

Plot 7-1299. Radiated spurious emission_30 MHz to 1000 MHz (Multi Band_B2_5M+5M+5M_3C_High + B6 $\mathbf{6}$ _ $5 \mathrm{M}+5 \mathrm{M}+5 \mathrm{M}$ _3C_Low)


Plot 7-1300. Radiated spurious emission_1 GHz to 18 GHz (Multi Band_B2_5M+5M+5M_3C_High + B66_5M+5M+5M_3C_Low)


Plot 7-1301. Radiated spurious emission 18 GHz to 22 GHz (Multi Band_B2_5M+5M+5M_3C_High + B66_5M+5M+5M_3C_Low)

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | SIMSUNA | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: <br> 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 414 of 430 |

07/19/2021-08/18/2021


Plot 7-1302. Radiated spurious emission_30 MHz to 1000 MHz (Multi Band_B2_5M+5M+5M_3C - Non-contiguous + B66_5M+5M+5M_3C - Non-contiguous)


Plot 7-1303. Radiated spurious emission_1 GHz to 18 GHz (Multi Band_B2_5M+5M+5M_3C - Non-contiguous + B66_5M+5M+5M_3C - Non-contiguous)


Plot 7-1304. Radiated spurious emission_18 GHz to 22 GHz
(Multi Band_B2_5M+5M+5M_3C - Non-contiguous + B66_5M+5M+5M_3C - Non-contiguous)

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | shmsuna | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: <br> 07/19/2021-08/18/2021 | EUT Type: <br> RRU(RF4437d) |  | Page 415 of 430 |


| Bandwidth $(\mathrm{MHz}):$ | B2_5MHz + B66_5MHz |
| :---: | :---: |
| Frequency $(\mathrm{MHz}):$ | $1^{\text {st }}$ Carrier : B2_1932.5 |
| Modulation Signal: | QPSK |


| Frequency <br> $[\mathrm{MHz}]$ | Ant. Pol. <br> $[\mathrm{H} / \mathrm{V}]$ | Antenna <br> Heigh <br> $[\mathrm{cm}]$ | Turntable <br> azimuth <br> $[\mathrm{degree}]$ | Analyzer Level <br> $[\mathrm{dBm}]$ | AFCL <br> $[\mathrm{dBm}]$ | Field Stength <br> $[\mathrm{dB} / \mathrm{N} / \mathrm{m}]$ | RSE EIRP <br> $[\mathrm{dBm}]$ | Limit <br> $[\mathrm{dBm}]$ | Margin <br> $[\mathrm{dB}]$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 988.12 | H | 140 | 120 | -81.64 | 26.10 | 51.50 | -43.77 | -13.00 | -30.77 |
| 989.47 | V | 180 | 150 | -81.25 | 26.11 | 51.90 | -43.37 | -13.00 | -30.37 |
| 17982.45 | H | 180 | 50 | -79.82 | 34.65 | 61.80 | -33.40 | -13.00 | -20.40 |
| 17991.28 | V | 210 | 180 | -80.03 | 34.65 | 61.60 | -33.61 | -13.00 | -20.61 |

Table 7-256. Radiated transmitter Emission Table (Multi Band_B2_5M_1C_Low + B66_5M_1C_High)

| FCC ID: A3LRF4437D-25D | 界 PCTEST | MEASUREMENT REPORT | SHMSUNE | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 416 of 430 |

## $7.9 \quad$ Frequency Stability

§ 2.1055

## Test Overview and Limit

Frequency stability testing is performed in accordance with the guidelines of KDB 971168 D01 v03r01. The frequency stability of the transmitter is measured by:
a.) Temperature: The temperature is varied from $-30^{\circ} \mathrm{C},+20^{\circ} \mathrm{C}$ and $+50^{\circ} \mathrm{C}$ using an environmental chamber.
b.) Primary Supply Voltage: The primary supply voltage is varied from $85 \%$ to $115 \%$ of the nominal value for DC powered equipment.

## Test Description

1. The carrier frequency of the transmitter is measured at room temperature $\left(20^{\circ} \mathrm{C}\right.$ to provide a reference).
2. The equipment is turned on in a "standby" condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made $-30^{\circ} \mathrm{C},+20^{\circ} \mathrm{C}$ and $+50^{\circ} \mathrm{C}$. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

## Limit

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

## Test Setup

The EUT was connected via an RF cable to a spectrum analyzer with the EUT placed inside an environmental chamber.


Figure 7-9. Test Instrument \& Measurement Setup

## Test Notes

None.

| FCC ID: A3LRF4437D-25D | 界 PCTEST | MEASUREMENT REPORT | SAMSUNE | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: $07 / 19 / 2021-08 / 18 / 2021$ | EUT Type: RRU(RF4437d) |  | Page 417 of 430 |

$\begin{aligned} & \text { OPERATING FREQUENCY: } 1,960,000,000 \\ & \text { REFERENCE VOLTAGE: } \mathrm{Hz} \\ & 110.00 \\ &\end{aligned}$

| VOLTAGE <br> (\%) | $\begin{array}{\|l} \hline \text { POWER } \\ \text { (VAC) } \end{array}$ | TEMP <br> $\left({ }^{\circ} \mathrm{C}\right)$ | $\begin{gathered} \text { FREQUENCY } \\ (H z) \end{gathered}$ | Freq. Dev. (Hz) | Deviation (\%) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 100 \% | 110.00 | + 20 (Ref) | 1,960,029,967 | 0 | 0.0000000 |
| 100 \% |  | - 30 | 1,960,029,957 | -10 | -0.0000005 |
| 100 \% |  | - 20 | 1,960,029,960 | -7 | -0.0000004 |
| $100 \%$ |  | -10 | 1,960,029,963 | -4 | -0.0000002 |
| 100 \% |  | 0 | 1,960,029,968 | 1 | 0.0000001 |
| 100 \% |  | + 10 | 1,960,029,979 | 12 | 0.0000006 |
| $100 \%$ |  | + 20 | 1,960,029,967 | 0 | 0.0000000 |
| 100 \% |  | + 30 | 1,960,029,968 | 1 | 0.0000001 |
| $100 \%$ |  | + 40 | 1,960,029,961 | -6 | -0.0000003 |
| 100 \% |  | + 50 | 1,960,029,965 | -2 | -0.0000001 |
| 85 \% | 93.50 | + 20 | 1,960,029,970 | 3 | 0.0000002 |
| 115 \% | 126.50 | + 20 | 1,960,029,970 | 3 | 0.0000002 |

Table 7-257. Frequency Stability Data - Band 2_5 MHz 1C Mid Channel


Figure 7-10. Frequency Stability Graph - Band 2_5 MHz 1C Mid Channel

| FCC ID: A3LRF4437D-25D | F1PCTEST | MEASUREMENT REPORT | nmsuna | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 418 of 430 |

OPERATING FREQUENCY:
REFERENCE VOLTAGE: $\qquad$ Hz
110.00 VAC

| VOLTAGE <br> (\%) | POWER <br> (VAC) | TEMP $\left({ }^{\circ} \mathrm{C}\right)$ | FREQUENCY $(\mathrm{Hz})$ | $\begin{gathered} \hline \text { Freq. Dev. } \\ (H z) \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { Deviation } \\ (\%) \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 100 \% | 110.00 | + 20 (Ref) | 2,145,029,970 | 0 | 0.0000000 |
| $100 \%$ |  | - 30 | 2,145,029,953 | -17 | -0.0000008 |
| 100 \% |  | - 20 | 2,145,029,959 | -11 | -0.0000005 |
| 100 \% |  | -10 | 2,145,029,961 | -9 | -0.0000004 |
| 100 \% |  | 0 | 2,145,029,969 | -1 | 0.0000000 |
| 100 \% |  | + 10 | 2,145,029,967 | -3 | -0.0000001 |
| 100 \% |  | + 20 | 2,145,029,970 | 0 | 0.0000000 |
| 100 \% |  | + 30 | 2,145,029,965 | -5 | -0.0000002 |
| 100 \% |  | + 40 | 2,145,029,957 | -13 | -0.0000006 |
| 100 \% |  | + 50 | 2,145,029,961 | -9 | -0.0000004 |
| 85 \% | 93.50 | + 20 | 2,145,029,966 | -4 | -0.0000002 |
| 115 \% | 126.50 | + 20 | 2,145,029,941 | -29 | -0.0000014 |

Table 7-258. Frequency Stability Data - Band 66_5 MHz 1C Mid Channel


Figure 7-11. Frequency Stability Graph - Band 66_5 MHz 1C Mid Channel

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | snmsuna | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 419 of 430 |

### 8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the Samsung RRU(RF4437d) FCC ID: A3LRF4437D-25D complies with all of the requirements of Part 24, and 27 FCC Rules.

| FCC ID: A3LRF4437D-25D | F-PCTEST | MEASUREMENT REPORT | SIMSUNE | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: <br> RRU(RF4437d) |  | Page 420 of 430 |

### 9.0 APPENDIX A

### 9.1 Introduction (KDB 484596 Section 3 a)

The applicant takes full responsibility that the test data as referenced FCC ID : A3LRF4437D-25C represents compliance for FCC ID : A3LRF4437D-25D

### 9.2 Explain the Differences (KDB 484596 Section 3 b)

FCC ID : A3LRF4437D-25C is powered by DC voltage source. For FCC ID : A3LRF4437D-25D is powered by AC voltage source which is only different power supply condition that no affect to RF parameters because other components are identical except for power supply.

### 9.3 Spot Check Verification Data (KDB 484596 Section 3 c)

Spot check verification was adopted to the following two test cases to check whether it is changed by power supply difference. As a result, the For FCC ID : A3LRF4437D-25D And For FCC ID : A3LRF4437D-25C test result can be identical because both are using same RF components.

- Case \#1 : B2_5M_1C
- Case \#2 : B66_5M_1C

| FCC ID: A3LRF4437D-25D | F\|PCTEST | MEASUREMENT REPORT | SAMSUNA | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: $07 / 19 / 2021-08 / 18 / 2021$ | EUT Type: RRU(RF4437d) |  | Page 421 of 430 |


| Channel | Port | OBW (MHz) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | QPSK | 16QAM | 64QAM | 256QAM |
| Low | 0 | 4.49 | 4.48 | 4.49 | 4.49 |
|  | 1 | 4.49 | 4.48 | 4.49 | 4.49 |
|  | 2 | 4.48 | 4.49 | 4.49 | 4.49 |
|  | 3 | 4.48 | 4.48 | 4.50 | 4.49 |
| Middle | 0 | 4.49 | 4.48 | 4.49 | 4.49 |
|  | 1 | 4.49 | 4.48 | 4.50 | 4.49 |
|  | 2 | 4.48 | 4.48 | 4.50 | 4.49 |
|  | 3 | 4.48 | 4.48 | 4.50 | 4.49 |
| High | 0 | 4.49 | 4.49 | 4.50 | 4.49 |
|  | 1 | 4.48 | 4.48 | 4.50 | 4.49 |
|  | 2 | 4.49 | 4.48 | 4.49 | 4.49 |
|  | 3 | 4.48 | 4.48 | 4.50 | 4.49 |

Table 9-1. Occupied Bandwidth Summary Data (B2_5M_1C)

| Channel | Port | OBW (MHz) |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | QPSK | 16QAM | 64QAM | 256QAM |
| Low | 0 | 4.48 | 4.48 | 4.49 | 4.49 |
|  | 1 | 4.48 | 4.48 | 4.49 | 4.50 |
|  | 2 | 4.48 | 4.48 | 4.49 | 4.49 |
|  | 3 | 4.48 | 4.48 | 4.49 | 4.49 |
| Middle | 0 | 4.49 | 4.49 | 4.51 | 4.50 |
|  | 1 | 4.48 | 4.49 | 4.50 | 4.50 |
|  | 2 | 4.48 | 4.49 | 4.50 | 4.50 |
|  | 3 | 4.48 | 4.48 | 4.50 | 4.50 |
| High | 0 | 4.49 | 4.48 | 4.50 | 4.50 |
|  | 1 | 4.49 | 4.48 | 4.50 | 4.50 |
|  | 2 | 4.49 | 4.49 | 4.50 | 4.50 |
|  | 3 | 4.49 | 4.49 | 4.51 | 4.50 |

Table 9-2. Occupied Bandwidth Summary Data (B66_5M_1C)

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | SnMSUNA | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 422 of 430 |


| Low Channel | Port | QPSK | 16QAM | 64QAM | 256QAM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Conducted Average Power (dBm) | 0 | 39.48 | 39.46 | 39.45 | 39.44 |
|  | 1 | 39.46 | 39.37 | 39.47 | 39.48 |
|  | 2 | 39.54 | 39.61 | 39.64 | 39.63 |
|  | 3 | 39.51 | 39.67 | 39.64 | 39.67 |
| Total MIMO Conducted Power (mW) |  | 35630.39 | 35889.91 | 36070.64 | 36113.41 |
| Total MIMO Conducted Power (dBm) |  | 45.52 | 45.55 | 45.57 | 45.58 |

Table 9-3. Conducted Average Output Power Table (B2_5M_1C - Low Channel)

| Middle Channel | Port | QPSK | 16QAM | 64QAM | 256QAM |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 39.49 | 39.49 | 39.42 | 39.50 |
|  | 1 | 39.47 | 39.50 | 39.50 | 39.50 |
| Conducted Average <br> Power (dBm) | 2 | 39.50 | 39.57 | 39.57 | 39.53 |
|  | 3 | 39.55 | 39.67 | 39.63 | 39.70 |
| Total MIMO Conducted Power |  |  |  |  |  |
| $(\mathrm{mW})$ |  |  |  |  |  |

Table 9-4. Conducted Average Output Power Table (B2_5M_1C - Middle Channel)

| High Channel | Port | QPSK | 16QAM | 64QAM | 256QAM |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 0 | 39.51 | 39.52 | 39.43 | 39.49 |
|  | 1 | 39.58 | 39.55 | 39.51 | 39.46 |
| Conducted Average <br> Power (dBm) | 2 | 39.57 | 39.59 | 39.54 | 39.54 |
|  | 3 | 39.68 | 39.60 | 39.57 | 39.59 |
| Total MIMO Conducted Power |  |  |  |  |  |
| $(\mathrm{mW})$ |  |  |  |  |  |

Table 9-5. Conducted Average Output Power Table (B2_5M_1C - High Channel)

| FCC ID: A3LRF4437D-25D | F) PCTEST | MEASUREMENT REPORT | SnMSUNE | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 423 of 430 |


| Low Channel | Port | QPSK | 16QAM | 64QAM | 256QAM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Conducted Average Power (dBm) | 0 | 40.40 | 40.37 | 40.43 | 40.37 |
|  | 1 | 40.26 | 40.22 | 40.23 | 40.27 |
|  | 2 | 40.54 | 40.62 | 40.62 | 40.63 |
|  | 3 | 40.45 | 40.43 | 40.42 | 40.45 |
| Total MIMO Conducted Power ( mW ) |  | 43997.49 | 43984.24 | 44134.58 | 44183.60 |
| Total MIMO Conducted Power (dBm) |  | 46.43 | 46.43 | 46.45 | 46.45 |

Table 9-6. Conducted Average Output Power Table (B66_5M_1C - Low Channel)

| Middle Channel | Port | QPSK | 16QAM | 64QAM | 256QAM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Conducted Average Power (dBm) | 0 | 40.69 | 40.61 | 40.68 | 40.63 |
|  | 1 | 40.53 | 40.52 | 40.61 | 40.55 |
|  | 2 | 40.74 | 40.85 | 40.81 | 40.85 |
|  | 3 | 40.62 | 40.62 | 40.70 | 40.62 |
| Total MIMO Conducted Power (mW) |  | 46412.13 | 46476.37 | 47002.33 | 46607.62 |
| Total MIMO Conducted Power |  | 46.67 | 46.67 | 46.72 | 46.68 |

Table 9-7. Conducted Average Output Power Table (B66_5M_1C - Middle Channel)

| High Channel | Port | QPSK | 16QAM | 64QAM | 256QAM |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Conducted Average Power (dBm) | 0 | 40.75 | 40.73 | 40.77 | 40.75 |
|  | 1 | 40.42 | 40.42 | 40.44 | 40.41 |
|  | 2 | 40.72 | 40.69 | 40.72 | 40.65 |
|  | 3 | 40.70 | 40.67 | 40.72 | 40.64 |
| Total MIMO Conducted Power (mW) |  | 46452.60 | 46235.86 | 46612.53 | 46077.34 |
| Total MIMO Conducted Power (dBm) |  | 46.67 | 46.65 | 46.69 | 46.63 |

Table 9-8. Conducted Average Output Power Table (B66_5M_1C - High Channel)

| FCC ID: A3LRF4437D-25D | F\|PCTEST | MEASUREMENT REPORT | SMMSUNG | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 424 of 430 |


| Channel | Port | Measured Range (MHz) | Max. Value (dBm) | $\begin{gathered} \text { Limit } \\ (\mathrm{dBm}) \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| Low | 0 | 1929 to 1930 | -27.75 | -19.02 |
|  | 0 | 1928 to 1929 | -25.31 | -19.02 |
|  | 1 | 1929 to 1930 | -26.95 | -19.02 |
|  | 1 | 1928 to 1929 | -25.34 | -19.02 |
|  | 2 | 1929 to 1930 | -27.54 | -19.02 |
|  | 2 | 1928 to 1929 | -25.38 | -19.02 |
|  | 3 | 1929 to 1930 | -28.25 | -19.02 |
|  | 3 | 1928 to 1929 | -25.34 | -19.02 |
| High | 0 | 1990 to 1991 | -28.59 | -19.02 |
|  | 0 | 1991 to 1992 | -25.72 | -19.02 |
|  | 1 | 1990 to 1991 | -28.11 | -19.02 |
|  | 1 | 1991 to 1992 | -25.81 | -19.02 |
|  | 2 | 1990 to 1991 | -28.03 | -19.02 |
|  | 2 | 1991 to 1992 | -25.77 | -19.02 |
|  | 3 | 1990 to 1991 | -28.65 | -19.02 |
|  | 3 | 1991 to 1992 | -25.33 | -19.02 |

Table 9-9. Band Edge Emission Summary Data (B2_5M_1C)

| Channel | Port | Measured Range (MHz) | Max. Value (dBm) | $\begin{array}{r} \text { Limit } \\ (\mathrm{dBm}) \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| Low | 0 | 2109 to 2110 | -26.02 | -19.02 |
|  | 0 | 2108 to 2109 | -35.09 | -19.02 |
|  | 1 | 2109 to 2110 | -25.80 | -19.02 |
|  | 1 | 2108 to 2109 | -33.04 | -19.02 |
|  | 2 | 2109 to 2110 | -26.44 | -19.02 |
|  | 2 | 2108 to 2109 | -31.85 | -19.02 |
|  | 3 | 2109 to 2110 | -27.05 | -19.02 |
|  | 3 | 2108 to 2109 | -36.49 | -19.02 |
| High | 0 | 2180 to 2181 | -32.85 | -19.02 |
|  | 0 | 2181 to 2182 | -24.44 | -19.02 |
|  | 1 | 2180 to 2181 | -31.62 | -19.02 |
|  | 1 | 2181 to 2182 | -23.78 | -19.02 |
|  | 2 | 2180 to 2181 | -30.82 | -19.02 |
|  | 2 | 2181 to 2182 | -25.87 | -19.02 |
|  | 3 | 2180 to 2181 | -31.61 | -19.02 |
|  | 3 | 2181 to 2182 | -26.70 | -19.02 |

Table 9-10. Band Edge Emission Summary Data (B66_5M_1C)

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | SMMSUNE | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: <br> RRU(RF4437d) |  | Page 425 of 430 |


| Channel | Port | Measurement Range | Level (dBm) | Limit (dBm) | Worst Margin (dB) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Low | 0 | 9 kHz to 150 kHz | -64.11 | -49.02 | -15.09 |
|  |  | 150 kHz to 30 MHz | -62.19 | -39.02 | -23.17 |
|  |  | 30 MHz to 1 GHz | -53.59 | -29.02 | -24.57 |
|  |  | 1 GHz to 1.928 GHz | -25.63 | -19.02 | -6.61 |
|  |  | 1.992 GHz to 6 GHz | -27.57 | -19.02 | -8.55 |
|  |  | 6 GHz to 22 GHz | -25.83 | -19.02 | -6.81 |
|  | 1 | 9 kHz to 150 kHz | -62.94 | -49.02 | -13.92 |
|  |  | 150 kHz to 30 MHz | -59.99 | -39.02 | -20.97 |
|  |  | 30 MHz to 1 GHz | -50.61 | -29.02 | -21.59 |
|  |  | 1 GHz to 1.928 GHz | -28.00 | -19.02 | -8.98 |
|  |  | 1.992 GHz to 6 GHz | -26.00 | -19.02 | -6.98 |
|  |  | 6 GHz to 22 GHz | -26.04 | -19.02 | -7.02 |
|  | 2 | 9 kHz to 150 kHz | -64.69 | -49.02 | -15.67 |
|  |  | 150 kHz to 30 MHz | -61.52 | -39.02 | -22.50 |
|  |  | 30 MHz to 1 GHz | -50.19 | -29.02 | -21.17 |
|  |  | 1 GHz to 1.928 GHz | -26.06 | -19.02 | -7.04 |
|  |  | 1.992 GHz to 6 GHz | -24.34 | -19.02 | -5.32 |
|  |  | 6 GHz to 22 GHz | -26.38 | -19.02 | -7.36 |
|  | 3 | 9 kHz to 150 kHz | -61.49 | -49.02 | -12.47 |
|  |  | 150 kHz to 30 MHz | -60.90 | -39.02 | -21.88 |
|  |  | 30 MHz to 1 GHz | -50.76 | -29.02 | -21.74 |
|  |  | 1 GHz to 1.928 GHz | -28.14 | -19.02 | -9.12 |
|  |  | 1.992 GHz to 6 GHz | -27.17 | -19.02 | -8.15 |
|  |  | 6 GHz to 22 GHz | -26.09 | -19.02 | -7.07 |

Table 9-11. Conducted Spurious Emission Summary Data (B2_5M_1C)

| FCC ID: A3LRF4437D-25D | F) PCTEST | MEASUREMENT REPORT | shmsunf | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: <br> RRU(RF4437d) |  | Page 426 of 430 |


| Channel | Port | Measurement Range | Level (dBm) | Limit (dBm) | Worst Margin (dB) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Low | 0 | 9 kHz to 150 kHz | -60.86 | -49.02 | -11.84 |
|  |  | 150 kHz to 30 MHz | -58.06 | -39.02 | -19.04 |
|  |  | 30 MHz to 1 GHz | -53.92 | -29.02 | -24.90 |
|  |  | 1 GHz to 2.108 GHz | -31.05 | -19.02 | -12.03 |
|  |  | 2.182 GHz to 6 GHz | -28.32 | -19.02 | -9.30 |
|  |  | 6 GHz to 22 GHz | -24.96 | -19.02 | -5.94 |
|  | 1 | 9 kHz to 150 kHz | -60.30 | -49.02 | -11.28 |
|  |  | 150 kHz to 30 MHz | -58.26 | -39.02 | -19.24 |
|  |  | 30 MHz to 1 GHz | -51.29 | -29.02 | -22.27 |
|  |  | 1 GHz to 2.108 GHz | -30.48 | -19.02 | -11.46 |
|  |  | 2.182 GHz to 6 GHz | -26.29 | -19.02 | -7.27 |
|  |  | 6 GHz to 22 GHz | -24.77 | -19.02 | -5.75 |
|  | 2 | 9 kHz to 150 kHz | -61.37 | -49.02 | -12.35 |
|  |  | 150 kHz to 30 MHz | -59.35 | -39.02 | -20.33 |
|  |  | 30 MHz to 1 GHz | -50.82 | -29.02 | -21.80 |
|  |  | 1 GHz to 2.108 GHz | -30.45 | -19.02 | -11.43 |
|  |  | 2.182 GHz to 6 GHz | -24.77 | -19.02 | -5.75 |
|  |  | 6 GHz to 22 GHz | -25.17 | -19.02 | -6.15 |
|  | 3 | 9 kHz to 150 kHz | -60.92 | -49.02 | -11.90 |
|  |  | 150 kHz to 30 MHz | -57.80 | -39.02 | -18.78 |
|  |  | 30 MHz to 1 GHz | -50.68 | -29.02 | -21.66 |
|  |  | 1 GHz to 2.108 GHz | -30.64 | -19.02 | -11.62 |
|  |  | 2.182 GHz to 6 GHz | -27.27 | -19.02 | -8.25 |
|  |  | 6 GHz to 22 GHz | -25.51 | -19.02 | -6.49 |

Table 9-12. Conducted Spurious Emission Summary Data (B66_5M_1C)

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | SMMSUN: | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 427 of 430 |



Plot 9-1. Radiated spurious emission_30 MHz to 1000 MHz (B2_5M_1C_Low Channel)


Plot 9-2. Radiated spurious emission_1 GHz to 18 GHz (B2_5M_1C_Low Channel)


Plot 9-3. Radiated spurious emission_18 GHz to 22 GHz
(B2_5M_1C_Low Channel)

| FCC ID: A3LRF4437D-25D | F1PCTEST | MEASUREMENT REPORT | SnMSUNE | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 428 of 430 |



Plot 9-4. Radiated spurious emission_30 MHz to 1000 MHz (B66_5M_1C_Low Channel)


Plot 9-5. Radiated spurious emission_1 GHz to 18 GHz (B66_5M_1C_Low Channel)


Plot 9-6. Radiated spurious emission_18 GHz to 22 GHz
(B66_5M_1C_Low Channel)

| FCC ID: A3LRF4437D-25D | F)PCTEST | MEASUREMENT REPORT | snmsuna | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: 8K21071202-02-R2.A3L | Test Dates: 07/19/2021-08/18/2021 | EUT Type: RRU(RF4437d) |  | Page 429 of 430 |

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### 9.4 Reference Section (KDB 484596 Section 3 d)

A matrix has been provided the source data for rule part, frequency range, and emission designator as required by KDB 484596:
$\left.\begin{array}{|c|c|c|c|c|}\hline \begin{array}{c}\text { Rule } \\ \text { Part }\end{array} & \begin{array}{c}\text { Frequency } \\ \text { Range(MHz) }\end{array} & \begin{array}{c}\text { Emission } \\ \text { Designator }\end{array} & \begin{array}{c}\text { Source Data } \\ \text { FCC ID }\end{array} & \text { Exhibit Name(s) } \\ \hline & & \text { 4M48G7D } & & \\ & & \text { 4M48W7D } & & \\ & & \text { 9M44G7D } & & \\ & & \text { 9M45W7D }\end{array}\right)$

| FCC ID: A3LRF4437D-25D | F\|PCTEST | MEASUREMENT REPORT | Snmsun | Approved by: <br> Technical Manager |
| :---: | :---: | :---: | :---: | :---: |
| Test Report S/N: <br> 8K21071202-02-R2.A3L | Test Dates: $07 / 19 / 2021-08 / 18 / 2021$ | EUT Type: <br> RRU(RF4437d) |  | Page 430 of 430 |

