

Fig. 59 20dB Bandwidth (GFSK, CH39)

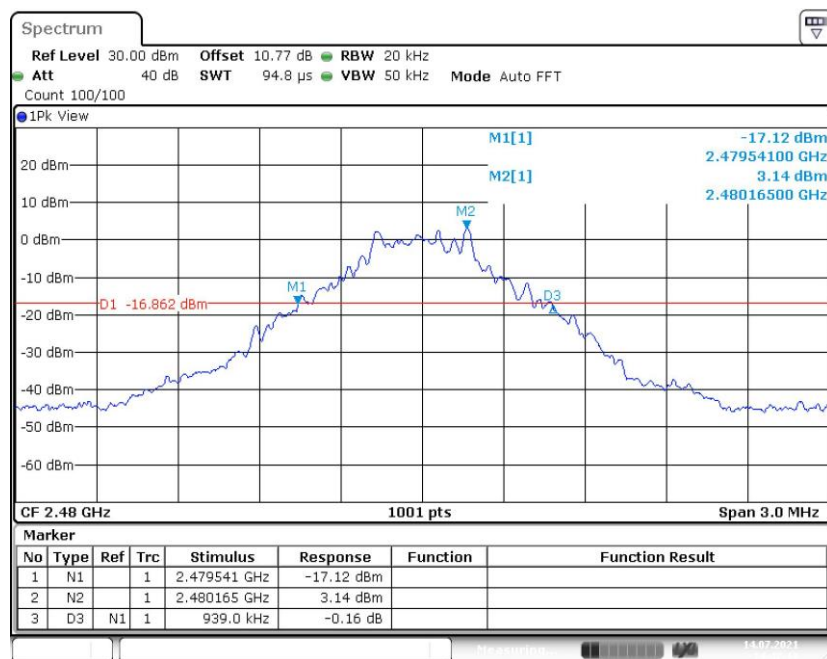


Fig. 60 20dB Bandwidth (GFSK, CH78)

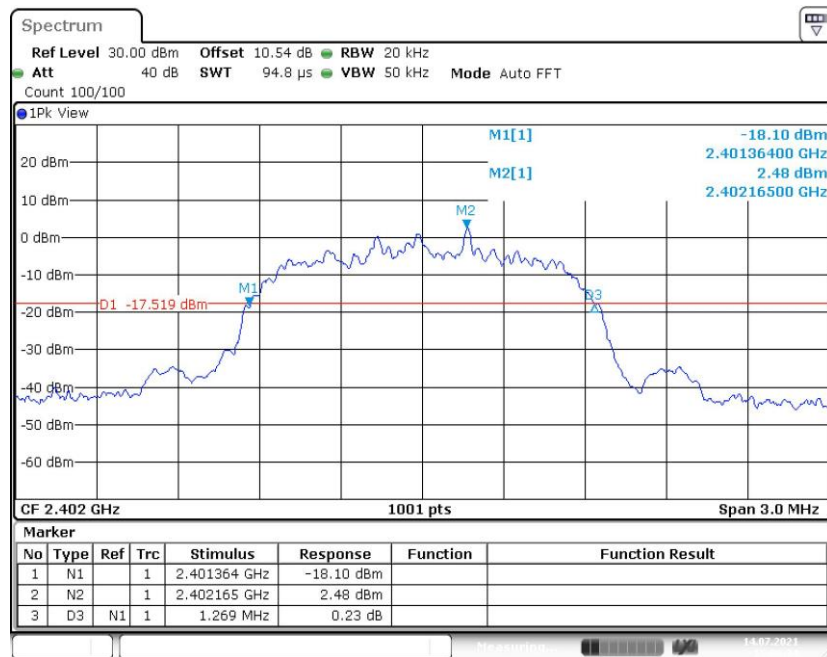


Fig. 61 20dB Bandwidth ($\pi/4$ DQPSK, CH0)

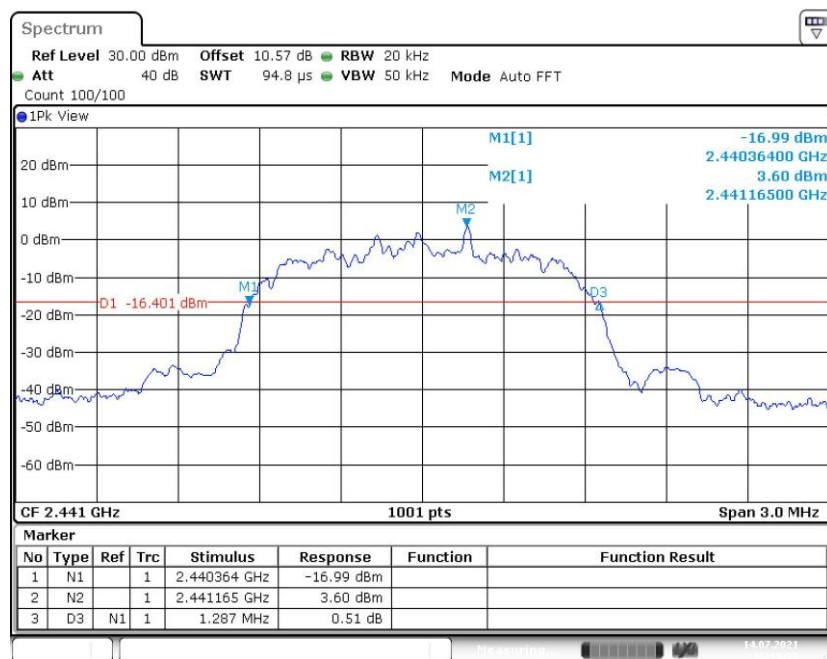


Fig. 62 20dB Bandwidth ($\pi/4$ DQPSK, CH39)

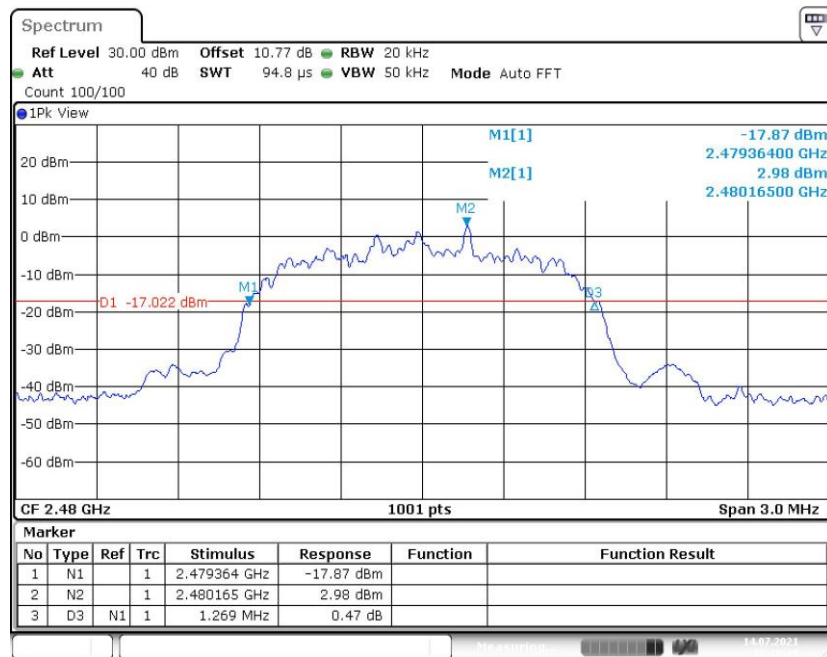


Fig. 63 20dB Bandwidth ($\pi/4$ DQPSK, CH78)

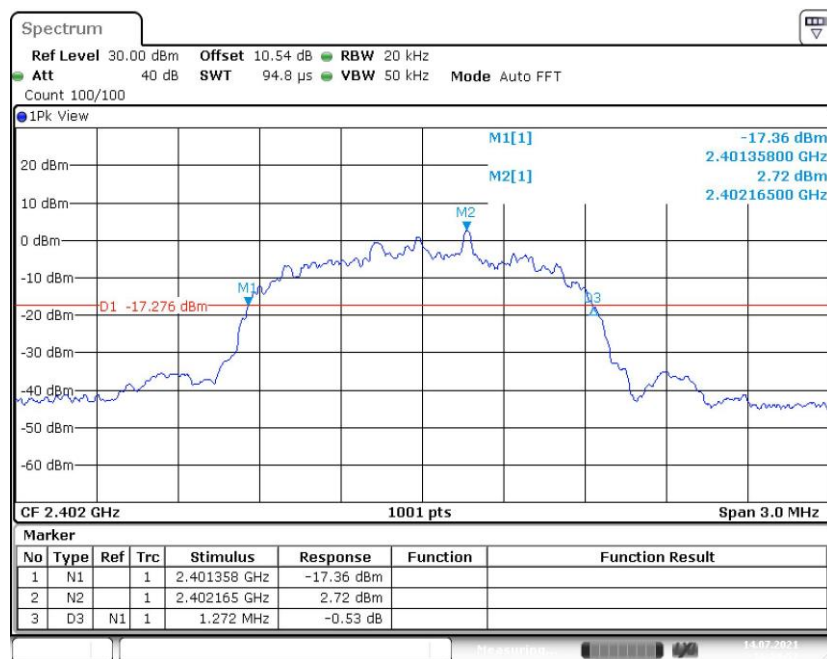


Fig. 64 20dB Bandwidth (8DPSK, CH0)

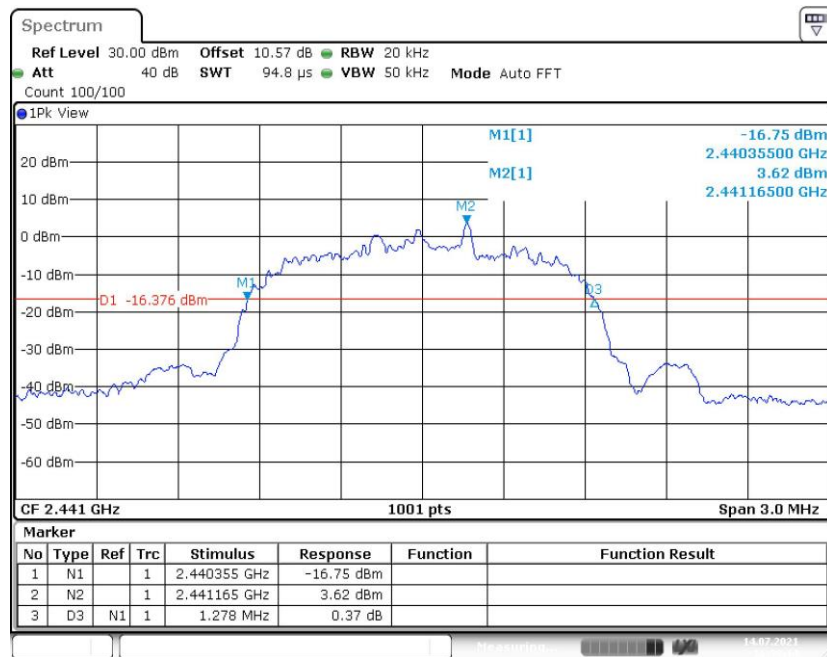


Fig. 65 20dB Bandwidth (8DPSK, CH39)

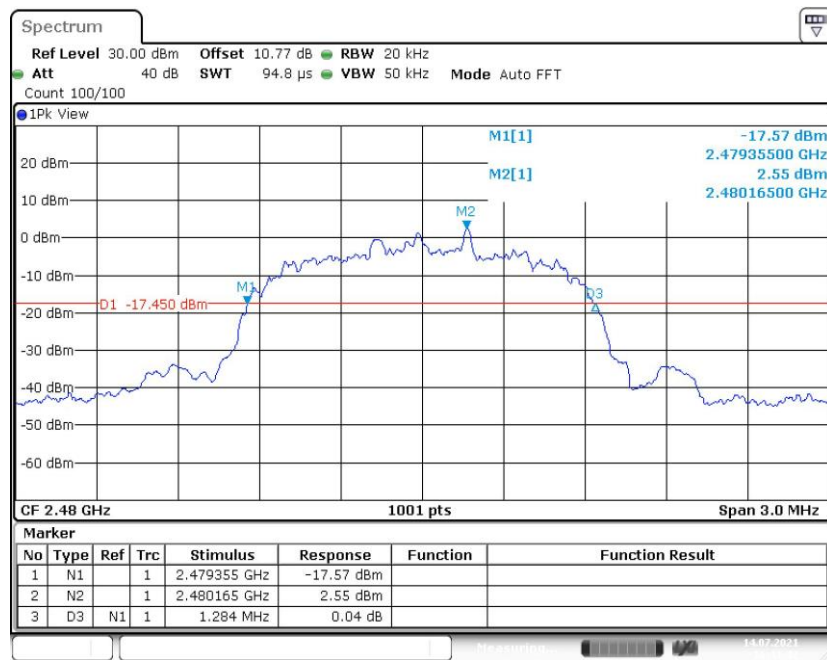


Fig. 66 20dB Bandwidth (8DPSK, CH78)

A.6 Time of Occupancy (Dwell Time)**Measurement Limit:**

| Standard | Limit (ms) |
|---------------------------|------------|
| FCC 47 CFR Part 15.247(a) | < 400 |

Measurement Results:

| Mode | Channel | Packet | BurstWidth (ms) | | TotalHops (Num) | | Result (ms) | Conclusion |
|---------------|---------|--------|--------------------|------|--------------------|-----|----------------|------------|
| GFSK | 39 | DH5 | Fig.67 | 2.88 | Fig.68 | 70 | 202.00 | P |
| $\pi/4$ DQPSK | 39 | 2-DH5 | Fig.69 | 2.88 | Fig.70 | 100 | 288.00 | P |
| 8DPSK | 39 | 3-DH5 | Fig.71 | 2.88 | Fig.72 | 100 | 288.00 | P |

See below for test graphs.

Conclusion: Pass

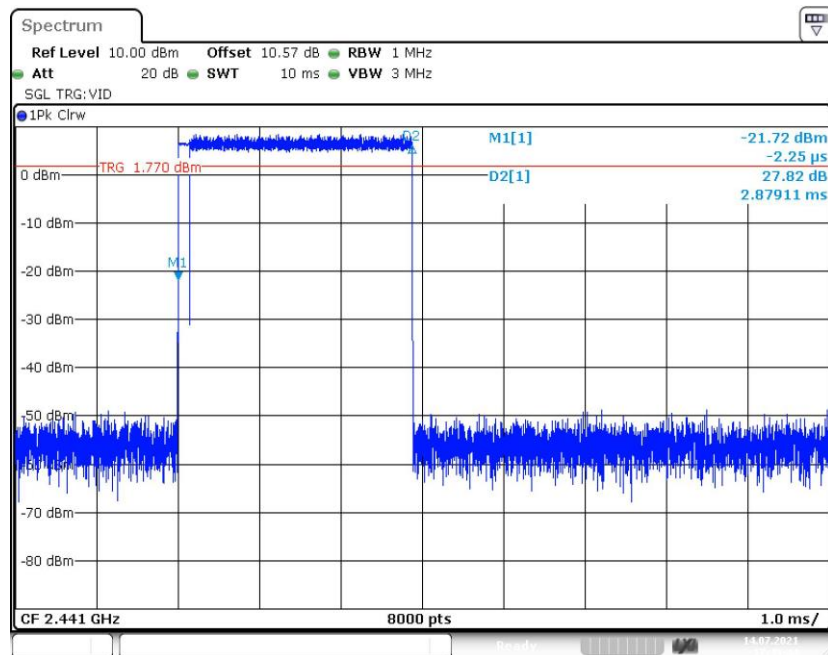


Fig. 67 BurstWidth (Dwell Time) (GFSK, CH39)

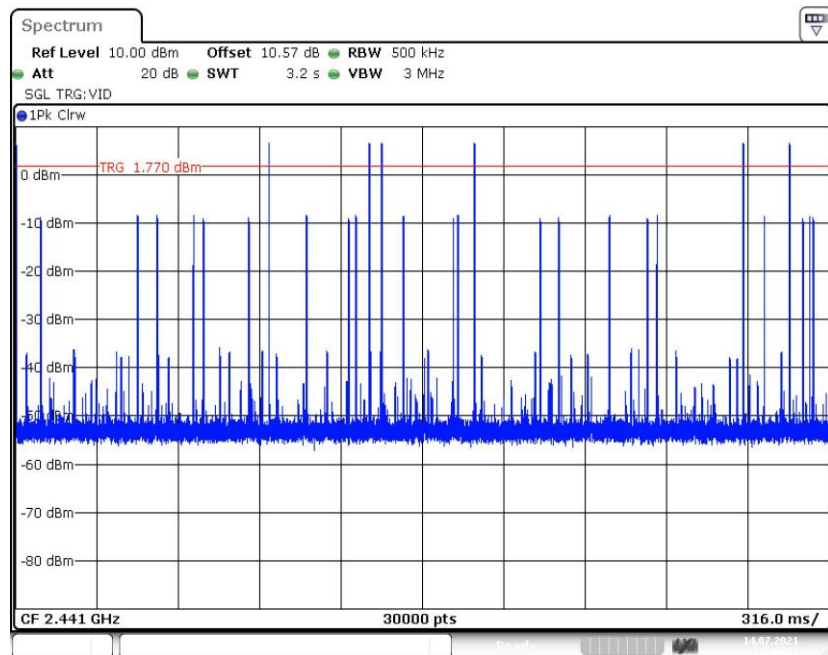


Fig. 68 Number of Burst in Observation Period (Dwell Time) (GFSK, CH39)

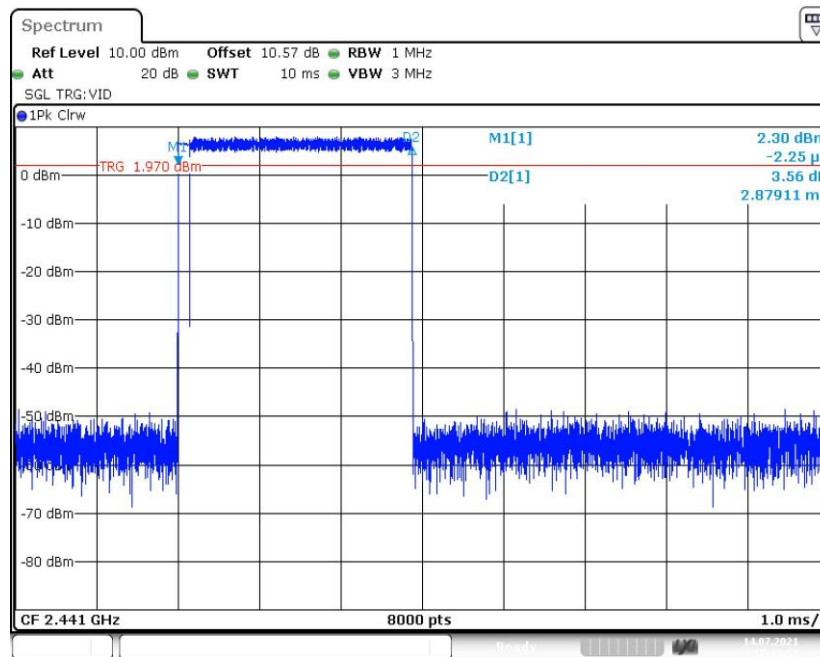


Fig. 69 BurstWidth (Dwell Time) ($\pi/4$ DQPSK, CH39)

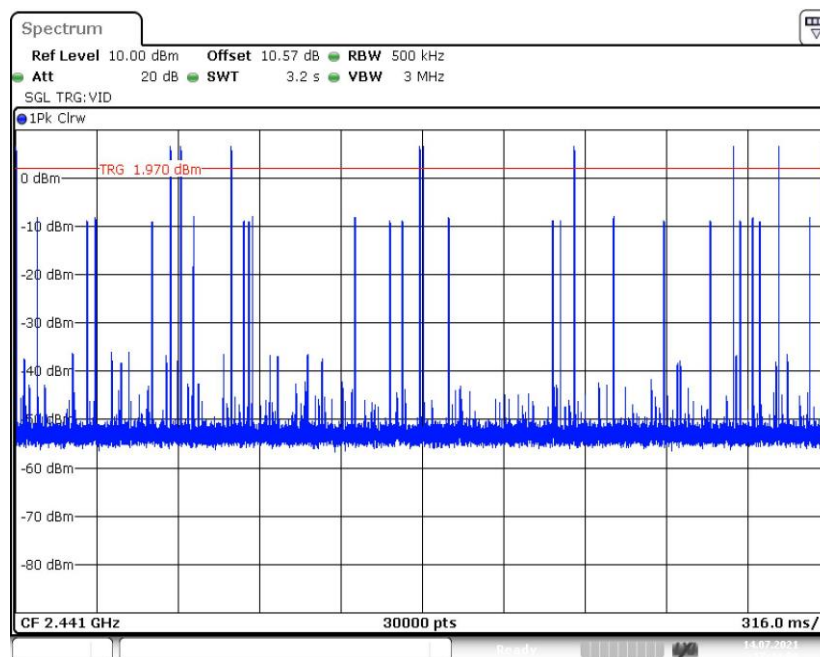


Fig. 70 Number of Burst in Observation Period (Dwell Time) ($\pi/4$ DQPSK, CH39)

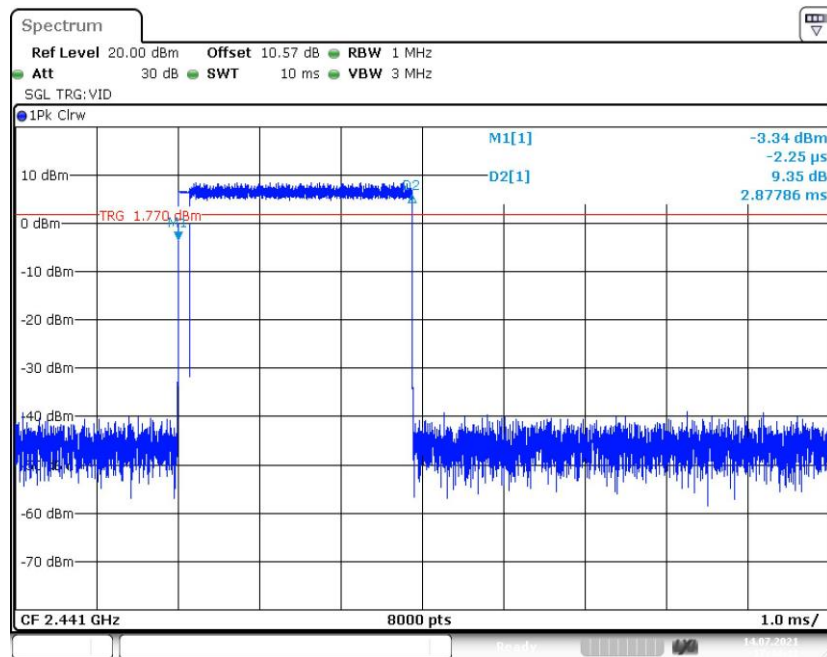


Fig. 71 BurstWidth (Dwell Time) (8DPSK, CH39)

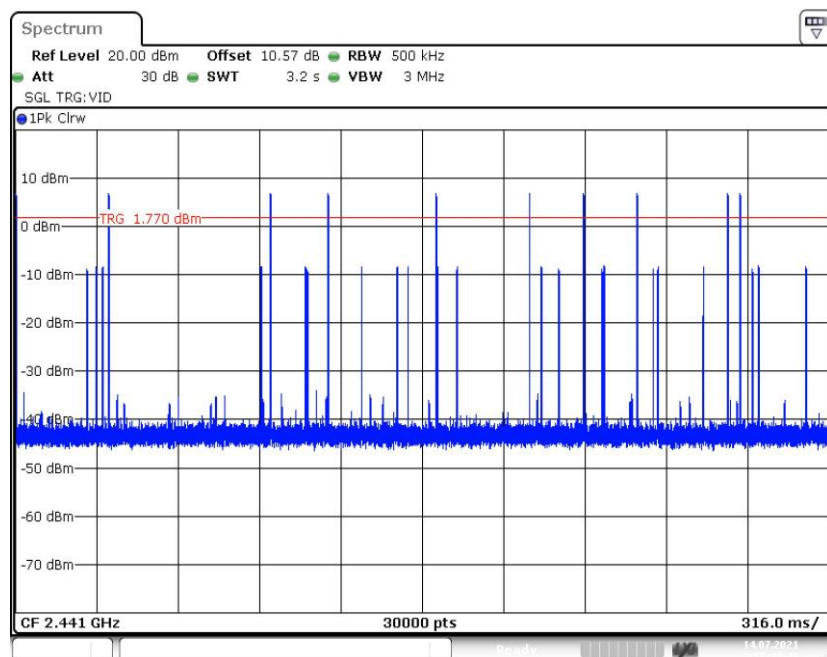


Fig. 72 Number of Burst in Observation Period (Dwell Time) (8DPSK, CH39)

A.7 Number of Hopping Channels

Measurement Limit:

| Standard | Limit (Num) |
|---------------------------|--------------------------------------|
| FCC 47 CFR Part 15.247(a) | At least 15 non-overlapping channels |

Measurement Results:

| Mode | Packet | Number of Hopping Channels | Test results (Num) | Conclusion |
|---------------|--------|----------------------------|--------------------|------------|
| GFSK | DH5 | Fig.73 | 79 | P |
| $\pi/4$ DQPSK | 2-DH5 | Fig.74 | 79 | P |
| 8DPSK | 3-DH5 | Fig.75 | 79 | P |

See below for test graphs.

Conclusion: Pass

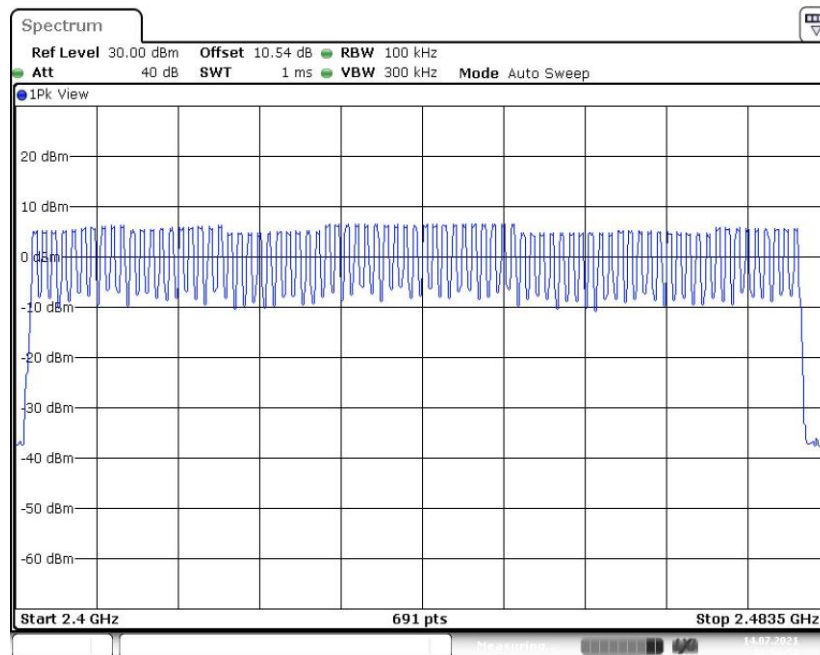


Fig. 73 Number of Hopping Channels (GFSK, Hopping)

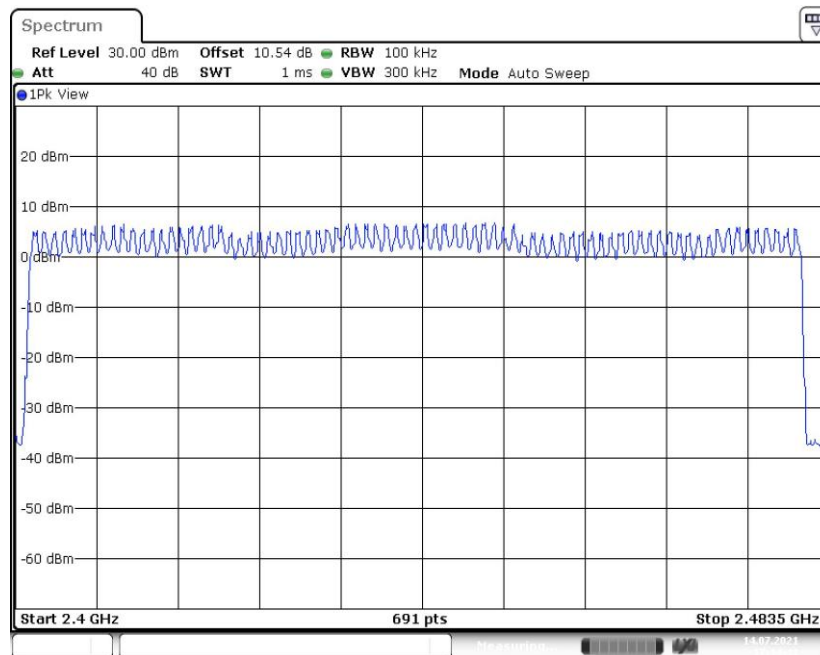


Fig. 74 Number of Hopping Channels ($\pi/4$ DQPSK, Hopping)

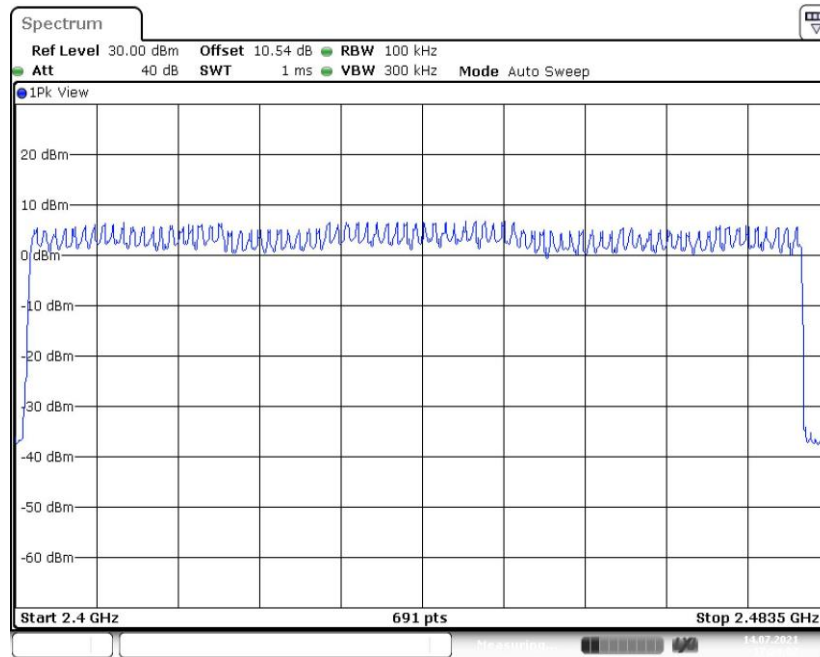


Fig. 75 Number of Hopping Channels (8DPSK, Hopping)

A.8 Carrier Frequency Separation

Measurement Limit:

| Standard | Limit |
|---------------------------|--|
| FCC 47 CFR Part 15.247(a) | By a minimum of 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater |

Measurement Results:

| Mode | Channel | Packet | Separation of hopping channels | Test result (kHz) | Conclusion |
|---------------|---------|--------|--------------------------------|-------------------|------------|
| GFSK | 39 | DH5 | Fig.76 | 1000.00 | P |
| $\pi/4$ DQPSK | 39 | 2-DH5 | Fig.77 | 1003.00 | P |
| 8DPSK | 39 | 3-DH5 | Fig.78 | 1000.00 | P |

See below for test graphs.

Conclusion: Pass

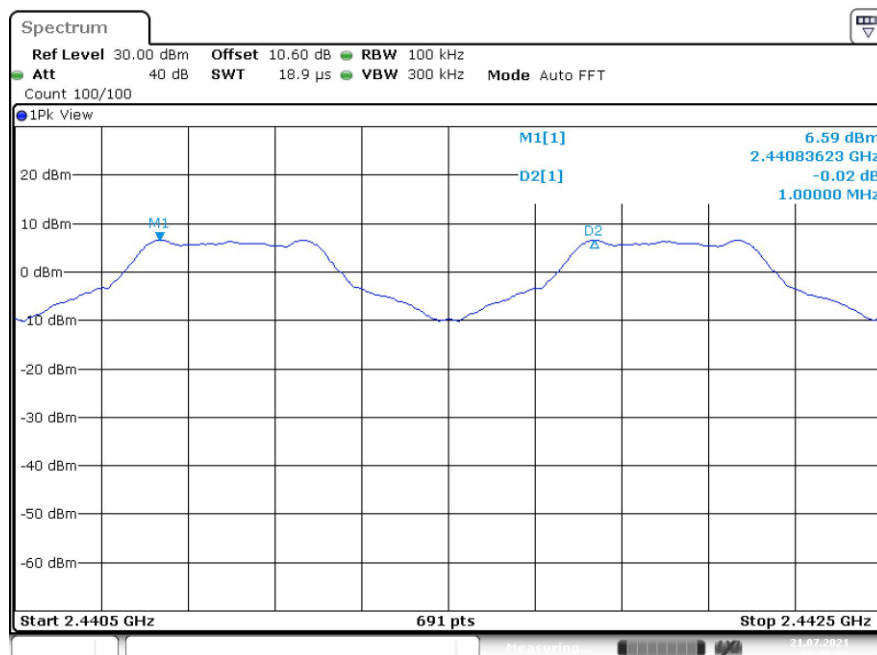


Fig. 76 Carrier Frequency Separation (GFSK, CH39)

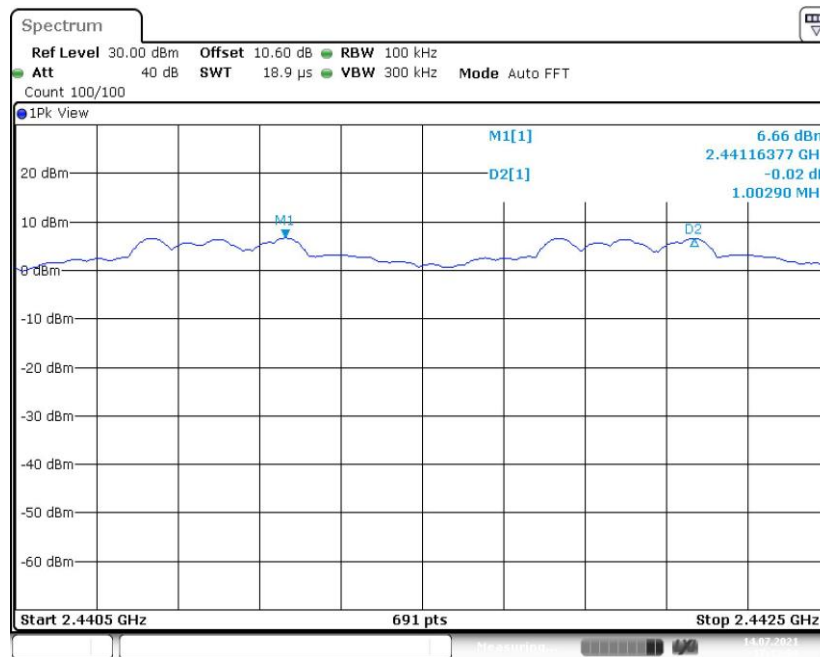


Fig. 77 Carrier Frequency Separation ($\pi/4$ DQPSK, CH39)

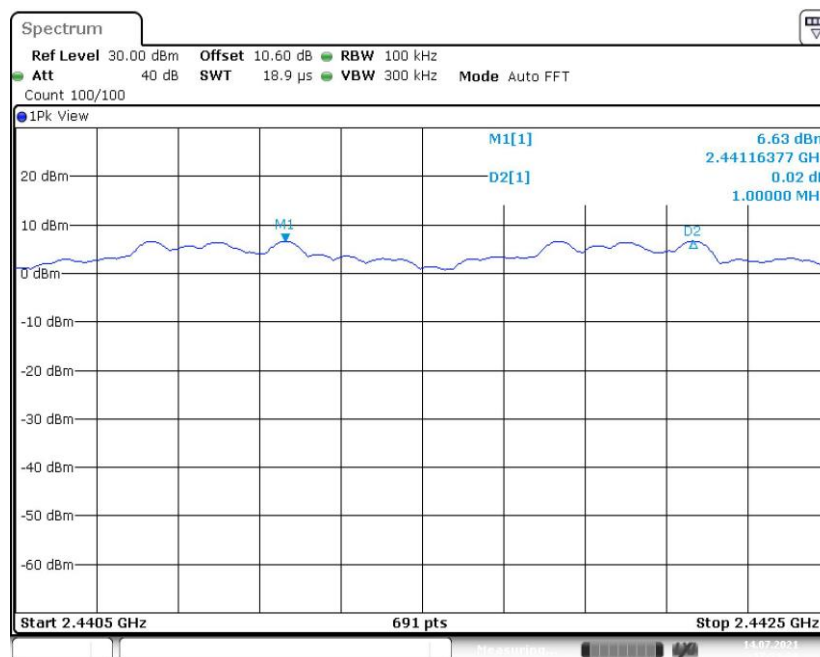


Fig. 78 Carrier Frequency Separation (8DPSK, CH39)

A.9 AC Power line Conducted Emission

Test Condition:

| Voltage (V) | Frequency (Hz) |
|-------------|----------------|
| 120 | 60 |

Measurement Result and limit:

BT-AE2, AE3

| Frequency range (MHz) | Quasi-peak Limit (dB μ V) | Average-peak Limit (dB μ V) | Result (dB μ V) | | Conclusion |
|--------------------------|----------------------------------|------------------------------------|---------------------|--------|------------|
| | | | Traffic | Idle | |
| 0.15 to 0.5 | 66 to 56 | 56 to 46 | Fig.79 | Fig.80 | P |
| 0.5 to 5 | 56 | 46 | | | |
| 5 to 30 | 60 | 50 | | | |

NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.

Note: The measurement results include the L1 and N measurements.

AE2 was the model with the worst results in the test.

See below for test graphs.

Conclusion: Pass

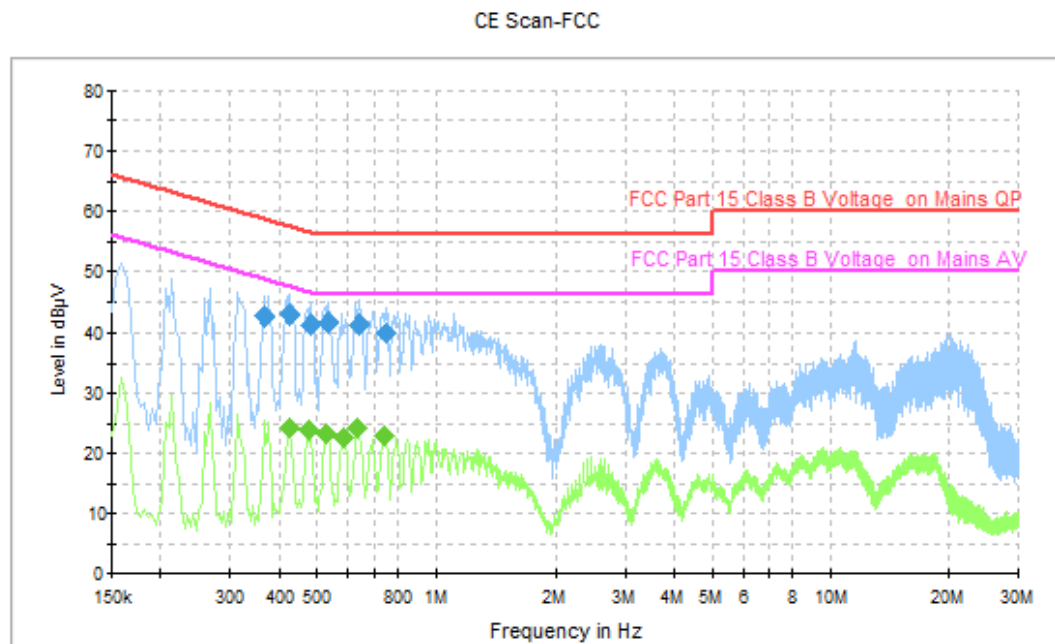


Fig. 79 AC Power line Conducted Emission (Traffic)

Measurement Results: Quasi Peak

| Frequency (MHz) | Quasi Peak (dBμV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|-------------------|-----|------|------------|-------------|--------------|
| 0.366000 | 42.5 | GND | N | 9.6 | 16.0 | 58.6 |
| 0.426000 | 42.9 | GND | N | 9.7 | 14.4 | 57.3 |
| 0.482000 | 41.2 | GND | N | 9.7 | 15.1 | 56.3 |
| 0.534000 | 41.5 | GND | N | 9.7 | 14.5 | 56.0 |
| 0.642000 | 41.3 | GND | N | 9.6 | 14.7 | 56.0 |
| 0.750000 | 39.9 | GND | N | 9.6 | 16.1 | 56.0 |

Measurement Results: Average

| Frequency (MHz) | Average (dBμV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBμV) |
|-----------------|----------------|-----|------|------------|-------------|--------------|
| 0.426000 | 24.1 | GND | N | 9.7 | 23.2 | 47.3 |
| 0.474000 | 23.8 | GND | N | 9.7 | 22.6 | 46.4 |
| 0.526000 | 23.2 | GND | N | 9.7 | 22.8 | 46.0 |
| 0.582000 | 22.7 | GND | N | 9.6 | 23.3 | 46.0 |
| 0.634000 | 24.2 | GND | N | 9.6 | 21.8 | 46.0 |
| 0.742000 | 23.0 | GND | N | 9.6 | 23.0 | 46.0 |

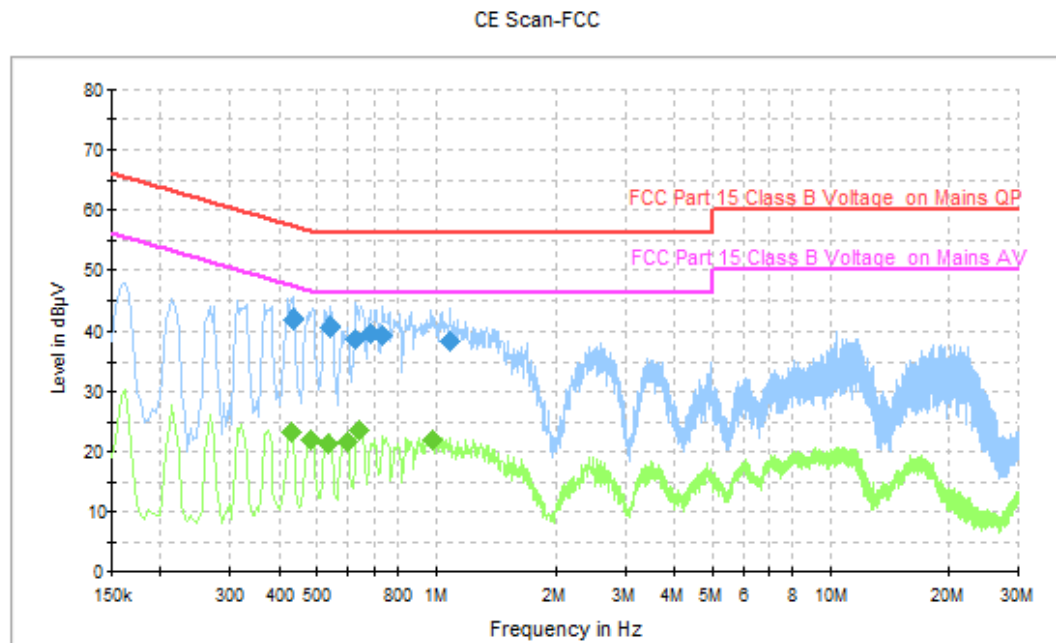


Fig. 80 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

| Frequency (MHz) | Quasi Peak (dBµV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|-------------------|-----|------|------------|-------------|--------------|
| 0.434000 | 42.0 | GND | N | 9.7 | 15.1 | 57.2 |
| 0.542000 | 40.5 | GND | N | 9.7 | 15.5 | 56.0 |
| 0.626000 | 38.8 | GND | N | 9.6 | 17.2 | 56.0 |
| 0.682000 | 39.8 | GND | N | 9.6 | 16.2 | 56.0 |
| 0.734000 | 39.4 | GND | N | 9.6 | 16.6 | 56.0 |
| 1.086000 | 38.3 | GND | N | 9.6 | 17.7 | 56.0 |

Measurement Results: Average

| Frequency (MHz) | Average (dBµV) | PE | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|-----------------|----------------|-----|------|------------|-------------|--------------|
| 0.430000 | 23.1 | GND | N | 9.7 | 24.1 | 47.3 |
| 0.482000 | 22.0 | GND | N | 9.7 | 24.3 | 46.3 |
| 0.534000 | 21.4 | GND | N | 9.7 | 24.6 | 46.0 |
| 0.594000 | 21.8 | GND | N | 9.6 | 24.2 | 46.0 |
| 0.638000 | 23.6 | GND | N | 9.6 | 22.4 | 46.0 |
| 0.978000 | 22.1 | GND | N | 9.6 | 23.9 | 46.0 |

END OF REPORT