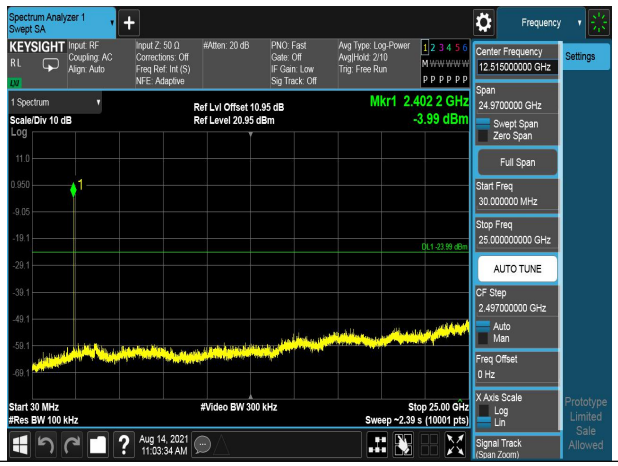
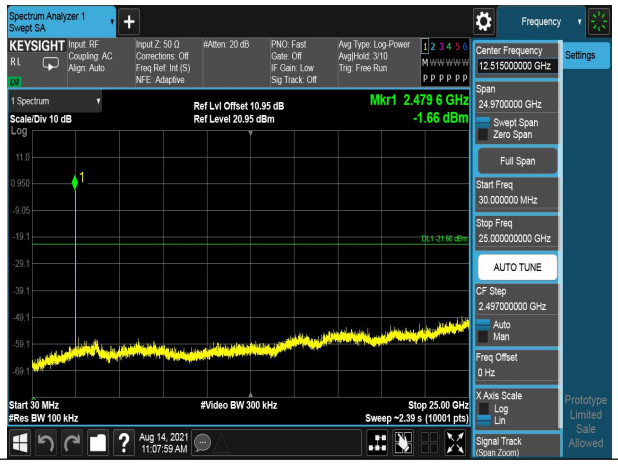
Modulation type:Coded 125K



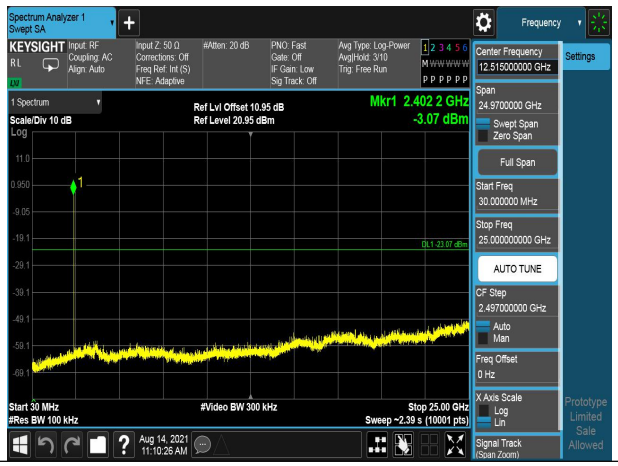
CH0

CH39



CH78

Modulation type:Coded 500K



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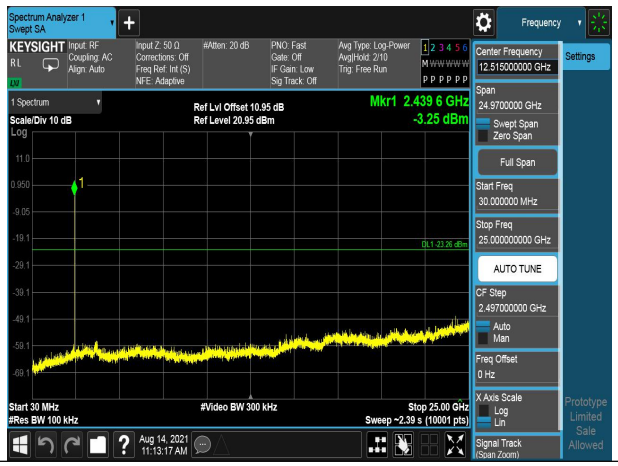

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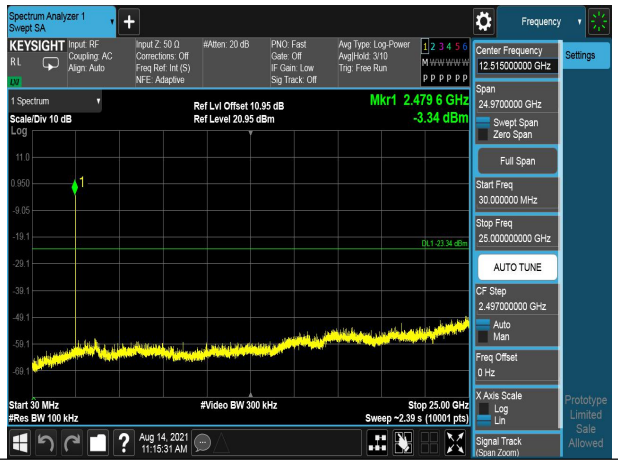


CH78

6 Band Edge measurement

Modulation type: GFSK(LE 1Mbps)

CH0

CH78

Modulation type:GFSK(LE 2Mbps)

CH0

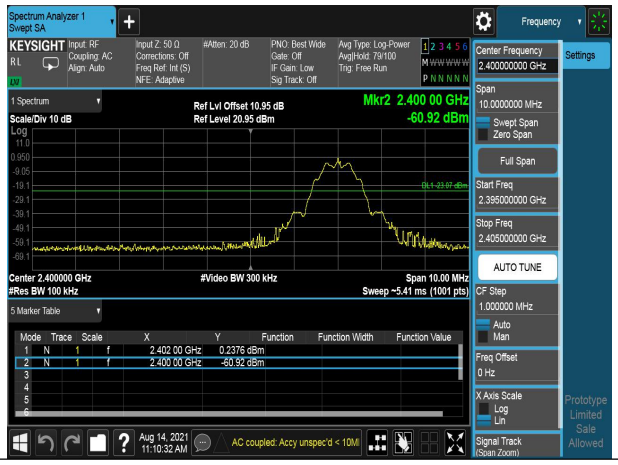
CH78

Modulation type:Coded 125K

CH0

CH78

Modulation type:Coded 500K



CH0

CH78

APPENDIX B – TEST DATA OF RADIATED EMISSION

Radiated Emission Band Edge

The worst case attitude: The mobile lay down.
The measurement results are obtained as described below:
Measure Level = Reading Level + cable loss + antenna factor

Sample calculation: (102.78 dBuV/m) = (68.78 dBμV) + (8.90 dB) + (25.10 dB), the corresponding frequency is 2402MHz.

No	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	cable loss (dB)	antenna factor (dB)
1	2402	102.78	68.78	N/A	N/A	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 1Mbps)
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	96.12	62.12	N/A	N/A	8.90	25.10
2	2390	25.53	-8.47	-48.47	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 1Mbps)
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	93.55	59.55	N/A	N/A	8.90	25.10
2	2390	26.41	-7.59	-47.59	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 1Mbps)
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	92.42	58.42	N/A	N/A	8.90	25.10
2	2390	15.83	-18.17	-38.17	54.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 1Mbps)
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	89.43	55.43	N/A	N/A	8.90	25.10
2	2390	15.44	-18.56	-38.56	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 1Mbps)
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	94.71	60.71	N/A	N/A	8.90	25.10
2	2483.5	25.95	-8.05	-48.05	74.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 1Mbps)
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	92.07	58.07	N/A	N/A	8.90	25.10
2	2483.5	25.09	-8.91	-48.91	74.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 1Mbps)
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	93.54	59.54	N/A	N/A	8.90	25.10
2	2483.5	15.49	-18.51	-38.51	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 1Mbps)
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	90.64	56.64	N/A	N/A	8.90	25.10
2	2483.5	15.45	-18.55	-38.55	54.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 2Mbps)
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	96.11	62.11	N/A	N/A	8.90	25.10
2	2390	24.14	-9.86	-49.86	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 2Mbps)
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	93.71	59.71	N/A	N/A	8.90	25.10
2	2390	24.50	-9.50	-49.50	74.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 2Mbps)
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	92.95	58.95	N/A	N/A	8.90	25.10
2	2390	15.07	-18.93	-38.93	54.00	8.90	25.10

Carrier frequency (MHz): 2402
Channel No.:0
Test Mode: GFSK (LE 2Mbps)
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	90.60	56.60	N/A	N/A	8.90	25.10
2	2390	14.31	-19.69	-39.69	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 2Mbps)
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	95.31	61.31	N/A	N/A	8.90	25.10
2	2483.5	24.89	-9.11	-49.11	74.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 2Mbps)
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	92.51	58.51	N/A	N/A	8.90	25.10
2	2483.5	24.84	-9.16	-49.16	74.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 2Mbps)
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	92.79	58.79	N/A	N/A	8.90	25.10
2	2483.5	14.11	-19.89	-39.89	54.00	8.90	25.10

Carrier frequency (MHz): 2480
Channel No.:39
Test Mode: GFSK (LE 2Mbps)
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	89.88	55.88	N/A	N/A	8.90	25.10
2	2483.5	14.71	-19.29	-39.29	54.00	8.90	25.10

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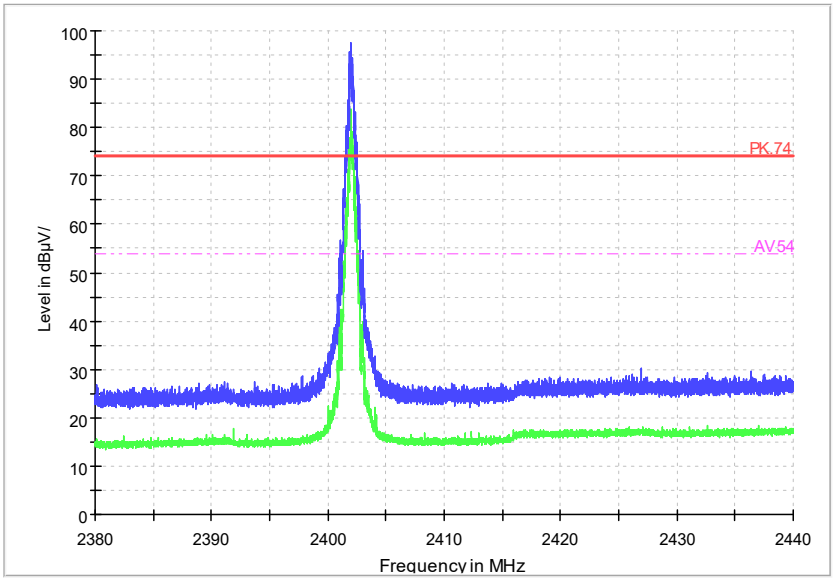


Sample Calculations

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:
Result= $P_{mea} + A_{Rpl}$
Sample calculation: (25 dBμV/m) = (45.9 dBuV) + (-20.9 dB/m), the corresponding frequency is 31.358MHz.
The worst case attitude: The mobile lay down.

For GFSK (LE 1Mbps)
Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
31.358	25	-20.9	45.9	Vertical	40
87.3755	15.88	-22.1	37.98	Vertical	40
162.89	25.21	-21.9	47.11	Vertical	43.5
177.44	19.6	-21.2	40.8	Vertical	43.5
512.5265	12.77	-10.5	23.27	Vertical	46
937.7745	19.08	-2.8	21.88	Vertical	46

Channel No.:19

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
31.6975	24.24	-20.8	45.04	Vertical	40
87.6665	16.33	-22	38.33	Vertical	40
162.211	25.47	-22	47.47	Vertical	43.5
176.8095	19.12	-21.2	40.32	Vertical	43.5
556.613	13.23	-9.5	22.73	Vertical	46
925.31	19.01	-3	22.01	Vertical	46

Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
31.2125	24.37	-20.9	45.27	Vertical	40
87.8605	16.37	-22	38.37	Vertical	40
162.793	25.53	-21.9	47.43	Vertical	43.5
177.4885	19.48	-21.2	40.68	Vertical	43.5
524.9425	13.04	-10.3	23.34	Vertical	46
925.0675	19.04	-3	22.04	Vertical	46

For GFSK (LE 2Mbps)

Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
31.455	24.99	-20.9	45.89	Vertical	40
87.9575	16.48	-21.9	38.38	Vertical	40
162.502	25.43	-22	47.43	Vertical	43.5
175.4515	18.26	-21.3	39.56	Vertical	43.5
545.9915	13.17	-9.8	22.97	Vertical	46
920.5085	18.72	-3	21.72	Vertical	46

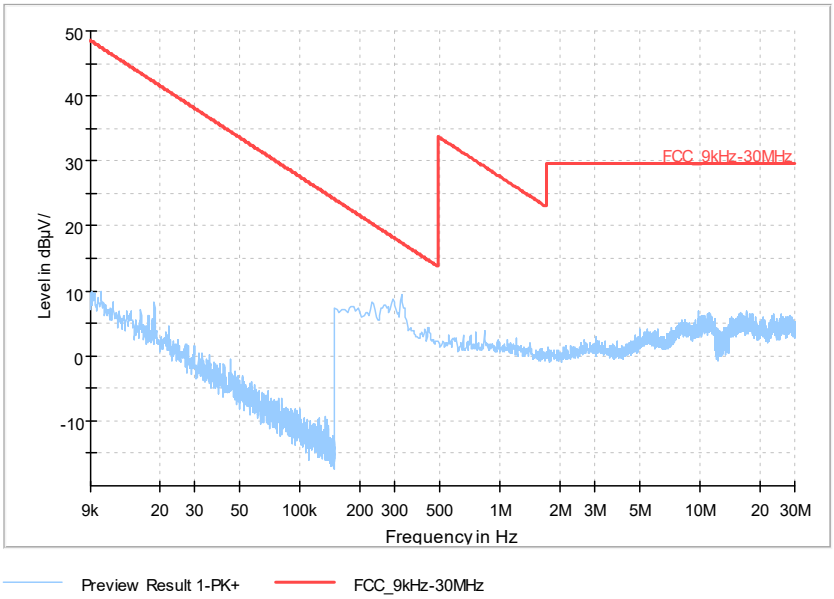
Channel No.:19

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
32.0855	22.88	-20.7	43.58	Vertical	40
86.8905	14.85	-22.3	37.15	Vertical	40
163.3265	25.33	-21.9	47.23	Vertical	43.5
176.761	19.16	-21.2	40.36	Vertical	43.5
550.114	13.16	-9.7	22.86	Vertical	46
949.851	19.14	-2.7	21.84	Vertical	46

Channel No.:39

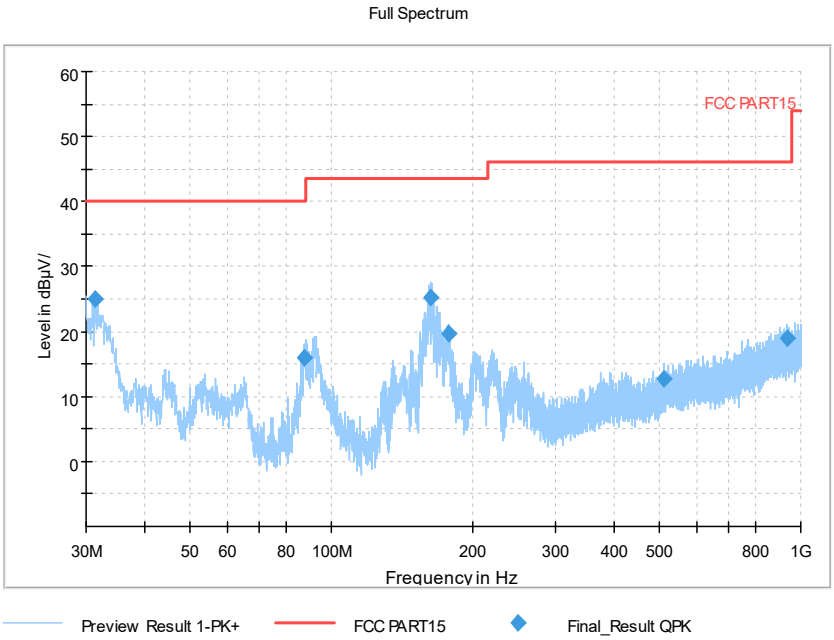
Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)
31.552	24.73	-20.9	45.63	Vertical	40
87.23	15.59	-22.2	37.79	Vertical	40
164.4905	24.36	-21.9	46.26	Vertical	43.5
177.634	19.5	-21.2	40.7	Vertical	43.5
524.409	12.99	-10.3	23.29	Vertical	46
903.5335	18.37	-3.2	21.57	Vertical	46

Full Spectrum

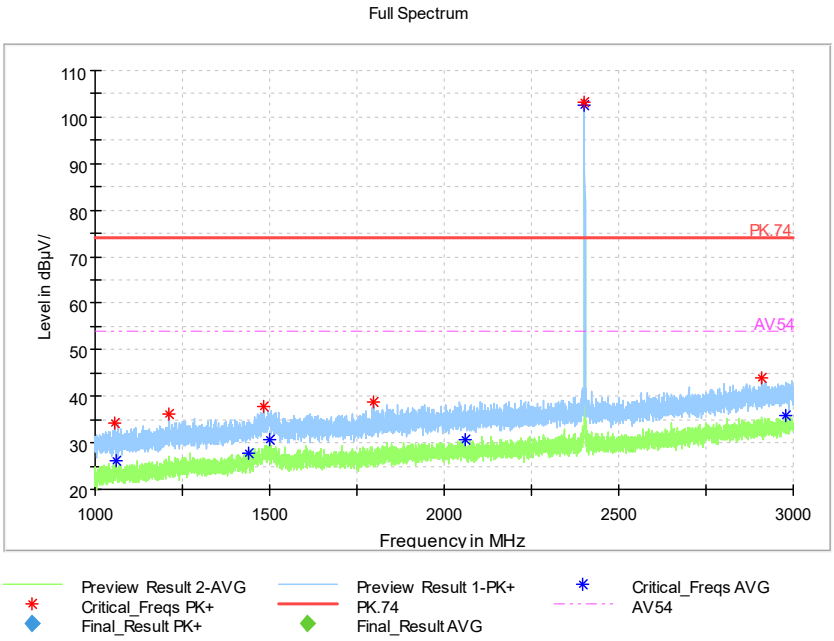


Frequency Range: 9kHz-30MHz

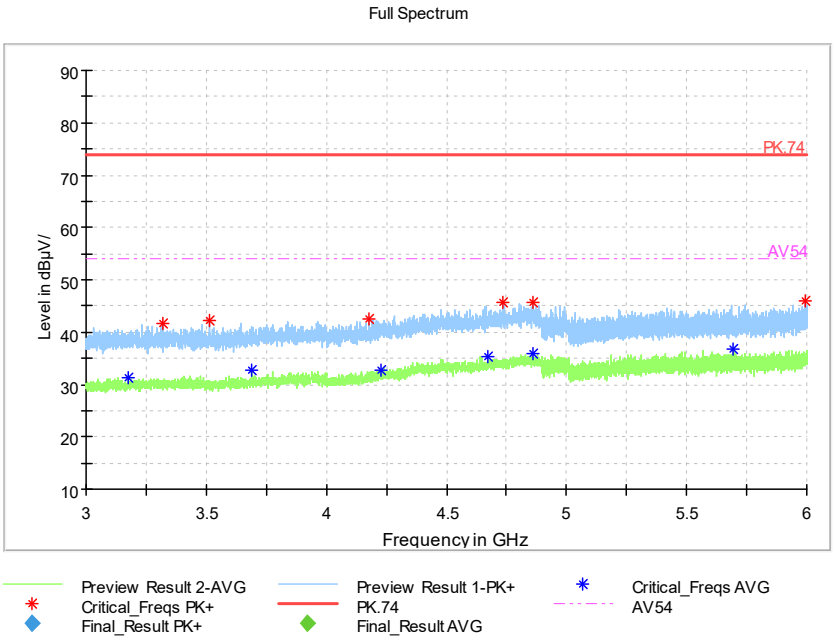
Channel No.:0



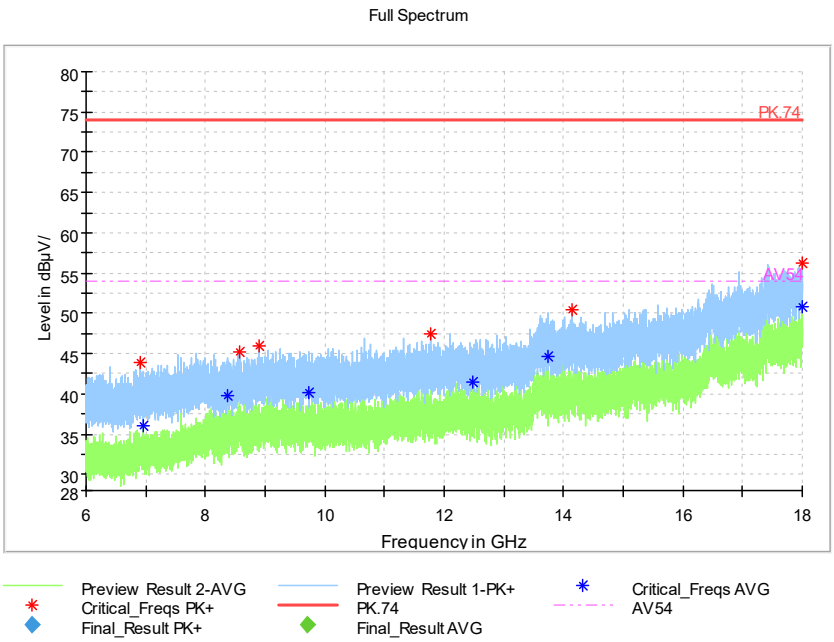
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 1Mbps)



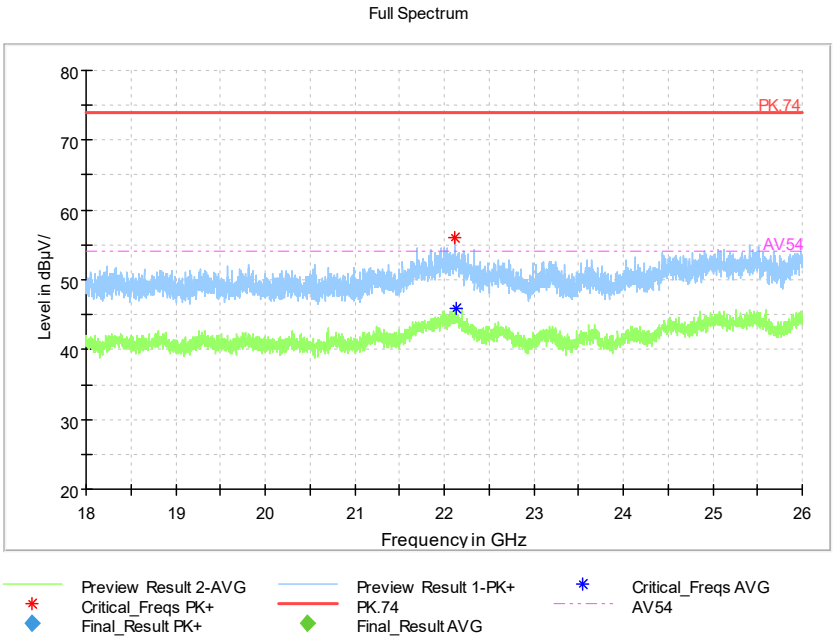
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)



Frequency Range: 3GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

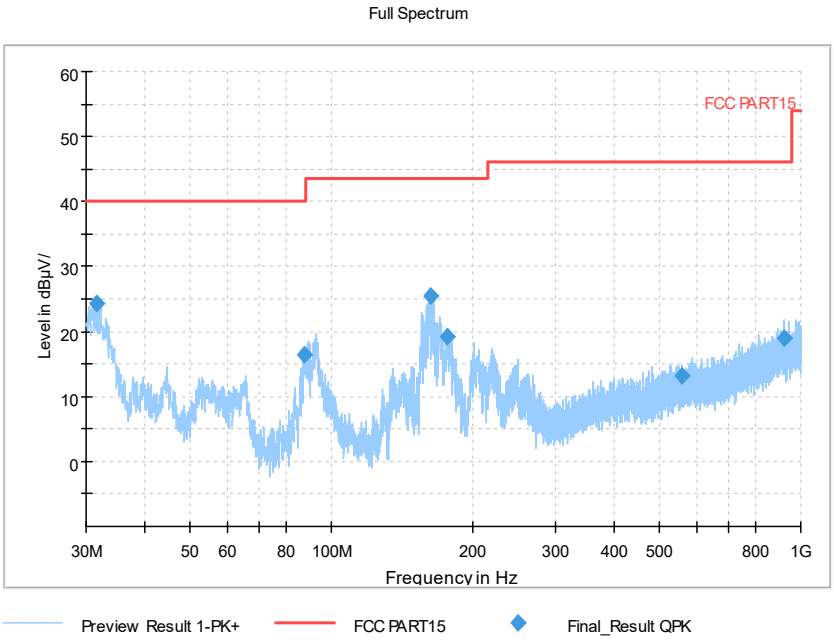


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

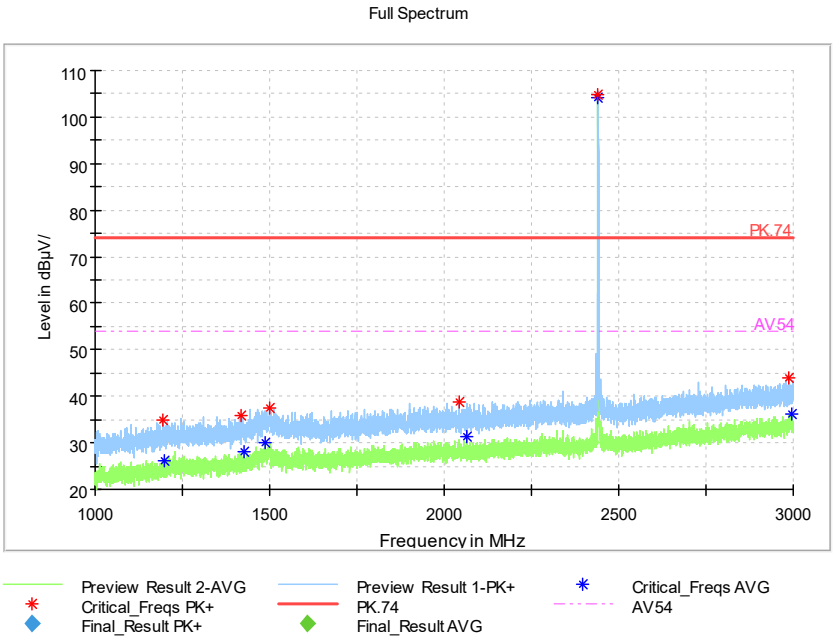


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

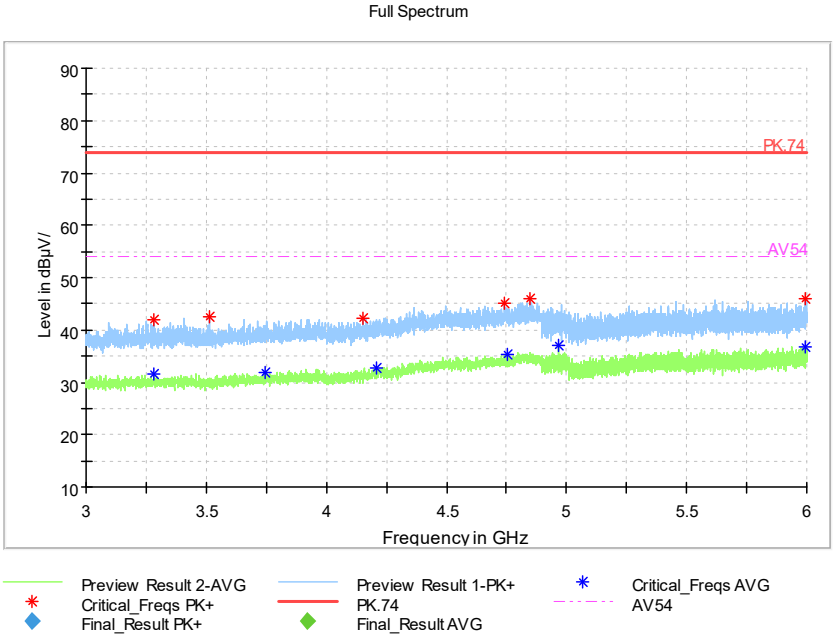
Channel No.:19



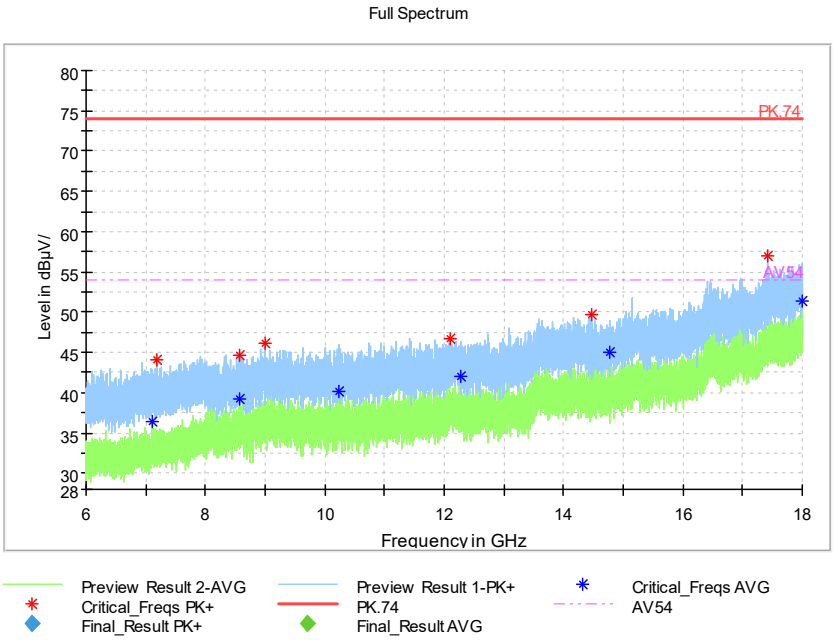
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 1Mbps)



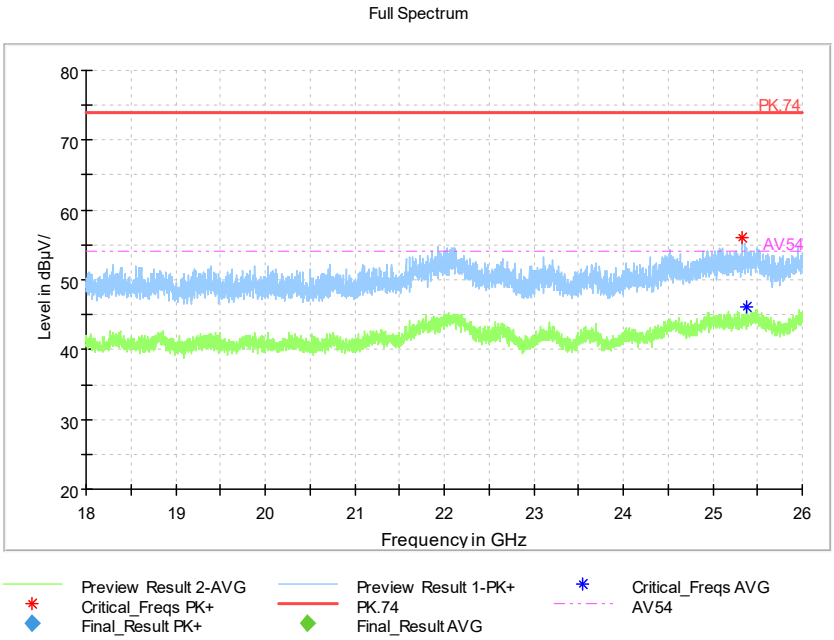
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)



Frequency Range: 3GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

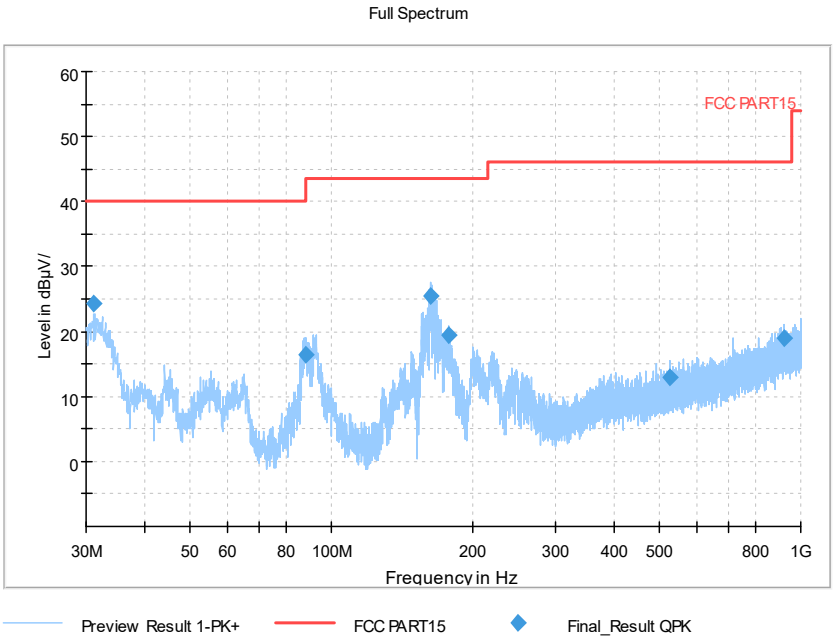


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

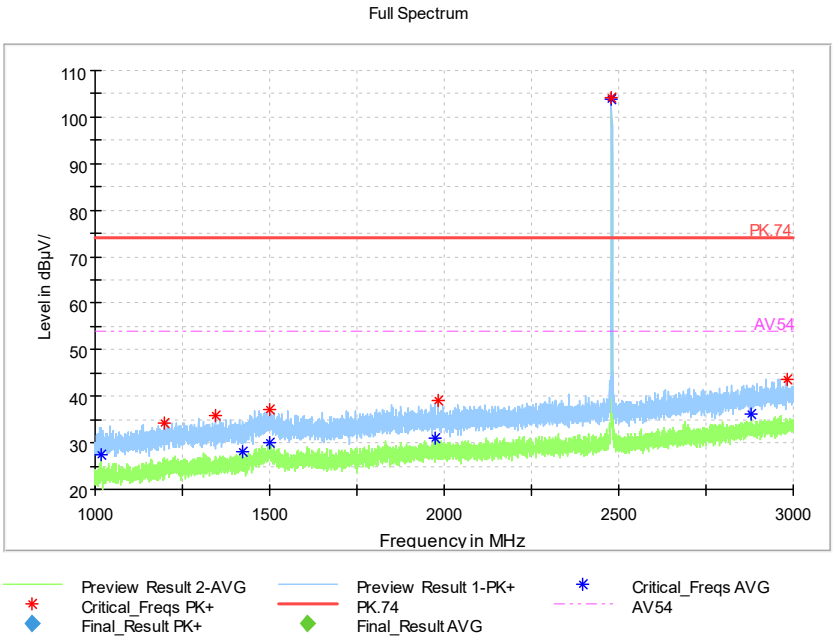


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

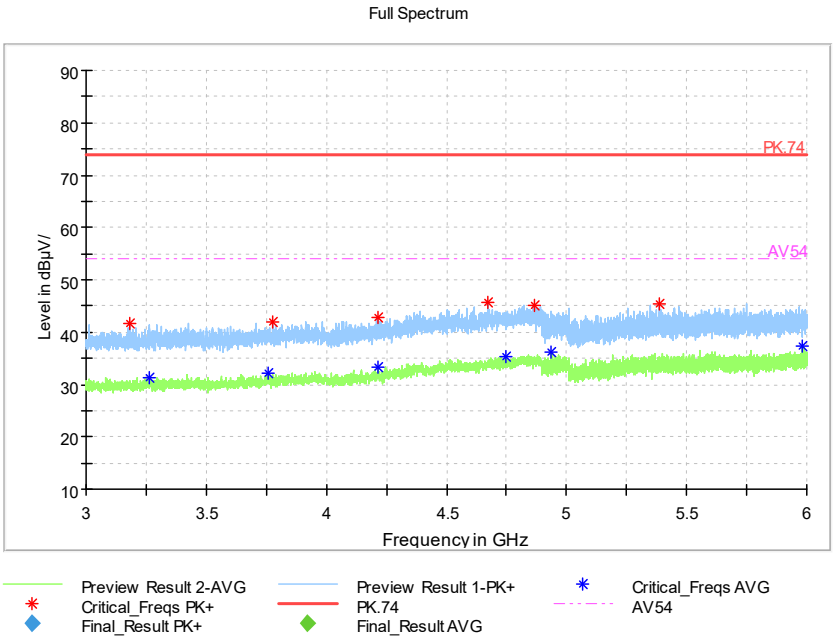
Channel No.:39



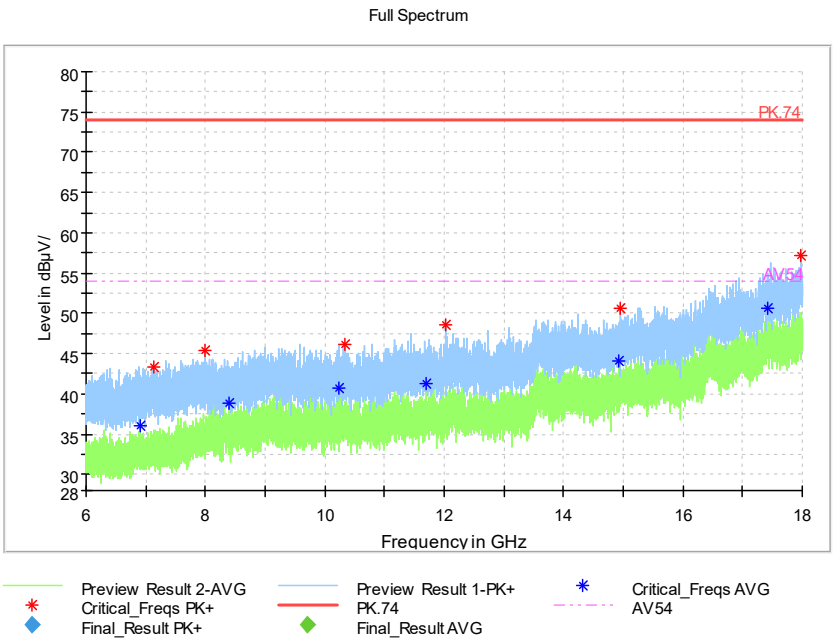
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 1Mbps)



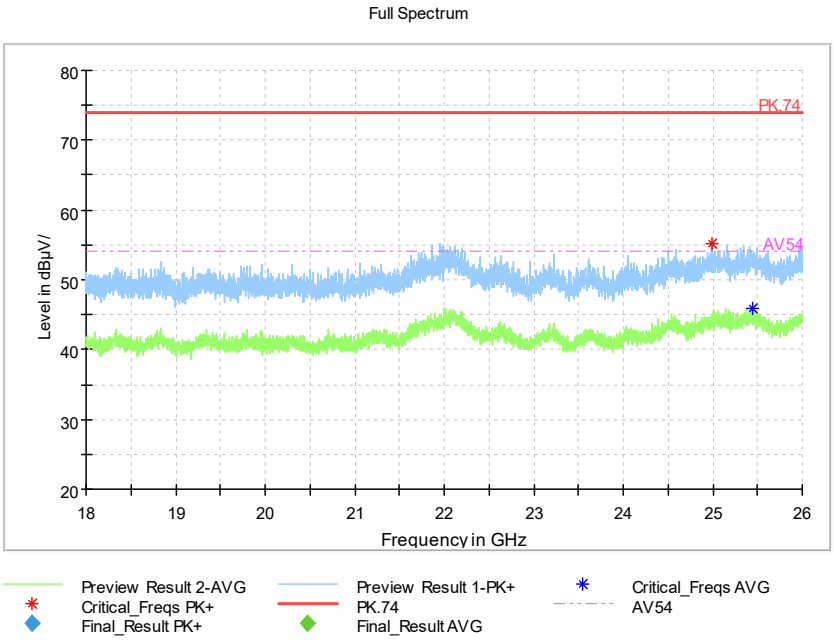
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)



Frequency Range: 3GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

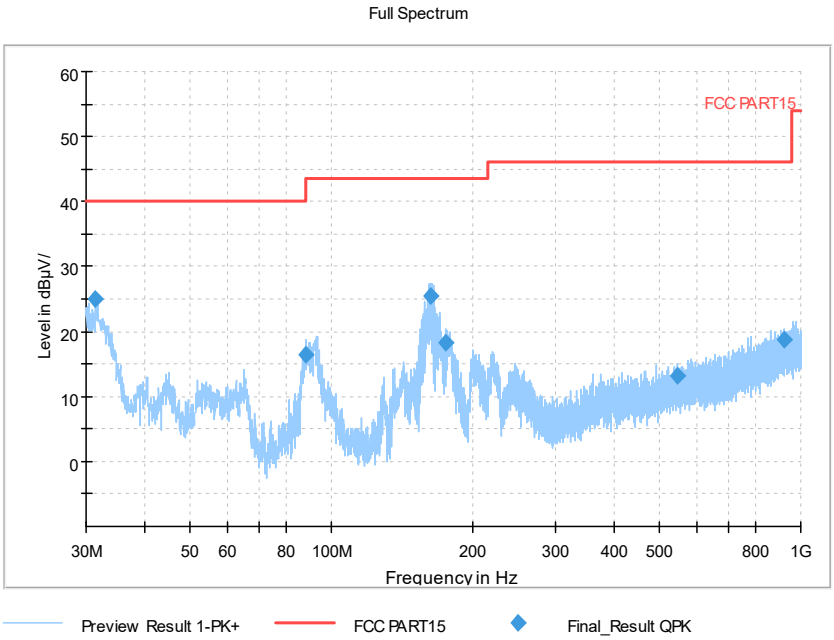


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

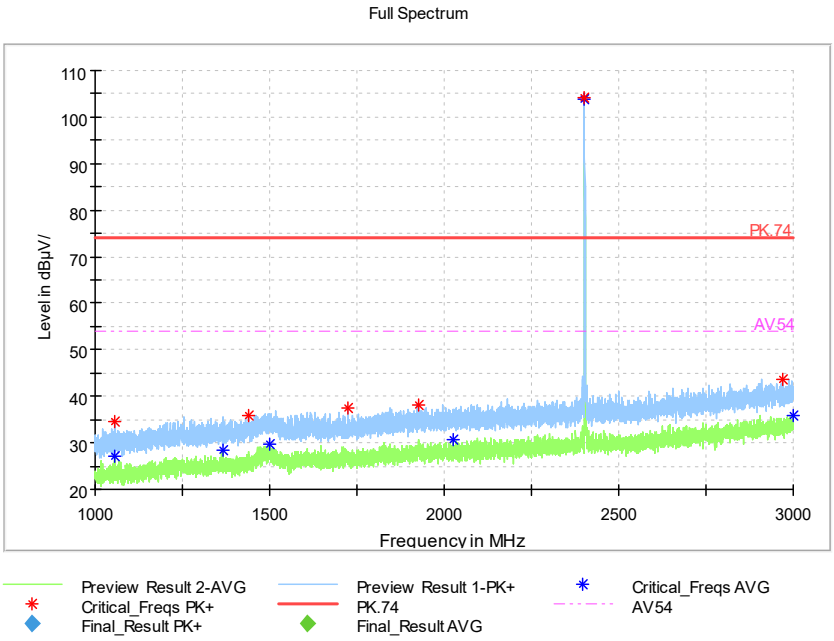


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

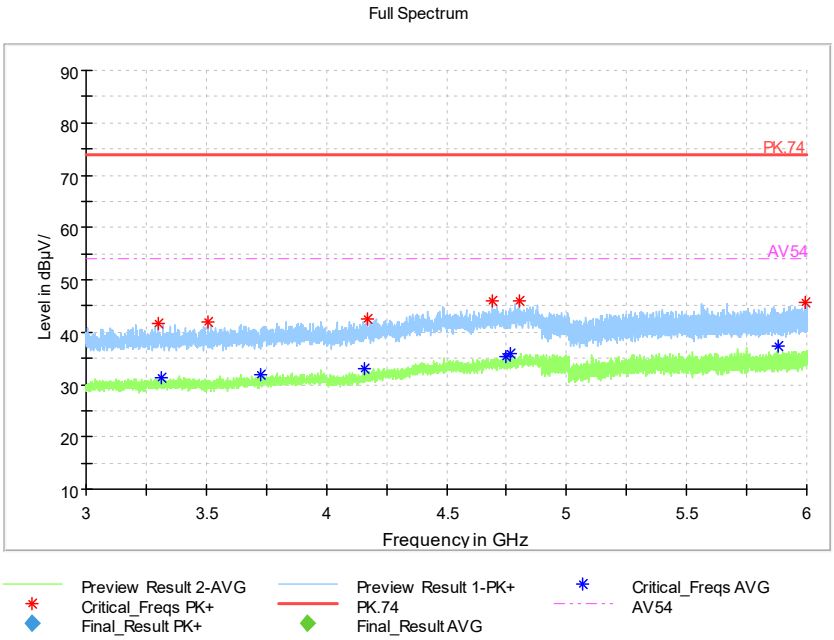
Channel No.:0



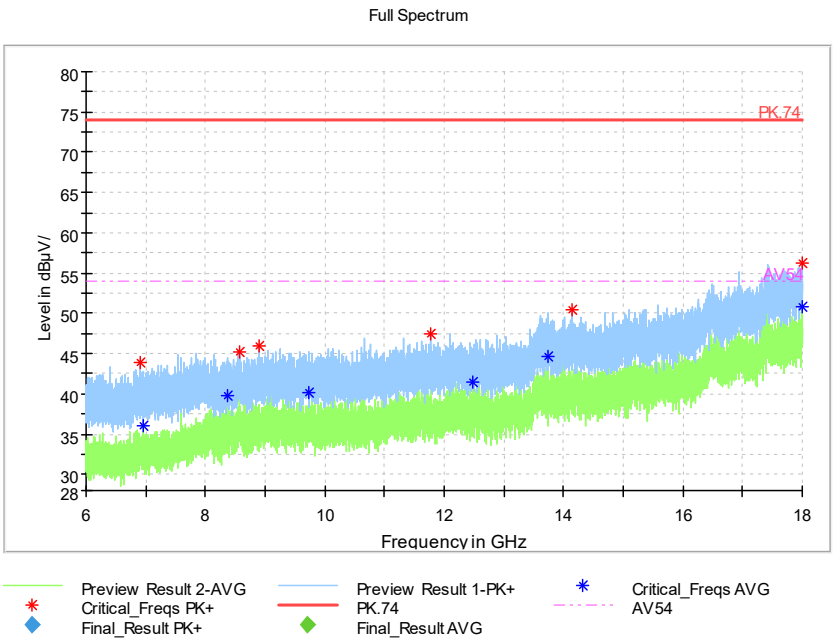
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 2Mbps)



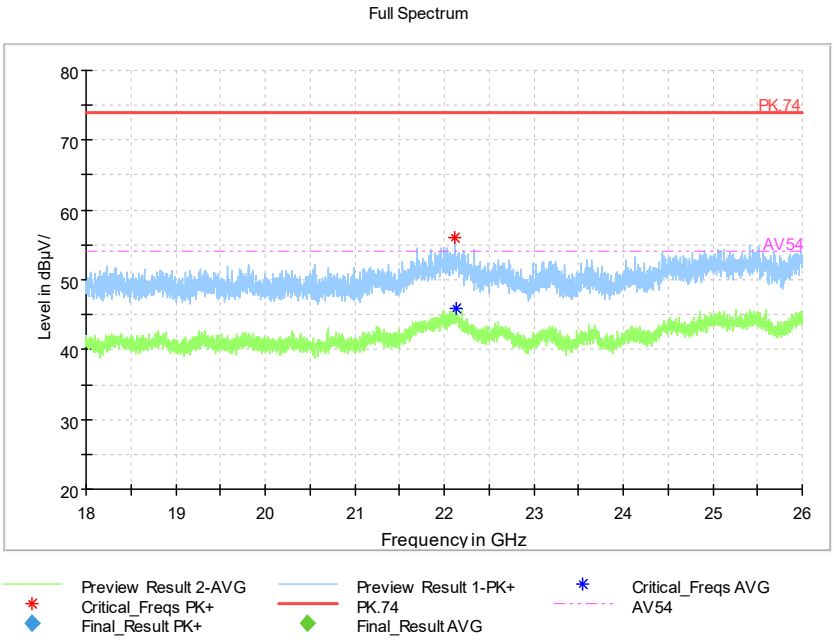
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)



Frequency Range: 3GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

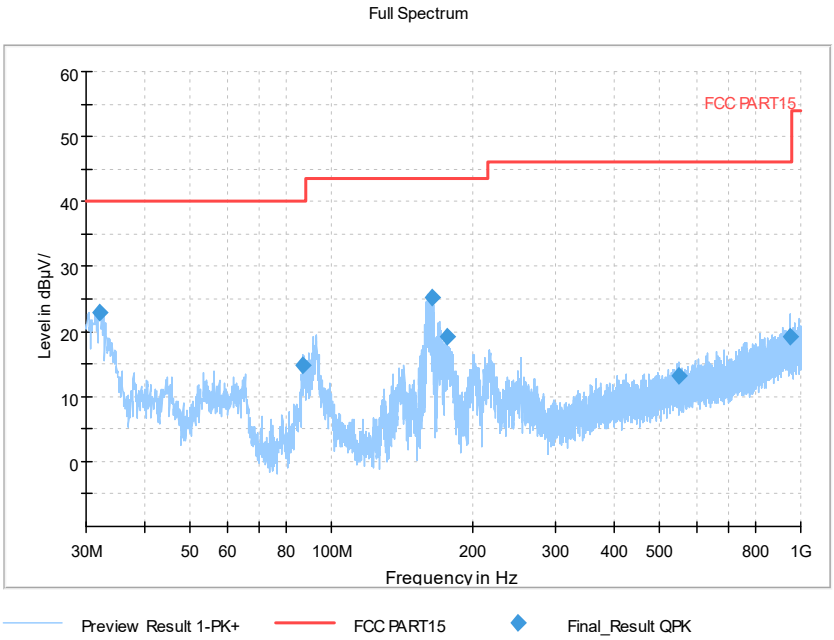


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

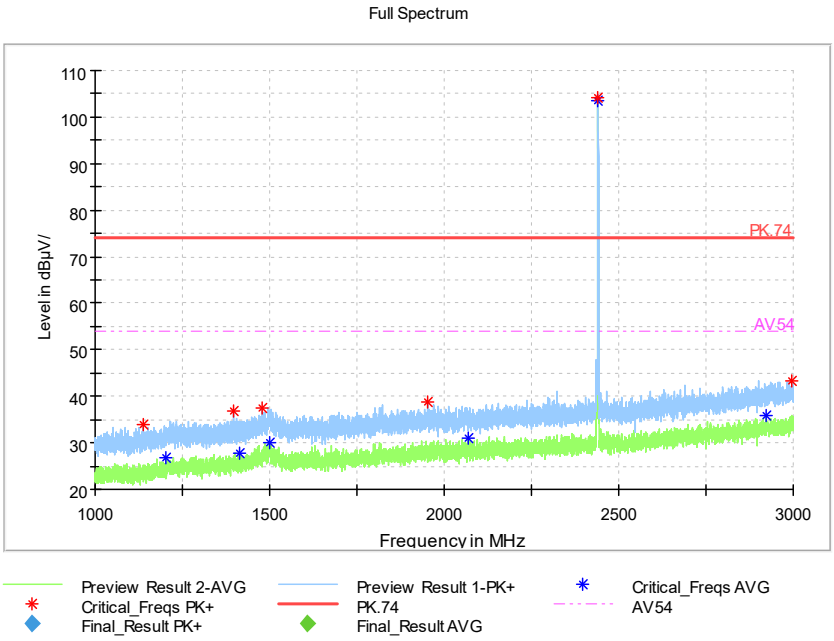


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

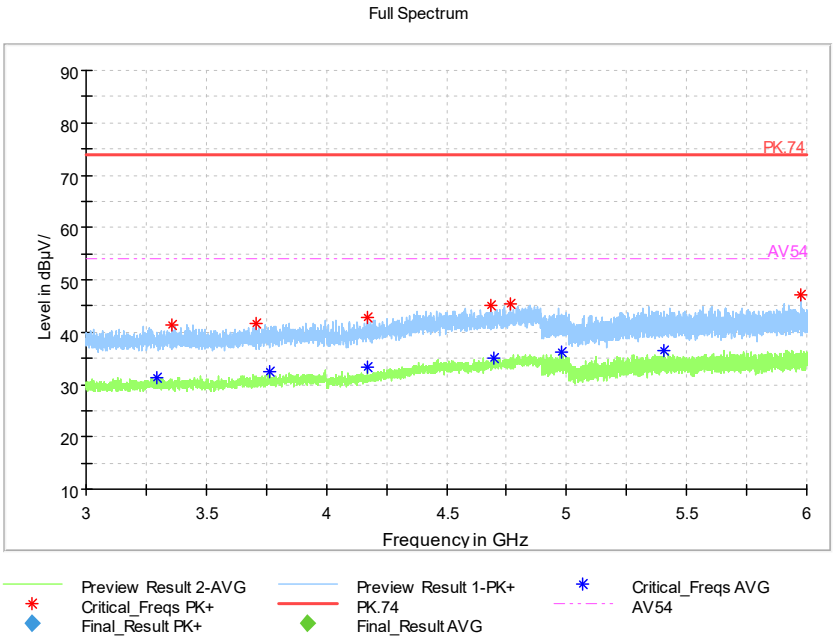
Channel No.:19



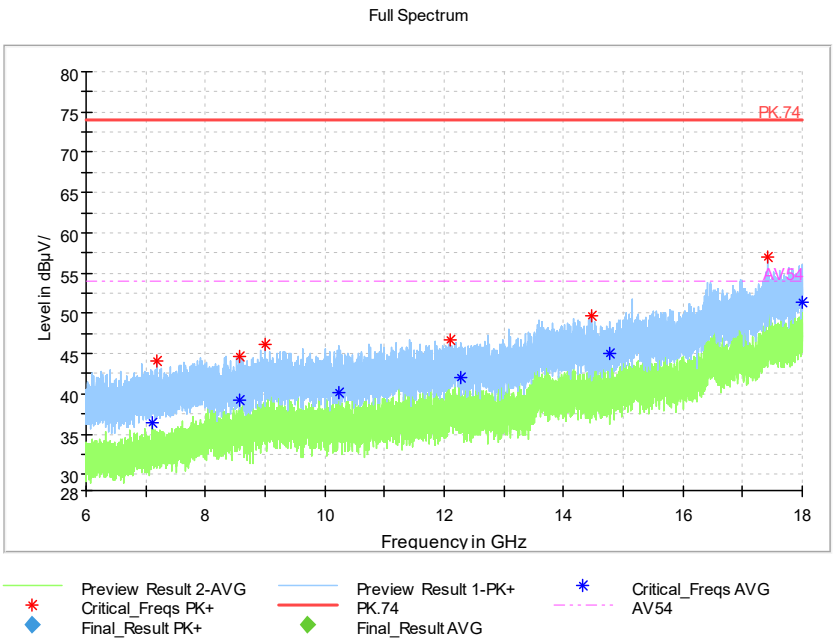
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 2Mbps)



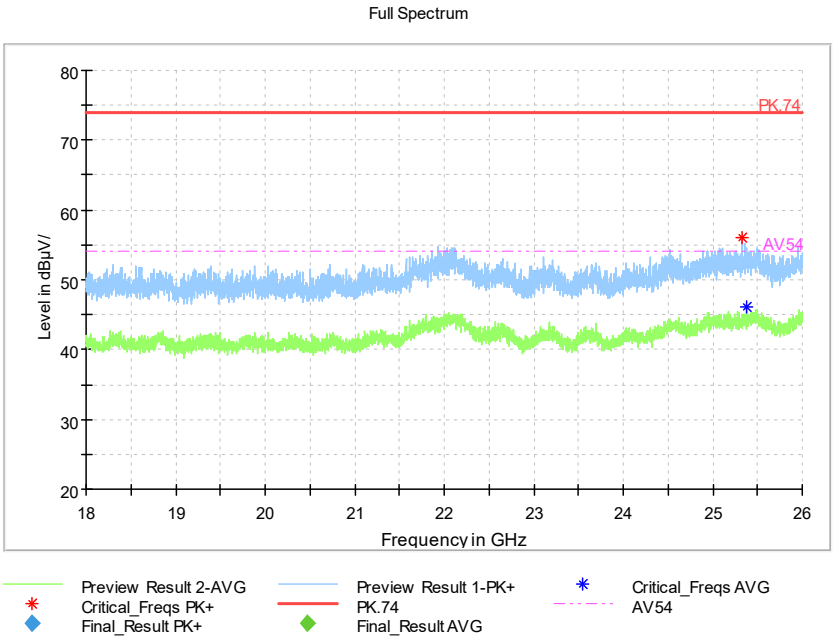
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)



Frequency Range: 3GHz-6GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

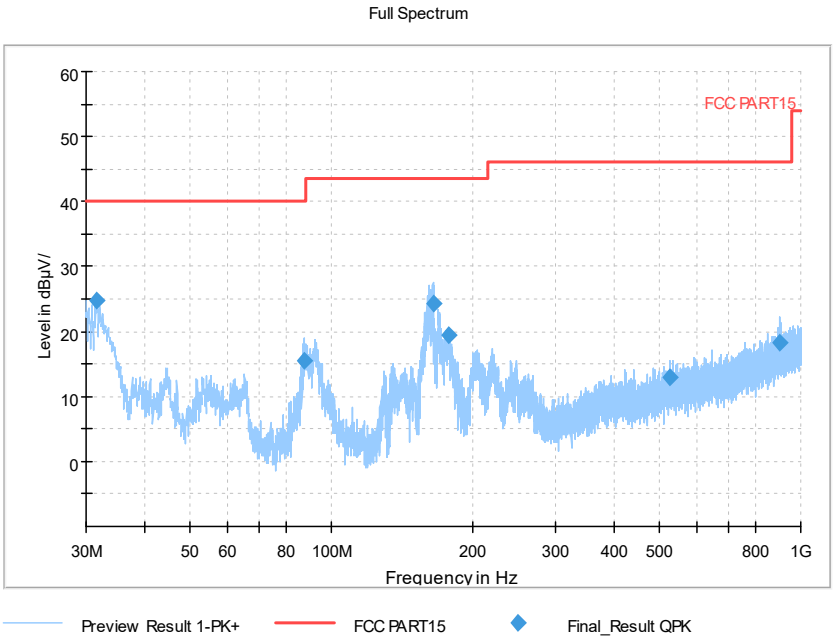


Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

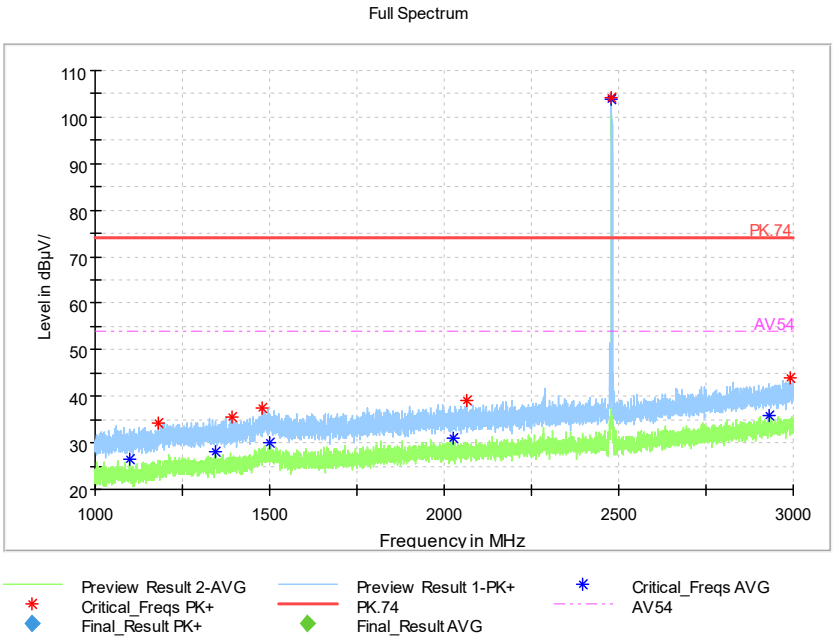


Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

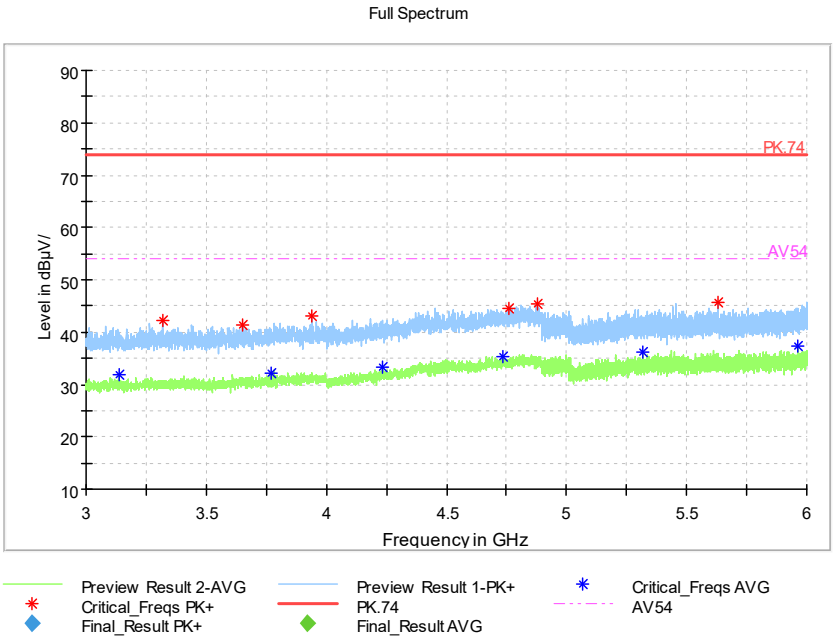
Channel No.:39



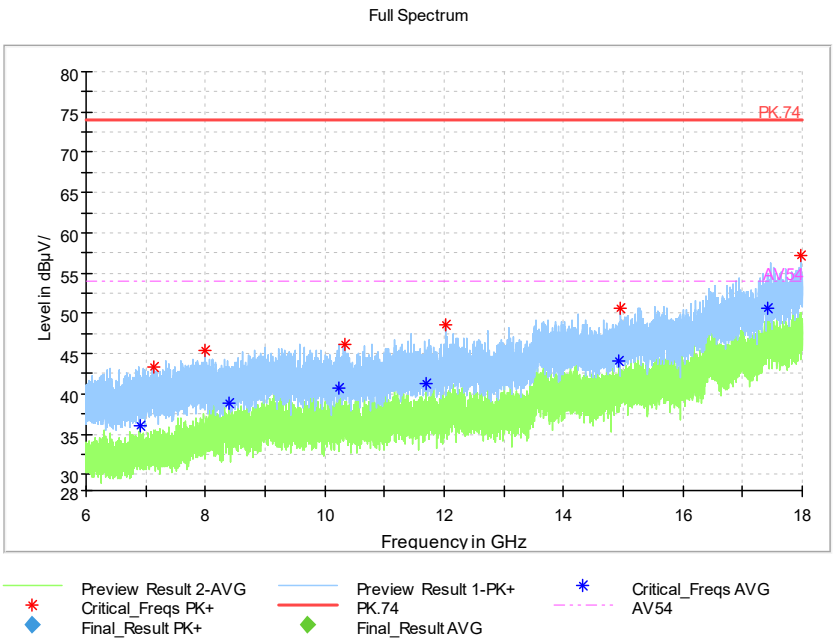
Frequency Range: 30MHz-1000 MHz
Detector: QP mode
Modulation type: GFSK (LE 2Mbps)



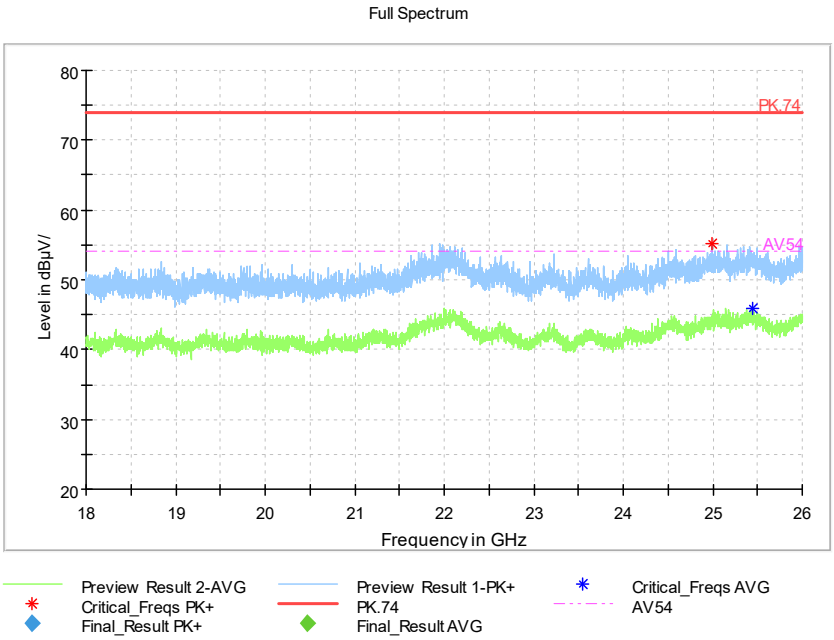
Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)



Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)



Frequency Range: 6GHz-18GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)



Frequency Range: 18GHz-26GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 2Mbps)

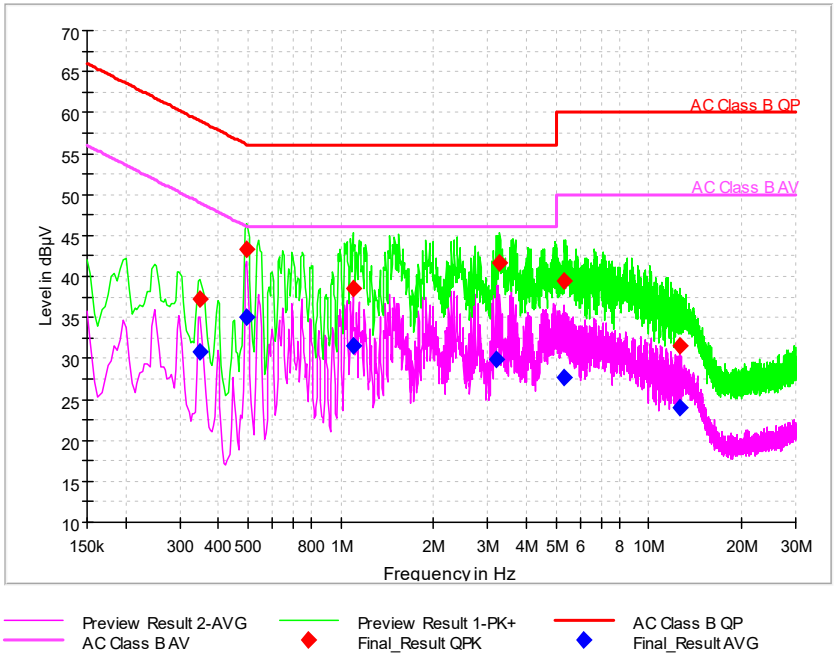
AC Power line Conducted Emission

A “reference path loss” Corr.(dB) is established and the L_{cable}+ATT+VDF is the attenuation of ” reference path loss”, and including the cable loss, the attenuation of the attenuator, the voltage division factor of AMN.

The measurement results are obtained as described below:

$P_{result}=P_{mea}$+ Corr.(dB)

Sample calculation: (30.82 dBμV) = (1.12 dBμV) + (29.7 dB), the corresponding frequency is 0.350421MHz.



L+N Line

MEASUREMENT RESULT:

Frequency (MHz)	QuasiPeak (dBμV)	Average (dBμV)	Limit (dBμV)	Margin (dB)	Line	Corr. (dB)	Pmea QuasiPeak (dBμV)	Pmea Average (dBμV)
0.350421	---	30.82	48.95	18.13	L1	29.7	---	1.12
0.350421	37.33	---	58.95	21.63	L1	29.7	7.63	---
0.495407	---	35.04	46.08	11.04	L1	29.7	---	5.34
0.495407	43.23	---	56.08	12.85	L1	29.7	13.53	---
1.092407	38.50	---	56.00	17.50	L1	29.8	8.7	---
1.096671	---	31.47	46.00	14.53	L1	29.8	---	1.67
3.186171	---	29.90	46.00	16.10	L1	29.8	---	0.1
3.288514	41.72	---	56.00	14.28	L1	29.8	11.92	---
5.279936	---	27.64	50.00	22.36	N	29.9	---	-2.26
5.331107	39.44	---	60.00	20.56	N	29.9	9.54	---
12.652886	---	23.97	50.00	26.03	N	30.0	---	-6.03
12.652886	31.54	---	60.00	28.46	N	30.0	1.54	---

---End of Test Report---