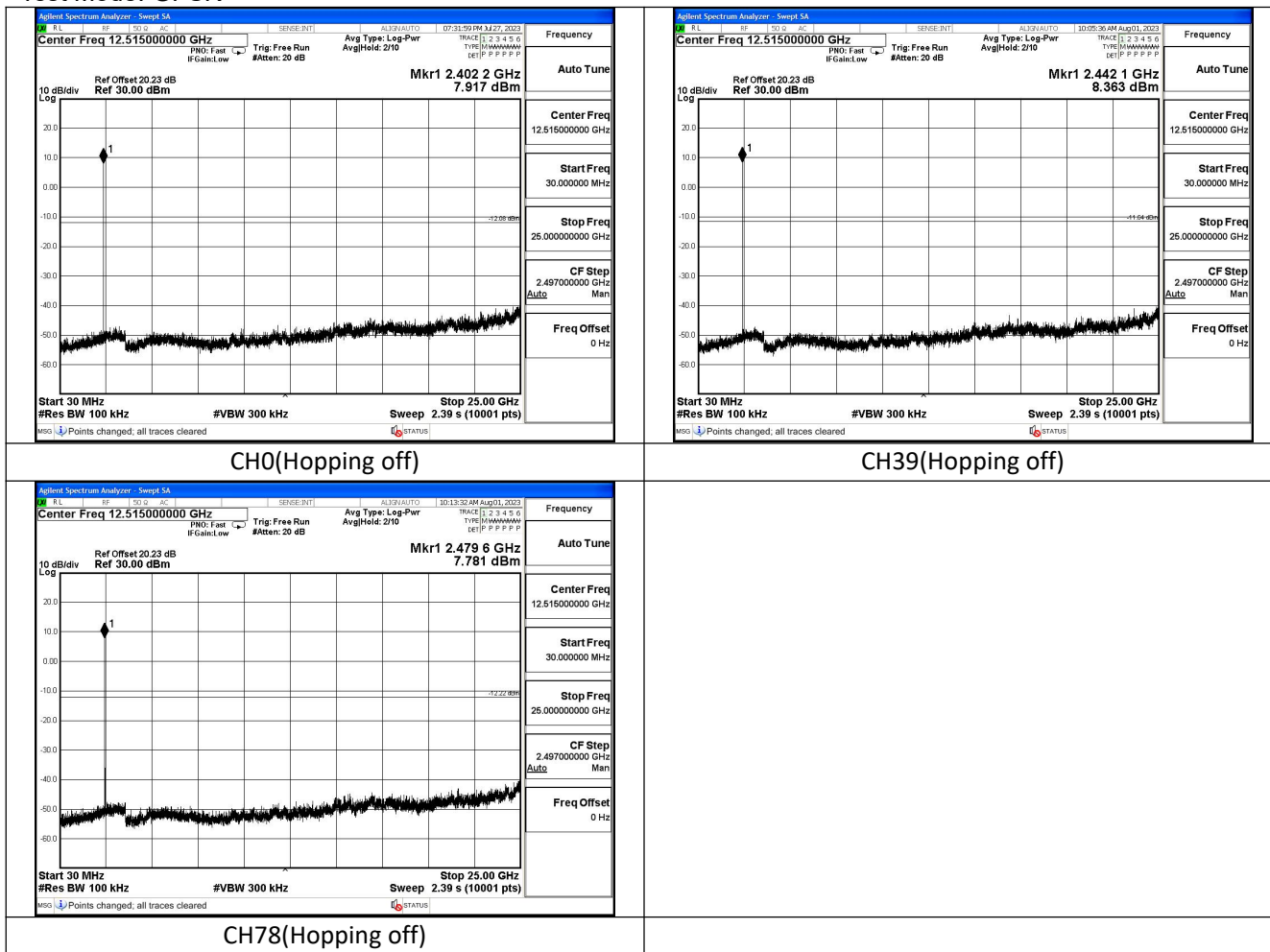
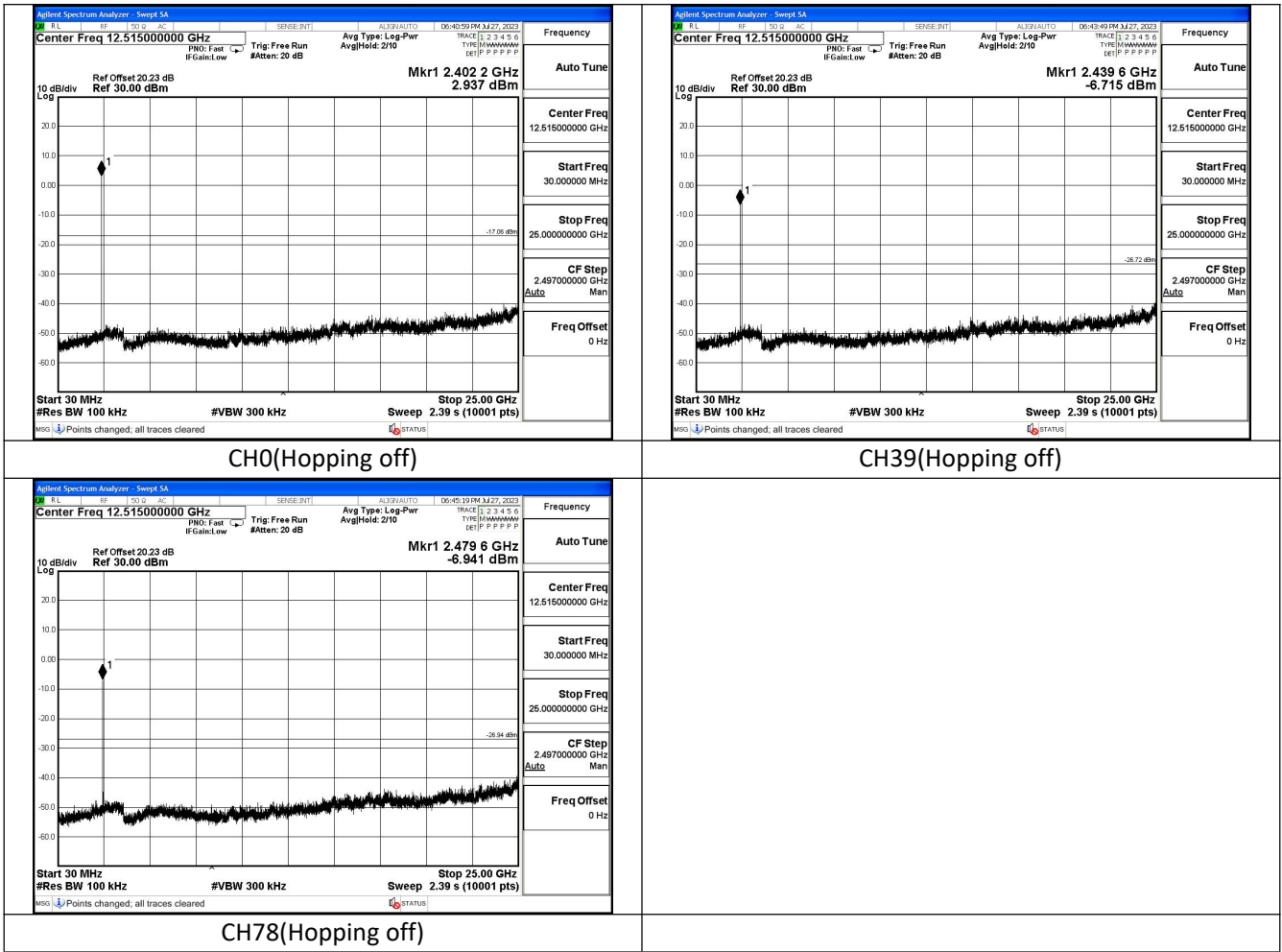


**6 Conducted Out of band emission measurement**

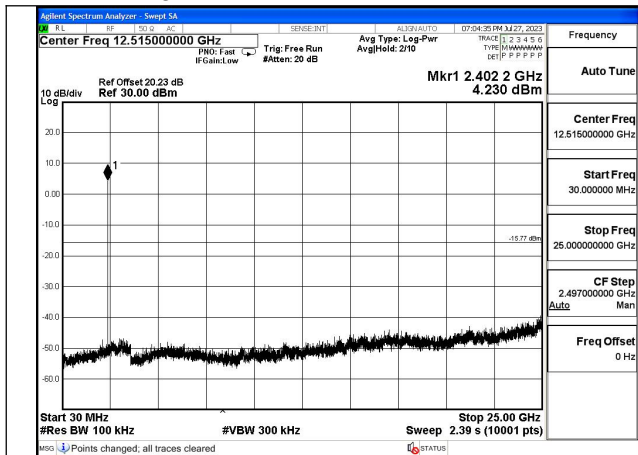
Test Mode: GFSK



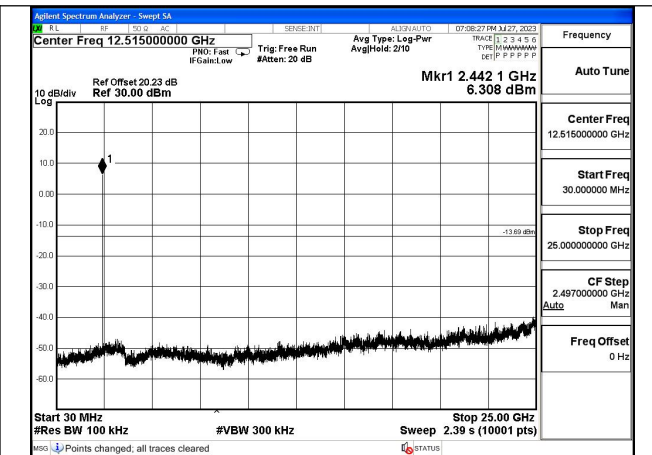
Test Mode:  $\pi$ /4DQPSK



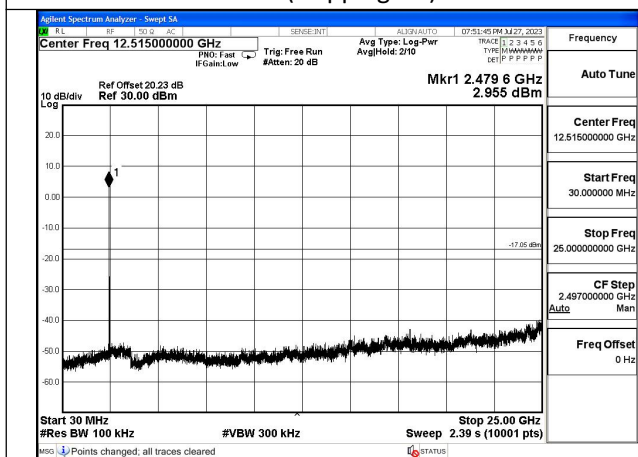
Test Mode: 8DPSK



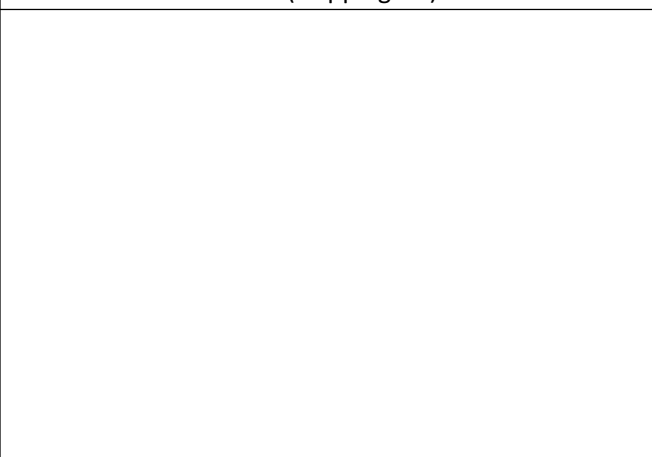
CH0(Hopping off)



CH39(Hopping off)

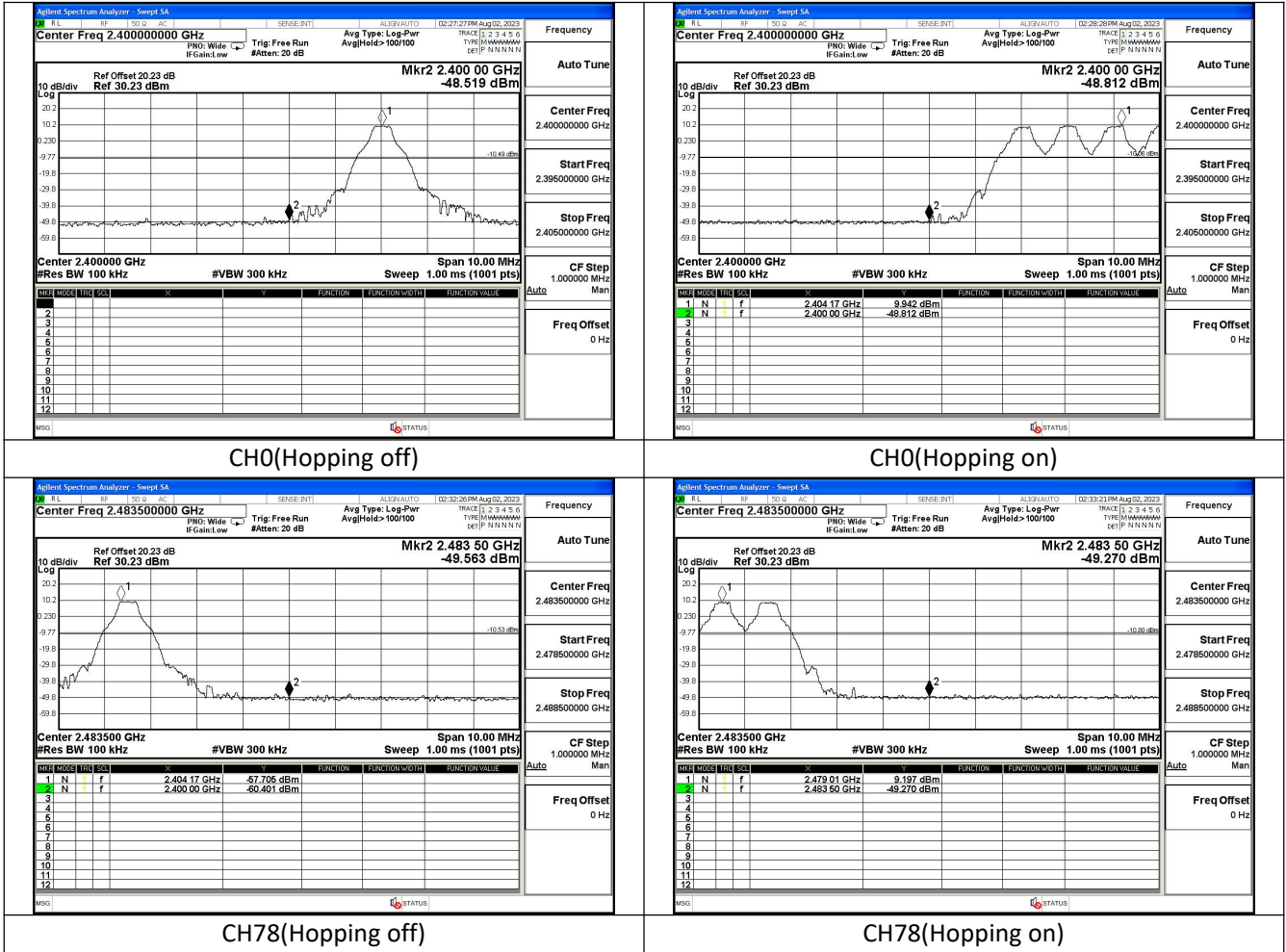


CH78(Hopping off)

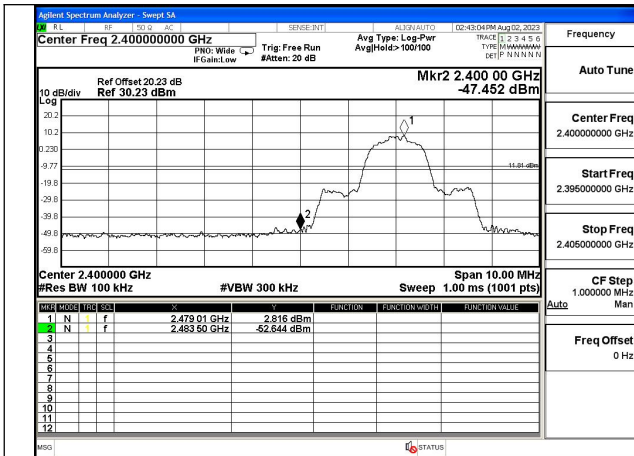


## 7 Band Edge measurement

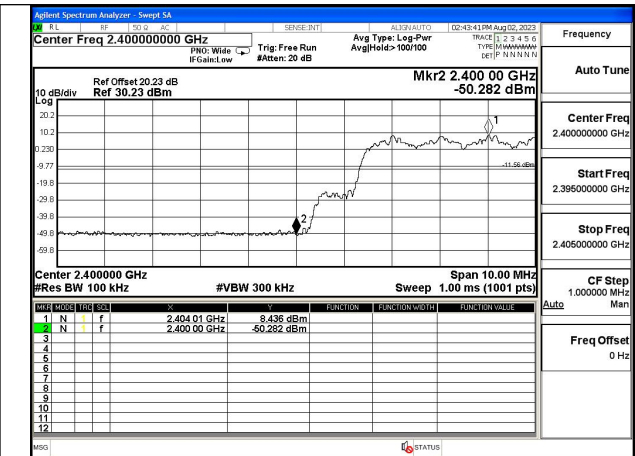
Test Mode: GFSK



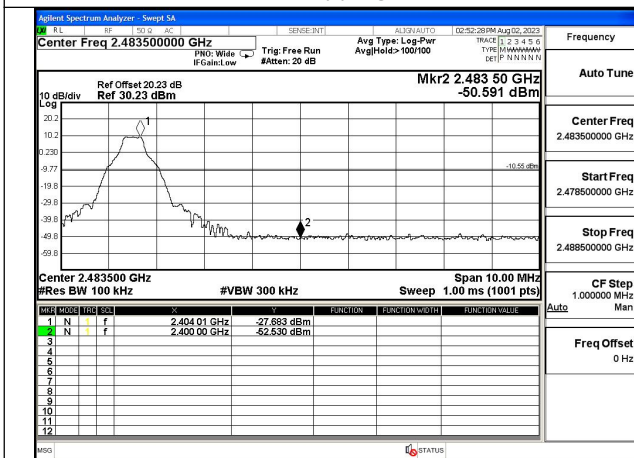
Test Mode:  $\pi$  /4DQPSK



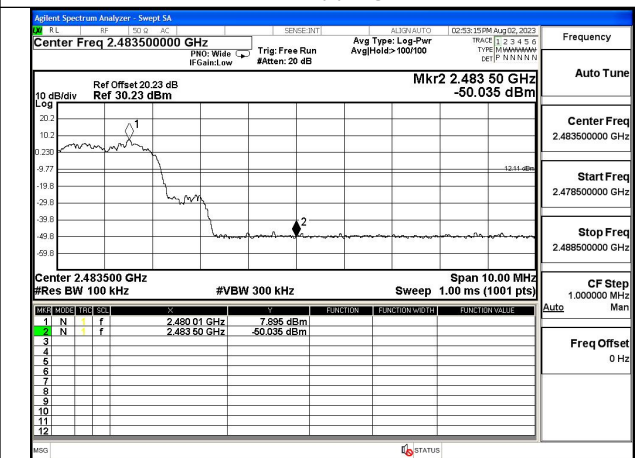
CH0(Hopping off)



CH0(Hopping on)

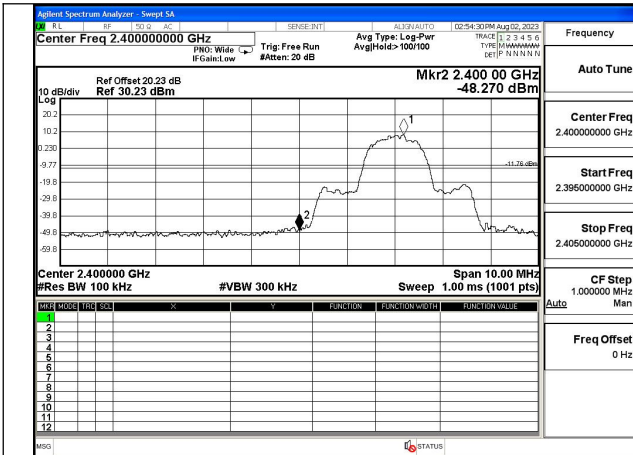


CH78(Hopping off)

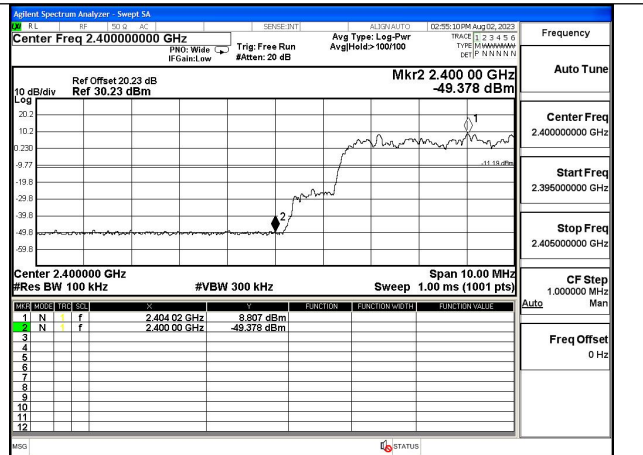


CH78(Hopping on)

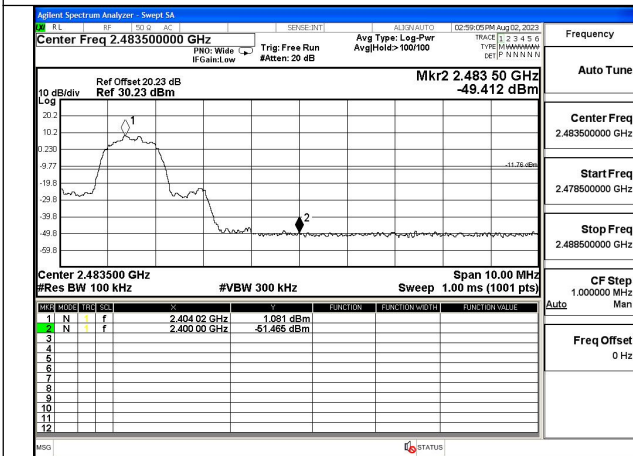
Test Mode: 8DPSK



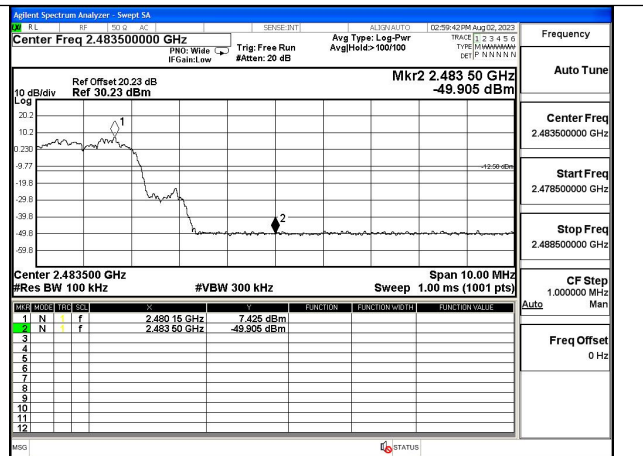
CH0(Hopping off)



CH0(Hopping on)



CH78(Hopping off)



CH78(Hopping on)



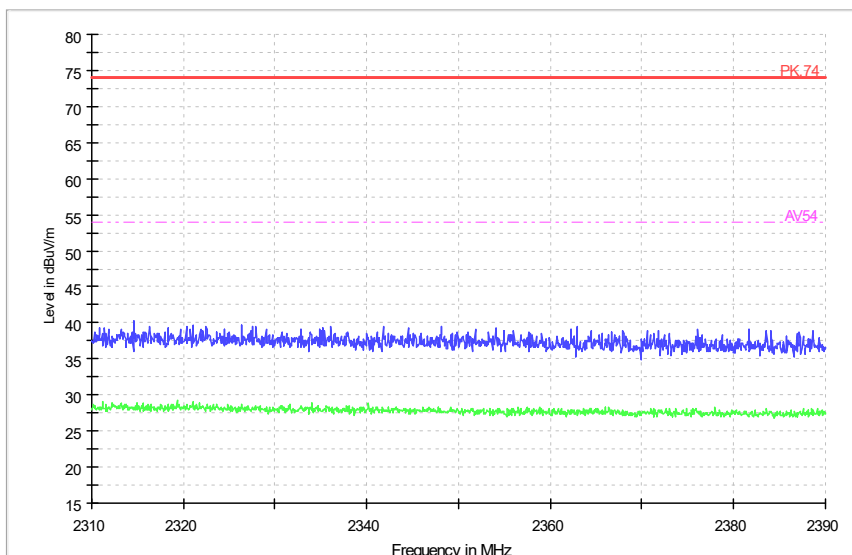
## APPENDIX B – TEST DATA OF RADIATED EMISSION

Note: The worst channel results are reflected in the report.

Note: The scanned graph represents the maximum of both horizontal and vertical polarizations and is not a single horizontal or vertical polarization scan.

### Radiated Emission Band Edge

After comparison,the worst case attitude is EUT lay down .

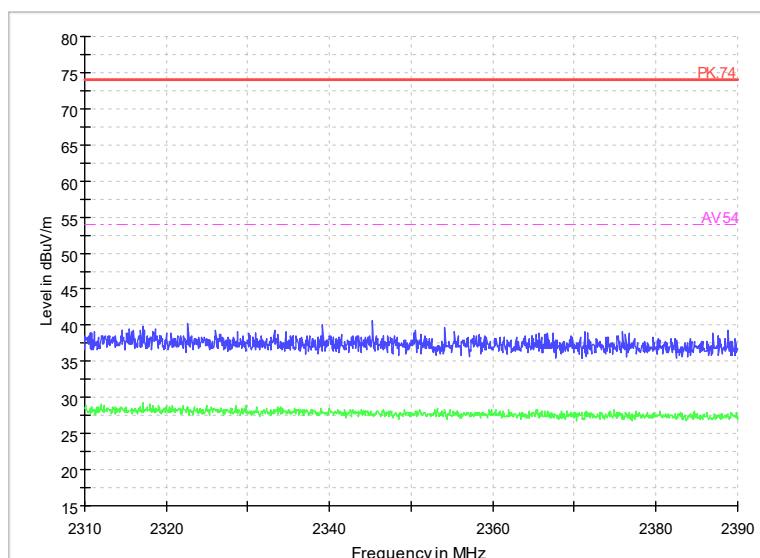


Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK

Polarity: Vertical



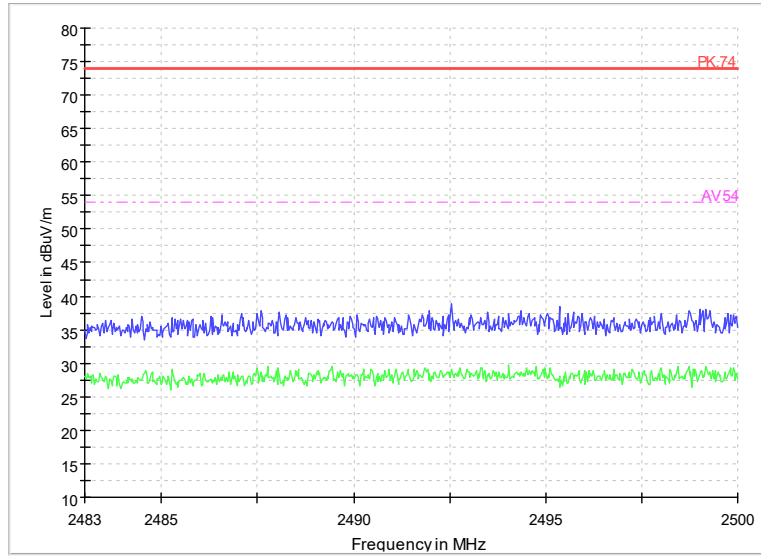
Carrier frequency (MHz): 2402

Channel No.:0

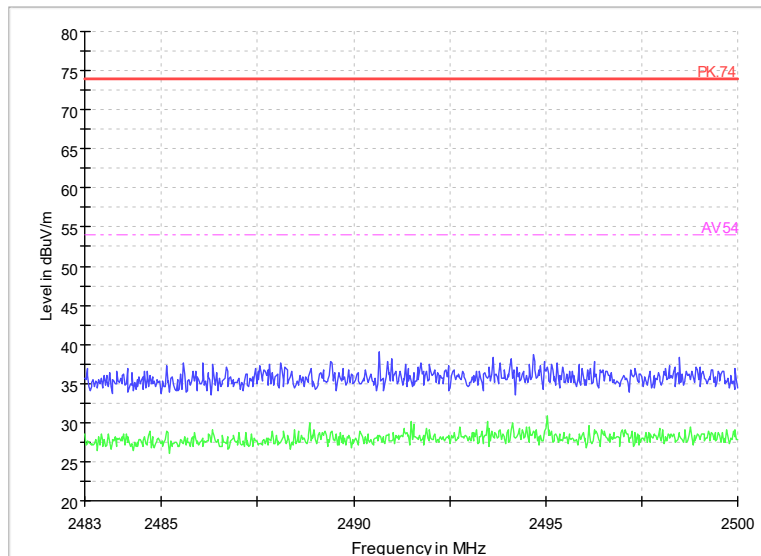
Test Mode: GFSK

Polarity: Horizontal

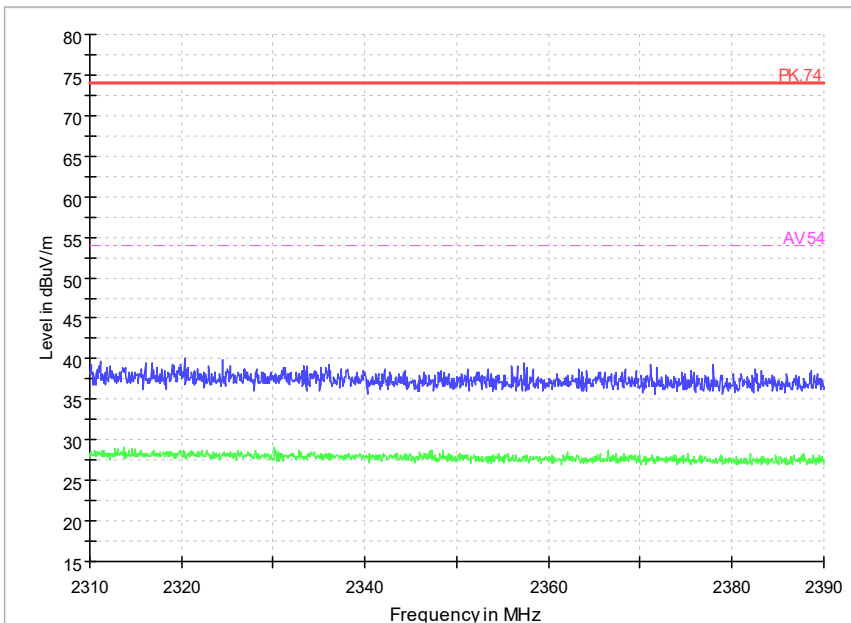




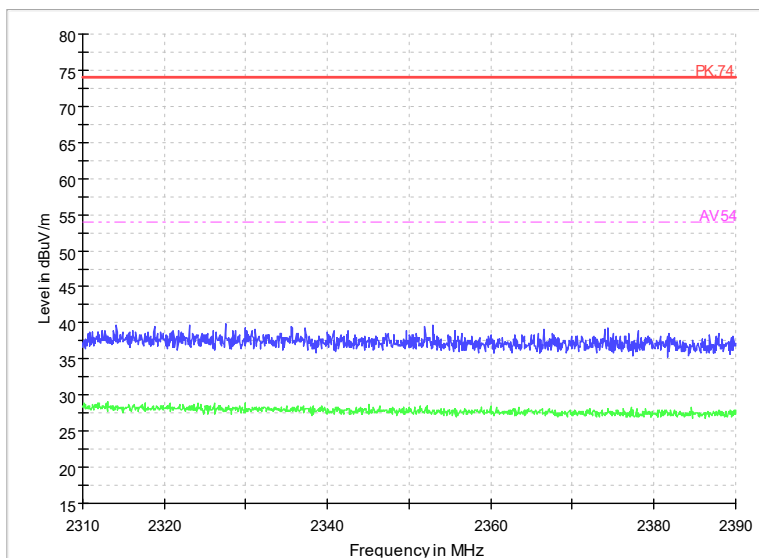
Carrier frequency (MHz): 2480  
Channel No.:78  
Test Mode: GFSK  
Polarity: Vertical



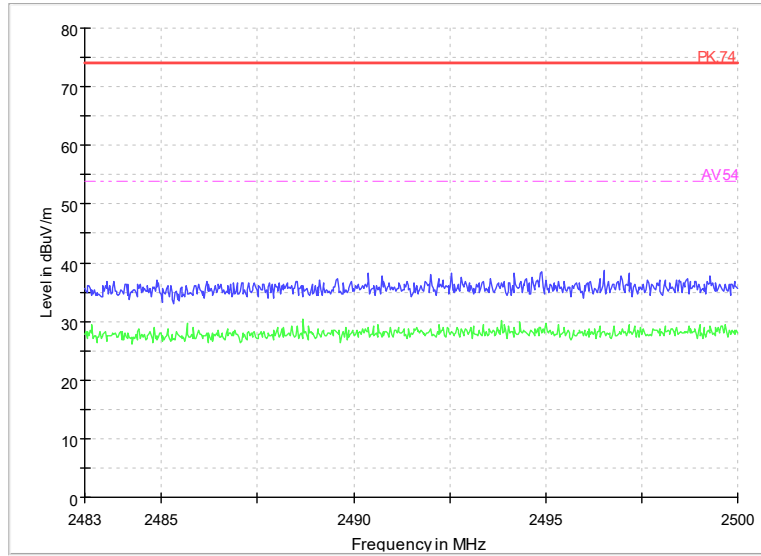
Carrier frequency (MHz): 2480  
Channel No.:78  
Test Mode: GFSK  
Polarity: Horizontal



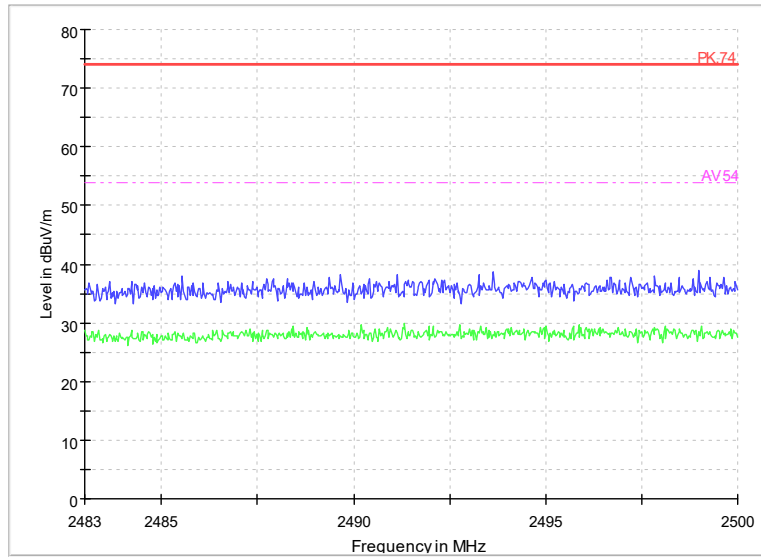
Carrier frequency (MHz): 2402  
Channel No.:0  
Test Mode:  $\pi/4$ DQPSK  
Polarity: Vertical



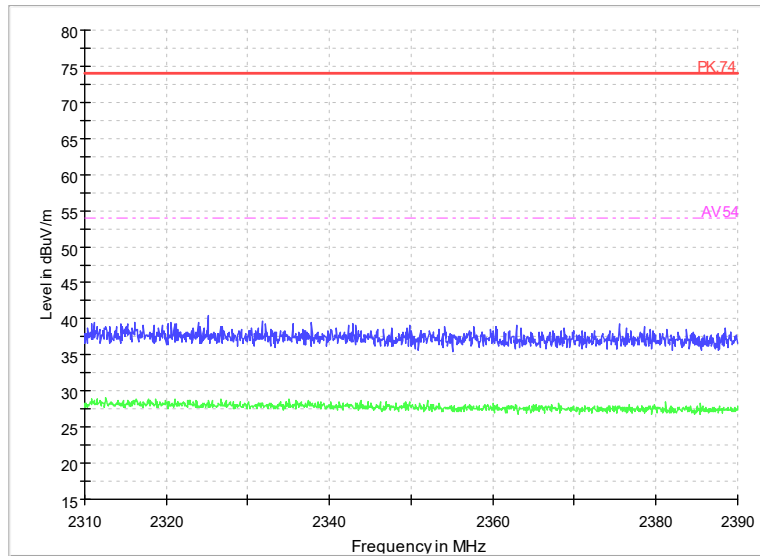
Carrier frequency (MHz): 2402  
Channel No.:0  
Test Mode:  $\pi/4$ DQPSK  
Polarity: Horizontal



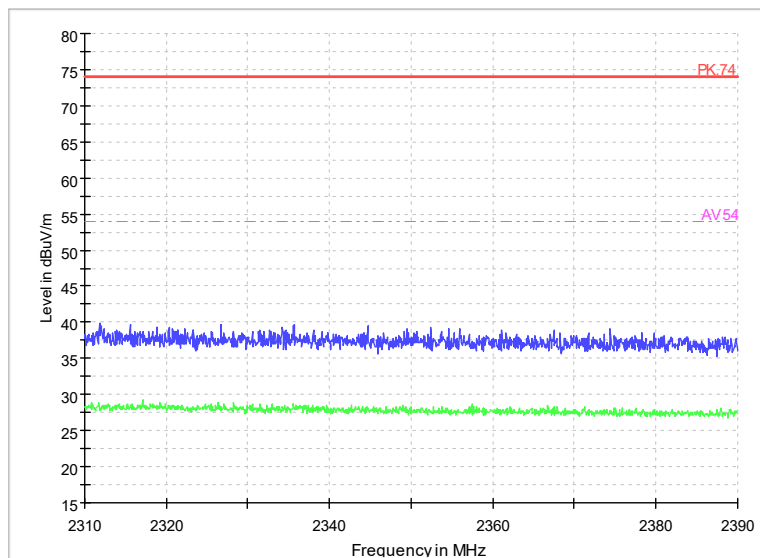
Carrier frequency (MHz): 2480  
Channel No.:78  
Test Mode:  $\pi/4$ DQPSK  
Polarity: Vertical



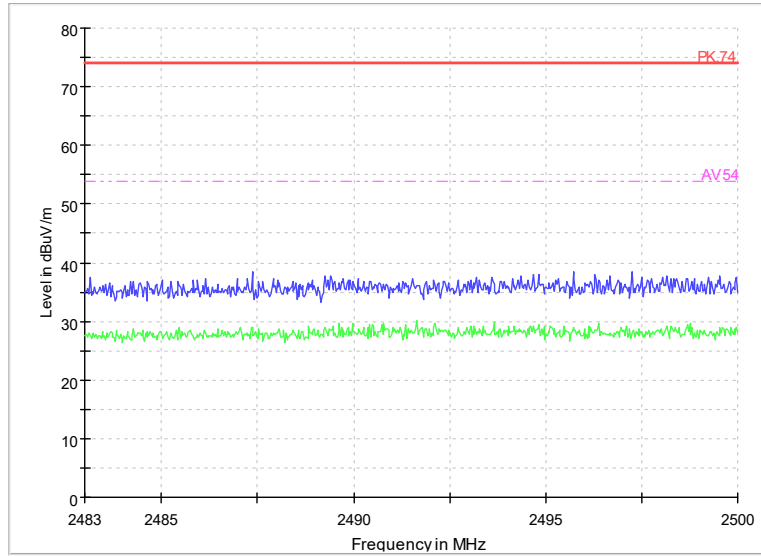
Carrier frequency (MHz): 2480  
Channel No.:78  
Test Mode:  $\pi/4$ DQPSK  
Polarity: Horizontal



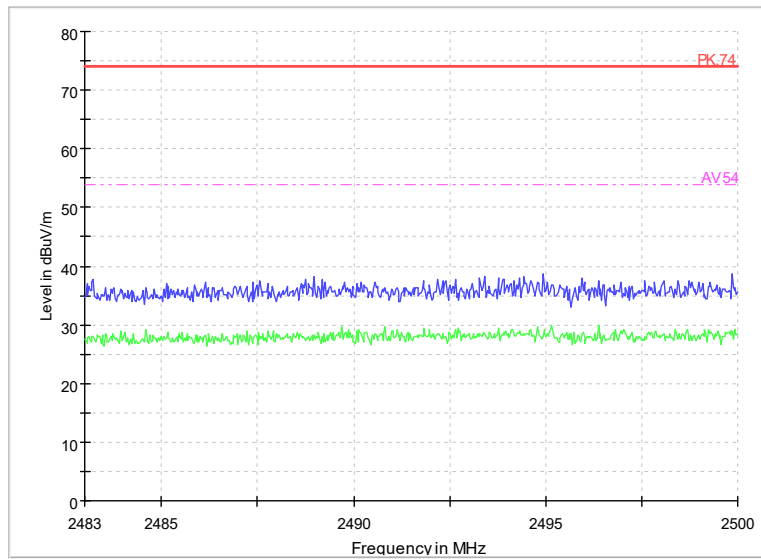
Carrier frequency (MHz): 2402  
Channel No.:0  
Test Mode: 8DPSK  
Polarity: Vertical



Carrier frequency (MHz): 2402  
Channel No.:0  
Test Mode: 8DPSK  
Polarity: Horizontal



Carrier frequency (MHz): 2480  
Channel No.:78  
Test Mode: 8DPSK  
Polarity: Vertical



Carrier frequency (MHz): 2480  
Channel No.:78  
Test Mode: 8DPSK  
Polarity: Horizontal

## Radiated Emission

### Sample Calculations

After comparison, the worst case attitude is EUT lay down .

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:  $(9.07\text{dB}\mu\text{V/m}) = (27.47\text{dB}\mu\text{V}) + (-18.4\text{dB/m})$ , the corresponding frequency is 43.968MHz.

For GFSK

Channel No.:0

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 43.968          | 9.07            | -18.4     | 27.47         | Vertical | 40             | 30.93       |
| 87.23           | 9.28            | -19.8     | 29.08         | Vertical | 40             | 30.72       |
| 102.3135        | 6.69            | -18.7     | 25.39         | Vertical | 43.5           | 36.81       |
| 268.9595        | 8.12            | -16.7     | 24.82         | Vertical | 46             | 37.88       |
| 439.4855        | 12.67           | -11.9     | 24.57         | Vertical | 46             | 33.33       |
| 922.109         | 20.89           | -3.1      | 23.99         | Vertical | 46             | 25.11       |

For  $\pi/4$ DQPSK

Channel No.:0

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 50.661          | 8.63            | -18.4     | 27.03         | Vertical | 40             | 31.37       |
| 87.23           | 8.99            | -19.8     | 28.79         | Vertical | 40             | 31.01       |
| 109.734         | 7.25            | -18.9     | 26.15         | Vertical | 43.5           | 36.25       |
| 213.1845        | 6.69            | -18.4     | 25.09         | Vertical | 43.5           | 36.81       |
| 547.3495        | 14.1            | -9.5      | 23.6          | Vertical | 46             | 31.9        |
| 957.32          | 21.13           | -2.7      | 23.83         | Vertical | 46             | 24.87       |

For 8DPSK

Channel No.:0

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 45.229          | 8.96            | -18.4     | 27.36         | Vertical | 40             | 31.04       |
| 87.5695         | 9.94            | -19.7     | 29.64         | Vertical | 40             | 30.06       |
| 105.951         | 7.04            | -18.8     | 25.84         | Vertical | 43.5           | 36.46       |
| 292.87          | 8.79            | -16       | 24.79         | Vertical | 46             | 37.21       |

|          |       |      |       |          |    |       |
|----------|-------|------|-------|----------|----|-------|
| 547.495  | 14.03 | -9.5 | 23.53 | Vertical | 46 | 31.97 |
| 940.5875 | 21.2  | -2.9 | 24.1  | Vertical | 46 | 24.8  |

For GFSK

Channel No.:39

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 50.758          | 8.44            | -18.4     | 26.84         | Vertical | 40             | 31.56       |
| 87.909          | 10.42           | -19.7     | 30.12         | Vertical | 40             | 29.58       |
| 101.004         | 6.56            | -18.7     | 25.26         | Vertical | 43.5           | 36.94       |
| 305.092         | 9.15            | -15.7     | 24.85         | Vertical | 46             | 36.85       |
| 533.527         | 13.92           | -9.8      | 23.72         | Vertical | 46             | 32.08       |
| 893.3485        | 20.45           | -3.5      | 23.95         | Vertical | 46             | 25.55       |

For  $\pi/4$ DQPSK

Channel No.:39

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 51.825          | 8.72            | -18.5     | 27.22         | Vertical | 40             | 31.28       |
| 87.9575         | 11.04           | -19.7     | 30.74         | Vertical | 40             | 28.96       |
| 119.6765        | 5.83            | -19.6     | 25.43         | Vertical | 43.5           | 37.67       |
| 205.182         | 6.44            | -18.7     | 25.14         | Vertical | 43.5           | 37.06       |
| 534.4           | 13.91           | -9.8      | 23.71         | Vertical | 46             | 32.09       |
| 948.7355        | 21.14           | -2.8      | 23.94         | Vertical | 46             | 24.86       |

For 8DPSK

Channel No.:39

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 44.55           | 9.07            | -18.4     | 27.47         | Vertical | 40             | 30.93       |
| 87.909          | 10.47           | -19.7     | 30.17         | Vertical | 40             | 29.53       |
| 97.609          | 7.93            | -18.8     | 26.73         | Vertical | 43.5           | 35.57       |
| 193.445         | 6.03            | -19.2     | 25.23         | Vertical | 43.5           | 37.47       |
| 528.774         | 13.67           | -10       | 23.67         | Vertical | 46             | 32.33       |
| 934.2825        | 21.2            | -2.9      | 24.1          | Vertical | 46             | 24.8        |

For GFSK

Channel No.:78

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 45.4715         | 8.92            | -18.4     | 27.32         | Vertical | 40             | 31.08       |
| 87.909          | 10.17           | -19.7     | 29.87         | Vertical | 40             | 29.83       |
| 104.7385        | 7.71            | -18.8     | 26.51         | Vertical | 43.5           | 35.79       |
| 282.4425        | 8.53            | -16.4     | 24.93         | Vertical | 46             | 37.47       |
| 553.121         | 14.26           | -9.3      | 23.56         | Vertical | 46             | 31.74       |
| 950.045         | 21.05           | -2.8      | 23.85         | Vertical | 46             | 24.95       |

For  $\pi/4$ DQPSK

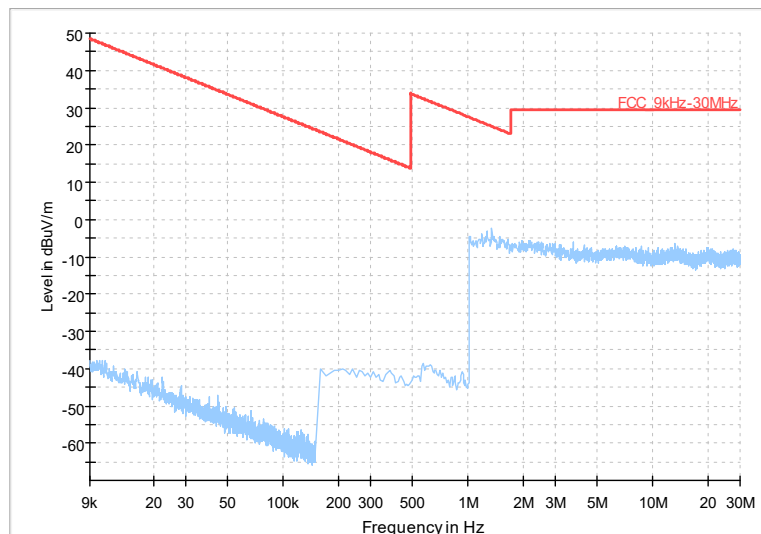
Channel No.:78

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 44.5985         | 9.54            | -18.4     | 27.94         | Vertical | 40             | 30.46       |
| 87.909          | 10.29           | -19.7     | 29.99         | Vertical | 40             | 29.71       |
| 98.967          | 7.84            | -18.7     | 26.54         | Vertical | 43.5           | 35.66       |
| 273.567         | 8.27            | -16.6     | 24.87         | Vertical | 46             | 37.73       |
| 556.904         | 14.22           | -9.3      | 23.52         | Vertical | 46             | 31.78       |
| 937.823         | 21.13           | -2.9      | 24.03         | Vertical | 46             | 24.87       |

For 8DPSK  
Channel No.:78

| Frequency (MHz) | Result (dBuV/m) | ARpl (dB) | Pmea (dBuV/m) | Polarity | Limit (dBuV/m) | Margin (dB) |
|-----------------|-----------------|-----------|---------------|----------|----------------|-------------|
| 39.7485         | 8.4             | -18.7     | 27.1          | Vertical | 40             | 31.6        |
| 87.23           | 8.85            | -19.8     | 28.65         | Vertical | 40             | 31.15       |
| 97.6575         | 8.53            | -18.8     | 27.33         | Vertical | 43.5           | 34.97       |
| 213.815         | 6.69            | -18.4     | 25.09         | Vertical | 43.5           | 36.81       |
| 551.181         | 13.96           | -9.4      | 23.36         | Vertical | 46             | 32.04       |
| 943.837         | 21.09           | -2.9      | 23.99         | Vertical | 46             | 24.91       |

Full Spectrum



Frequency Range: 9kHz -30MHz

Detector: QP mode

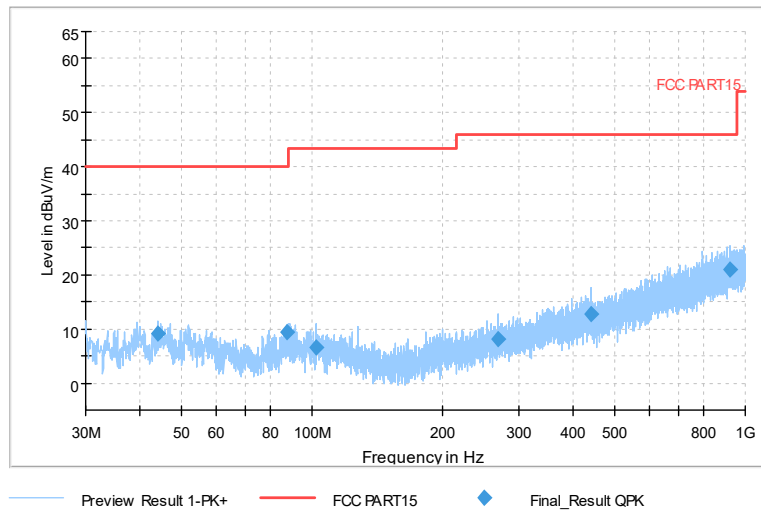
Note: The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case.

Carrier frequency (MHz): 2402

Channel No.:0



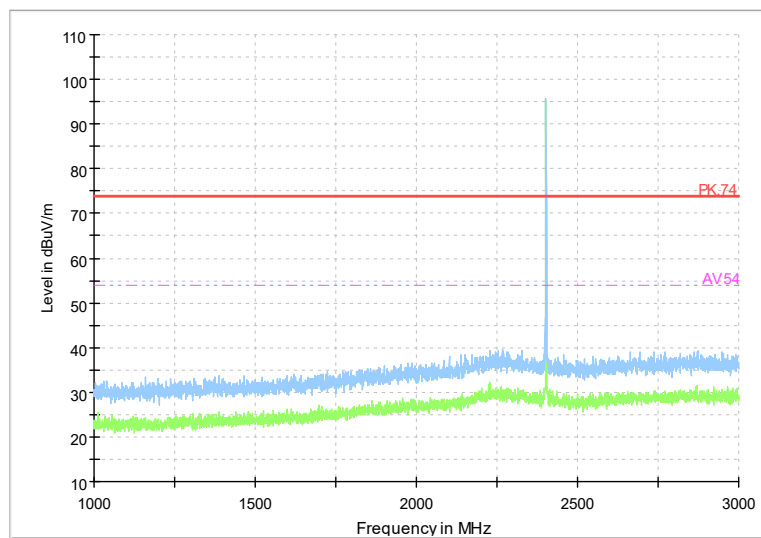
Full Spectrum



Comment

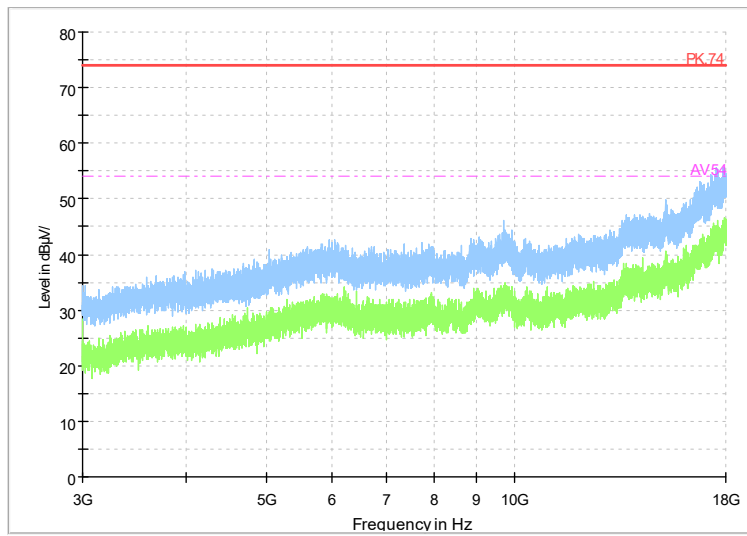
Frequency Range:30MHz-1GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

Full Spectrum



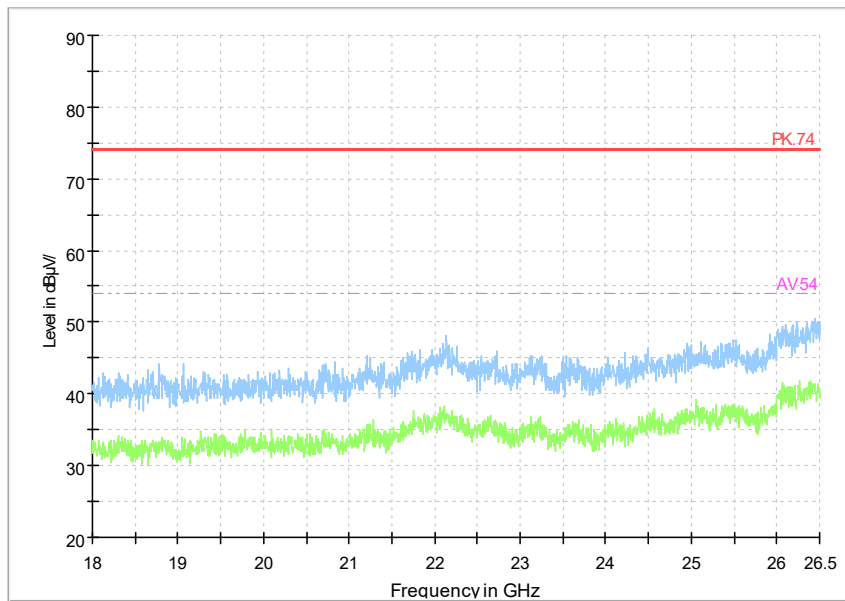
Frequency Range: 1GHz-3GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

Full Spectrum



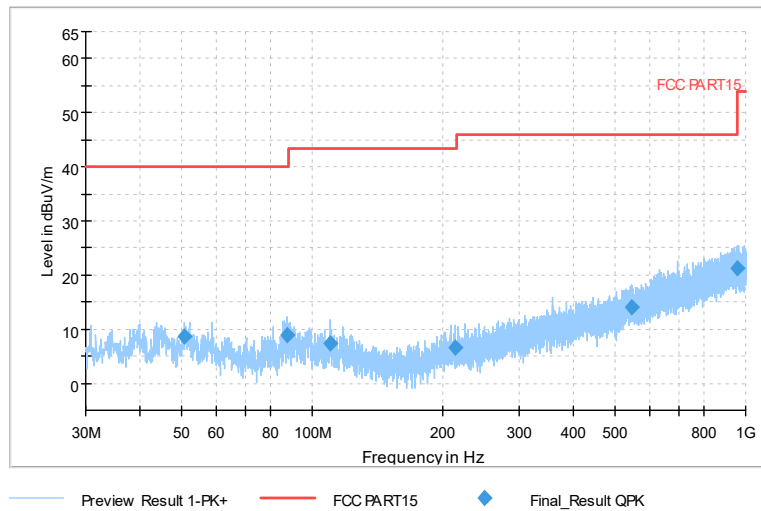
Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

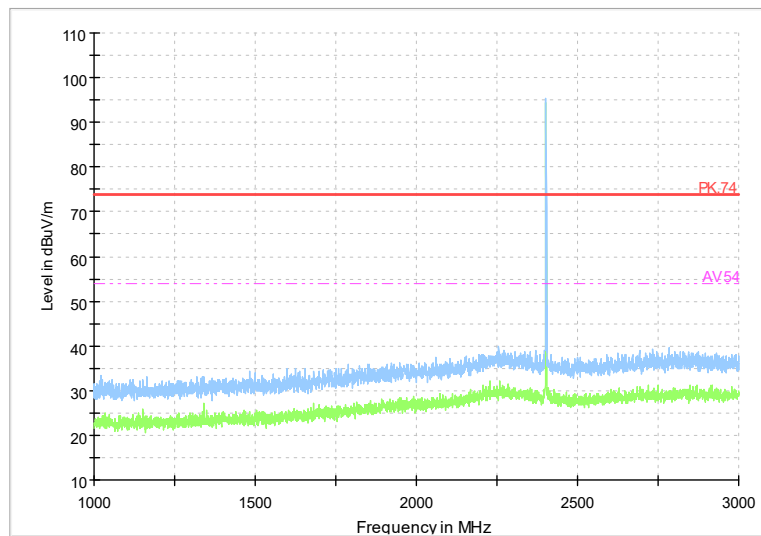
Full Spectrum



Comment

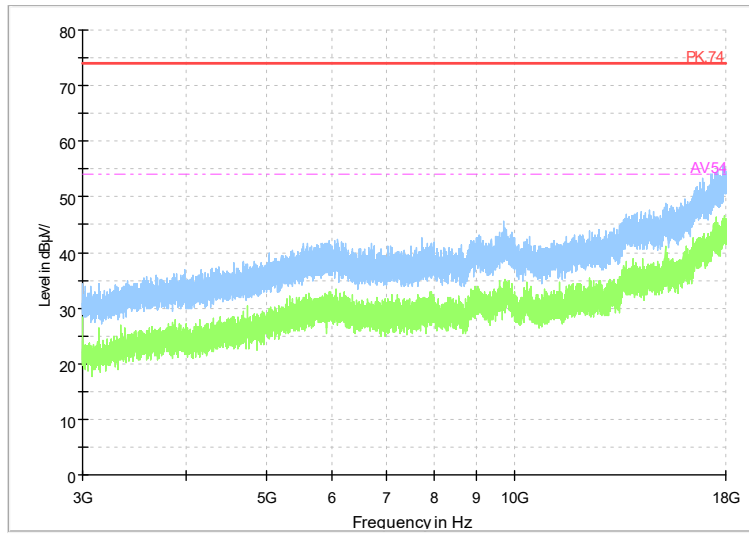
Frequency Range:30MHz-1GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

Full Spectrum



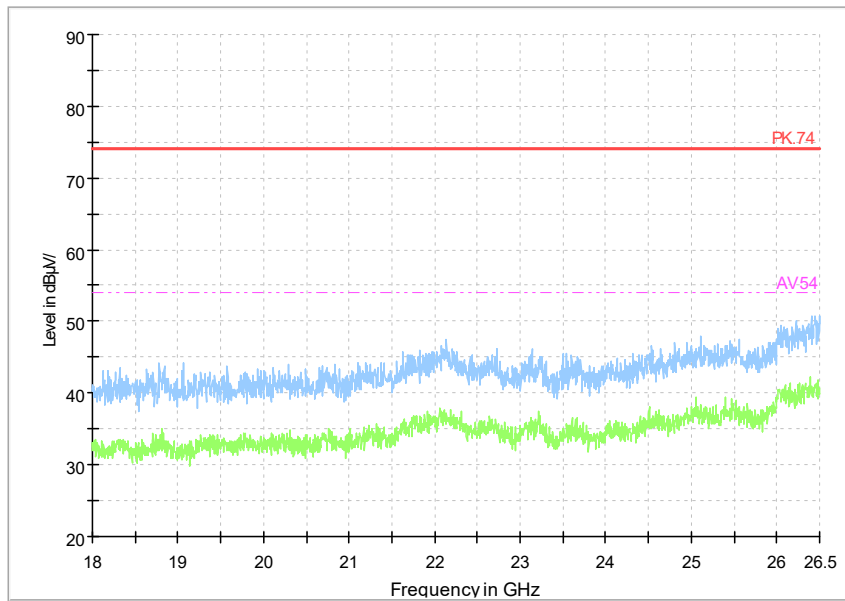
Frequency Range: 1GHz-3GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

Full Spectrum



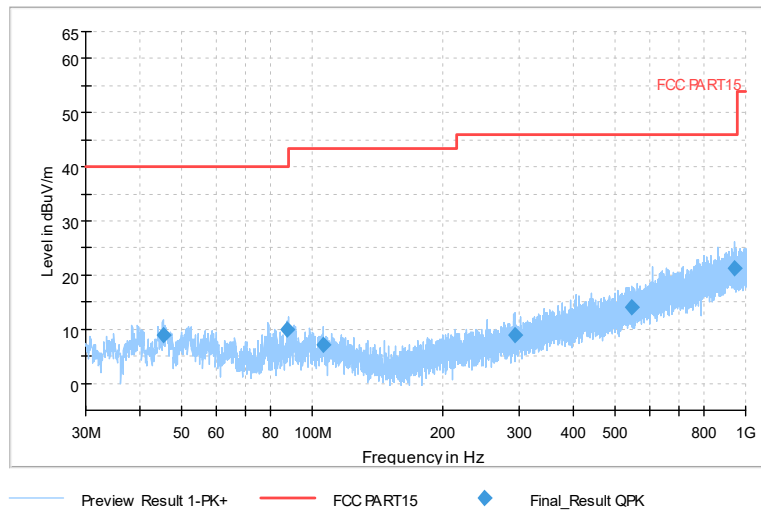
Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

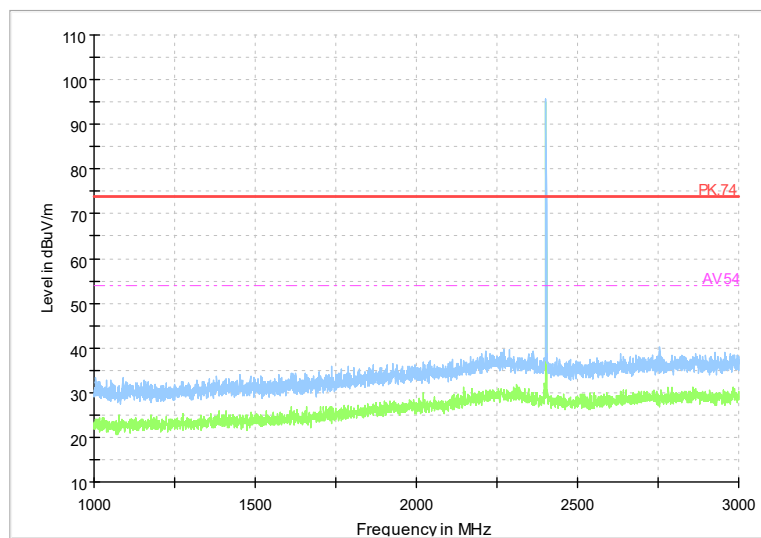
Full Spectrum



Comment

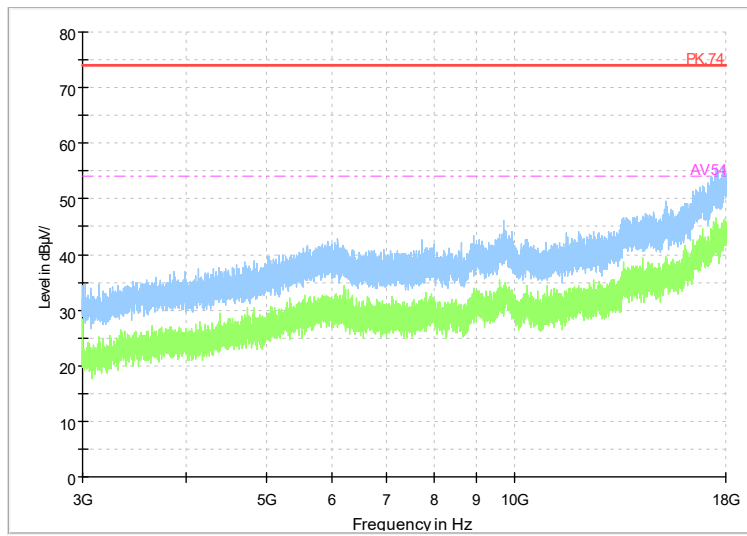
Frequency Range:30MHz-1GHz  
 Detector: Av mode and PK mode  
 Modulation type: 8DPSK

Full Spectrum



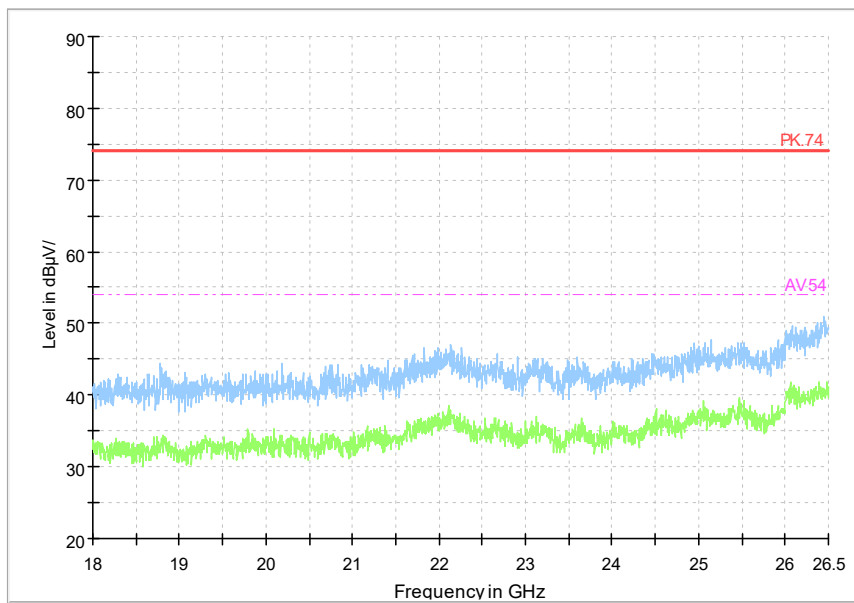
Frequency Range: 1GHz-3GHz  
 Detector: Av mode and PK mode  
 Modulation type: 8DPSK

Full Spectrum



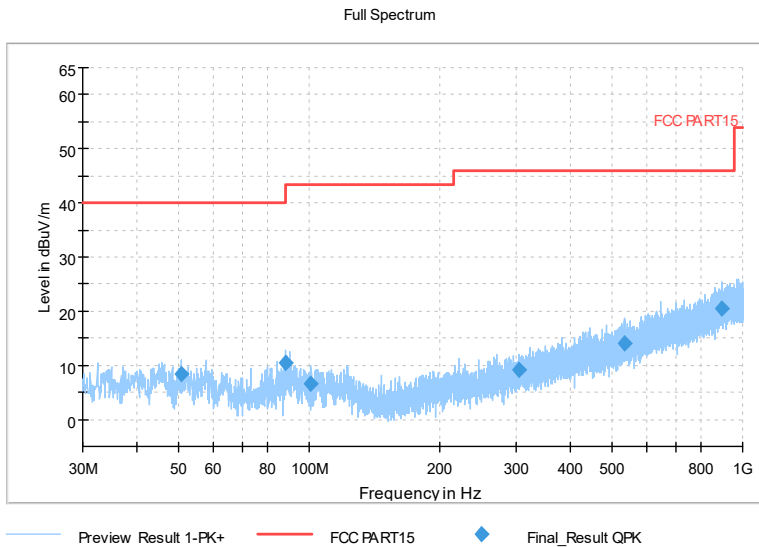
Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

Full Spectrum



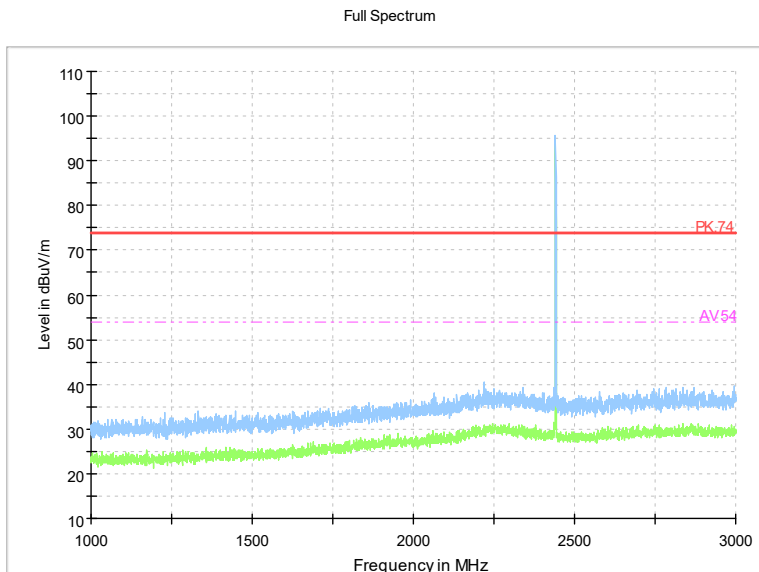
Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

Carrier frequency (MHz): 2440  
Channel No.:39



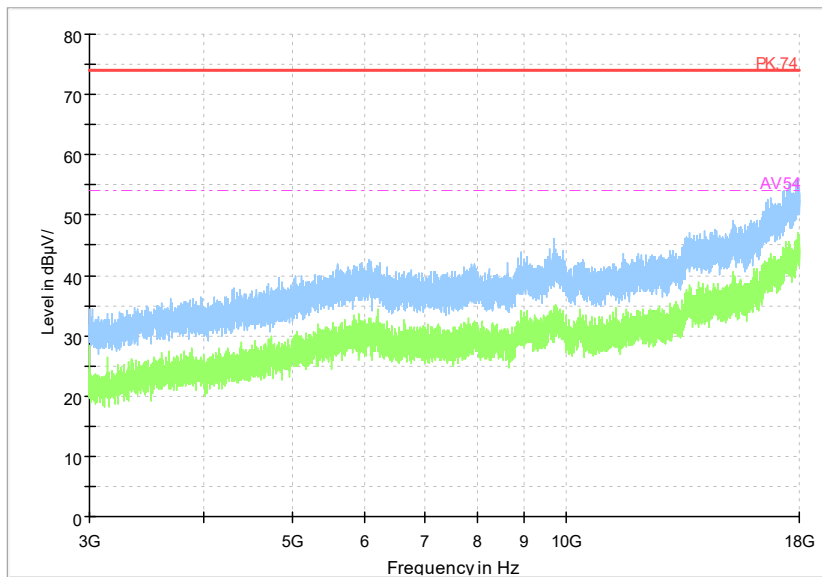
Comment

Frequency Range: 30MHz-1GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK



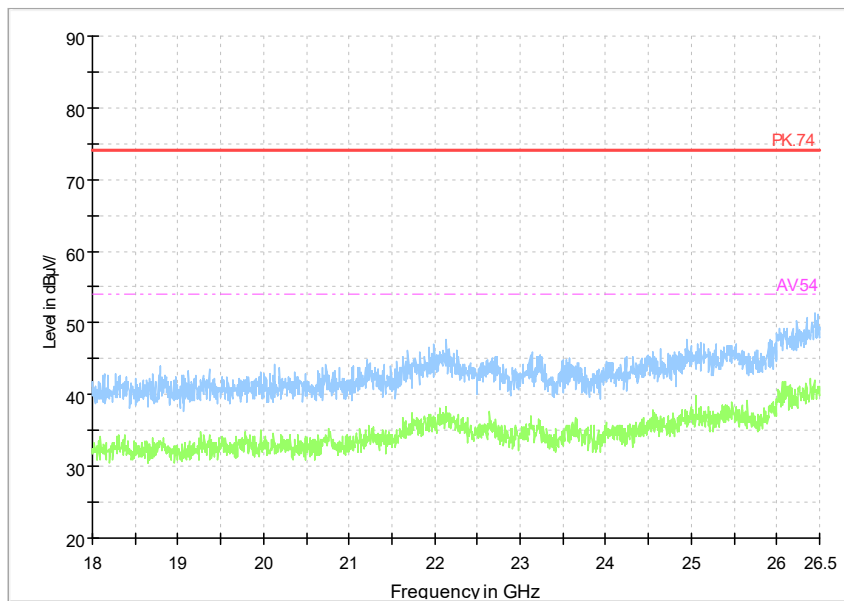
Frequency Range: 1GHz-3GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

Full Spectrum



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

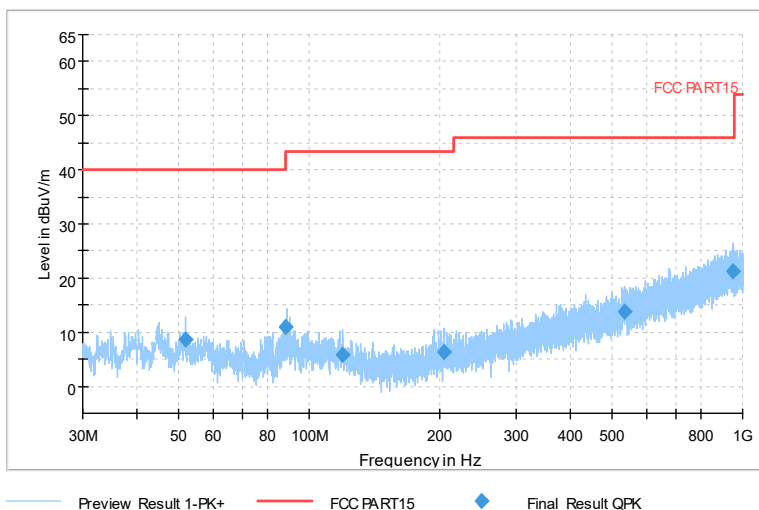
Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK



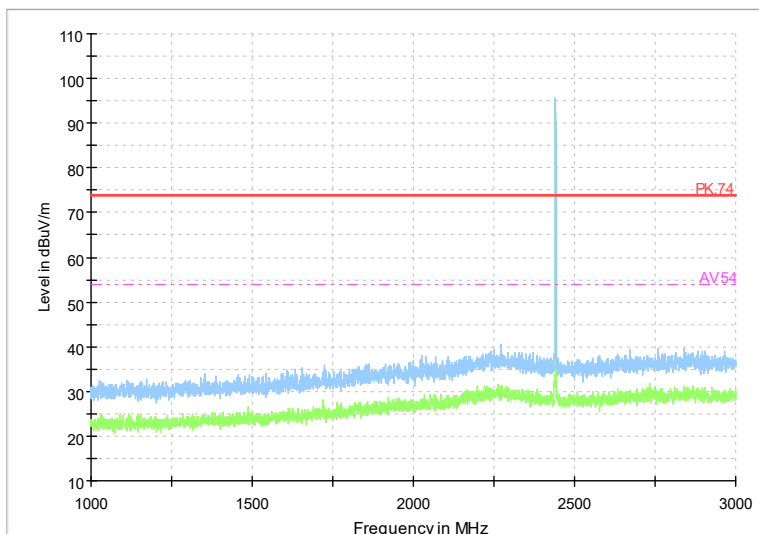
Full Spectrum



Comment

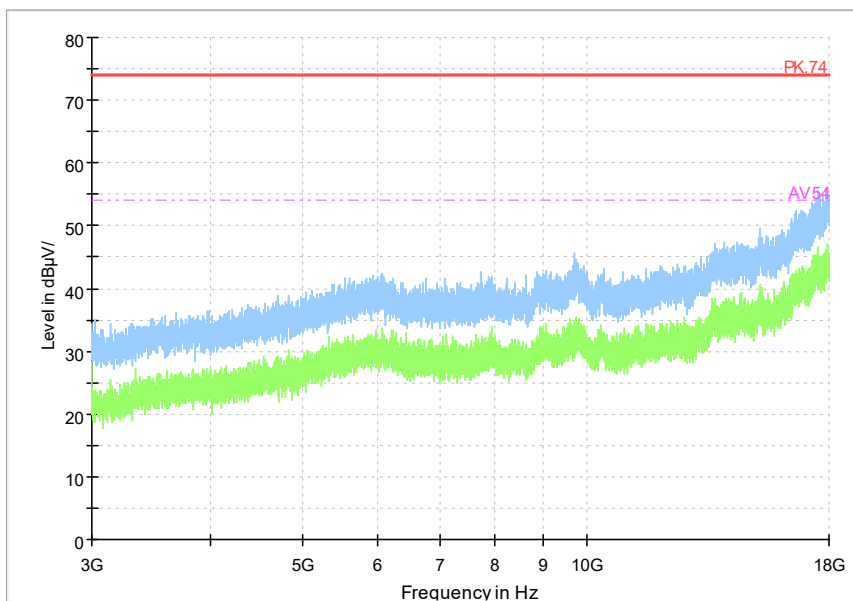
Frequency Range: 1GHz-3GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

Full Spectrum



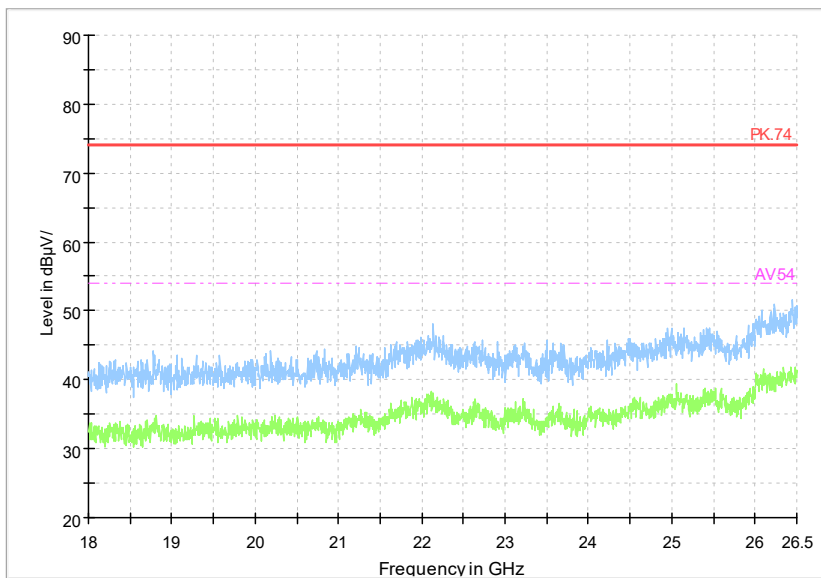
Frequency Range: 30MHz-1GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

Full Spectrum



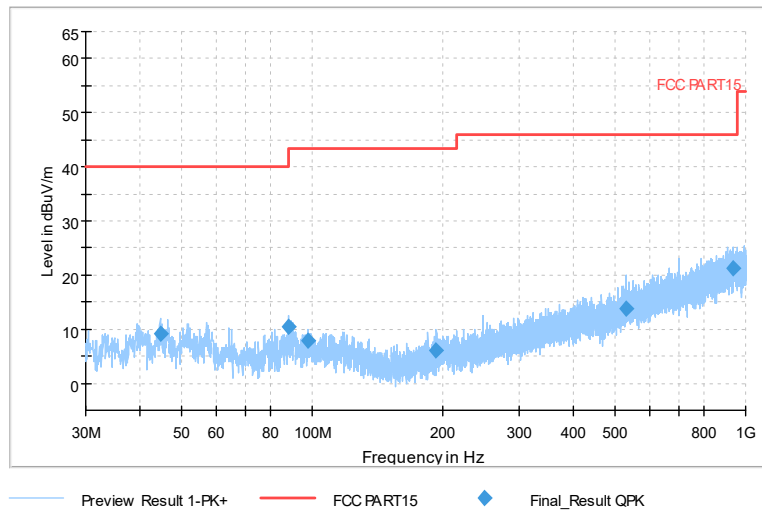
Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

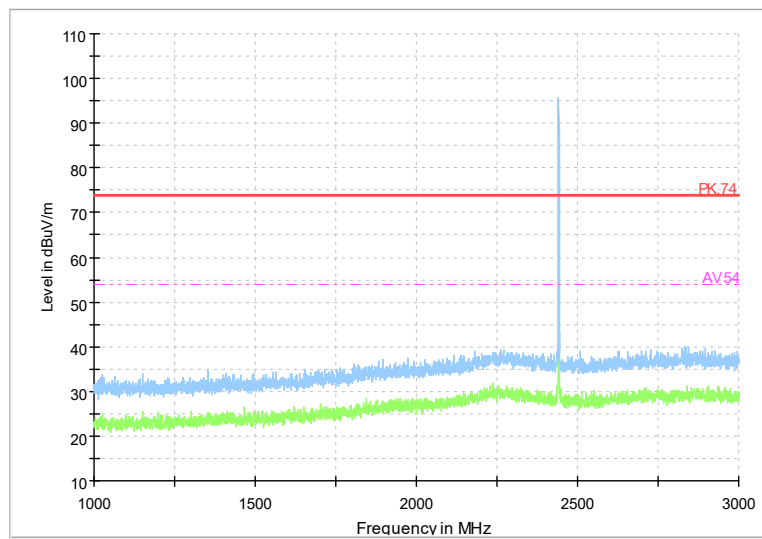
Full Spectrum



Comment

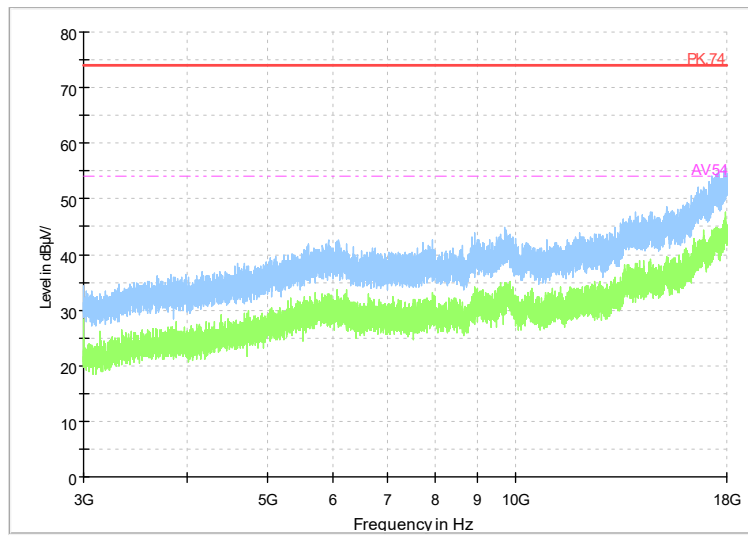
Frequency Range: 30MHz-1GHz  
 Detector: Av mode and PK mode  
 Modulation type: 8DPSK

Full Spectrum



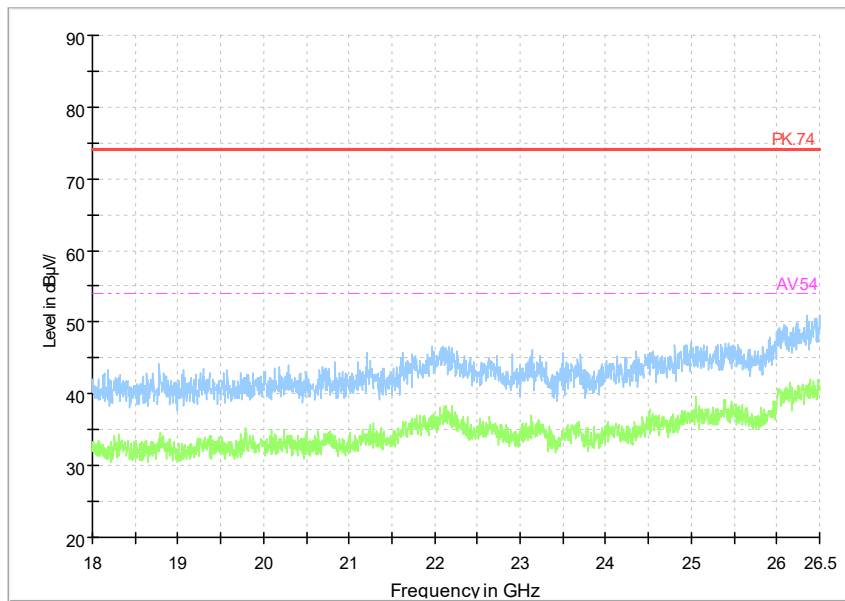
Frequency Range: 1GHz-3GHz  
 Detector: Av mode and PK mode  
 Modulation type: 8DPSK

Full Spectrum



Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

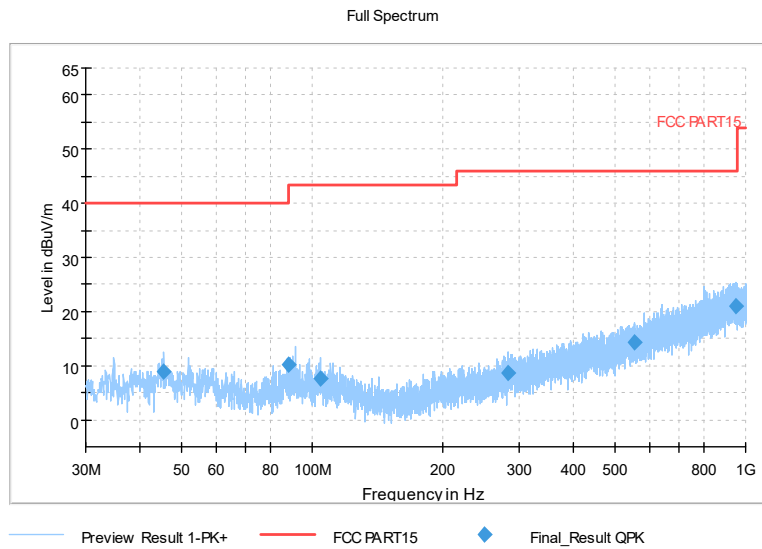
Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

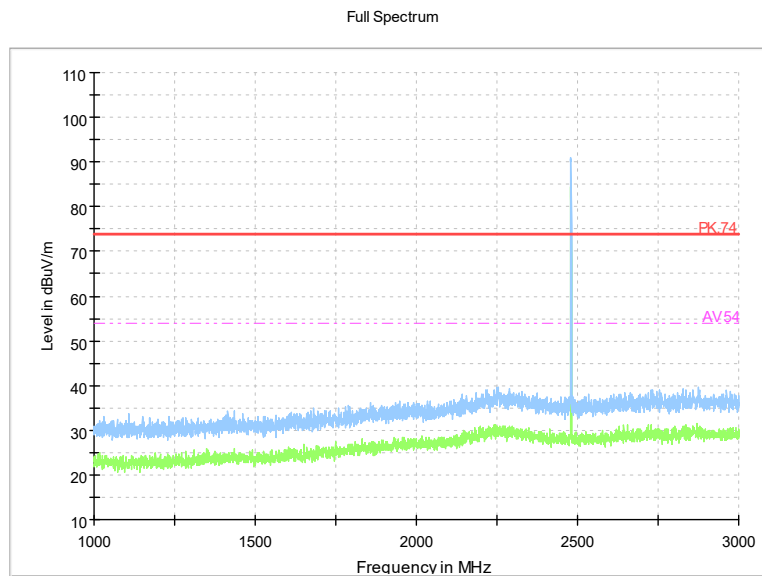
Carrier frequency (MHz): 2480

Channel No.:78



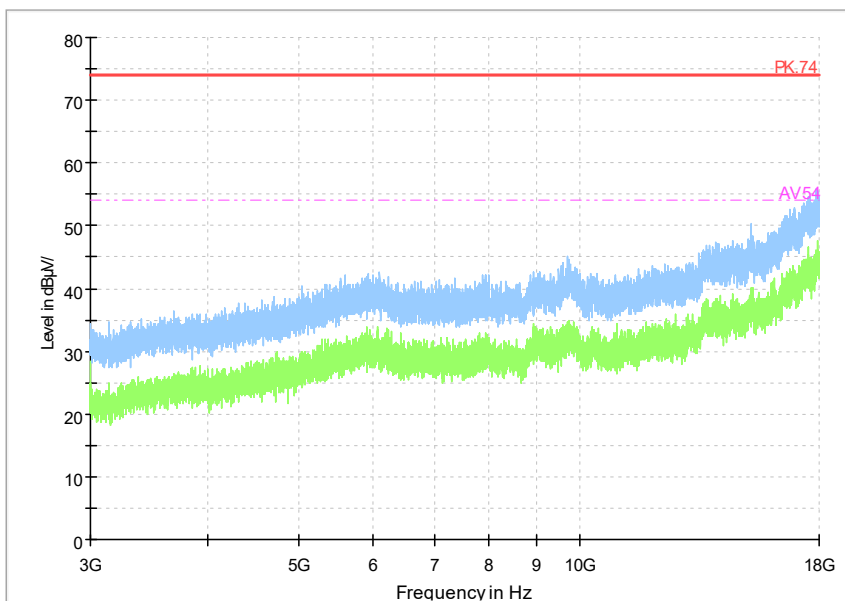
Comment

**Frequency Range:30MHz-1GHz**  
**Detector: Av mode and PK mode**  
**Modulation type: GFSK**



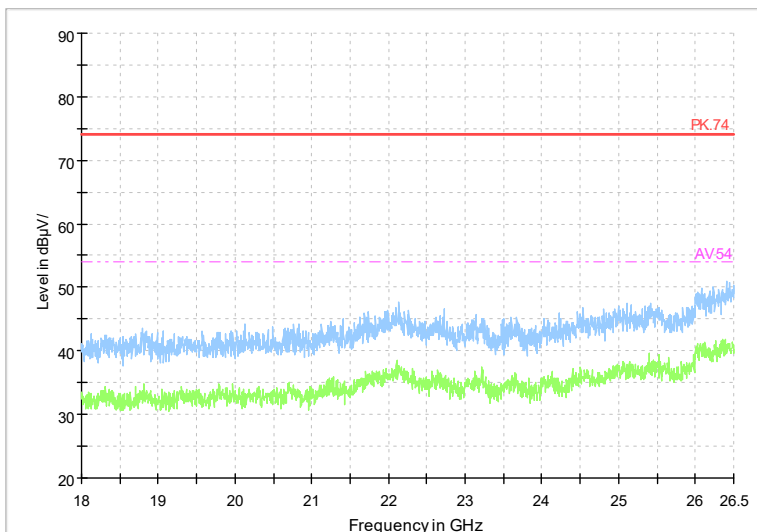
**Frequency Range: 1GHz-3GHz**  
**Detector: Av mode and PK mode**  
**Modulation type: GFSK**

Full Spectrum



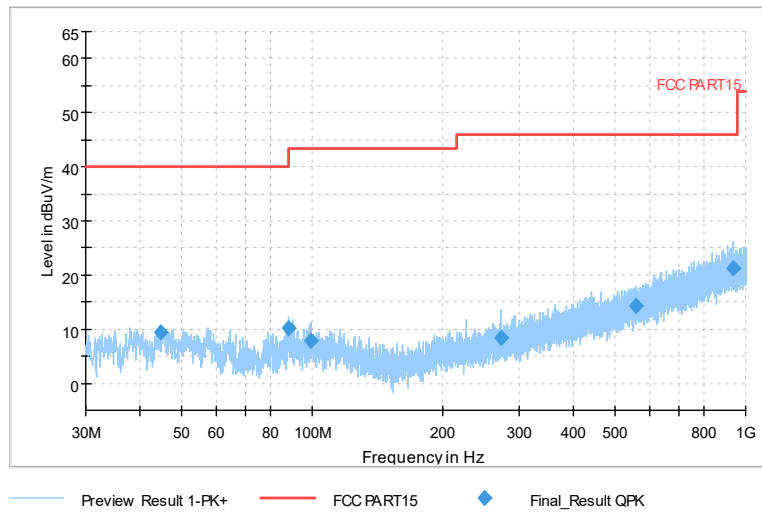
Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type: GFSK

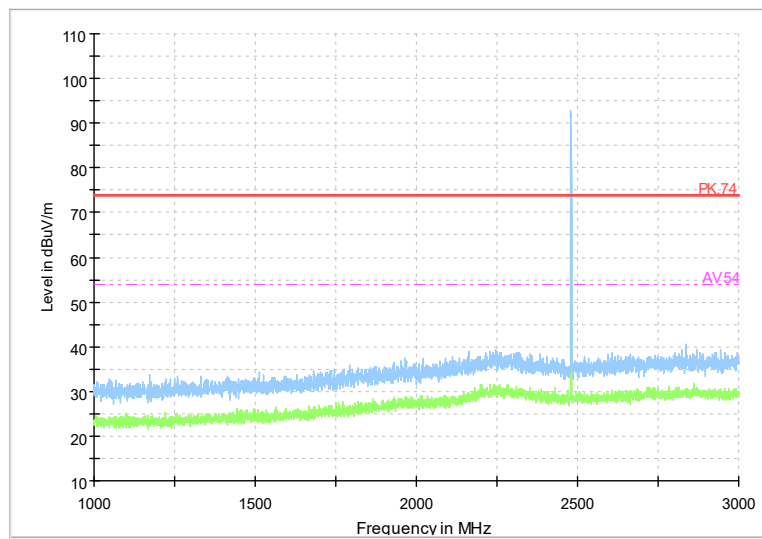
Full Spectrum



Comment

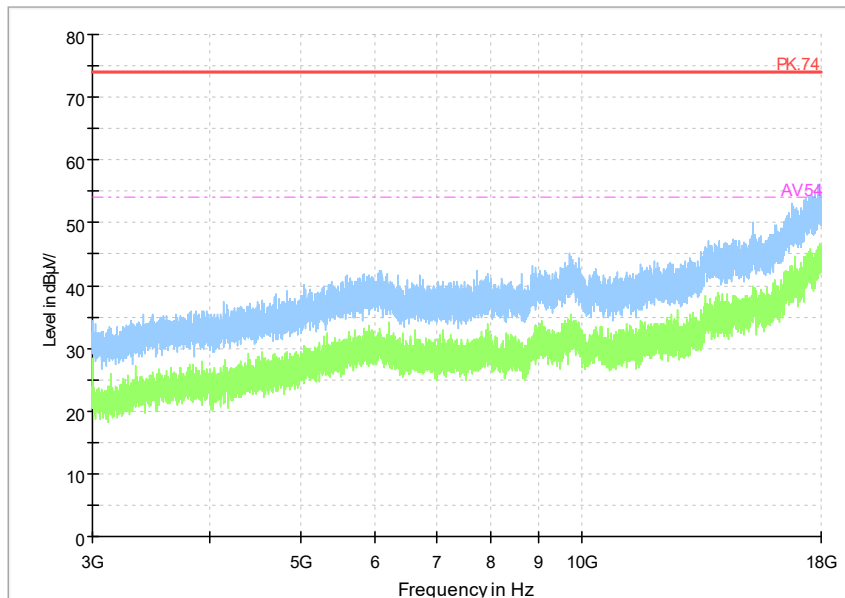
Frequency Range: 1GHz-3GHz  
 Detector: Av mode and PK mode  
 Modulation type:  $\pi/4$ DQPSK

Full Spectrum



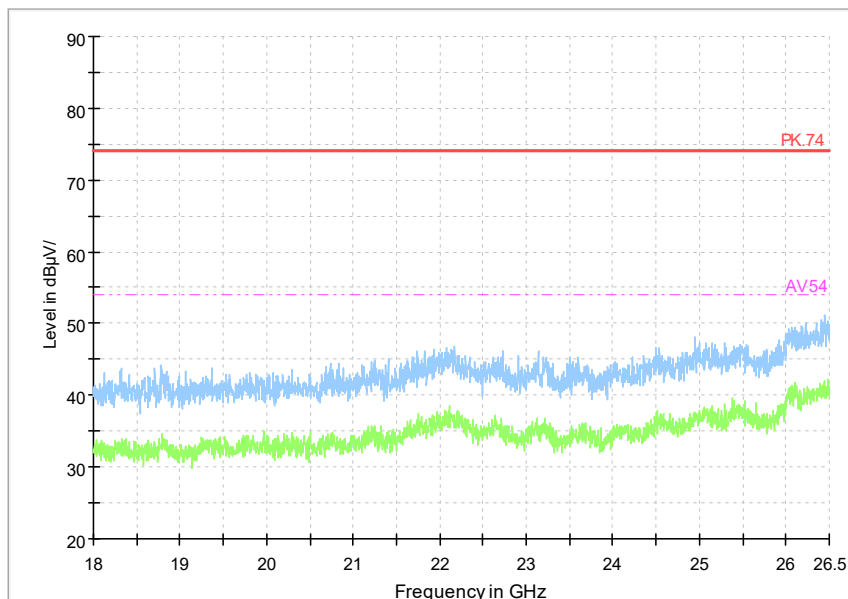
Frequency Range: 30MHz-1GHz  
 Detector: Av mode and PK mode  
 Modulation type:  $\pi/4$ DQPSK

Full Spectrum



Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK

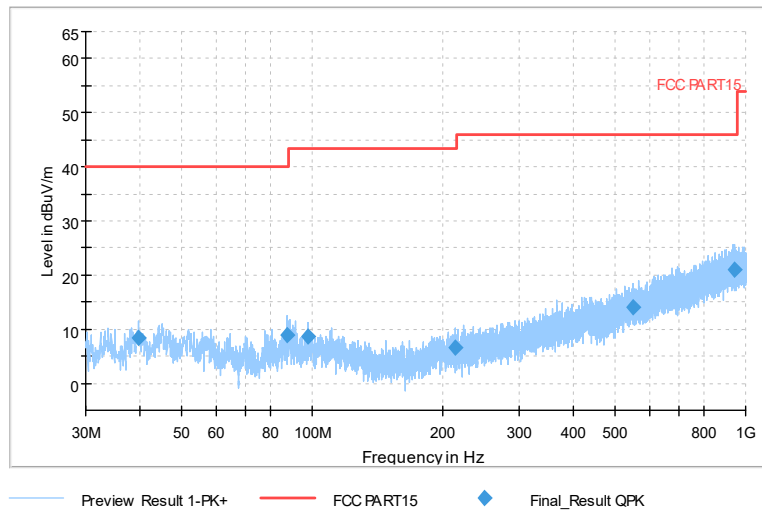
Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type:  $\pi/4$ DQPSK



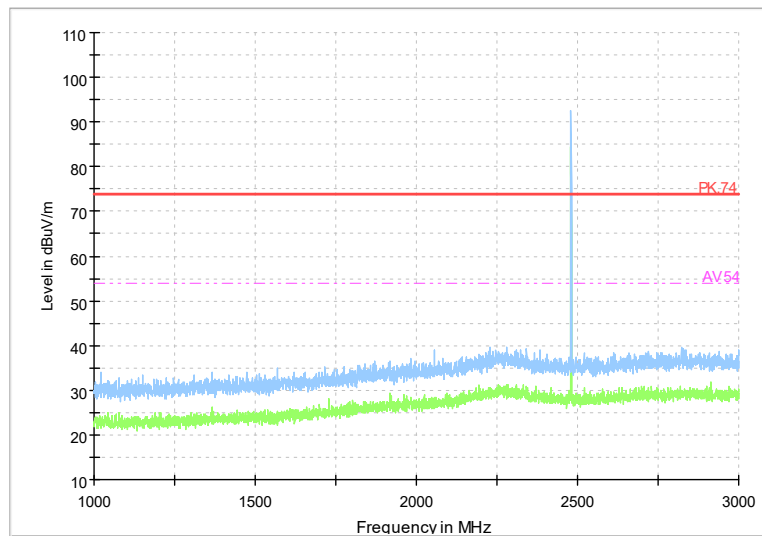
Full Spectrum



Comment

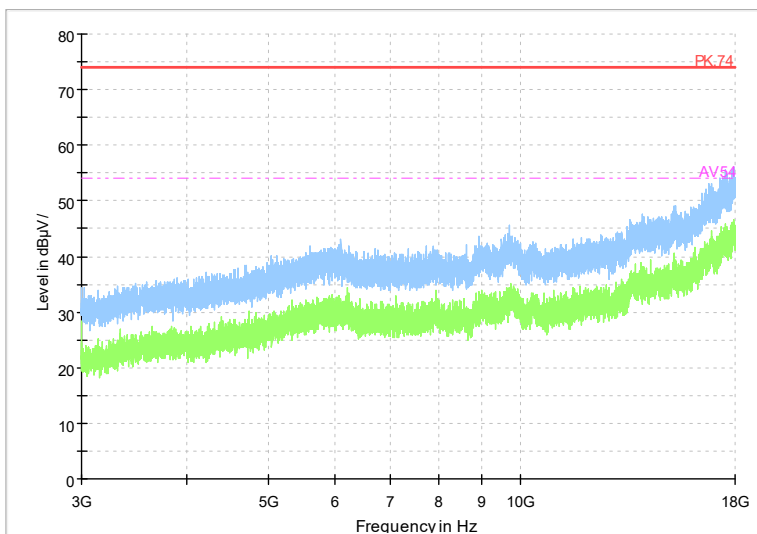
Frequency Range: 30MHz-1GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

Full Spectrum



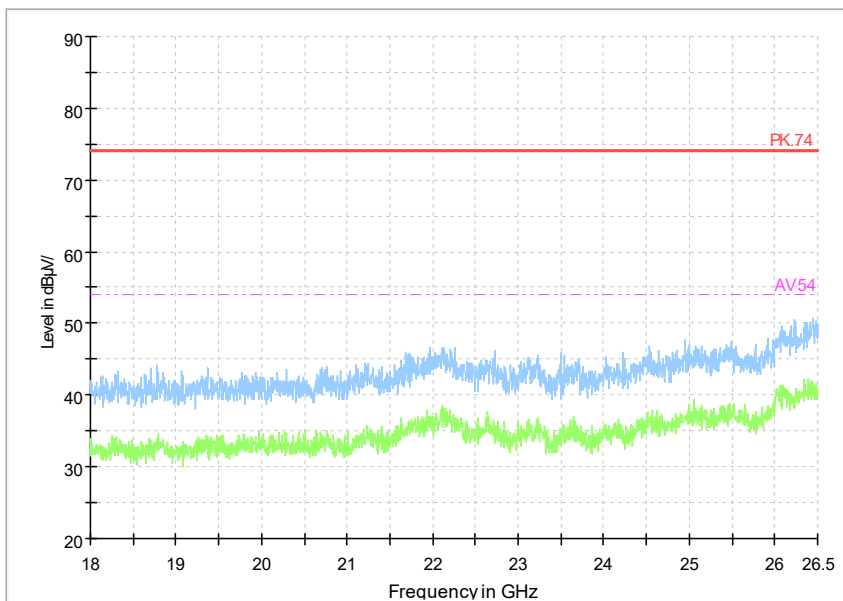
Frequency Range: 1GHz-3GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

Full Spectrum



Frequency Range: 3GHz-18GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

Full Spectrum



Frequency Range: 18GHz-26GHz  
Detector: Av mode and PK mode  
Modulation type: 8DPSK

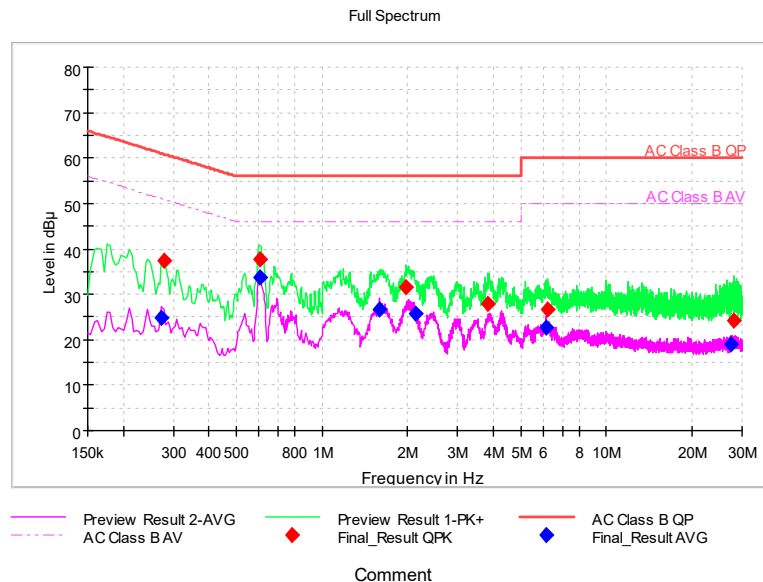
### AC Power line Conducted Emission

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:  $(24.74dB\mu V) = (-5.06dB\mu V) + (29.8 dB)$ , the corresponding frequency is 0.27366MHz.



### L+N Line

#### MEASUREMENT RESULT:

| Frequency (MHz) | QuasiPeak (dBμV) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Corr. (dB) | Pmea QuasiPeak (dBμV) | Pmea Average (dBμV) |
|-----------------|------------------|----------------|--------------|-------------|------|------------|-----------------------|---------------------|
| 0.27366         | ---              | 24.74          | 51.01        | 26.26       | L1   | 29.8       | ---                   | -5.06               |
| 0.27793         | 37.38            | ---            | 60.88        | 23.5        | L1   | 29.8       | 7.58                  | ---                 |
| 0.60201         | ---              | 33.71          | 46           | 12.29       | L1   | 29.8       | ---                   | 3.91                |
| 0.60628         | 37.83            | ---            | 56           | 18.17       | L1   | 29.8       | 8.03                  | ---                 |
| 1.59559         | ---              | 26.8           | 46           | 19.2        | L1   | 29.8       | ---                   | -3                  |
| 1.97938         | 31.69            | ---            | 56           | 24.31       | L1   | 29.8       | 1.89                  | ---                 |
| 2.13716         | ---              | 25.88          | 46           | 20.12       | L1   | 29.8       | ---                   | -3.92               |
| 3.82155         | 27.98            | ---            | 56           | 28.02       | L1   | 29.8       | -1.82                 | ---                 |
| 6.17117         | ---              | 22.72          | 50           | 27.28       | L1   | 29.9       | ---                   | -7.18               |
| 6.19249         | 26.76            | ---            | 60           | 33.24       | L1   | 29.9       | -3.14                 | ---                 |
| 27.2879         | ---              | 18.9           | 50           | 31.1        | N    | 30.1       | ---                   | -11.2               |
| 28.1749         | 24.1             | ---            | 60           | 35.9        | N    | 30.1       | -6                    | ---                 |

---

---End of Test Report---