



Appendix B

E-UTRA Band 2



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1 Effective (Isotropic) Radiated Power Output Data

Effective Isotropic Radiated Power of Transmitter (EIRP) for LTE BAND 2

| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM1 | 1.4M | LCH | RB1#0 | 22.45 | 25.45 | 33.00 | PASS |
| | | | | RB1#2 | 22.57 | 25.57 | 33.00 | PASS |
| | | | | RB1#5 | 22.47 | 25.47 | 33.00 | PASS |
| | | | | RB3#0 | 22.21 | 25.21 | 33.00 | PASS |
| | | | | RB3#2 | 22.20 | 25.2 | 33.00 | PASS |
| | | | | RB3#3 | 22.23 | 25.23 | 33.00 | PASS |
| | | | | RB6#0 | 21.30 | 24.3 | 33.00 | PASS |
| | | | MCH | RB1#0 | 22.32 | 25.32 | 33.00 | PASS |
| | | | | RB1#2 | 22.47 | 25.47 | 33.00 | PASS |
| | | | | RB1#5 | 22.42 | 25.42 | 33.00 | PASS |
| | | | | RB3#0 | 22.46 | 25.46 | 33.00 | PASS |
| | | | | RB3#2 | 22.47 | 25.47 | 33.00 | PASS |
| | | | | RB3#3 | 22.33 | 25.33 | 33.00 | PASS |
| | | | | RB6#0 | 21.53 | 24.53 | 33.00 | PASS |
| | | | HCH | RB1#0 | 22.47 | 25.47 | 33.00 | PASS |
| | | | | RB1#2 | 22.37 | 25.37 | 33.00 | PASS |
| | | | | RB1#5 | 22.44 | 25.44 | 33.00 | PASS |
| | | | | RB3#0 | 22.51 | 25.51 | 33.00 | PASS |
| | | | | RB3#2 | 22.49 | 25.49 | 33.00 | PASS |
| | | | | RB3#3 | 22.39 | 25.39 | 33.00 | PASS |
| | | | | RB6#0 | 21.68 | 24.68 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM2 | 1.4M | LCH | RB1#0 | 21.56 | 24.56 | 33.00 | PASS |
| | | | | RB1#2 | 21.69 | 24.69 | 33.00 | PASS |
| | | | | RB1#5 | 21.46 | 24.46 | 33.00 | PASS |
| | | | | RB3#0 | 21.19 | 24.19 | 33.00 | PASS |
| | | | | RB3#2 | 21.18 | 24.18 | 33.00 | PASS |
| | | | | RB3#3 | 21.22 | 24.22 | 33.00 | PASS |
| | | | | RB6#0 | 20.42 | 23.42 | 33.00 | PASS |
| | | | MCH | RB1#0 | 21.17 | 24.17 | 33.00 | PASS |
| | | | | RB1#2 | 21.40 | 24.4 | 33.00 | PASS |
| | | | | RB1#5 | 21.38 | 24.38 | 33.00 | PASS |
| | | | | RB3#0 | 21.34 | 24.34 | 33.00 | PASS |
| | | | | RB3#2 | 21.33 | 24.33 | 33.00 | PASS |
| | | | | RB3#3 | 21.56 | 24.56 | 33.00 | PASS |
| | | | | RB6#0 | 20.39 | 23.39 | 33.00 | PASS |
| | | | HCH | RB1#0 | 21.43 | 24.43 | 33.00 | PASS |
| | | | | RB1#2 | 21.63 | 24.63 | 33.00 | PASS |
| | | | | RB1#5 | 21.76 | 24.76 | 33.00 | PASS |
| | | | | RB3#0 | 21.52 | 24.52 | 33.00 | PASS |
| | | | | RB3#2 | 21.50 | 24.5 | 33.00 | PASS |
| | | | | RB3#3 | 21.54 | 24.54 | 33.00 | PASS |
| | | | | RB6#0 | 20.56 | 23.56 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM1 | 3M | LCH | RB1#0 | 21.29 | 24.29 | 33.00 | PASS |
| | | | | RB1#7 | 22.57 | 25.57 | 33.00 | PASS |
| | | | | RB1#14 | 22.17 | 25.17 | 33.00 | PASS |
| | | | | RB8#0 | 22.21 | 25.21 | 33.00 | PASS |
| | | | | RB8#4 | 21.33 | 24.33 | 33.00 | PASS |
| | | | | RB8#7 | 21.32 | 24.32 | 33.00 | PASS |
| | | | | RB15#0 | 21.26 | 24.26 | 33.00 | PASS |
| | | | MCH | RB1#0 | 21.49 | 24.49 | 33.00 | PASS |
| | | | | RB1#7 | 22.69 | 25.69 | 33.00 | PASS |
| | | | | RB1#14 | 22.45 | 25.45 | 33.00 | PASS |
| | | | | RB8#0 | 22.83 | 25.83 | 33.00 | PASS |
| | | | | RB8#4 | 21.53 | 24.53 | 33.00 | PASS |
| | | | | RB8#7 | 21.44 | 24.44 | 33.00 | PASS |
| | | | | RB15#0 | 21.55 | 24.55 | 33.00 | PASS |
| | | | HCH | RB1#0 | 21.69 | 24.69 | 33.00 | PASS |
| | | | | RB1#7 | 22.48 | 25.48 | 33.00 | PASS |
| | | | | RB1#14 | 22.43 | 25.43 | 33.00 | PASS |
| | | | | RB8#0 | 22.49 | 25.49 | 33.00 | PASS |
| | | | | RB8#4 | 21.67 | 24.67 | 33.00 | PASS |
| | | | | RB8#7 | 21.56 | 24.56 | 33.00 | PASS |
| | | | | RB15#0 | 21.63 | 24.63 | 33.00 | PASS |

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|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM2 | 3M | LCH | RB1#0 | 20.28 | 23.28 | 33.00 | PASS |
| | | | | RB1#7 | 21.63 | 24.63 | 33.00 | PASS |
| | | | | RB1#14 | 21.29 | 24.29 | 33.00 | PASS |
| | | | | RB8#0 | 21.18 | 24.18 | 33.00 | PASS |
| | | | | RB8#4 | 20.40 | 23.4 | 33.00 | PASS |
| | | | | RB8#7 | 20.40 | 23.4 | 33.00 | PASS |
| | | | | RB15#0 | 20.53 | 23.53 | 33.00 | PASS |
| | | | MCH | RB1#0 | 20.61 | 23.61 | 33.00 | PASS |
| | | | | RB1#7 | 21.68 | 24.68 | 33.00 | PASS |
| | | | | RB1#14 | 21.53 | 24.53 | 33.00 | PASS |
| | | | | RB8#0 | 21.63 | 24.63 | 33.00 | PASS |
| | | | | RB8#4 | 20.61 | 23.61 | 33.00 | PASS |
| | | | | RB8#7 | 20.52 | 23.52 | 33.00 | PASS |
| | | | | RB15#0 | 20.74 | 23.74 | 33.00 | PASS |
| | | | HCH | RB1#0 | 20.75 | 23.75 | 33.00 | PASS |
| | | | | RB1#7 | 21.65 | 24.65 | 33.00 | PASS |
| | | | | RB1#14 | 21.58 | 24.58 | 33.00 | PASS |
| | | | | RB8#0 | 21.54 | 24.54 | 33.00 | PASS |
| | | | | RB8#4 | 20.65 | 23.65 | 33.00 | PASS |
| | | | | RB8#7 | 20.76 | 23.76 | 33.00 | PASS |
| | | | | RB15#0 | 20.67 | 23.67 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM1 | 5M | LCH | RB1#0 | 21.38 | 24.38 | 33.00 | PASS |
| | | | | RB1#13 | 21.38 | 24.38 | 33.00 | PASS |
| | | | | RB1#24 | 21.38 | 24.38 | 33.00 | PASS |
| | | | | RB12#0 | 22.44 | 25.44 | 33.00 | PASS |
| | | | | RB12#6 | 22.43 | 25.43 | 33.00 | PASS |
| | | | | RB12#13 | 22.37 | 25.37 | 33.00 | PASS |
| | | | | RB25#0 | 21.34 | 24.34 | 33.00 | PASS |
| | | | MCH | RB1#0 | 21.50 | 24.5 | 33.00 | PASS |
| | | | | RB1#13 | 21.53 | 24.53 | 33.00 | PASS |
| | | | | RB1#24 | 21.49 | 24.49 | 33.00 | PASS |
| | | | | RB12#0 | 22.38 | 25.38 | 33.00 | PASS |
| | | | | RB12#6 | 22.37 | 25.37 | 33.00 | PASS |
| | | | | RB12#13 | 22.54 | 25.54 | 33.00 | PASS |
| | | | | RB25#0 | 21.51 | 24.51 | 33.00 | PASS |
| | | | HCH | RB1#0 | 21.73 | 24.73 | 33.00 | PASS |
| | | | | RB1#13 | 21.61 | 24.61 | 33.00 | PASS |
| | | | | RB1#24 | 21.63 | 24.63 | 33.00 | PASS |
| | | | | RB12#0 | 22.63 | 25.63 | 33.00 | PASS |
| | | | | RB12#6 | 22.63 | 25.63 | 33.00 | PASS |
| | | | | RB12#13 | 22.59 | 25.59 | 33.00 | PASS |
| | | | | RB25#0 | 21.57 | 24.57 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM2 | 5M | LCH | RB1#0 | 20.52 | 23.52 | 33.00 | PASS |
| | | | | RB1#13 | 20.40 | 23.4 | 33.00 | PASS |
| | | | | RB1#24 | 20.44 | 23.44 | 33.00 | PASS |
| | | | | RB12#0 | 21.32 | 24.32 | 33.00 | PASS |
| | | | | RB12#6 | 21.69 | 24.69 | 33.00 | PASS |
| | | | | RB12#13 | 21.40 | 24.4 | 33.00 | PASS |
| | | | | RB25#0 | 20.31 | 23.31 | 33.00 | PASS |
| | | | MCH | RB1#0 | 20.40 | 23.4 | 33.00 | PASS |
| | | | | RB1#13 | 20.35 | 23.35 | 33.00 | PASS |
| | | | | RB1#24 | 20.40 | 23.4 | 33.00 | PASS |
| | | | | RB12#0 | 21.46 | 24.46 | 33.00 | PASS |
| | | | | RB12#6 | 21.58 | 24.58 | 33.00 | PASS |
| | | | | RB12#13 | 21.46 | 24.46 | 33.00 | PASS |
| | | | | RB25#0 | 20.52 | 23.52 | 33.00 | PASS |
| | | | HCH | RB1#0 | 20.68 | 23.68 | 33.00 | PASS |
| | | | | RB1#13 | 20.67 | 23.67 | 33.00 | PASS |
| | | | | RB1#24 | 20.67 | 23.67 | 33.00 | PASS |
| | | | | RB12#0 | 21.09 | 24.09 | 33.00 | PASS |
| | | | | RB12#6 | 21.12 | 24.12 | 33.00 | PASS |
| | | | | RB12#13 | 21.38 | 24.38 | 33.00 | PASS |
| | | | | RB25#0 | 20.64 | 23.64 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM1 | 10M | LCH | RB1#0 | 22.50 | 25.5 | 33.00 | PASS |
| | | | | RB1#25 | 22.67 | 25.67 | 33.00 | PASS |
| | | | | RB1#49 | 22.32 | 25.32 | 33.00 | PASS |
| | | | | RB25#0 | 21.54 | 24.54 | 33.00 | PASS |
| | | | | RB25#13 | 21.54 | 24.54 | 33.00 | PASS |
| | | | | RB25#25 | 21.40 | 24.4 | 33.00 | PASS |
| | | | | RB50#0 | 21.54 | 24.54 | 33.00 | PASS |
| | | | MCH | RB1#0 | 22.43 | 25.43 | 33.00 | PASS |
| | | | | RB1#25 | 22.94 | 25.94 | 33.00 | PASS |
| | | | | RB1#49 | 22.21 | 25.21 | 33.00 | PASS |
| | | | | RB25#0 | 21.54 | 24.54 | 33.00 | PASS |
| | | | | RB25#13 | 21.63 | 24.63 | 33.00 | PASS |
| | | | | RB25#25 | 21.55 | 24.55 | 33.00 | PASS |
| | | | | RB50#0 | 21.57 | 24.57 | 33.00 | PASS |
| | | | HCH | RB1#0 | 22.65 | 25.65 | 33.00 | PASS |
| | | | | RB1#25 | 23.09 | 26.09 | 33.00 | PASS |
| | | | | RB1#49 | 22.50 | 25.5 | 33.00 | PASS |
| | | | | RB25#0 | 21.67 | 24.67 | 33.00 | PASS |
| | | | | RB25#13 | 21.66 | 24.66 | 33.00 | PASS |
| | | | | RB25#25 | 21.80 | 24.8 | 33.00 | PASS |
| | | | | RB50#0 | 21.77 | 24.77 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM1 | 15M | LCH | RB1#0 | 22.28 | 25.28 | 33.00 | PASS |
| | | | | RB1#38 | 22.53 | 25.53 | 33.00 | PASS |
| | | | | RB1#74 | 22.36 | 25.36 | 33.00 | PASS |
| | | | | RB36#0 | 22.61 | 25.61 | 33.00 | PASS |
| | | | | RB36#18 | 22.54 | 25.54 | 33.00 | PASS |
| | | | | RB36#39 | 22.39 | 25.39 | 33.00 | PASS |
| | | | | RB75#0 | 21.67 | 24.67 | 33.00 | PASS |
| | | | MCH | RB1#0 | 22.57 | 25.57 | 33.00 | PASS |
| | | | | RB1#38 | 22.92 | 25.92 | 33.00 | PASS |
| | | | | RB1#74 | 22.43 | 25.43 | 33.00 | PASS |
| | | | | RB36#0 | 22.59 | 25.59 | 33.00 | PASS |
| | | | | RB36#18 | 22.87 | 25.87 | 33.00 | PASS |
| | | | | RB36#39 | 22.41 | 25.41 | 33.00 | PASS |
| | | | | RB75#0 | 21.69 | 24.69 | 33.00 | PASS |
| | | | HCH | RB1#0 | 22.64 | 25.64 | 33.00 | PASS |
| | | | | RB1#38 | 22.86 | 25.86 | 33.00 | PASS |
| | | | | RB1#74 | 22.58 | 25.58 | 33.00 | PASS |
| | | | | RB36#0 | 22.72 | 25.72 | 33.00 | PASS |
| | | | | RB36#18 | 22.88 | 25.88 | 33.00 | PASS |
| | | | | RB36#39 | 22.62 | 25.62 | 33.00 | PASS |
| | | | | RB75#0 | 21.86 | 24.86 | 33.00 | PASS |

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| Test Band(LTE) | Test Mode | Test Bandwidth | Test channel | Test RB | Measured (dBm) | EIRP (dBm) | limit (dBm) | Verdict |
|----------------|-----------|----------------|--------------|---------|----------------|------------|-------------|---------|
| BAND2 | LTE/TM1 | 20M | LCH | RB1#0 | 21.52 | 24.52 | 33.00 | PASS |
| | | | | RB1#50 | 22.35 | 25.35 | 33.00 | PASS |
| | | | | RB1#99 | 22.90 | 25.9 | 33.00 | PASS |
| | | | | RB50#0 | 22.30 | 25.3 | 33.00 | PASS |
| | | | | RB50#25 | 21.56 | 24.56 | 33.00 | PASS |
| | | | | RB50#50 | 21.56 | 24.56 | 33.00 | PASS |
| | | | | RB100#0 | 21.45 | 24.45 | 33.00 | PASS |
| | | | MCH | RB1#0 | 21.64 | 24.64 | 33.00 | PASS |
| | | | | RB1#50 | 22.68 | 25.68 | 33.00 | PASS |
| | | | | RB1#99 | 22.73 | 25.73 | 33.00 | PASS |
| | | | | RB50#0 | 22.33 | 25.33 | 33.00 | PASS |
| | | | | RB50#25 | 21.53 | 24.53 | 33.00 | PASS |
| | | | | RB50#50 | 21.52 | 24.52 | 33.00 | PASS |
| | | | | RB100#0 | 21.54 | 24.54 | 33.00 | PASS |
| | | | HCH | RB1#0 | 21.90 | 24.9 | 33.00 | PASS |
| | | | | RB1#50 | 22.54 | 25.54 | 33.00 | PASS |
| | | | | RB1#99 | 23.09 | 26.09 | 33.00 | PASS |
| | | | | RB50#0 | 22.59 | 25.59 | 33.00 | PASS |
| | | | | RB50#25 | 21.78 | 24.78 | 33.00 | PASS |
| | | | | RB50#50 | 21.78 | 24.78 | 33.00 | PASS |
| | | | | RB100#0 | 21.76 | 24.76 | 33.00 | PASS |

Note:

a: For getting the EIRP (Efficient Isotropic Radiated Power) in substitution method, the following formula should be taken to calculate it,

$$\text{EIRP [dBm]} = \text{SGP [dBm]} - \text{Cable Loss [dB]} + \text{Gain [dBi]}$$

b: SGP=Signal Generator Level

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2 Peak-to-Average Ratio

Part I - Test Results

| Test Band | Test Mode | Test Channel | Measured[dB] | Limit [dB] | Verdict |
|-----------|-----------|--------------|--------------|------------|---------|
| Band 2 | TM1/20M | LCH | 3.97 | 13 | PASS |
| | | MCH | 4.20 | 13 | PASS |
| | | HCH | 4.06 | 13 | PASS |

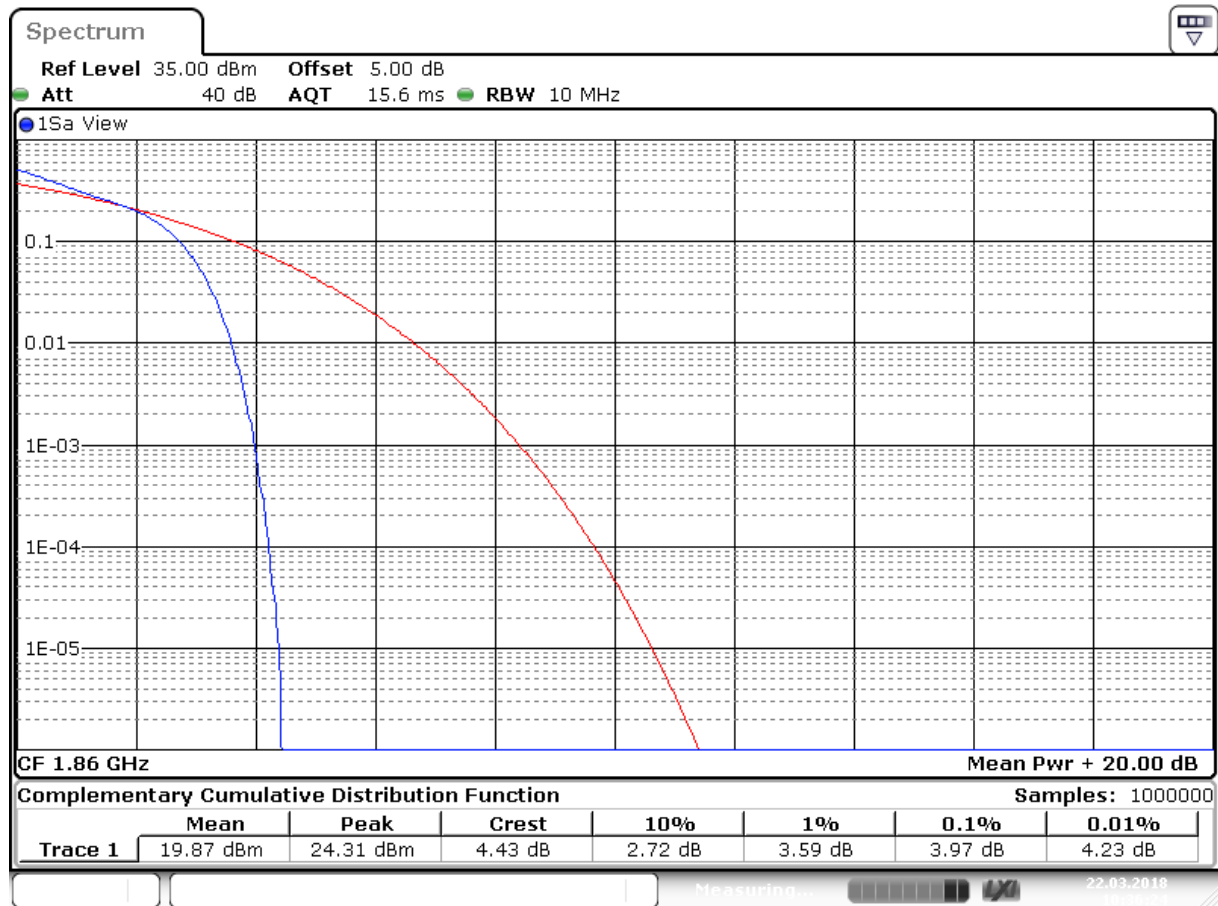
Part II - Test Plots

2.1 For LTE

2.1.1 Test Band = LTE band2

2.1.1.1 Test Mode = LTE/TM1.Bandwidth=20MHz

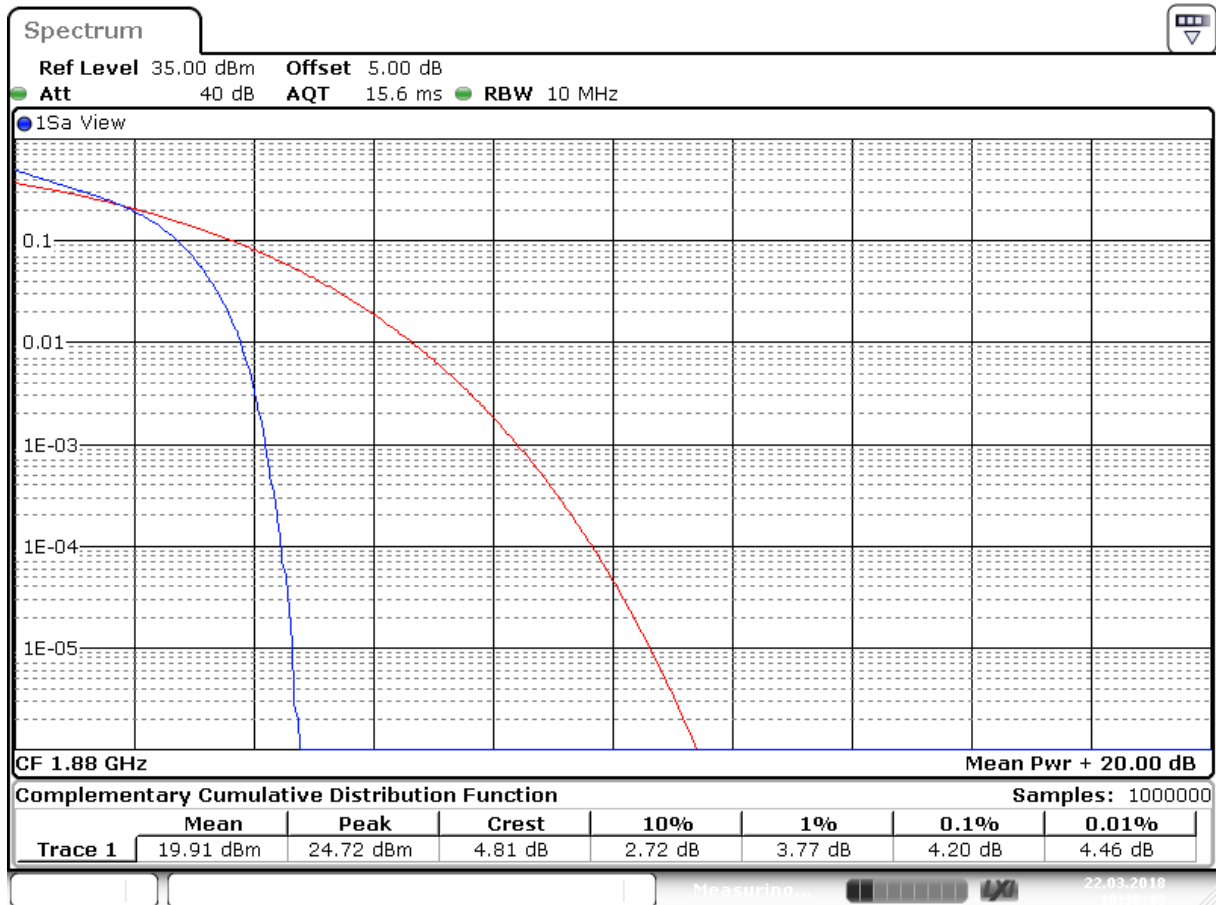
2.1.1.1.1 Test Channel = LCH



Date: 22 MAR 2018 10:36:24



2.1.1.1.2 Test Channel = MCH

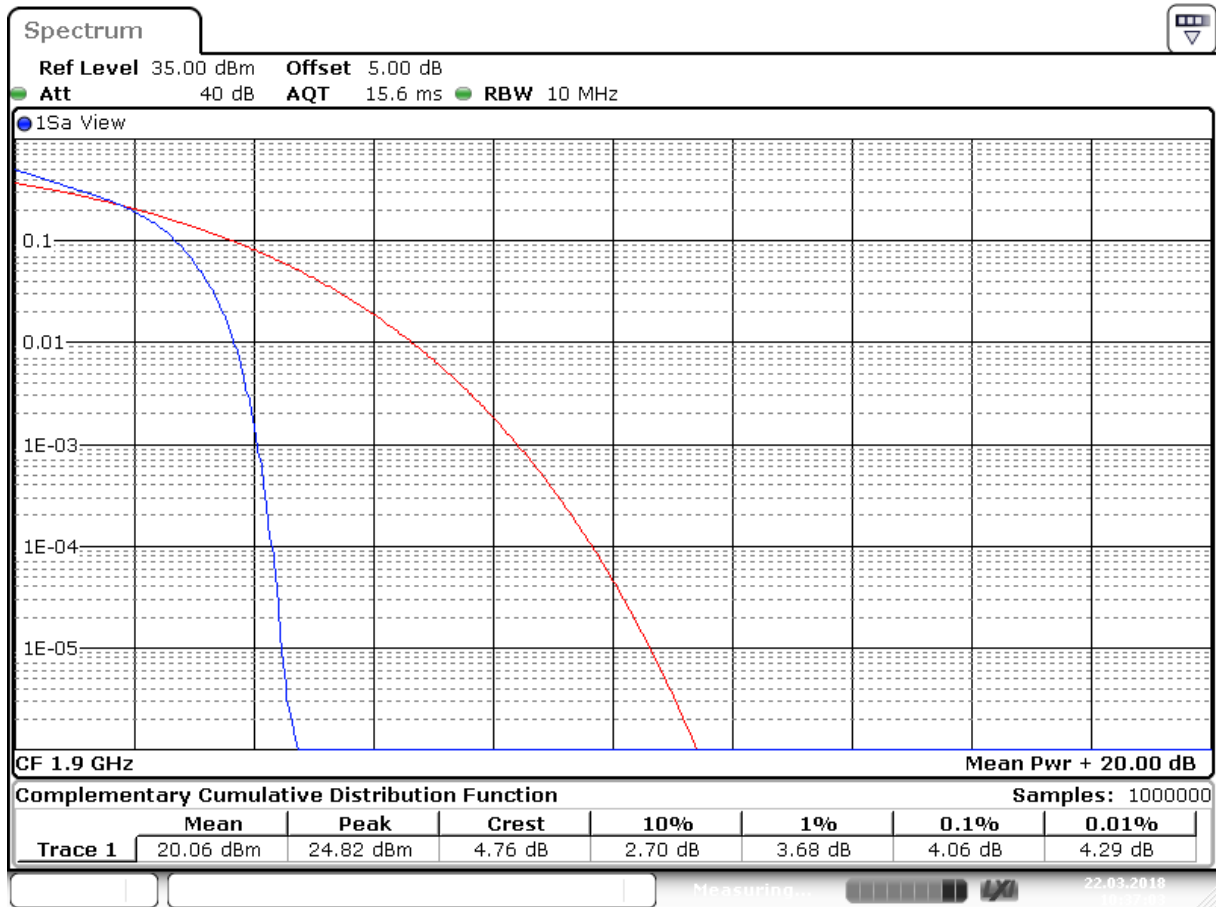


Date: 22 MAR 2018 10:36:44

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2.1.1.1.3 Test Channel = HCH



Date: 22 MAR 2018 10:37:03

3 Modulation Characteristics

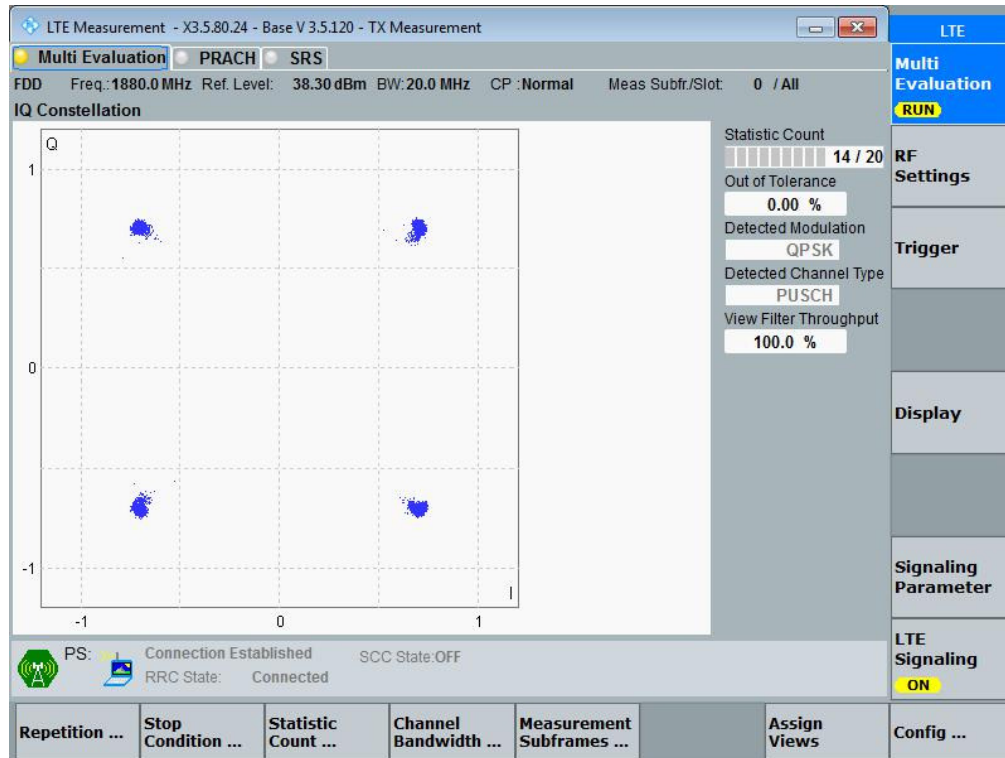
Part I - Test Plots

3.1 For LTE

3.1.1 Test Band = LTE band2

3.1.1.1 Test Mode = LTE /TM1 20MHz

3.1.1.1.1 Test Channel = MCH





4 Bandwidth

Part I - Test Results

| Test Band | Test Mode | Test Channel | Occupied Bandwidth [MHz] | Emission Bandwidth [MHz] | Verdict |
|------------|------------|--------------|--------------------------|--------------------------|---------|
| Band 2 | TM1/1.4MHz | LCH | 1.091 | 1.227 | PASS |
| | | MCH | 1.091 | 1.242 | PASS |
| | | HCH | 1.094 | 1.245 | PASS |
| | TM2/1.4MHz | LCH | 1.091 | 1.248 | PASS |
| | | MCH | 1.088 | 1.245 | PASS |
| | | HCH | 1.091 | 1.251 | PASS |
| | TM1/ 3MHz | LCH | 2.697 | 2.892 | PASS |
| | | MCH | 2.697 | 2.856 | PASS |
| | | HCH | 2.691 | 2.880 | PASS |
| | TM2/3MHz | LCH | 2.697 | 2.886 | PASS |
| | | MCH | 2.697 | 2.850 | PASS |
| | | HCH | 2.691 | 2.880 | PASS |
| | TM1/ 5MHz | LCH | 4.476 | 4.700 | PASS |
| | | MCH | 4.476 | 4.730 | PASS |
| | | HCH | 4.476 | 4.740 | PASS |
| | TM2/ 5MHz | LCH | 4.466 | 4.780 | PASS |
| | | MCH | 4.486 | 4.730 | PASS |
| | | HCH | 4.476 | 4.720 | PASS |
| | TM1/10MHz | LCH | 8.931 | 9.320 | PASS |
| | | MCH | 8.931 | 9.300 | PASS |
| | | HCH | 8.951 | 9.280 | PASS |
| | TM1/ 15MHz | LCH | 13.457 | 14.280 | PASS |
| | | MCH | 13.457 | 14.280 | PASS |
| | | HCH | 13.457 | 14.280 | PASS |
| TM1/ 20MHz | LCH | 17.862 | 18.800 | PASS | |
| | MCH | 17.942 | 19.421 | PASS | |
| | HCH | 17.902 | 18.800 | PASS | |

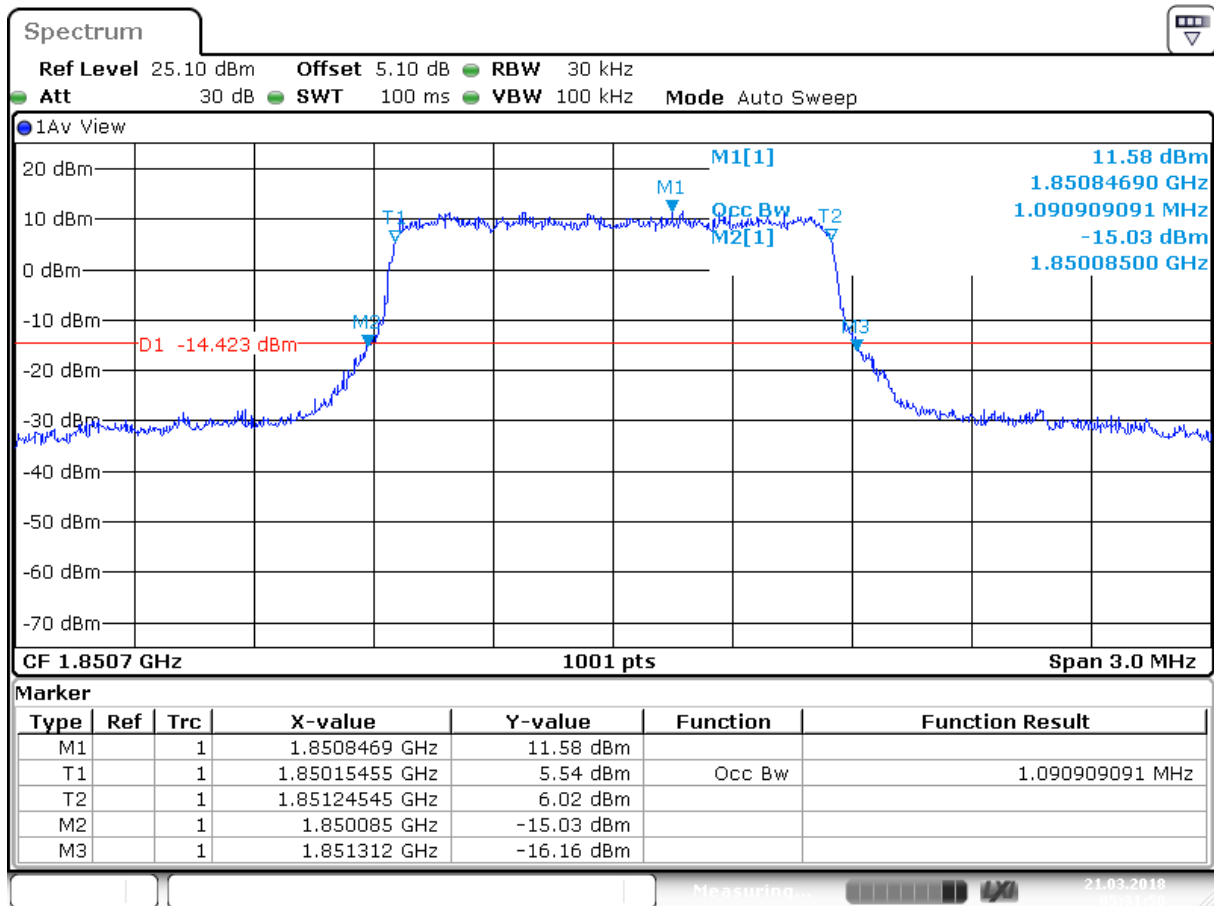
⁴This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

4.1 For LTE

4.1.1 Test Band = LTE band2

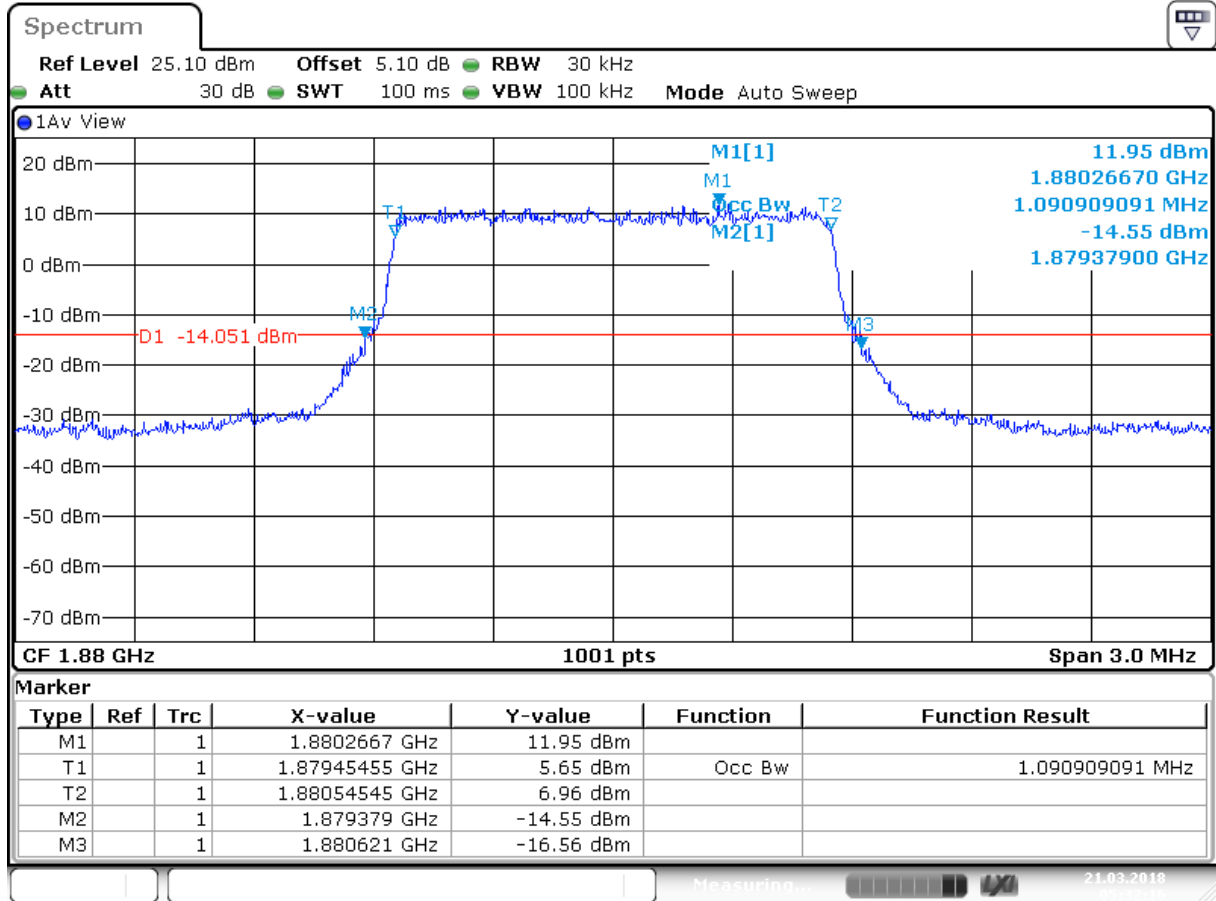
4.1.1.1 Test Mode = LTE/TM1 1.4MHz

4.1.1.1.1 Test Channel = LCH



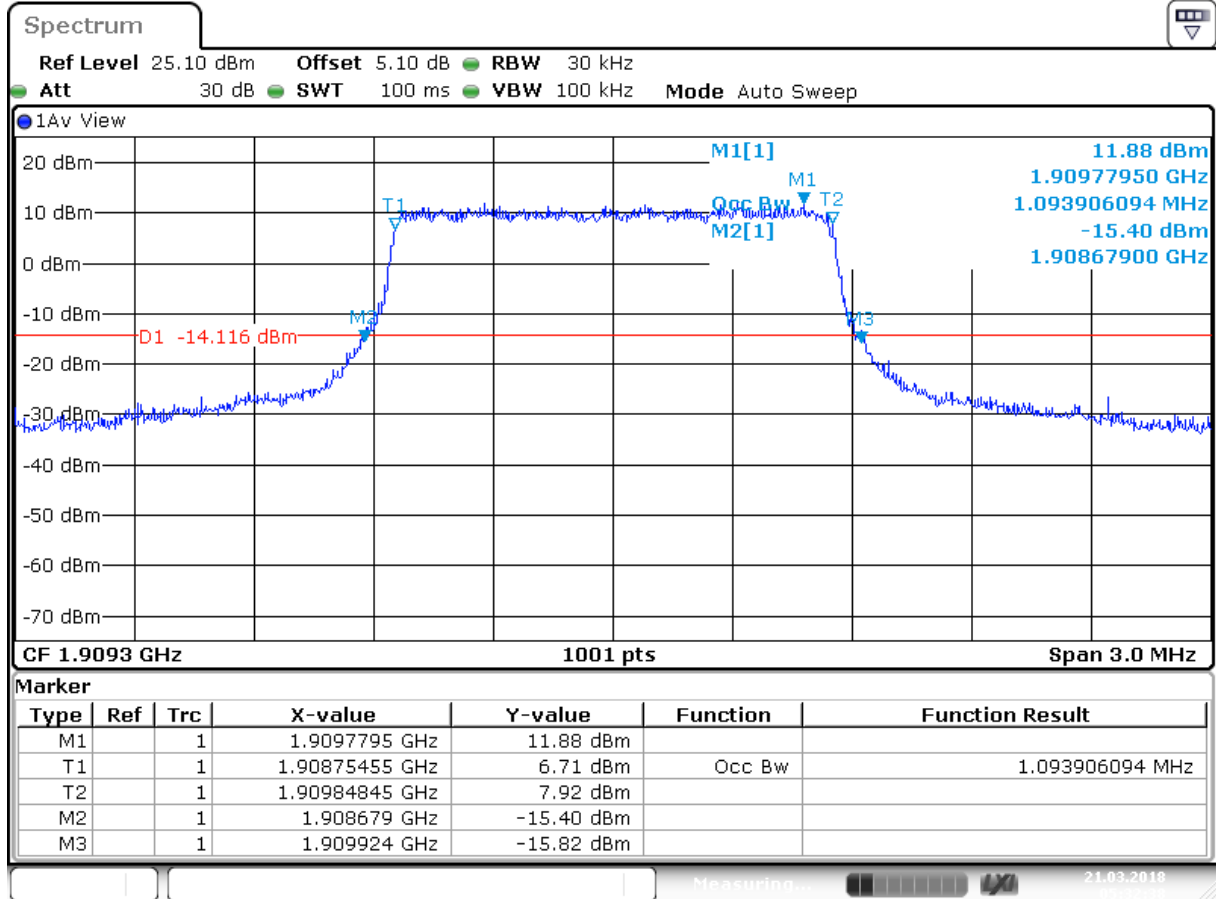
Date: 21 MAR 2018 05:31:51

4.1.1.1.2 Test Channel = MCH



Date: 21 MAR 2018 05:32:16

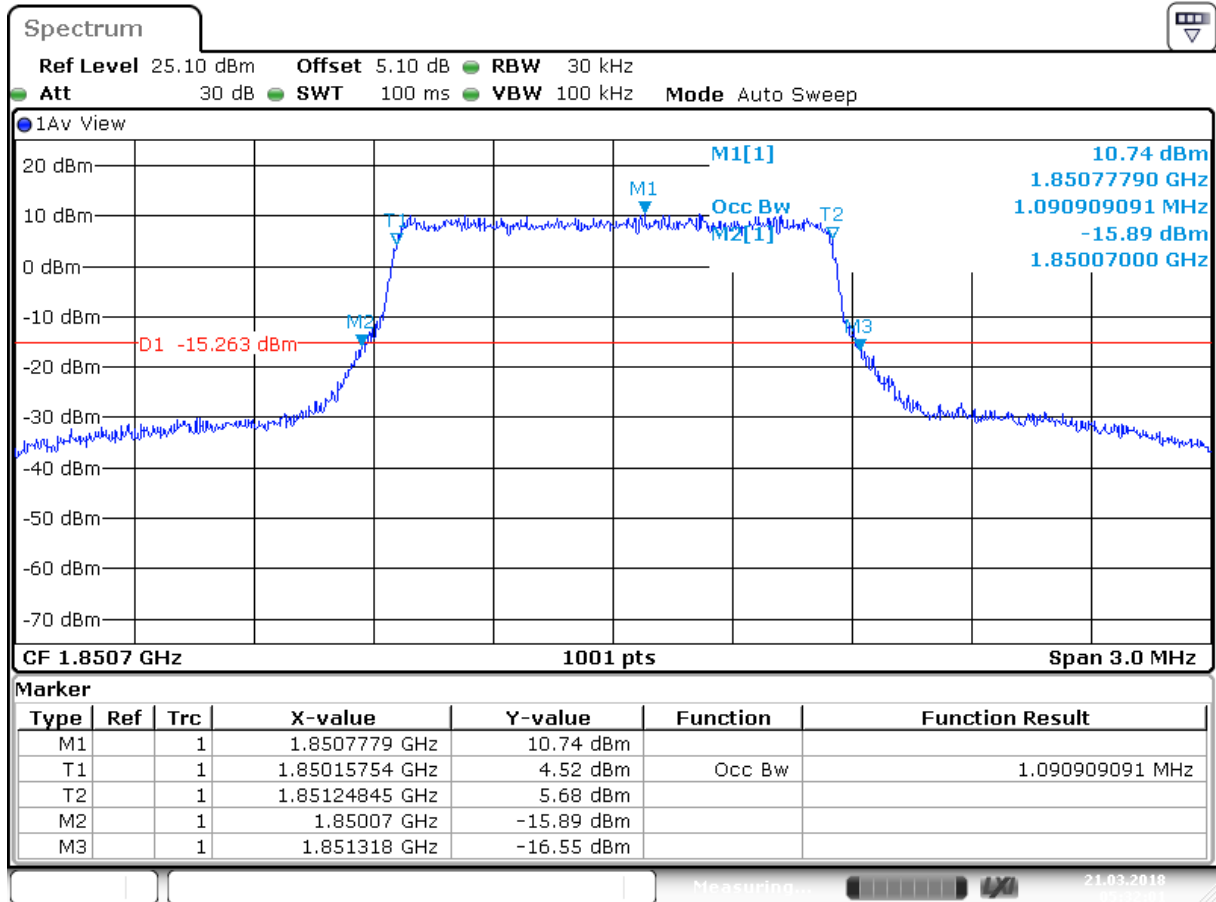
4.1.1.1.3 Test Channel = HCH



Date: 21 MAR 2018 05:32:38

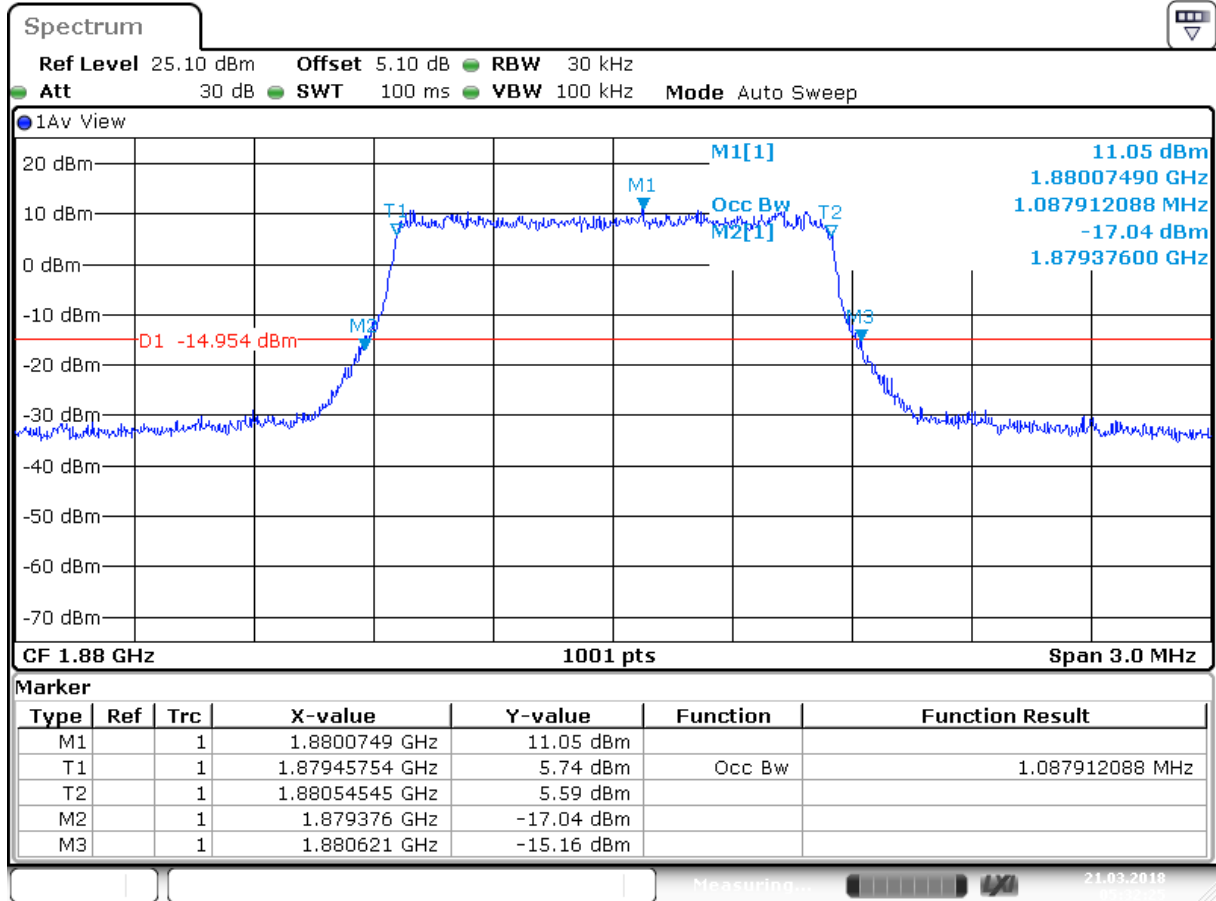
4.1.1.2 Test Mode = LTE/TM2 1.4MHz

4.1.1.2.1 Test Channel = LCH



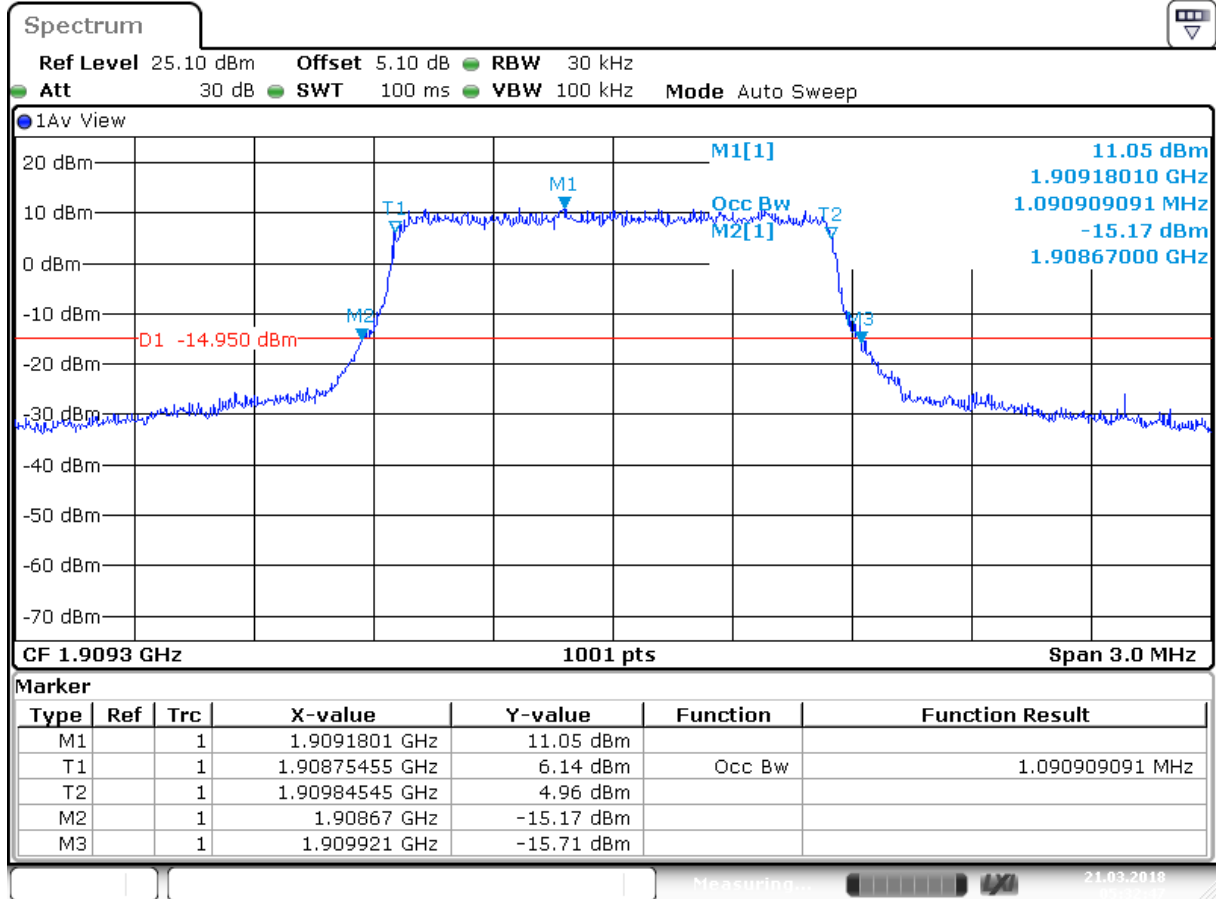
Date: 21 MAR.2018 05:32:01

4.1.1.2.2 Test Channel = MCH



Date: 21 MAR 2018 05:32:25

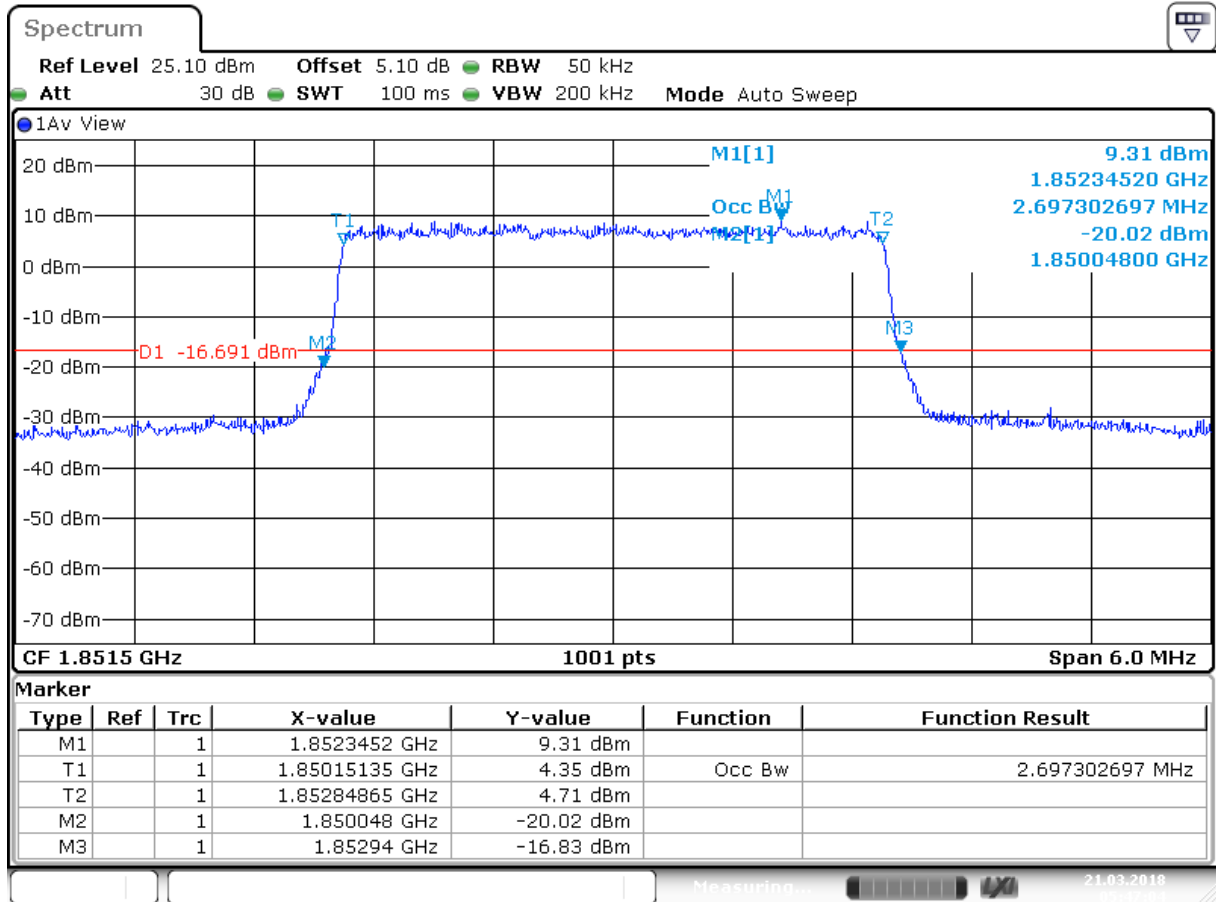
4.1.1.2.3 Test Channel = HCH



Date: 21 MAR.2018 05:32:48

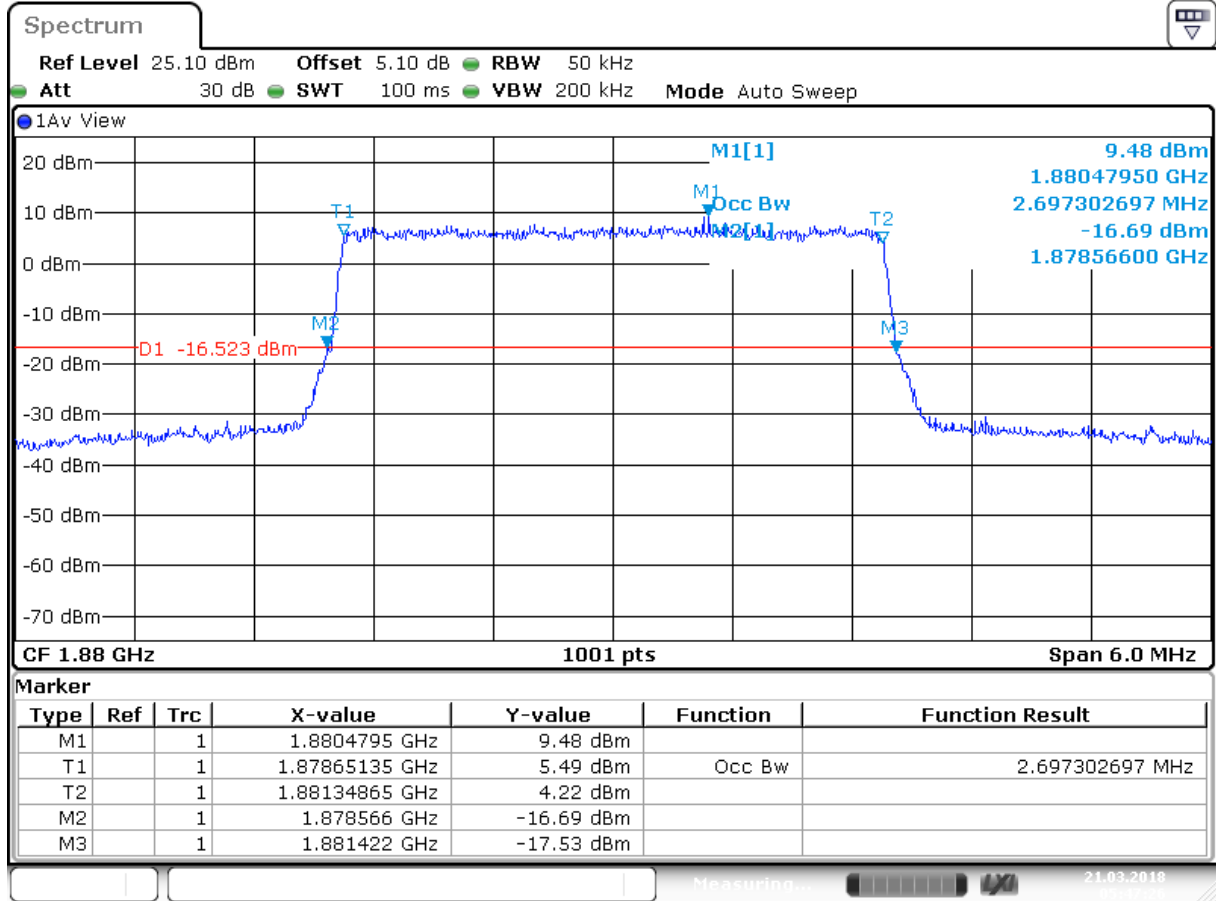
4.1.1.3 Test Mode = LTE/TM1 3MHz

4.1.1.3.1 Test Channel = LCH



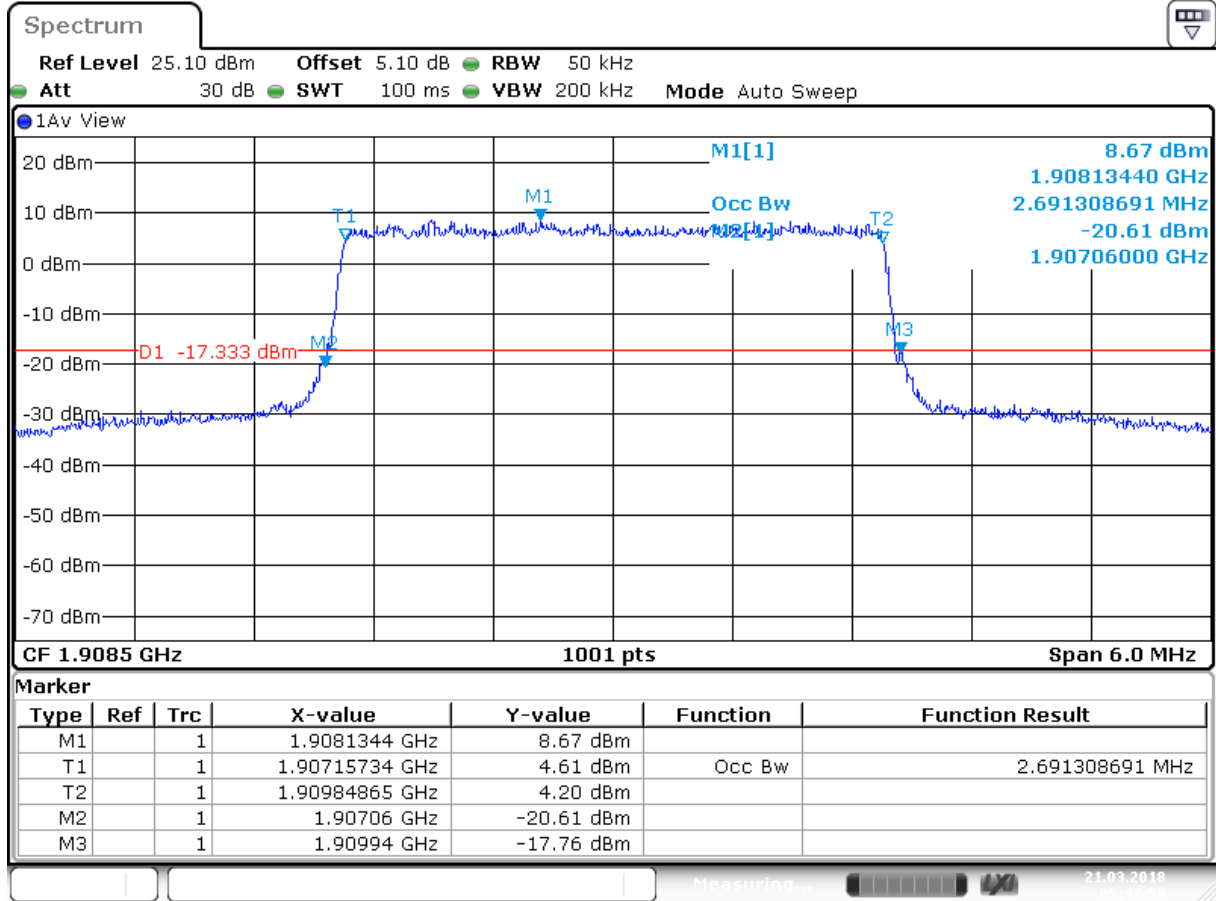
Date: 21 MAR.2018 05:47:05

4.1.1.3.2 Test Channel = MCH



Date: 21 MAR 2018 05:47:27

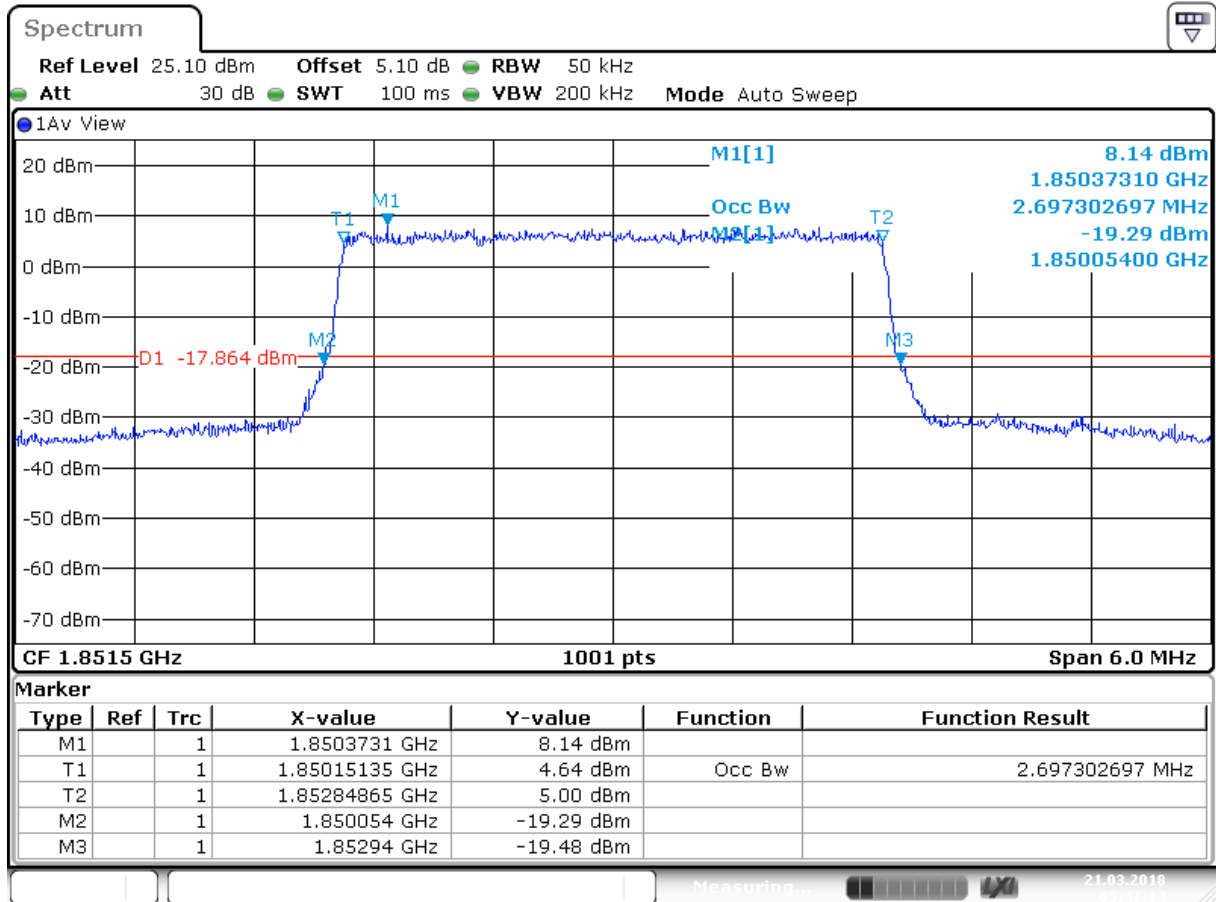
4.1.1.3.3 Test Channel = HCH



Date: 21 MAR.2018 05:47:50

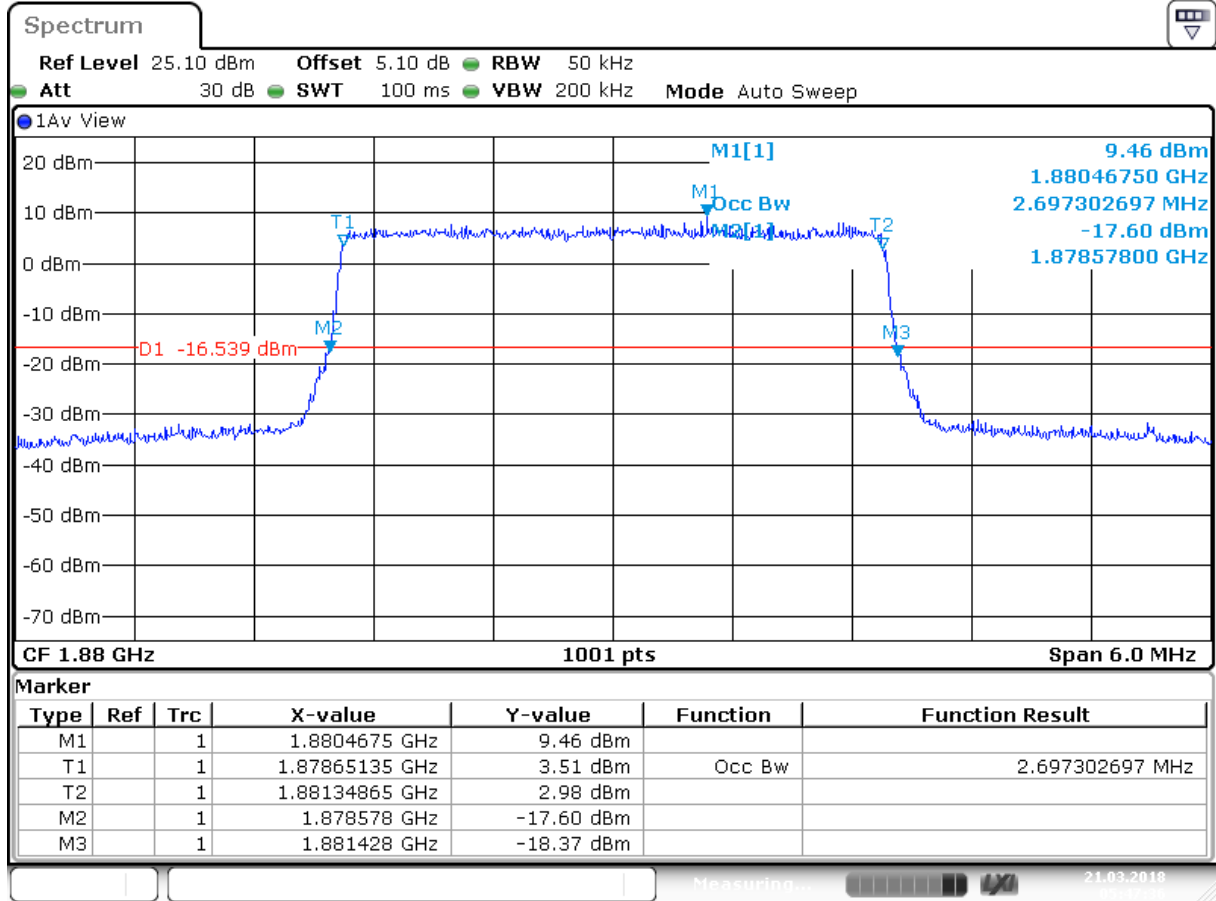
4.1.1.4 Test Mode = LTE/TM2 3MHz

4.1.1.4.1 Test Channel = LCH



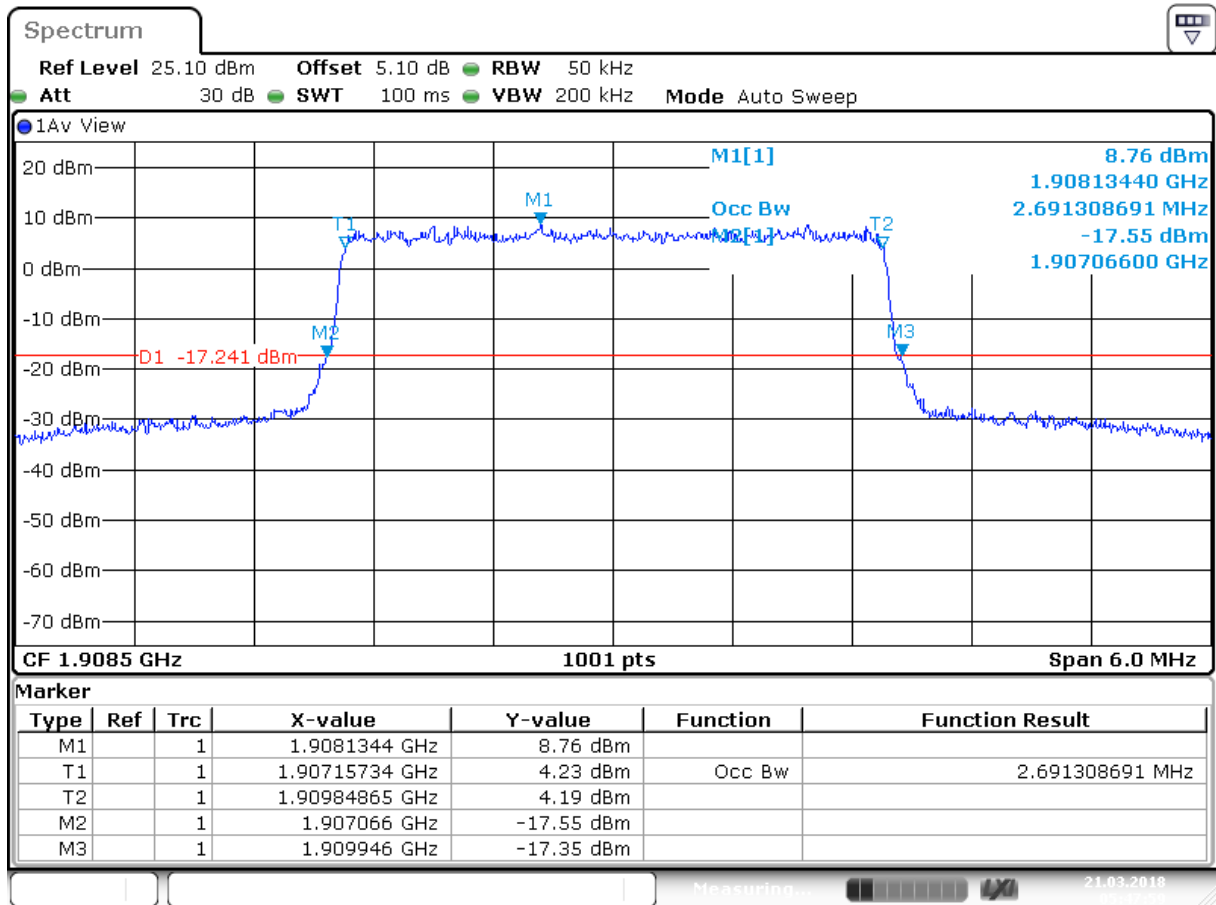
Date: 21 MAR.2018 05:47:15

4.1.1.4.2 Test Channel = MCH



Date: 21 MAR.2018 05:47:37

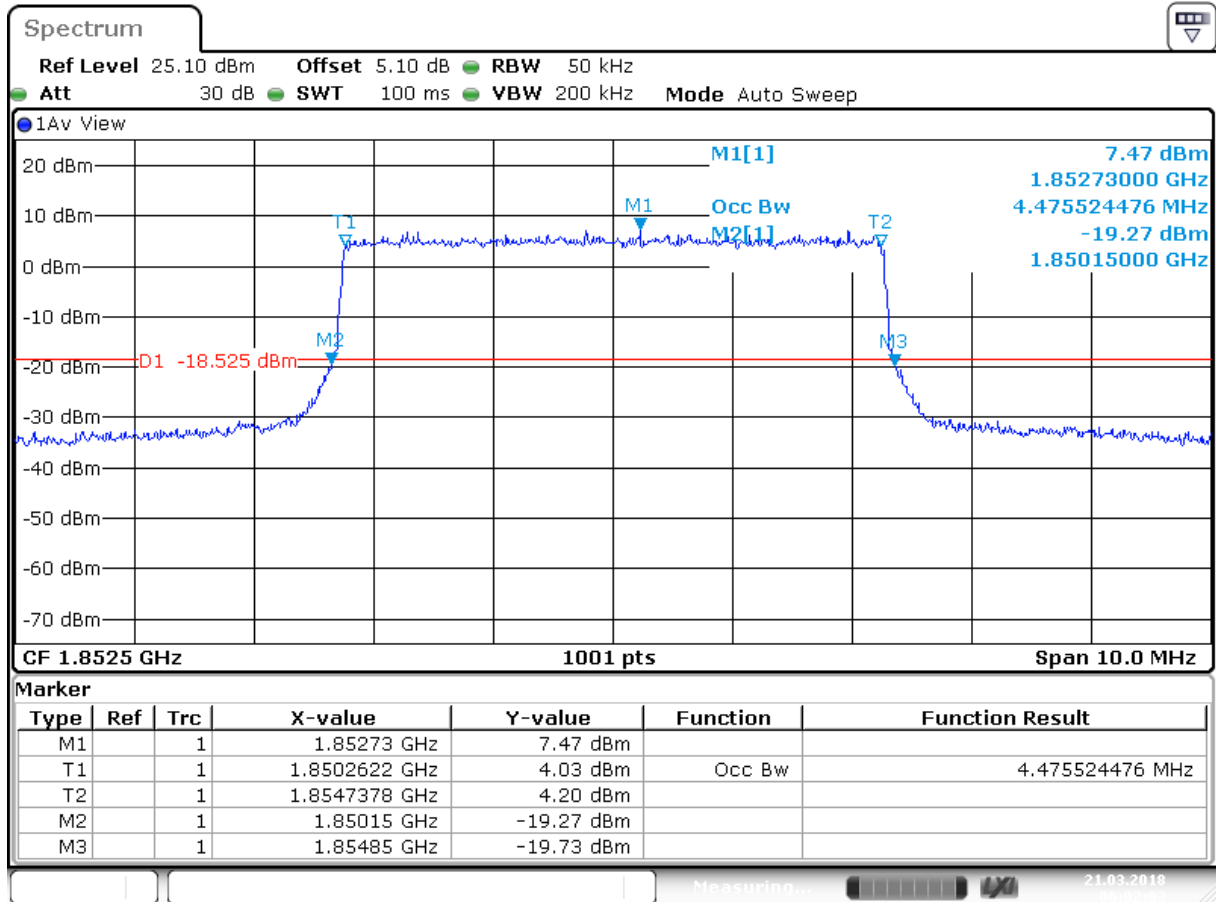
4.1.1.4.3 Test Channel = HCH



Date: 21 MAR 2018 05:47:59

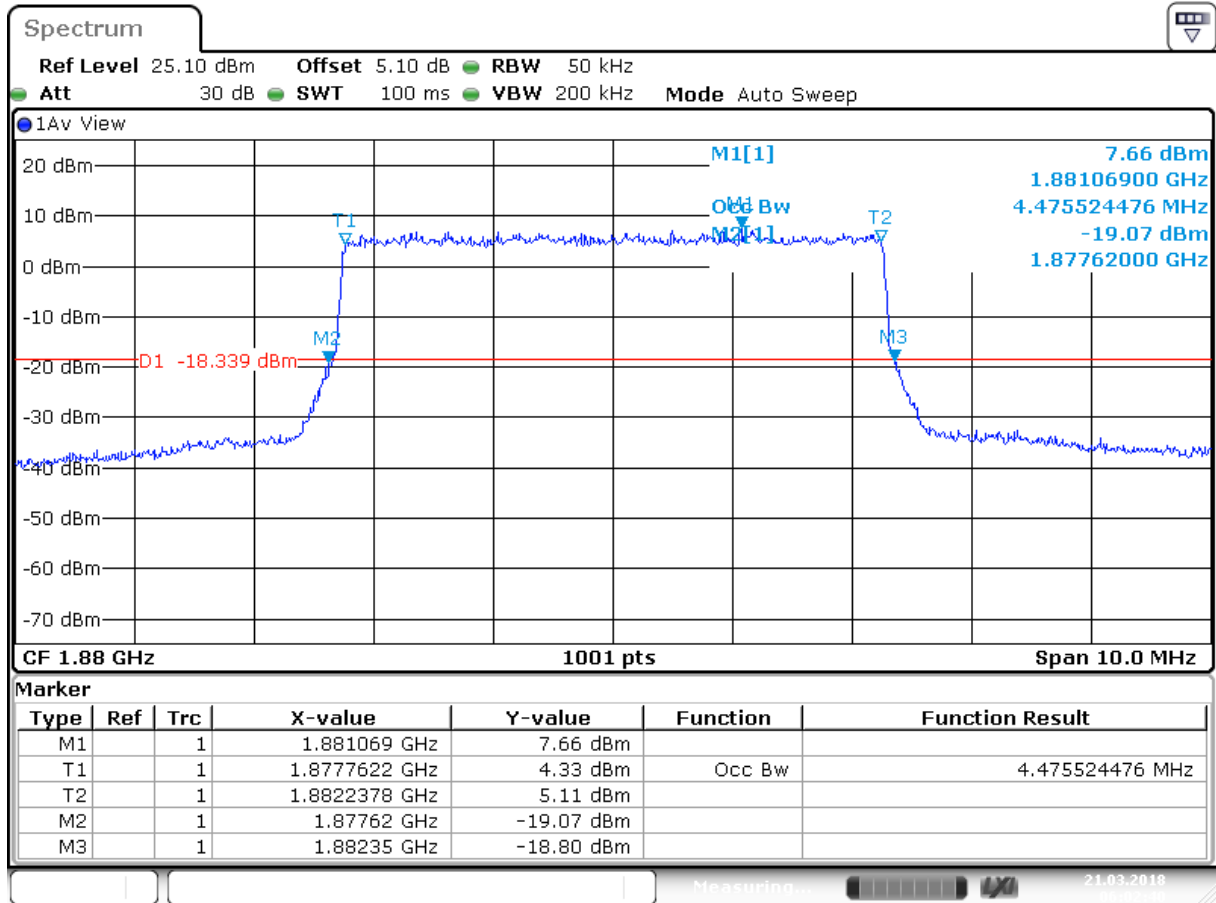
4.1.1.5 Test Mode = LTE/TM1 5MHz

4.1.1.5.1 Test Channel = LCH



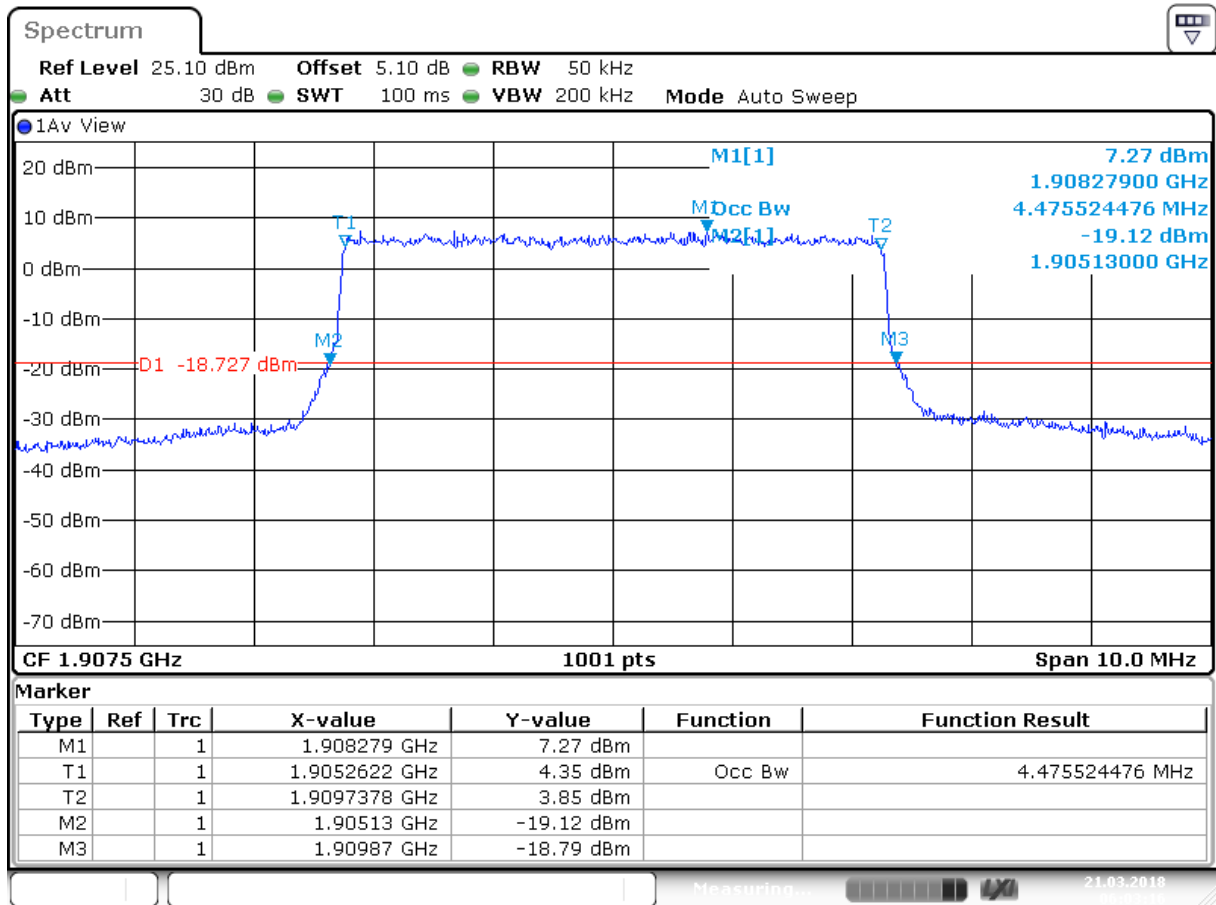
Date: 21 MAR.2018 06:02:04

4.1.1.5.2 Test Channel = MCH



Date: 21 MAR 2018 06:02:41

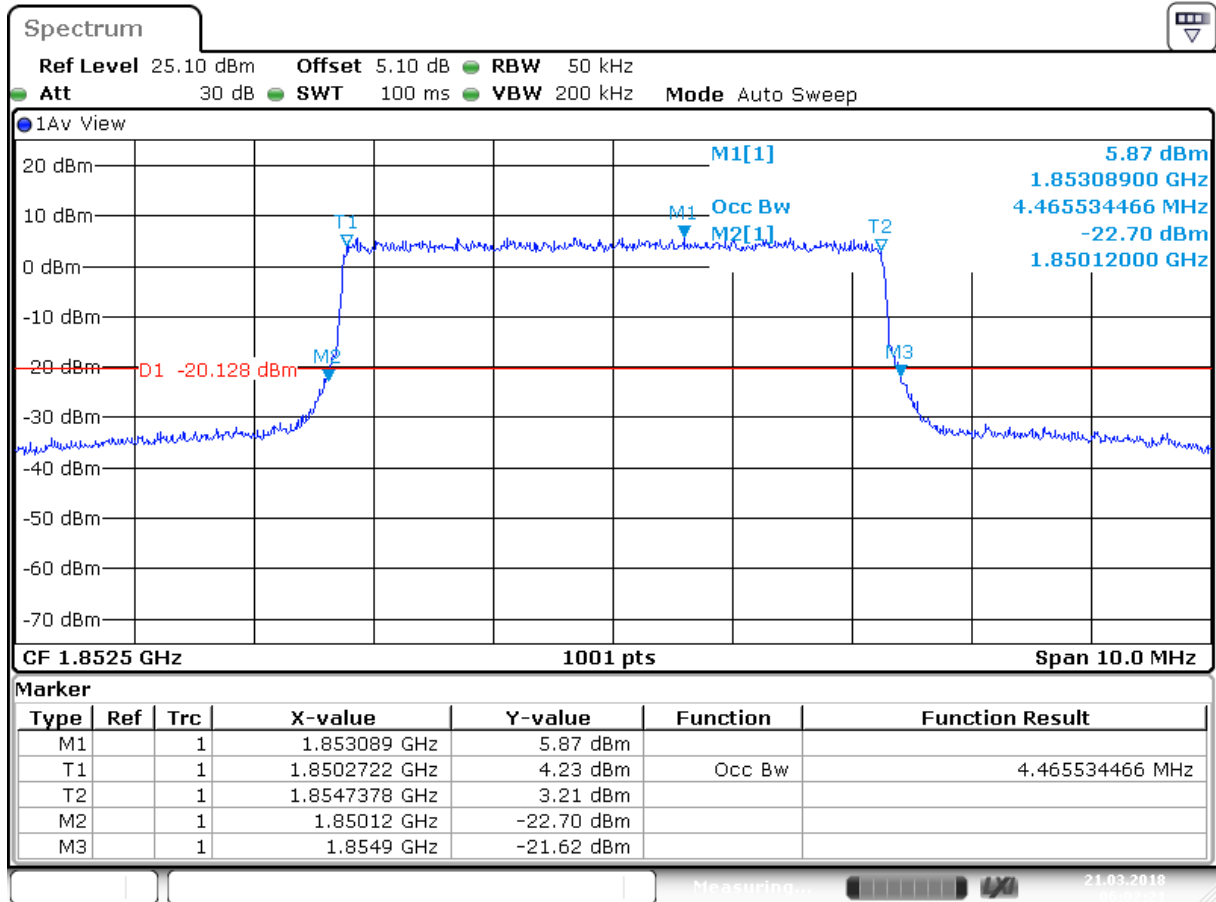
4.1.1.5.3 Test Channel = HCH



Date: 21 MAR 2018 06:03:17

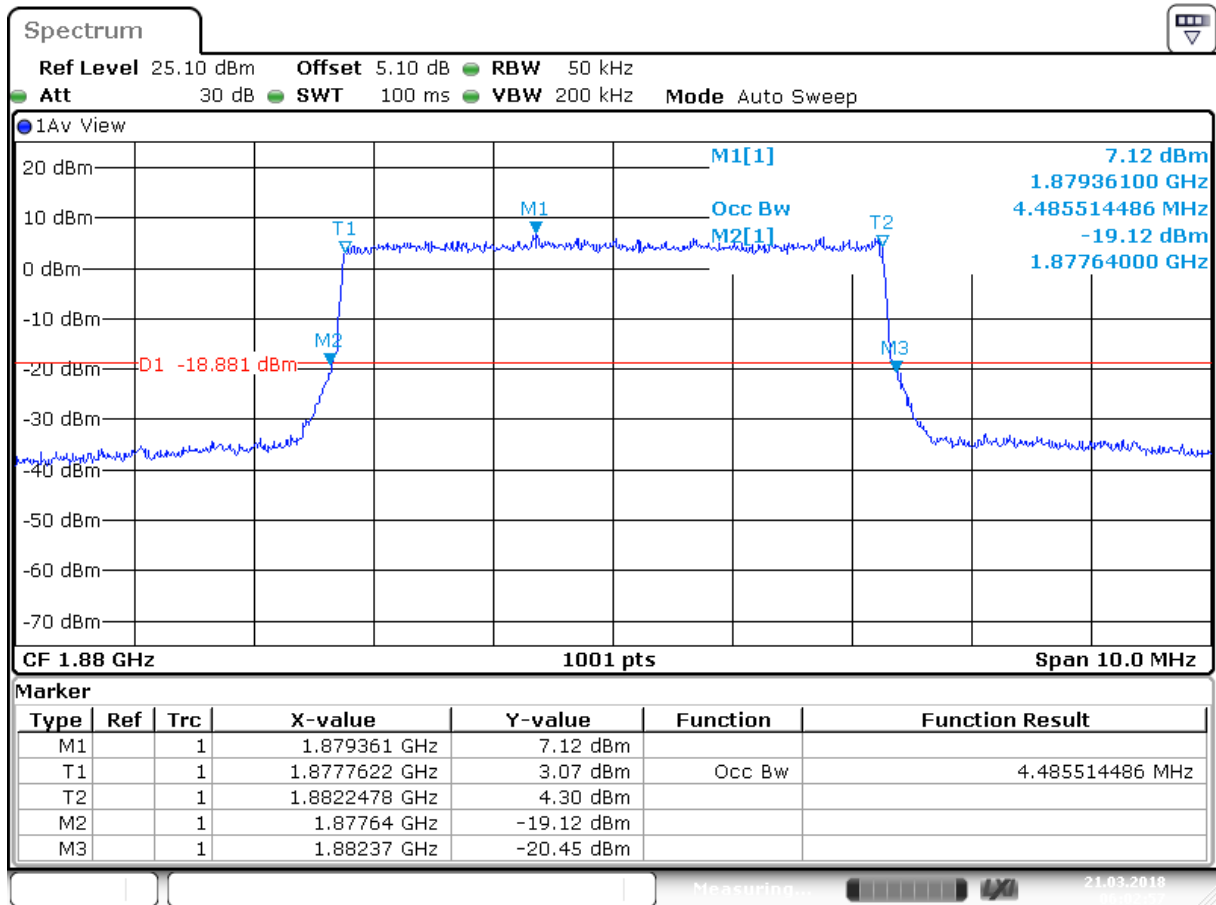
4.1.1.6 Test Mode = LTE/TM2 5MHz

4.1.1.6.1 Test Channel = LCH



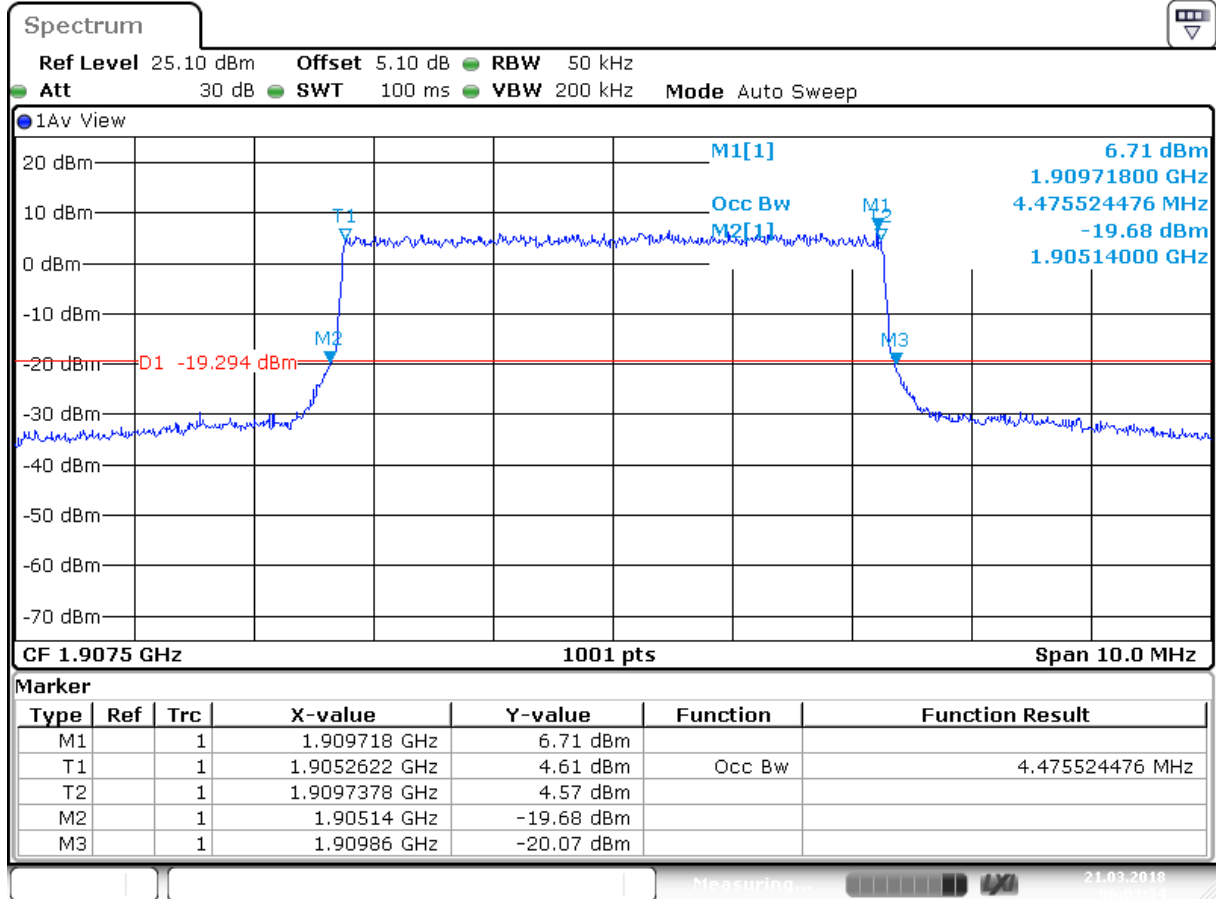
Date: 21 MAR 2018 06:02:21

4.1.1.6.2 Test Channel = MCH



Date: 21 MAR 2018 06:02:57

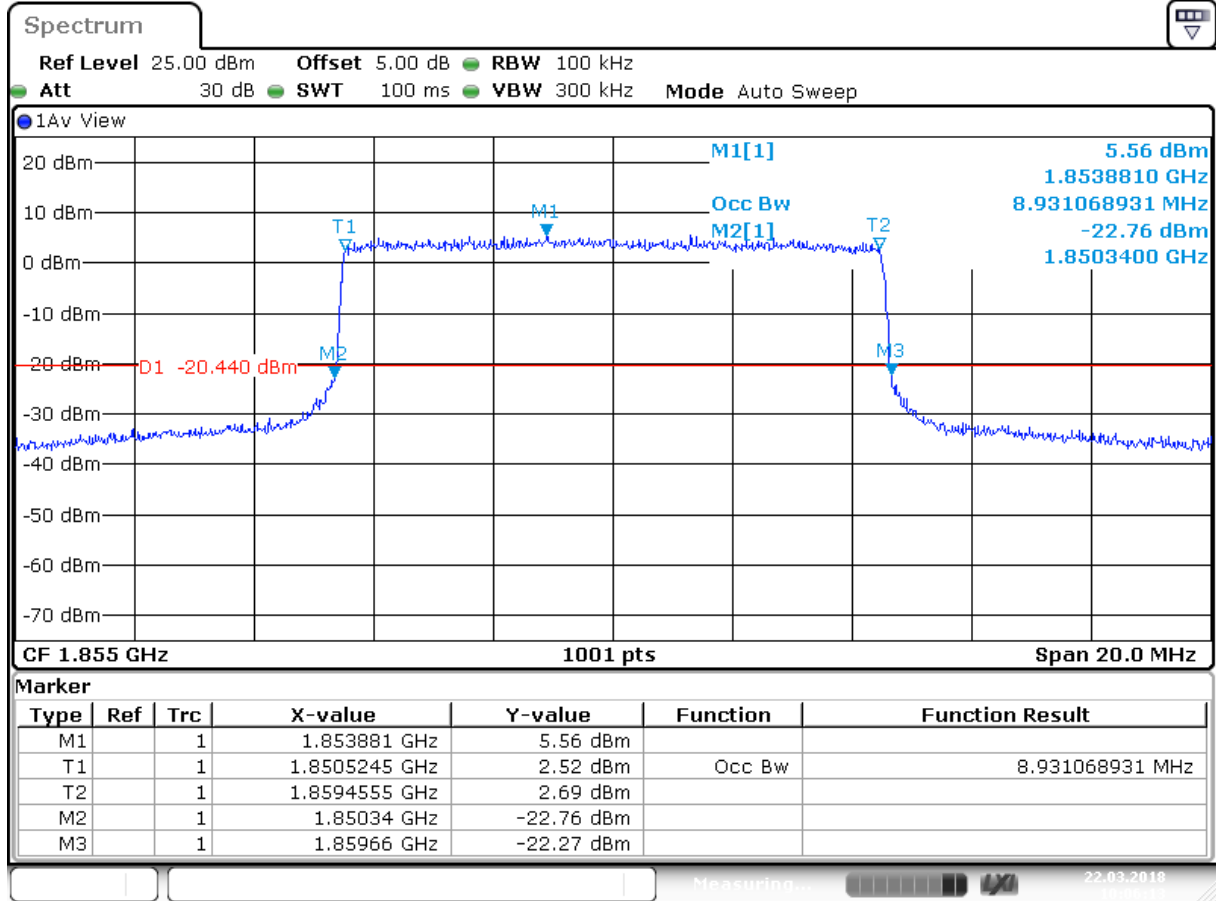
4.1.1.6.3 Test Channel = HCH



Date: 21 MAR 2018 06:03:34

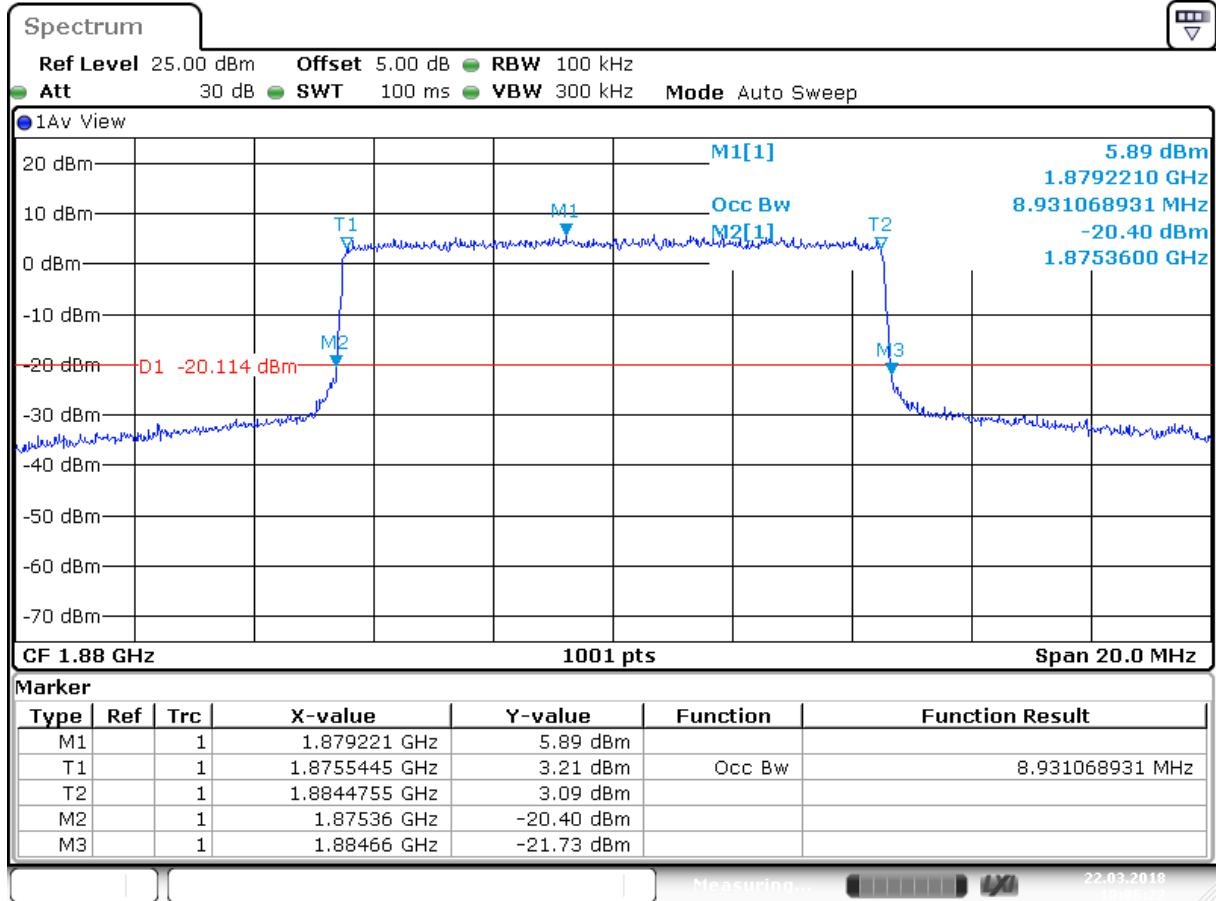
4.1.1.7 Test Mode = LTE/TM1 10MHz

4.1.1.7.1 Test Channel = LCH



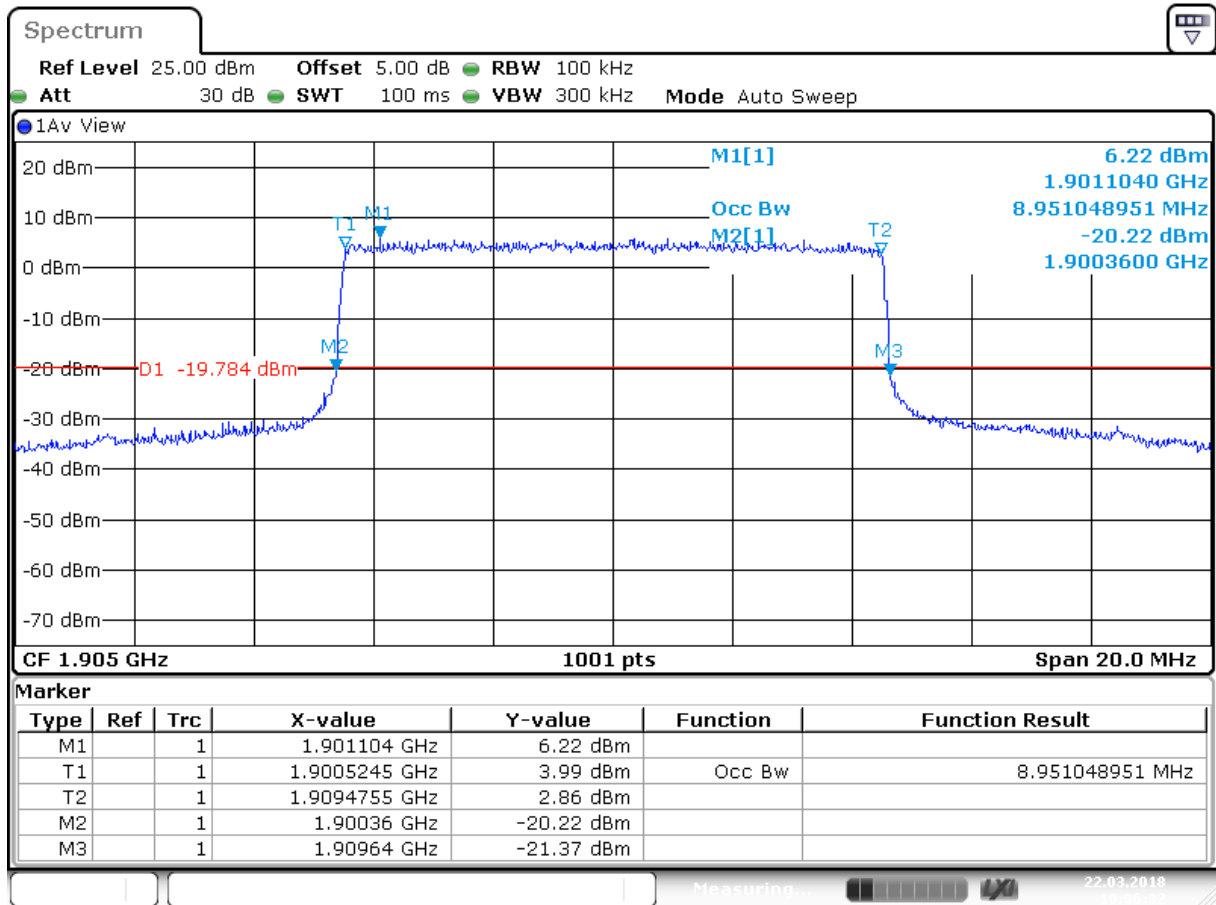
Date: 22 MAR 2018 10:06:13

4.1.1.7.2 Test Channel = MCH



Date: 22 MAR 2018 10:06:23

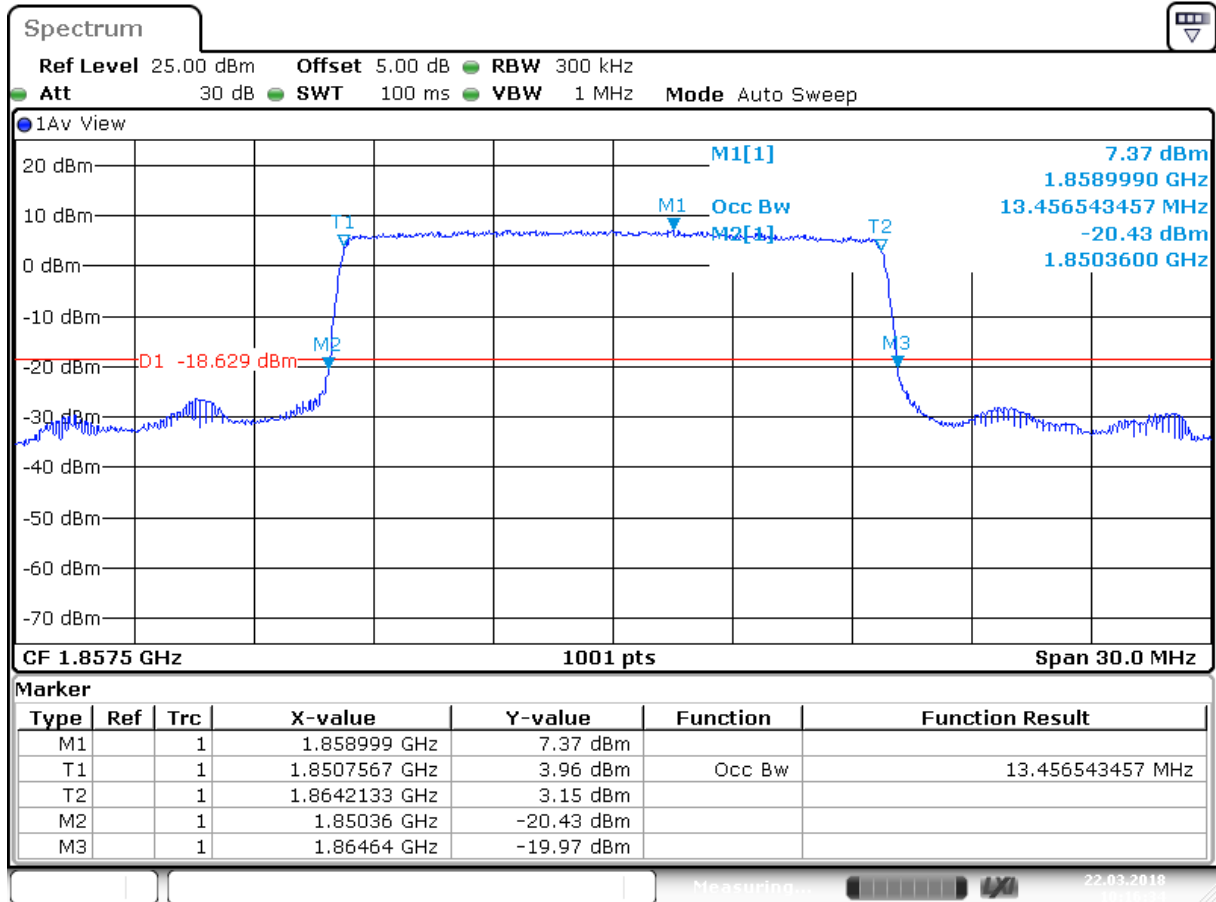
4.1.1.7.3 Test Channel = HCH



Date: 22 MAR 2018 10:06:32

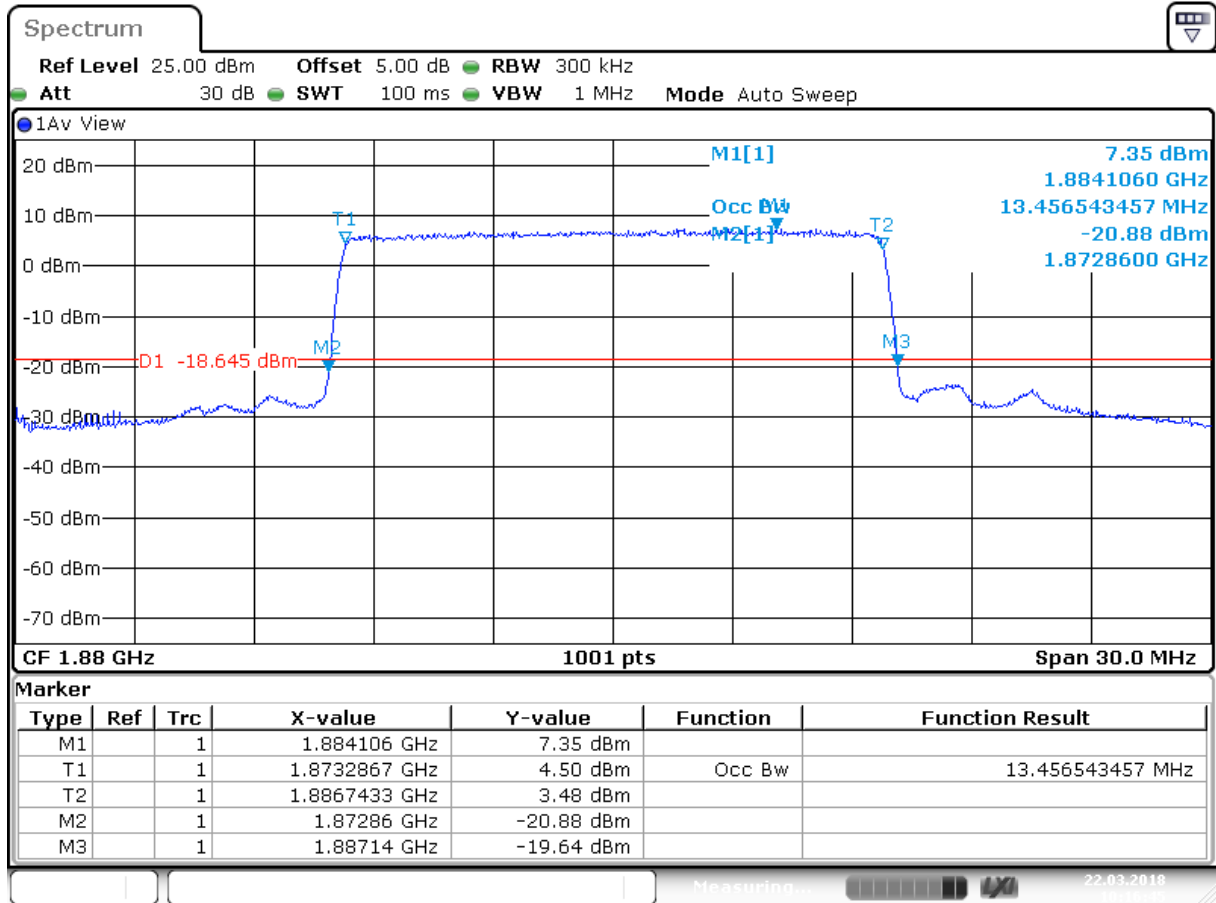
4.1.1.8 Test Mode = LTE/TM1 15MHz

4.1.1.8.1 Test Channel = LCH



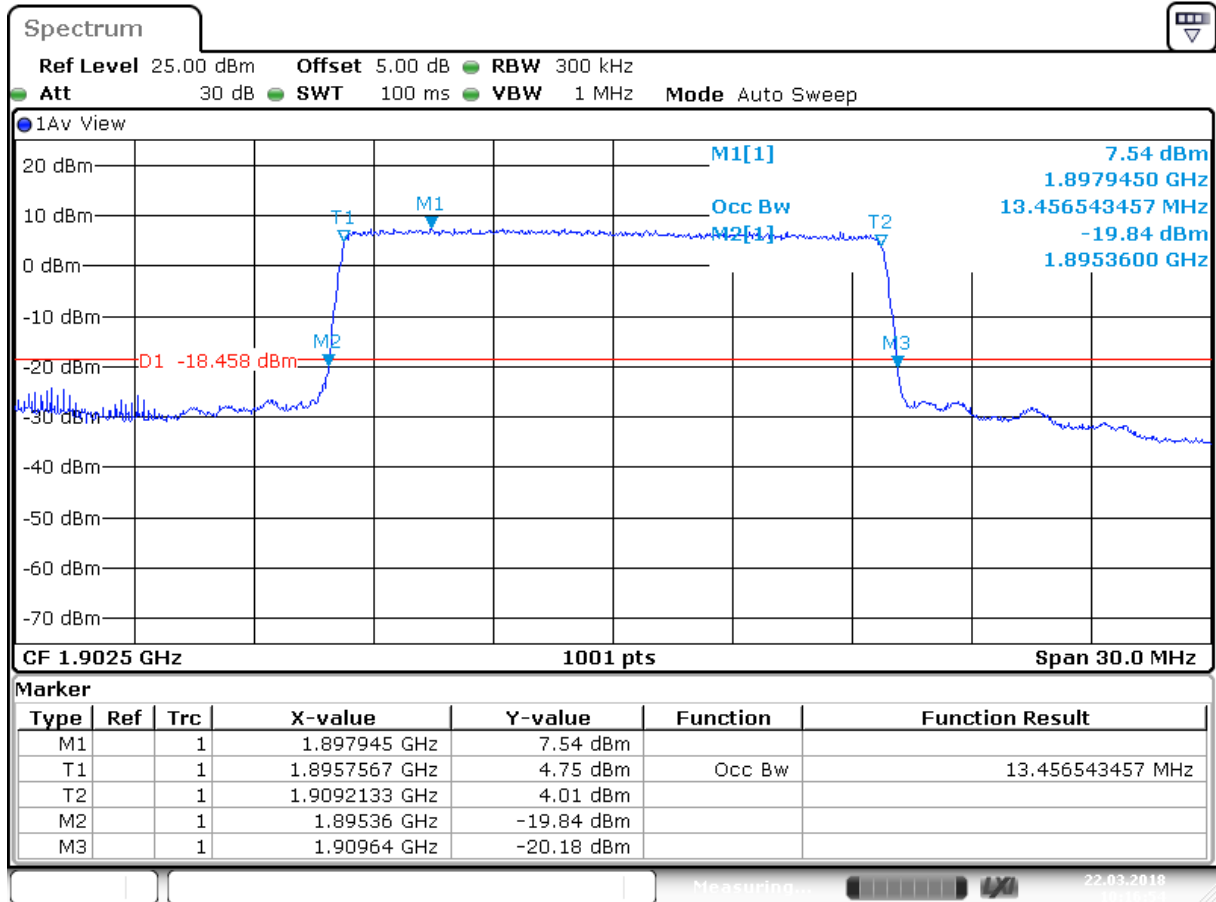
Date: 22 MAR 2018 10:16:35

4.1.1.8.2 Test Channel = MCH



Date: 22 MAR 2018 10:16:45

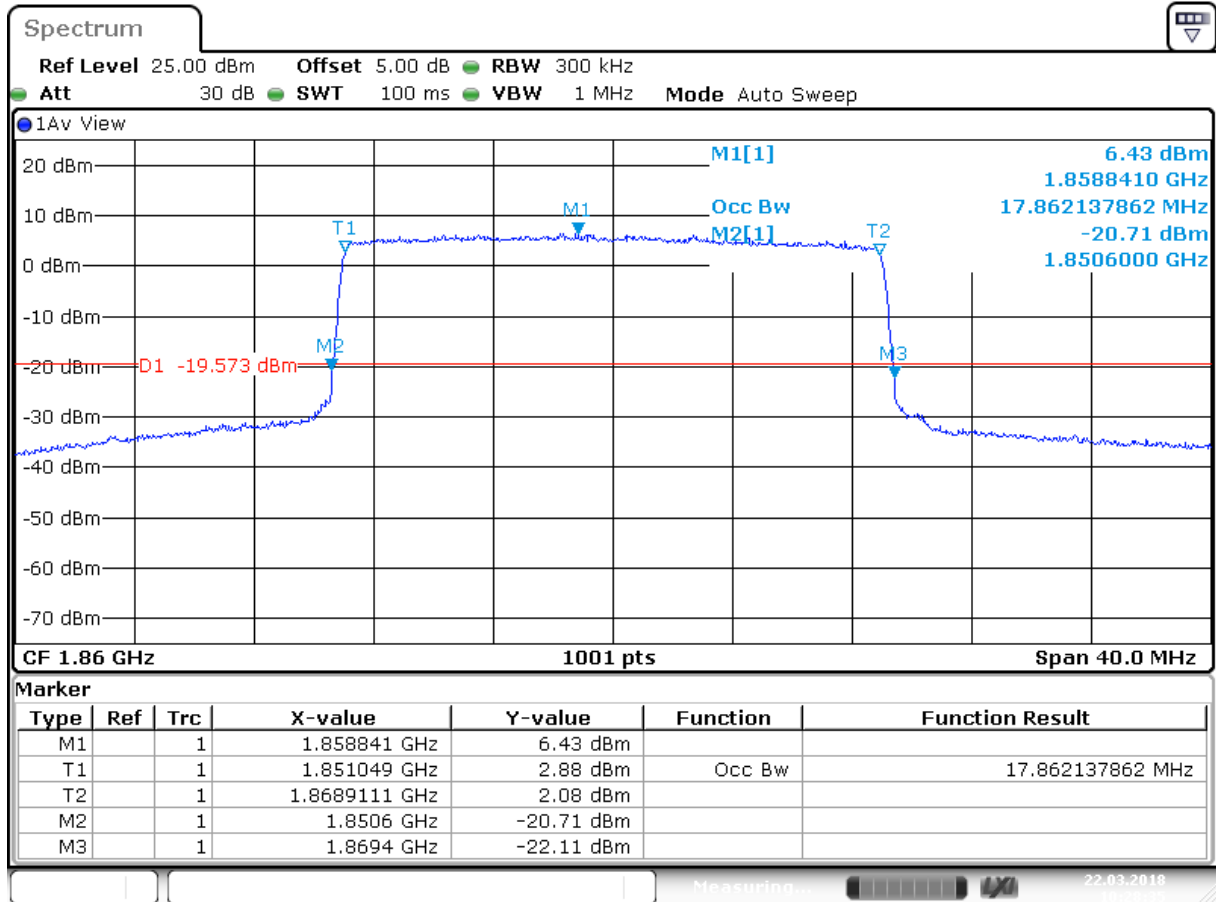
4.1.1.8.3 Test Channel = HCH



Date: 22 MAR 2018 10:16:54

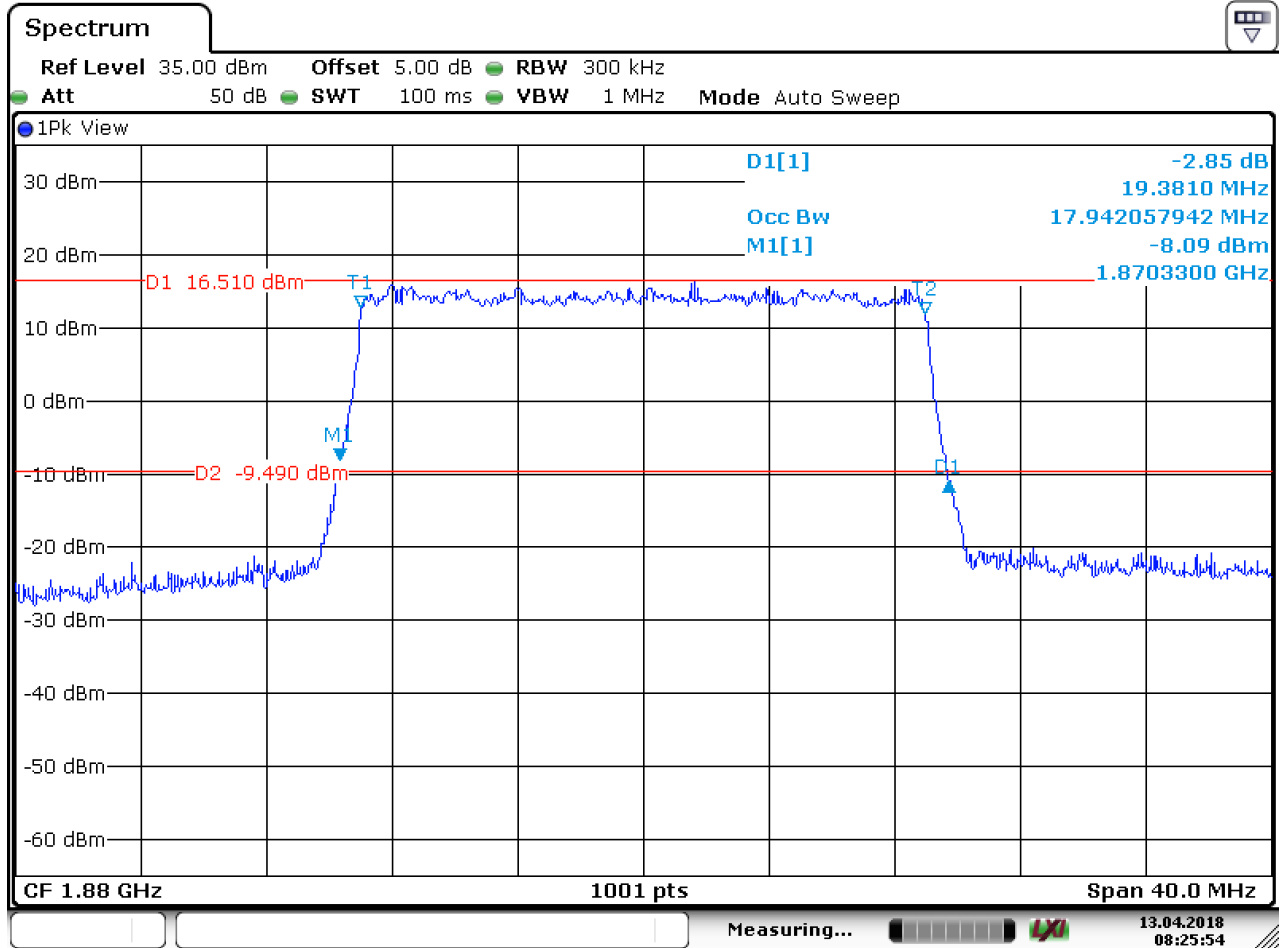
4.1.1.9 Test Mode = LTE/TM1 20MHz

4.1.1.9.1 Test Channel = LCH



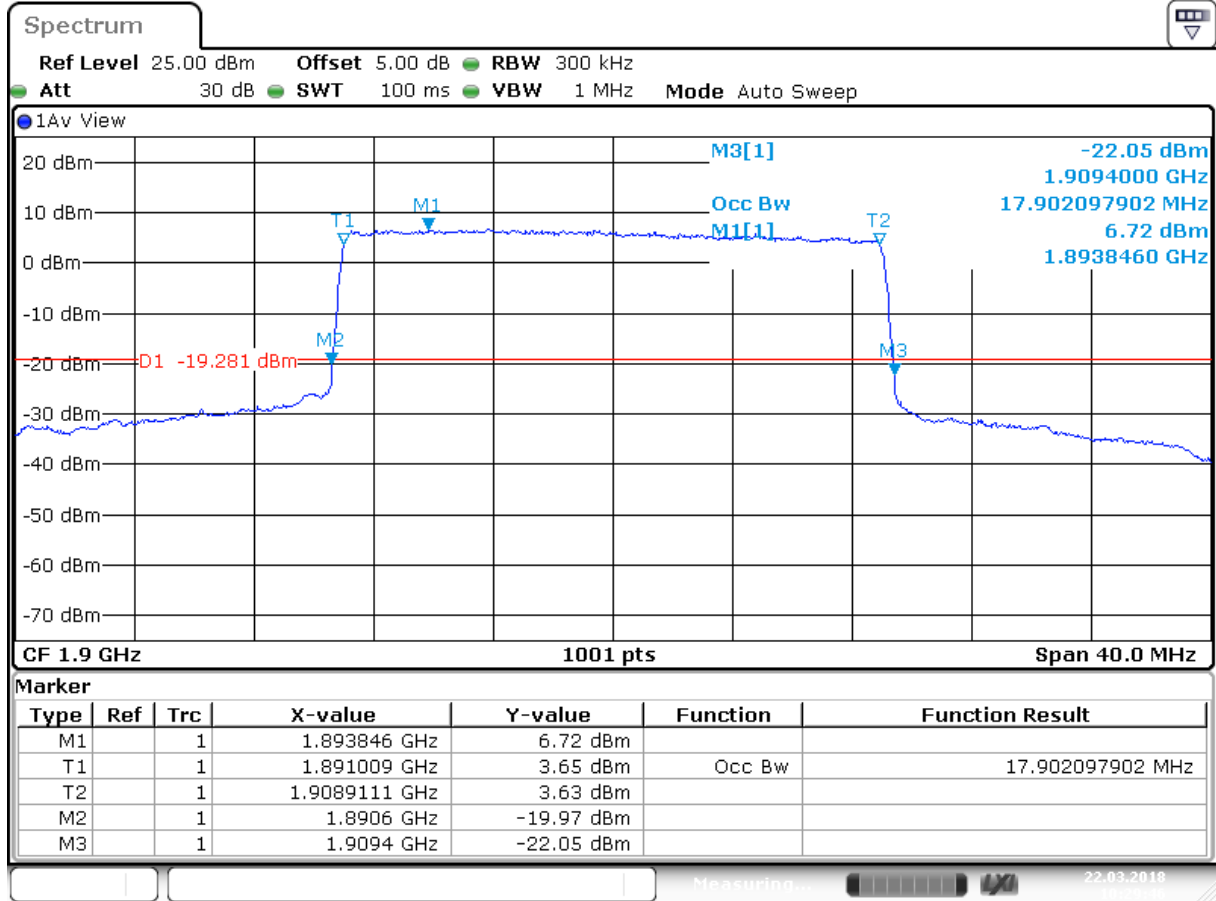
Date: 22 MAR 2018 10:28:36

4.1.1.9.2 Test Channel = MCH



Date: 13.APR.2018 08:25:55

4.1.1.9.3 Test Channel = HCH



Date: 22 MAR. 2018 10:29:47

5 Band Edges Compliance

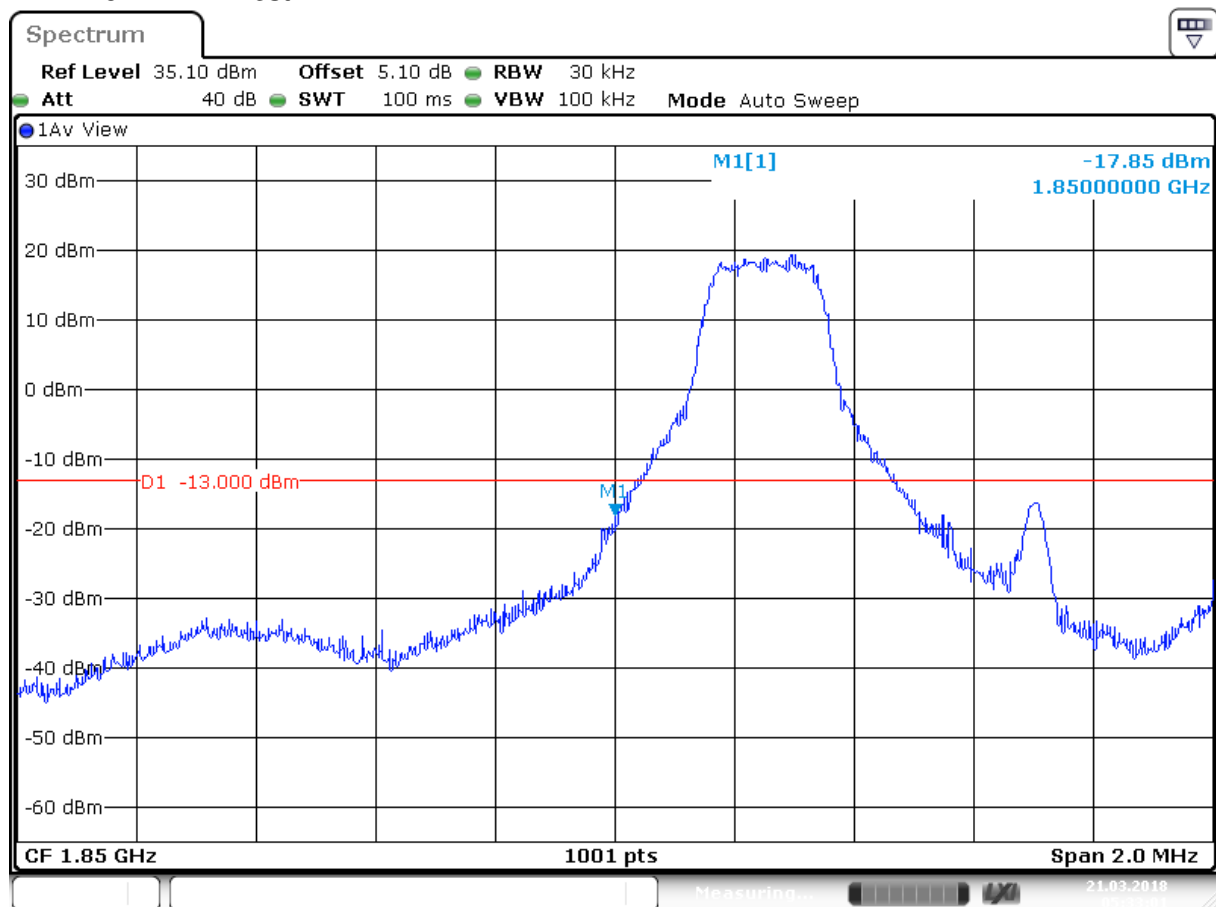
5.1 For LTE

5.1.1 Test Band = LTE band2

5.1.1.1 Test Mode = LTE/TM1 1.4MHz

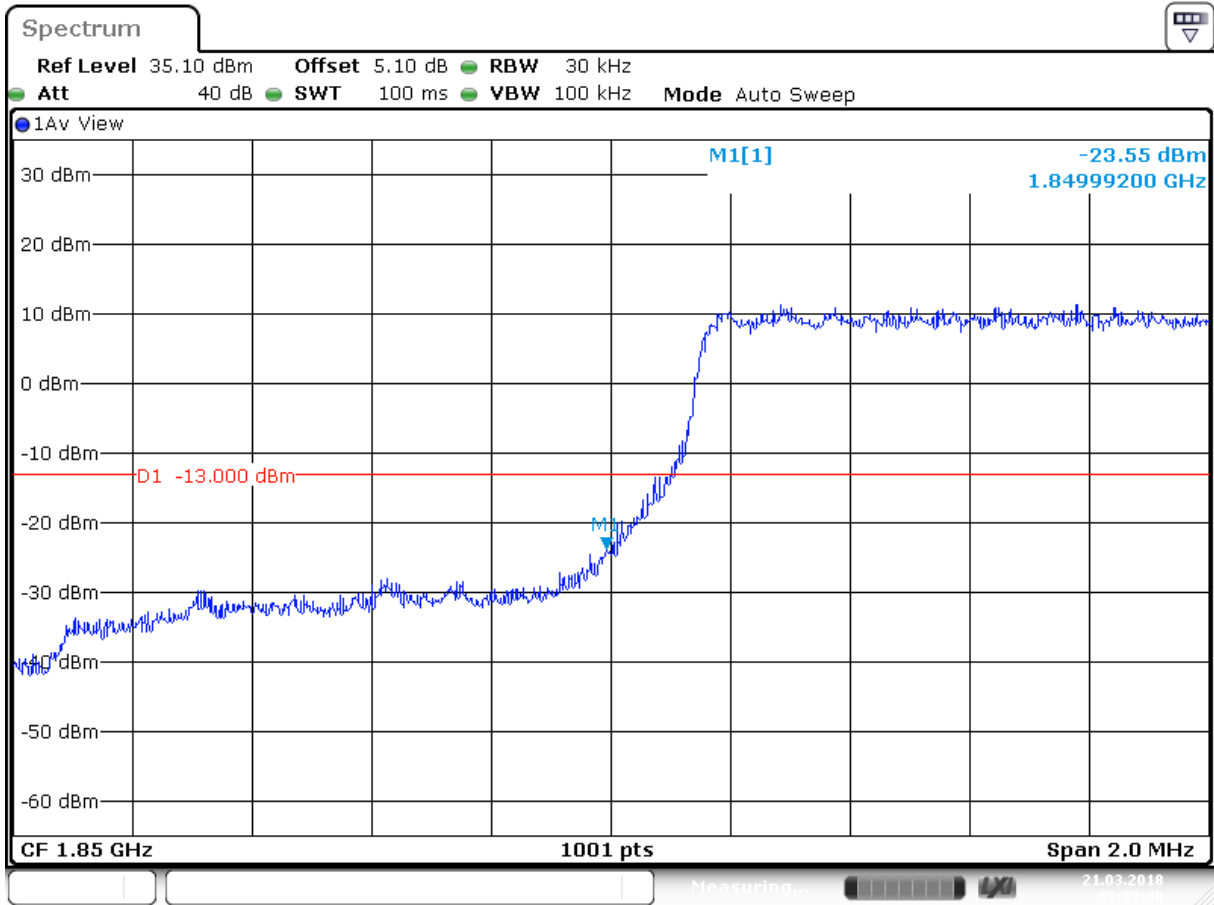
5.1.1.1.1 Test Channel = LCH

5.1.1.1.1.1 Test RB=1RB



Date: 21 MAR 2018 05:33:02

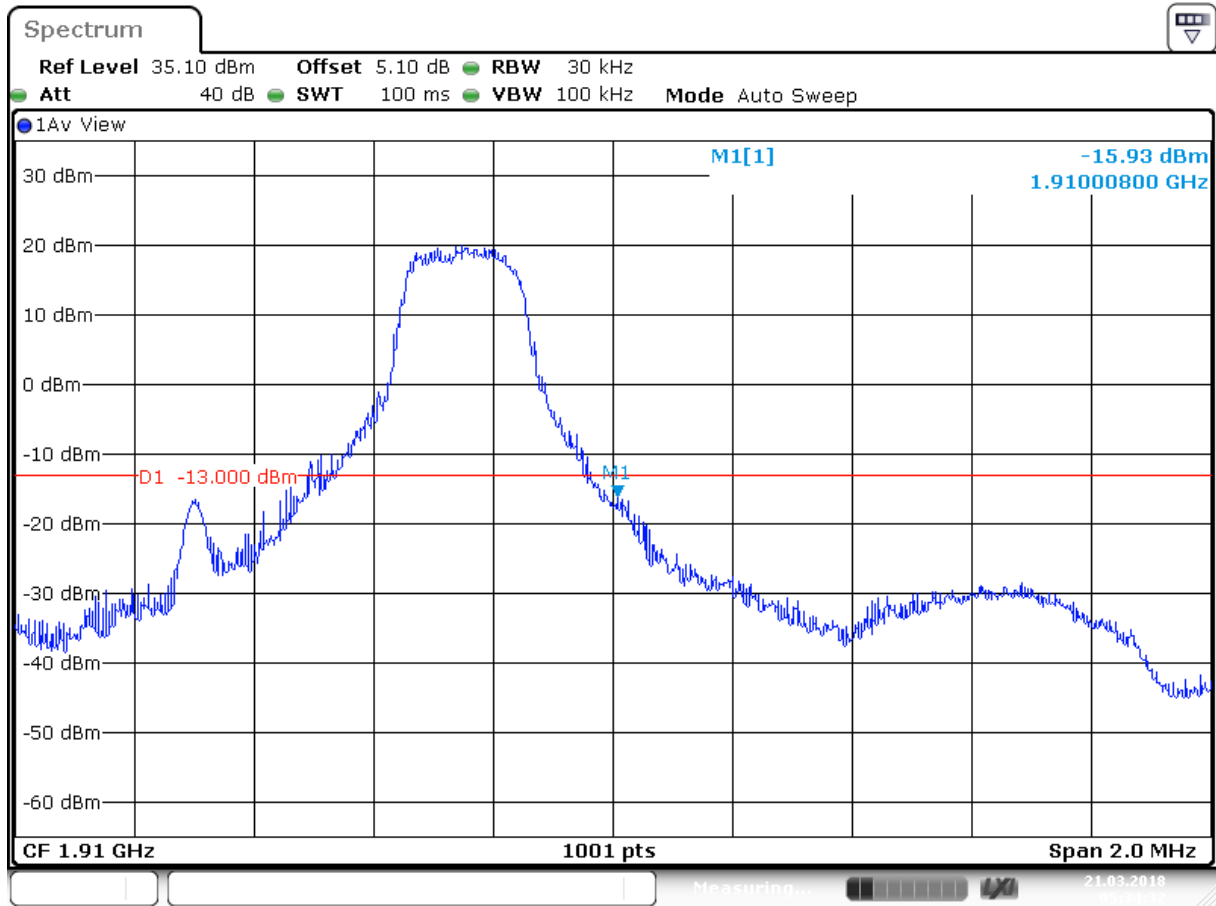
5.1.1.1.2 Test RB=6RB



Date: 21 MAR 2018 05:33:40

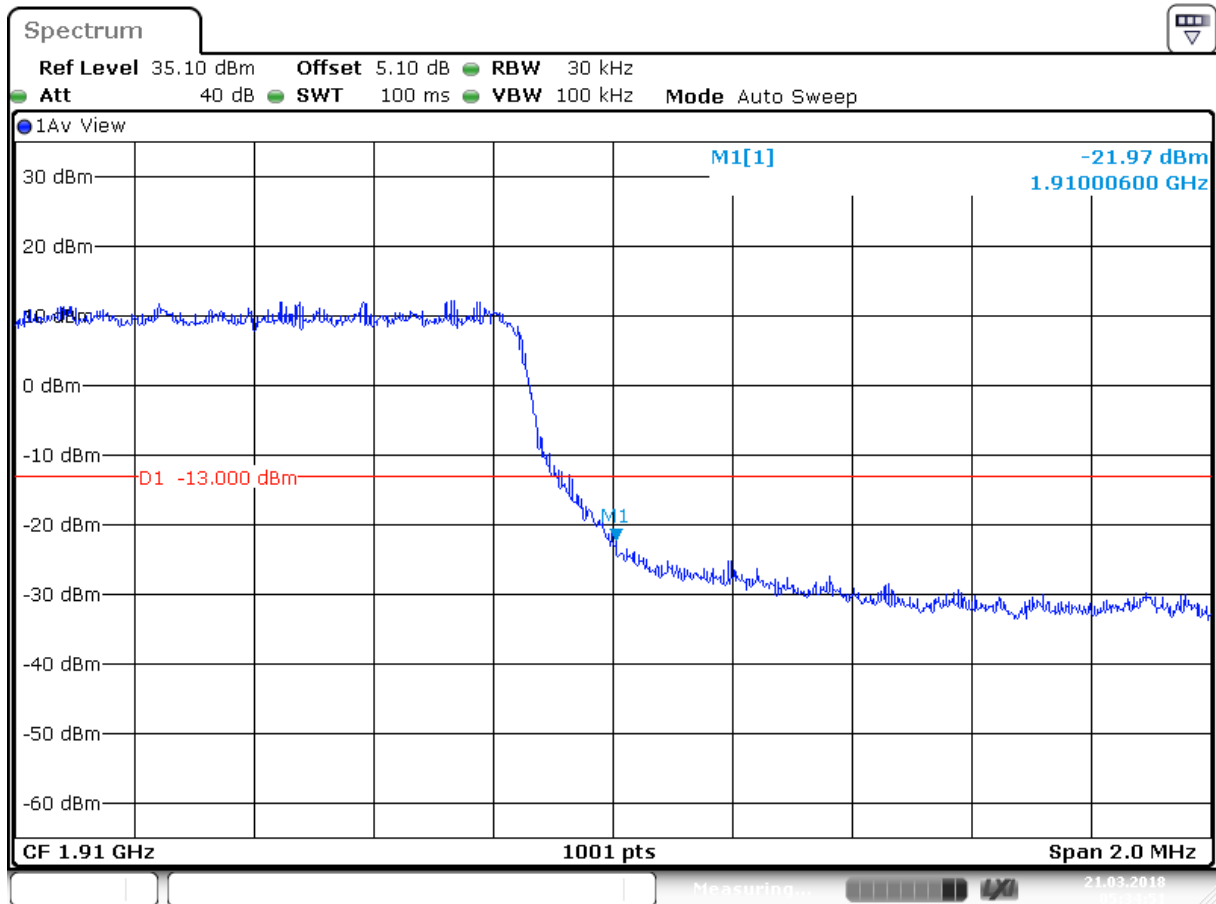
5.1.1.1.2 Test Channel = HCH

5.1.1.1.2.1 Test RB=1RB



Date: 21 MAR 2018 05:34:32

5.1.1.1.2.2 Test RB=6RB



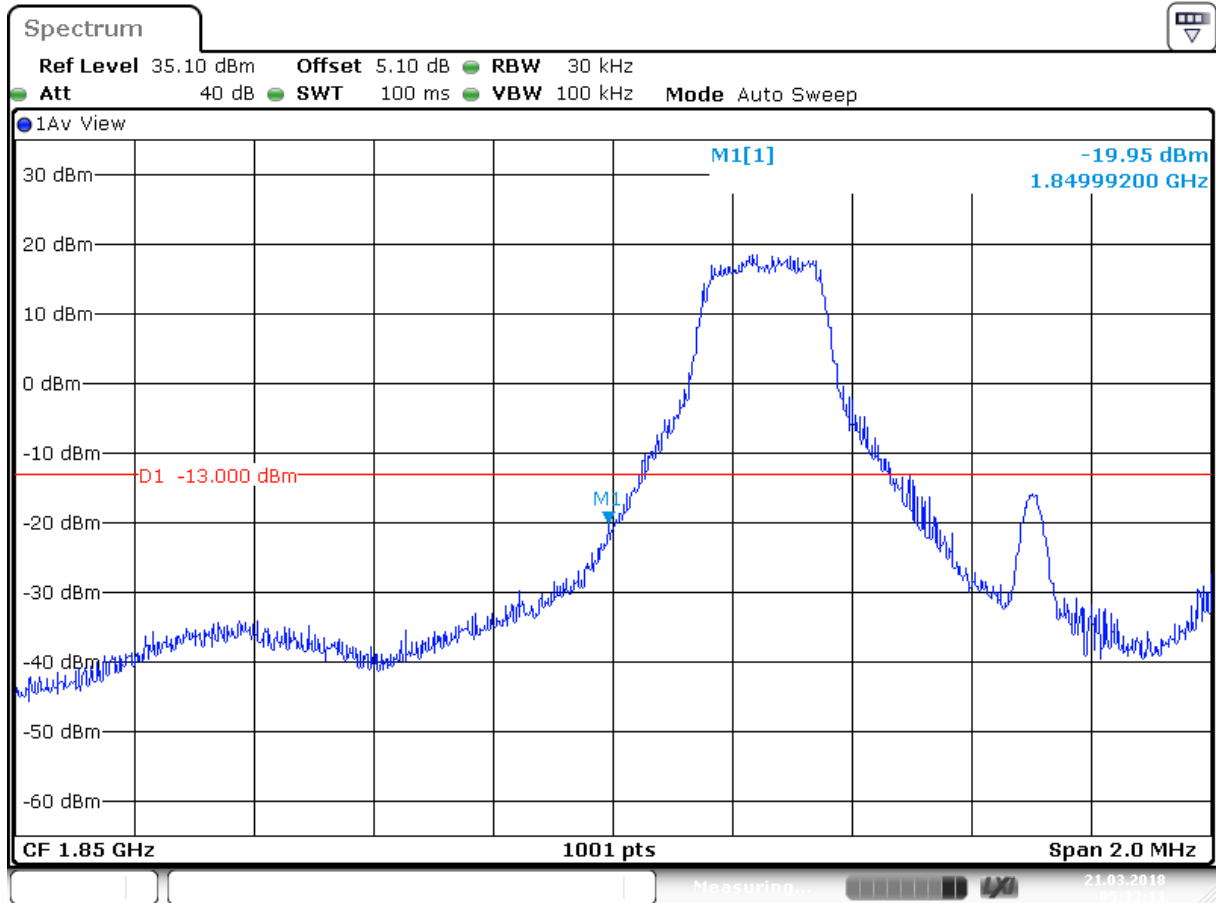
Date: 21 MAR 2018 05:34:51



5.1.1.2 Test Mode = LTE/TM2 1.4MHz

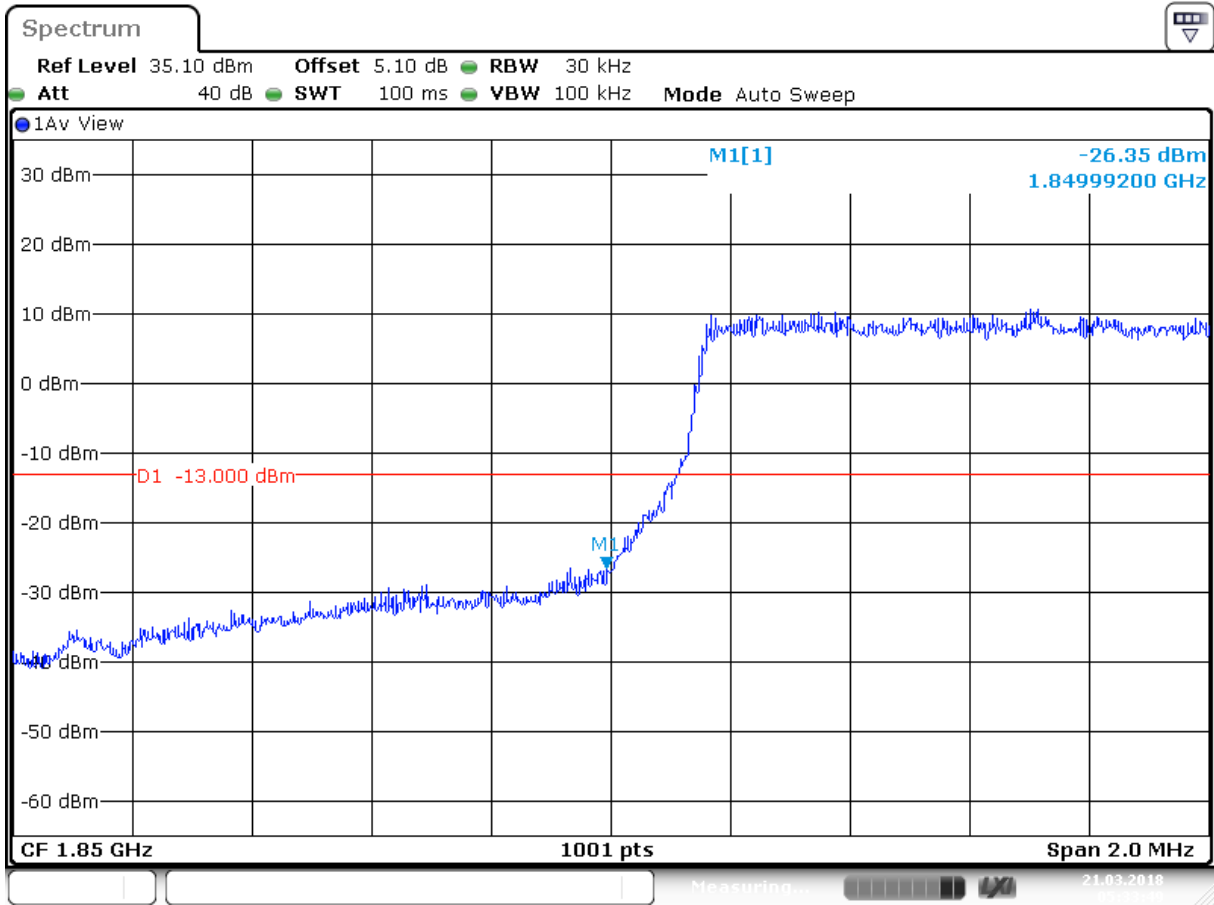
5.1.1.2.1 Test Channel = LCH

5.1.1.2.1.1 Test RB=1RB



Date: 21 MAR 2018 05:33:11

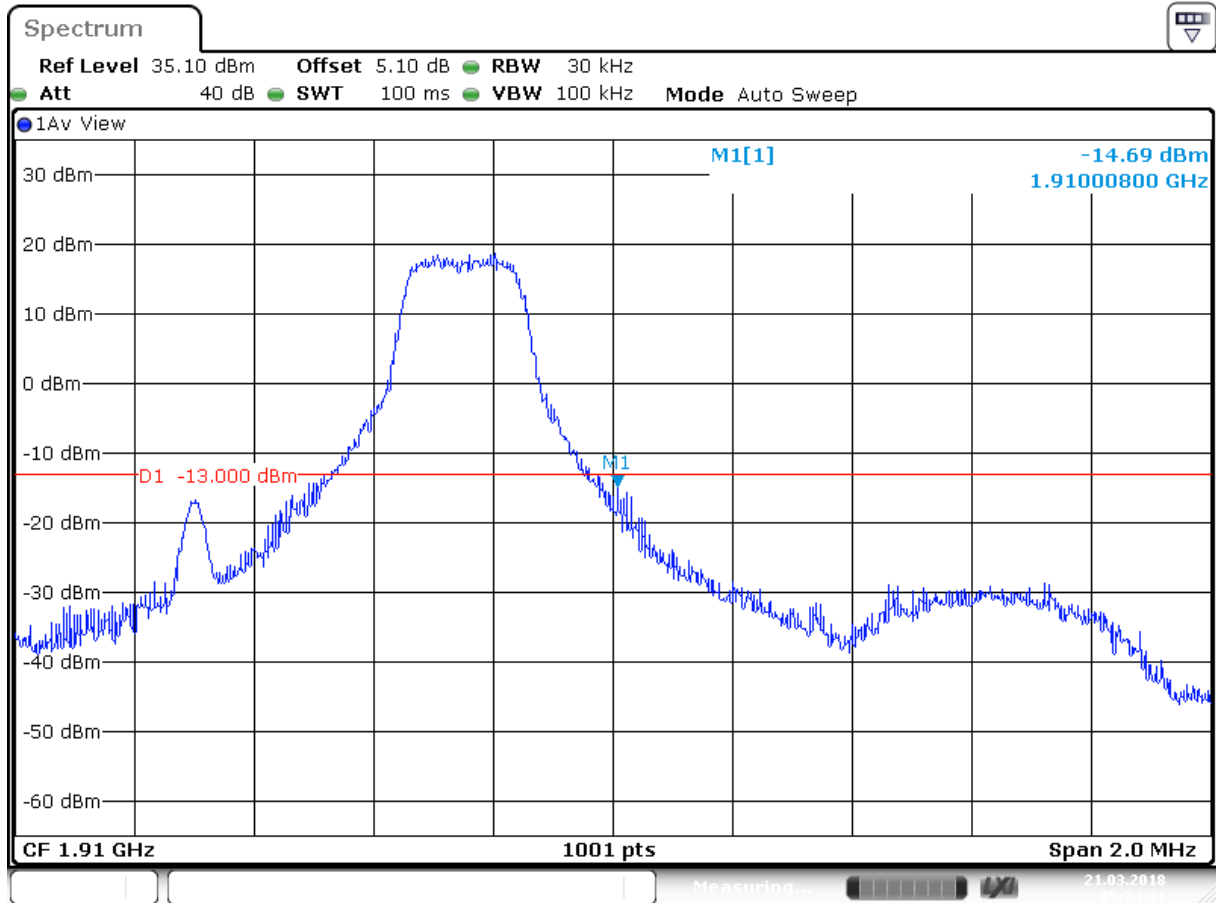
5.1.1.2.1.2 Test RB=6RB



Date: 21 MAR 2018 05:33:49

5.1.1.2.2 Test Channel = HCH

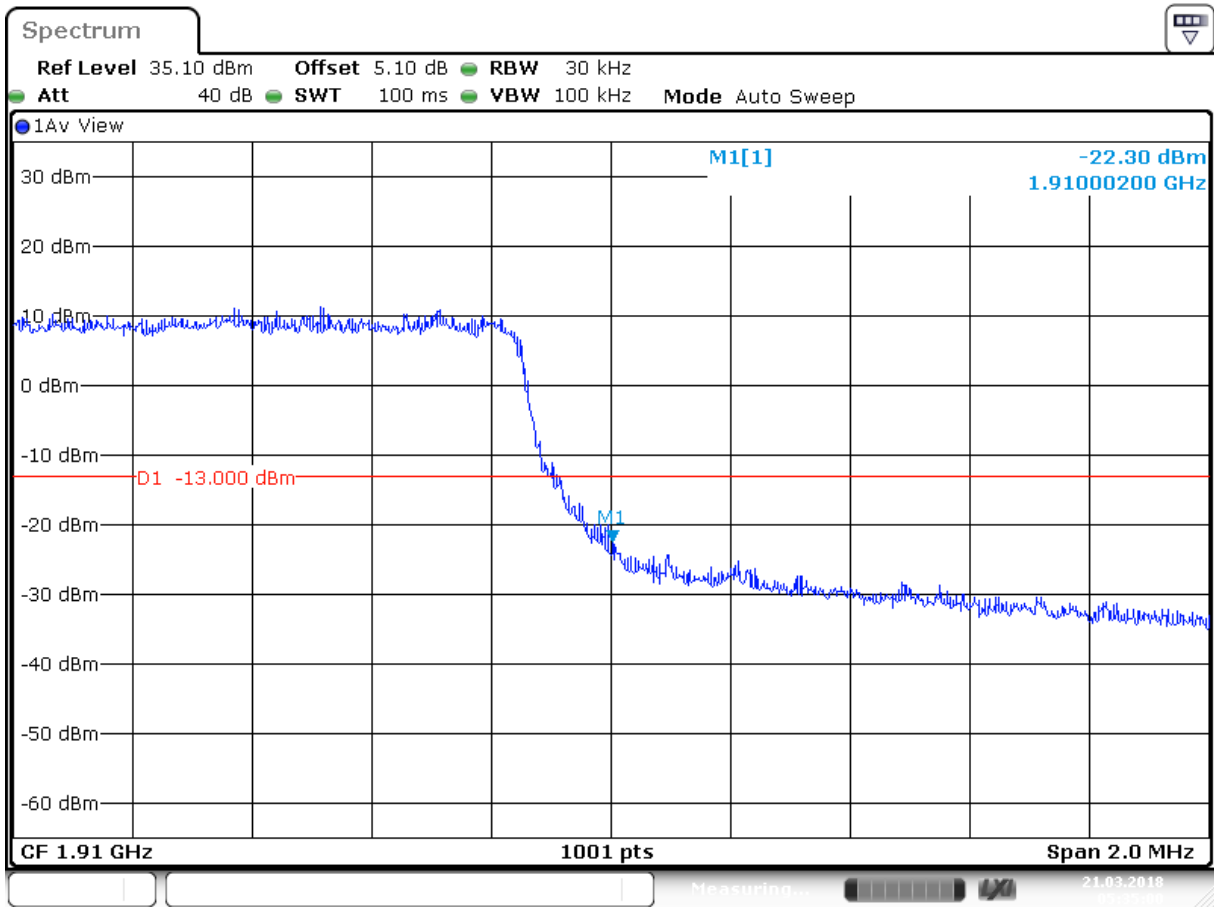
5.1.1.2.2.1 Test RB=1RB



Date: 21 MAR 2018 05:34:41



5.1.1.2.2.2 Test RB=6RB



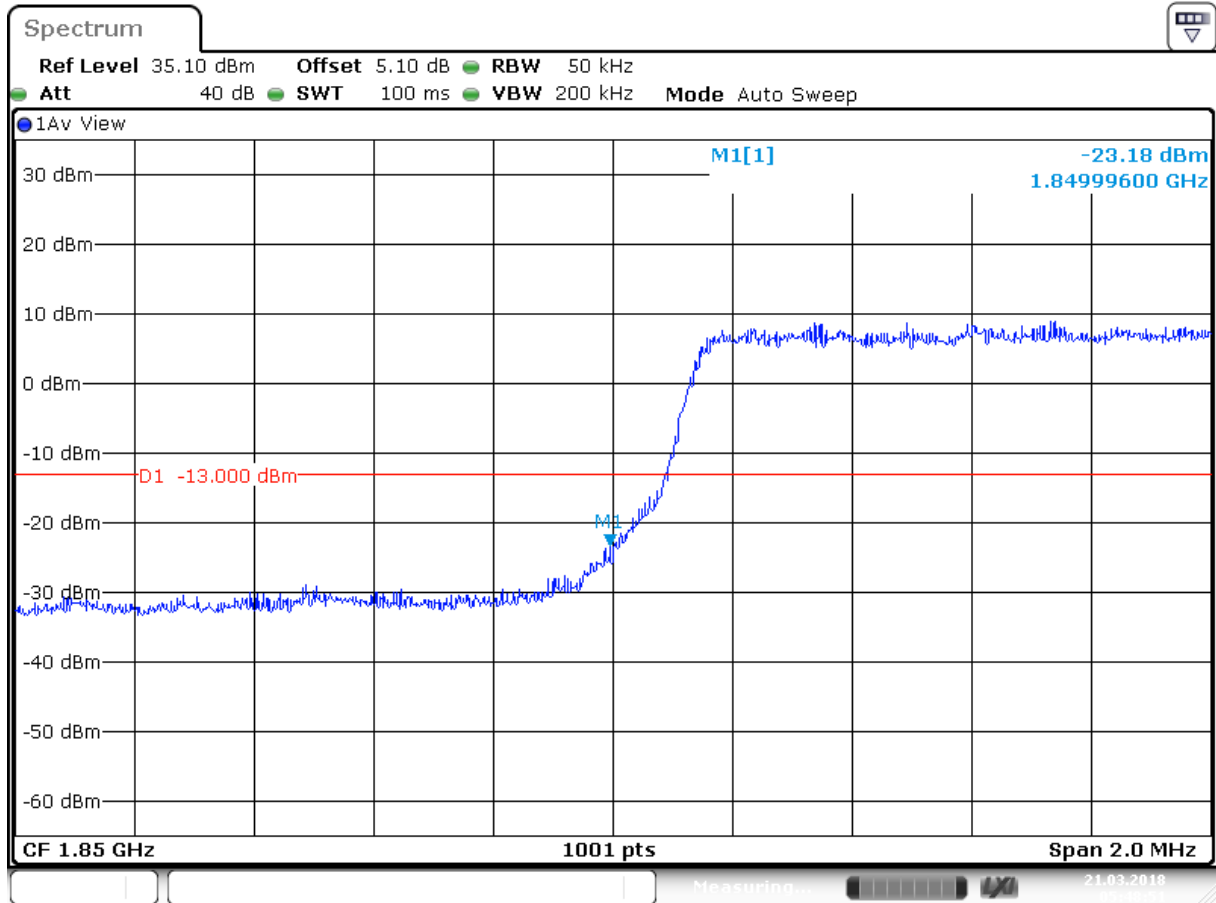
Date: 21 MAR 2018 05:35:00



5.1.1.3 Test Mode = LTE/TM1 3MHz

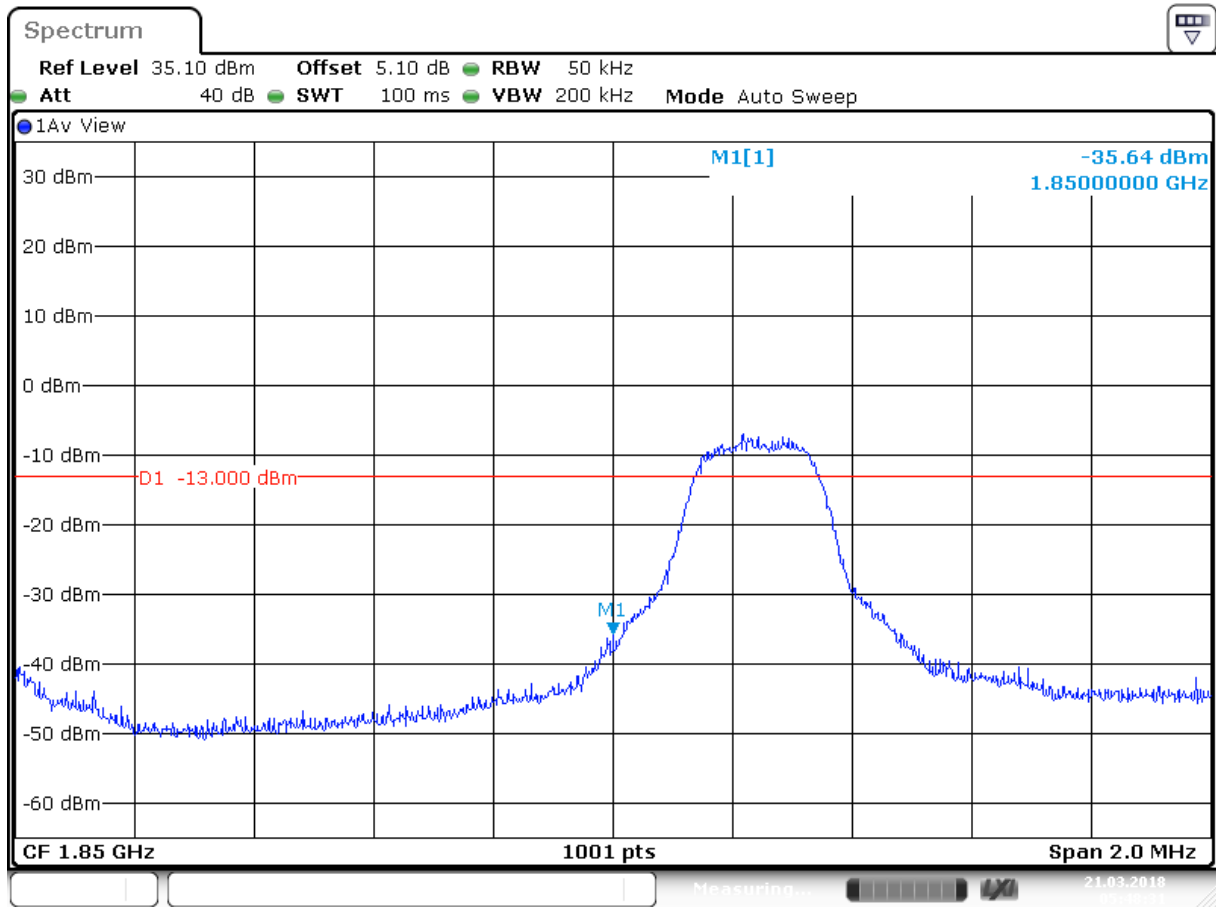
5.1.1.3.1 Test Channel = LCH

5.1.1.3.1.1 Test RB=1RB



Date: 21 MAR 2018 05:48:51

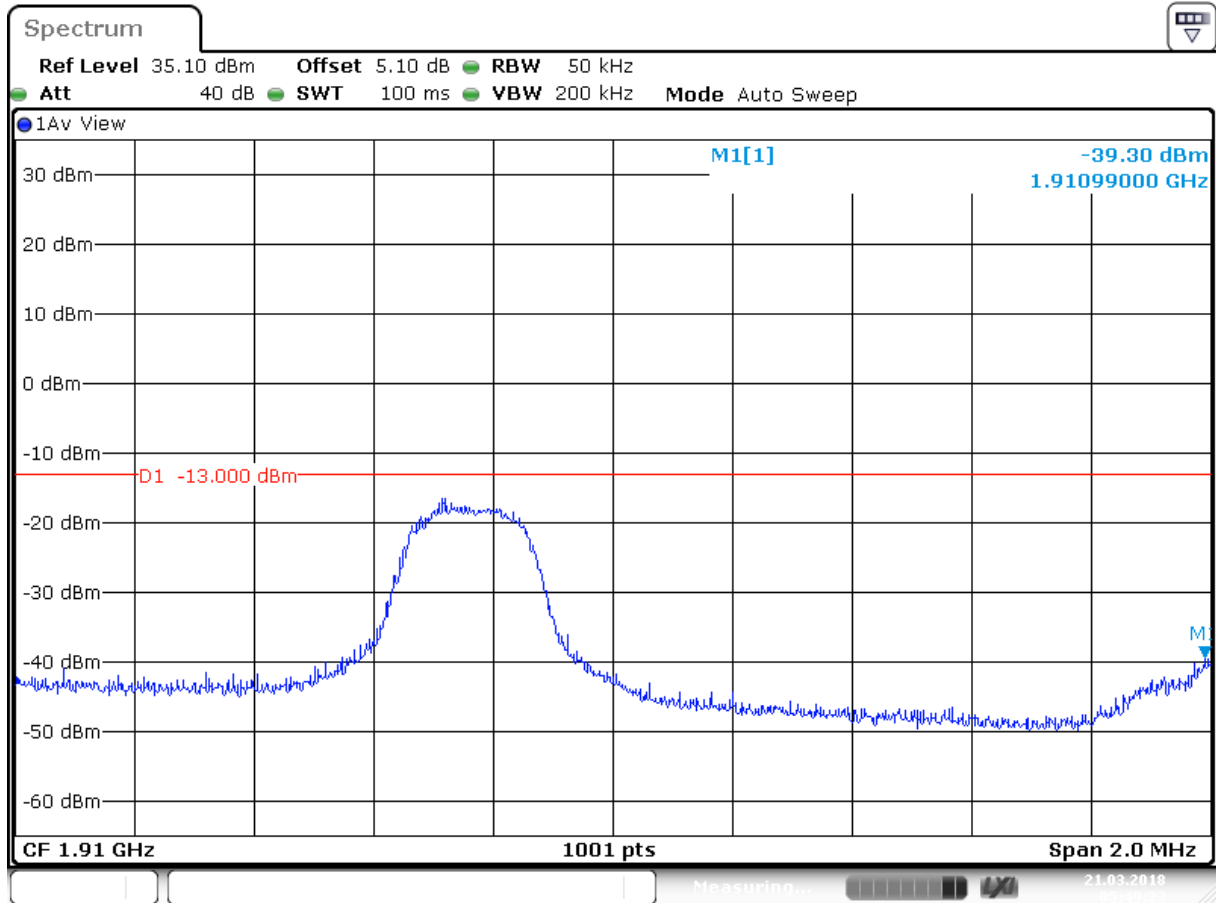
5.1.1.3.1.2 Test RB=15RB



Date: 21 MAR 2018 05:48:32

5.1.1.3.2 Test Channel = HCH

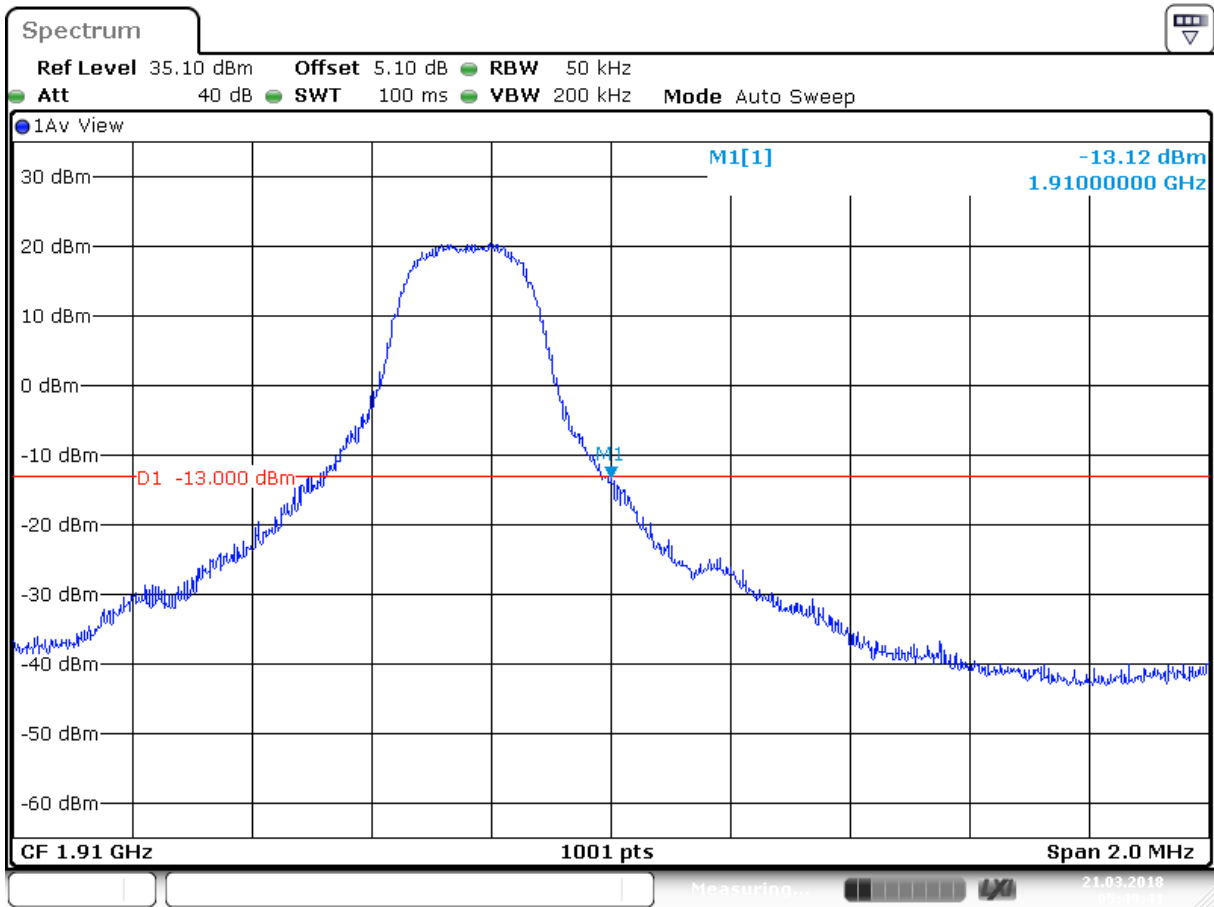
5.1.1.3.2.1 Test RB=1RB



Date: 21 MAR 2018 05:49:23



5.1.1.3.2.2 Test RB=15RB



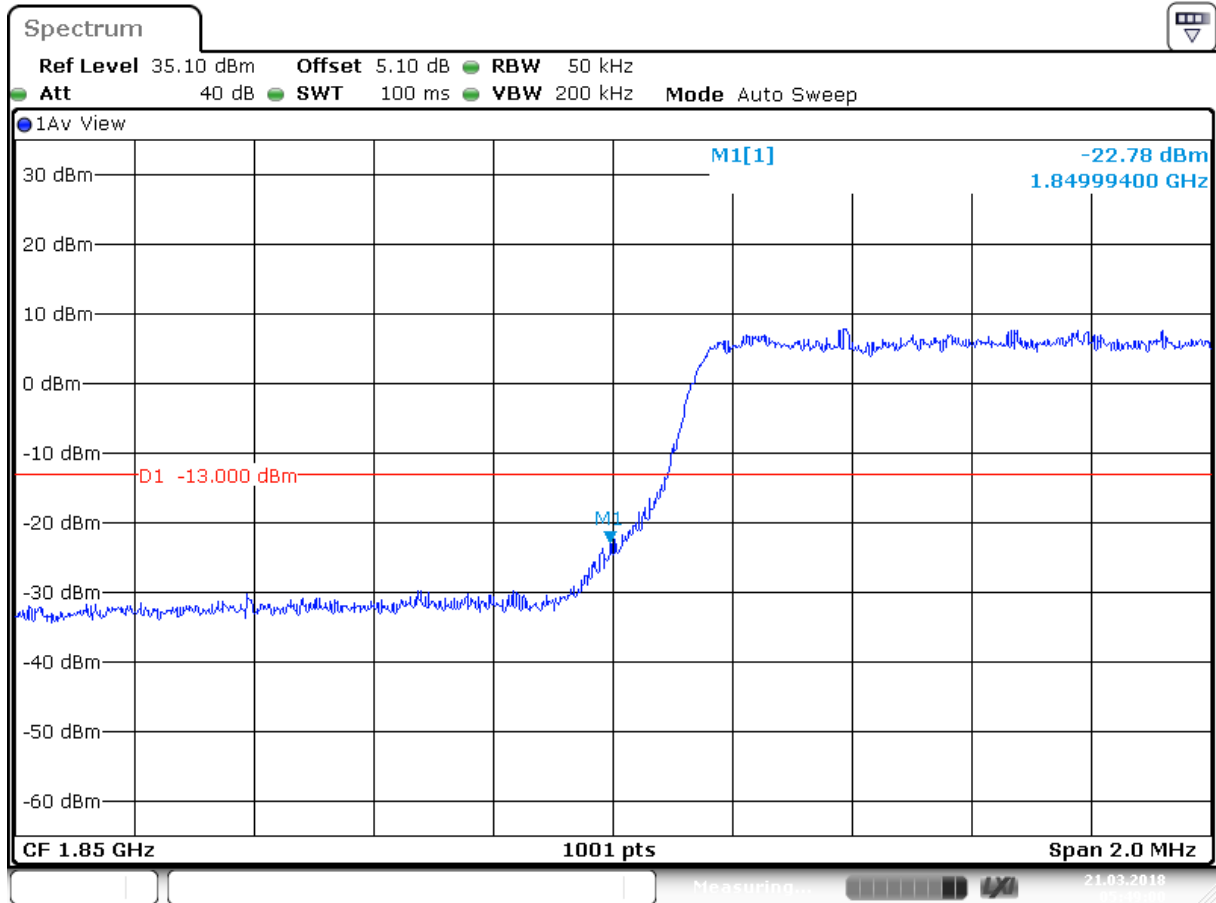
Date: 21 MAR 2018 05:49:42



5.1.1.4 Test Mode = LTE/TM2 3MHz

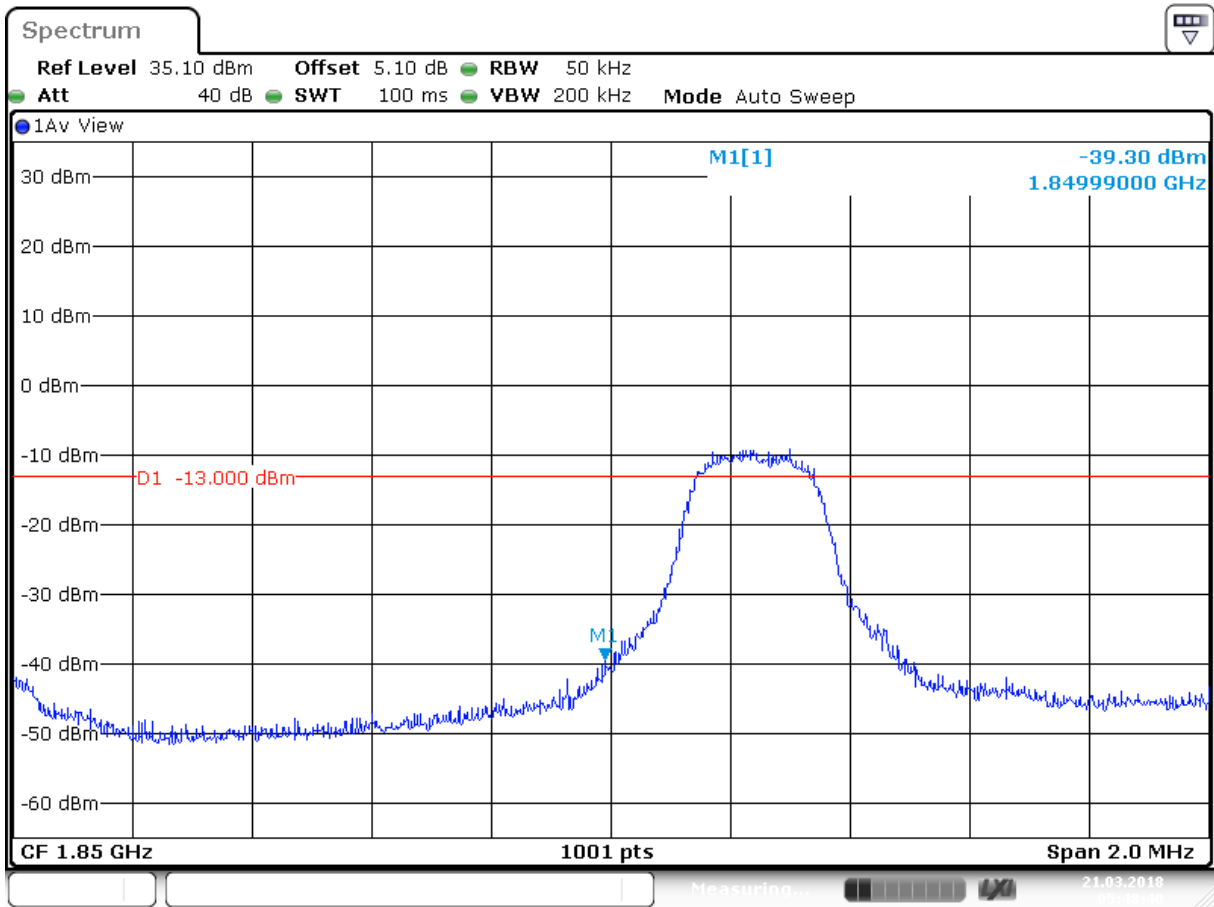
5.1.1.4.1 Test Channel = LCH

5.1.1.4.1.1 Test RB=1RB



Date: 21 MAR 2018 05:49:00

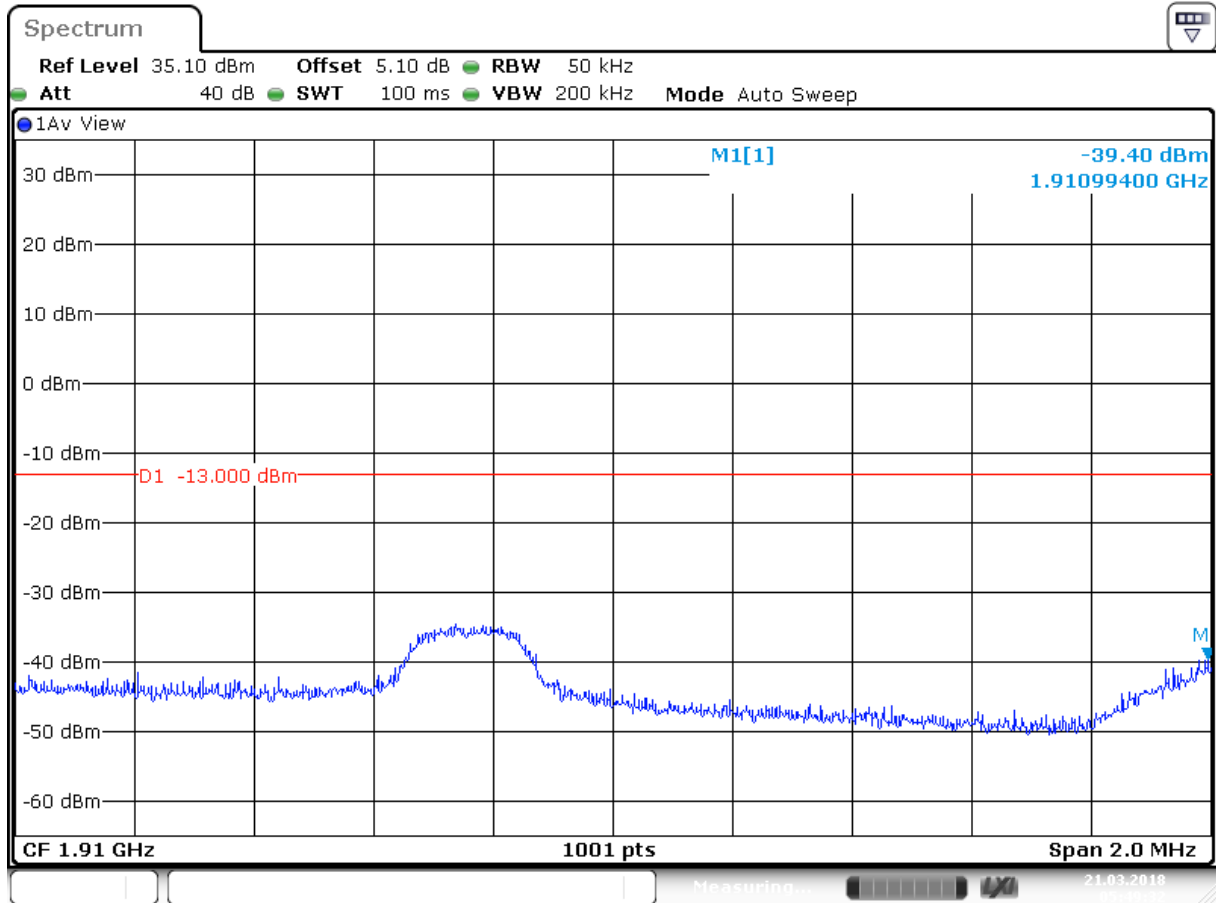
5.1.1.4.1.2 Test RB=15RB



Date: 21 MAR 2018 05:48:41

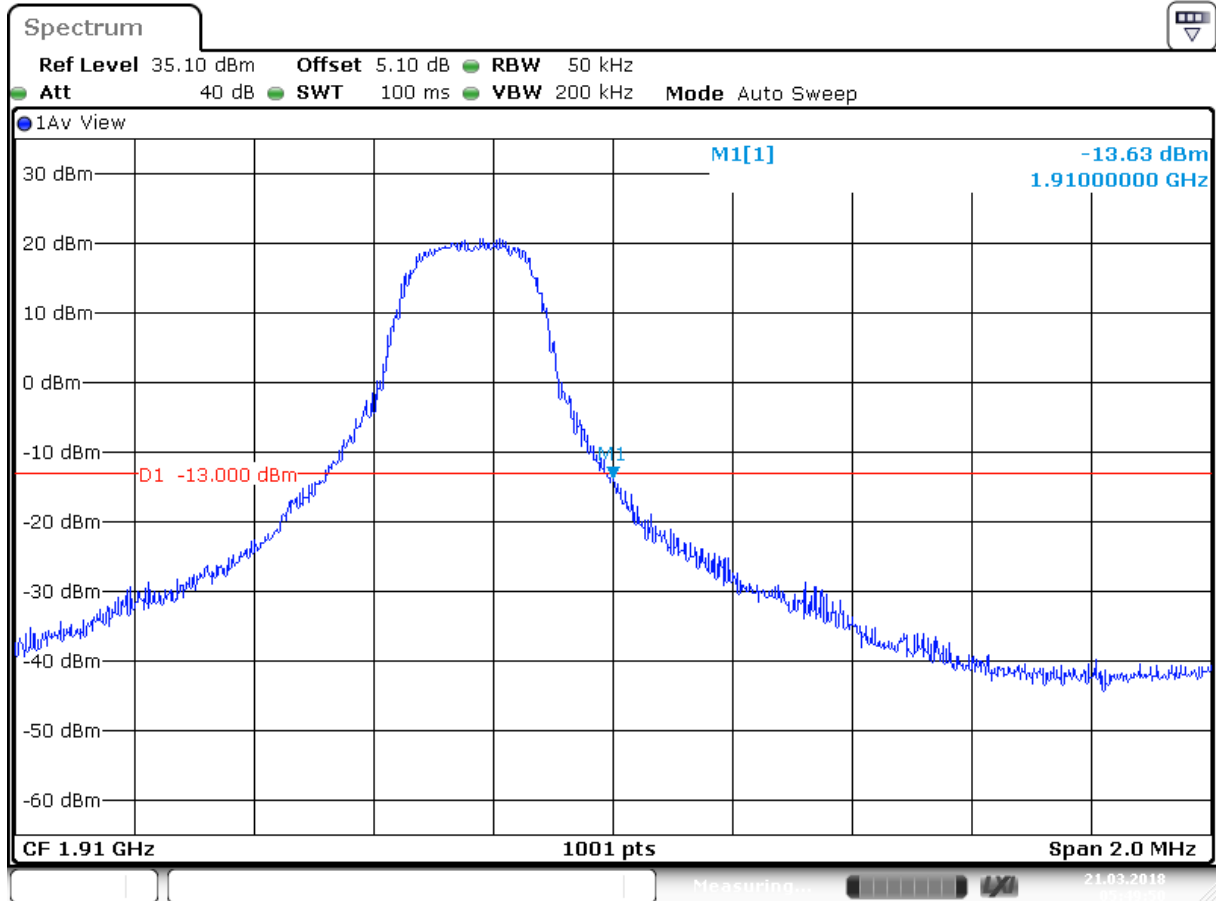
5.1.1.4.2 Test Channel = HCH

5.1.1.4.2.1 Test RB=1RB



Date: 21 MAR 2018 05:49:33

5.1.1.4.3 Test RB=15RB

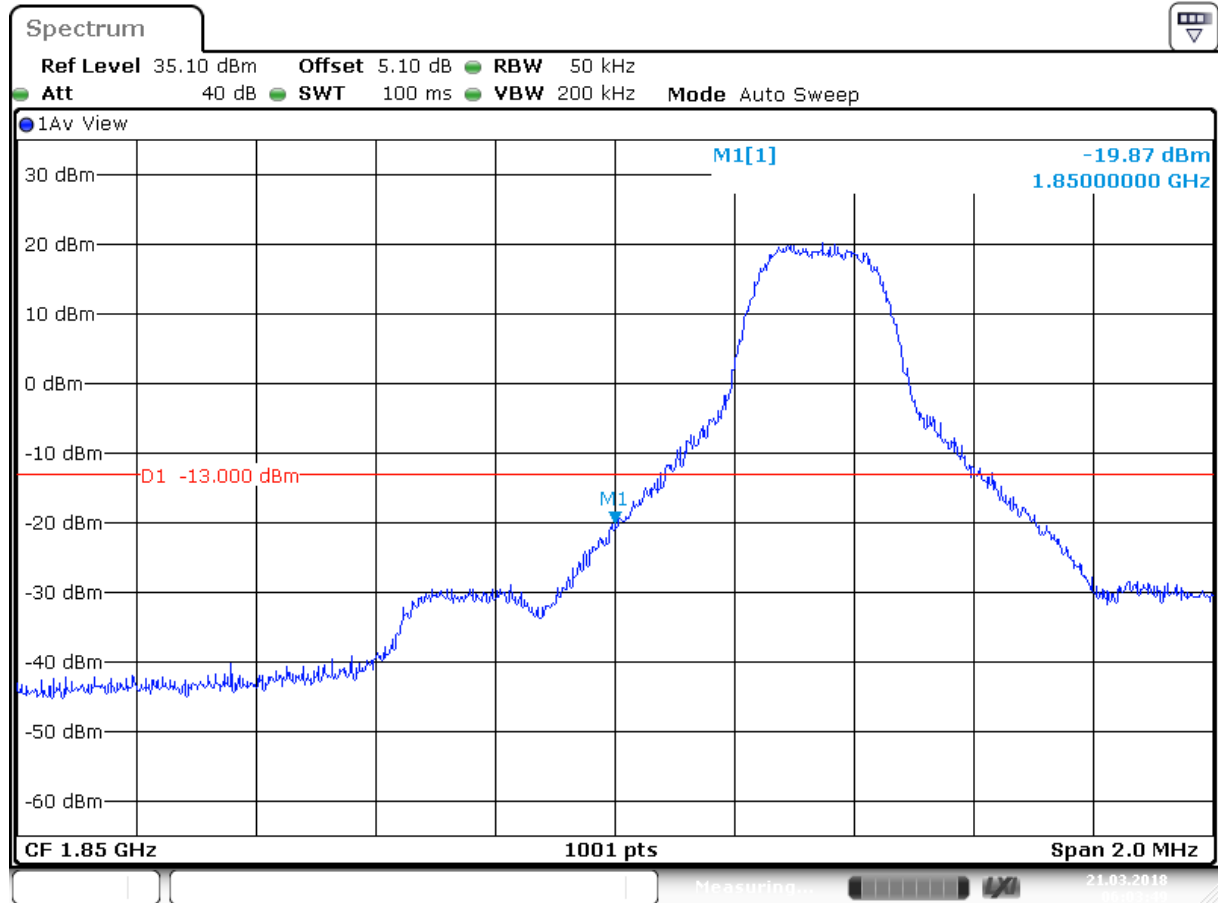


Date: 21 MAR 2018 05:49:51

5.1.1.5 Test Mode = LTE/TM1 5MHz

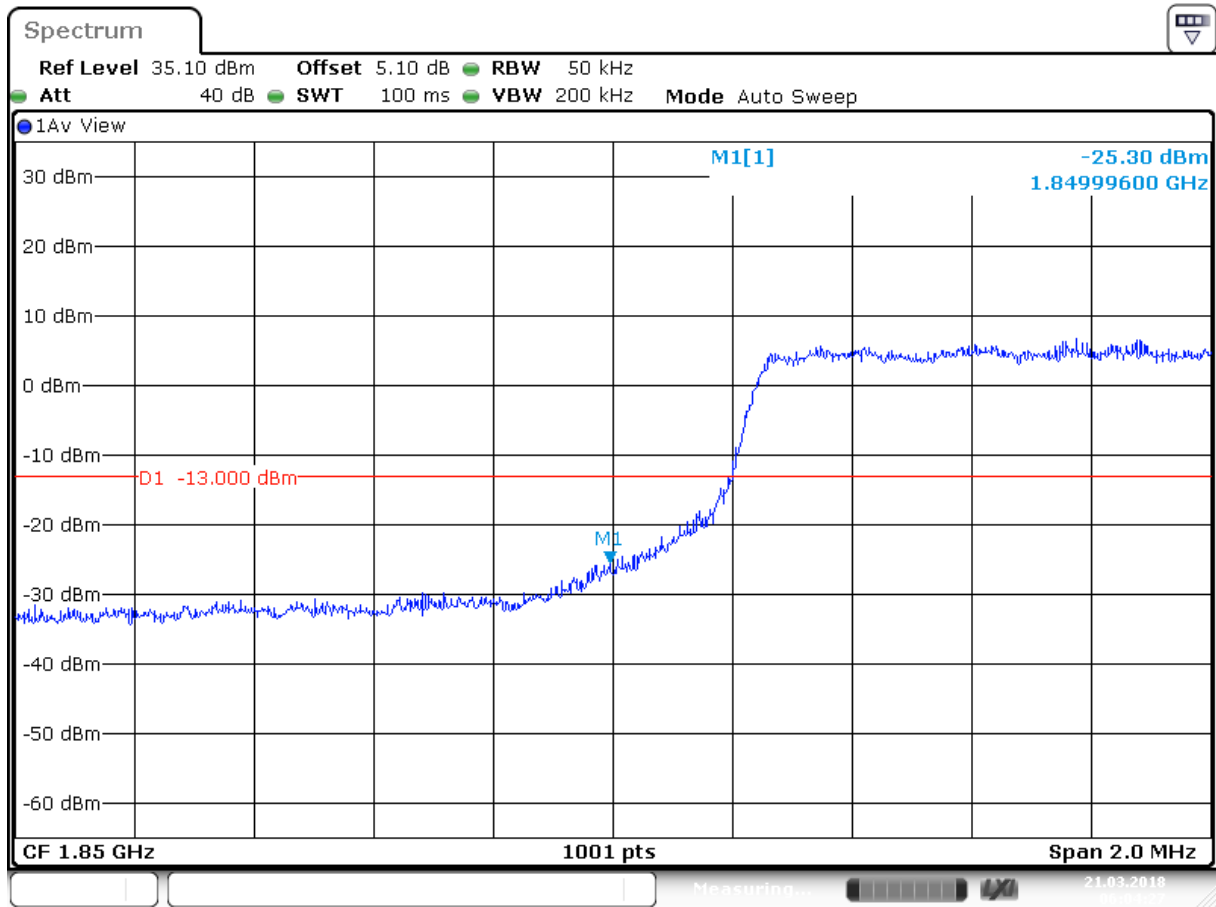
5.1.1.5.1 Test Channel = LCH

5.1.1.5.1.1 Test RB=1RB



Date: 21 MAR 2018 06:03:49

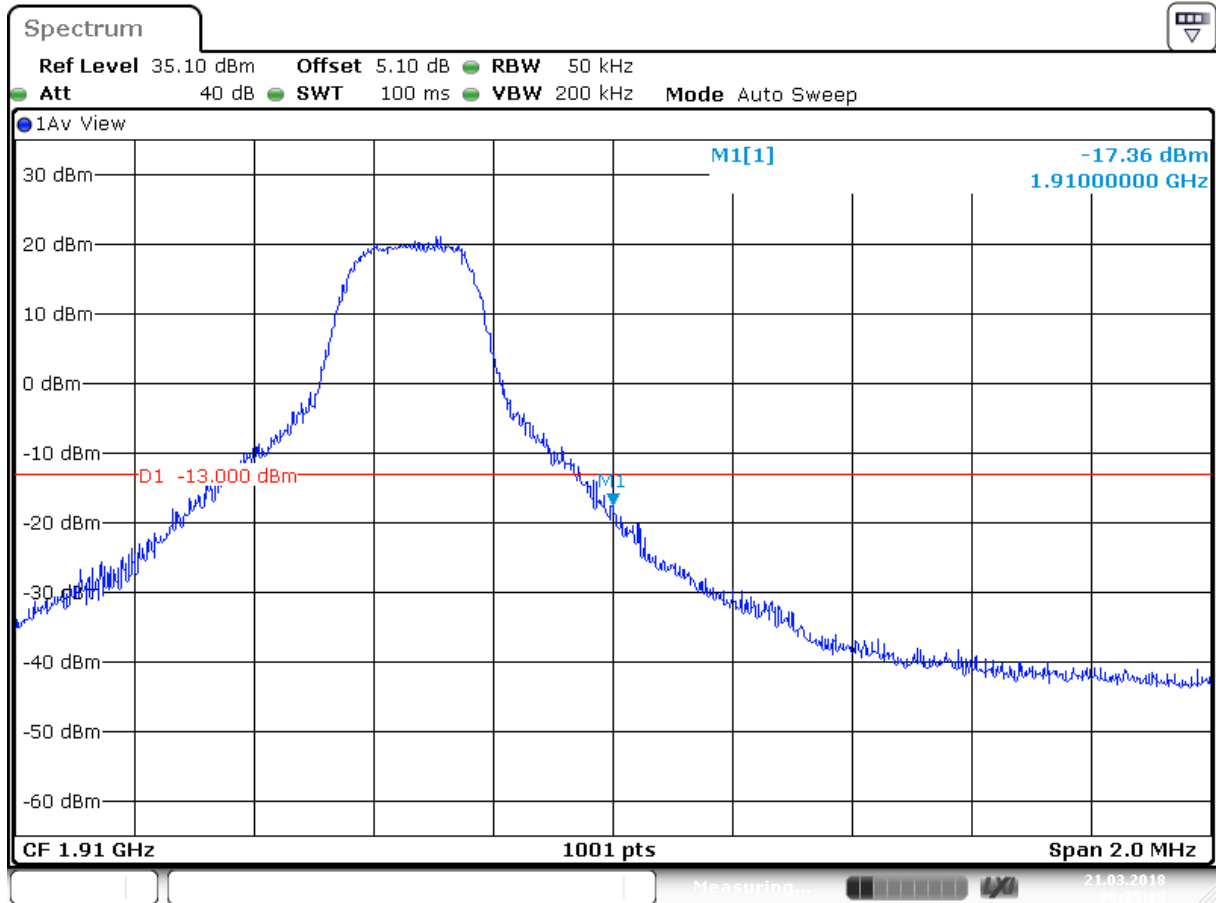
5.1.1.5.1.2 Test RB=25RB



Date: 21 MAR 2018 06:04:27

5.1.1.5.2 Test Channel = HCH

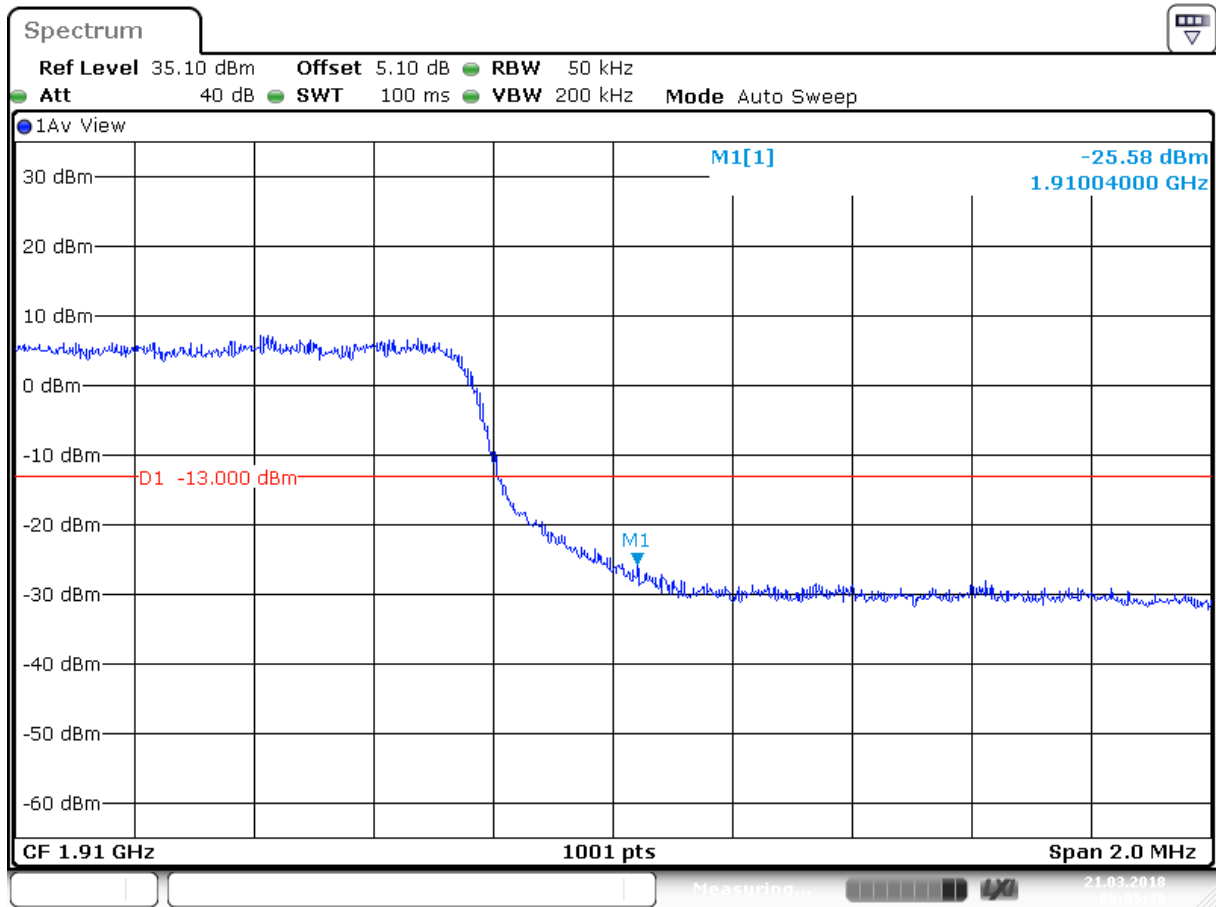
5.1.1.5.2.1 Test RB=1RB



Date: 21 MAR 2018 06:05:19



5.1.1.5.2.2 Test RB=25RB



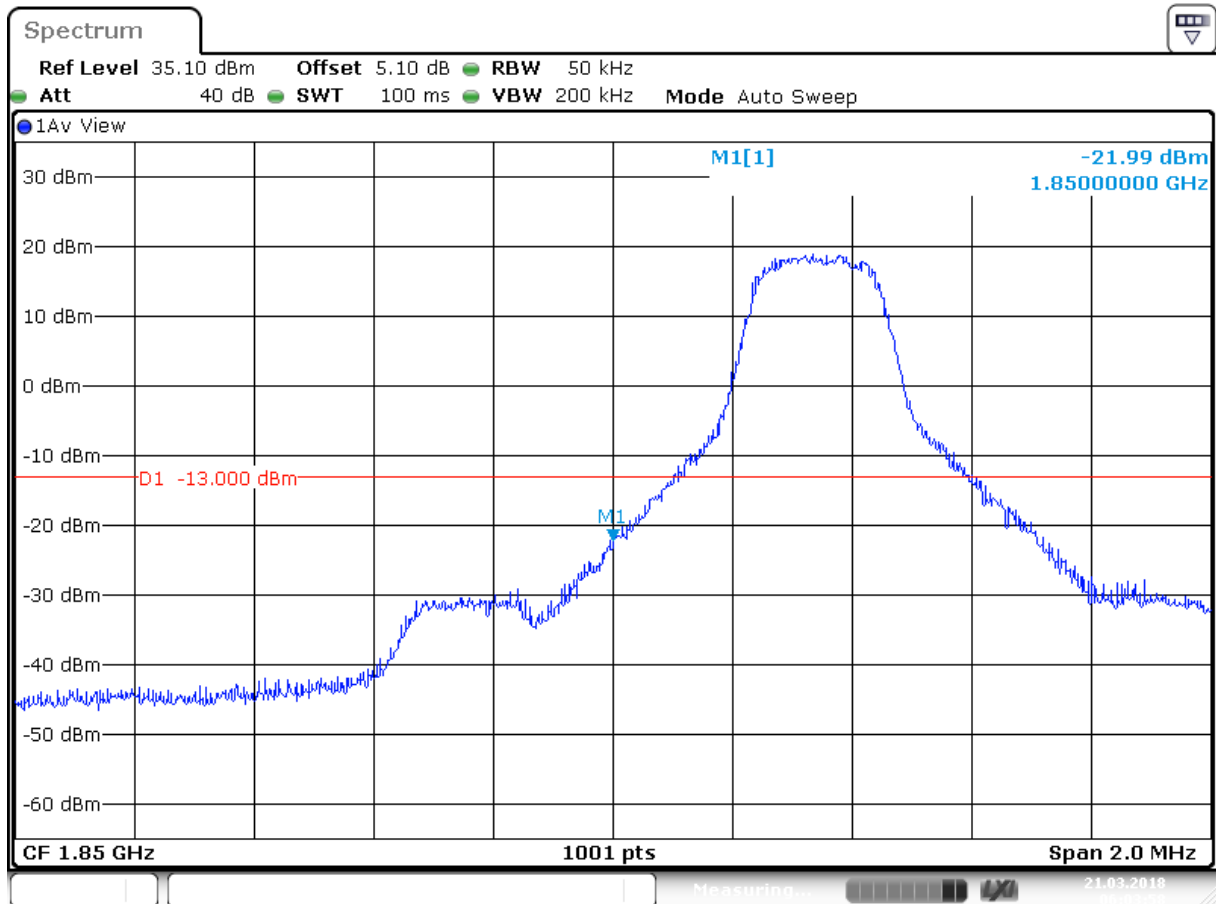
Date: 21 MAR 2018 06:05:39



5.1.1.6 Test Mode = LTE/TM2 5MHz

5.1.1.6.1 Test Channel = LCH

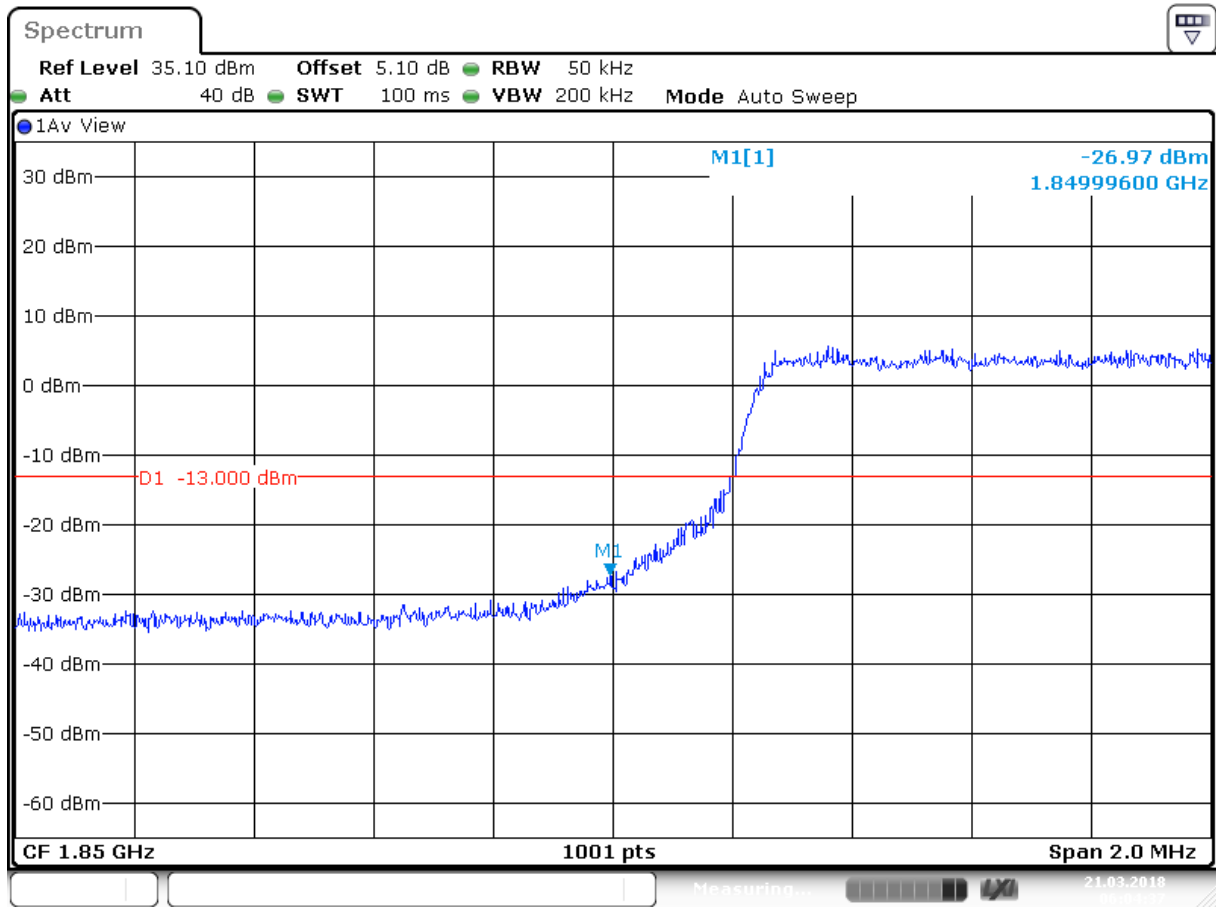
5.1.1.6.1.1 Test RB=1RB



Date: 21 MAR 2018 06:03:59



5.1.1.6.1.2 Test RB=25RB

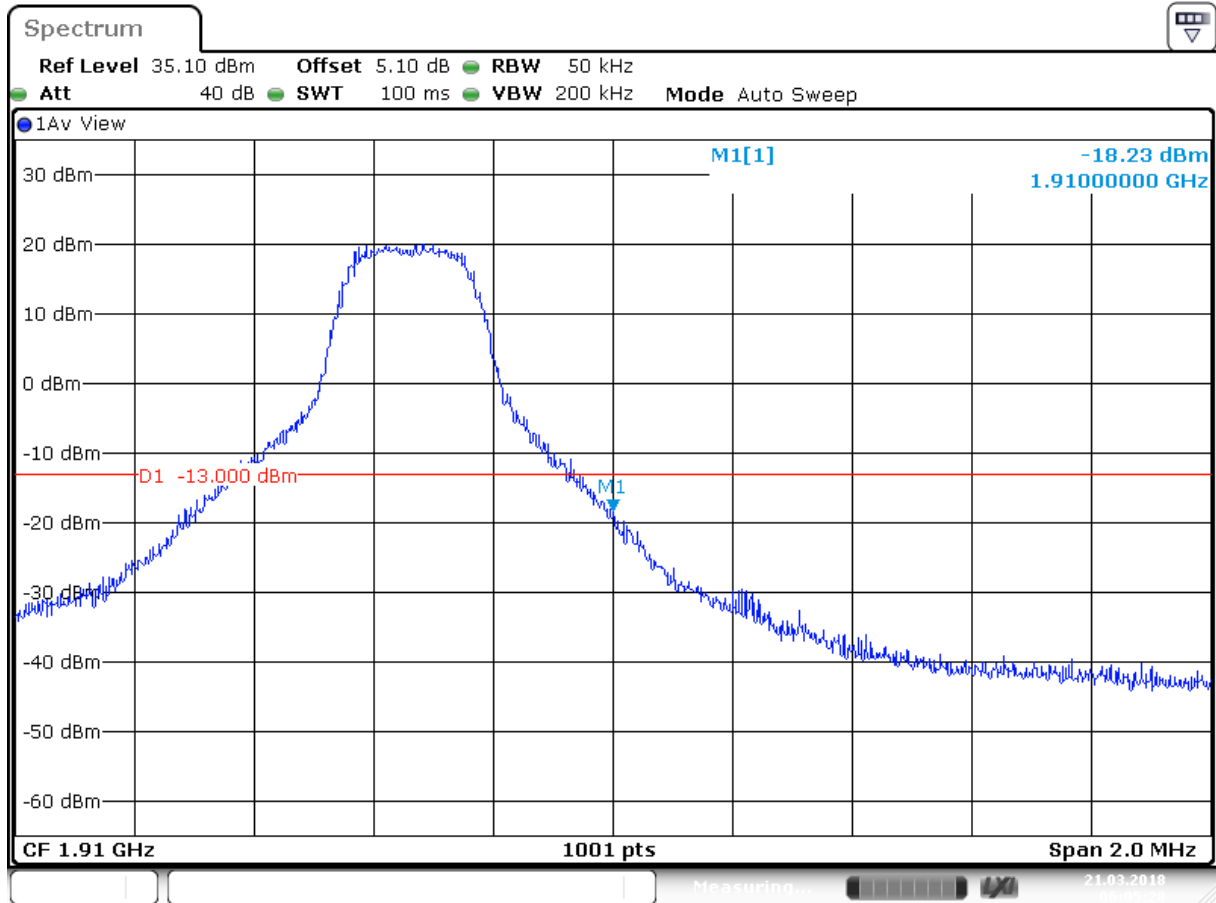


Date: 21 MAR 2018 06:04:37

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5.1.1.6.2 Test Channel = HCH

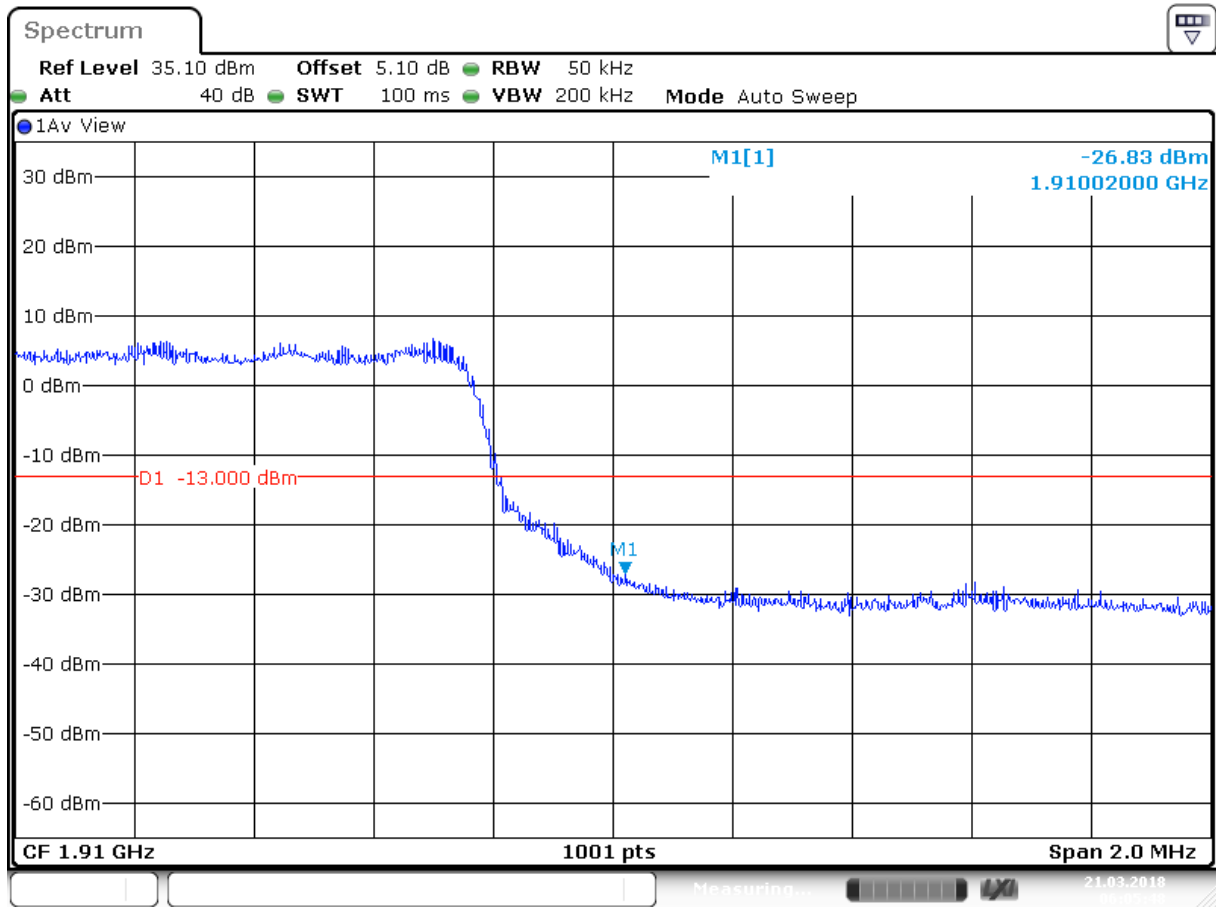
5.1.1.6.2.1 Test RB=1RB



Date: 21 MAR 2018 06:05:29



5.1.1.6.2.2 Test RB=25RB



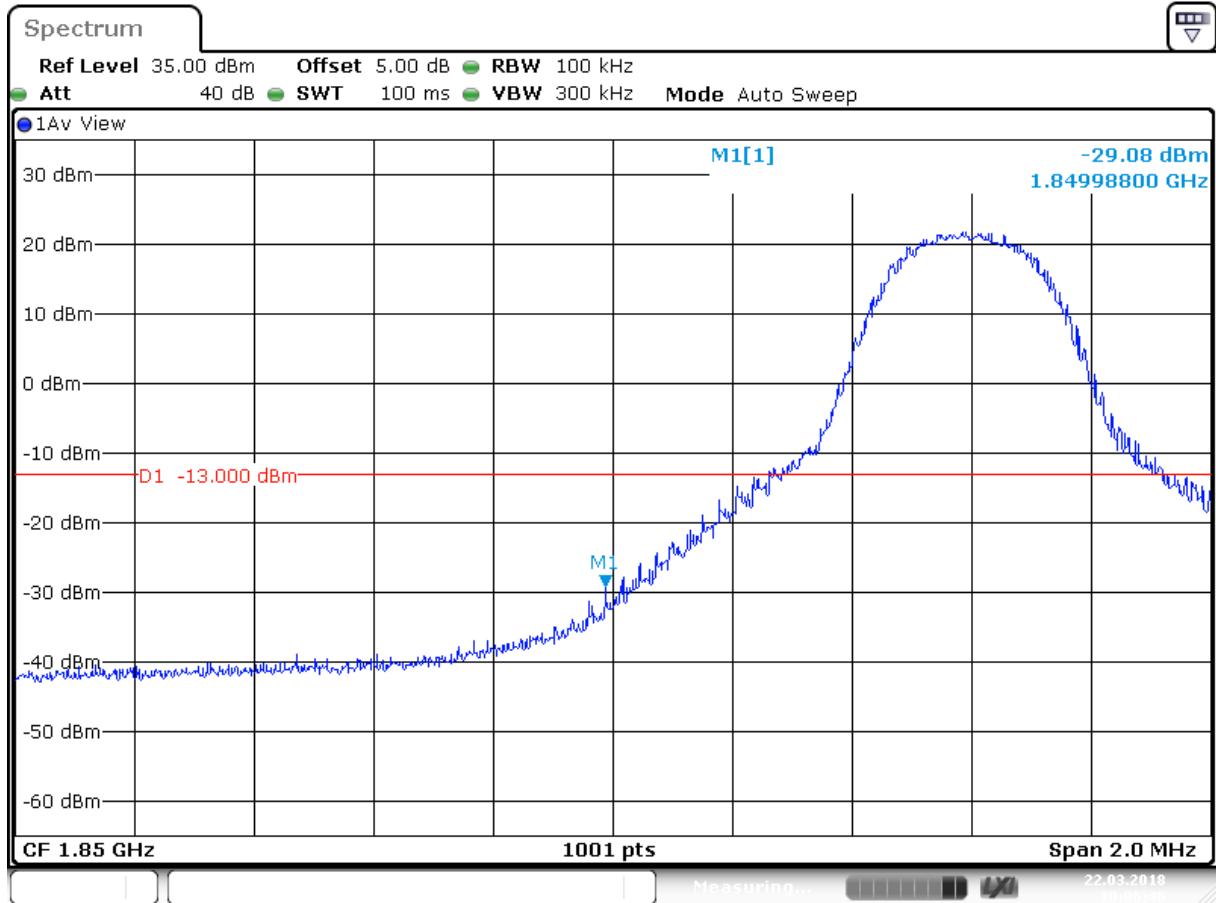
Date: 21 MAR 2018 06:05:48



5.1.1.7 Test Mode = LTE/TM1 10MHz

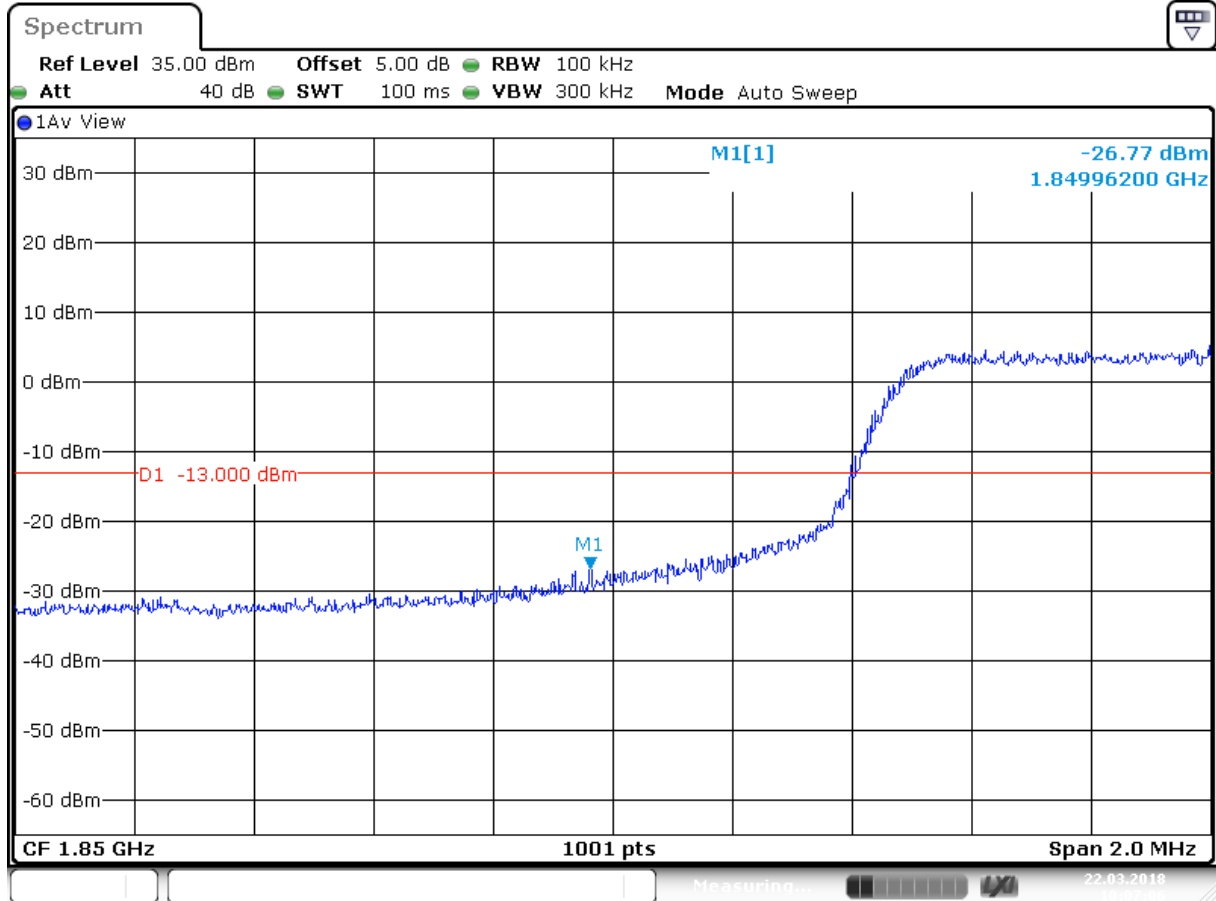
5.1.1.7.1 Test Channel = LCH

5.1.1.7.1.1 Test RB=1RB



Date: 22 MAR 2018 10:06:47

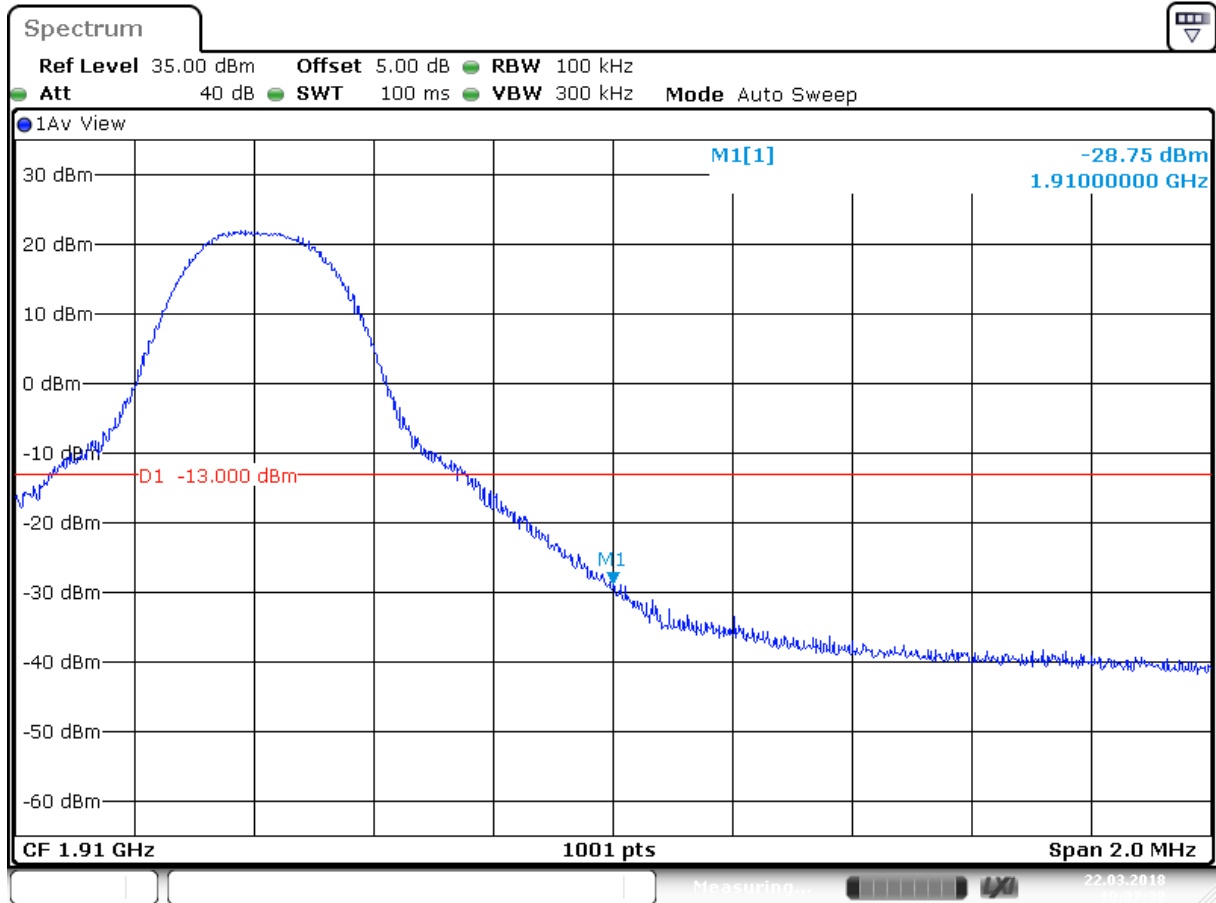
5.1.1.7.1.2 Test RB=50RB



Date: 22 MAR 2018 10:07:06

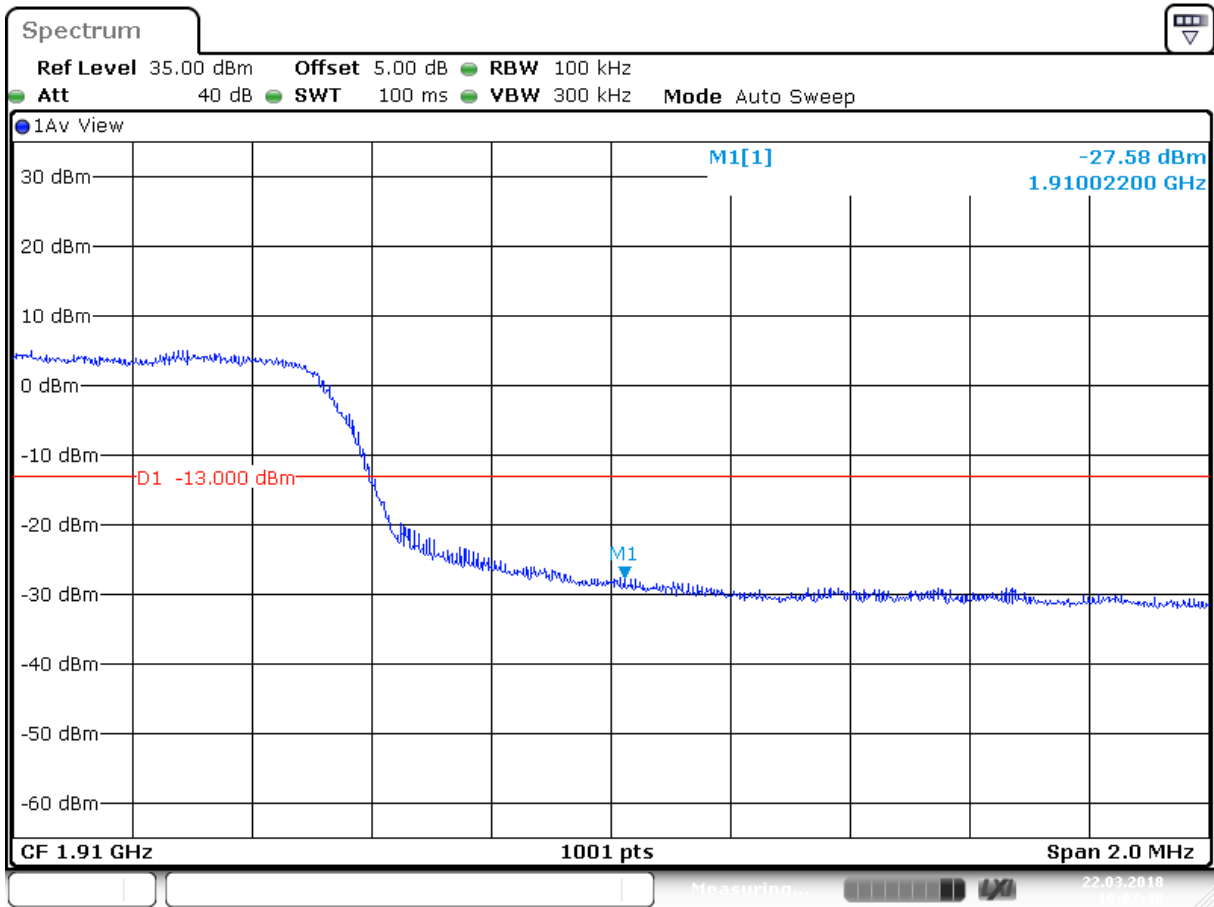
5.1.1.7.2 Test Channel = HCH

5.1.1.7.2.1 Test RB=1RB



Date: 22 MAR 2018 10:07:39

5.1.1.7.2.2 Test RB=50RB



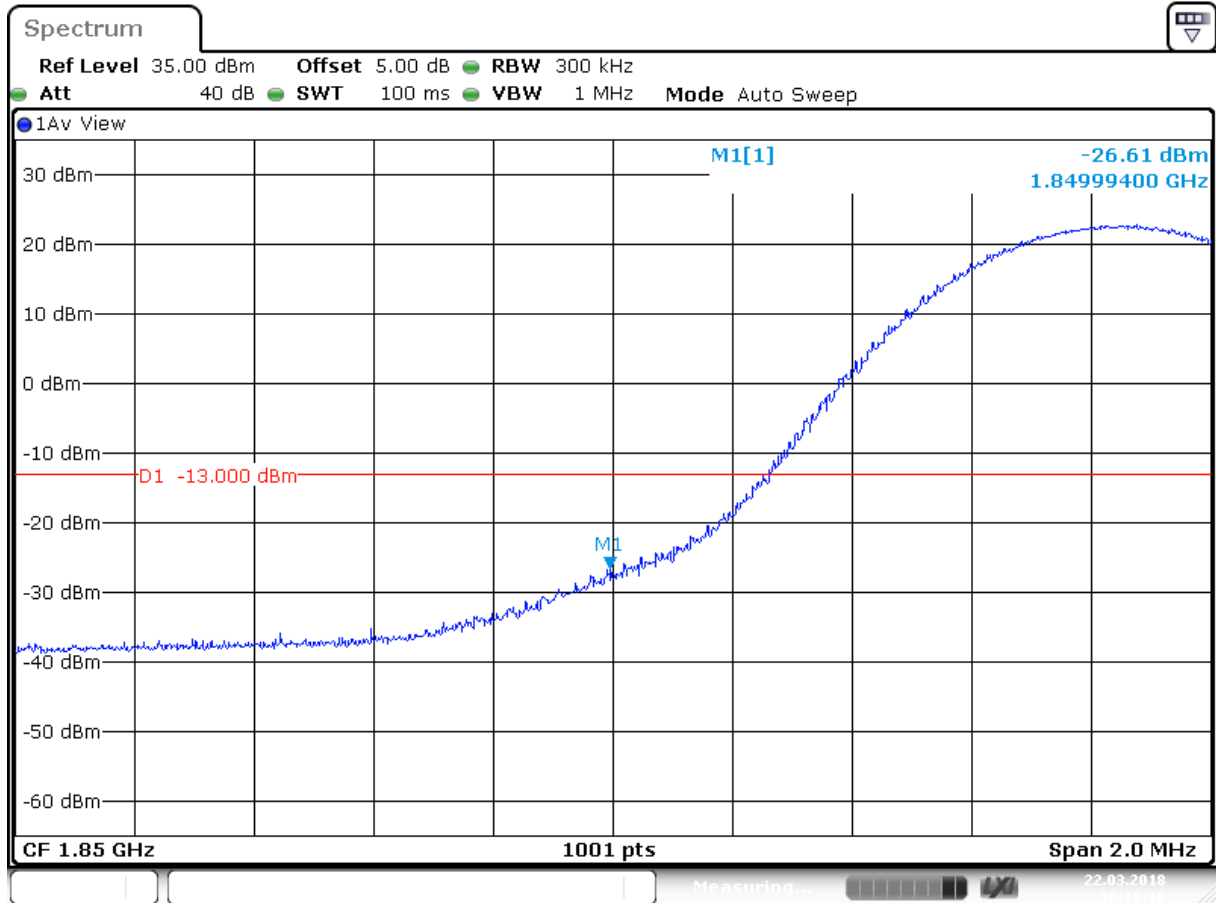
Date: 22 MAR 2018 10:07:48



5.1.1.8 Test Mode = LTE/TM1 15MHz

5.1.1.8.1 Test Channel = LCH

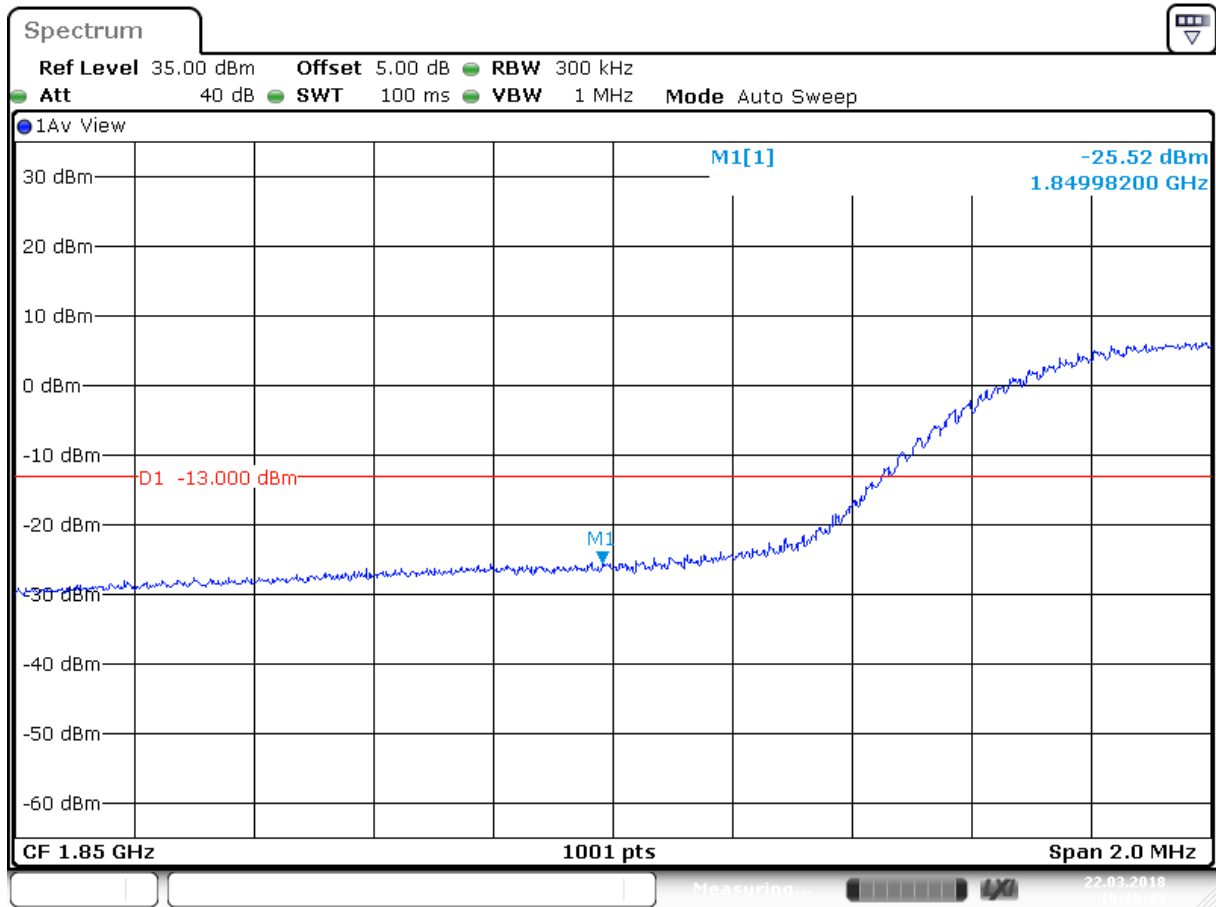
5.1.1.8.1.1 Test RB=1RB



Date: 22 MAR 2018 10:19:16



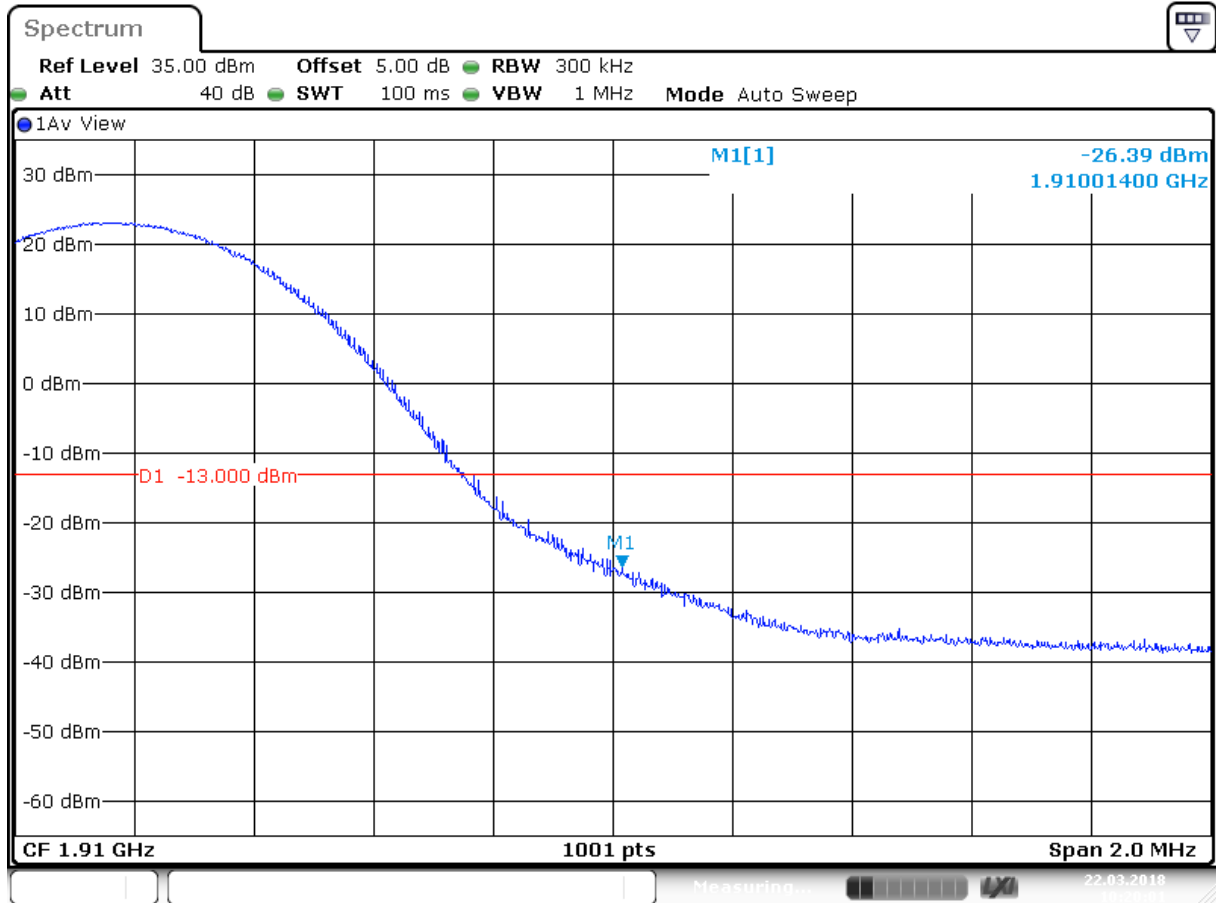
5.1.1.8.1.2 Test RB=75RB



Date: 22 MAR 2018 10:19:35

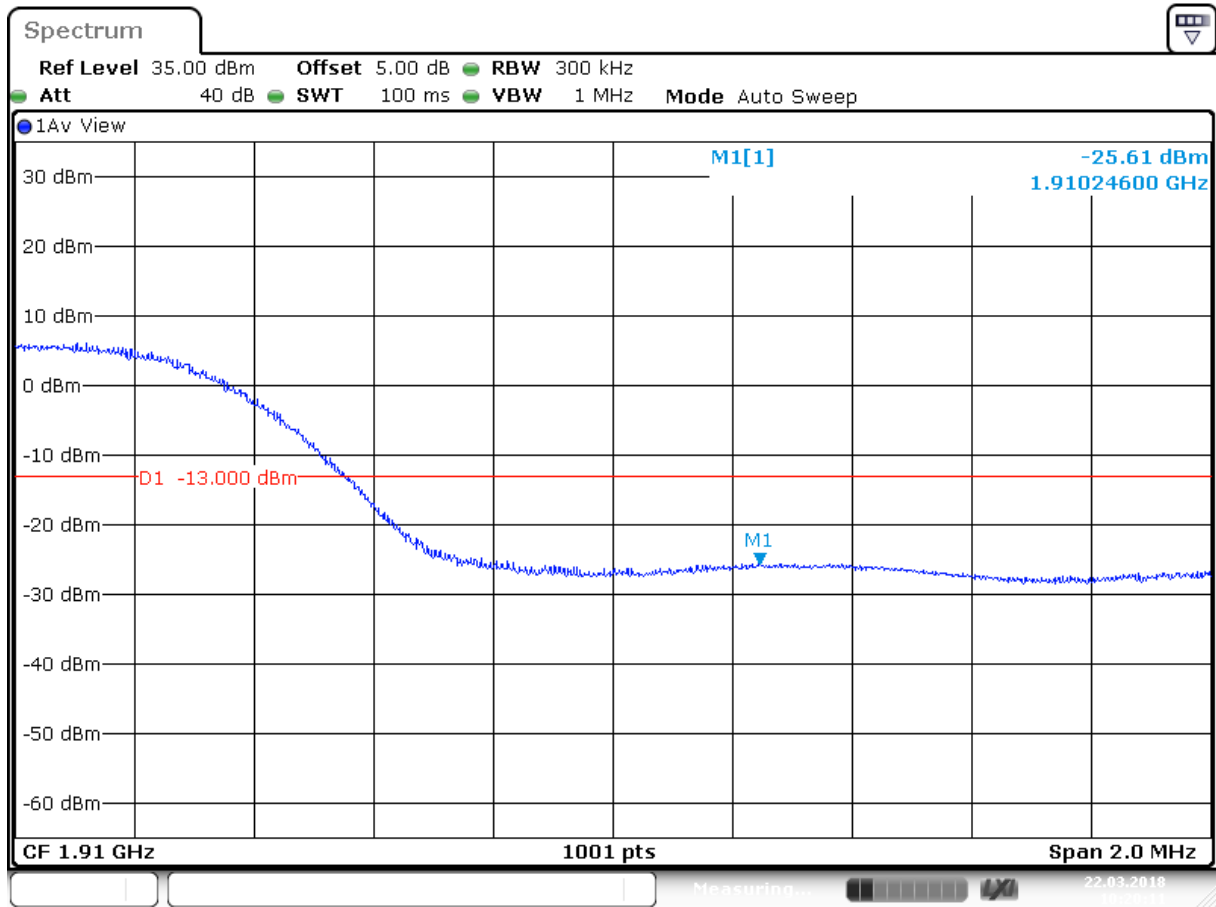
5.1.1.8.2 Test Channel = HCH

5.1.1.8.2.1 Test RB=1RB



Date: 22 MAR 2018 10:20:02

5.1.1.8.2.2 Test RB=75RB



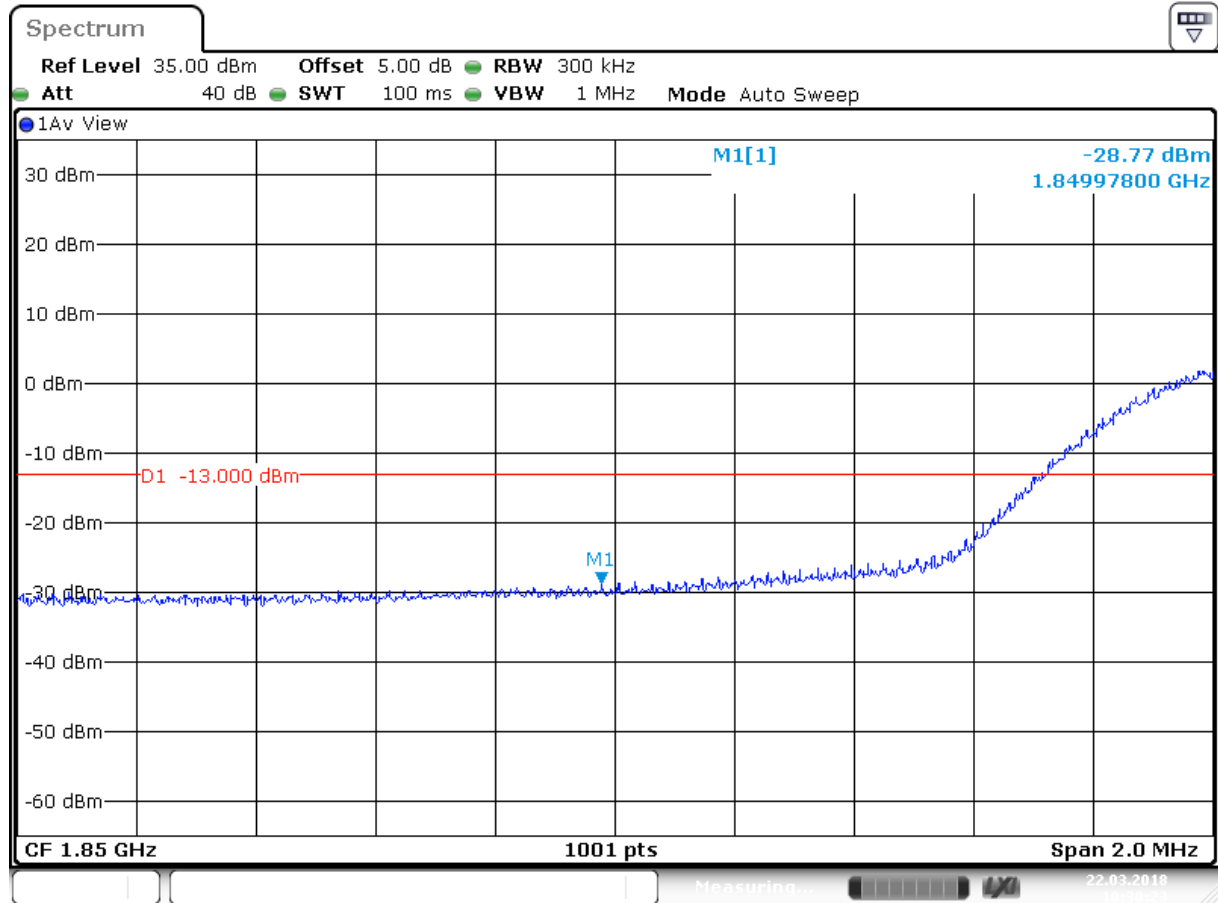
Date: 22 MAR 2018 10:20:12



5.1.1.9 Test Mode = LTE/TM1 20MHz

5.1.1.9.1 Test Channel = LCH

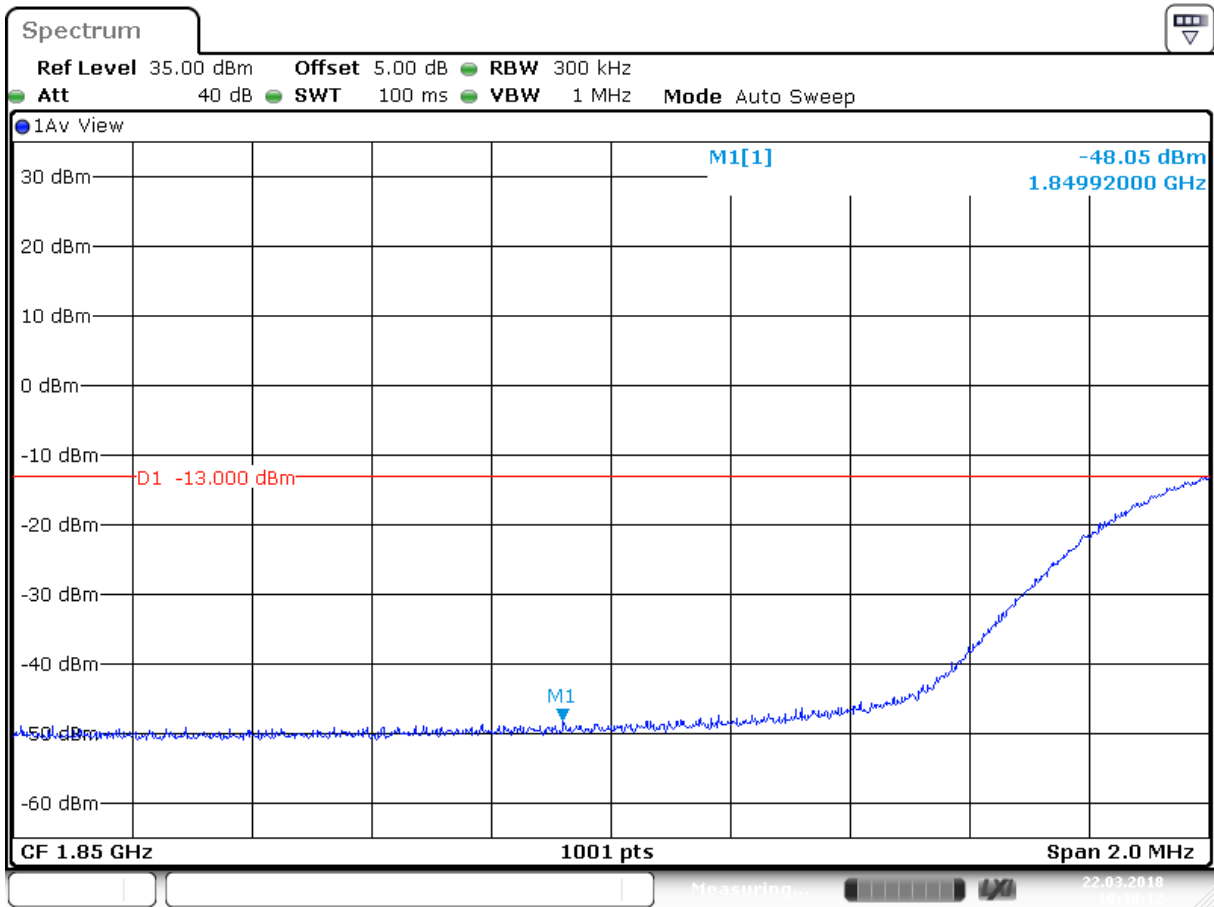
5.1.1.9.1.1 Test RB=1RB



Date: 22 MAR 2018 10:30:23



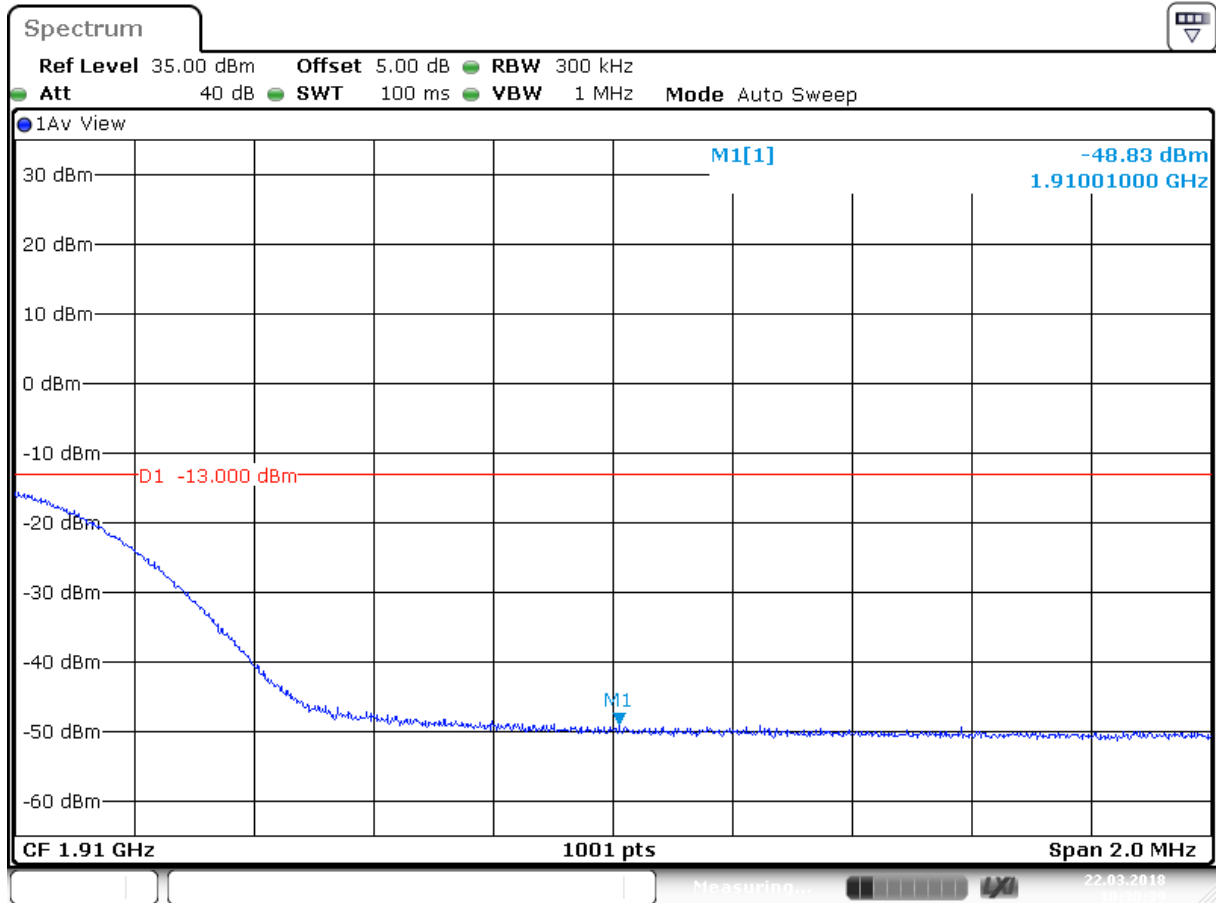
5.1.1.9.1.2 Test RB=100RB



Date: 22 MAR 2018 10:30:13

5.1.1.9.2 Test Channel = HCH

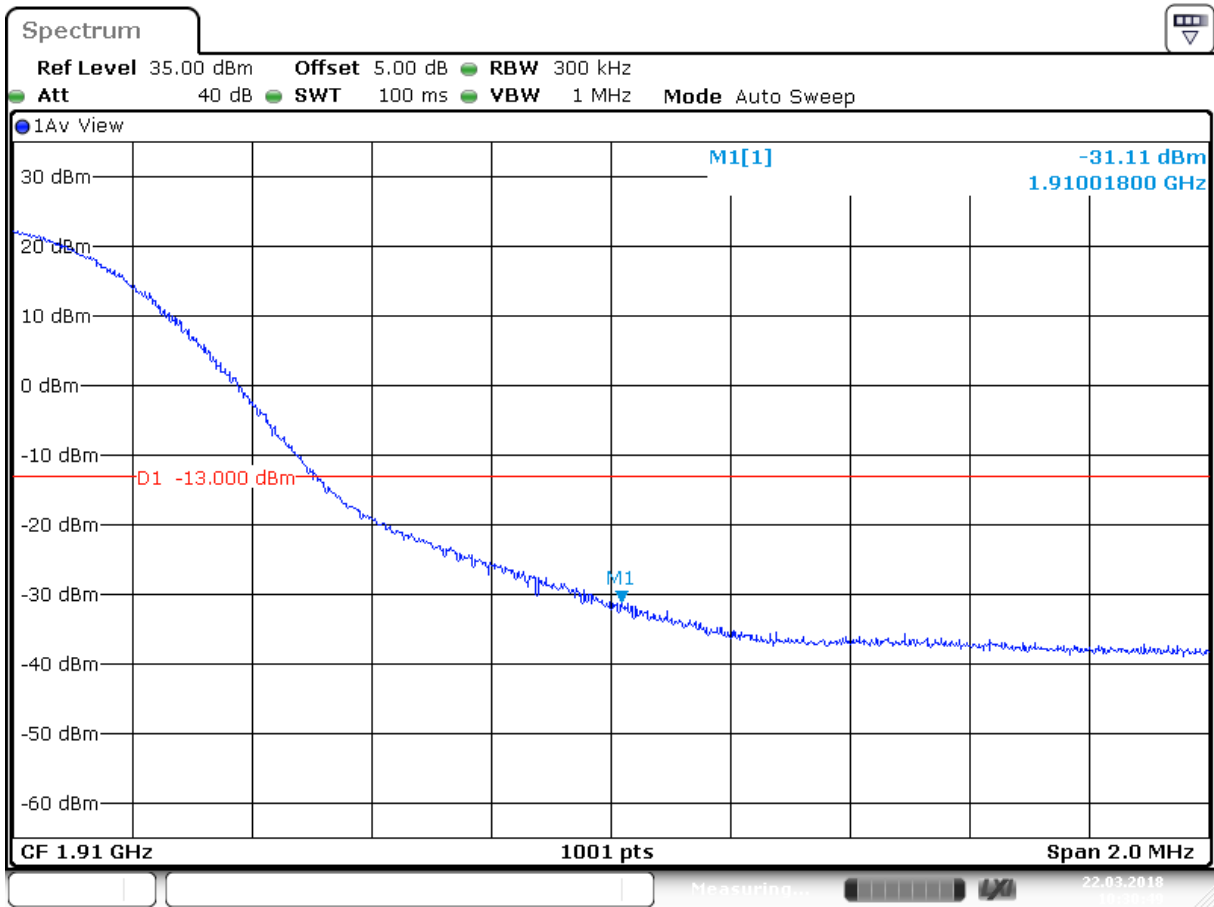
5.1.1.9.2.1 Test RB=1RB



Date: 22 MAR 2018 10:30:39



5.1.1.9.2.2 Test RB=100RB



Date: 22 MAR 2018 10:30:49

6 Spurious Emission at Antenna Terminal

NOTE: For the averaged unwanted emissions measurements, the measurement points in each sweep is greater than twice the Span/RBW in order to ensure bin-to-bin spacing of $< RBW/2$ so that narrowband signals are not lost between frequency bins. As to the present test item, the "Measurement Points = $k * (Span / RBW)$ " with k between 4 and 5, which results in an acceptable level error of less than 0.5 dB.

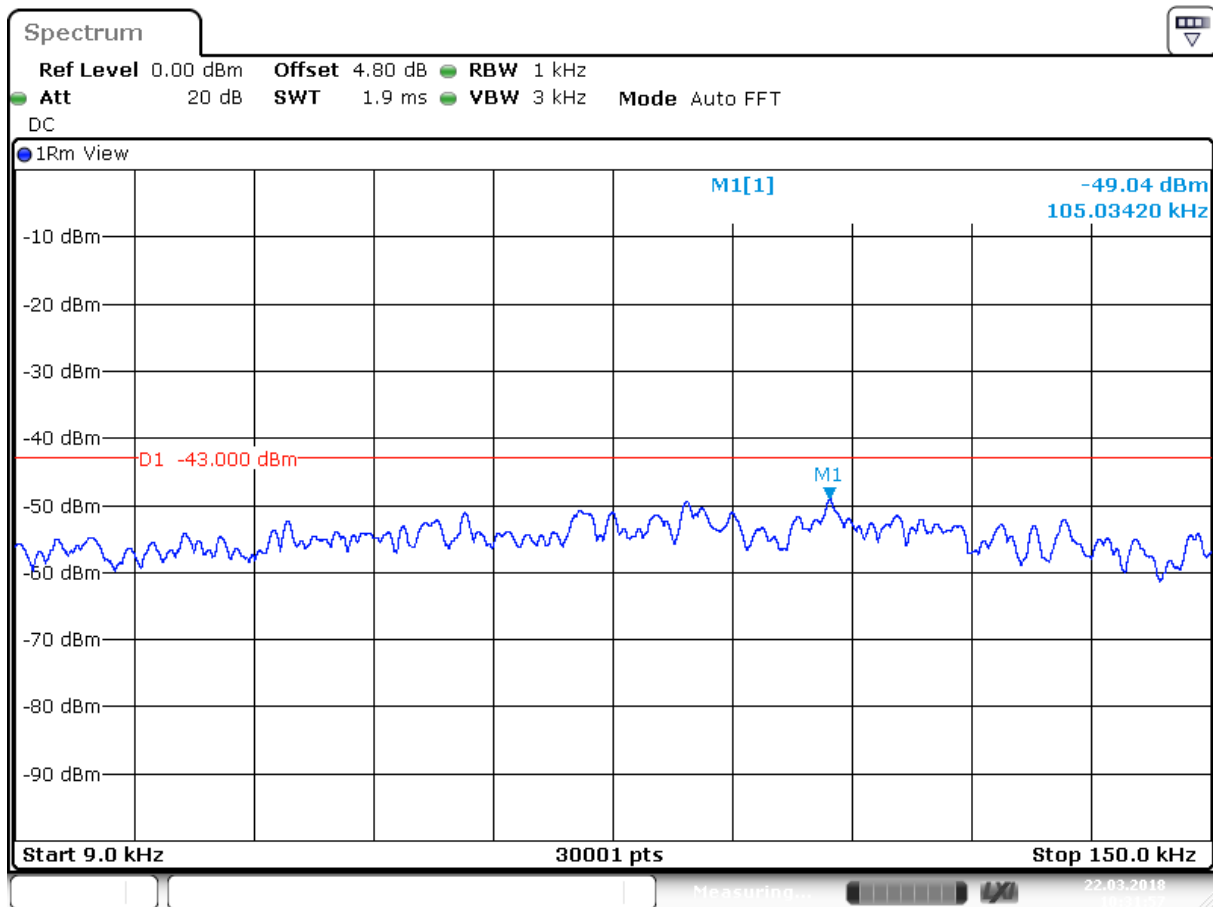
Part I - Test Plots

6.1 For LTE

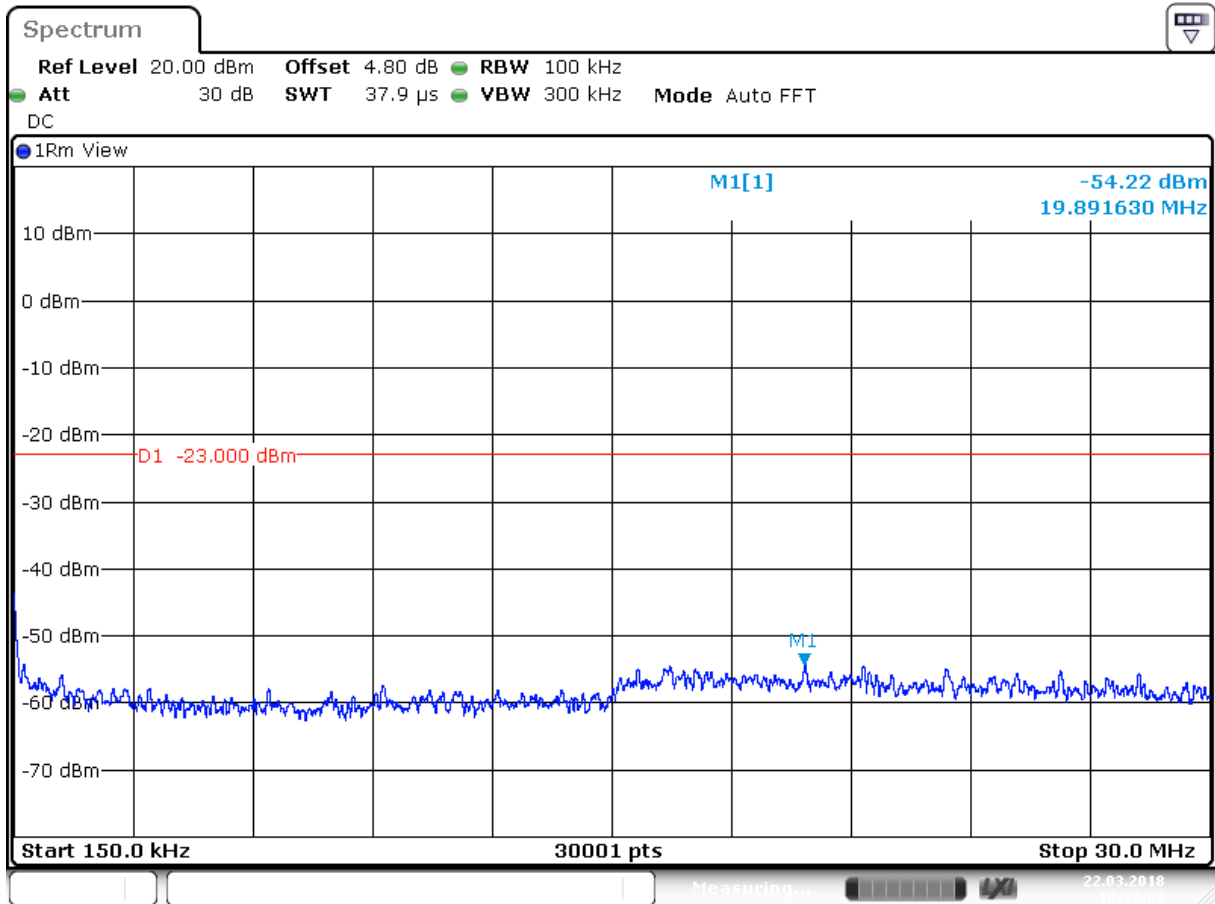
6.1.1 Test Band = LTE band2

6.1.1.1 Test Mode = LTE / TM1 20MHz RB1#0

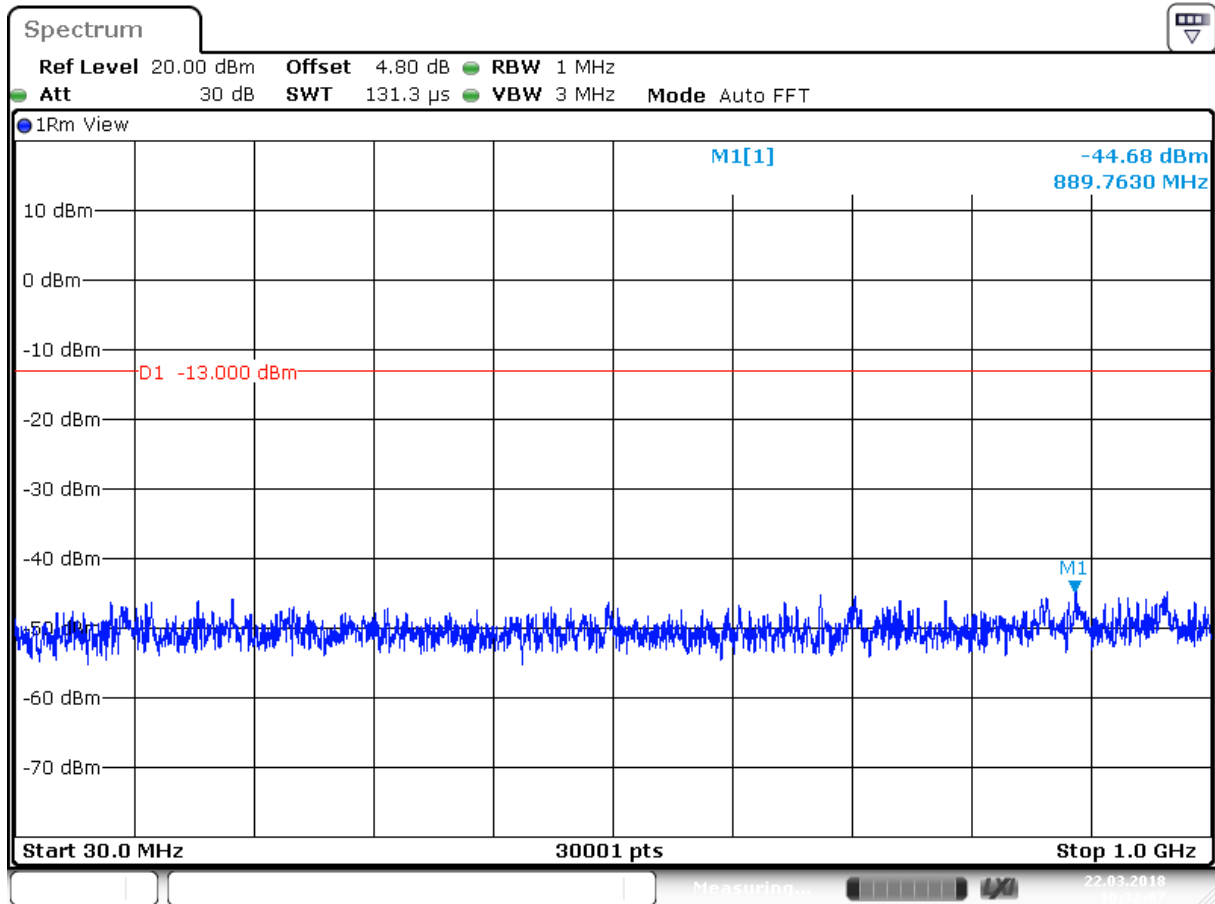
6.1.1.1.1 Test Channel = LCH



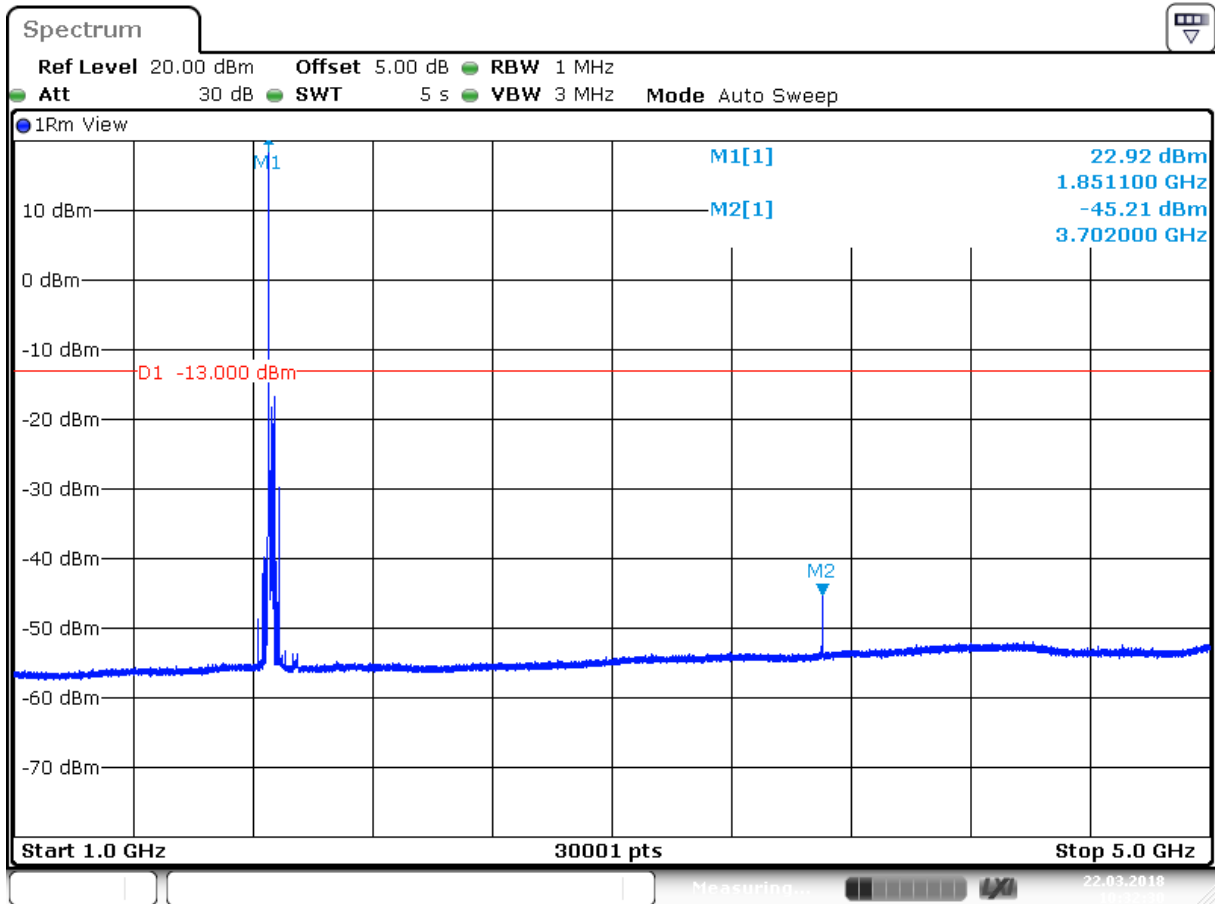
Date: 22 MAR 2018 10:31:57



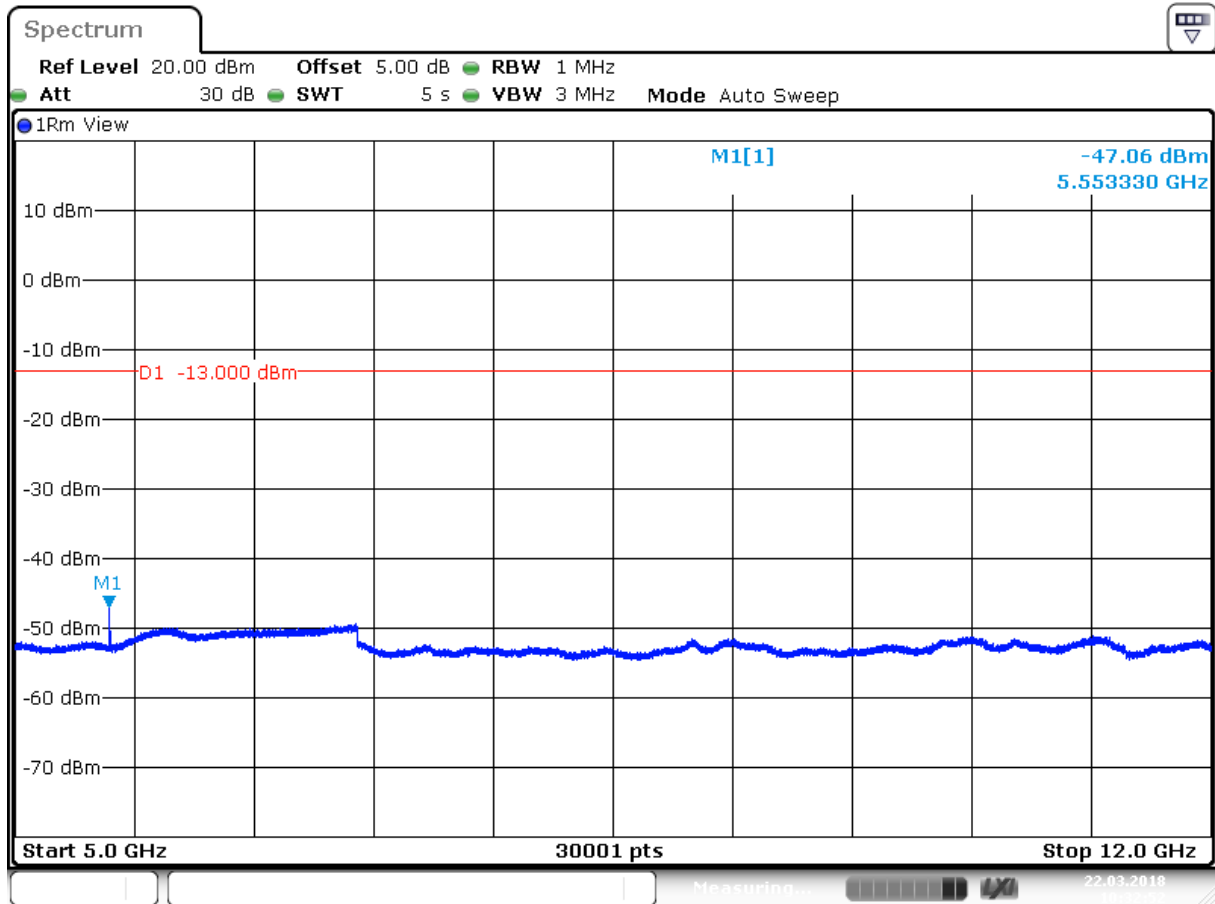
Date: 22 MAR 2018 10:32:03



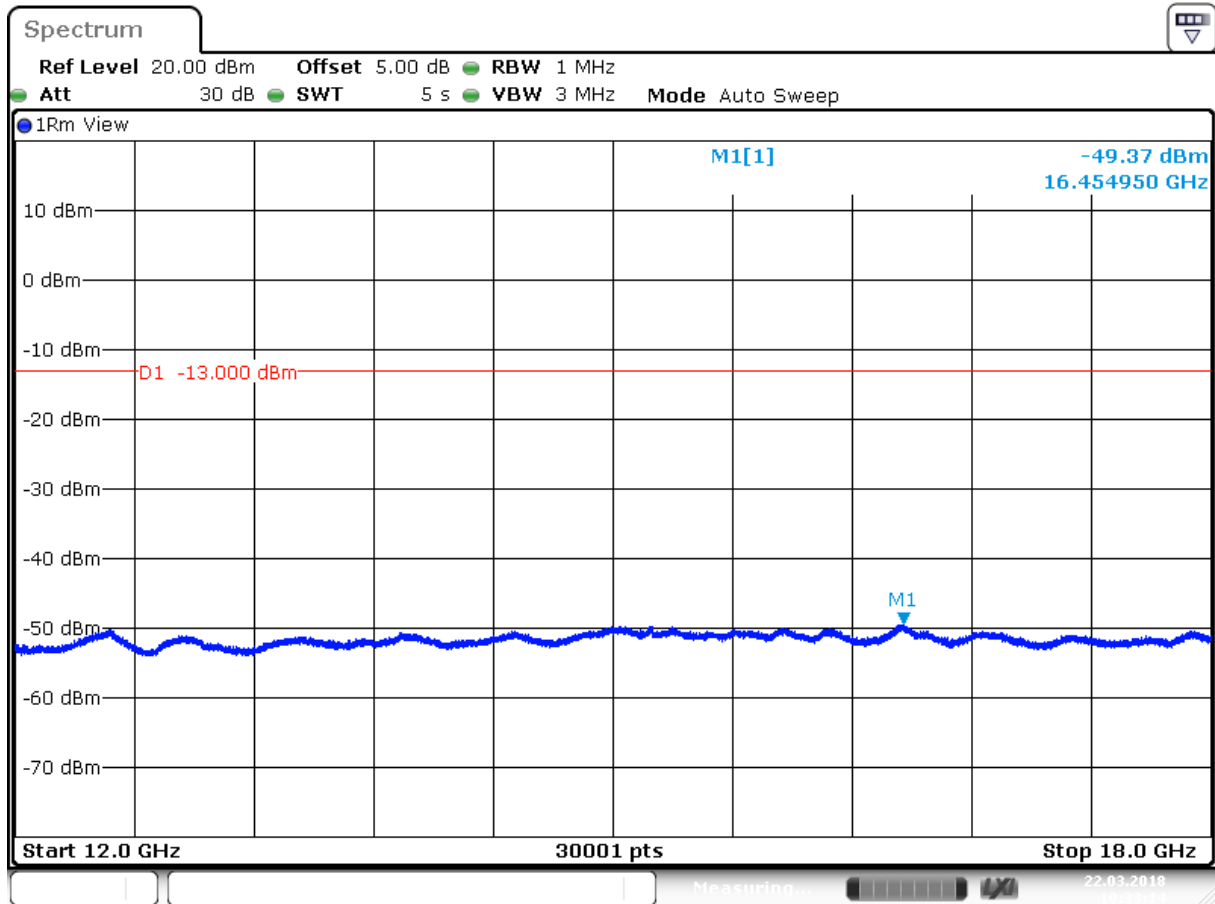
Date: 22 MAR 2018 10:32:08



Date: 22 MAR 2018 10:32:30

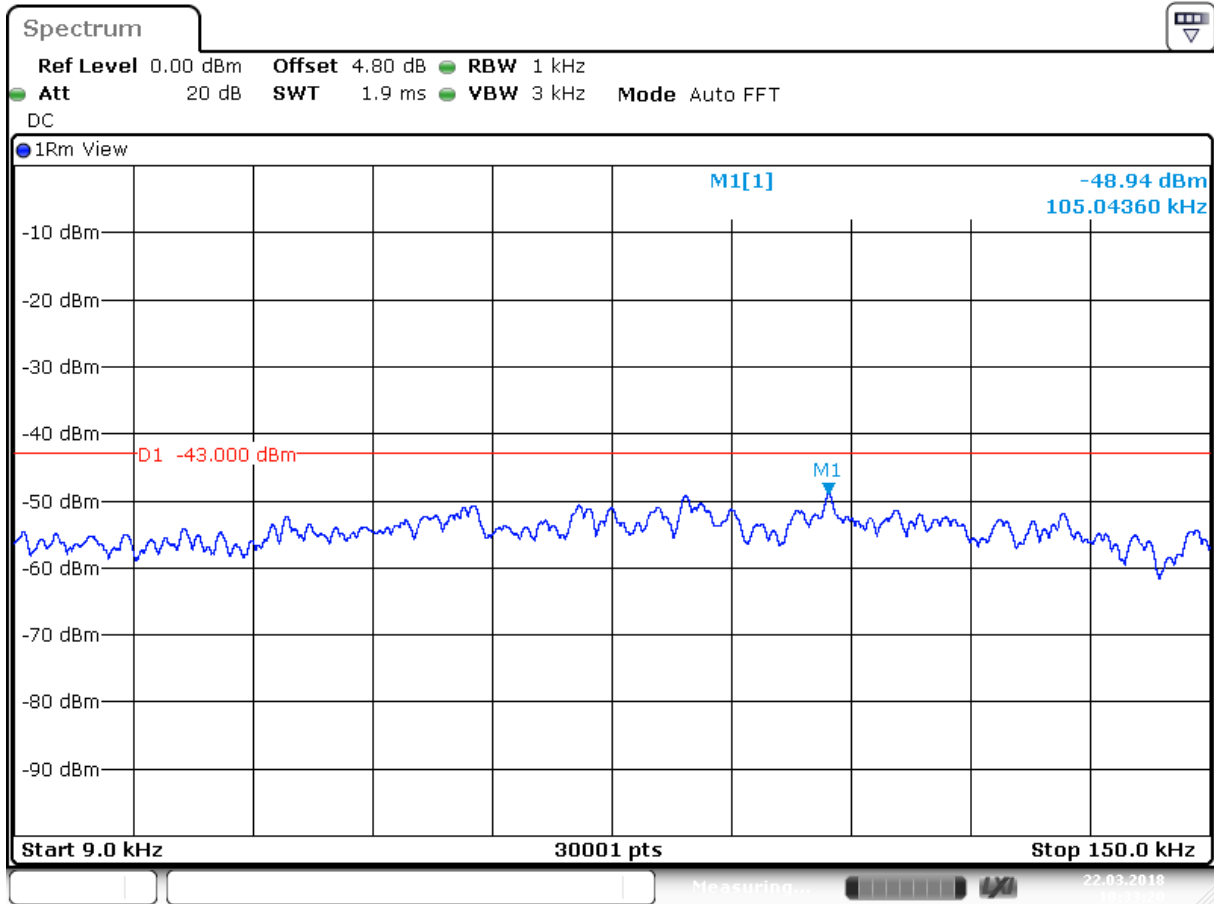


Date: 22 MAR 2018 10:32:52

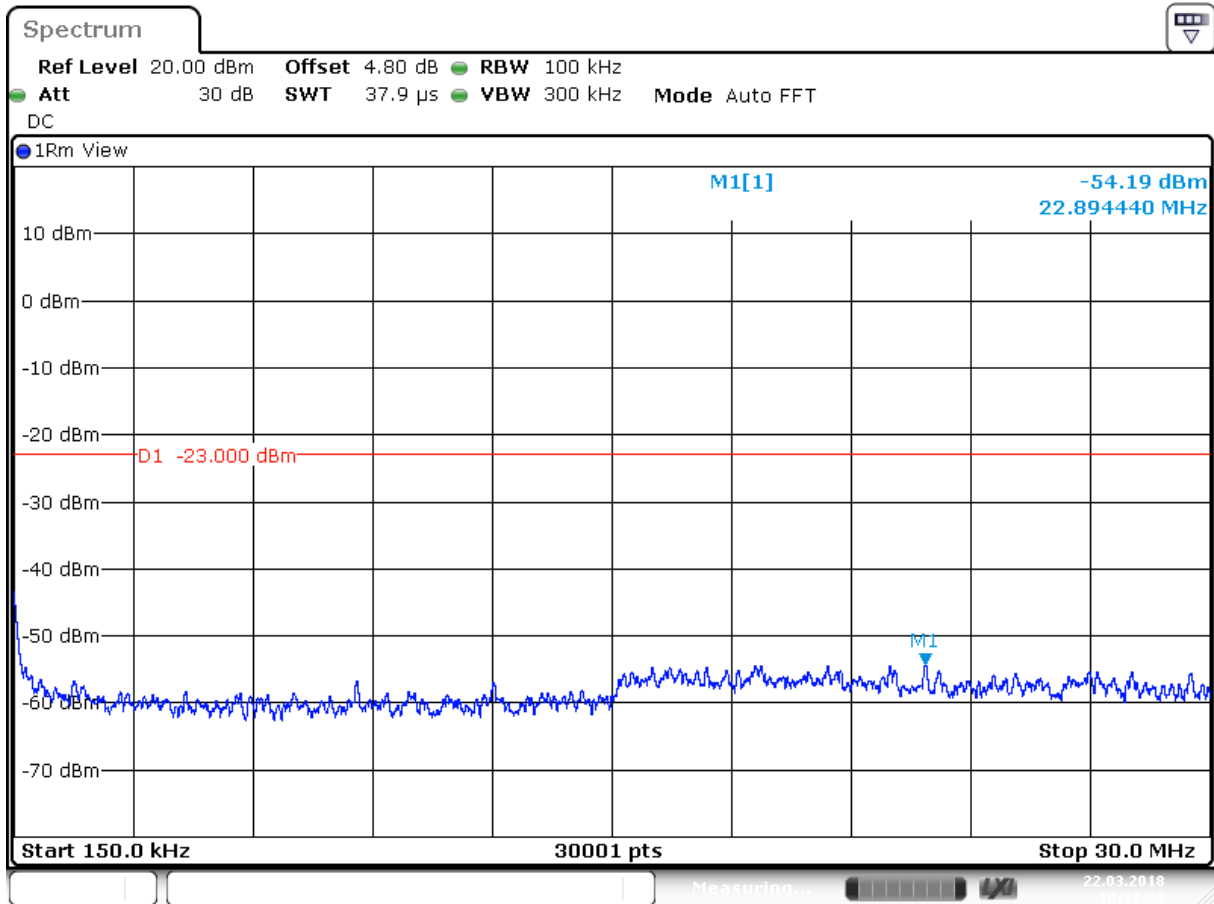


Date: 22 MAR 2018 10:33:14

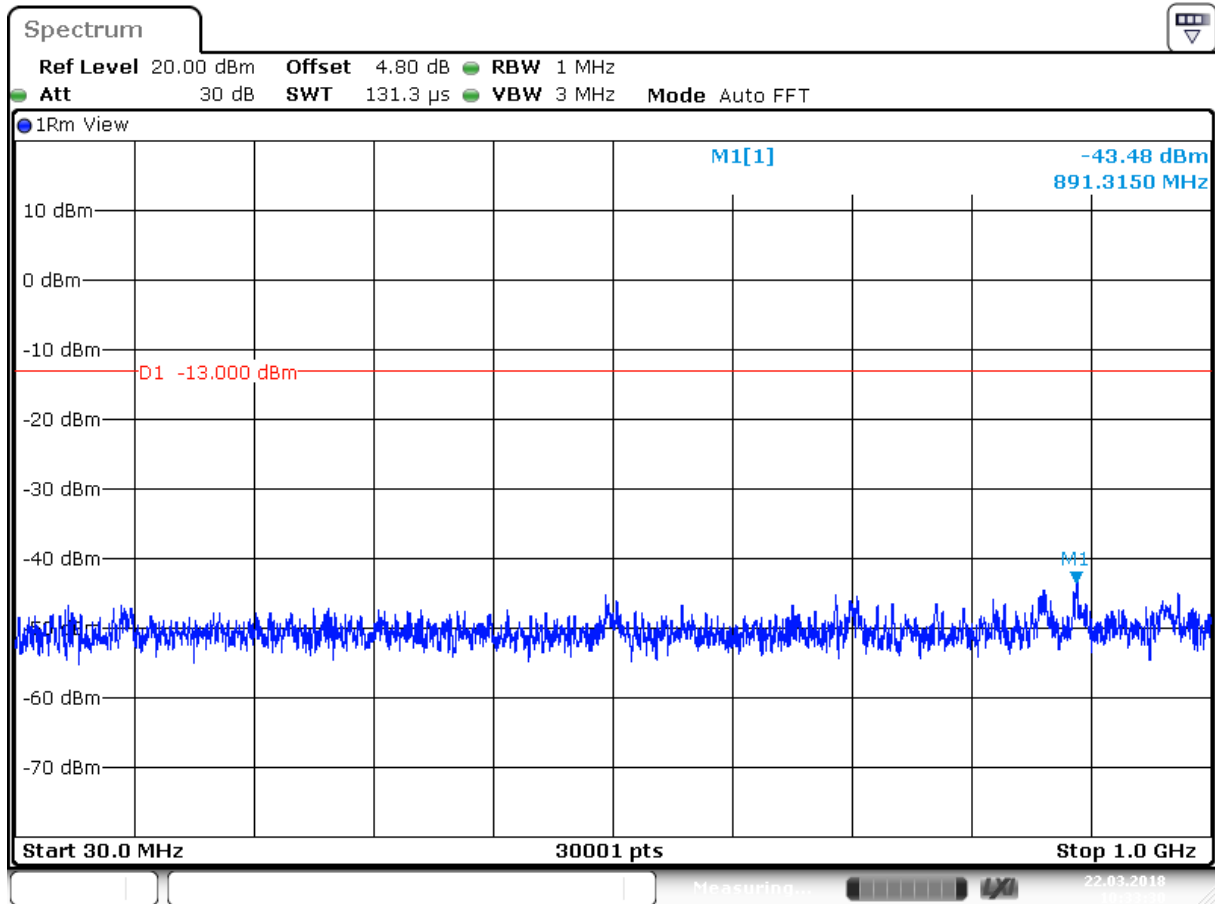
6.1.1.1.2 Test Channel = MCH



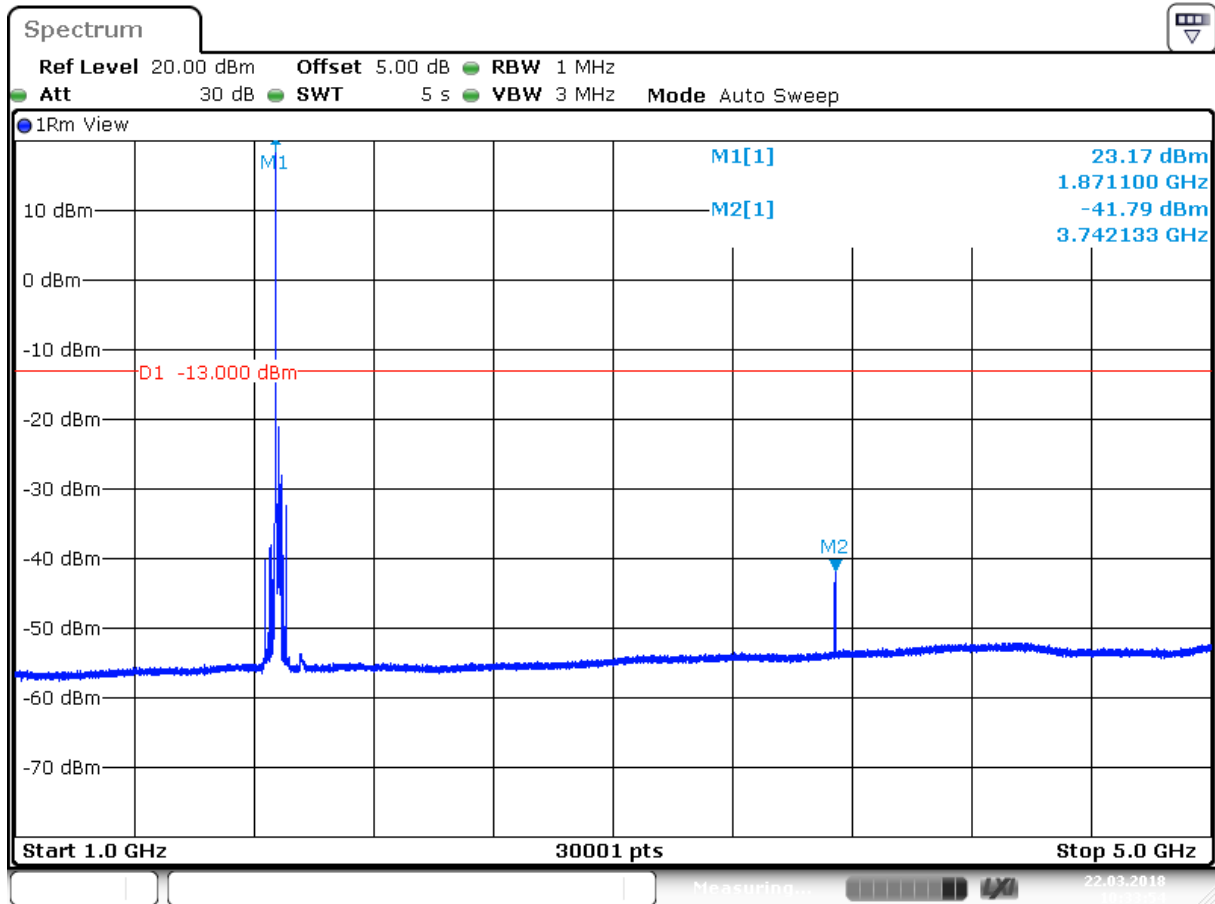
Date: 22 MAR. 2018 10:33:20



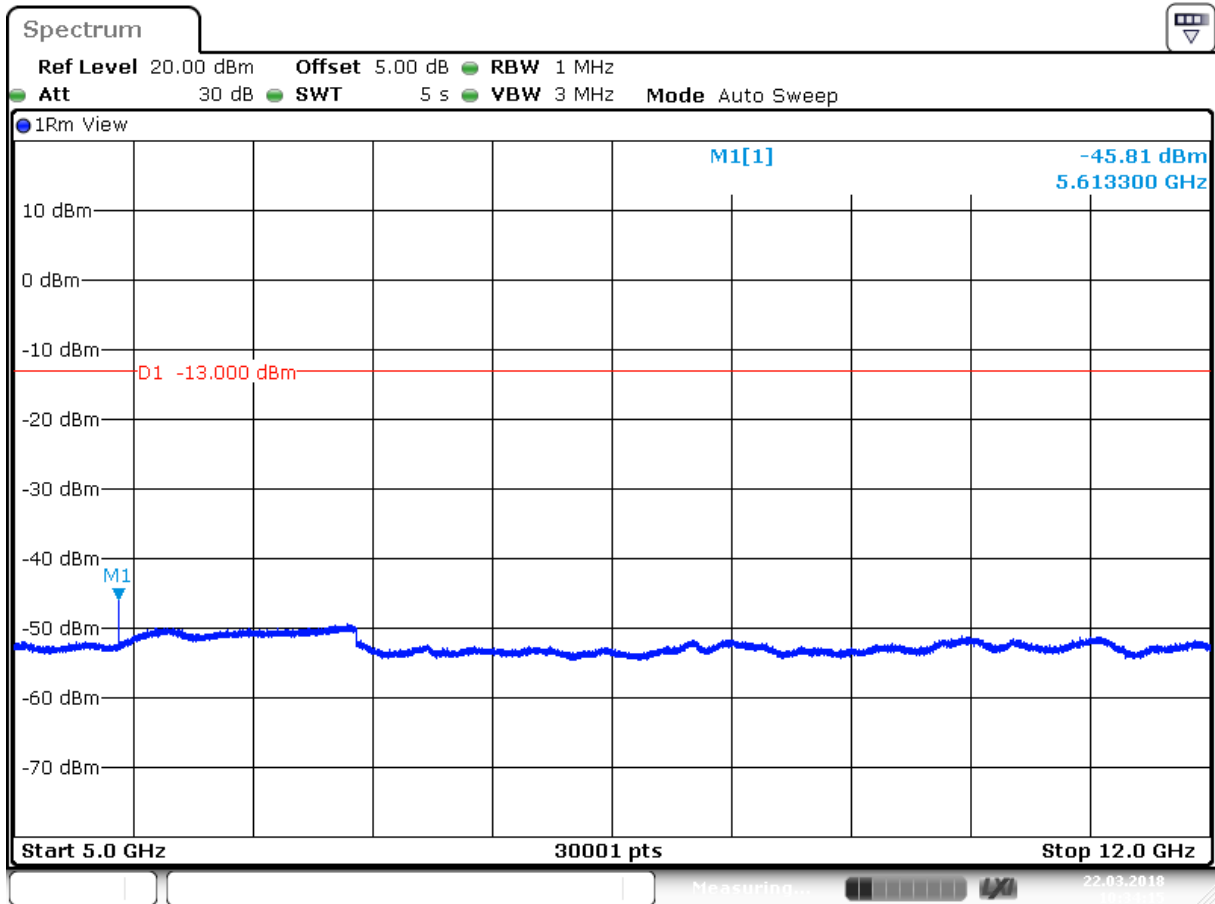
Date: 22 MAR 2018 10:33:26



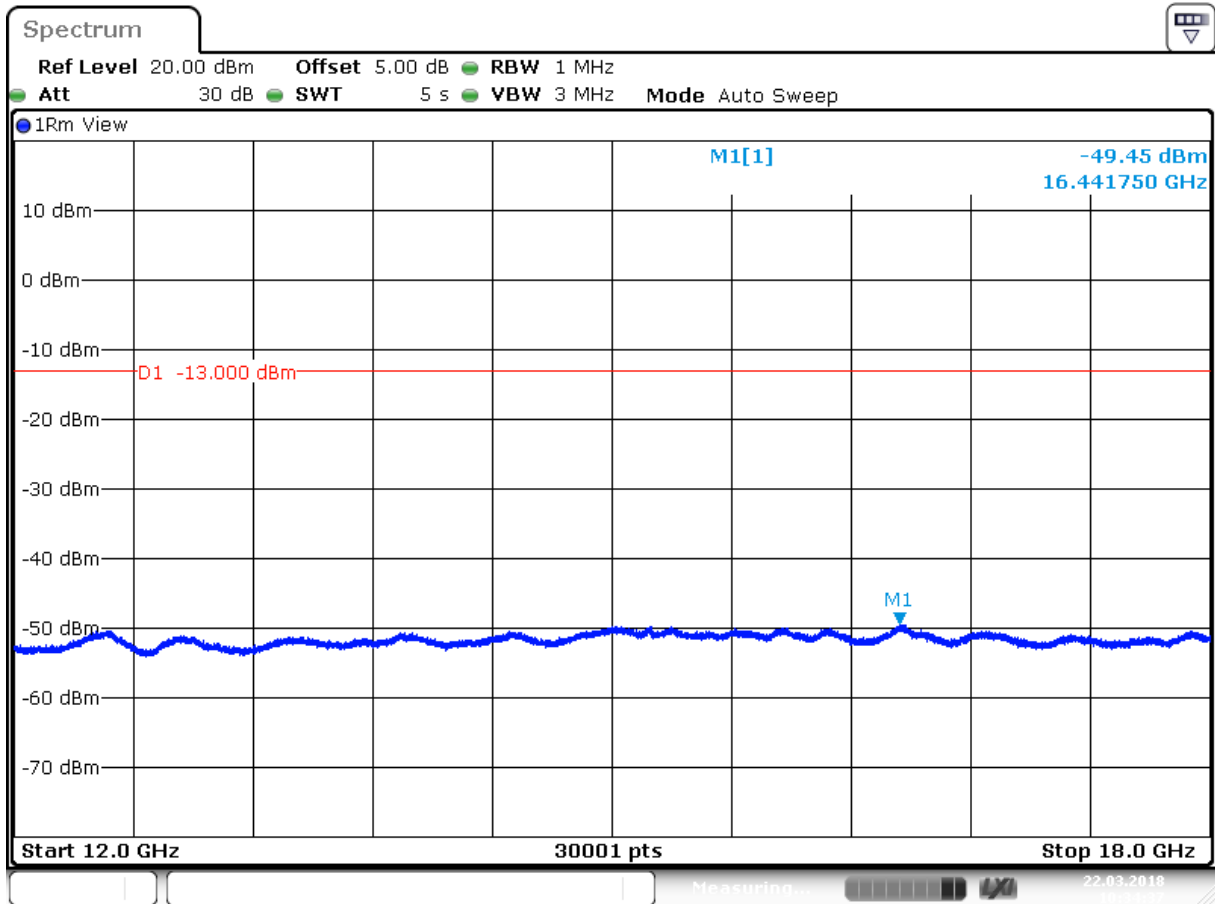
Date: 22 MAR 2018 10:33:31



Date: 22 MAR 2018 10:33:54



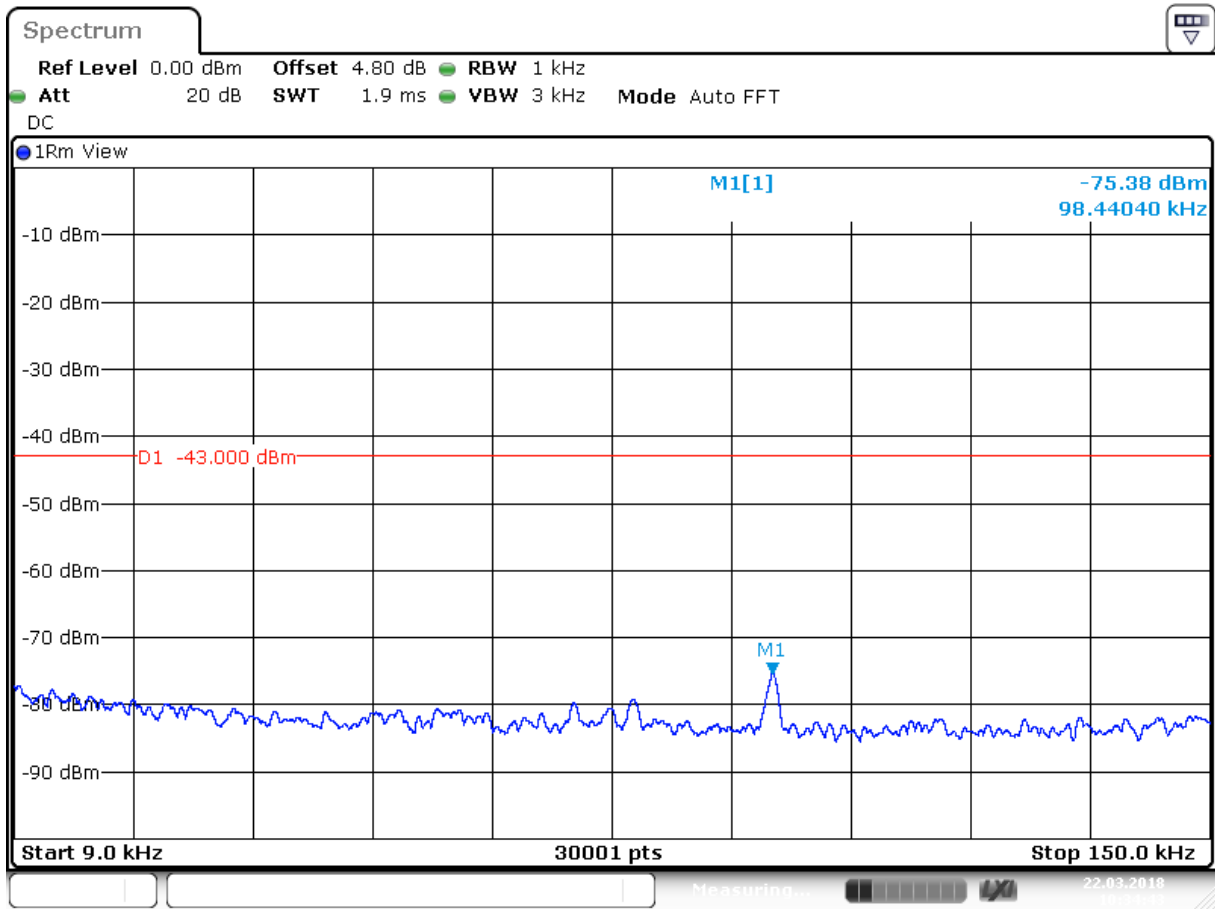
Date: 22 MAR 2018 10:34:16



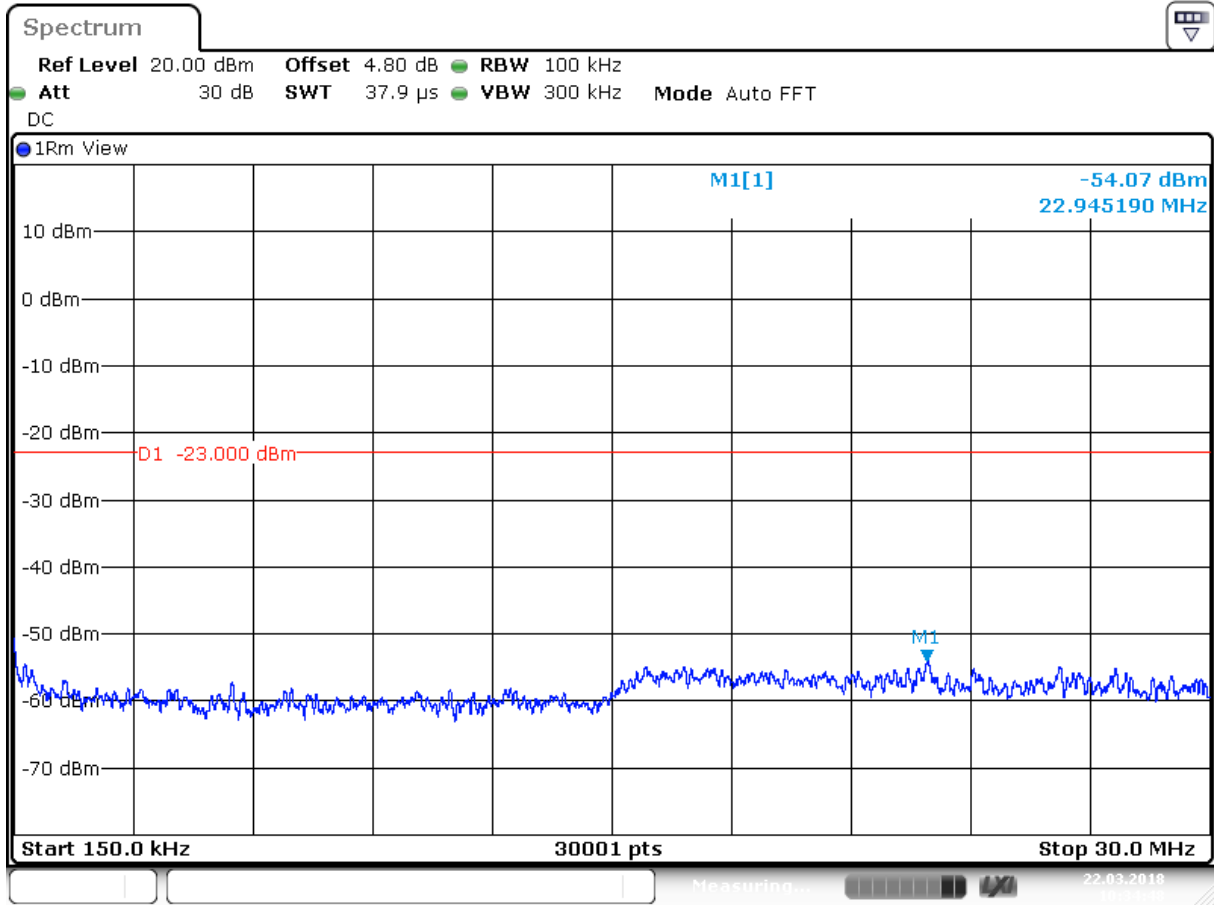
Date: 22 MAR 2018 10:34:38



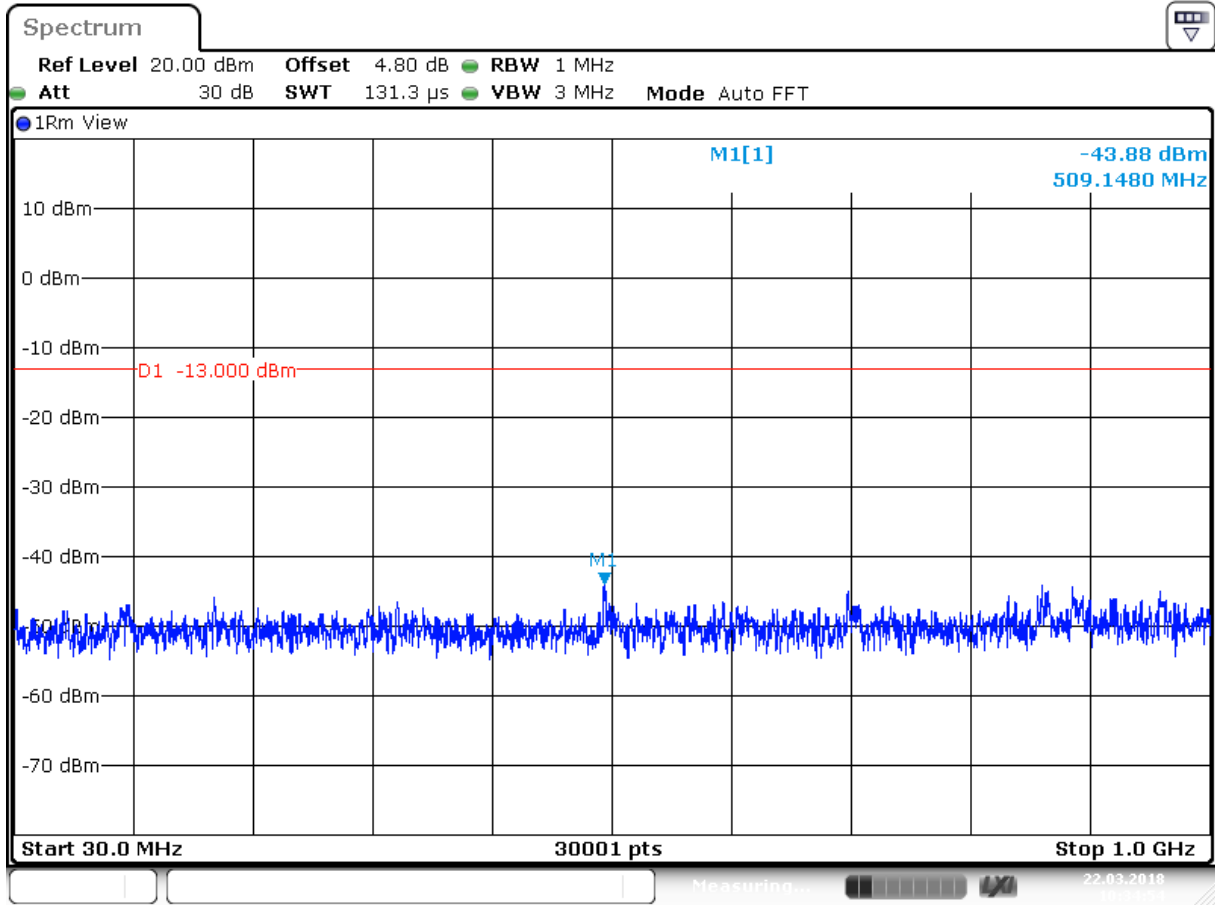
6.1.1.1.3 Test Channel = HCH



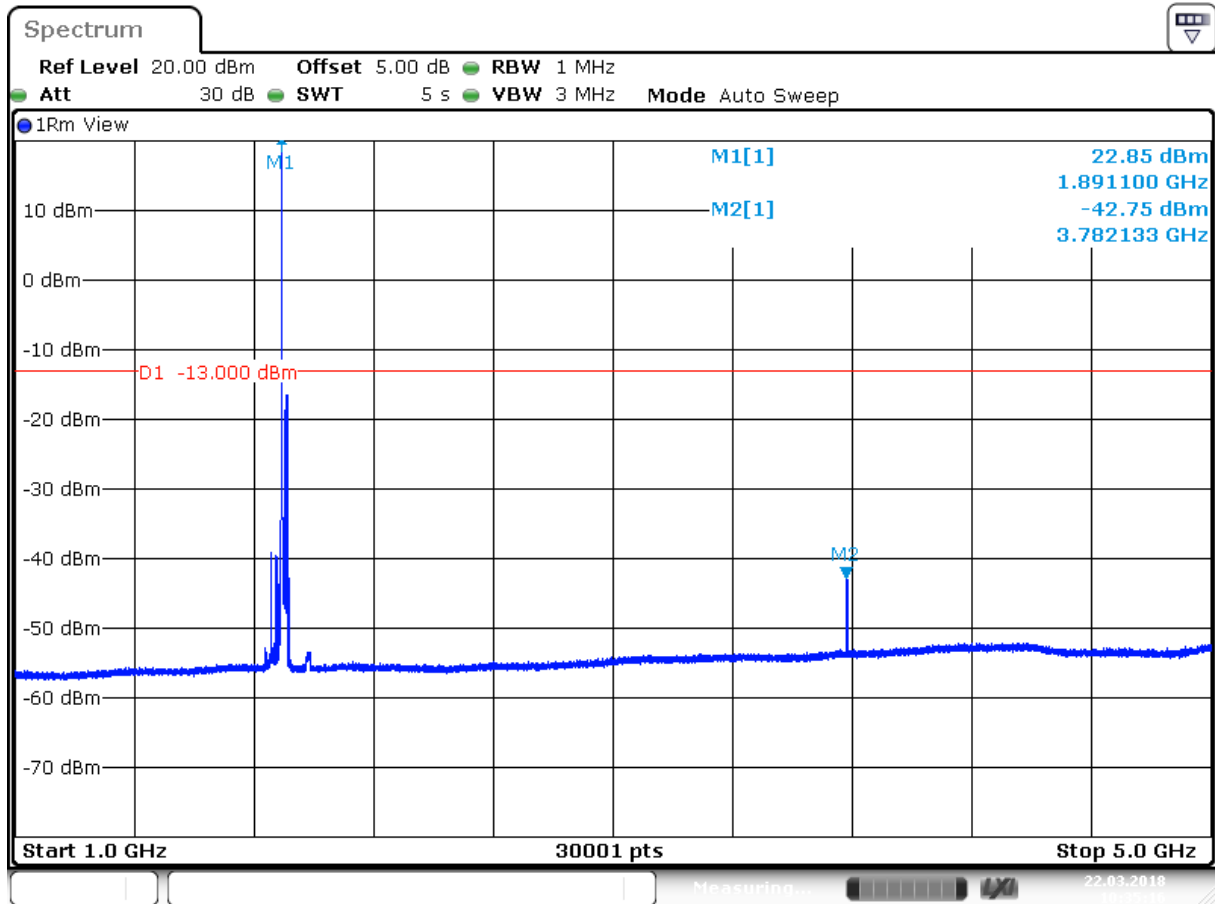
Date: 22 MAR. 2018 10:34:43



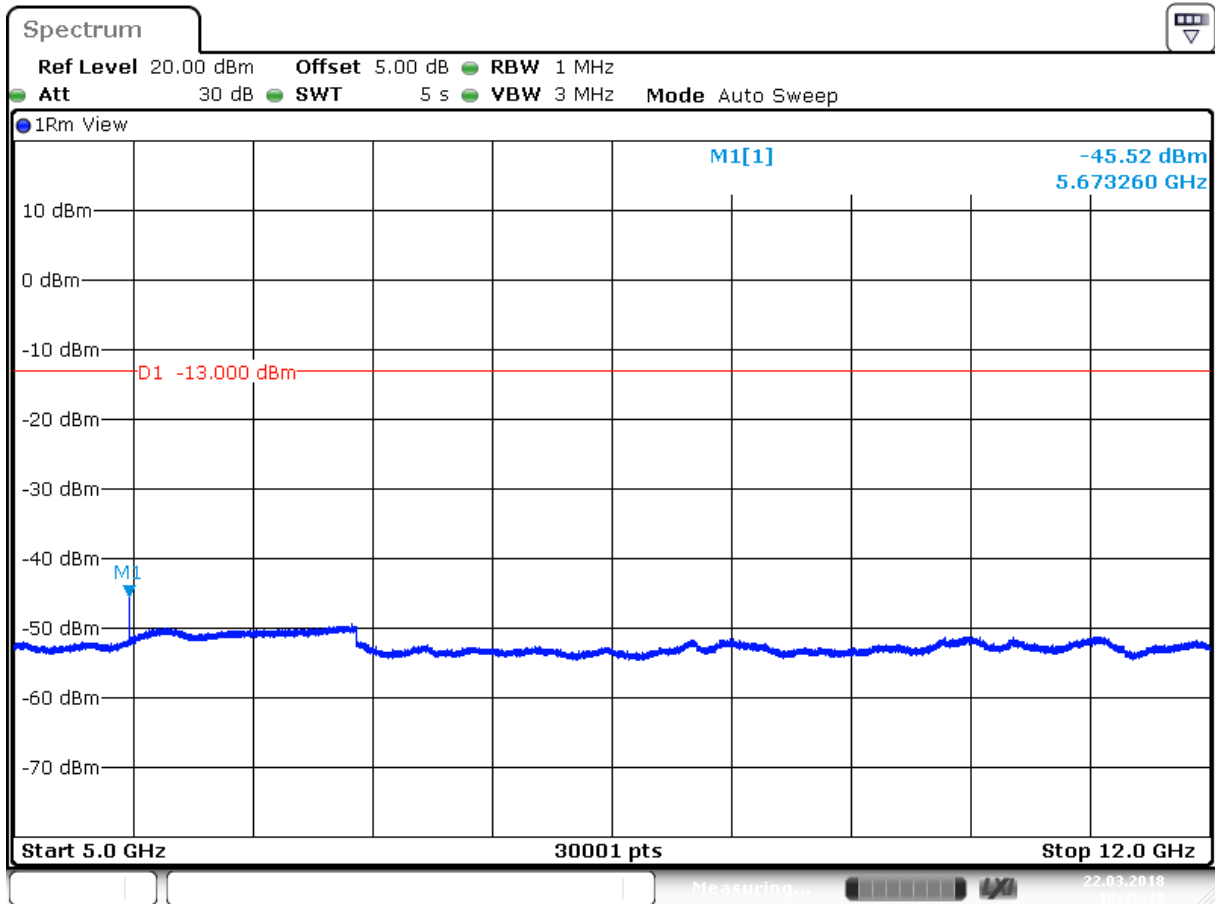
Date: 22 MAR 2018 10:34:49



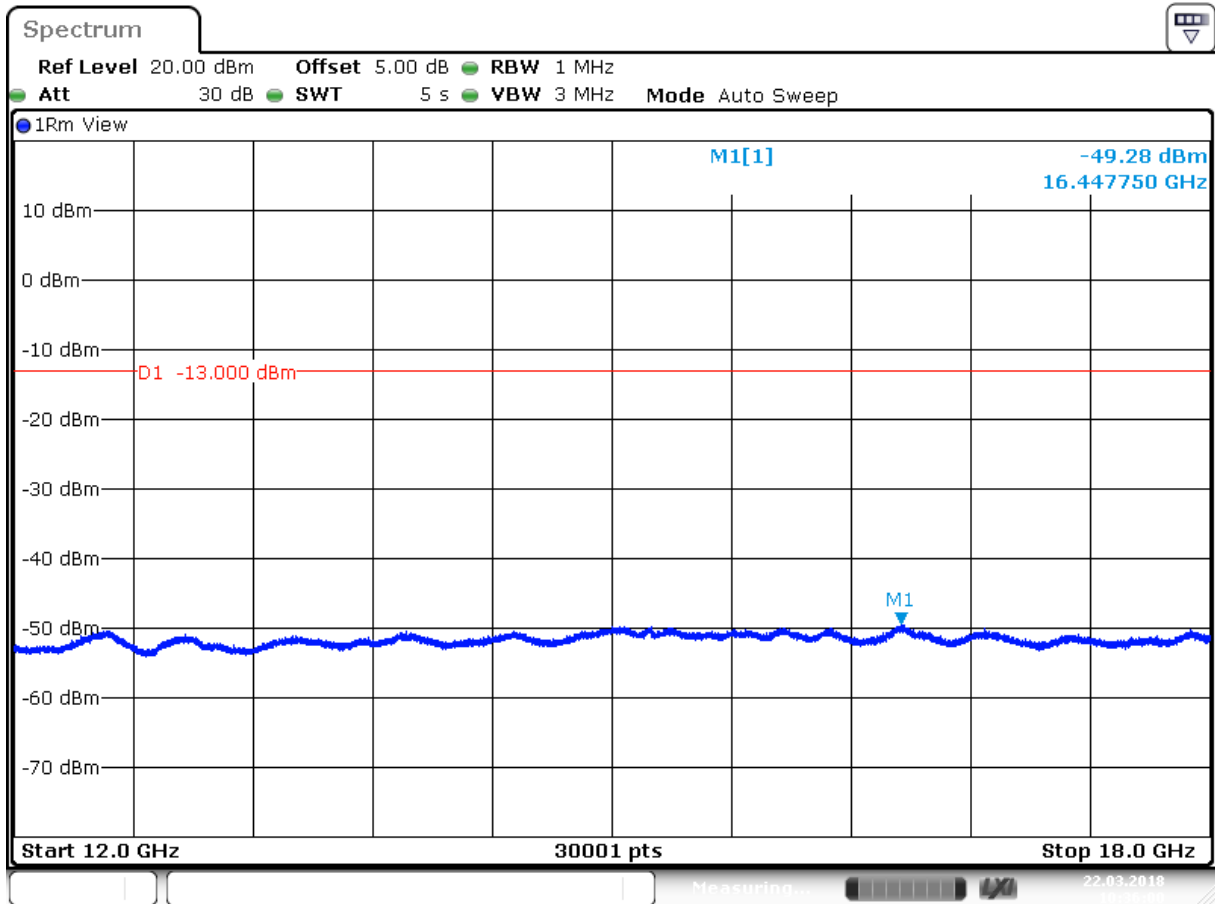
Date: 22 MAR 2018 10:34:54



Date: 22 MAR 2018 10:35:17



Date: 22 MAR 2018 10:35:39



Date: 22 MAR 2018 10:36:01



7 Field Strength of Spurious Radiation

7.1 For LTE

7.1.1 Test Band = LTE band2

7.1.1.1 Test Mode =LTE/TM1 20MHz RB1#0

7.1.1.1.1 Test Channel = LCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 89.150000 | -73.17 | -13.00 | 60.17 | Vertical |
| 345.600000 | -73.60 | -13.00 | 60.60 | Vertical |
| 1271.000000 | -66.48 | -13.00 | 53.48 | Vertical |
| 3702.000000 | -50.16 | -13.00 | 37.16 | Vertical |
| 5553.200000 | -48.82 | -13.00 | 35.82 | Vertical |
| 7404.400000 | -60.55 | -13.00 | 47.55 | Vertical |
| 90.150000 | -72.14 | -13.00 | 59.14 | Horizontal |
| 304.950000 | -67.91 | -13.00 | 54.91 | Horizontal |
| 1456.500000 | -61.12 | -13.00 | 48.12 | Horizontal |
| 3702.325000 | -49.06 | -13.00 | 36.06 | Horizontal |
| 5552.875000 | -56.03 | -13.00 | 43.03 | Horizontal |
| 7404.400000 | -60.78 | -13.00 | 47.78 | Horizontal |

7.1.1.1.2 Test Channel = MCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 88.100000 | -73.81 | -13.00 | 60.81 | Vertical |
| 345.600000 | -73.59 | -13.00 | 60.59 | Vertical |
| 1271.000000 | -66.48 | -13.00 | 53.48 | Vertical |
| 3741.975000 | -45.31 | -13.00 | 32.31 | Vertical |
| 5613.325000 | -56.22 | -13.00 | 43.22 | Vertical |
| 7484.025000 | -62.24 | -13.00 | 49.24 | Vertical |
| 63.300000 | -77.67 | -13.00 | 64.67 | Horizontal |
| 89.600000 | -72.95 | -13.00 | 59.95 | Horizontal |
| 309.950000 | -68.47 | -13.00 | 55.47 | Horizontal |
| 3741.975000 | -47.86 | -13.00 | 34.86 | Horizontal |
| 5613.000000 | -55.31 | -13.00 | 42.31 | Horizontal |
| 7484.350000 | -62.81 | -13.00 | 49.81 | Horizontal |

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7.1.1.1.3 Test Channel = HCH

| Frequency (MHz) | Level (dBm) | Limit Line (dBm) | Over Limit (dB) | Polarization |
|-----------------|-------------|------------------|-----------------|--------------|
| 89.650000 | -73.04 | -13.00 | 60.04 | Vertical |
| 345.600000 | -73.22 | -13.00 | 60.22 | Vertical |
| 2200.000000 | -59.27 | -13.00 | 46.27 | Vertical |
| 3781.950000 | -51.05 | -13.00 | 38.05 | Vertical |
| 5673.125000 | -54.32 | -13.00 | 41.32 | Vertical |
| 7564.300000 | -61.71 | -13.00 | 48.71 | Vertical |
| 88.150000 | -72.26 | -13.00 | 59.26 | Horizontal |
| 303.950000 | -68.11 | -13.00 | 55.11 | Horizontal |
| 2711.500000 | -57.57 | -13.00 | 44.57 | Horizontal |
| 3781.950000 | -50.80 | -13.00 | 37.80 | Horizontal |
| 5673.125000 | -54.71 | -13.00 | 41.71 | Horizontal |
| 7564.300000 | -63.50 | -13.00 | 50.50 | Horizontal |

NOTE:

- 1) The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.
- 2) We have tested all modulation, but only the worst case data presented in this report.



8 Frequency Stability

8.1 Frequency Error VS. Voltage

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|-----------|---------------|--------------|------------|------------|------------------|-----------------------|---------|
| LTEband2 | LTE/TM1 20MHz | LCH | TN | VL | -4.03 | -0.00217 | PASS |
| | | | | VN | 0.46 | 0.00025 | PASS |
| | | | | VH | -7.73 | -0.00416 | PASS |
| | | MCH | TN | VL | 1.49 | 0.00079 | PASS |
| | | | | VN | -2.84 | -0.00151 | PASS |
| | | | | VH | 2.63 | 0.00140 | PASS |
| | | HCH | TN | VL | -6.56 | -0.00345 | PASS |
| | | | | VN | -5.17 | -0.00272 | PASS |
| | | | | VH | -0.79 | -0.00042 | PASS |



8.2 Frequency Error VS. Temperature

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq. Error [Hz] | Freq. vs. rated [ppm] | Verdict |
|-----------|---------------|--------------|------------|------------|------------------|-----------------------|---------|
| LTEband2 | LTE/TM1 20MHz | LCH | VN | -30 | -0.40 | -0.00022 | PASS |
| | | | | -20 | -1.34 | -0.00072 | PASS |
| | | | | -10 | 2.38 | 0.00128 | PASS |
| | | | | 0 | 1.75 | 0.00094 | PASS |
| | | | | 10 | 1.65 | 0.00089 | PASS |
| | | | | 20 | 0.11 | 0.00006 | PASS |
| | | | | 30 | -0.31 | -0.00017 | PASS |
| | | | | 40 | -0.14 | -0.00008 | PASS |
| | | | | 50 | 0.59 | 0.00032 | PASS |
| | | MCH | VN | -30 | -7.80 | -0.00415 | PASS |
| | | | | -20 | -5.95 | -0.00316 | PASS |
| | | | | -10 | -7.49 | -0.00398 | PASS |
| | | | | 0 | -5.62 | -0.00299 | PASS |
| | | | | 10 | -4.04 | -0.00215 | PASS |
| | | | | 20 | -9.94 | -0.00529 | PASS |
| | | | | 30 | -5.66 | -0.00301 | PASS |
| | | | | 40 | -4.62 | -0.00246 | PASS |
| | | | | 50 | -6.92 | -0.00368 | PASS |
| | | HCH | VN | -30 | 0.54 | 0.00028 | PASS |
| | | | | -20 | -1.49 | -0.00078 | PASS |
| | | | | -10 | 1.53 | 0.00081 | PASS |
| | | | | 0 | -2.83 | -0.00149 | PASS |
| | | | | 10 | 2.60 | 0.00137 | PASS |
| | | | | 20 | -0.57 | -0.00030 | PASS |
| | | | | 30 | -2.66 | -0.00140 | PASS |
| | | | | 40 | -5.43 | -0.00286 | PASS |
| | | | | 50 | -8.90 | -0.00468 | PASS |

The End