

Fig. 66 Radiated Spurious Emission (All Channels, 18 GHz ~26.5 GHz)

A.5 20dB Bandwidth**Method of Measurement: See ANSI C63.10-clause 7.8.7.****Measurement Limit:**

| Standard | Limit (MHz) |
|----------------------------|-------------|
| FCC 47 CFR Part 15.247 (a) | / |

Measurement Result:

| Mode | Channel | 20dB Bandwidth (MHz) | | Conclusion |
|---------------|---------|----------------------|------|------------|
| GFSK | 0 | Fig.67 | 0.95 | / |
| | 39 | Fig.68 | 0.99 | |
| | 78 | Fig.69 | 1.02 | |
| $\pi/4$ DQPSK | 0 | Fig.70 | 1.26 | / |
| | 39 | Fig.71 | 1.26 | |
| | 78 | Fig.72 | 1.29 | |
| 8DPSK | 0 | Fig.73 | 1.26 | / |
| | 39 | Fig.74 | 1.26 | |
| | 78 | Fig.75 | 1.26 | |

See below for test graphs.**Conclusion: PASS**

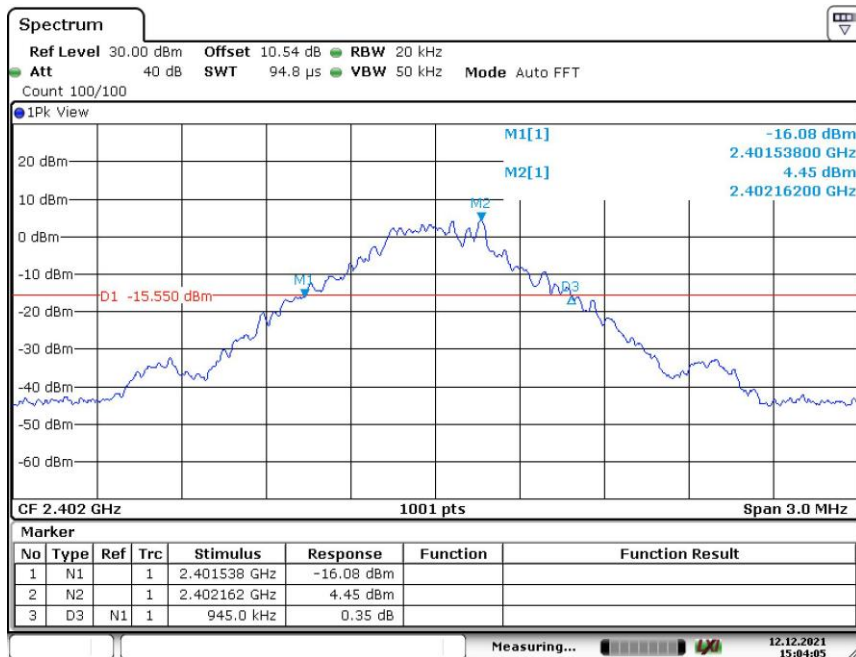


Fig. 67 20dB Bandwidth (GFSK, CH0)

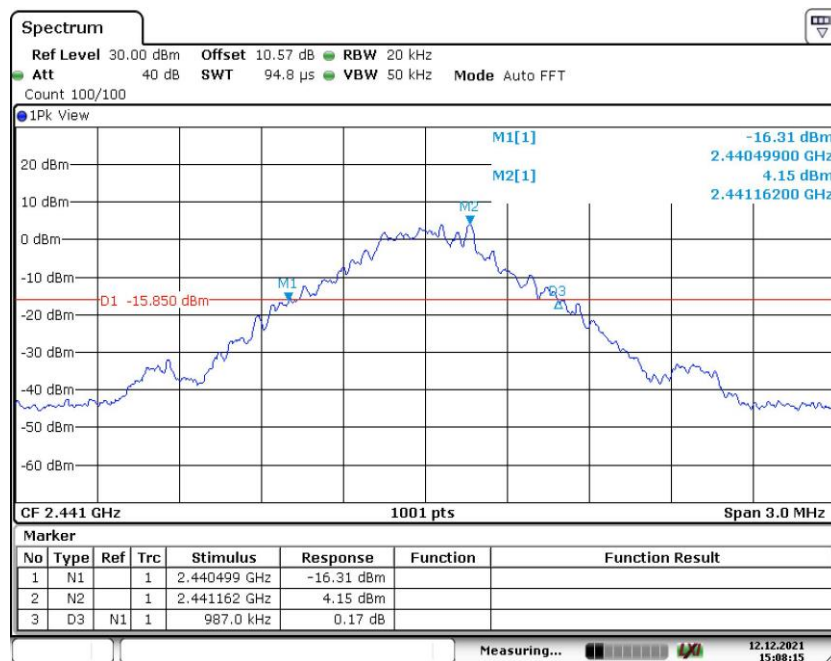


Fig. 68 20dB Bandwidth (GFSK, CH39)

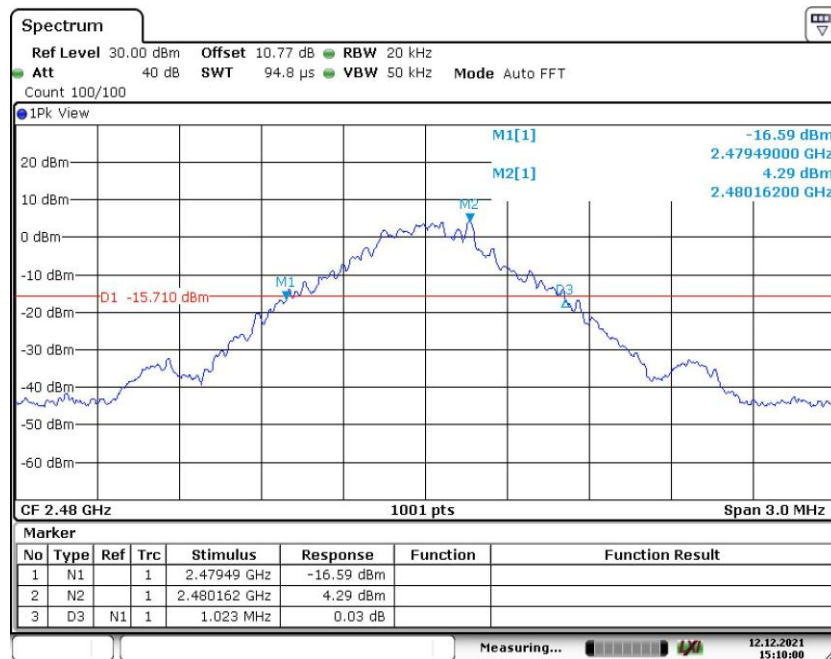


Fig. 69 20dB Bandwidth (GFSK, CH78)

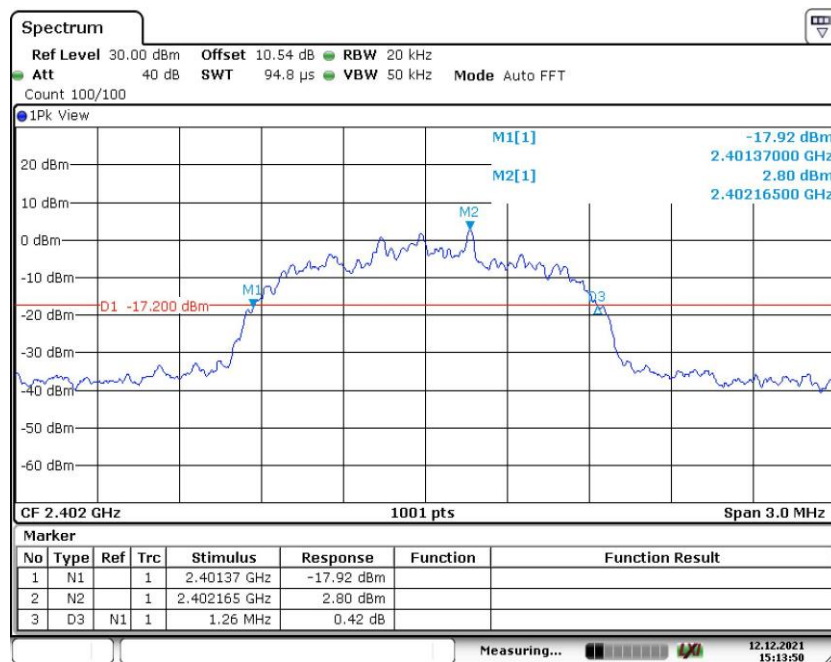


Fig. 70 20dB Bandwidth ($\pi/4$ DQPSK, CH0)

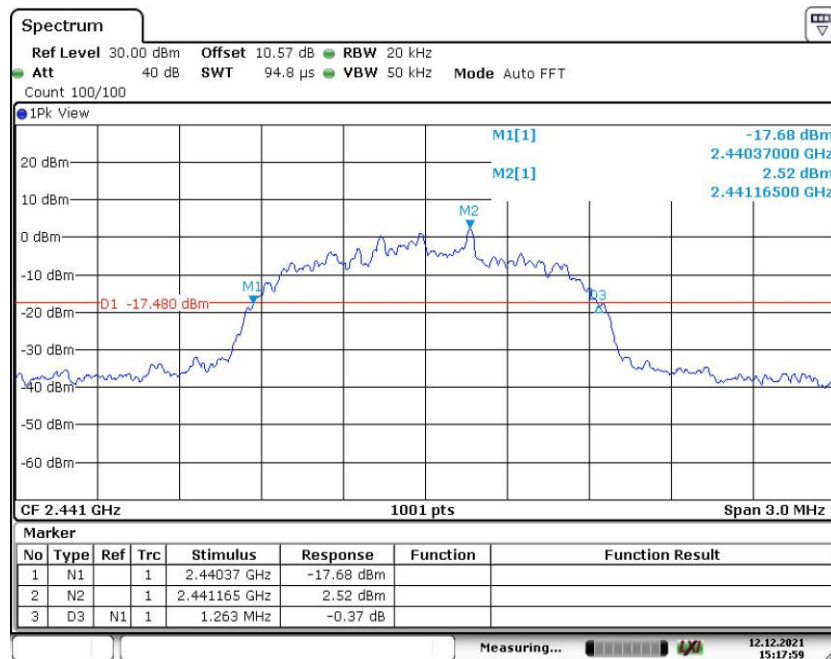


Fig. 71 20dB Bandwidth ($\pi/4$ DQPSK, CH39)

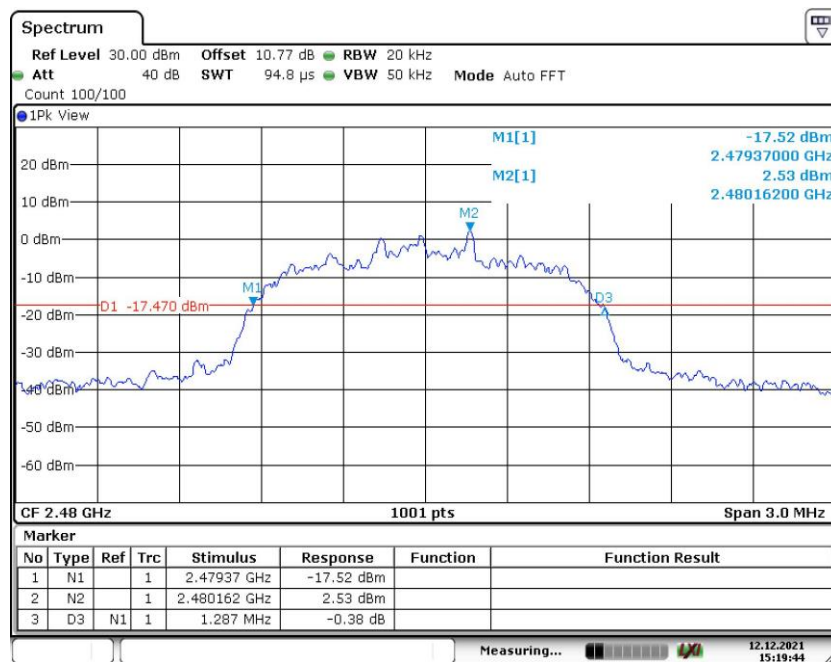


Fig. 72 20dB Bandwidth ($\pi/4$ DQPSK, CH78)

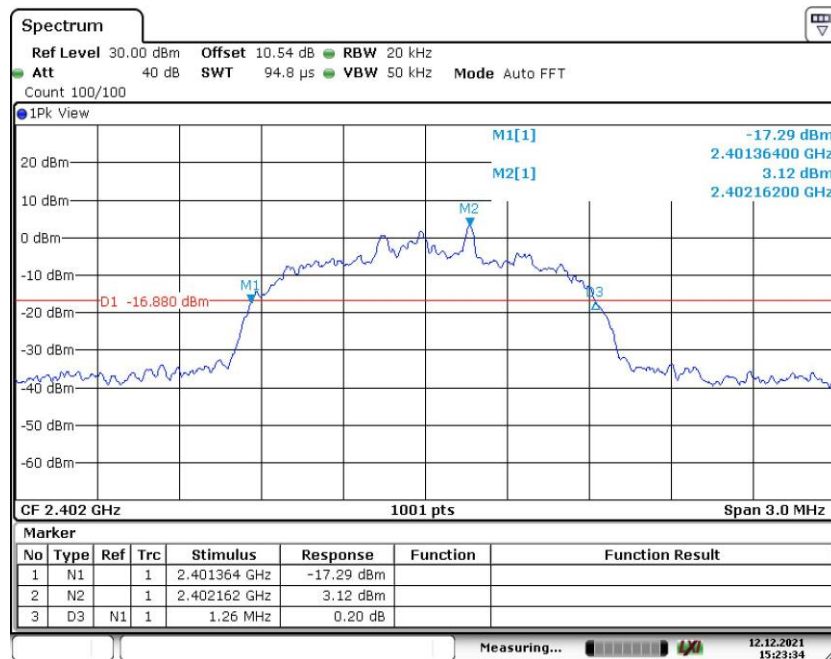


Fig. 73 20dB Bandwidth (8DPSK, CH0)

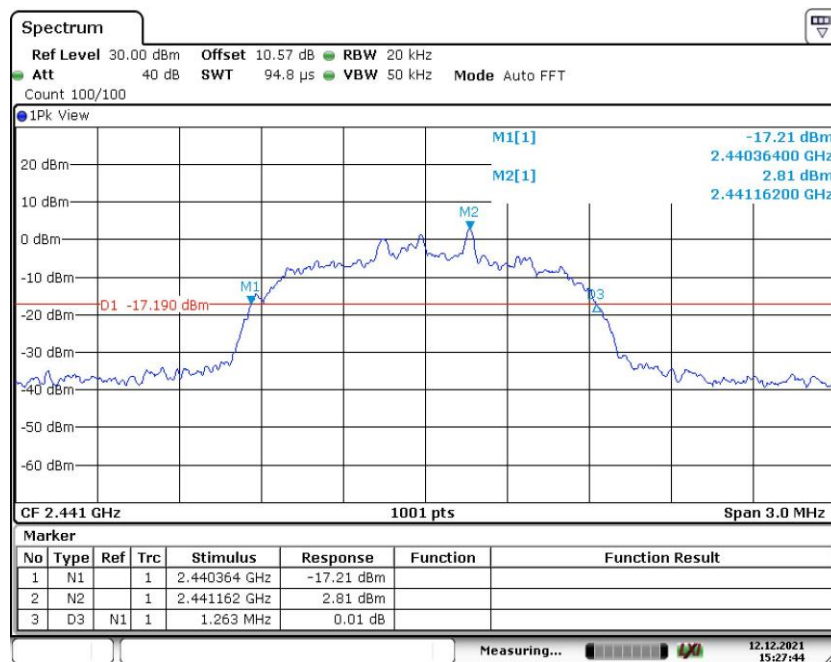


Fig. 74 20dB Bandwidth (8DPSK, CH39)

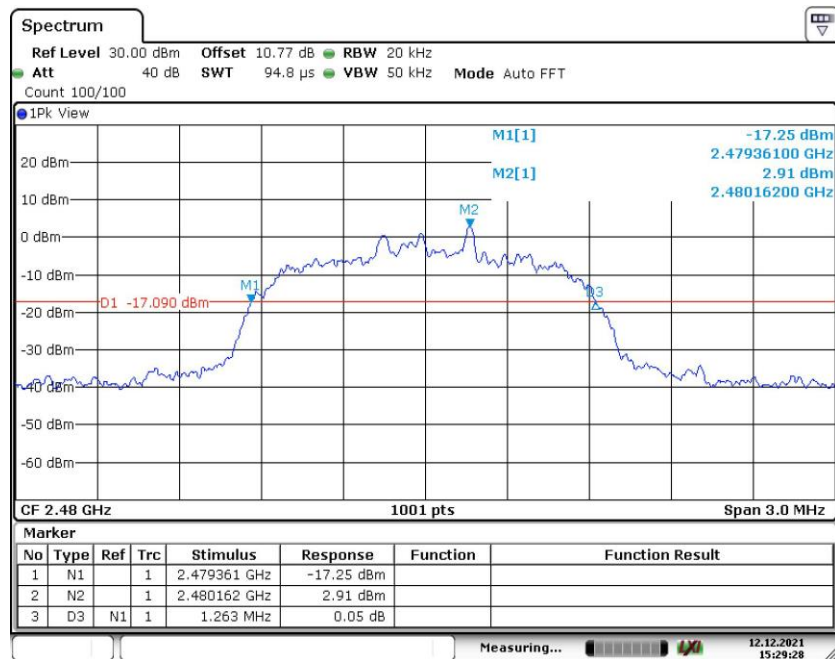


Fig. 75 20dB Bandwidth (8DPSK, CH78)

**A.6 Time of Occupancy (Dwell Time)****Method of Measurement:** See ANSI C63.10-clause 7.8.4.**Measurement Limit:**

| Standard | Limit (s) |
|---------------------------|-----------|
| FCC 47 CFR Part 15.247(a) | < 0.40 |

Measurement Results:

| Mode | Channel | Packet | BurstWidth (ms) | | TotalHops (Num) | | Result (s) | Conclusion |
|---------------|---------|--------|--------------------|------|--------------------|-----|---------------|------------|
| GFSK | 39 | DH5 | Fig.76 | 2.86 | Fig.77 | 100 | 0.286 | P |
| $\pi/4$ DQPSK | 39 | 2-DH5 | Fig.78 | 2.86 | Fig.79 | 80 | 0.229 | P |
| 8DPSK | 39 | 3-DH5 | Fig.80 | 2.86 | Fig.81 | 80 | 0.229 | P |

See below for test graphs.**Conclusion: Pass**

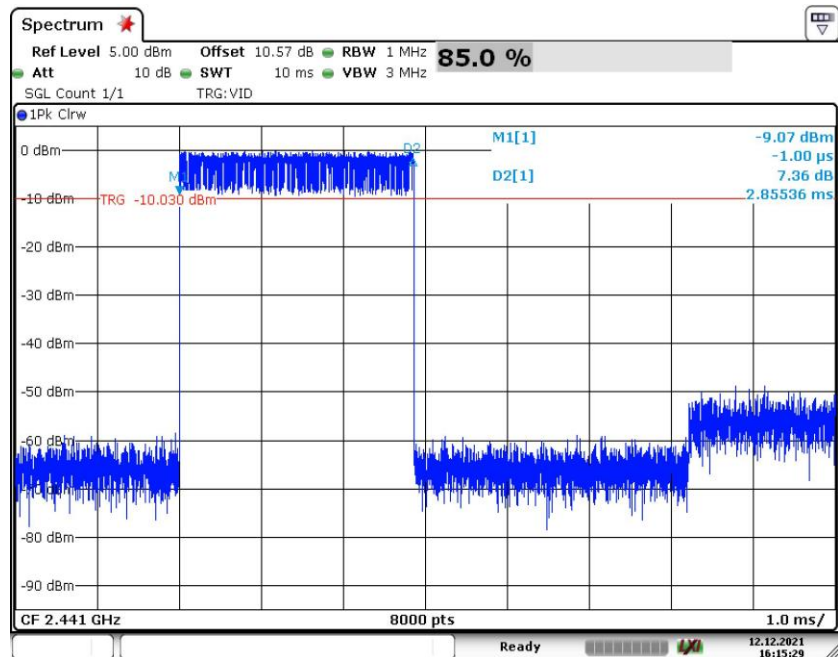


Fig. 76 BurstWidth (Dwell Time) (GFSK, CH39)

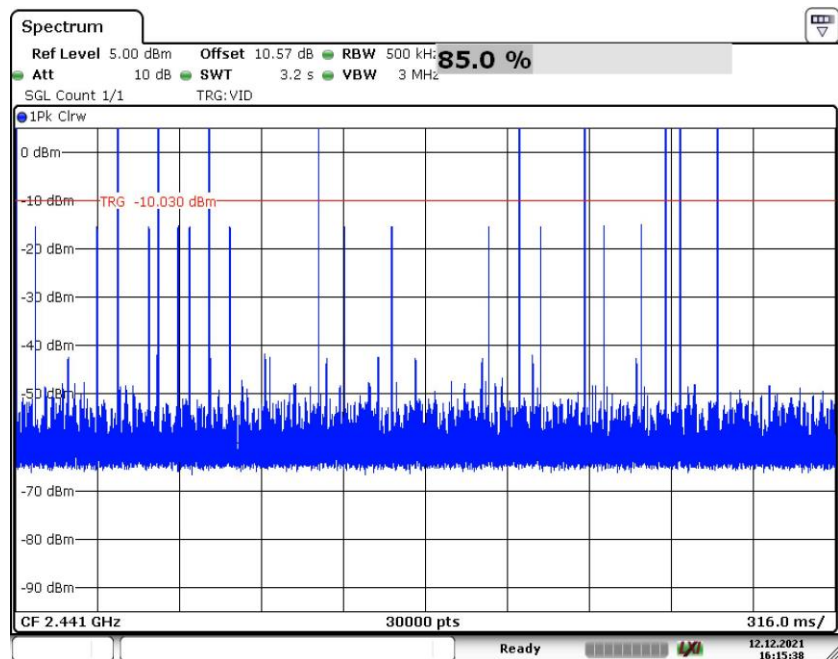


Fig. 77 Number of Burst in Observation Period (Dwell Time) (GFSK, CH39)

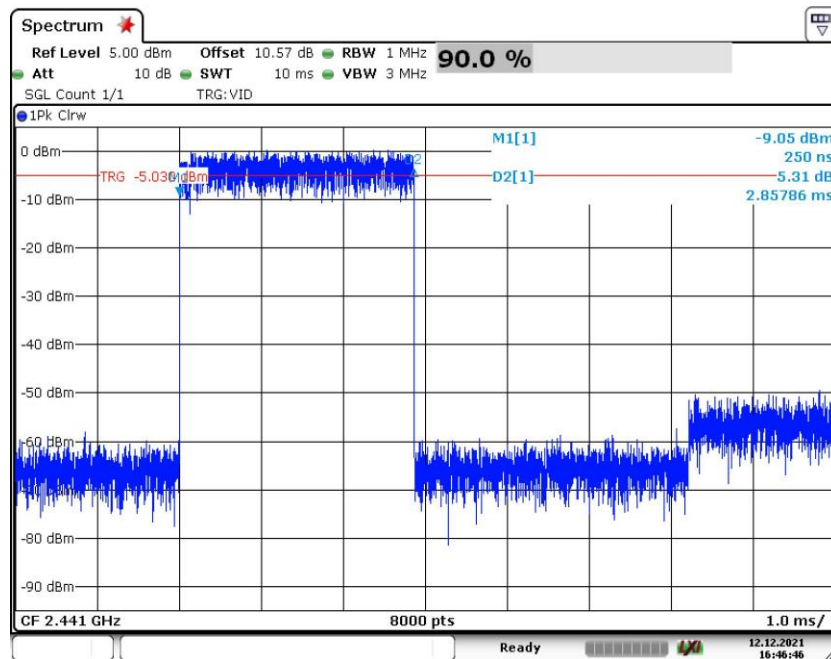


Fig. 78 BurstWidth (Dwell Time) ($\pi/4$ DQPSK, CH39)

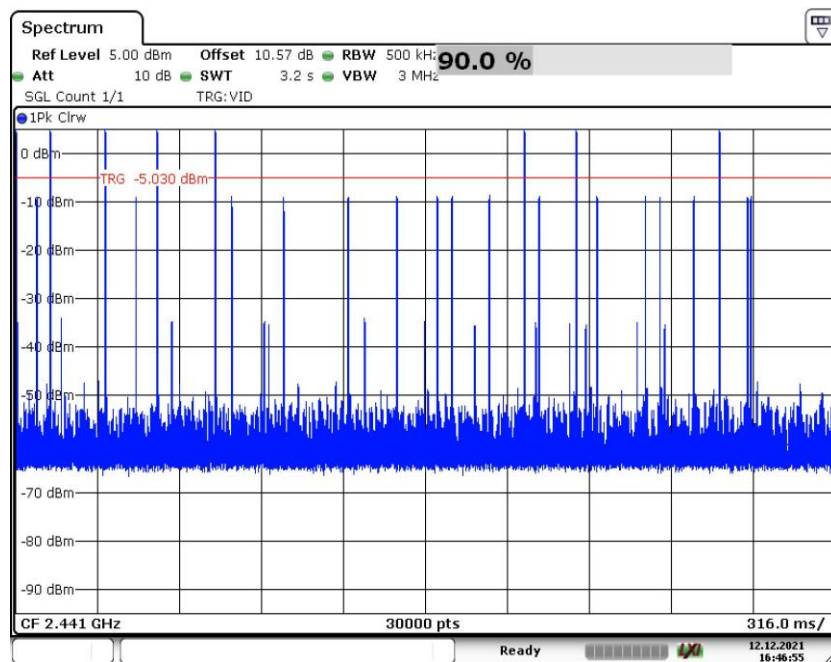


Fig. 79 Number of Burst in Observation Period (Dwell Time) ($\pi/4$ DQPSK, CH39)

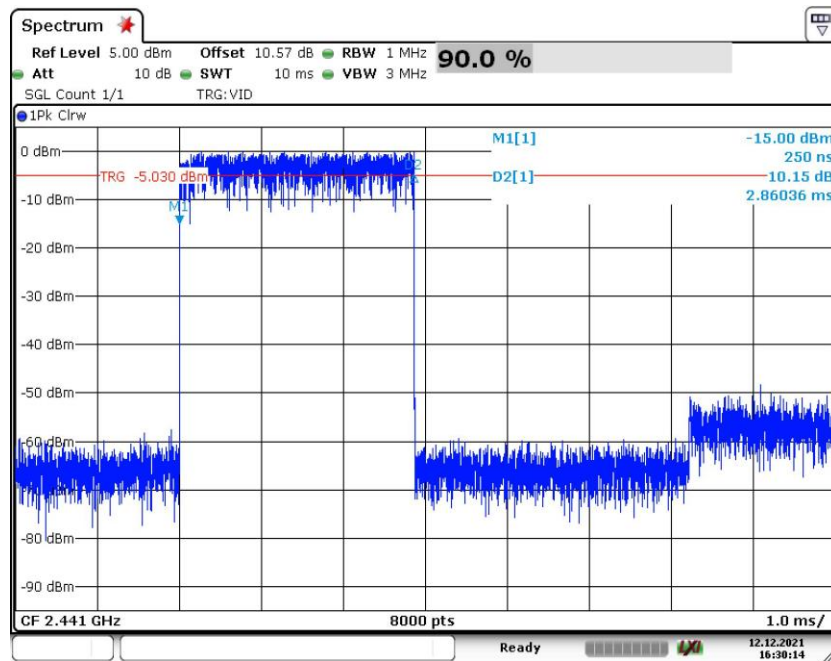


Fig. 80 BurstWidth (Dwell Time) (8DPSK, CH39)

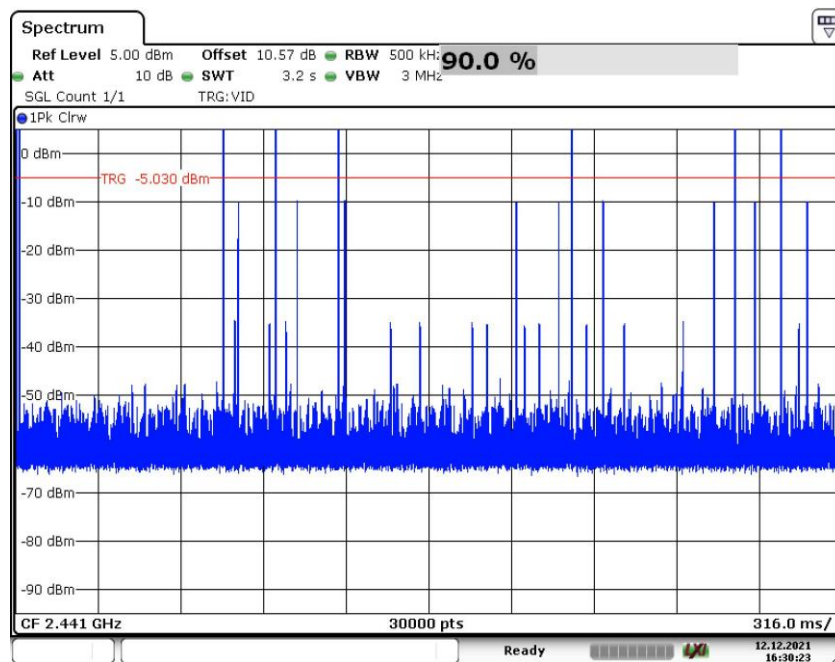


Fig. 81 Number of Burst in Observation Period (Dwell Time) (8DPSK, CH39)

A.7 Number of Hopping Channels

Method of Measurement: See ANSI C63.10-clause 7.8.3.

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.82 | 79 | P |
| $\pi/4$ DQPSK | 2-DH5 | Fig.83 | 79 | P |
| 8DPSK | 3-DH5 | Fig.84 | 79 | P |

See below for test graphs.

Conclusion: Pass

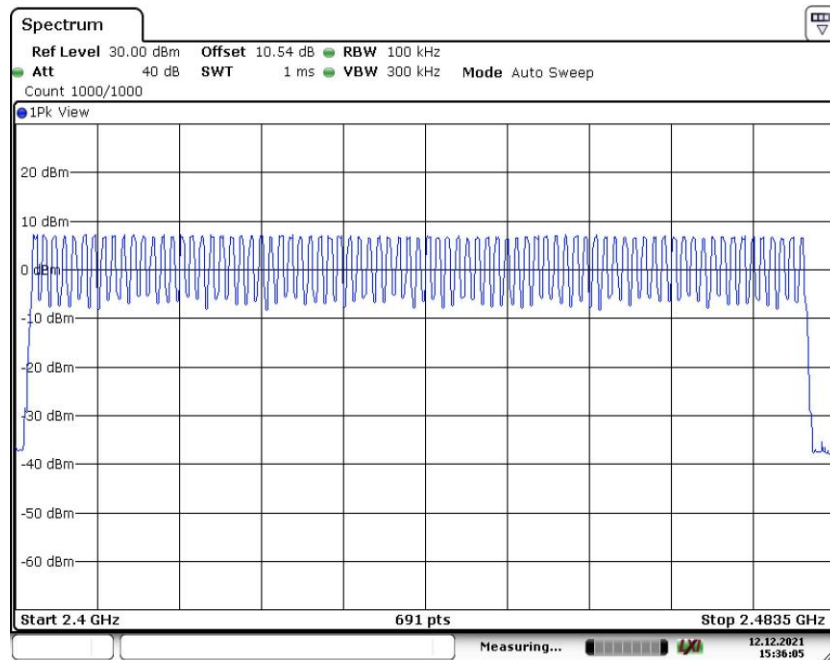


Fig. 82 Number of Hopping Channels (GFSK, Hopping)

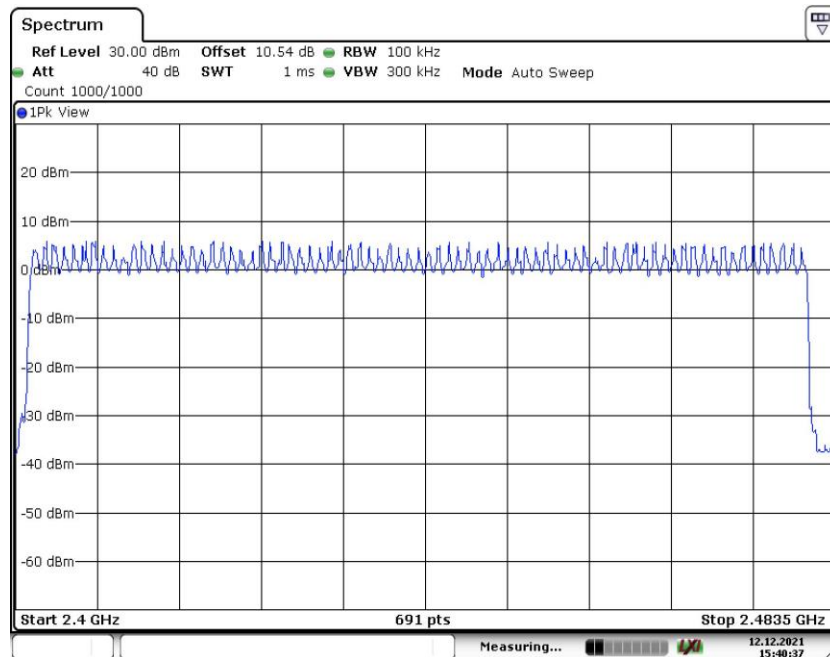


Fig. 83 Number of Hopping Channels ($\pi/4$ DQPSK, Hopping)



Fig. 84 Number of Hopping Channels (8DPSK, Hopping)

A.8 Carrier Frequency Separation**Method of Measurement:** See ANSI C63.10-clause 7.8.2.**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.85 | 974.00 | P |
| $\pi/4$ DQPSK | 39 | 2-DH5 | Fig.86 | 1009.00 | P |
| 8DPSK | 39 | 3-DH5 | Fig.87 | 1000.00 | P |

See below for test graphs.**Conclusion: Pass**

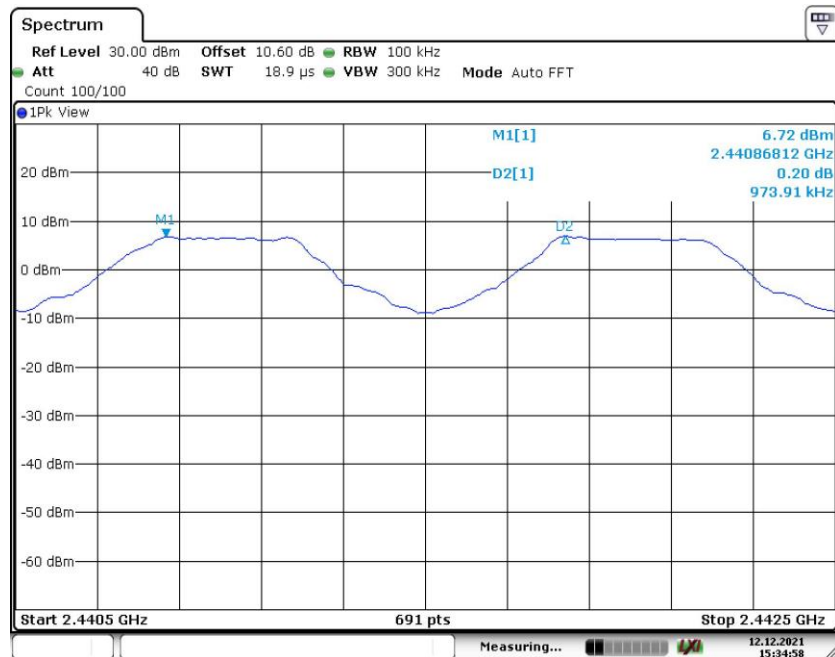


Fig. 85 Carrier Frequency Separation (GFSK, CH39)

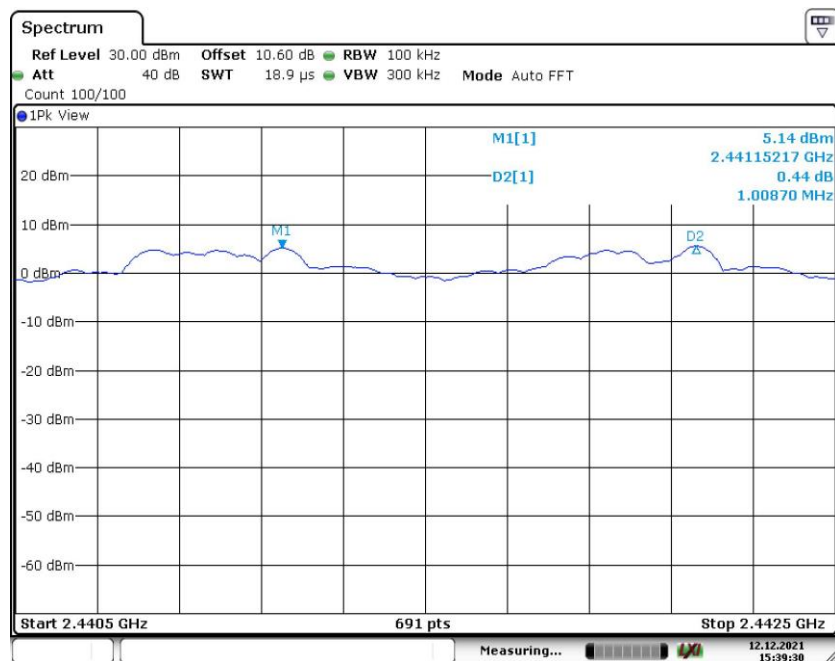


Fig. 86 Carrier Frequency Separation ($\pi/4$ DQPSK, CH39)

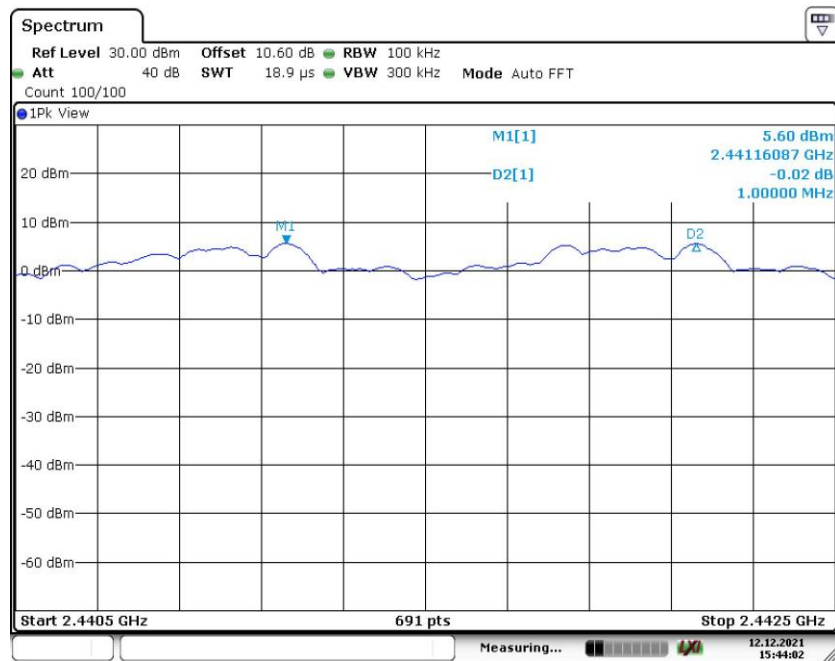


Fig. 87 Carrier Frequency Separation (8DPSK, CH39)

**A.9 AC Power line Conducted Emission****Method of Measurement: See ANSI C63.10-clause 6.2****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.88 | Fig.89 | 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.**See below for test graphs.****Conclusion: Pass**

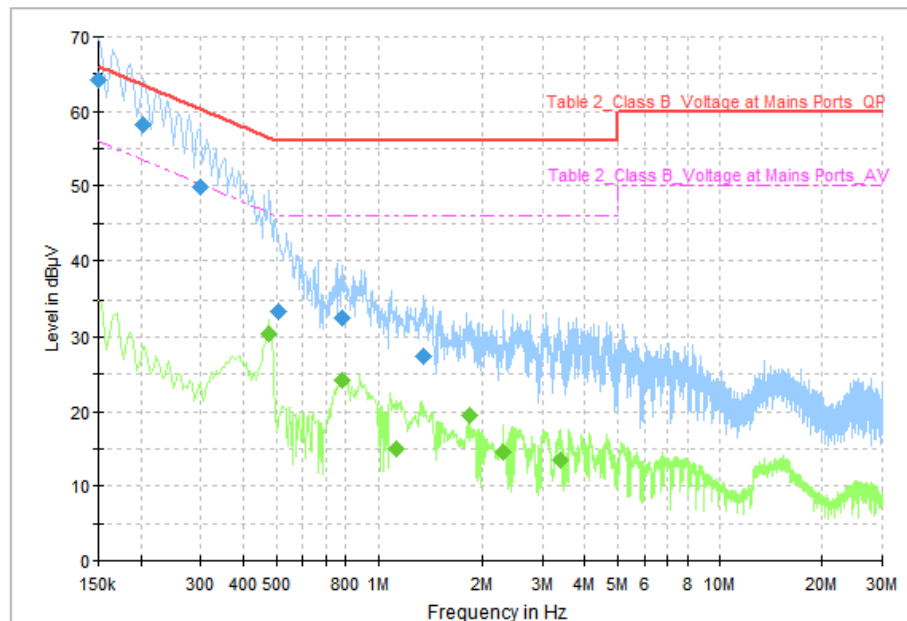


Fig. 88 AC Power line Conducted Emission (Traffic)

Measurement Results: Quasi Peak

| Frequency (MHz) | Quasi Peak (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------|--------------|-------------|------|--------|------------|
| 0.150000 | 64.14 | 66.00 | 1.86 | N | ON | 10 |
| 0.202000 | 58.16 | 63.53 | 5.37 | L1 | ON | 10 |
| 0.298000 | 49.80 | 60.30 | 10.50 | L1 | ON | 10 |
| 0.510000 | 33.46 | 56.00 | 22.54 | L1 | ON | 10 |
| 0.778000 | 32.62 | 56.00 | 23.38 | L1 | ON | 10 |
| 1.350000 | 27.47 | 56.00 | 28.53 | L1 | ON | 10 |

Measurement Results: Average

| Frequency (MHz) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|----------------|--------------|-------------|------|--------|------------|
| 0.474000 | 30.31 | 46.44 | 16.13 | L1 | ON | 10 |
| 0.786000 | 24.19 | 46.00 | 21.81 | L1 | ON | 10 |
| 1.130000 | 15.07 | 46.00 | 30.93 | N | ON | 10 |
| 1.826000 | 19.39 | 46.00 | 26.61 | L1 | ON | 10 |
| 2.294000 | 14.53 | 46.00 | 31.48 | L1 | ON | 10 |
| 3.374000 | 13.45 | 46.00 | 32.55 | L1 | ON | 10 |

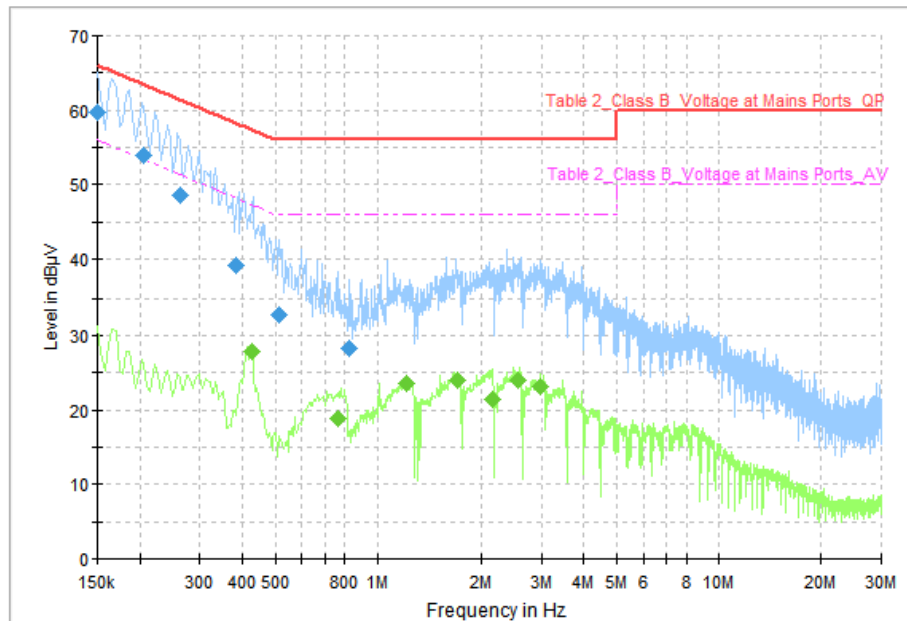


Fig. 89 AC Power line Conducted Emission (Idle)

Measurement Results: Quasi Peak

| Frequency (MHz) | Quasi Peak (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|-------------------|--------------|-------------|------|--------|------------|
| 0.150000 | 59.68 | 66.00 | 6.32 | N | ON | 10 |
| 0.206000 | 53.99 | 63.37 | 9.37 | N | ON | 10 |
| 0.262000 | 48.52 | 61.37 | 12.84 | L1 | ON | 10 |
| 0.382000 | 39.11 | 58.24 | 19.13 | L1 | ON | 10 |
| 0.514000 | 32.69 | 56.00 | 23.31 | N | ON | 10 |
| 0.826000 | 28.20 | 56.00 | 27.80 | N | ON | 10 |

Measurement Results: Average

| Frequency (MHz) | Average (dBμV) | Limit (dBμV) | Margin (dB) | Line | Filter | Corr. (dB) |
|-----------------|----------------|--------------|-------------|------|--------|------------|
| 0.426000 | 27.81 | 47.33 | 19.52 | L1 | ON | 10 |
| 0.762000 | 18.87 | 46.00 | 27.13 | L1 | ON | 10 |
| 1.218000 | 23.46 | 46.00 | 22.54 | L1 | ON | 10 |
| 1.698000 | 23.89 | 46.00 | 22.11 | L1 | ON | 10 |
| 2.150000 | 21.36 | 46.00 | 24.64 | L1 | ON | 10 |
| 2.554000 | 24.00 | 46.00 | 22.00 | L1 | ON | 10 |
| 2.974000 | 23.04 | 46.00 | 22.96 | L1 | ON | 10 |

END OF REPORT