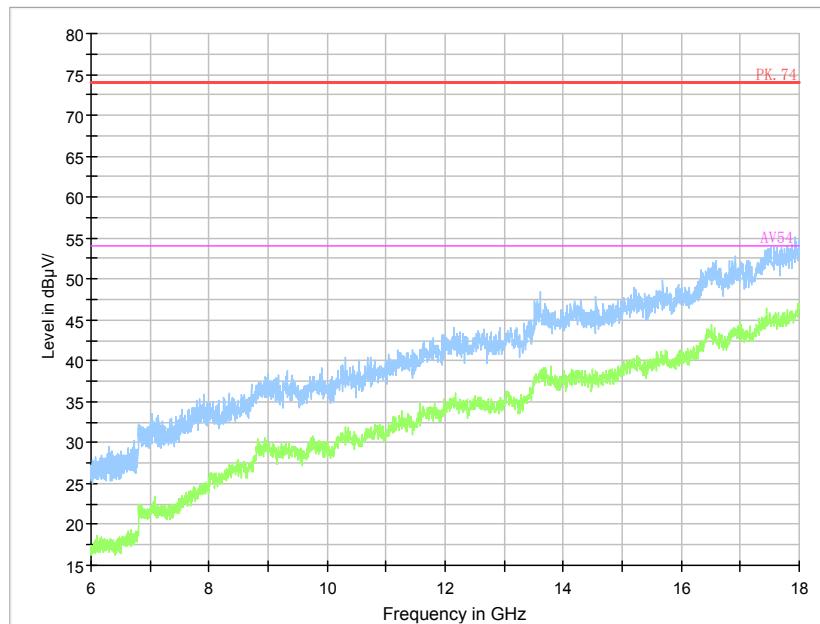
Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK



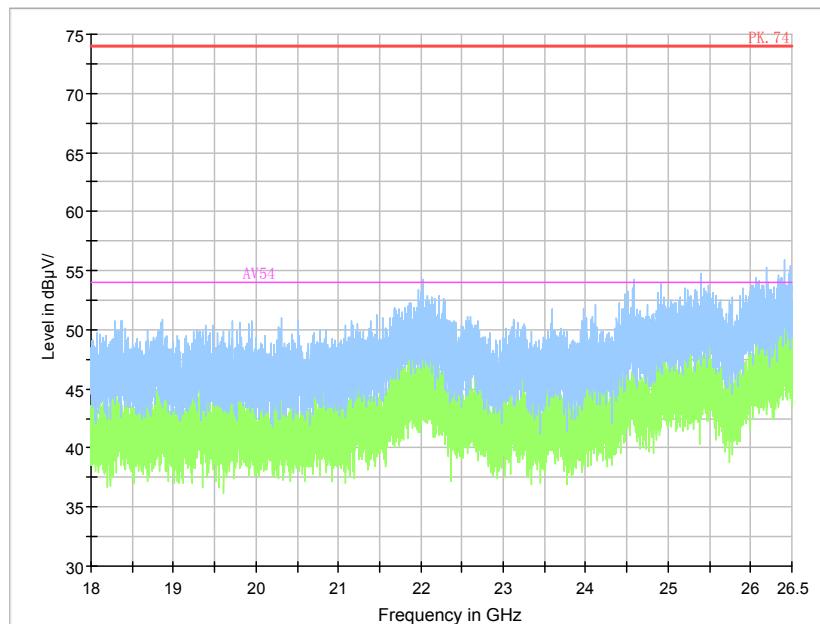
Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK

Carrier frequency (MHz): 2480
Channel No.:78

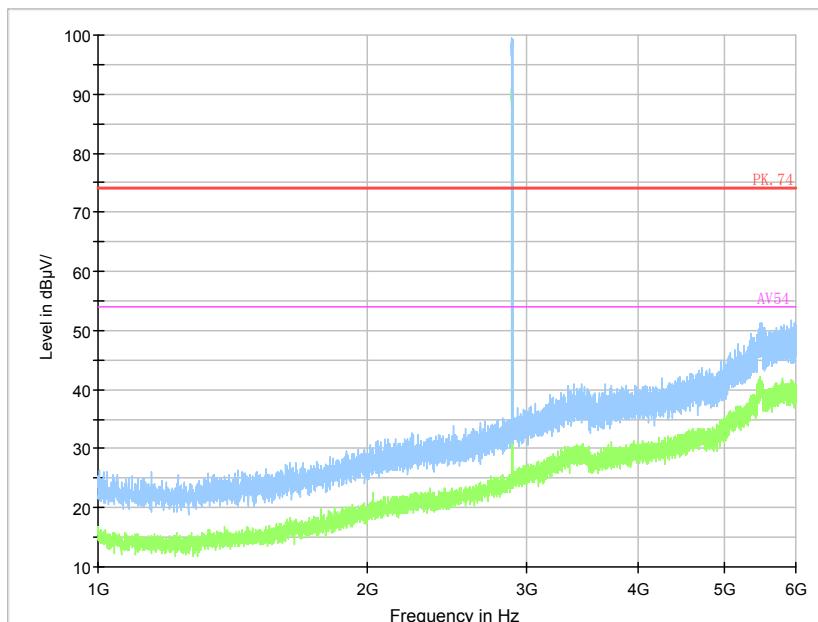
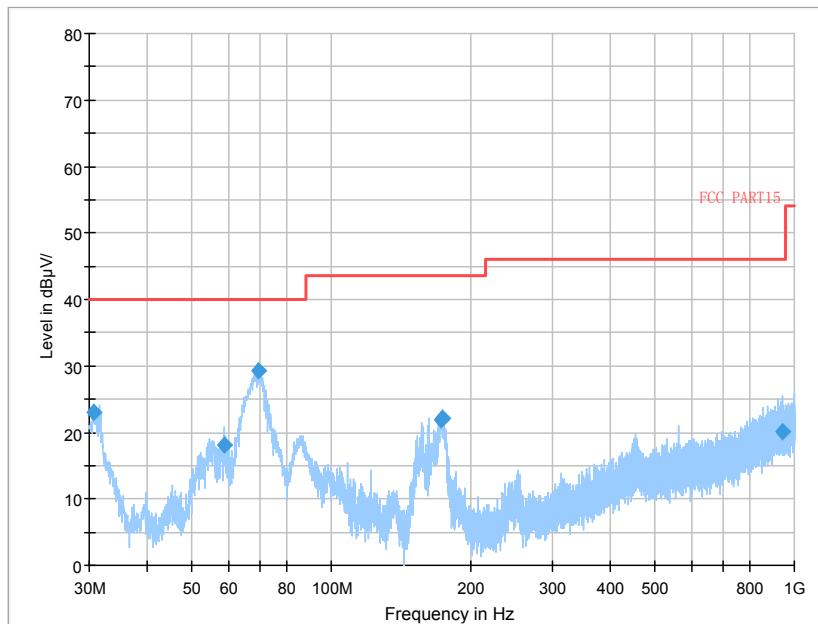


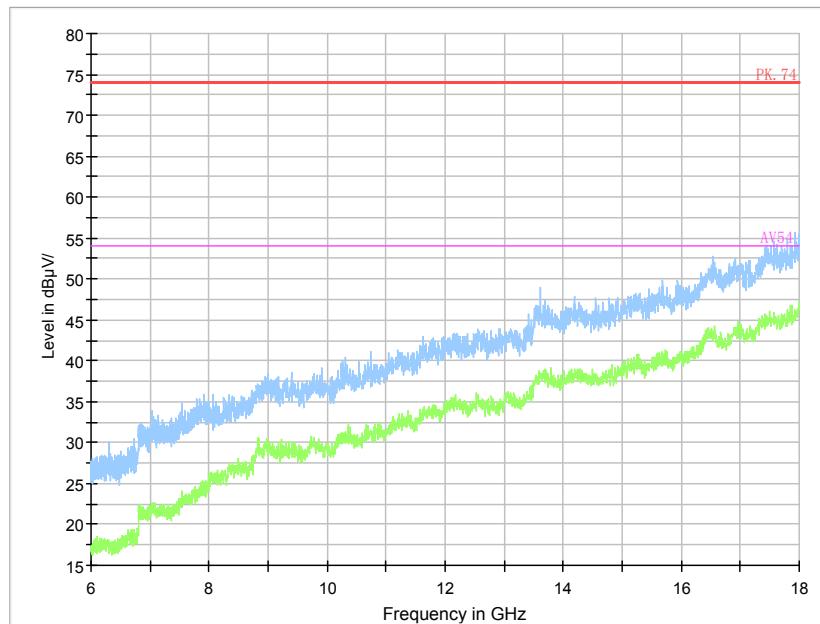


Frequency Range: 3GHz- 18GHz
Detector: Av mode and PK mode
Modulation type: GFSK

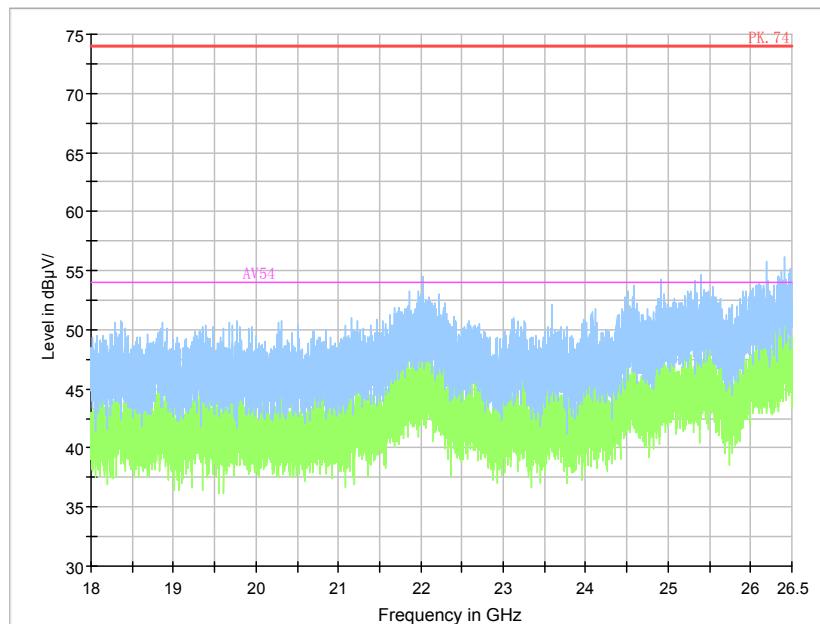


Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: GFSK

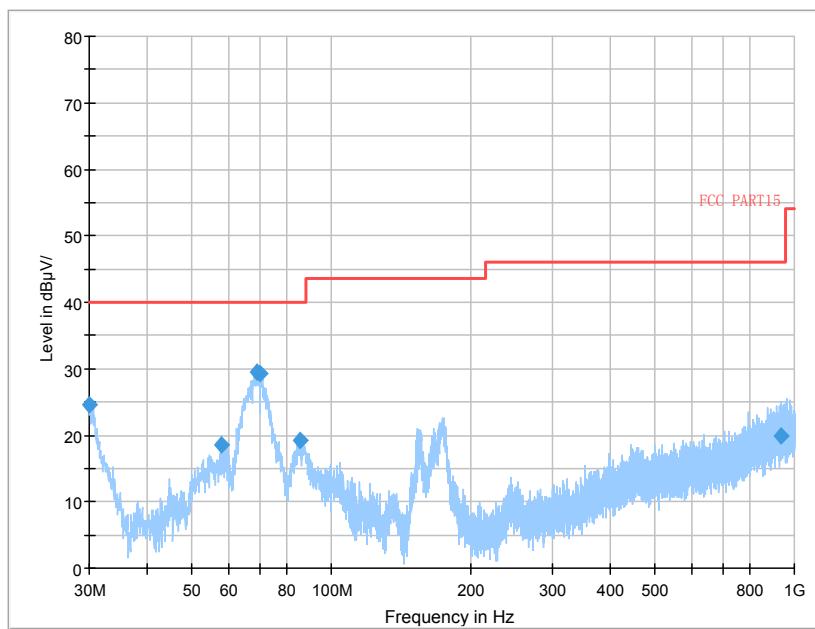




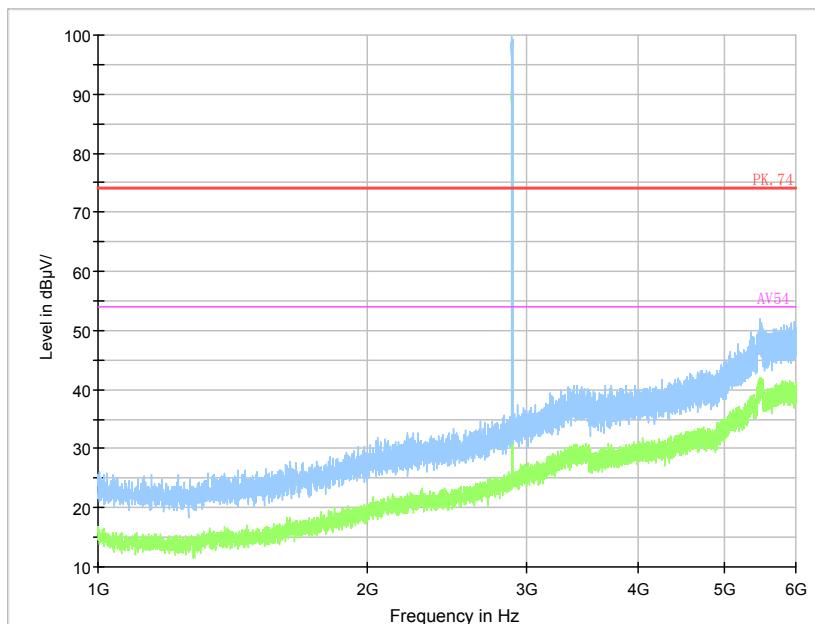
Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK



Frequency Range: 18GHz-25GHz
Detector: Av mode and PK mode
Modulation type: $\pi/4$ DQPSK



Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: 8DPSK



Frequency Range: 1GHz-6GHz
Detector: Av mode and PK mode
Modulation type: 8DPSK