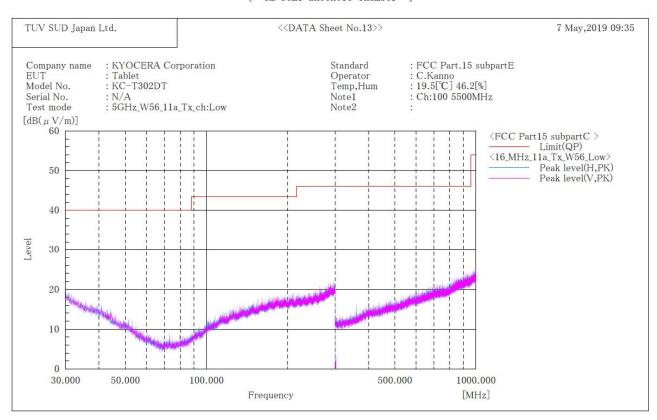


[11a] W56 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



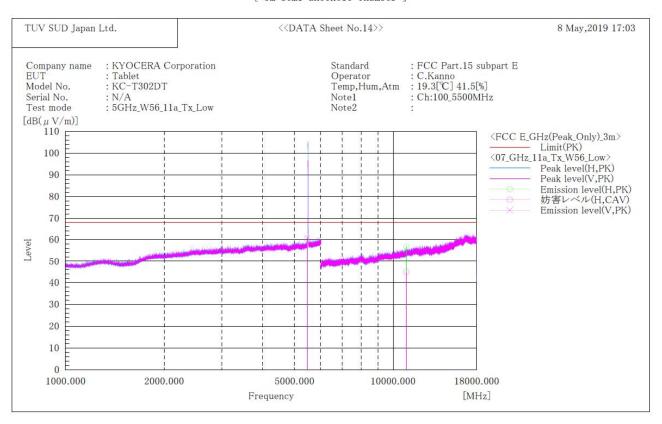
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11a] W56 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

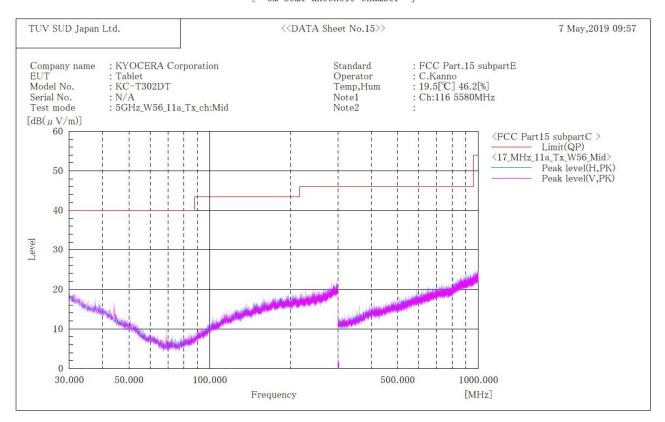
| No. | Frequency | (P) | Reading PK | Reading CAV | c. f | Result PK | Result CAV | Limit PK | Margin PK | Margin CAV | Height | Angle |
|-----|-----------|-----|---------------|----------------|-----------|-----------------|-----------------|-----------------|--------------|---------------|--------|-------|
| | [MHz] | | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 5465. 700 | H | 49.5 | | 11.1 | 60.6 | | 68. 2 | 7.6 | | 147.0 | 0.0 |
| 2 | 5465.900 | V | 49.8 | | 11.1 | 60.9 | | 68. 2 | 7.3 | | 161.0 | 0.0 |
| 3 | 11000,000 | H | 45.3 | 33.4 | 11.6 | 56. 9 | 45.0 | 74.0 | 17.1 | 9.0 | 121.0 | 328.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11a] W56 / Channel Middle BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



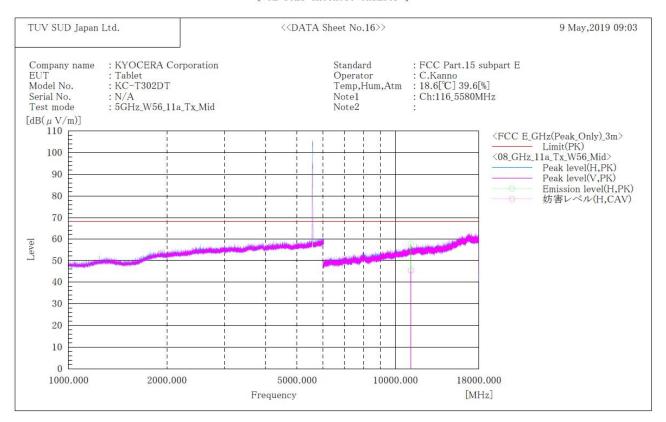
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11a] W56 / Channel Middle ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

| No. | Frequency | (P) | Reading PK | Reading CAV | c. f | Result PK | Result CAV | Limit PK | Margin PK | Margin CAV | Height | Angle |
|-----|--------------------|-----|------------------|------------------|-----------|------------------------|---------------------------|-----------------------------------|---------------|---------------|---------------|-------|
| 1 | [MHz] 11160.000 | Н | [dB(μV)] 46.0 | [dB(μV)] 33.6 | [dB(1/m)] | [dB($\mu V/m$)] 57.8 | [dB($\mu V/m$)] 45.4 | [dB($\mu \text{ V/m}$)] 74.0 | [dB] 16. 2 | [dB] 8.6 | [cm] 151.0 | [°] |

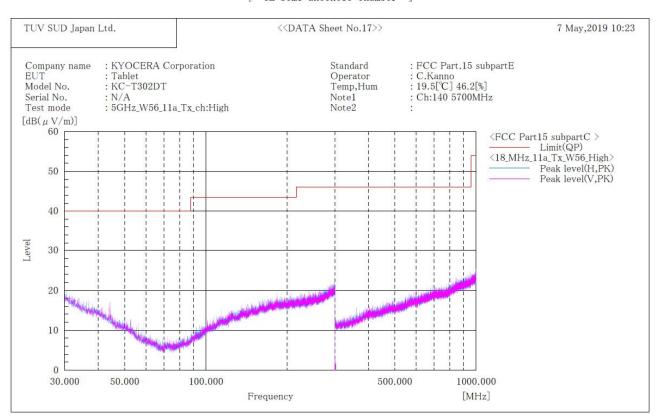
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11a] W56 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



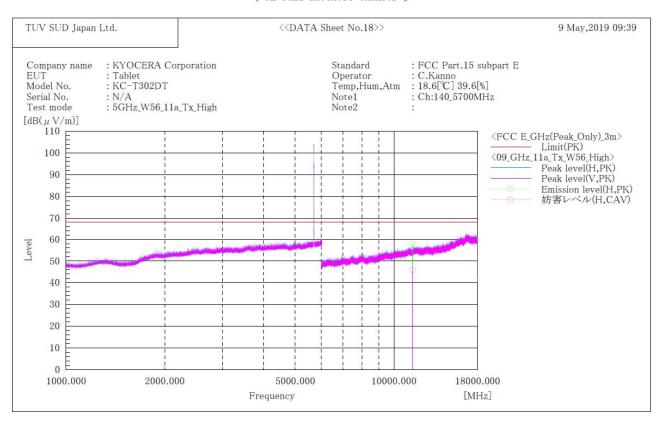
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11a] W56 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

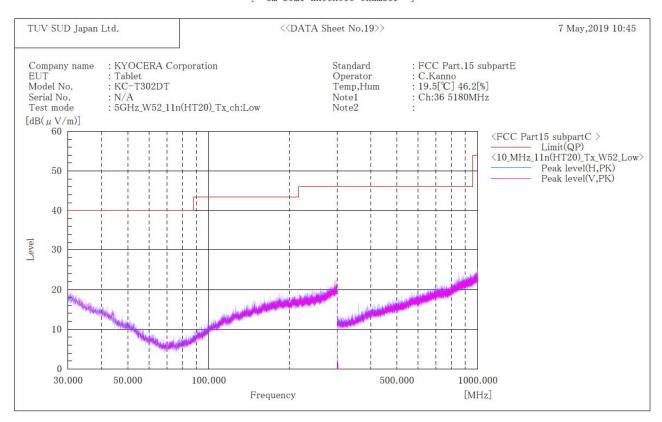
| No. | Frequency | (P) | Reading | Reading | c.f | Result | Result | Limit | Margin | Margin | Height | Angle |
|-----|-----------|-----|----------|---------------|-----------|-----------------|-----------------|-----------------|--------|--------|--------|-------|
| | [MHz] | | [dB(µV)] | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 11400,000 | H | 45.8 | 33. 8 | 12. 1 | 57. 9 | 45. 9 | 74. 0 | 16. 1 | 8. 1 | 141.0 | 89.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W52 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



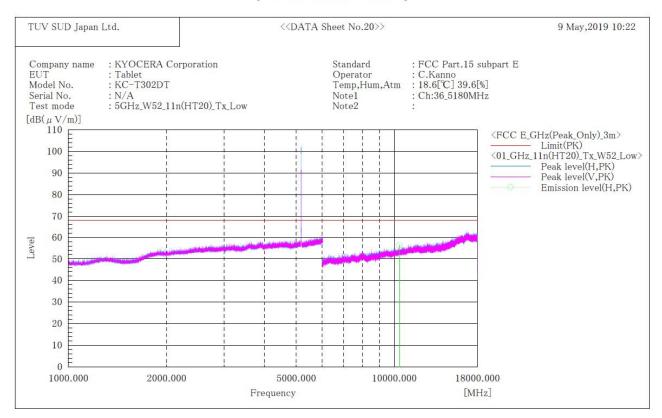
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W52 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

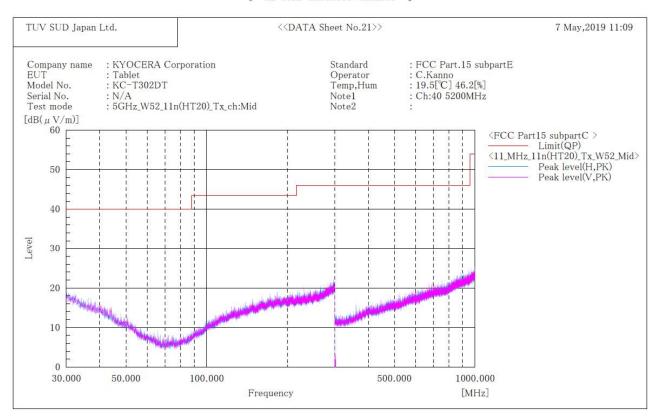
| No. | Frequency | (P) | Reading | c. f | Result | Limit | Margin | Height | Angle |
|-----|-----------|-----|---------------|----------------------|-----------------|-----------------|--------|--------|------------|
| | | | PK | VENNERAL IN BUILDING | PK | PK | PK | 200 | 1111111111 |
| | [MHz] | | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [cm] | [°] |
| 1 | 10360.000 | H | 45.9 | 10.7 | 56.6 | 68. 2 | 11.6 | 172.0 | 118.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W52 / Channel Middle BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



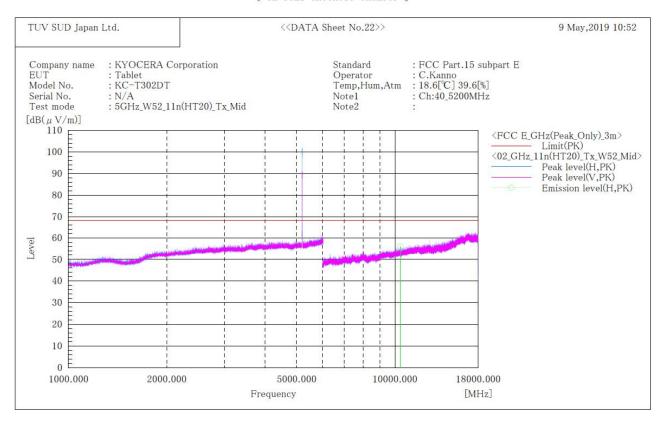
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W52 / Channel Middle ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

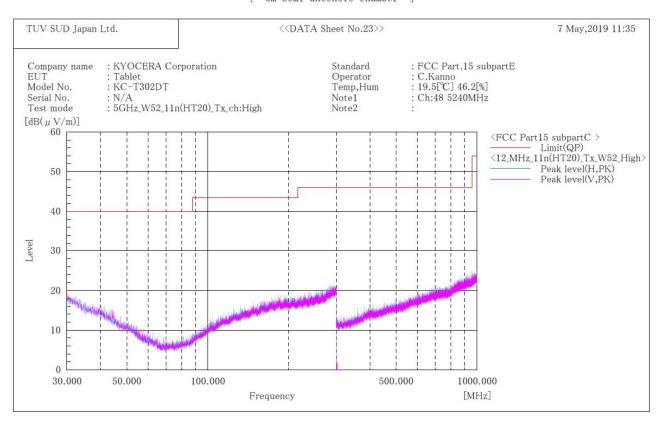
| No. | Frequency | (P) | Reading PK | c. f | Result PK | Limit PK | Margin PK | Height | Angle |
|-----|--------------------|-----|------------------------|-------------------|------------------------|-----------------------|--------------|---------------|---------------|
| 1 | [MHz] 10400.000 | Н | [dB(μ V)] 45.5 | [dB(1/m)] 10.7 | [dB(μ V/m)] 56. 2 | $[dB(\mu V/m)]$ 68. 2 | [dB] 12.0 | [cm] 165.0 | [°] 129. 0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W52 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



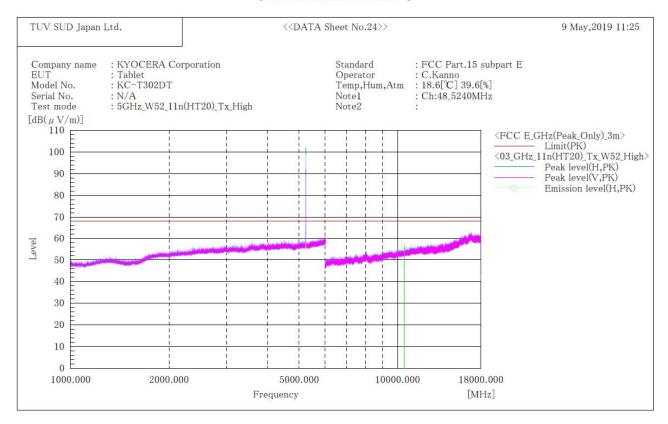
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W52 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

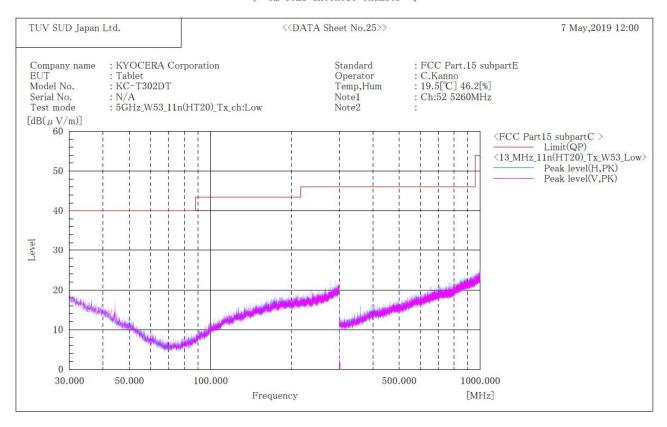
| No. | Frequency | (P) | Reading | c.f | Result | Limit | Margin | Height | Angle |
|-----|-----------|-----|---------------|-----------|-----------------|-----------------|--------|--------|-------|
| | | | PK | | PK | PK | PK | | |
| | [MHz] | | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [cm] | [°] |
| 1 | 10480.000 | H | 45.8 | 10.8 | 56.6 | 68. 2 | 11.6 | 144.0 | 121.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W53 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



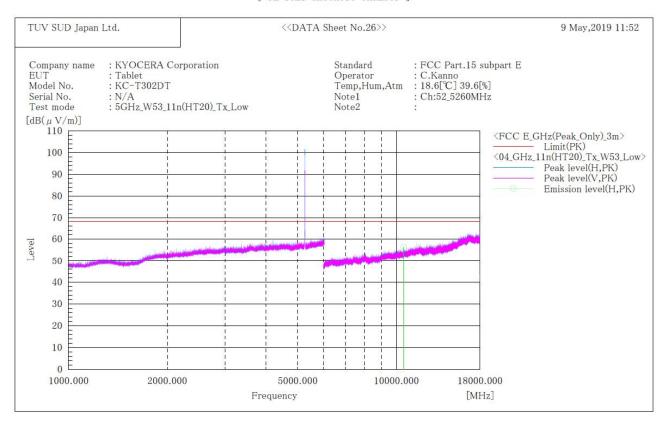
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W53 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

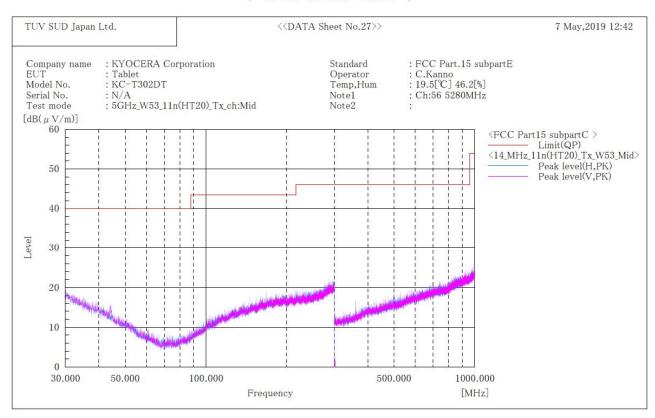
| No. | Frequency | (P) | Reading | c. f | Result | Limit | Margin | Height | Angle |
|-----|-----------|-----|---------------|-----------|-----------------|-----------------|--------|--------|-------|
| | | | PK | | PK | PK | PK | | |
| | [MHz] | | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [cm] | [°] |
| 1 | 10520,000 | H | 45.5 | 10.9 | 56. 4 | 68. 2 | 11.8 | 163.0 | 144.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W53 / Channel Middle BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



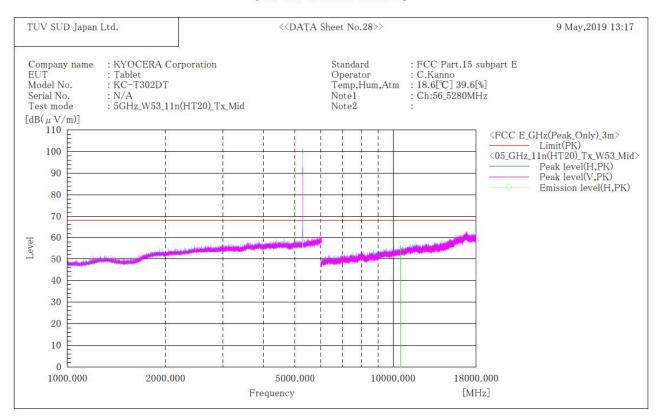
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W53 / Channel Middle ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

| No. | Frequency | (P) | Reading | c.f | Result | Limit | Margin | Height | Angle |
|-----|------------|-----|---------|-----------|---------------|--|------------|--------|-------|
| | [MHz] | | PK | [dB(1/m)] | PK [dB(uV/m)] | $ \begin{array}{c} PK \\ [dB(\mu V/m)] \end{array} $ | PK [dB] | [cm] | [°] |
| 1 | 10560, 000 | Н | 45.6 | 10. 9 | 56. 5 | 68. 2 | 11.7 | 158. 0 | 107.0 |

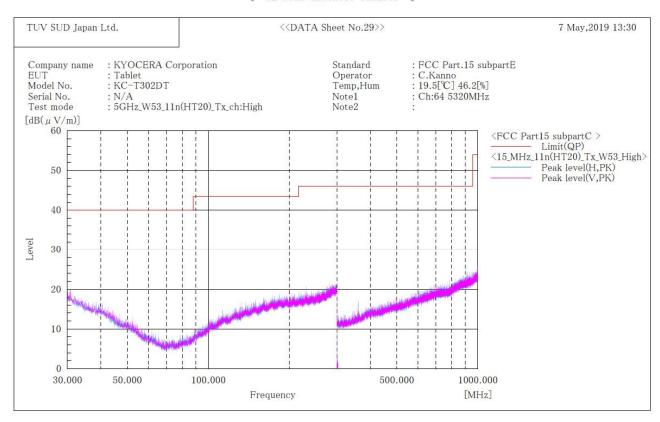
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W53 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



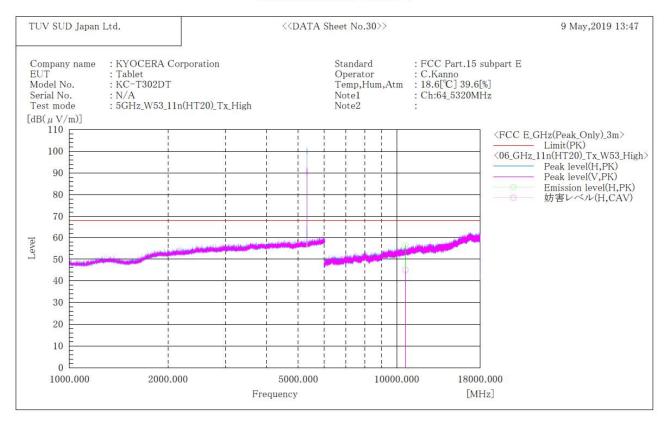
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W53 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



| Fina | al Result | | | | | | | | | | | |
|------|-----------|-----|---------------|----------------|-----------|-----------------|-----------------|-----------------|--------|---------------|--------|-------|
| No. | Frequency | (P) | Reading PK | Reading CAV | c.f | Result PK | Result CAV | Limit PK | Margin | Margin CAV | Height | Angle |
| | [MHz] | | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 10640.000 | H | 45.5 | 33.9 | 11.1 | 56. 6 | 45.0 | 74.0 | 17.4 | 9.0 | 153.0 | 148.0 |

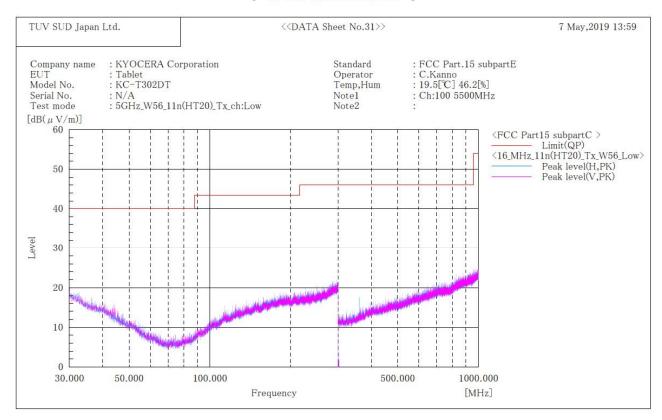
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W56 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



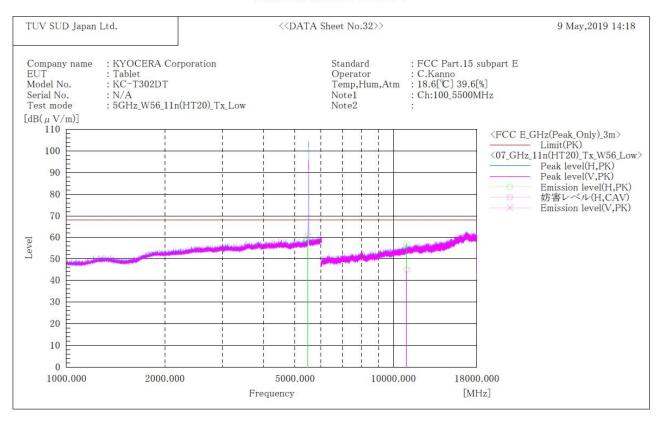
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W56 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



| Final | Result |
|-------|--------|
| | |

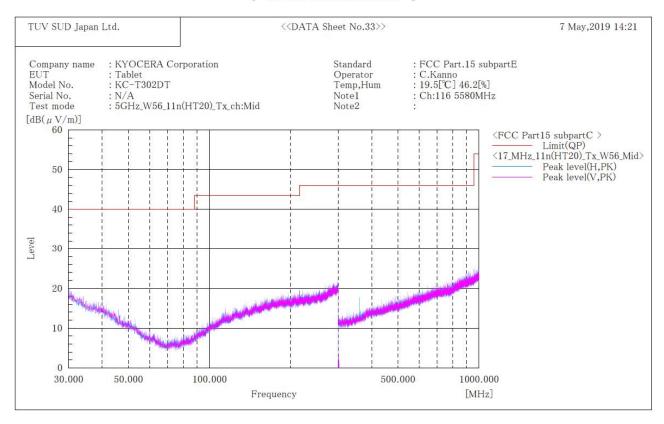
| No. | Frequency | (P) | Reading PK | Reading CAV | c. f | Result PK | Result CAV | Limit PK | Margin PK | Margin CAV | Height | Angle |
|-----|-----------|-----|---------------|----------------|-----------|-----------------|-----------------|-----------------|--------------|---------------|--------|-------|
| | [MHz] | | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 5467.000 | H | 49.8 | | 11.1 | 60.9 | | 68. 2 | 7.3 | | 172.0 | 221.0 |
| 2 | 5463.000 | V | 49.5 | | 11.1 | 60.6 | | 68. 2 | 7.6 | | 112.0 | 317.0 |
| 3 | 11000,000 | H | 45.5 | 33. 3 | 11.6 | 57.1 | 44. 9 | 74.0 | 16.9 | 9.1 | 127.0 | 74.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W56 / Channel Middle BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



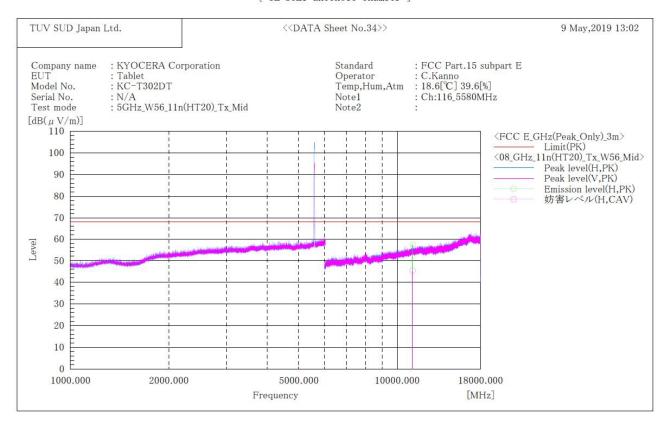
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W56 / Channel Middle ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]





| No. | Frequency | (P) | Reading PK | Reading CAV | c. f | Result PK | Result CAV | Limit PK | Margin PK | Margin | Height | Angle |
|------|--------------------|-----|------------------|------------------|-------------------|-----------------|---------------|-----------------|--------------|--------|---------------|--------------|
| (40) | [MHz] 11160.000 | ш | [dB(μV)] 45.9 | [dB(μV)] 33.6 | [dB(1/m)] 11.8 | $[dB(\mu V/m)]$ | [dB(μV/m)] | $[dB(\mu V/m)]$ | [dB] 16.3 | [dB] | [cm] 100.0 | [°] 67. 0 |

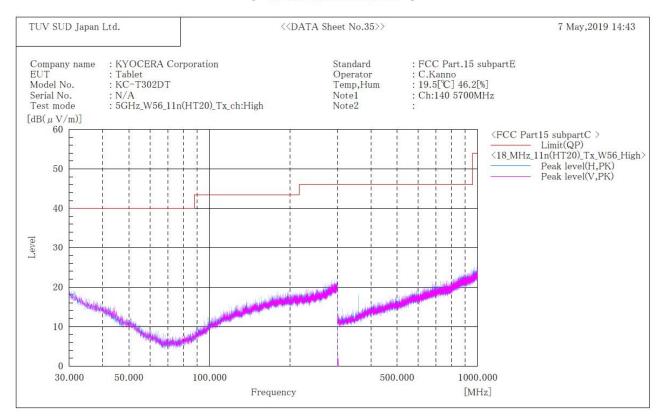
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT20)] W56 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



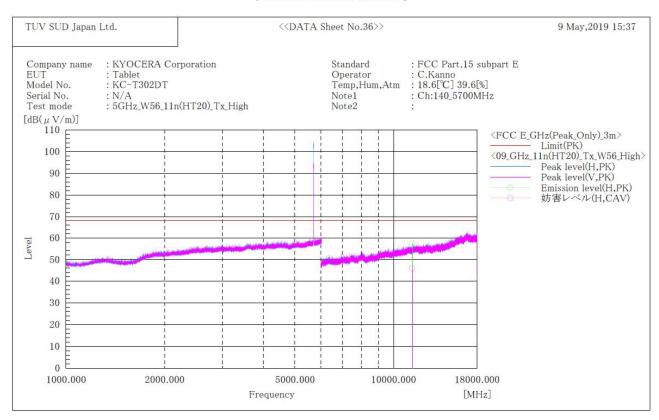
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT20)] W56 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

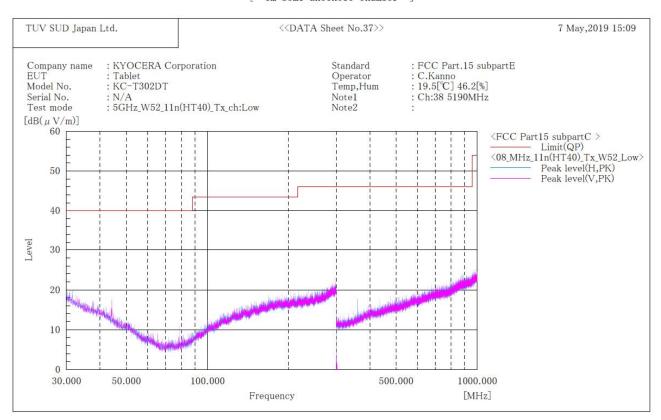
| No. | Frequency | (P) | Reading | Reading | c. f | Result | Result | Limit PK | Margin | Margin | Height | Angle |
|-----|-----------|-----|---------------|---------------|-----------|-----------------|-----------------|-----------------|--------|--------|--------|-------|
| | [MHz] | | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 11400 000 | H | 45 6 | 33 8 | 19 1 | 57 7 | 45 9 | 74 0 | 16 3 | 8 1 | 137 0 | 90 0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W52 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



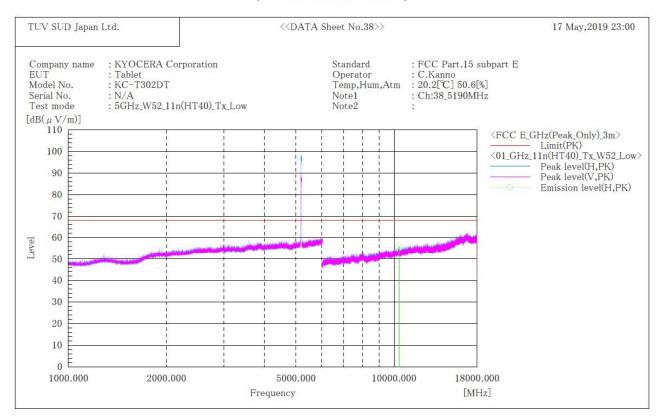
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W52 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

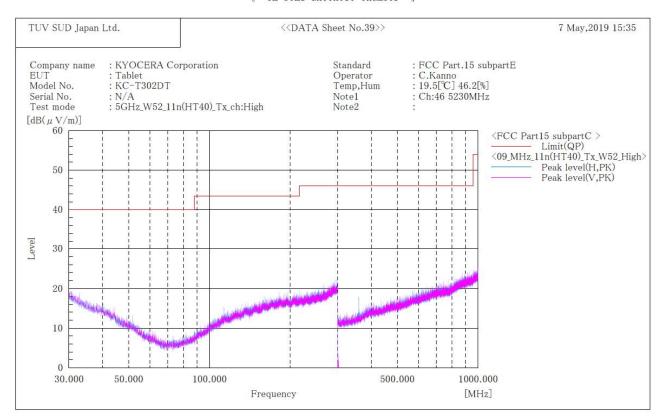
| No. | Frequency | (P) | Reading | c. f | Result | Limit | Margin | Height | Angle |
|-----|-----------|-----|---------------|----------------------------|-----------------|-----------------|--------|--------|-------|
| | | | PK | VENTONIAN IN INVESTIGATION | PK | PK | PK | | |
| | [MHz] | | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [cm] | [°] |
| 1 | 10380.000 | H | 45.4 | 10.7 | 56. 1 | 68. 2 | 12. 1 | 103.0 | 79.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W52 / Channel High BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



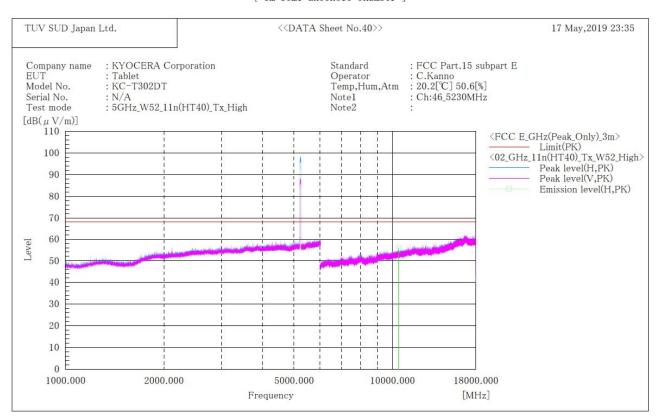
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W52 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

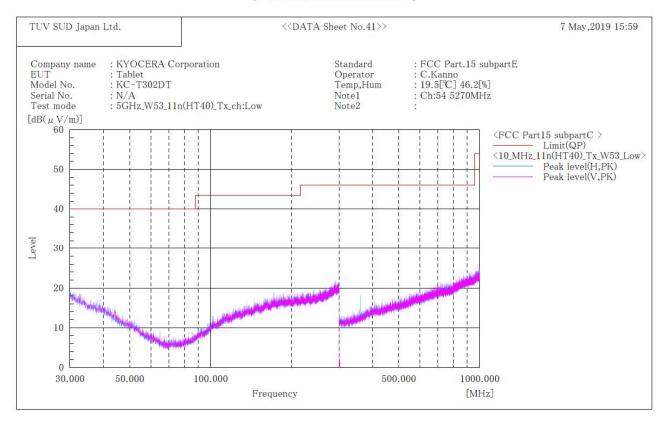
| No. | Frequency | (P) | Reading | c. f | Result | Limit | Margin | Height | Angle |
|-----|-----------|-----|---------------|-----------|-----------------|-----------------|--------|--------|-------|
| | | | PK | | PK | PK | PK | | |
| | [MHz] | | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [cm] | [°] |
| 1 | 10460.000 | H | 45.4 | 10.8 | 56. 2 | 68. 2 | 12.0 | 146.0 | 81.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W53 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



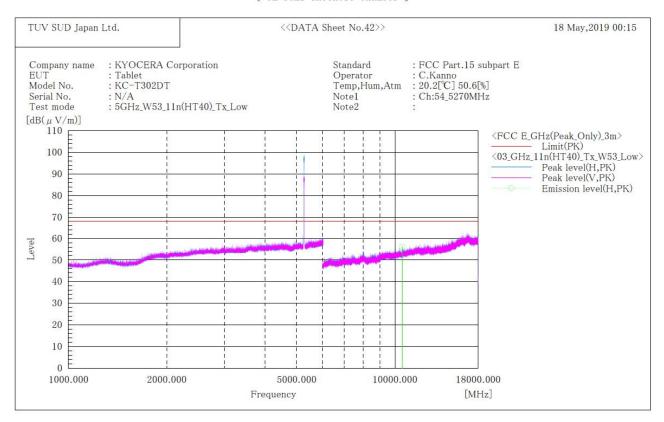
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W53 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

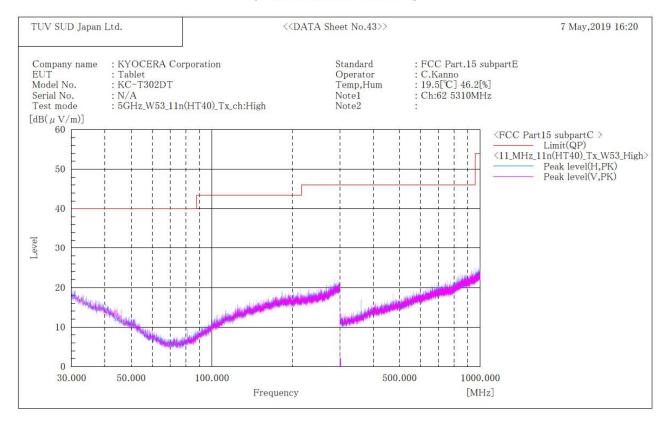
| No. | Frequency | (P) | Reading | c.f | Result | Limit | Margin | Height | Angle |
|-----|-----------|-----|---------------|-----------|-----------------|-----------------|--------|--------|-------|
| | | | PK | | PK | PK | PK | | |
| | [MHz] | | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [cm] | [°] |
| 1 | 10540.000 | H | 45. 4 | 10.9 | 56. 3 | 68. 2 | 11.9 | 148.0 | 78.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W53 / Channel High BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



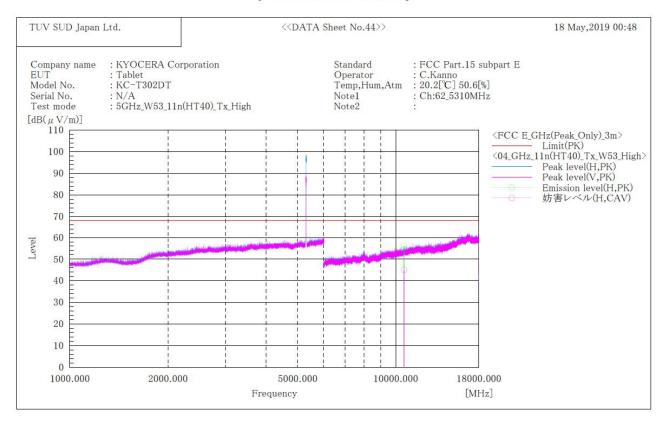
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W53 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

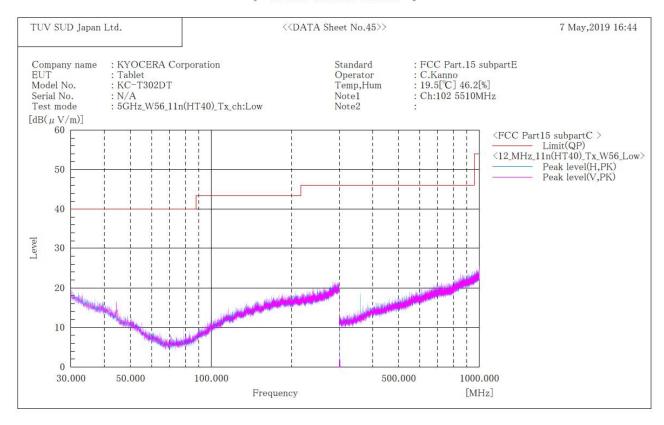
| No. | Frequency | (P) | Reading | Reading | c. f | Result | Result | Limit | Margin | Margin | Height | Angle |
|-----|-----------|-----|-------------|-----------------|-----------|-----------------|---|-----------------|------------|--------|--------|-------|
| | [MHz] | | PK [dB(µV)] | CAV [dB(μV)] | [dB(1/m)] | $[dB(\mu V/m)]$ | $\begin{bmatrix} dB(\mu V/m) \end{bmatrix}$ | $[dB(\mu V/m)]$ | PK [dB] | [dB] | [cm] | [°] |
| 1 | 10620 000 | H | 45 1 | 33 9 | 11 1 | 56.2 | 45 0 | 74 0 | 17 8 | 9.0 | 146.0 | 79 0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W56 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



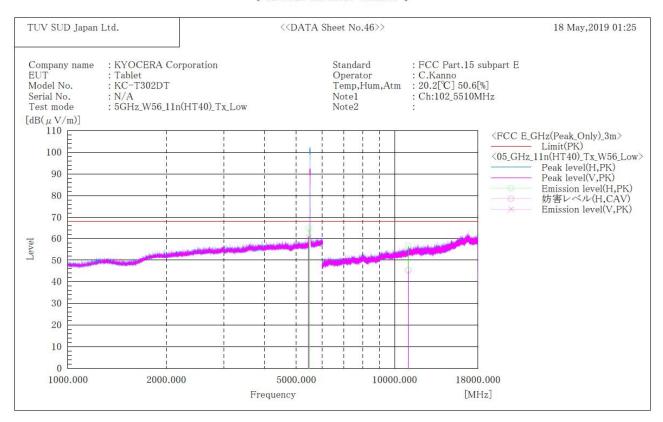
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W56 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

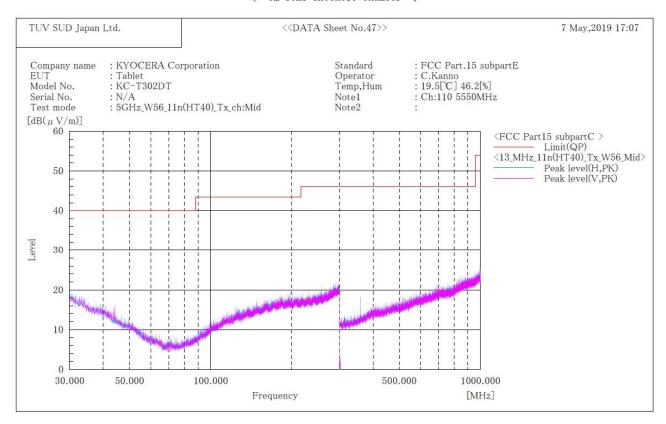
| No. | Frequency | (P) | Reading PK | Reading CAV | c. f | Result PK | Result CAV | Limit PK | Margin PK | Margin CAV | Height | Angle |
|-----|-----------|-----|---------------|----------------|-----------|-----------------|-----------------|-----------------|--------------|---------------|--------|-------|
| | [MHz] | | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 5465, 200 | H | 53. 7 | | 11.1 | 64.8 | | 68. 2 | 3.4 | | 138.0 | 71.0 |
| 2 | 5462.300 | V | 49.8 | | 11.1 | 60.9 | | 68. 2 | 7.3 | | 162.0 | 172.0 |
| 3 | 11020,000 | H | 45. 1 | 33. 7 | 11.6 | 56. 7 | 45. 3 | 74.0 | 17.3 | 8.7 | 145.0 | 73.0 |

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W56 / Channel Middle BELOW 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



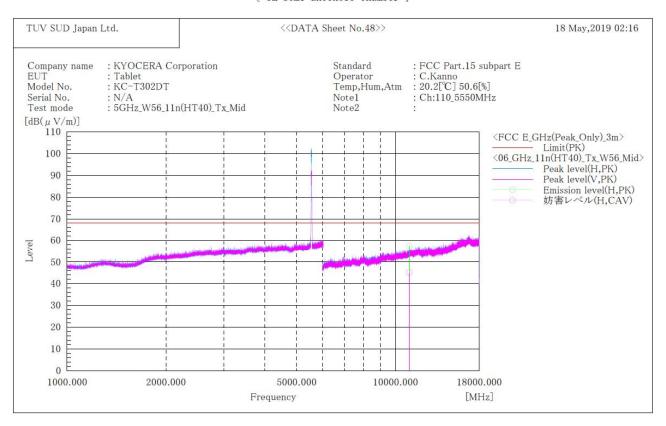
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W56 / Channel Middle ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

| No. | Frequency | (P) | Reading | Reading | c.f | Result | Result | Limit | Margin | Margin | Height | Angle |
|-----|-----------|-----|---------------|---------------|-----------|-----------------|-----------------|-----------------|--------|--------|--------|-------|
| | | | PK | CAV | | PK | CAV | PK | PK | CAV | | |
| | [MHz] | | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB(1/m)] | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | $[dB(\mu V/m)]$ | [dB] | [dB] | [cm] | [°] |
| 1 | 11020,000 | H | 45. 7 | 33.6 | 11.6 | 57.3 | 45. 2 | 74.0 | 16.7 | 8.8 | 131.0 | 74.0 |

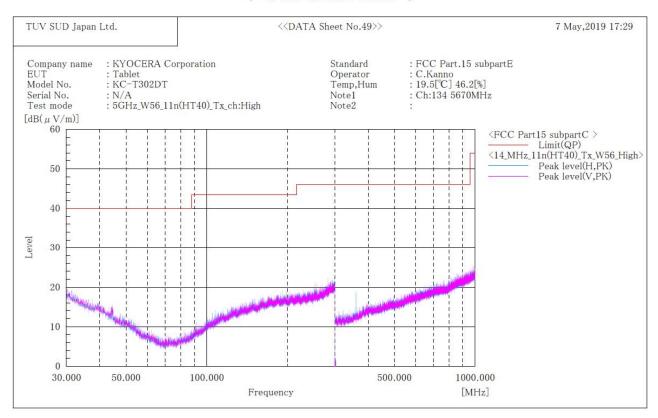
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



[11n(HT40)] W56 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



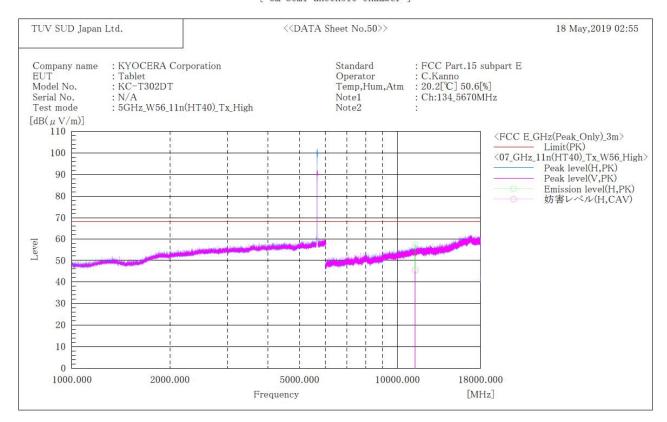
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



[11n(HT40)] W56 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]





| No. | Frequency | (P) | Reading PK | Reading CAV | c.f | Result PK | Result CAV | Limit PK | Margin PK | Margin CAV | Height | Angle |
|-----|--------------------|-----|------------------|------------------|-------------------|-----------------------|--------------------------|---------------------------|---------------|---------------|---------------|-------|
| 1 | [MHz] 11340.000 | Н | [dB(μV)] 45.5 | [dB(µV)] 33.3 | [dB(1/m)] 12.0 | [dB(μ V/m)] 57.5 | [dB(μ V/m)] 45.3 | [dB($\mu V/m$)] 74.0 | [dB] 16. 5 | [dB] 8.7 | [cm] 148.0 | [°] |

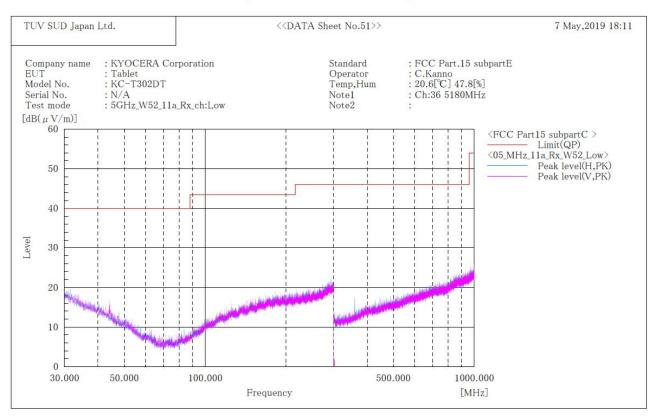
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



Receive mode

W52 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



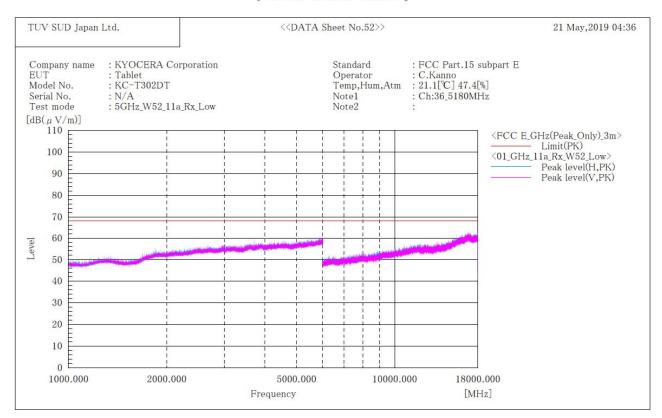
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



W52 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ****** [3m Semi-anechoic chamber]



Final Result

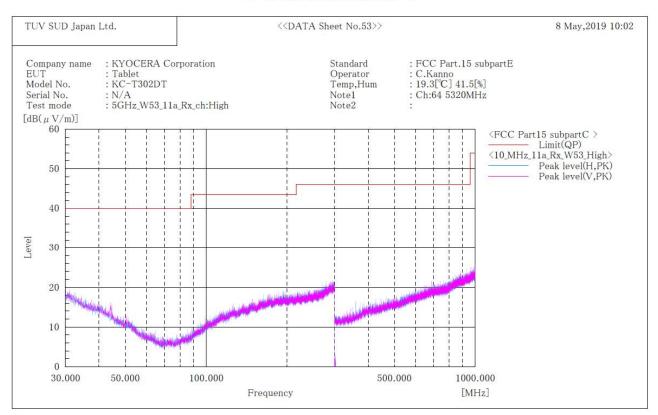
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



W53 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



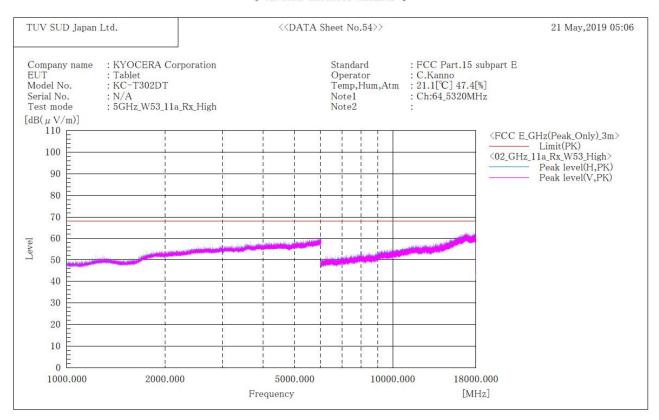
Final Result

- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



W53 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ******
[3m Semi-anechoic chamber]



Final Result

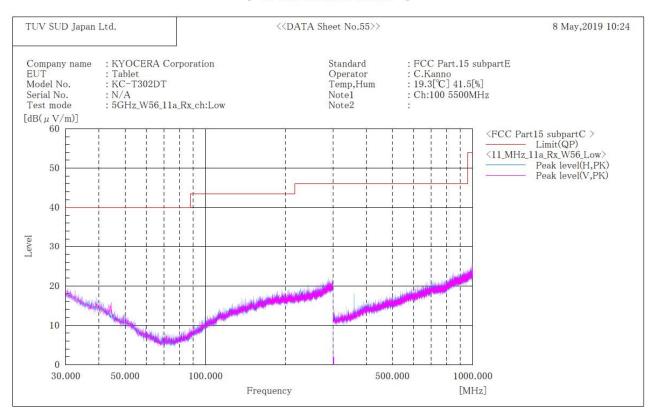
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



W56 / Channel Low BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



Final Result

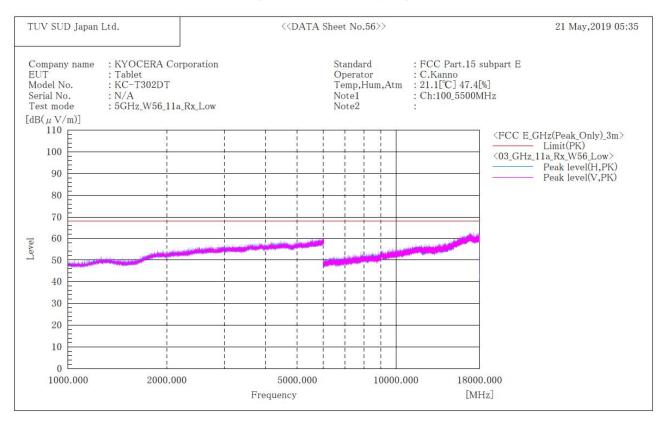
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.



W56 / Channel Low ABOVE 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



Final Result

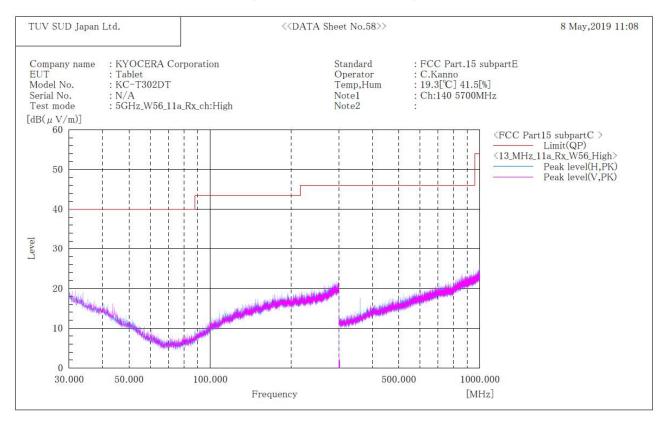
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



W56 / Channel High BELOW 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]



Final Result

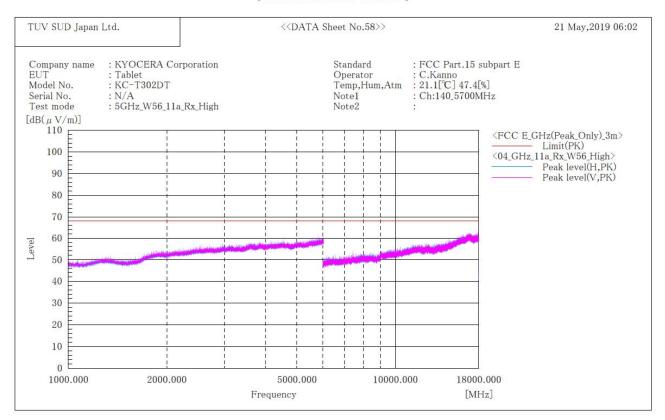
- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 9kHz to 1000MHz at the 3 meters distance.

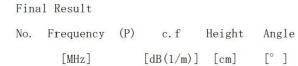


W56 / Channel High ABOVE 1GHz

****** RADIATED EMISSION ******

[3m Semi-anechoic chamber]





- 1. Emission Level (Margin) = Limit [Reading + Factor (Antenna + Cable Amp)]
- 2. No emission were detected in frequency range 18GHz to 40GHz at the 3 meters distance.



4.5 Frequency Stability

4.5.1 Measurement procedure

[FCC 15.407(g)]

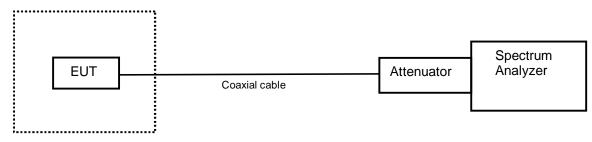
The EUT was placed of an inside of an constant temperature chamber as the temperature in the chamber was varied between -30°C and +60°C. The temperature was incremented by 10°C intervals and the unit was allowed to stabilize at each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channels center frequency was recorded.

The EUT was set to operate with following conditions.

- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.

- Tx mode
- Test configuration



Constant Temperature Chamber

4.5.2 Limit

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified.



4.5.3 Measurement result

Date : 8-May-2019

Temperature : 23.6 [°C] Humidity : 46.1 [%]

Test place : Shielded room No.4

Test engineer : Taiki Watanabe

[Channel: 36 (5180 MHz)]

| Lonanne |)1. 00 (0 100 | ····· · - /1 | | | | | | | |
|-----------------|--------------------------|--|-------------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|---------------------------------------|------------------------------------|
| Power Supply | Temperature | Measurements Frequency (startup) | Frequency Tolerance (startup) | Measurements Frequency (2mins) | Frequency Tolerance (2mins) | Measurements Frequency (5mins) | Frequency Tolerance (5mins) | Measurements Frequency (10mins) | Frequency Tolerance (10mins) |
| [V] | [°C] | [Hz] | [ppm] | [Hz] | [ppm] | [Hz] | [ppm] | [Hz] | [ppm] |
| | 25(Ref.) | 5179981922 | 0.00000000 | 5179986092 | 0.80502211 | 5179985881 | 0.76428838 | 5179976442 | -1.05791875 |
| | 60 | 5179984233 | 0.44614055 | 5179976522 | -1.04247468 | 5179961590 | -3.92511022 | 5179973216 | -1.68070085 |
| | 50 | 5179957847 | -4.64769962 | 5179980068 | -0.35791631 | 5179961945 | -3.85657717 | 5179975956 | -1.15174147 |
| | 40 | 5179977718 | -0.81158584 | 5179983951 | 0.39170021 | 5179976320 | -1.08147096 | 5179965816 | -3.10927726 |
| | 30 | 5179984808 | 0.55714480 | 5179997996 | 3.10309963 | 5180004283 | 4.31681043 | 5179977406 | -0.87181771 |
| 3.80 | 20 | 5180001247 | 3.73070800 | 5180001587 | 3.79634530 | 5179990527 | 1.66120271 | 5179990996 | 1.75174357 |
| | 10 | 5179975564 | -1.22741741 | 5179993178 | 2.17298056 | 5180006540 | 4.75252624 | 5180003555 | 4.17626940 |
| | 0 | 5179994445 | 2.41757600 | 5179994819 | 2.48977703 | 5180010263 | 5.47125462 | 5180007930 | 5.02086694 |
| | -10 | 5180025703 | 8.45196000 | 5179983965 | 0.39440292 | 5180012649 | 5.93187398 | 5180012298 | 5.86411313 |
| | -20 | 5180007529 | 4.94345355 | 5179983305 | 0.26698935 | 5179995318 | 2.58610941 | 5180011828 | 5.77337922 |
| | -30 | 5179971638 | -1.98533511 | 5179976436 | -1.05907706 | 5179980444 | -0.28532918 | 5180010721 | 5.55967191 |
| 3.42 | 25 | 5179991574 | 1.86332697 | 5180001693 | 3.81680869 | 5179979731 | -0.42297445 | 5179994115 | 2.35386922 |
| 4.18 | 25 | 5179967133 | -2.85502927 | 5180007942 | 5.02318355 | 5179998130 | 3.12896845 | 5179994774 | 2.48108974 |

Frequency Tolerance (ppm) = Measurements Frequency (Hz) - Reference Frequency (Hz) / Reference Frequency (Hz) x 1000000



Japan

[Channel: 64 (5320 MHz)]

| Lourning | 51. 04 (3320 | 1411 12/] | | | | | | | |
|-----------------|-------------------------|--|-------------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|---------------------------------------|------------------------------------|
| Power Supply | Temperature | Measurements Frequency (startup) | Frequency Tolerance (startup) | Measurements Frequency (2mins) | Frequency Tolerance (2mins) | Measurements Frequency (5mins) | Frequency Tolerance (5mins) | Measurements Frequency (10mins) | Frequency Tolerance (10mins) |
| [V] | [°C] | [Hz] | [ppm] | [Hz] | [ppm] | [Hz] | [ppm] | [Hz] | [ppm] |
| | 25(Ref.) | 5319997598 | 0.00000000 | 5320003609 | 1.12988773 | 5319977638 | -3.75188139 | 5319980559 | -3.20282099 |
| | 60 | 5319979828 | -3.34022707 | 5319986192 | -2.14398593 | 5320007260 | 1.81616623 | 5319989684 | -1.48759466 |
| | 50 | 5319960813 | -6.91447681 | 5319983305 | -2.68665535 | 5319990129 | -1.40394800 | 5319964652 | -6.19285994 |
| | 40 | 5319986318 | -2.12030171 | 5319959502 | -7.16090549 | 5319981888 | -2.95300885 | 5319964366 | -6.24661936 |
| | 30 | 5319977116 | -3.85000174 | 5319982666 | -2.80676818 | 5319974818 | -4.28195682 | 5319963444 | -6.41992771 |
| 3.80 | 20 | 5319997260 | -0.06353386 | 5319986158 | -2.15037691 | 5319982770 | -2.78721930 | 5319982630 | -2.81353510 |
| | 10 | 5320009076 | 2.15751977 | 5320005938 | 1.56766988 | 5320003693 | 1.14567721 | 5320001617 | 0.75545147 |
| | 0 | 5320008513 | 2.05169266 | 5320024358 | 5.03007746 | 5320006768 | 1.72368499 | 5320003017 | 1.01860948 |
| | -10 | 5320004471 | 1.29191788 | 5320025580 | 5.25977681 | 5319993274 | -0.81278232 | 5320019938 | 4.19925002 |
| | -20 | 5320024886 | 5.12932562 | 5319993689 | -0.73477477 | 5319997639 | 0.00770677 | 5320010996 | 2.51842219 |
| | -30 | 5319968385 | -5.49116789 | 5319989829 | -1.46033901 | 5319984093 | -2.53853498 | 5319979453 | -3.41071583 |
| 3.42 | 25 | 5319997365 | -0.04379701 | 5319973436 | -4.54173137 | 5319994735 | -0.53815814 | 5320012177 | 2.74041477 |
| 4.18 | 25 | 5319998877 | 0.24041364 | 5319977677 | -3.74455056 | 5319970033 | -5.18139332 | 5319974842 | -4.27744554 |

Frequency Tolerance (ppm) = Measurements Frequency (Hz) - Reference Frequency (Hz) / Reference Frequency (Hz) x 1000000

[Channel: 140 (5700 MHz)]

| | 1 | | | | | | | | |
|-----------------|-------------|--|-------------------------------------|--------------------------------------|-----------------------------------|--------------------------------------|-----------------------------------|---------------------------------------|------------------------------------|
| Power Supply | Temperature | Measurements Frequency (startup) | Frequency Tolerance (startup) | Measurements Frequency (2mins) | Frequency Tolerance (2mins) | Measurements Frequency (5mins) | Frequency Tolerance (5mins) | Measurements Frequency (10mins) | Frequency Tolerance (10mins) |
| [V] | [°C] | [Hz] | [ppm] | [Hz] | [ppm] | [Hz] | [ppm] | [Hz] | [ppm] |
| | 25(Ref.) | 5699981620 | 0.00000000 | 5699975202 | -1.12596854 | 5699968398 | -2.31965660 | 5699977871 | -0.65772142 |
| | 60 | 5699983652 | 0.35649238 | 5699971461 | -1.78228645 | 5699975916 | -1.00070498 | 5699969283 | -2.16439294 |
| | 50 | 5699990459 | 1.55070675 | 5699974056 | -1.32702182 | 5699972704 | -1.56421557 | 5699974945 | -1.17105641 |
| | 40 | 5699971439 | -1.78614611 | 5699968162 | -2.36106024 | 5699973127 | -1.49000480 | 5699971988 | -1.68983001 |
| | 30 | 5699976450 | -0.90702047 | 5699978844 | -0.48701911 | 5699967004 | -2.56421879 | 5699986311 | 0.82298511 |
| 3.80 | 20 | 5699991513 | 1.73561963 | 5700001548 | 3.49615162 | 5699975666 | -1.04456477 | 5699985174 | 0.62351078 |
| | 10 | 5700001884 | 3.55509918 | 5699989696 | 1.41684667 | 5700014613 | 5.78826428 | 5699991461 | 1.72649680 |
| | 0 | 5700033671 | 9.13178383 | 5699995596 | 2.45193773 | 5700006631 | 4.38790889 | 5699989128 | 1.31719723 |
| | -10 | 5700002433 | 3.65141528 | 5700010863 | 5.13036742 | 5700005859 | 4.25246985 | 5700005758 | 4.23475050 |
| | -20 | 5699979726 | -0.33228177 | 5700019664 | 6.67440749 | 5699986469 | 0.85070450 | 5699985379 | 0.65947581 |
| | -30 | 5699972769 | -1.55281202 | 5699966911 | -2.58053464 | 5699985350 | 0.65438808 | 5699964529 | -2.99843072 |
| 3.42 | 25 | 5699983385 | 0.30965012 | 5699985926 | 0.75544103 | 5699984971 | 0.58789663 | 5699986889 | 0.92438895 |
| 4.18 | 25 | 5699977922 | -0.64877402 | 5699975632 | -1.05052970 | 5699978330 | -0.57719484 | 5699980786 | -0.14631626 |

Frequency Tolerance (ppm) = Measurements Frequency (Hz) - Reference Frequency (Hz) / Reference Frequency (Hz) x 1000000



4.6 AC Power Line Conducted Emissions

4.6.1 Measurement procedure

[FCC 15.207]

Test was applied by following conditions.

Test method : ANSI C63.10

Frequency range : 0.15 MHz to 30 MHz

Test place : 3m Semi-anechoic chamber

EUT was placed on : FRP table / (W) $2.0 \times$ (D) $1.0 \times$ (H) 0.8 m Vertical Metal Reference Plane : (W) $2.0 \times$ (H) $2.0 \times$ (D) $1.0 \times$ (H) $0.8 \times$ m

Test receiver setting

- Detector : Quasi-peak, Average

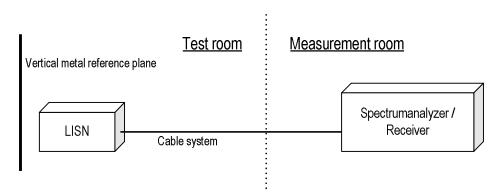
- Bandwidth : 9 kHz

EUT and peripherals are connected to 50Ω/50μH Line Impedance Stabilization Network (LISN) which are connected to reference ground plane, and are placed 80cm away from EUT. Excess of AC power cable is bundled in center.

LISN for peripheral is terminated in 50Ω .

EUT operating mode is selected to emit the maximum noise. Overall frequency range is investigated with spectrum analyzer using peak detector. Maximum emission configuration is determined by manipulating the EUT, peripherals, interconnecting cables. Then, emission measurements are performed with test receiver in above setting to each current-carrying conductor of the mains port. Sufficient time for EUT, peripherals and test equipment is provided in order for them to warm up to their normal operating condition. If the average limit is met when using a quasi-peak detector receiver, the EUT shall be deemed to meet both limits.

- Test configuration



4.6.2 Calculation method

Emission level = Reading + (LISN. factor + Cable system loss)

Margin = Limit - Emission level



4.6.3 Limit

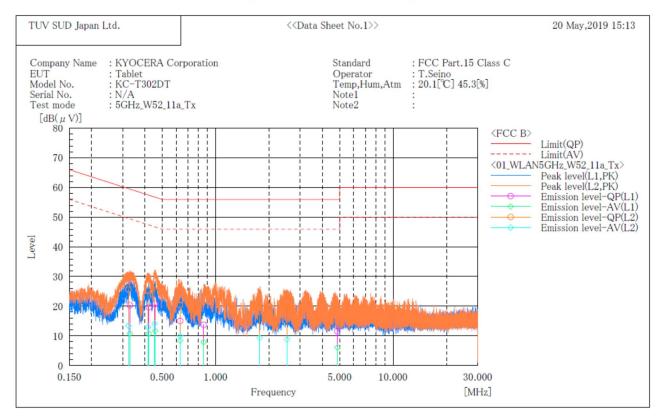
| Frequency | Limit | | | | | | |
|-----------|-----------|-----------|--|--|--|--|--|
| [MHz] | QP [dBuV] | AV [dBuV] | | | | | |
| 0.15-0.5 | 66-56* | 56-46* | | | | | |
| 0.5-5 | 56 | 46 | | | | | |
| 5-30 | 60 | 50 | | | | | |

^{*:} The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.



4.6.4 Test data





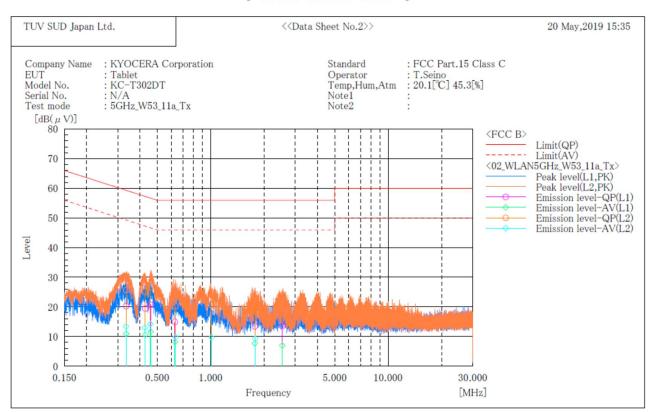
Final Result

| | L1 Phase | | D 1: | C | D1. | D1. | ***** | 11 | | W |
|----------------------------|---|---|---|---|---|---|---|---|--|--|
| No. | Frequency | Reading | Reading | c. f | Result | Result | Limit | Limit | Margin | Margin |
| 1 2 3 4 5 6 | [MHz] 0.329 0.421 0.457 0.632 0.857 4.857 | QP [dB(µV)] 9.9 9.2 10.4 4.6 3.3 0.8 | AV [dB(μV)] 0. 4 0. 3 1. 3 -2. 0 -2. 5 -4. 6 | [dB] 10. 4 10. 4 10. 4 10. 4 10. 4 | QP [dB(µV)] 20.3 19.6 20.8 15.0 13.7 11.5 | AV [dB(µV)] 10.8 10.7 11.7 8.4 7.9 6.1 | QP [dB(µV)] 59. 5 57. 4 56. 7 56. 0 56. 0 56. 0 | AV [dB(\(\mu\) V)] 49. 5 47. 4 46. 7 46. 0 46. 0 46. 0 | QP [dB] 39. 2 37. 8 35. 9 41. 0 42. 3 44. 5 | AV [dB] 38. 7 36. 7 35. 0 37. 6 38. 1 39. 9 |
| 0 | 4.007 | 0.0 | 4.0 | 10. 1 | 11.0 | 0.1 | 30.0 | 40.0 | 44. 0 | 33. 3 |
| | L2 Phase | - | | | | | | | | |
| No. | Frequency | Reading | Reading | c. f | Result | Result | Limit | Limit | Margin | Margin |
| | | QP | AV | F 7 | QP | AV | QP | AV | QP | AV |
| | [MHz] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | [dB] |
| 1 | 0. 323 | 15. 2 | 3. 0 | 10.4 | 25.6 | 13. 4 | 59. 6 | 49.6 | 34.0 | 36. 2 |
| 2 | 0.416 | 14.8 | 2. 6 | 10.4 | 25. 2 | 13.0 | 57. 5 | 47.5 | 32. 3 | 34. 5 |
| 3 | 0. 453 | 16. 2 | 3. 7 | 10.4 | 26.6 | 14. 1 | 56. 8 | 46.8 | 30. 2 | 32. 7 |
| 4 5 | 0.630 | 9. 9 | -0.4 | 10.4 | 20. 3 | 10.0 | 56. 0 | 46. 0 | 35. 7 | 36. 0 |
| 6 | 1.772 | 9.1 | -1. 1 -1. 7 | 10. 4 | 19. 5 | 9.3 | 56.0 | 46.0 | 36. 5 | 36. 7 |
| 0 | 2.530 | 8.9 | -1.7 | 10.5 | 19. 4 | 8.8 | 56. 0 | 46.0 | 36. 6 | 37. 2 |



***** CONDUCTED EMISSION at MAINS PORT *****

[3m Semi-anechoic chamber]



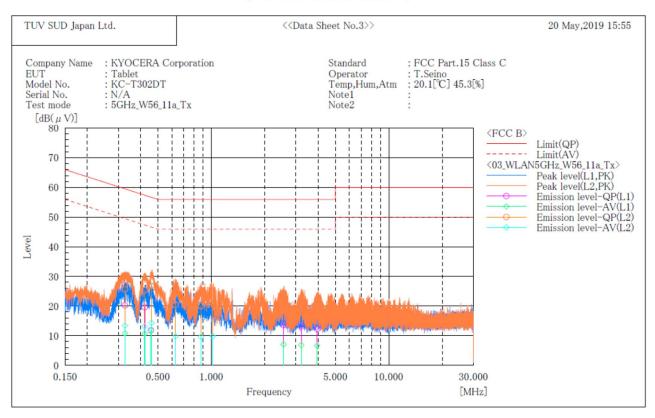
Final Result

| | L1 Phase | _ | | | | | | | | |
|-------------|-----------|---------------|---------------|------|---------------|---------------|---------------|---------------|--------|--------|
| No. | Frequency | Reading | Reading | c.f | Result | Result | Limit | Limit | Margin | Margin |
| | F | QP | AV | F 7 | QP | AV | QP | AV | QP | AV |
| | [MHz] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | [dB] |
| 1 | 0.334 | 9.8 | 0. 5 | 10.4 | 20.2 | 10.9 | 59. 4 | 49. 4 | 39. 2 | 38. 5 |
| 2 | 0.428 | 9.0 | 0.2 | 10.4 | 19. 4 | 10.6 | 57. 3 | 47.3 | 37.9 | 36. 7 |
| 3 | 0.460 | 10.3 | 1.2 | 10.4 | 20.7 | 11.6 | 56. 7 | 46.7 | 36.0 | 35. 1 |
| 4 5 6 | 0.629 | 4. 5 | -2.2 | 10.4 | 14. 9 | 8. 2 | 56.0 | 46.0 | 41.1 | 37.8 |
| 5 | 1. 774 | 2.9 | -2.8 | 10.5 | 13. 4 | 7. 7 | 56. 0 | 46.0 | 42.6 | 38. 3 |
| 6 | 2. 532 | 3.0 | -3.5 | 10.5 | 13. 5 | 7.0 | 56. 0 | 46.0 | 42.5 | 39. 0 |
| | L2 Phase | -: | | | | | | | | |
| No. | Frequency | Reading | Reading | c. f | Result | Result | Limit | Limit | Margin | Margin |
| | | QP | AV | | QP | AV | QP | AV | QP | AV |
| | [MHz] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | [dB] |
| 1 | 0.334 | 15. 2 | 3.0 | 10.4 | 25.6 | 13. 4 | 59. 4 | 49.4 | 33.8 | 36.0 |
| 2 | 0.426 | 14.6 | 2.6 | 10.4 | 25.0 | 13.0 | 57.3 | 47.3 | 32. 3 | 34.3 |
| 3 | | | | | | | | | | |
| | 0.458 | 16.2 | 3.8 | 10.4 | 26.6 | 14.2 | 56. 7 | 46.7 | 30.1 | 32. 5 |
| 4 | 0.634 | 9.8 | -0.6 | 10.4 | 20.2 | 9.8 | 56.0 | 46.0 | 35.8 | 36.2 |
| | | | | | | | | | | |



***** CONDUCTED EMISSION at MAINS PORT *****

[3m Semi-anechoic chamber]



Final Result

| | L1 Phase | - | | | | | | | | |
|-------------|---|--|---|---------------------------------|--|---|--|--|--|--|
| No. | Frequency | Reading | Reading | c.f | Result | Result | Limit | Limit | Margin | Margin |
| | | QP | AV | | QP | AV | QP | AV | QP | AV |
| | [MHz] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | $[dB(\mu V)]$ | [dB] | [dB] |
| 1 | 0.326 | 9.8 | 0.4 | 10.4 | 20. 2 | 10.8 | 59.6 | 49.6 | 39. 4 | 38.8 |
| 2 3 | 0.422 | 9.2 | 0.3 | 10.4 | 19.6 | 10.7 | 57.4 | 47.4 | 37.8 | 36. 7 |
| 3 | 0.457 | 1.4 | 1. 3 | 10.4 | 11.8 | 11.7 | 56. 7 | 46.7 | 44.9 | 35.0 |
| 4 | 2.554 | 3. 1 | -3.4 | 10.5 | 13.6 | 7. 1 | 56. 0 | 46.0 | 42.4 | 38. 9 |
| 4 5 6 | 3. 211 | 2. 5 | -3.7 | 10.6 | 13. 1 | 6. 9 | 56.0 | 46.0 | 42.9 | 39. 1 |
| 6 | 3.947 | 1.7 | -4.0 | 10.6 | 12.3 | 6.6 | 56.0 | 46.0 | 43.7 | 39. 4 |
| | L2 Phase | _ | | | | | | | | |
| | | | | | | | | | | |
| No. | Frequency | Reading | Reading | c.f | Result | Result | Limit | Limit | Margin | Margin |
| No. | Frequency | Reading QP | AV | | Result QP | Result AV | Limit QP | Limit AV | Margin QP | AV |
| No. | Frequency [MHz] | | | c. f [dB] | | AV | | | | AV [dB] |
| 1 | | QP | AV | | QP | AV | QP | AV | QP | AV |
| 1 | [MHz] 0.326 0.421 | $ \begin{array}{c} QP\\ [dB(\mu V)] \end{array} $ | AV [dB(μV)] 3. 0 2. 7 | [dB] | QP [dB(μV)] 25. 6 25. 3 | AV [dB(μV)] 13.4 13.1 | QP [dB(μV)] | AV [dB(μV)] 49.6 47.4 | QP [dB] 34. 0 32. 1 | AV [dB] 36. 2 34. 3 |
| 1 2 3 | [MHz] 0.326 0.421 0.459 | QP [dB(μV)] 15. 2 | AV [dB(μV)] 3.0 | [dB] 10.4 | QP [dB(μV)] 25.6 | AV [dB(μV)] 13.4 13.1 14.3 | QP [dB(μV)] 59.6 | AV [dB(μV)] 49.6 47.4 46.7 | QP [dB] 34. 0 32. 1 29. 9 | AV [dB] 36. 2 34. 3 32. 4 |
| 1 2 3 | [MHz] 0. 326 0. 421 0. 459 0. 629 | QP [dB(μV)] 15. 2 14. 9 16. 4 10. 0 | AV [dB(μV)] 3. 0 2. 7 3. 9 -0. 6 | [dB] 10. 4 10. 4 | QP [dB(μV)] 25. 6 25. 3 26. 8 20. 4 | AV [dB(μV)] 13.4 13.1 14.3 9.8 | QP [dB(μV)] 59. 6 57. 4 56. 7 56. 0 | AV [dB(μV)] 49.6 47.4 46.7 46.0 | QP [dB] 34. 0 32. 1 29. 9 35. 6 | AV [dB] 36. 2 34. 3 32. 4 36. 2 |
| 1 | [MHz] 0.326 0.421 0.459 | QP [dB(μV)] 15. 2 14. 9 16. 4 | AV [dB(μV)] 3. 0 2. 7 3. 9 | [dB] 10. 4 10. 4 10. 4 | QP [dB(μV)] 25. 6 25. 3 26. 8 | AV [dB(μV)] 13.4 13.1 14.3 | QP [dB(μV)] 59. 6 57. 4 56. 7 | AV [dB(μV)] 49.6 47.4 46.7 | QP [dB] 34. 0 32. 1 29. 9 | AV [dB] 36. 2 34. 3 32. 4 |



4.7 Duty Cycle

4.7.1 Measurement procedure

[KDB 789033 D02, Section B, Zero-Span Spectrum Analyzer Method]

The duty cycle is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

The spectrum analyzer is set to;

- RBW=8 MHz, VBW=8 MHz, Span=0 Hz, Sweep=Auto, Detector=Peak, Trace mode=Single The EUT was set to operate with following conditions.
- 5.2 GHz Band, 5.3 GHz Band, 5.6 GHz Band

The test mode of EUT is as follows.

- Tx mode
- Test configuration



4.7.2 Limit

None

4.7.3 Measurement result

Date : 26-April-2019

Temperature : 20.5 [°C] Humidity : 36.9 [%]

Test place : Shielded room No.4 Chiaki Kanno

Test engineer

TÜV SÜD Japan Ltd.



Japan

| | | | | Duty Cycle | | | | | |
|---------|---------|--------------------|----------------|--------------------|-------|-------|---------------------------|---------------------------|--|
| Mode | Channel | Frequency (MHz) | On Time(ms) | On+Off Time(ms) | X | 1/T | DCF (dB) 10log(1/x) | DCF (dB) 20log(1/x) | |
| | 36 | 5180 | | | | | | | |
| | 40 | 5200 | 1.364 | 1.372 | 0.994 | 733.1 | 0.025 | 0.051 | |
| | 58 | 5240 | | | | | | | |
| | 52 | 5260 | | | | | | | |
| 802.11a | 56 | 5280 | 1.364 | 1.372 | 0.994 | 733.1 | 0.025 | 0.051 | |
| | 64 | 5320 | | | | | | | |
| | 100 | 5500 | | | | | | | |
| | 116 | 5580 | 1.364 | 1.372 | 0.994 | 733.1 | 0.025 | 0.051 | |
| | 140 | 5700 | | | | | | | |

Note: X = On time / (On + Off time)

| | | | | Duty Cycle | | | | | |
|--------------------|---------|--------------------|----------------|--------------------|-------|-------|---------------------------|---------------------------|--|
| Mode | Channel | Frequency (MHz) | On Time(ms) | On+Off Time(ms) | X | 1/T | DCF (dB) 10log(1/x) | DCF (dB) 20log(1/x) | |
| | 36 | 5180 | | | | | | | |
| | 40 | 5200 | 1.274 | 1.284 | 0.992 | 784.9 | 0.034 | 0.068 | |
| | 58 | 5240 | | | | | | | |
| 000.44 | 52 | 5260 | | 1.284 | 0.994 | 783.7 | 0.027 | | |
| 802.11n (20MHz) | 56 | 5280 | 1.276 | | | | | 0.054 | |
| (2011112) | 64 | 5320 | | | | | | | |
| | 100 | 5500 | | | | | | | |
| | 116 | 5580 | 1.276 | 1.284 | 0.994 | 783.7 | 0.027 | 0.054 | |
| | 140 | 5700 | | | | | | | |

Note: X = On time / (On + Off time)



Japan

| | | Frequency (MHz) | | Duty Cycle | | | | | |
|---------------------|---------|-----------------|----------------|--------------------|---------|-----|---------------------------|---------------------------|--|
| Mode | Channel | | On Time(ms) | On+Off Time(ms) | Х | 1/T | DCF (dB) 10log(1/x) | DCF (dB) 20log(1/x) | |
| | 36 | 5180 | | | | | | | |
| | 40 | 5200 | 1024.000 | 8.000 | 128.000 | 1.0 | -21.072 | -42.144 | |
| | 58 | 5240 | | | | | | | |
| 000 44 | 52 | 5260 | | 10.000 | 136.000 | 0.7 | -21.335 | | |
| 802.11ac (20MHz) | 56 | 5280 | 1360.000 | | | | | -42.671 | |
| (2011112) | 64 | 5320 | | | | | | | |
| | 100 | 5500 | | | | | | | |
| | 116 | 5580 | 1276.000 | 10.000 | 127.600 | 0.8 | -21.059 | -42.117 | |
| | 140 | 5700 | | | | | | | |

Note: X = On time / (On + Off time)

| | | Frequency (MHz) | | Duty Cycle |) | | | |
|---------|---------|--------------------|----------------|--------------------|-------|--------|---------------------------|---------------------------|
| Mode | Channel | | On Time(ms) | On+Off Time(ms) | Х | 1/T | DCF (dB) 10log(1/x) | DCF (dB) 20log(1/x) |
| | 38 | 5190 | 0.635 | 0.645 | 0.984 | 1574.8 | 0.068 | 0.136 |
| | 46 | 5230 | 0.033 | | | | | 0.130 |
| 000.44 | 54 | 5270 | 0.635 | 0.645 | 0.984 | 1574.8 | 0.068 | 0.136 |
| 802.11n | 62 | 5310 | 0.033 | 0.645 | 0.964 | 1374.6 | 0.000 | 0.130 |
| (40MHz) | 102 | 5510 | | | | | | |
| | 110 | 5550 | 0.635 | 0.645 | 0.984 | 1574.8 | 0.068 | 0.136 |
| | 134 | 5670 | | | | | | |

Note: X = On time / (On + Off time)



Janan

| | | | Duty Cycle | | | | | |
|---------------------|---------|--------------------|----------------|--------------------|---------|-----|---------------------------|---------------------------|
| Mode | Channel | Frequency (MHz) | On Time(ms) | On+Off Time(ms) | X | 1/T | DCF (dB) 10log(1/x) | DCF (dB) 20log(1/x) |
| | 38 | 5190 | 1024.000 | 8 | 128.000 | 1.0 | -21.072 | -42.144 |
| | 46 | 5230 | | | | | | -42.144 |
| 000 44 | 54 | 5270 | 1360.000 | 10 | 136.000 | 0.7 | -21.335 | -42.671 |
| 802.11ac (40MHz) | 62 | 5310 | | | | | | |
| (40Wii 12) | 102 | 5510 | | 10.000 | 127.600 | 0.8 | -21.059 | |
| | 110 | 5550 | 1276.000 | | | | | -42.117 |
| | 134 | 5670 | | | | | | |

Note: X = On time / (On + Off time)

| | | | Duty Cycle | | | | | |
|---------------------|---------|--------------------|----------------|--------------------|---------|-----|---------------------------|---------------------------|
| Mode | Channel | Frequency (MHz) | On Time(ms) | On+Off Time(ms) | Х | 1/T | DCF (dB) 10log(1/x) | DCF (dB) 20log(1/x) |
| 802.11ac (80MHz) | 42 | 5210 | 1024.000 | 8.000 | 128.000 | 1.0 | -21.072 | -42.144 |
| | 58 | 5290 | 1360.000 | 10.000 | 136.000 | 0.7 | -21.335 | -42.671 |
| | 106 | 5530 | 1276.000 | 10.000 | 127.600 | 0.8 | -21.059 | -42.117 |
| | 122 | 5610 | 1276.000 | 10.000 | 127.600 | 0.8 | -21.059 | -42.117 |

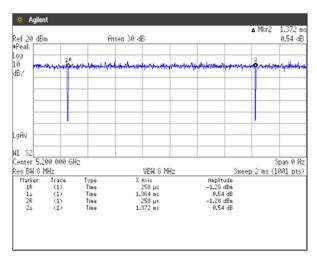
Note: X = On time / (On + Off time)



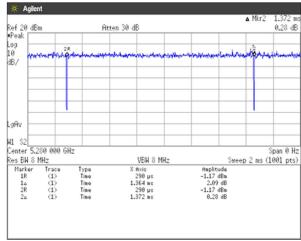
4.7.4 Trace data

[IEEE802.11a]

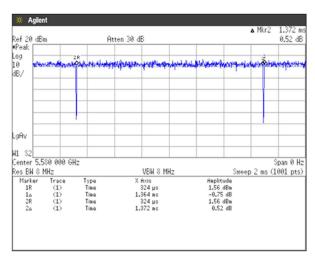
Channel: 40



Channel: 56



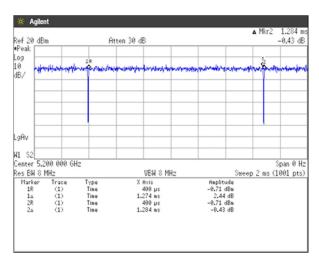
Channel: 116



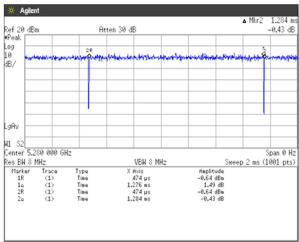


[IEEE802.11n (HT20)]

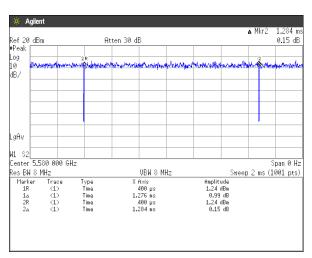
Channel: 40



Channel: 56



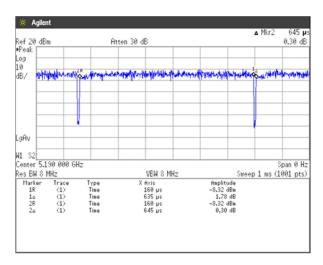
Channel: 116



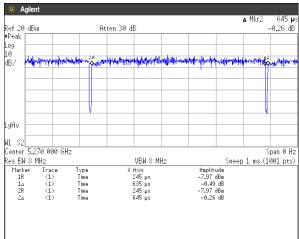


[IEEE802.11n (HT40)]

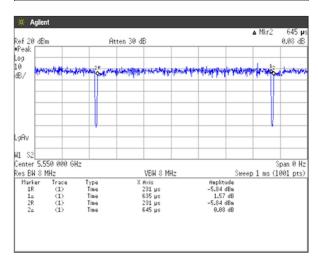
Channel: 38



Channel: 54



Channel: 110





5 Antenna requirement

According to FCC section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The antenna is a special antenna mounted inside of the EUT. Therefore, the EUT complies with the antenna requirement of FCC section 15.203.



6 Measurement uncertainty

Expanded uncertainties stated are calculated with a coverage Factor k=2. Please note that these results are not taken into account when measurement uncertainty considerations contained in ETSI TR 100 028 Parts 1 and 2 determining compliance or noncompliance with test result.

| Test item | Measurement uncertainty |
|--|-------------------------|
| Conducted emission, AMN (9 kHz – 150 kHz) | ±3.8 dB |
| Conducted emission, AMN (150 kHz – 30 MHz) | ±3.3 dB |
| Radiated emission (9kHz – 30 MHz) | ±3.1 dB |
| Radiated emission (30 MHz – 1000 MHz) | ±4.9 dB |
| Radiated emission (1 GHz – 6 GHz) | ±4.8 dB |
| Radiated emission (6 GHz – 18 GHz) | ±5.1 dB |
| Radiated emission (18 GHz – 40 GHz) | ±5.8 dB |
| Radio Frequency | ±1.4 * 10 ⁻⁸ |
| RF power, conducted | ±0.6 dB |
| Temperature | ±0.6 °C |
| Humidity | ±1.2 % |
| Voltage (DC) | ±0.4 % |
| Voltage (AC, <10kHz) | ±0.2 % |

| Judge | Measured value and standard limit value | | | | | | | |
|-------|---|---|--|--|--|--|--|--|
| PASS | Case1 Sandard limi | Uncertainty -Uncertainty Even if it takes uncertainty into consideration, Measured value a standard limit value is fulfilled. Although measured value is in a standard limit value, a limit value won't be fulfilled if uncertainty is taken into consideration. | | | | | | |
| FAIL | Case3 | Although measured value exceeds a standard limit value, a limit value will be fulfilled if uncertainty is taken into consideration. Even if it takes uncertainty into consideration, a standard limit value isn't fulfilled. | | | | | | |



7 Laboratory Information

Testing was performed and the report was issued at:

TÜV SÜD Japan Ltd. Yonezawa Testing Center

Address: 5-4149-7 Hachimanpara, Yonezawa-shi, Yamagata, 992-1128 Japan

Phone: +81-238-28-2881 Fax: +81-238-28-2888

Accreditation and Registration

NVLAP

LAB CODE: 200306-0

VLAC

Accreditation No.: VLAC-013

BSMI

Laboratory Code: SL2-IN-E-6018, SL2-A1-E-6018

Innovation, Science and Economic Development Canada

| Site number | Facility | Expiration date | |
|-------------|----------------------------------|------------------|--|
| 4224A-4 | 3 m Semi-anechoic chamber | 27-November-2020 | |
| 4224A-5 | 10 m Semi-anechoic chamber No. 1 | 27-November-2020 | |
| 4224A-6 | 10 m Semi-anechoic chamber No. 2 | 14-December-2019 | |

VCCI Council

| Registration number | Expiration date | | |
|---------------------|-----------------|--|--|
| A-0166 | 03-July-2019 | | |



Appendix A. Test Equipment

Antenna port conducted test

| Autolina port conductou toct | | | | | | | |
|----------------------------------|----------------------|-----------|------------|-------------|-------------|--|--|
| Equipment | Company | Model No. | Serial No. | Cal. Due | Cal. Date | | |
| Spectrum analyzer | Agilent Technologies | E4440A | US44302655 | 31-Jul-2019 | 02-Jul-2018 | | |
| Attenuator | Weinschel | 56-10 | J4180 | 31-Jul-2019 | 12-Jul-2018 | | |
| Power meter | ROHDE&SCHWARZ | NRP2 | 103269 | 31-Aug-2019 | 01-Aug-2018 | | |
| Power sensor | ROHDE&SCHWARZ | NRP-Z81 | 102467 | 31-Aug-2019 | 01-Aug-2018 | | |
| Temperature and humidity chamber | ESPEC | PL1KP | 14007261 | 31-Dec-2019 | 07-Dec-2018 | | |

Radiated emission

| Equipment | Company | Model No. | Serial No. | Cal. Due | Cal. Date |
|-----------------------------|----------------------|-------------------|-----------------|-------------|-------------|
| EMI Receiver | ROHDE&SCHWARZ | ESCI | 100765 | 30-Sep-2019 | 20-Sep-2018 |
| Spectrum analyzer | Agilent Technologies | E4447A | MY46180188 | 30-Apr-2020 | 16-Apr-2019 |
| Spectrum analyzer | Agilent Technologies | E4440A | US40420937 | 31-Oct-2019 | 12-Oct-2018 |
| Preamplifier | SONOMA | 310 | 372170 | 30-Sep-2019 | 20-Sep-2018 |
| Loop antenna | ROHDE&SCHWARZ | HFH2-Z2 | 100515 | 28-Mar-2020 | 07-Mar-2019 |
| Attenuator | TDC | TAT-43B-06 | N/A(S209) | 31-Jul-2019 | 11-Jul-2018 |
| Biconical antenna | Schwarzbeck | VHA9103/BBA9106 | VHA91032155 | 31-Aug-2019 | 06-Aug-2018 |
| Log periodic antenna | Schwarzbeck | UHALP9108A | 0560 | 31-Aug-2019 | 06-Aug-2018 |
| Attenuator | TAMAGAWA.ELEC | CFA-01/6dB | N/A(S465) | 31-May-2020 | 17-May-2019 |
| Attenuator | TAMAGAWA.ELEC | CFA-10/3dB | N/A(S503) | 31-Jul-2019 | 11-Jul-2018 |
| Preamplifier | TSJ | MLA-100M18-B02-40 | 1929118 | 31-Jan-2020 | 17-Jan-2019 |
| Attenuator | AEROFLEX | 26A-10 | 081217-08 | 31-Jan-2020 | 17-Jan-2019 |
| Double ridged guide antenna | ETS LINDGREN | 3117 | 00224193 | 31-Jan-2020 | 23-Jan-2019 |
| Attenuator | Agilent Technologies | 8491B | MY39268633 | 31-Mar-2020 | 08-Mar-2019 |
| Double ridged guide antenna | A.H.Systems Inc. | SAS-574 | 469 | 31-Aug-2019 | 24-Aug-2018 |
| Preamplifier | TSJ | MLA-1840-B03-35 | 1240332 | 31-Aug-2019 | 24-Aug-2018 |
| Notch filter | Micro-Tronics | BRM50716 | 006 | 31-Jul-2019 | 12-Jul-2018 |
| | | SUCOFLEX104/9m | MY30037/4 | 31-Jan-2020 | 16-Jan-2019 |
| | | SUCOFLEX104/1m | my24610/4 | 31-Jan-2020 | 16-Jan-2019 |
| Microwave cable | HUBER+SUHNER | SUCOFLEX104/8m | SN MY30031/4 | 31-Jan-2020 | 16-Jan-2019 |
| Microwave cable | HUBER+SURINER | SUCOFLEX104/1.5m | MY32976/4 | 31-Jan-2020 | 16-Jan-2019 |
| | | SUCOFLEX104/1.5m | MY19309/4 | 31-Jan-2020 | 16-Jan-2019 |
| | | SUCOFLEX104/7m | 41625/6 | 31-Jan-2020 | 16-Jan-2019 |
| PC | DELL | DIMENSION E521 | 75465BX | N/A | N/A |
| Software | TOYO Corporation | EP5/RE-AJ | 0611193/V5.6.0 | N/A | N/A |
| Absorber | RIKEN | PFP30 | N/A | N/A | N/A |
| 3m Semi an-echoic Chamber | TOKIN | N/A | N/A(9002-NSA) | 31-May-2019 | 21-May-2018 |
| 3m Semi an-echoic Chamber | TOKIN | N/A | N/A(9002-SVSWR) | 31-May-2019 | 22-May-2018 |

Conducted emission at mains port

| Conducted emission at mains port | | | | | | | | |
|--|------------------------------------|-------------|-----------------|-------------|-------------|--|--|--|
| Equipment | Company | Model No. | Serial No. | Cal. Due | Cal. Date | | | |
| EMI Receiver | ROHDE&SCHWARZ | ESCI | 100765 | 30-Sep-2019 | 20-Sep-2018 | | | |
| Attenuator | HUBER+SUHNER | 6810.01.A | N/A (S411) | 31-Jan-2020 | 17-Jan-2019 | | | |
| Line impedance stabilization network for EUT | Kyoritsu Electrical Works, Ltd. | KNW-407F2 | 12-17-110-2 | 31-May-2020 | 16-May-2019 | | | |
| Coaxial cable | FUJIKURA | 5D-2W/4m | N/A (S350) | 31-Jan-2020 | 16-Jan-2019 | | | |
| Coaxial cable | FUJIKURA | 5D-2W/1m | N/A (S193) | 31-Jan-2020 | 16-Jan-2019 | | | |
| Coaxial cable | HUBER+SUHNER | RG214/U/10m | N/A (S194) | 31-Jan-2020 | 16-Jan-2019 | | | |
| PC | DELL | DIMENSION | 75465BX | N/A | N/A | | | |
| Software | TOYO Corporation | EP5/CE-AJ | 0611193/V5.4.11 | N/A | N/A | | | |

^{*:} The calibrations of the above equipment are traceable to NIST or equivalent standards of the reference organizations.