




|  |  |  | Mode Auto Sweep <br> M1[1] |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 11 N 20 MIMO | t3_5700 |  |
|  |  |  | Mode Auto Sweep <br> M1[1] $\square$ |  |
|  |  | 11N20MIMO_Ant | 5720_UNI-2C |  |
|  |  | $\begin{array}{lr}\text { Offset } & 16.54 \mathrm{~dB} \\ \text { SWT } & 1 \mathrm{~ms}\end{array}=$ RBW 1 MHz $\qquad$ | Mode Auto Sweep <br> M1[1] <br> M2 M1 |  |
| 11N20MIMO_Ant3_5720_UNII-2C <br> Date: 3.APR. 2024 11:26:32 |  |  |  |  |
|  |  |  |  |  |









|  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 11N40MIMO_An | 5710_UNII-3 |  |
|  |  |  |  |  |
|  |  | 11N40MIMO | nt1_5755 |  |
|  |  |  | Mode Auto Sweep $\qquad$ |  |
|  |  | 11N40MIMO | Ant3_5755 |  |
|  |  |  |  |  |























|  |  |  | Mode Auto Sweep <br> M1[1] $\square$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 11AX80MIMO_An | 5690_UNI-2C |  |
|  |  |  | Mode Auto Sweep $\qquad$ <br> M1[1] $\square$ <br> ${ }^{5}$ |  |
|  |  | 11AX80MIMO_Ant3 | 5690_UNII-2C |  |
|  |  | $06$ <br> SWT <br> 29.1 <br> ms <br> VBW <br> 2 MHz $\square$ |  |  |
|  |  | 11AX80MIMO_Ant | t1_5690_UNII-3 |  |
|  |  |  |  |  |



### 11.6. APPENDIX F: FREQUENCY STABILITY

### 11.6.1. Test Result

| Frequency Error vs. Voltage |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 802.11a:5180MHz |  |  |  |  |  |  |  |  |  |
| Temp. | Volt. | 0 Minute |  | 2 Minute |  | 5 Minute |  | 10 Minute |  |
|  |  | $\begin{aligned} & \text { Freq. Error } \\ & (\mathrm{MHz}) \\ & \hline \end{aligned}$ | Tolerance (ppm) | $\begin{aligned} & \text { Freq. Error } \\ & (\mathrm{MHz}) \\ & \hline \end{aligned}$ | Tolerance (ppm) | $\begin{gathered} \text { Freq. Error } \\ (\mathrm{MHz}) \\ \hline \end{gathered}$ | Tolerance (ppm) | $\begin{gathered} \text { Freq. Error } \\ \text { (MHz) } \\ \hline \end{gathered}$ | Tolerance (ppm) |
| TN | VL | 5180.0217 | 4.19 | 5179.9940 | -1.16 | 5180.0231 | 4.46 | 5180.0050 | 0.97 |
| TN | VN | 5179.9818 | -3.51 | 5180.0150 | 2.89 | 5179.9758 | -4.67 | 5180.0116 | 2.24 |
| TN | VH | 5179.9769 | -4.45 | 5179.9774 | -4.37 | 5179.9957 | -0.83 | 5180.0032 | 0.61 |
| Frequency Error vs. Temperature |  |  |  |  |  |  |  |  |  |
| 802.11a:5180MHz |  |  |  |  |  |  |  |  |  |
|  |  | 0 Minute |  | 2 Minute |  | 5 Minute |  | 10 Minute |  |
| Temp. | Volt. | Freq.Error $(\mathrm{MHz})$ | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | $\begin{gathered} \text { Freq.Error } \\ (\mathrm{MHz}) \end{gathered}$ | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 70 | VN | 5179.9772 | -4.39 | 5179.9905 | -1.83 | 5179.9867 | -2.56 | 5179.9968 | -0.62 |
| 60 | VN | 5179.9942 | -1.12 | 5179.9888 | -2.16 | 5179.9959 | -0.79 | 5179.9847 | -2.96 |
| 50 | VN | 5179.9815 | -3.57 | 5180.0200 | 3.86 | 5180.0100 | 1.93 | 5179.9793 | -3.99 |
| 40 | VN | 5179.9762 | -4.60 | 5179.9774 | -4.36 | 5180.0174 | 3.36 | 5180.0152 | 2.94 |
| 30 | VN | 5179.9924 | -1.47 | 5180.0249 | 4.80 | 5180.0170 | 3.28 | 5179.9786 | -4.14 |
| 20 | VN | 5180.0065 | 1.26 | 5179.9864 | -2.63 | 5179.9852 | -2.86 | 5180.0175 | 3.38 |
| 10 | VN | 5180.0208 | 4.02 | 5179.9854 | -2.83 | 5180.0236 | 4.55 | 5179.9850 | -2.89 |
| 0 | VN | 5180.0072 | 1.39 | 5179.9786 | -4.14 | 5179.9834 | -3.21 | 5180.0062 | 1.20 |

Note:

1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 7.5 TEST ENVIRONMENT.

| Frequency Error vs. Voltage |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 802.11a:5825MHz |  |  |  |  |  |  |  |  |  |
| Temp. | Volt. | 0 Minute |  | 2 Minute |  | 5 Minute |  | 10 Minute |  |
|  |  | Freq.Error $(\mathrm{MHz})$ | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| TN | VL | 5824.9900 | -1.72 | 5825.0060 | 1.03 | 5824.9901 | -1.71 | 5824.9926 | -1.27 |
| TN | VN | 5825.0099 | 1.70 | 5824.9782 | -3.74 | 5825.0054 | 0.93 | 5824.9912 | -1.50 |
| TN | VH | 5825.0174 | 2.98 | 5825.0216 | 3.71 | 5825.0141 | 2.42 | 5825.0203 | 3.48 |
| Frequency Error vs. Temperature |  |  |  |  |  |  |  |  |  |
| 802.11a:5825MHz |  |  |  |  |  |  |  |  |  |
| Temp. | Volt. | 0 Minute |  | 2 Minute |  | 5 Minute |  | 10 Minute |  |
|  |  | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | $\begin{gathered} \text { Freq.Error } \\ (\mathrm{MHz}) \end{gathered}$ | Tolerance (ppm) |
| 70 | VN | 5825.0153 | 2.64 | 5824.9807 | -3.31 | 5825.0111 | 1.91 | 5825.0248 | 4.26 |
| 60 | VN | 5825.0107 | 1.84 | 5824.9981 | -0.33 | 5824.9996 | -0.07 | 5825.0155 | 2.66 |
| 50 | VN | 5825.0037 | 0.64 | 5825.0218 | 3.74 | 5824.9824 | -3.02 | 5825.0170 | 2.92 |
| 40 | VN | 5825.0097 | 1.67 | 5825.0092 | 1.58 | 5824.9930 | -1.21 | 5825.0168 | 2.88 |
| 30 | VN | 5825.0222 | 3.82 | 5824.9959 | -0.70 | 5824.9875 | -2.14 | 5824.9931 | -1.19 |
| 20 | VN | 5825.0128 | 2.20 | 5825.0180 | 3.10 | 5824.9916 | -1.44 | 5825.0010 | 0.17 |
| 10 | VN | 5824.9780 | -3.78 | 5825.0117 | 2.01 | 5825.0169 | 2.90 | 5825.0206 | 3.54 |
| 0 | VN | 5825.0003 | 0.04 | 5824.9838 | -2.77 | 5825.0154 | 2.65 | 5825.0224 | 3.85 |

Note:

1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 7.5 TEST ENVIRONMENT.

### 11.7. APPENDIX G: DUTY CYCLE

### 11.7.1. Test Result

| Test Mode | On Time <br> $(\mathrm{msec})$ | Period <br> $(\mathrm{msec})$ | Duty <br> Cycle <br> x <br> $($ Linear $)$ | Duty <br> Cycle <br> $(\%)$ | Duty Cycle <br> Correction <br> Factor <br> $(\mathrm{dB})$ | 1/T <br> Minimum <br> VBW <br> $(\mathrm{kHz})$ | Final <br> setting <br> For VBW <br> $(\mathrm{kHz})$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11A | 1.34 | 1.84 | 0.7283 | 72.83 | 1.38 | 0.75 | 1 |
| 11N20MIMO | 1.25 | 1.75 | 0.7143 | 71.43 | 1.46 | 0.80 | 1 |
| 11N40MIMO | 0.62 | 1.12 | 0.5536 | 55.36 | 2.57 | 1.61 | 2 |
| 11AC80MIMO | 0.31 | 0.8 | 0.3875 | 38.75 | 4.12 | 3.23 | 4 |
| 11AX20MIMO | 1.15 | 1.65 | 0.6970 | 69.70 | 1.57 | 0.87 | 1 |
| 11AX40MIMO | 0.63 | 1.12 | 0.5625 | 56.25 | 2.50 | 1.59 | 2 |
| 11AX80MIMO | 0.32 | 0.82 | 0.3902 | 39.02 | 4.09 | 3.13 | 4 |

## Note:

Duty Cycle Correction Factor=10log (1/x).
Where: x is Duty Cycle (Linear)
Where: T is On Time
If that calculated VBW is not available on the analyzer then the next higher value should be used.

### 11.7.2. Test Graphs




### 11.8. APPENDIX H: CALIBRATION

ype Result See test Graph Verdict

11.9. APPENDIX I: SHUTDOWN TIME

| Mode | Frequency <br> (MHz) | Channel <br> Move <br> Time (s) | Limit <br> Channel <br> Move <br> Time (s) | Close <br> Transmission <br> Time (s) | Limit Close <br> Transmission <br> Time (s) | Close <br> Transmission <br> Time after <br> $\mathbf{2 0 0 m s ( s )}$ | Limit Close <br> Transmission <br> Time after <br> $\mathbf{2 0 0 m s}(\mathbf{s})$ | Verdict |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ax80 | 5530 | 0.513 | 10 | 0.008 | 0.26 | 0.005 | 0.06 | Pass |

Note: refer to KDB 905462 D02 table 2, this report only records the widest BW mode test data.


### 11.10. APPENDIX J: NON-OCCUPANCY

| Mode | Frequency (MHz) | Result | Verdict |
| :---: | :---: | :---: | :---: |
| ax80 | 5530 | See test Graph | Pass |

Note: refer to KDB 905462 D02 table 2, this report only records the widest BW mode test data.


## END OF REPORT

