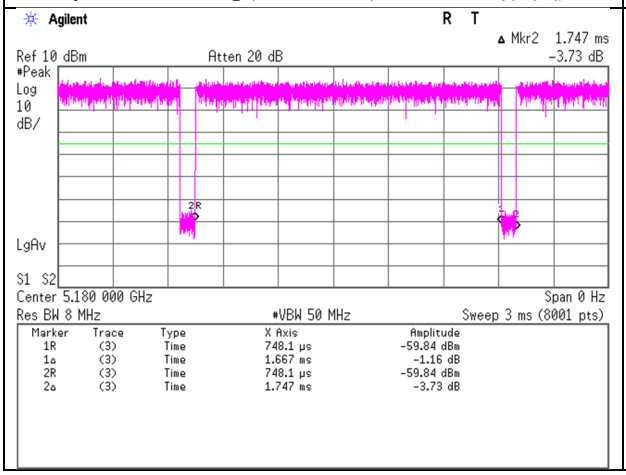
# Burst rate confirmation

| | |
|---|---|
| Report No. | 14118411H |
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | December 17, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH |
| Engineer | Nachi Konegawa |
| Mode | Tx |

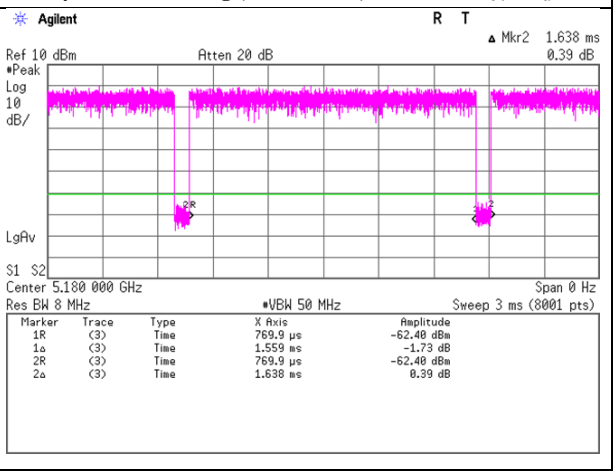
## 11a 6 Mbps

| | |
|---|---|
| Tx on / (Tx on + Tx off) = | 0.954 |
| Tx on / (Tx on + Tx off) * 100 = | 95.4 % |
| Duty factor = 10 * log (1.747 / 1.667) = | 0.20 dB |



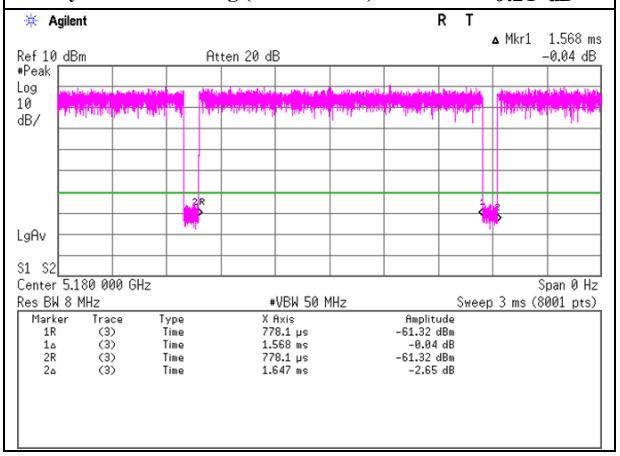

## 11n-20 MCS 0

| | |
|---|---|
| Tx on / (Tx on + Tx off) = | 0.952 |
| Tx on / (Tx on + Tx off) * 100 = | 95.2 % |
| Duty factor = 10 * log (1.638 / 1.559) = | 0.21 dB |




## 11ac-20 MSC 0

| | |
|---|---|
| Tx on / (Tx on + Tx off) = | 0.952 |
| Tx on / (Tx on + Tx off) * 100 = | 95.2 % |
| Duty factor = 10 * log (1.647 / 1.568) = | 0.21 dB |

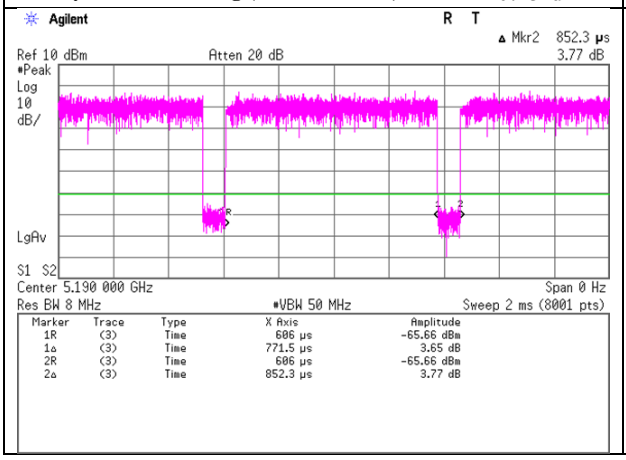


# Burst rate confirmation

| | |
|---|---|
| Report No. | 14118411H |
| Test place | Ise EMC Lab. No.8 Measurement Room |
| Date | December 17, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH |
| Engineer | Nachi Konegawa |
| Mode | Tx |

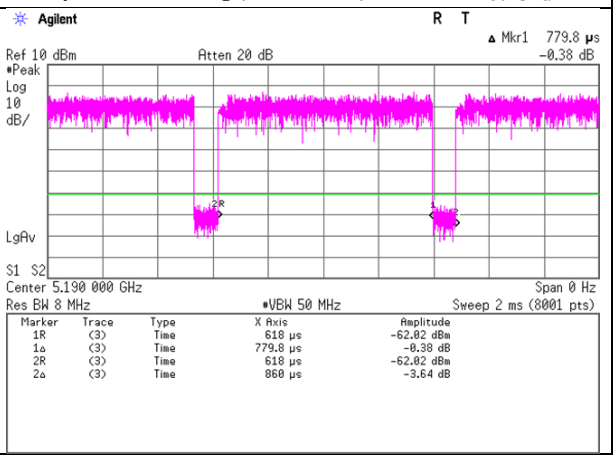
## 11n-40 MSC 0

| | |
|---|---|
| Tx on / (Tx on + Tx off) = | 0.905 |
| Tx on / (Tx on + Tx off) * 100 = | 90.5 % |
| Duty factor = 10 * log (0.8523 / 0.7715) = | 0.43 dB |



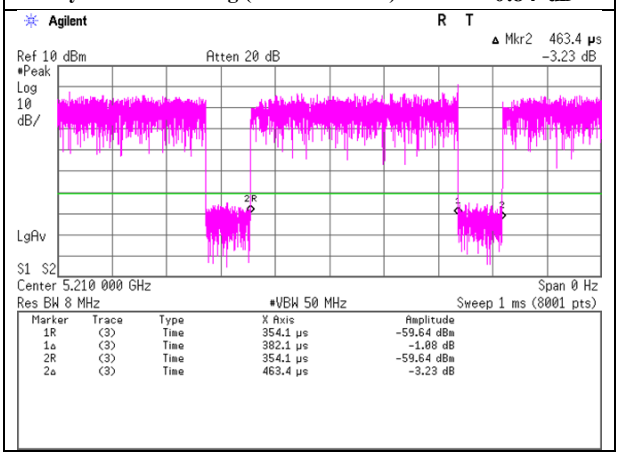

## 11ac-40 MCS 0

| | |
|---|---|
| Tx on / (Tx on + Tx off) = | 0.907 |
| Tx on / (Tx on + Tx off) * 100 = | 90.7 % |
| Duty factor = 10 * log (0.86 / 0.7798) = | 0.43 dB |




## 11ac-80 MSC 0

| | |
|---|---|
| Tx on / (Tx on + Tx off) = | 0.825 |
| Tx on / (Tx on + Tx off) * 100 = | 82.5 % |
| Duty factor = 10 * log (0.4634 / 0.3821) = | 0.84 dB |



# Maximum Power Spectral Density

| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11a | |

Applied limit: 15.407, mobile and portable client device

| Tested Frequency [MHz] | PSD Reading [dBm /MHz] | Cable Loss [dB] | Atten. Loss [dB] | Duty Factor [dB] | Antenna Gain [dBi] | RBW Correction Factor [dB] | PSD (Conducted) Result [dBm /MHz] | PSD (Conducted) Limit [dBm /MHz] | PSD (Conducted) Margin [dB] | PSD (e.i.r.p.) Result [dBm /MHz] | PSD (e.i.r.p.) Limit [dBm /MHz] | PSD (e.i.r.p.) Margin [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | -15.17 | 2.72 | 10.09 | 1.05 | 0.6 | 0.00 | -1.31 | 11.00 | 12.31 | -0.69 | 17.00 | 17.69 |
| 5220 | -14.57 | 2.74 | 10.09 | 1.05 | 0.6 | 0.00 | -0.69 | 11.00 | 11.69 | -0.07 | 17.00 | 17.07 |
| 5240 | -14.56 | 2.74 | 10.09 | 1.05 | 0.6 | 0.00 | -0.68 | 11.00 | 11.68 | -0.06 | 17.00 | 17.06 |
| 5260 | -14.54 | 2.75 | 10.09 | 1.05 | 0.6 | 0.00 | -0.65 | 11.00 | 11.65 | -0.03 | 17.00 | 17.03 |
| 5300 | -14.58 | 2.75 | 10.09 | 1.05 | 0.6 | 0.00 | -0.69 | 11.00 | 11.69 | -0.07 | 17.00 | 17.07 |
| 5320 | -14.70 | 2.77 | 10.09 | 1.05 | 0.6 | 0.00 | -0.79 | 11.00 | 11.79 | -0.17 | 17.00 | 17.17 |
| 5500 | -15.79 | 2.78 | 10.10 | 1.05 | 0.6 | 0.00 | -1.86 | 11.00 | 12.86 | -1.24 | 17.00 | 18.24 |
| 5580 | -14.84 | 2.84 | 10.10 | 1.05 | 0.6 | 0.00 | -0.85 | 11.00 | 11.85 | -0.23 | 17.00 | 17.23 |
| 5700 | -15.60 | 2.86 | 10.09 | 1.05 | 0.6 | 0.00 | -1.60 | 11.00 | 12.60 | -0.98 | 17.00 | 17.98 |
| 5745 | -17.72 | 2.85 | 10.09 | 1.05 | 0.6 | 0.27 | -3.46 | 30.00 | 33.46 | -2.84 | 36.00 | 38.84 |
| 5785 | -17.82 | 2.87 | 10.09 | 1.05 | 0.6 | 0.27 | -3.54 | 30.00 | 33.54 | -2.92 | 36.00 | 38.92 |
| 5825 | -18.71 | 2.87 | 10.09 | 1.05 | 0.6 | 0.27 | -4.43 | 30.00 | 34.43 | -3.81 | 36.00 | 39.81 |

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

# Maximum Power Spectral Density

| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11n-20 | |

Applied limit: 15.407, mobile and portable client device

| Tested Frequency [MHz] | PSD Reading [dBm /MHz] | Cable Loss [dB] | Atten. Loss [dB] | Duty Factor [dB] | Antenna Gain [dBi] | RBW Correction Factor [dB] | PSD (Conducted) Result [dBm /MHz] | PSD (Conducted) Limit [dBm /MHz] | PSD (Conducted) Margin [dB] | PSD (e.i.r.p.) Result [dBm /MHz] | PSD (e.i.r.p.) Limit [dBm /MHz] | PSD (e.i.r.p.) Margin [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | -16.18 | 2.72 | 10.09 | 1.43 | 0.6 | 0.00 | -1.93 | 11.00 | 12.93 | -1.31 | 17.00 | 18.31 |
| 5220 | -16.21 | 2.74 | 10.09 | 1.43 | 0.6 | 0.00 | -1.94 | 11.00 | 12.94 | -1.32 | 17.00 | 18.32 |
| 5240 | -16.41 | 2.74 | 10.09 | 1.43 | 0.6 | 0.00 | -2.14 | 11.00 | 13.14 | -1.52 | 17.00 | 18.52 |
| 5260 | -16.20 | 2.75 | 10.09 | 1.43 | 0.6 | 0.00 | -1.93 | 11.00 | 12.93 | -1.31 | 17.00 | 18.31 |
| 5300 | -16.47 | 2.75 | 10.09 | 1.43 | 0.6 | 0.00 | -2.20 | 11.00 | 13.20 | -1.58 | 17.00 | 18.58 |
| 5320 | -16.43 | 2.77 | 10.09 | 1.43 | 0.6 | 0.00 | -2.14 | 11.00 | 13.14 | -1.52 | 17.00 | 18.52 |
| 5500 | -16.80 | 2.78 | 10.10 | 1.43 | 0.6 | 0.00 | -2.49 | 11.00 | 13.49 | -1.87 | 17.00 | 18.87 |
| 5580 | -15.84 | 2.84 | 10.10 | 1.43 | 0.6 | 0.00 | -1.47 | 11.00 | 12.47 | -0.85 | 17.00 | 17.85 |
| 5700 | -15.74 | 2.86 | 10.09 | 1.43 | 0.6 | 0.00 | -1.36 | 11.00 | 12.36 | -0.74 | 17.00 | 17.74 |
| 5745 | -19.37 | 2.85 | 10.09 | 1.43 | 0.6 | 0.27 | -4.73 | 30.00 | 34.73 | -4.11 | 36.00 | 40.11 |
| 5785 | -19.90 | 2.87 | 10.09 | 1.43 | 0.6 | 0.27 | -5.24 | 30.00 | 35.24 | -4.62 | 36.00 | 40.62 |
| 5825 | -20.11 | 2.87 | 10.09 | 1.43 | 0.6 | 0.27 | -5.45 | 30.00 | 35.45 | -4.83 | 36.00 | 40.83 |

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

# Maximum Power Spectral Density

| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-20 | |

Applied limit: 15.407, mobile and portable client device

| Tested Frequency [MHz] | PSD Reading [dBm /MHz] | Cable Loss [dB] | Atten. Loss [dB] | Duty Factor [dB] | Antenna Gain [dBi] | RBW Correction Factor [dB] | PSD (Conducted) Result [dBm /MHz] | PSD (Conducted) Limit [dBm /MHz] | PSD (Conducted) Margin [dB] | PSD (e.i.r.p.) Result [dBm /MHz] | PSD (e.i.r.p.) Limit [dBm /MHz] | PSD (e.i.r.p.) Margin [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5180 | -15.91 | 2.72 | 10.09 | 1.40 | 0.6 | 0.00 | -1.69 | 11.00 | 12.69 | -1.07 | 17.00 | 18.07 |
| 5220 | -15.80 | 2.74 | 10.09 | 1.40 | 0.6 | 0.00 | -1.57 | 11.00 | 12.57 | -0.95 | 17.00 | 17.95 |
| 5240 | -16.25 | 2.74 | 10.09 | 1.40 | 0.6 | 0.00 | -2.01 | 11.00 | 13.01 | -1.39 | 17.00 | 18.39 |
| 5260 | -16.19 | 2.75 | 10.09 | 1.40 | 0.6 | 0.00 | -1.95 | 11.00 | 12.95 | -1.33 | 17.00 | 18.33 |
| 5300 | -16.17 | 2.75 | 10.09 | 1.40 | 0.6 | 0.00 | -1.93 | 11.00 | 12.93 | -1.31 | 17.00 | 18.31 |
| 5320 | -16.06 | 2.77 | 10.09 | 1.40 | 0.6 | 0.00 | -1.80 | 11.00 | 12.80 | -1.18 | 17.00 | 18.18 |
| 5500 | -16.46 | 2.78 | 10.10 | 1.40 | 0.6 | 0.00 | -2.18 | 11.00 | 13.18 | -1.56 | 17.00 | 18.56 |
| 5580 | -15.38 | 2.84 | 10.10 | 1.40 | 0.6 | 0.00 | -1.03 | 11.00 | 12.03 | -0.41 | 17.00 | 17.41 |
| 5700 | -15.96 | 2.86 | 10.09 | 1.40 | 0.6 | 0.00 | -1.60 | 11.00 | 12.60 | -0.98 | 17.00 | 17.98 |
| 5745 | -18.22 | 2.85 | 10.09 | 1.40 | 0.6 | 0.27 | -3.61 | 30.00 | 33.61 | -2.99 | 36.00 | 38.99 |
| 5785 | -18.62 | 2.87 | 10.09 | 1.40 | 0.6 | 0.27 | -3.99 | 30.00 | 33.99 | -3.37 | 36.00 | 39.37 |
| 5825 | -19.18 | 2.87 | 10.09 | 1.40 | 0.6 | 0.27 | -4.55 | 30.00 | 34.55 | -3.93 | 36.00 | 39.93 |

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

# Maximum Power Spectral Density

| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11n-40 | |

Applied limit: 15.407, mobile and portable client device

| Tested Frequency [MHz] | PSD Reading [dBm /MHz] | Cable Loss [dB] | Atten. Loss [dB] | Duty Factor [dB] | Antenna Gain [dBi] | RBW Correction Factor [dB] | PSD (Conducted) Result [dBm /MHz] | PSD (Conducted) Limit [dBm /MHz] | PSD (Conducted) Margin [dB] | PSD (e.i.r.p.) Result [dBm /MHz] | PSD (e.i.r.p.) Limit [dBm /MHz] | PSD (e.i.r.p.) Margin [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5190 | -22.45 | 2.73 | 10.09 | 2.11 | 0.6 | 0.00 | -7.52 | 11.00 | 18.52 | -6.90 | 17.00 | 23.90 |
| 5230 | -22.43 | 2.75 | 10.09 | 2.11 | 0.6 | 0.00 | -7.48 | 11.00 | 18.48 | -6.86 | 17.00 | 23.86 |
| 5270 | -22.04 | 2.75 | 10.09 | 2.11 | 0.6 | 0.00 | -7.09 | 11.00 | 18.09 | -6.47 | 17.00 | 23.47 |
| 5310 | -21.47 | 2.75 | 10.09 | 2.11 | 0.6 | 0.00 | -6.52 | 11.00 | 17.52 | -5.90 | 17.00 | 22.90 |
| 5510 | -22.31 | 2.77 | 10.10 | 2.11 | 0.6 | 0.00 | -7.33 | 11.00 | 18.33 | -6.71 | 17.00 | 23.71 |
| 5550 | -21.60 | 2.82 | 10.10 | 2.11 | 0.6 | 0.00 | -6.57 | 11.00 | 17.57 | -5.95 | 17.00 | 22.95 |
| 5670 | -22.09 | 2.85 | 10.09 | 2.11 | 0.6 | 0.00 | -7.04 | 11.00 | 18.04 | -6.42 | 17.00 | 23.42 |
| 5755 | -24.82 | 2.90 | 10.09 | 2.11 | 0.6 | 0.27 | -9.46 | 30.00 | 39.46 | -8.84 | 36.00 | 44.84 |
| 5795 | -25.07 | 2.87 | 10.09 | 2.11 | 0.6 | 0.27 | -9.73 | 30.00 | 39.73 | -9.11 | 36.00 | 45.11 |

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

# Maximum Power Spectral Density

| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-40 | |

Applied limit: 15.407, mobile and portable client device

| Tested Frequency [MHz] | PSD Reading [dBm /MHz] | Cable Loss [dB] | Atten. Loss [dB] | Duty Factor [dB] | Antenna Gain [dBi] | RBW Correction Factor [dB] | PSD (Conducted) Result [dBm /MHz] | PSD (Conducted) Limit [dBm /MHz] | PSD (Conducted) Margin [dB] | PSD (e.i.r.p.) Result [dBm /MHz] | PSD (e.i.r.p.) Limit [dBm /MHz] | PSD (e.i.r.p.) Margin [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5190 | -23.05 | 2.73 | 10.09 | 2.64 | 0.6 | 0.00 | -7.59 | 11.00 | 18.59 | -6.97 | 17.00 | 23.97 |
| 5230 | -22.90 | 2.75 | 10.09 | 2.64 | 0.6 | 0.00 | -7.42 | 11.00 | 18.42 | -6.80 | 17.00 | 23.80 |
| 5270 | -22.15 | 2.75 | 10.09 | 2.64 | 0.6 | 0.00 | -6.67 | 11.00 | 17.67 | -6.05 | 17.00 | 23.05 |
| 5310 | -21.97 | 2.75 | 10.09 | 2.64 | 0.6 | 0.00 | -6.48 | 11.00 | 17.48 | -5.86 | 17.00 | 22.86 |
| 5510 | -22.71 | 2.77 | 10.10 | 2.64 | 0.6 | 0.00 | -7.20 | 11.00 | 18.20 | -6.58 | 17.00 | 23.58 |
| 5550 | -22.17 | 2.82 | 10.10 | 2.64 | 0.6 | 0.00 | -6.61 | 11.00 | 17.61 | -5.99 | 17.00 | 22.99 |
| 5670 | -22.57 | 2.85 | 10.09 | 2.64 | 0.6 | 0.00 | -6.99 | 11.00 | 17.99 | -6.37 | 17.00 | 23.37 |
| 5755 | -25.76 | 2.90 | 10.09 | 2.64 | 0.6 | 0.27 | -9.86 | 30.00 | 39.86 | -9.24 | 36.00 | 45.24 |
| 5795 | -25.52 | 2.87 | 10.09 | 2.64 | 0.6 | 0.27 | -9.65 | 30.00 | 39.65 | -9.03 | 36.00 | 45.03 |

Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

# Maximum Power Spectral Density

| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-80 | |

Applied limit: 15.407, mobile and portable client device

| Tested Frequency [MHz] | PSD Reading [dBm /MHz] | Cable Loss [dB] | Atten. Loss [dB] | Duty Factor [dB] | Antenna Gain [dBi] | RBW Correction Factor [dB] | PSD (Conducted) Result [dBm /MHz] | PSD (Conducted) Limit [dBm /MHz] | PSD (Conducted) Margin [dB] | PSD (e.i.r.p.) Result [dBm /MHz] | PSD (e.i.r.p.) Limit [dBm /MHz] | PSD (e.i.r.p.) Margin [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5210 | -24.13 | 2.73 | 10.09 | 3.13 | 0.6 | 0.00 | -8.18 | 11.00 | 19.18 | -7.56 | 17.00 | 24.56 |
| 5290 | -24.42 | 2.75 | 10.09 | 3.13 | 0.6 | 0.00 | -8.45 | 11.00 | 19.45 | -7.83 | 17.00 | 24.83 |
| 5530 | -25.64 | 2.78 | 10.10 | 3.13 | 0.6 | 0.00 | -9.64 | 11.00 | 20.64 | -9.02 | 17.00 | 26.02 |
| 5775 | -28.88 | 2.89 | 10.09 | 3.13 | 0.6 | 0.27 | -12.51 | 30.00 | 42.51 | -11.89 | 36.00 | 47.89 |

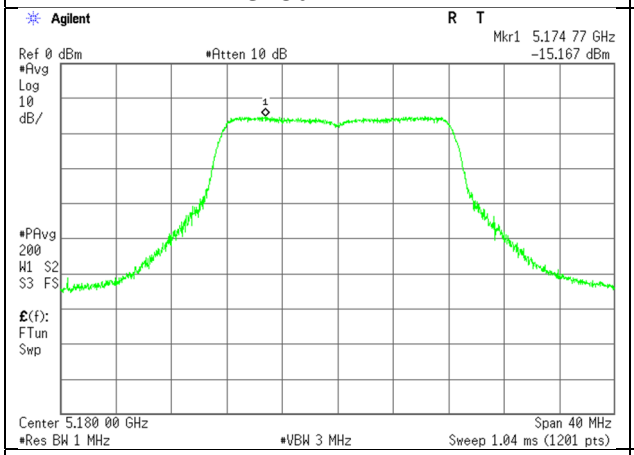
Sample Calculation:
PSD: Power Spectral Density
The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor
PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

# Maximum Power Spectral Density

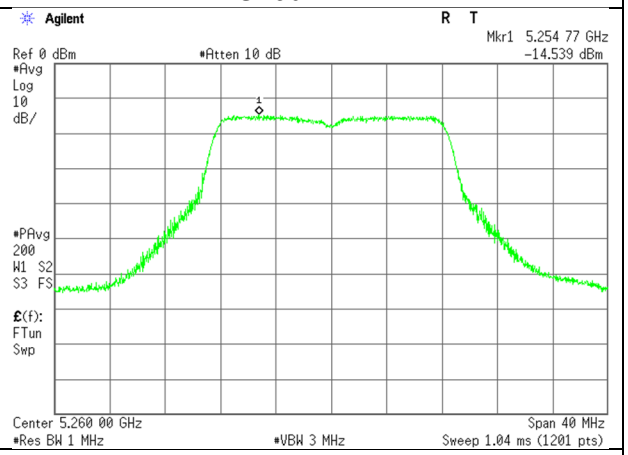
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11a | |

## 11a

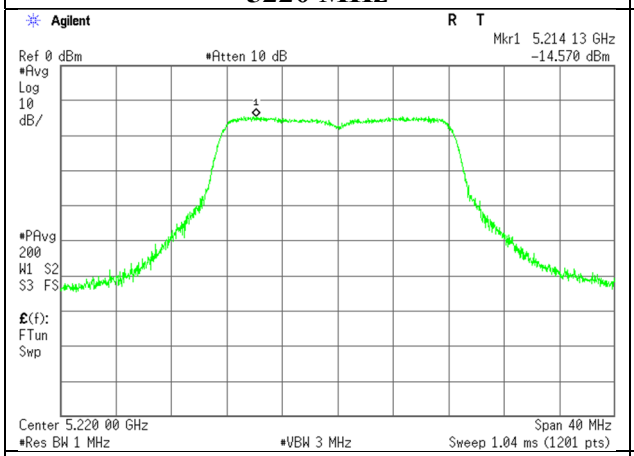
### 5180 MHz



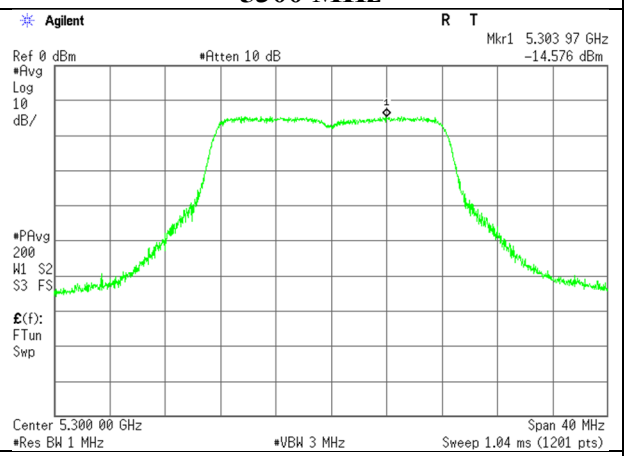

### 5260 MHz



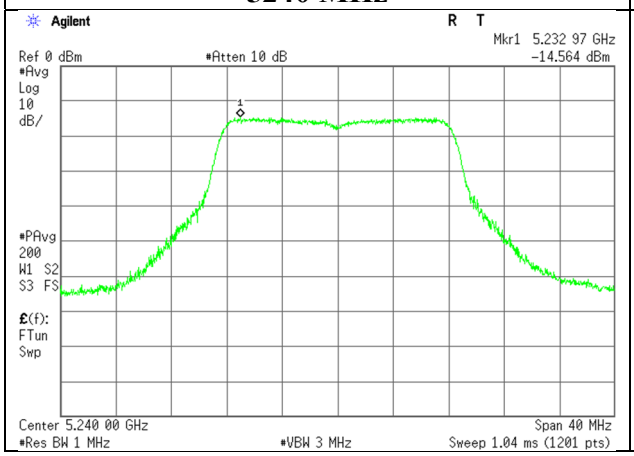

### 5220 MHz



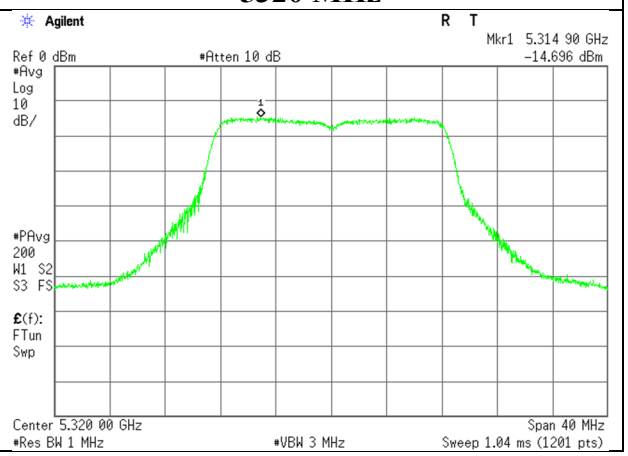

### 5300 MHz




### 5240 MHz




### 5320 MHz

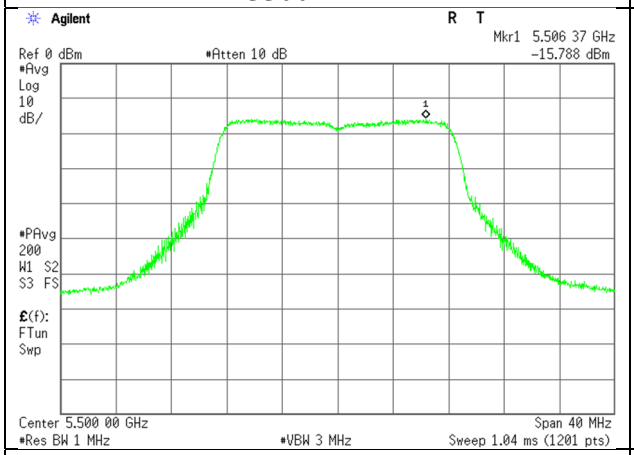


# Maximum Power Spectral Density

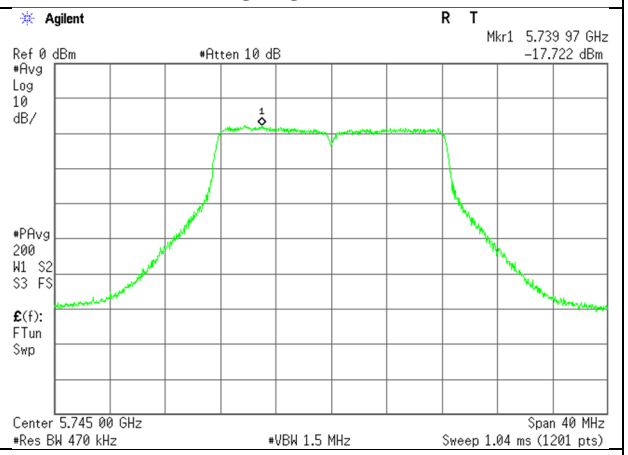
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11a | |

## 11a

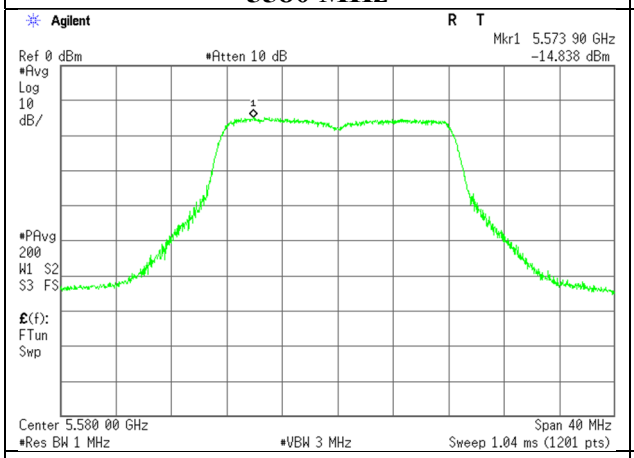
### 5500 MHz



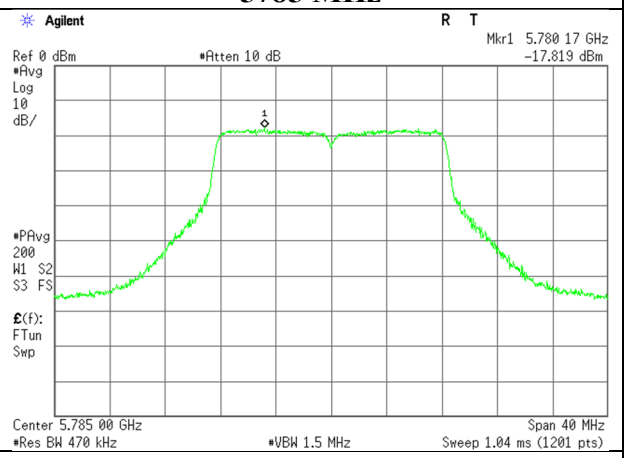

### 5745 MHz



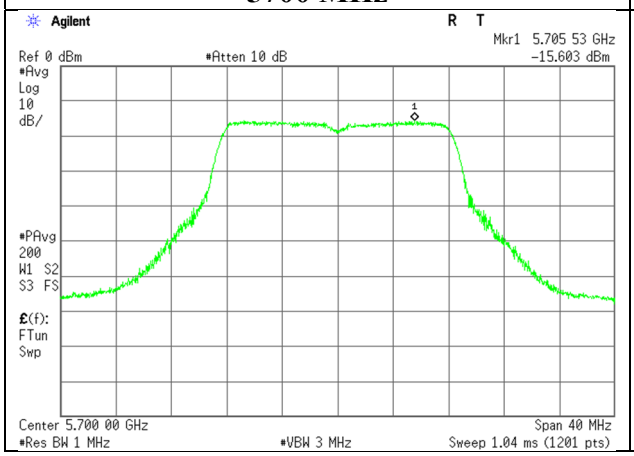

### 5580 MHz



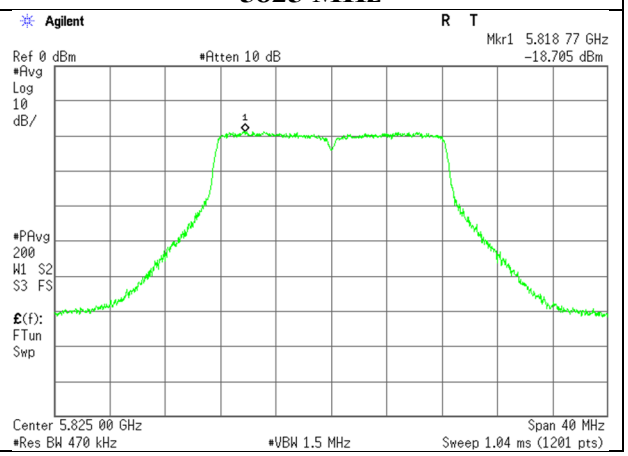

### 5785 MHz




### 5700 MHz




### 5825 MHz

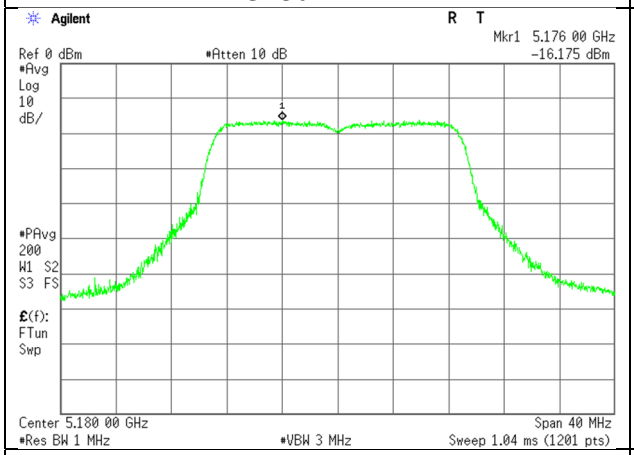


# Maximum Power Spectral Density

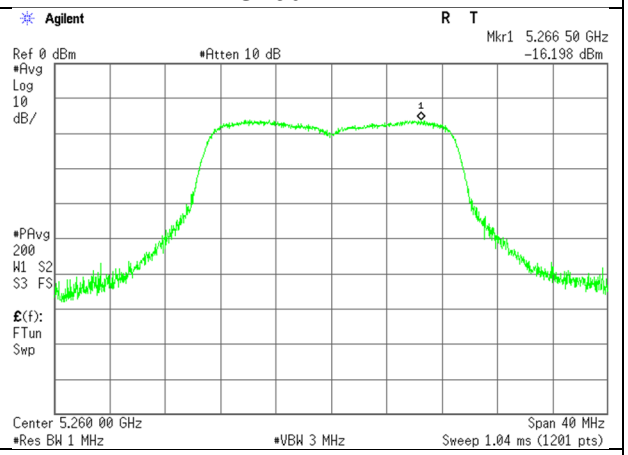
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11n-20 | |

## 11n-20

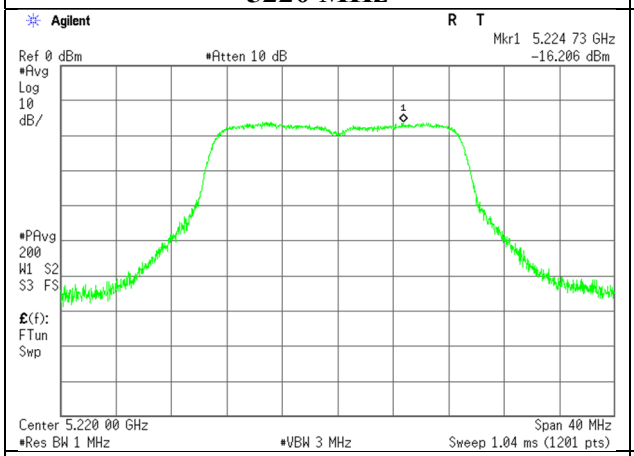
### 5180 MHz



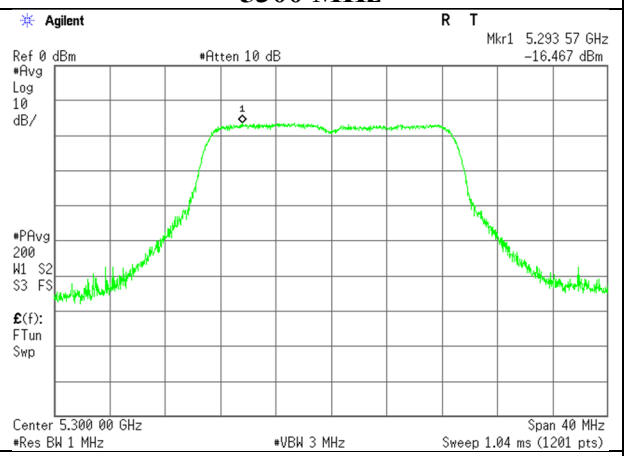

### 5260 MHz



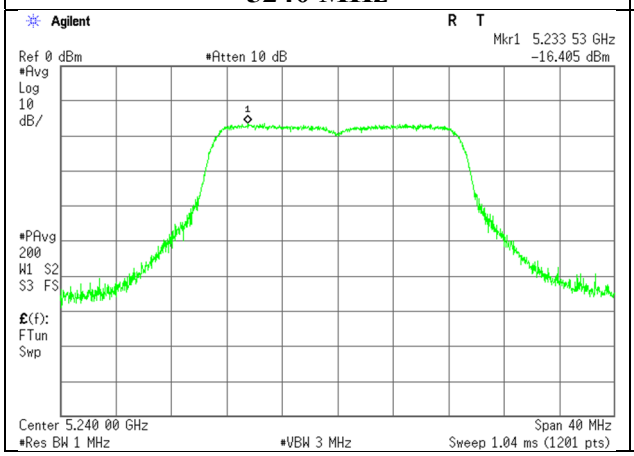

### 5220 MHz



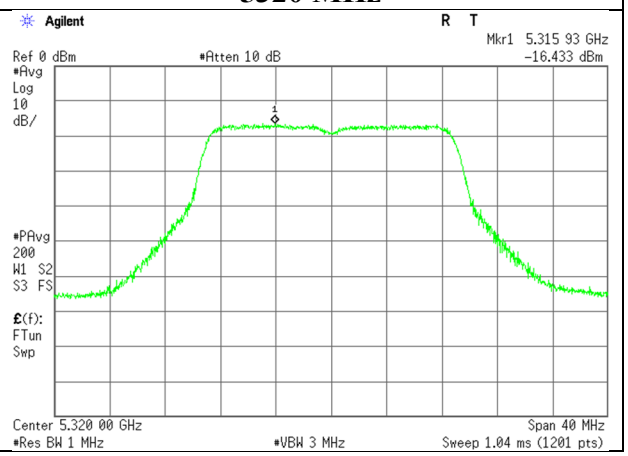

### 5300 MHz




### 5240 MHz




### 5320 MHz

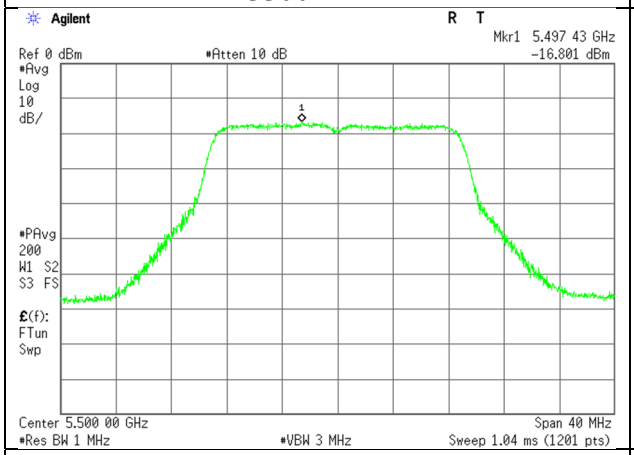


# Maximum Power Spectral Density

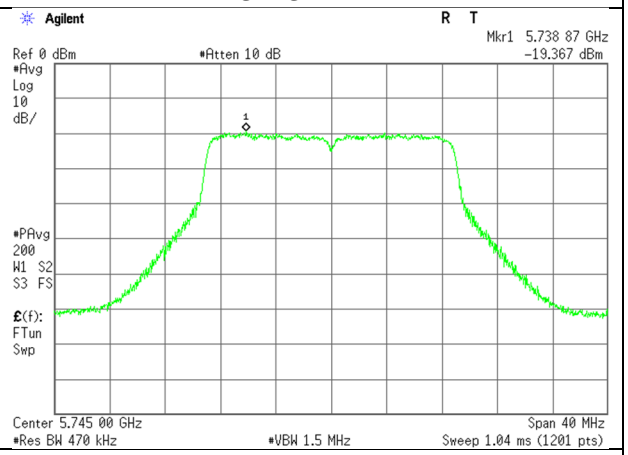
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11n-20 | |

## 11n-20

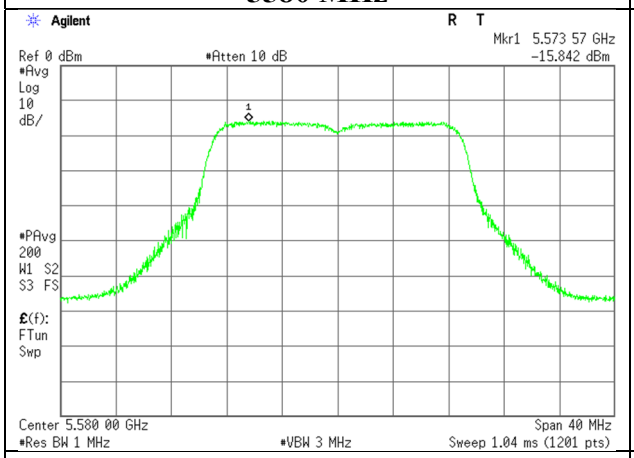
### 5500 MHz



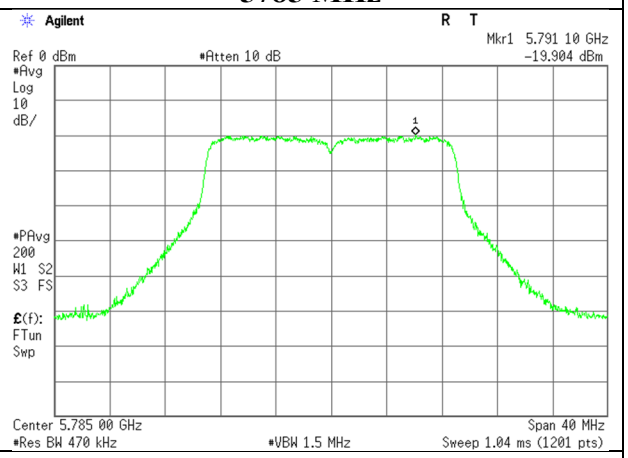

### 5745 MHz



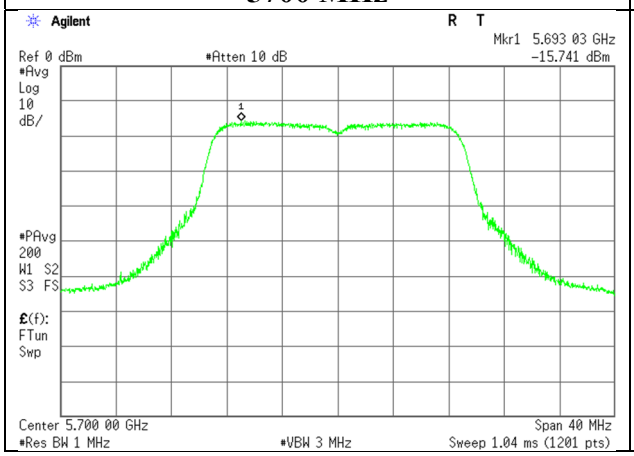

### 5580 MHz



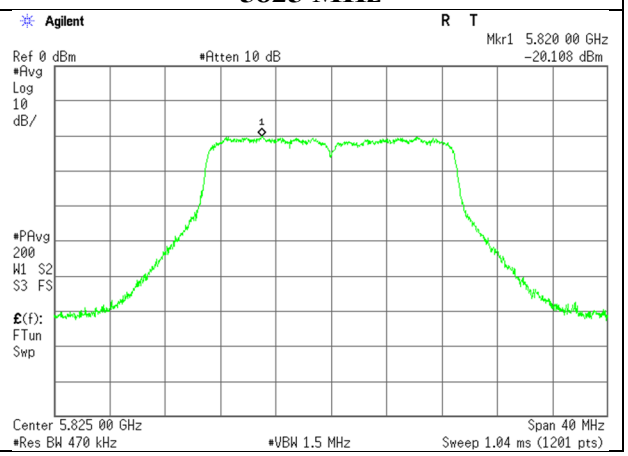

### 5785 MHz




### 5700 MHz




### 5825 MHz

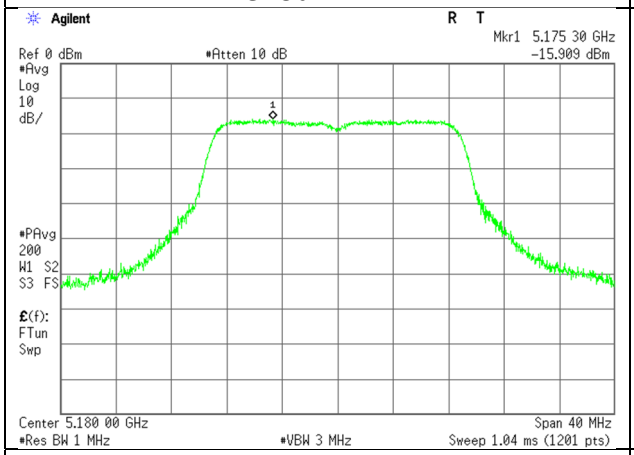


# Maximum Power Spectral Density

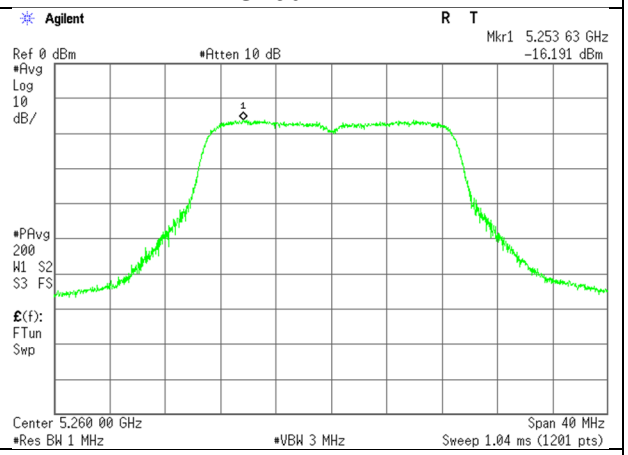
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-20 | |

## 11ac-20

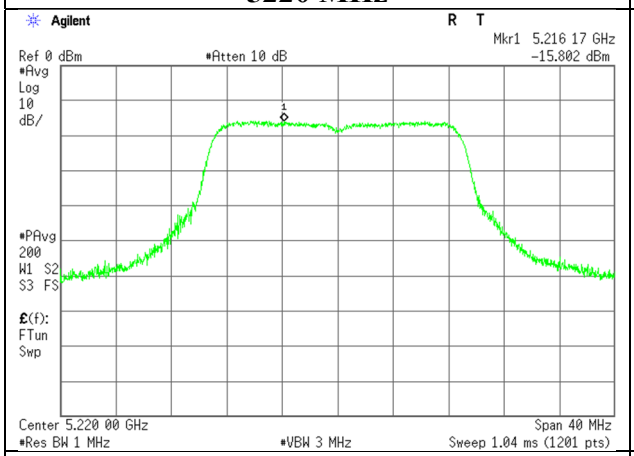
### 5180 MHz



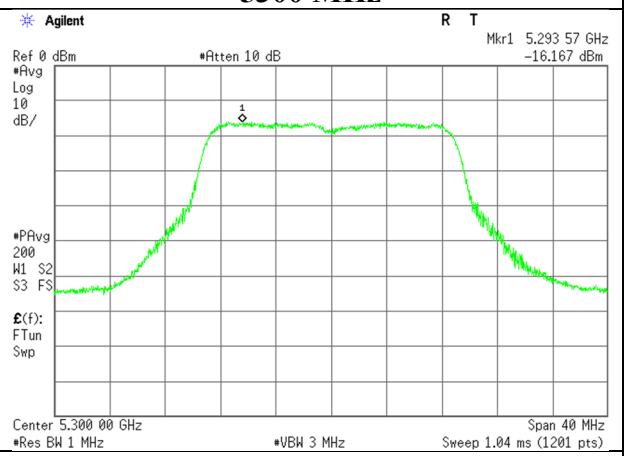

### 5260 MHz



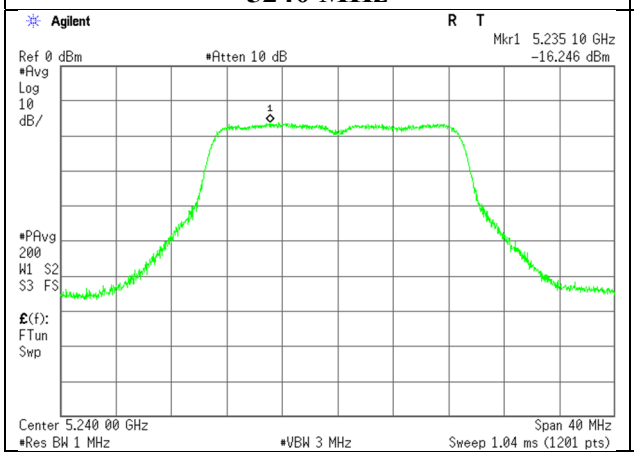

### 5220 MHz



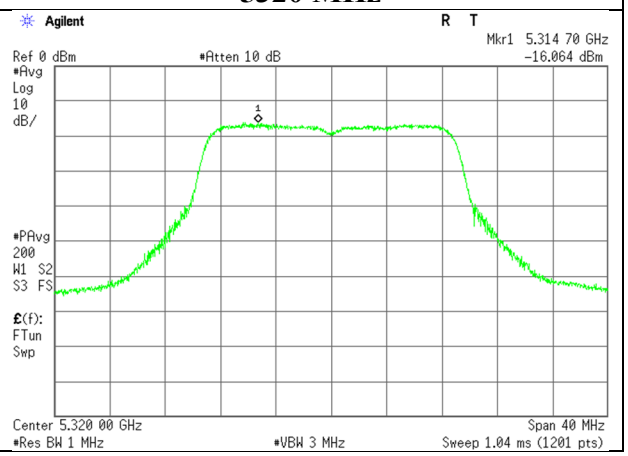

### 5300 MHz




### 5240 MHz




### 5320 MHz

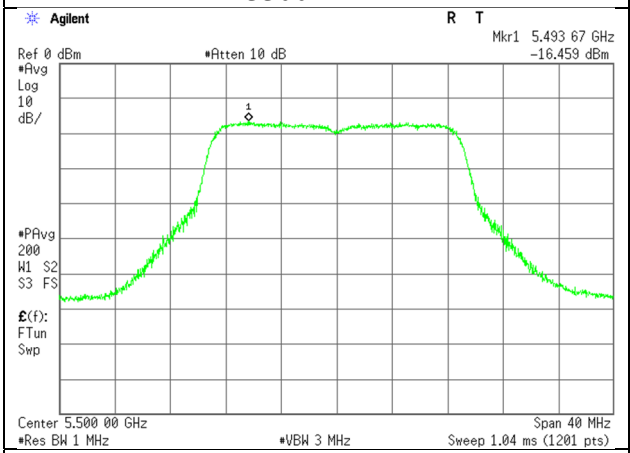


# Maximum Power Spectral Density

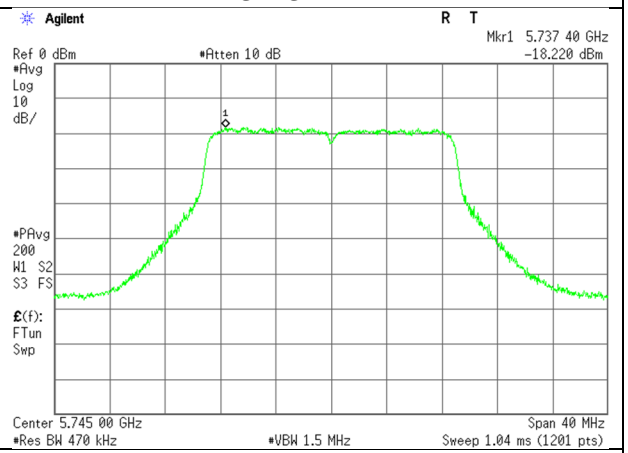
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-20 | |

## 11ac-20

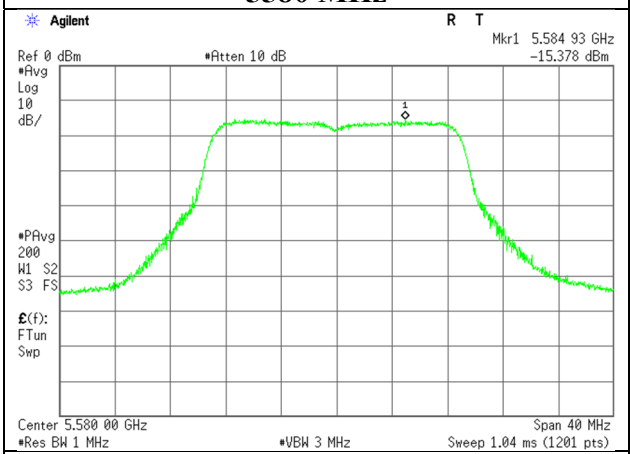
### 5500 MHz



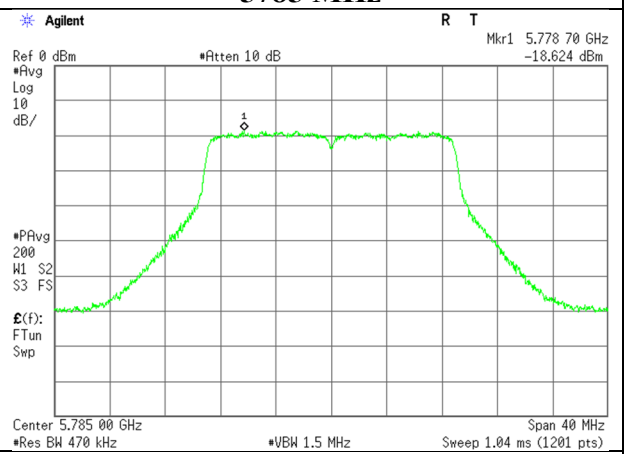

### 5745 MHz



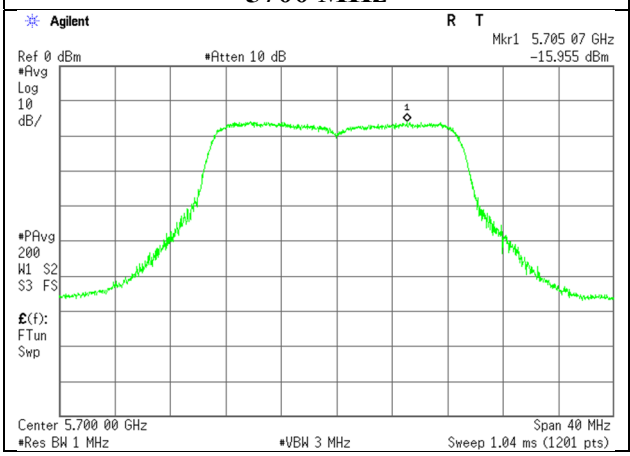

### 5580 MHz



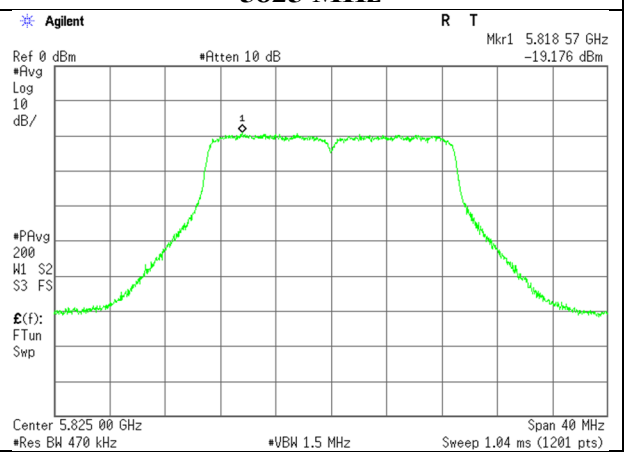

### 5785 MHz




### 5700 MHz




### 5825 MHz

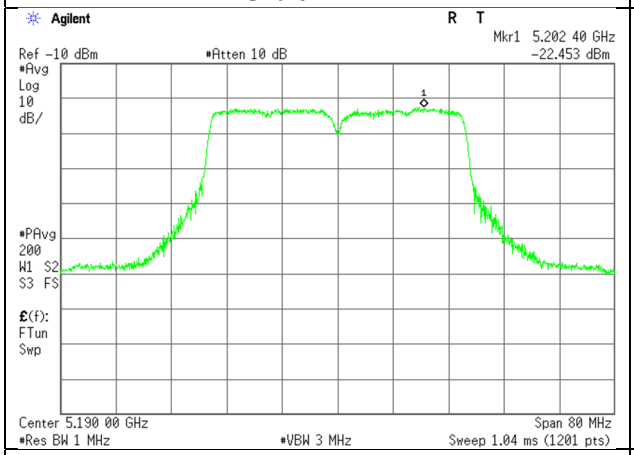


# Maximum Power Spectral Density

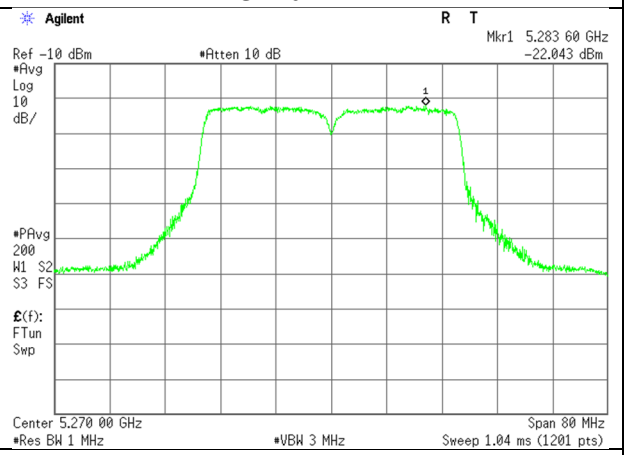
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11n-40 | |

## 11n-40

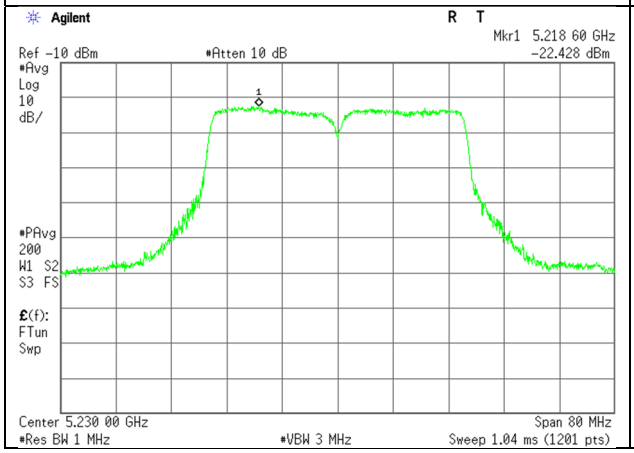
### 5190 MHz



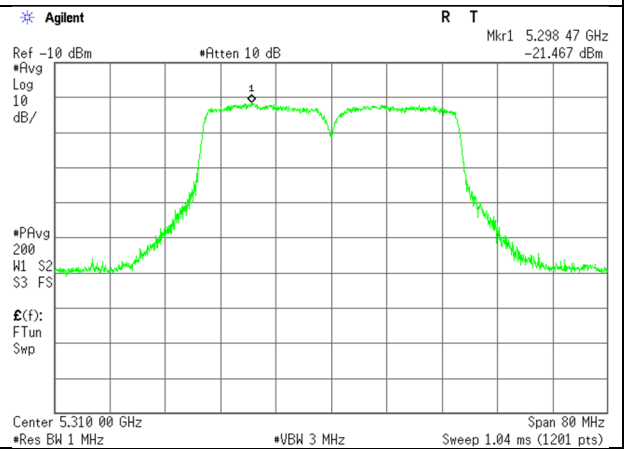

### 5270 MHz




### 5230 MHz




### 5310 MHz

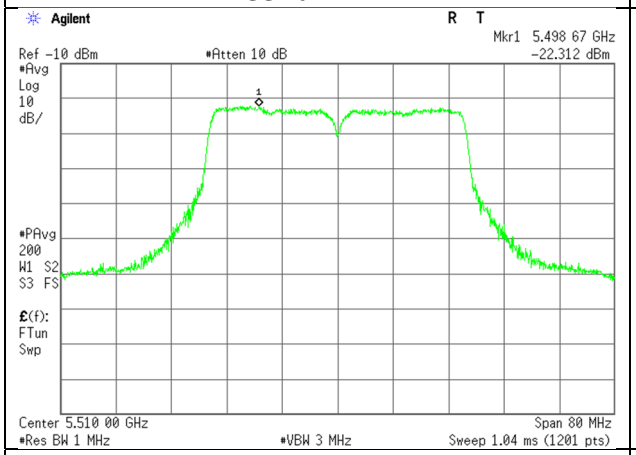


# Maximum Power Spectral Density

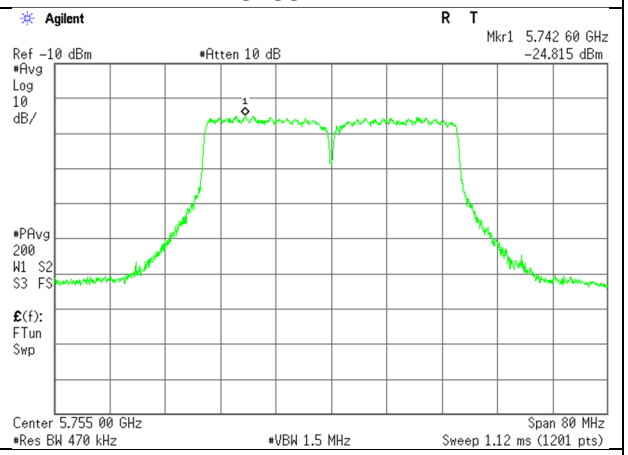
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11n-40 | |

## 11n-40

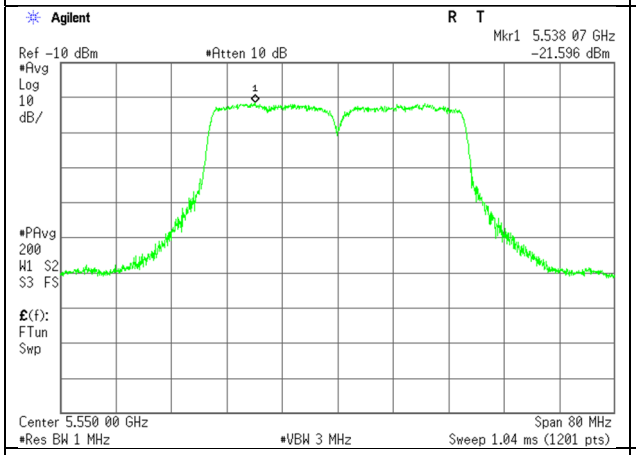
### 5510 MHz



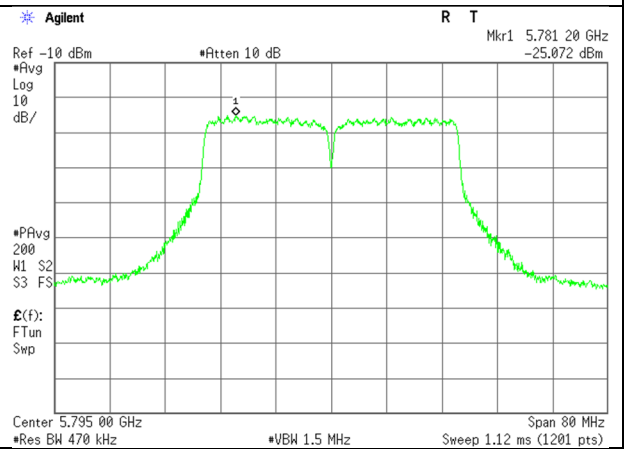

### 5755 MHz



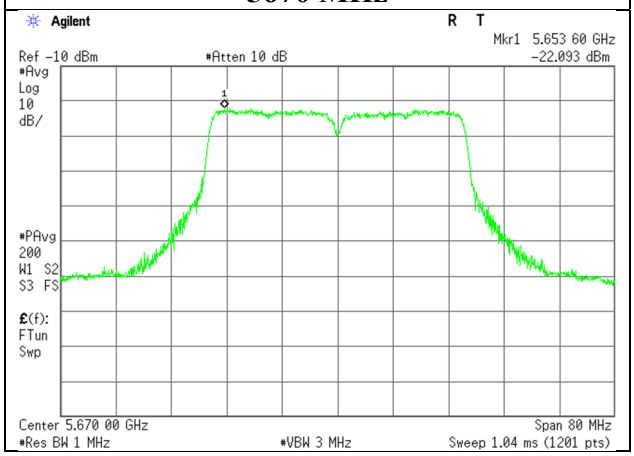

### 5550 MHz




### 5795 MHz




### 5670 MHz

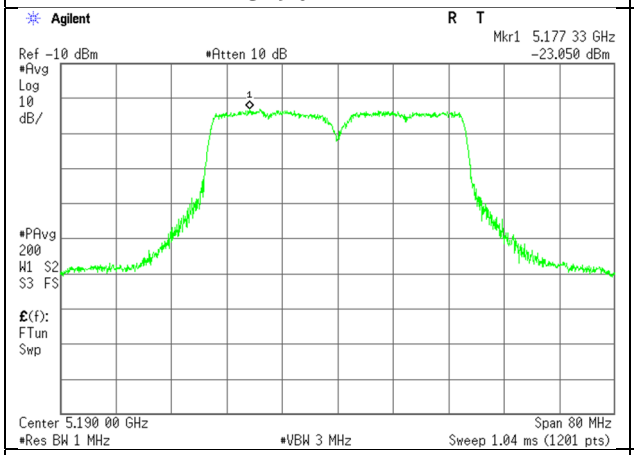


# Maximum Power Spectral Density

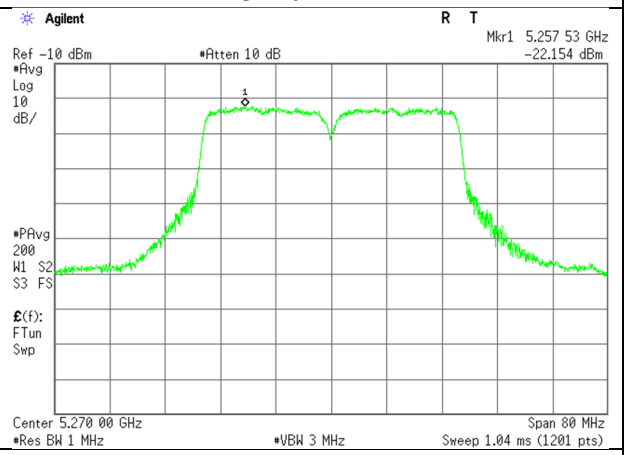
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-40 | |

## 11ac-40

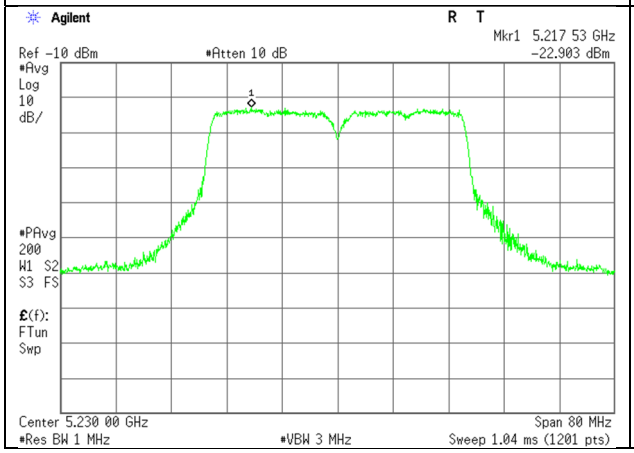
### 5190 MHz



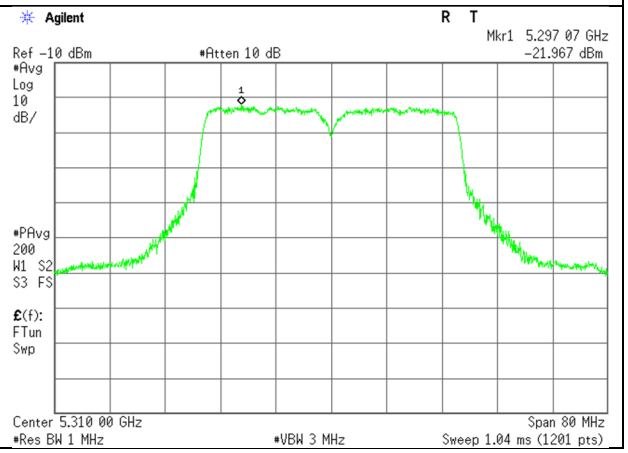

### 5270 MHz




### 5230 MHz




### 5310 MHz

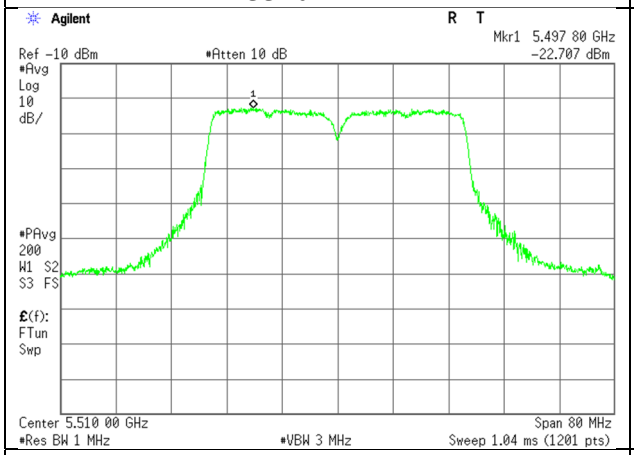


# Maximum Power Spectral Density

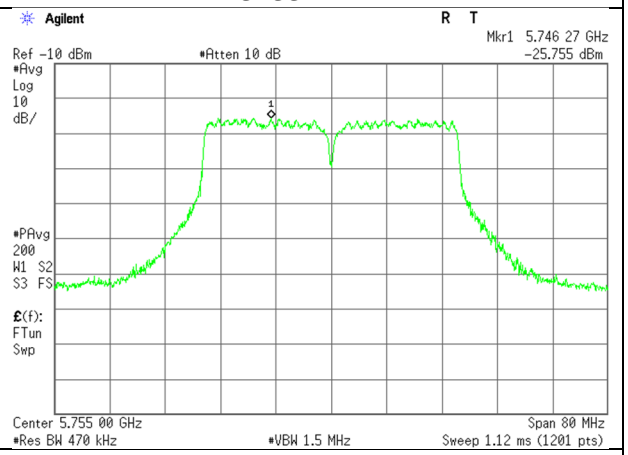
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-40 | |

## 11ac-40

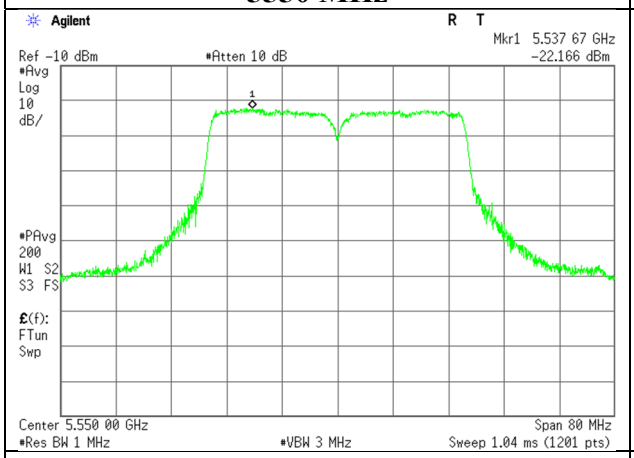
### 5510 MHz



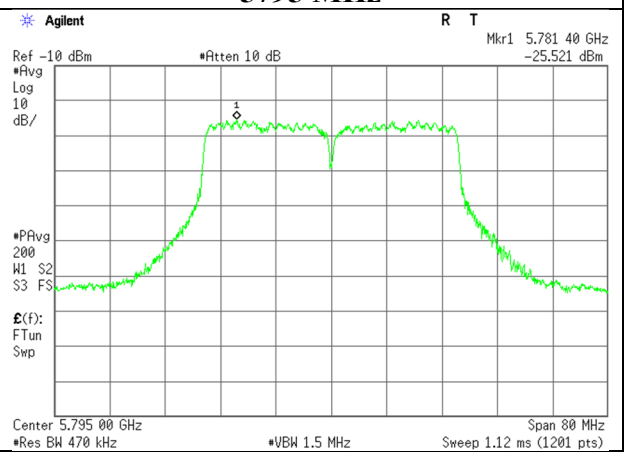

### 5755 MHz



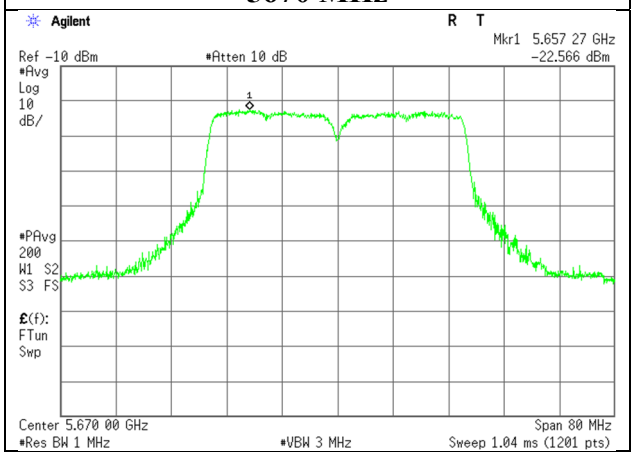

### 5550 MHz




### 5795 MHz




### 5670 MHz

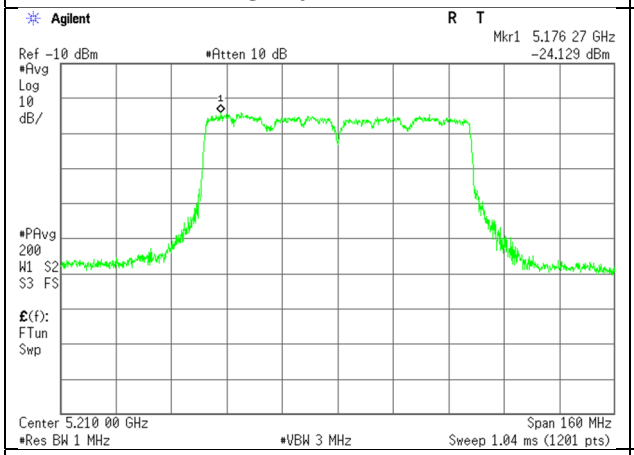


# Maximum Power Spectral Density

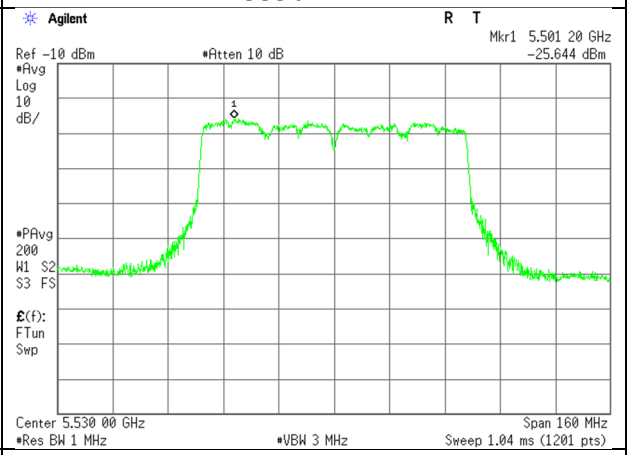
| | | |
|---|---|---|
| Report No. | 14118411H | |
| Test place | Ise EMC Lab. No.8 Measurement Room | |
| Date | December 17, 2021 | December 20, 2021 |
| Temperature / Humidity | 22deg. C / 35 % RH | 22deg. C / 28 % RH |
| Engineer | Nachi Konegawa | Nachi Konegawa |
| Mode | Tx 11ac-80 | |

## 11ac-80

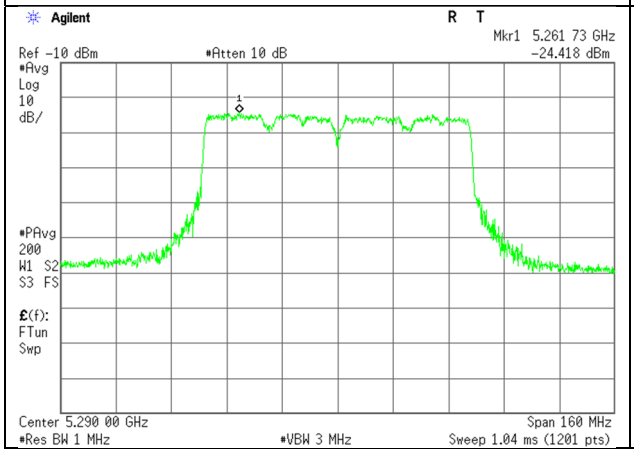
### 5210 MHz



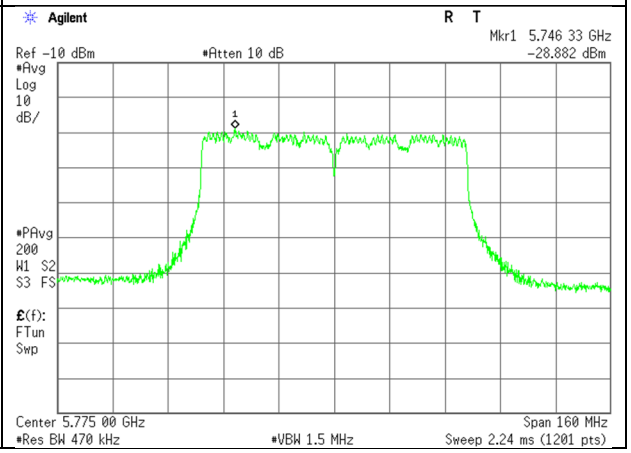

### 5530 MHz




### 5290 MHz




### 5775 MHz



# Radiated Spurious Emission

| | | | | | |
|---|---|---|---|---|---|
| Report No. | 14118411H | | | | |
| Test place | Ise EMC Lab. | | | | |
| Semi Anechoic Chamber | No.3 | No.3 | No.3 | No.3 | No.4 |
| Date | December 7, 2021 | December 9, 2021 (Day) | December 9, 2021 (Night) | December 10, 2021 | December 18, 2021 |
| Temperature / Humidity | 23 deg. C / 43 % RH | 22 deg. C / 45 % RH | 24 deg. C / 43 % RH | 22 deg. C / 40 % RH | 21 deg. C / 38 % RH |
| Engineer | Nachi Konegawa | Hiroki Numata | Takumi Nishida | Hiroki Numata | Nachi Konegawa |
| | (1 GHz - 10 GHz) | (10 GHz - 18 GHz) | (18 GHz - 26.5 GHz) | (26.5 GHz - 40 GHz) | (Below 1 GHz) |
| Mode | Tx 11a 5180 MHz | | | | |

| Polarity [Hori/Vert] | Frequency [MHz] | Reading (QP / PK) [dBuV] | Reading (AV) [dBuV] | Ant. Factor [dB/m] | Loss [dB] | Gain [dB] | Duty Factor [dB] | Result (QP / PK) [dBuV/m] | Result (AV) [dBuV/m] | Limit (QP / PK) [dBuV/m] | Limit (AV) [dBuV/m] | Margin (QP / PK) [dB] | Margin (AV) [dB] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hori. | 37.7 | 21.6 | - | 15.8 | 7.1 | 32.0 | - | 12.4 | - | 40.0 | - | 27.6 | - | Floor noise |
| Hori. | 53.7 | 22.0 | - | 9.8 | 7.3 | 32.0 | - | 7.2 | - | 40.0 | - | 32.9 | - | Floor noise |
| Hori. | 141.4 | 21.7 | - | 14.5 | 8.2 | 32.0 | - | 12.5 | - | 43.5 | - | 31.0 | - | Floor noise |
| Hori. | 244.9 | 22.3 | - | 11.8 | 9.0 | 31.9 | - | 11.2 | - | 46.0 | - | 34.8 | - | Floor noise |
| Hori. | 500.0 | 26.9 | - | 18.0 | 10.7 | 32.0 | - | 23.6 | - | 46.0 | - | 22.4 | - | |
| Hori. | 729.6 | 22.0 | - | 20.2 | 11.6 | 32.0 | - | 21.9 | - | 46.0 | - | 24.2 | - | Floor noise |
| Hori. | 5150.0 | 45.6 | 36.2 | 31.9 | 6.2 | 31.6 | 1.1 | 52.1 | 43.7 | 73.9 | 53.9 | 21.8 | 10.2 | *1) |
| Hori. | 10360.0 | 41.5 | - | 39.9 | -2.4 | 33.3 | - | 45.8 | - | 68.2 | - | 22.4 | - | Floor noise |
| Hori. | 15540.0 | 42.1 | 35.0 | 37.6 | 0.3 | 32.3 | - | 47.8 | 40.7 | 73.9 | 53.9 | 26.1 | 13.2 | Floor noise |
| Vert. | 37.7 | 21.5 | - | 15.8 | 7.1 | 32.0 | - | 12.3 | - | 40.0 | - | 27.7 | - | Floor noise |
| Vert. | 53.7 | 22.2 | - | 9.8 | 7.3 | 32.0 | - | 7.3 | - | 40.0 | - | 32.7 | - | Floor noise |
| Vert. | 141.4 | 21.8 | - | 14.5 | 8.2 | 32.0 | - | 12.6 | - | 43.5 | - | 30.9 | - | Floor noise |
| Vert. | 244.9 | 22.2 | - | 11.8 | 9.0 | 31.9 | - | 11.1 | - | 46.0 | - | 34.9 | - | Floor noise |
| Vert. | 500.0 | 29.3 | - | 18.0 | 10.7 | 32.0 | - | 26.0 | - | 46.0 | - | 20.0 | - | |
| Vert. | 729.6 | 22.1 | - | 20.2 | 11.6 | 32.0 | - | 22.0 | - | 46.0 | - | 24.1 | - | Floor noise |
| Vert. | 5150.0 | 45.1 | 35.7 | 31.9 | 6.2 | 31.6 | 1.1 | 51.6 | 43.3 | 73.9 | 53.9 | 22.3 | 10.6 | *1) |
| Vert. | 10360.0 | 41.5 | - | 39.9 | -2.4 | 33.3 | - | 45.8 | - | 68.2 | - | 22.5 | - | Floor noise |
| Vert. | 15540.0 | 42.2 | 35.6 | 37.6 | 0.3 | 32.3 | - | 47.8 | 41.3 | 73.9 | 53.9 | 26.1 | 12.7 | Floor noise |

Result (QP / PK) = Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier)

Result (AV)= Reading + Ant Factor + Loss (Cable+Attenuator+Filter+Distance factor(above 1 GHz)) - Gain(Amplifier) + Duty factor

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20 dB).

*QP detector was used up to 1GHz.

*1) Not Out of Band emission(Leakage Power)

| | | |
|---|---|---|
| Distance factor: | 1 GHz - 10 GHz | 20log (3.95 m / 3.0 m) = 2.39 dB |
| | 10 GHz - 40 GHz | 20log (1.0 m / 3.0 m) = -9.5 dB |