

# RADIO PERFORMANCE TEST REPORT

**Test Report No.** : OT-22O-RWD-027  
**Reception No.** : 2209003110  
**Applicant** : LG Electronics USA  
**Address** : 111 Sylvan Avenue North Building, Englewood Cliffs, New Jersey, United States  
**Manufacturer** : Hitachi-LG Data Storage Korea, Inc.  
**Address** : (Gasan-dong), 189, Gasandigital1-ro, Geumcheon-gu, Seoul, Korea  
**Type of Equipment** : Network Webcam  
**FCC ID.** : BEJAN-VC22PR  
**Model Name** : AN-VC22PR  
**Multiple Model Name** : HL-GE1  
**Serial number** : N/A  
**Total page of Report** : 174 pages (including this page)  
**Date of Incoming** : August 12, 2022  
**Date of issue** : October 21, 2022

## SUMMARY

The equipment complies with the regulation; **FCC PART 15 SUBPART E Section 15.407**

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

This report is not correlated with the "KS Q ISO/IEC 17025 and KOLAS accreditation" of Korean Laboratory Accreditation Scheme.

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## CONTENTS

	PAGE
<b>1. VERIFICATION OF COMPLIANCE .....</b>	<b>9</b>
<b>2. TEST SUMMARY.....</b>	<b>10</b>
<b>2.1 TEST ITEMS AND RESULTS .....</b>	<b>10</b>
<b>2.2 ADDITIONS, DEVIATIONS, EXCLUSIONS FROM STANDARDS.....</b>	<b>10</b>
<b>2.3 RELATED SUBMITTAL(S) / GRANT(S) .....</b>	<b>10</b>
<b>2.4 PURPOSE OF THE TEST .....</b>	<b>10</b>
<b>2.5 TEST METHODOLOGY.....</b>	<b>10</b>
<b>2.6 TEST FACILITY.....</b>	<b>10</b>
<b>3. GENERAL INFORMATION.....</b>	<b>11</b>
<b>3.1 PRODUCT DESCRIPTION.....</b>	<b>11</b>
<b>3.2 ALTERNATIVE TYPE(S)/MODEL(S); ALSO COVERED BY THIS TEST REPORT.....</b>	<b>16</b>
<b>4. EUT MODIFICATIONS.....</b>	<b>16</b>
<b>5. SYSTEM TEST CONFIGURATION .....</b>	<b>17</b>
<b>5.1 JUSTIFICATION.....</b>	<b>17</b>
<b>5.2 PERIPHERAL EQUIPMENT .....</b>	<b>17</b>
<b>5.3 MODE OF OPERATION DURING THE TEST .....</b>	<b>18</b>
<b>5.4 CONFIGURATION OF TEST SYSTEM.....</b>	<b>24</b>
<b>5.5 ANTENNA REQUIREMENT .....</b>	<b>24</b>
<b>6. PRELIMINARY TEST .....</b>	<b>24</b>
<b>6.1 AC POWER LINE CONDUCTED EMISSIONS TESTS.....</b>	<b>24</b>
<b>6.2 GENERAL RADIATED EMISSIONS TESTS .....</b>	<b>24</b>
<b>7. MINIMUM 26 DB BANDWIDTH.....</b>	<b>25</b>
<b>7.1 OPERATING ENVIRONMENT .....</b>	<b>25</b>
<b>7.2 TEST SET-UP .....</b>	<b>25</b>
<b>7.3 TEST DATE .....</b>	<b>25</b>
<b>7.4 TEST DATA FOR 802.11A RLAN MODE.....</b>	<b>26</b>
<b>7.4.1 Test data for Antenna 1 .....</b>	<b>26</b>
<b>7.4.2 Test data for Antenna 2 .....</b>	<b>27</b>
<b>7.5 TEST DATA FOR 802.11N_HT20 RLAN MODE .....</b>	<b>28</b>
<b>7.5.1 Test data for Antenna 1 .....</b>	<b>28</b>
<b>7.5.2 Test data for Antenna 2 .....</b>	<b>29</b>
<b>7.5.2 Test data for Multiple Transmit .....</b>	<b>30</b>
<b>7.6 TEST DATA FOR 802.11N_HT40 RLAN MODE .....</b>	<b>32</b>

<i>7.6.1 Test data for Antenna 1 .....</i>	32
<i>7.6.2 Test data for Antenna 2 .....</i>	33
<i>7.6.3 Test data for Multiple Transmit .....</i>	34
<b>7.7 TEST DATA FOR 802.11AC_VHT80 RLAN MODE.....</b>	<b>36</b>
<i>    7.7.1 Test data for Antenna 1 .....</i>	36
<i>    7.7.2 Test data for Antenna 2 .....</i>	37
<i>    7.7.3 Test data for Multiple Transmit .....</i>	38
<b>8. 6 DB BANDWIDTH .....</b>	<b>40</b>
<b>8.1 OPERATING ENVIRONMENT .....</b>	<b>40</b>
<b>8.2 TEST SET-UP .....</b>	<b>40</b>
<b>8.3 TEST DATE .....</b>	<b>40</b>
<b>8.4 TEST DATA FOR 802.11A RLAN MODE.....</b>	<b>41</b>
<i>    8.4.1 Test data for Antenna 1 .....</i>	41
<i>    8.4.2 Test data for Antenna 2 .....</i>	41
<i>    8.4.3 Test data for Staddle Channel_Antenna 1 .....</i>	41
<i>    8.4.4 Test data for Staddle Channel_Antenna 2 .....</i>	41
<b>8.5 TEST DATA FOR 802.11N_HT20 RLAN MODE.....</b>	<b>42</b>
<i>    8.5.1 Test data for Antenna 1 .....</i>	42
<i>    8.5.2 Test data for Antenna 2 .....</i>	42
<i>    8.5.3 Test data for Multiple Transmit .....</i>	42
<i>    8.5.4 Test data for Staddle Channel_Antenna 1 .....</i>	43
<i>    8.5.5 Test data for Staddle Channel_Antenna 2 .....</i>	43
<i>    8.5.6 Test data for Staddle Channel_Multiple Transmit .....</i>	43
<b>8.6 TEST DATA FOR 802.11N_HT40 RLAN MODE.....</b>	<b>44</b>
<i>    8.6.1 Test data for Antenna 1 .....</i>	44
<i>    8.6.2 Test data for Antenna 2 .....</i>	44
<i>    8.6.3 Test data for Multiple Transmit .....</i>	44
<i>    8.6.4 Test data for Staddle Channel_Antenna 1 .....</i>	45
<i>    8.6.5 Test data for Staddle Channel_Antenna 2 .....</i>	45
<i>    8.6.6 Test data for Staddle Channel_Multiple Transmit .....</i>	45
<b>8.7 TEST DATA FOR 802.11AC_VHT80 RLAN MODE.....</b>	<b>46</b>
<i>    8.7.1 Test data for Antenna 1 .....</i>	46
<i>    8.7.2 Test data for Antenna 2 .....</i>	46
<i>    8.7.3 Test data for Multiple Transmit .....</i>	46
<i>    8.7.4 Test data for Staddle Channel_Antenna 1 .....</i>	47
<i>    8.7.5 Test data for Staddle Channel_Antenna 2 .....</i>	47
<i>    8.7.6 Test data for Staddle Channel_Multiple Transmit .....</i>	47

<b>9. MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER .....</b>	<b>48</b>
<b>9.1 OPERATING ENVIRONMENT .....</b>	<b>48</b>
<b>9.2 TEST SET-UP .....</b>	<b>48</b>
<b>9.3 TEST DATE .....</b>	<b>48</b>
<b>9.4 TEST DATA FOR 802.11A RLAN MODE.....</b>	<b>49</b>
<b>9.4.1 Test data for Antenna 1 .....</b>	<b>49</b>
<b>9.4.2 Test data for Antenna 2 .....</b>	<b>50</b>
<b>9.4.3 Test data for Staddle Channel_Antenna 1 .....</b>	<b>51</b>
<b>9.4.4 Test data for Staddle Channel_Antenna 2 .....</b>	<b>51</b>
<b>9.5 TEST DATA FOR 802.11N_HT20 RLAN MODE.....</b>	<b>52</b>
<b>9.5.1 Test data for Antenna 1 .....</b>	<b>52</b>
<b>9.5.2 Test data for Antenna 2 .....</b>	<b>53</b>
<b>9.5.3 Test data for Multiple Transmit .....</b>	<b>54</b>
<b>9.5.4 Test data for Staddle Channel_Antenna 1 .....</b>	<b>57</b>
<b>9.5.5 Test data for Staddle Channel_Antenna 2 .....</b>	<b>57</b>
<b>9.5.6 Test data for Staddle Channel_Multiple Transmit .....</b>	<b>58</b>
<b>9.6 TEST DATA FOR 802.11N_HT40 RLAN MODE.....</b>	<b>59</b>
<b>9.6.1 Test data for Antenna 1 .....</b>	<b>59</b>
<b>9.6.2 Test data for Antenna 2 .....</b>	<b>60</b>
<b>9.6.3 Test data for Multiple Transmit .....</b>	<b>61</b>
<b>9.6.4 Test data for Staddle Channel_Antenna 1 .....</b>	<b>63</b>
<b>9.6.5 Test data for Staddle Channel_Antenna 2 .....</b>	<b>63</b>
<b>9.6.6 Test data for Staddle Channel_Multiple Transmit .....</b>	<b>64</b>
<b>9.7 TEST DATA FOR 802.11AC_HT80 RLAN MODE.....</b>	<b>65</b>
<b>9.7.1 Test data for Antenna 1 .....</b>	<b>65</b>
<b>9.7.2 Test data for Antenna 2 .....</b>	<b>65</b>
<b>9.7.3 Test data for Multiple Transmit .....</b>	<b>66</b>
<b>9.7.4 Test data for Staddle Channel_Antenna 1 .....</b>	<b>67</b>
<b>9.7.5 Test data for Staddle Channel_Antenna 2 .....</b>	<b>67</b>
<b>9.7.6 Test data for Staddle Channel_Multiple Transmit .....</b>	<b>68</b>
<b>10. PEAK POWER SPECTRUL DENSITY .....</b>	<b>69</b>
<b>10.1 OPERATING ENVIRONMENT .....</b>	<b>69</b>
<b>10.2 TEST SET-UP .....</b>	<b>69</b>
<b>10.3 TEST DATE .....</b>	<b>69</b>
<b>10.4 TEST DATA FOR 802.11A RLAN MODE.....</b>	<b>70</b>
<b>10.4.1 Test data for Antenna 1 .....</b>	<b>70</b>
<b>10.4.2 Test data for Antenna 2 .....</b>	<b>71</b>

<i>10.4.3 Test data for Staddle Channel_Antenna 1 .....</i>	72
<i>10.4.4 Test data for Staddle Channel_Antenna 2 .....</i>	72
<b>10.5 TEST DATA FOR 802.11N_HT20 RLAN MODE .....</b>	<b>73</b>
<i>    10.5.1 Test data for Antenna 1 .....</i>	73
<i>    10.5.2 Test data for Antenna 2 .....</i>	74
<i>    10.5.3 Test data for Multiple Transmit .....</i>	75
<i>    10.5.4 Test data for Staddle Channel_Antenna 1 .....</i>	78
<i>    10.5.5 Test data for Staddle Channel_Antenna 2 .....</i>	78
<i>    10.5.6 Test data for Staddle Channel_Multiple Transmit .....</i>	79
<b>10.6 TEST DATA FOR 802.11N_HT40 RLAN MODE .....</b>	<b>80</b>
<i>    10.6.1 Test data for Antenna 1 .....</i>	80
<i>    10.6.2 Test data for Antenna 2 .....</i>	81
<i>    10.6.3 Test data for Multiple Transmit .....</i>	82
<i>    10.6.4 Test data for Staddle Channel_Antenna 1 .....</i>	84
<i>    10.6.5 Test data for Staddle Channel_Antenna 2 .....</i>	84
<i>    10.6.6 Test data for Staddle Channel_Multiple Transmit .....</i>	85
<b>10.7 TEST DATA FOR 802.11AC_HT80 RLAN MODE .....</b>	<b>86</b>
<i>    10.7.1 Test data for Antenna 1 .....</i>	86
<i>    10.7.2 Test data for Antenna 2 .....</i>	86
<i>    10.7.3 Test data for Multiple Transmit .....</i>	87
<i>    10.7.4 Test data for Staddle Channel_Antenna 1 .....</i>	88
<i>    10.7.5 Test data for Staddle Channel_Antenna 2 .....</i>	88
<i>    10.7.6 Test data for Staddle Channel_Multiple Transmit .....</i>	89
<b>11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION.....</b>	<b>90</b>
<b>    11.1 OPERATING ENVIRONMENT .....</b>	<b>90</b>
<b>    11.2 TEST SET-UP .....</b>	<b>90</b>
<b>    11.3 TEST DATE .....</b>	<b>90</b>
<b>    11.4 TEST DATA FOR U-NII-1 .....</b>	<b>91</b>
<b>    11.5 TEST DATA FOR U-NII-2A.....</b>	<b>92</b>
<b>    11.6 TEST DATA FOR U-NII-2C.....</b>	<b>93</b>
<b>    11.7 TEST DATA FOR U-NII-3 .....</b>	<b>94</b>
<b>12. FREQUENCY STABILITY WITH VOLTAGE VARIATION.....</b>	<b>95</b>
<b>    12.1 OPERATING ENVIRONMENT .....</b>	<b>95</b>
<b>    12.2 TEST SET-UP .....</b>	<b>95</b>
<b>    12.3 TEST DATE .....</b>	<b>95</b>
<b>    12.4 TEST DATA FOR U-NII-1 .....</b>	<b>96</b>
<b>    12.5 TEST DATA FOR U-NII-2A.....</b>	<b>96</b>

<b>12.6 TEST DATA FOR U-NII-2C.....</b>	<b>97</b>
<b>12.7 TEST DATA FOR U-NII-3 .....</b>	<b>97</b>
<b>13. RADIATED SPURIOUS EMISSIONS .....</b>	<b>98</b>
<b>13.1 OPERATING ENVIRONMENT .....</b>	<b>98</b>
<b>13.2 TEST SET-UP FOR RADIATED MEASUREMENT.....</b>	<b>98</b>
<b>13.3 TEST DATE .....</b>	<b>99</b>
<b>13.4 TEST DATA FOR BELOW 30 MHZ .....</b>	<b>100</b>
<b>13.5 TEST DATA FOR 30 MHz ~ 1 000 MHz .....</b>	<b>101</b>
<i>13.5.1 Test data for WLAN 5 GHz .....</i>	<i>101</i>
<i>13.5.2 Test data for Intermodulation Mode(WLAN 5 GHz + Bluetooth) .....</i>	<i>102</i>
<i>13.5.3 Test data for Intermodulation Mode(WLAN 5 GHz + WLAN 2.4 GHz) .....</i>	<i>103</i>
<b>13.6 TEST DATA FOR ABOVE 1 GHZ.....</b>	<b>104</b>
<i>13.6.1 Test data for Frequency UNII I .....</i>	<i>104</i>
<i>13.6.2 Test data for Frequency UNII 2A .....</i>	<i>108</i>
<i>13.6.3 Test data for Frequency UNII 2C .....</i>	<i>115</i>
<i>13.6.4 Test data for Frequency UNII 3 .....</i>	<i>124</i>
<b>14. RADIATED RESTRICTED BAND EDGE MEASUREMENTS .....</b>	<b>132</b>
<b>14.1 OPERATING ENVIRONMENT .....</b>	<b>132</b>
<b>14.2 TEST SET-UP FOR RADIATED MEASUREMENT.....</b>	<b>132</b>
<b>14.3 TEST DATE .....</b>	<b>132</b>
<b>14.4 TEST DATA FOR FREQUENCY UNII I.....</b>	<b>133</b>
<i>14.4.1 Test data for 802.11a RLAN Mode .....</i>	<i>133</i>
<i>14.4.2 Test data for 802.11n_HT20 RLAN Mode .....</i>	<i>134</i>
<i>14.4.3 Test data for 802.11n_HT40 RLAN Mode .....</i>	<i>135</i>
<i>14.4.4 Test data for 802.11ac_VHT80 RLAN Mode.....</i>	<i>136</i>
<b>14.5 TEST DATA FOR FREQUENCY UNII 2A.....</b>	<b>137</b>
<i>14.5.1 Test data for 802.11a RLAN Mode .....</i>	<i>137</i>
<i>14.5.2 Test data for 802.11n_HT20 RLAN Mode .....</i>	<i>138</i>
<i>14.5.3 Test data for 802.11n_HT40 RLAN Mode .....</i>	<i>139</i>
<i>14.5.4 Test data for 802.11ac_VHT80 RLAN Mode.....</i>	<i>140</i>
<b>14.6 TEST DATA FOR FREQUENCY UNII 2C.....</b>	<b>141</b>
<i>14.6.1 Test data for 802.11a RLAN Mode .....</i>	<i>141</i>
<i>14.6.2 Test data for 802.11n_HT20 RLAN Mode .....</i>	<i>142</i>
<i>14.6.3 Test data for 802.11n_HT40 RLAN Mode .....</i>	<i>143</i>
<i>14.6.4 Test data for 802.11ac_VHT80 RLAN Mode.....</i>	<i>144</i>
<b>14.7 TEST DATA FOR FREQUENCY U-NII-3.....</b>	<b>145</b>
<i>14.7.1 Test data for 802.11a RLAN Mode .....</i>	<i>145</i>

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<i>14.7.2 Test data for 802.11n_HT20 RLAN Mode .....</i>	147
<i>14.7.3 Test data for 802.11n_HT40 RLAN Mode.....</i>	150
<i>14.7.4 Test data for 802.11ac_VHT80 RLAN Mode.....</i>	153
<b>15. CONDUCTED EMISSION TEST.....</b>	<b>157</b>
<b>15.1 OPERATING ENVIRONMENT .....</b>	<b>157</b>
<b>15.2 TEST SET-UP .....</b>	<b>157</b>
<b>15.3 TEST DATE .....</b>	<b>157</b>
<b>15.4 TEST DATA FOR WLAN 5 GHz .....</b>	<b>158</b>
<b>15.5 TEST DATA FOR INTERMODULATION MODE(WLAN 5 GHz + BLUETOOTH) .....</b>	<b>160</b>
<b>15.6 TEST DATA FOR INTERMODULATION MODE(WLAN 5 GHz + WLAN 2.4 GHz) .....</b>	<b>162</b>
<b>16. DYNAMIC FREQUENCY SELECTION (DFS) .....</b>	<b>164</b>
<b>16.1 OPERATING ENVIRONMENT .....</b>	<b>164</b>
<b>16.2 TEST SET-UPS .....</b>	<b>164</b>
<b>16.3 DFS TEST SIGNALS .....</b>	<b>166</b>
<b>16.4 TECHNICAL REQUIREMENT SPECIFICATION .....</b>	<b>167</b>
<b>16.5 TEST DATE .....</b>	<b>167</b>
<b>16.6 TEST DATA.....</b>	<b>168</b>
<i>16.6.1 UNII 2A.....</i>	<i>168</i>
<i>16.6.2 UNII 2C.....</i>	<i>171</i>

\* Please refer to the Appendix section for All test plots

**Revision History**

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected
0	OT-22O-RWD-027	October 21, 2022	Initial Release	All

## 1. VERIFICATION OF COMPLIANCE

Applicant : LG Electronics USA

Address : 111 Sylvan Avenue North Building, Englewood Cliffs, New Jersey, United States

Contact Person : Sung Soo, Kim / Director, Regulatory and Environmental Affairs

Telephone No. : 201-266-2215

FCC ID : BEJAN-VC22PR

Model Name : AN-VC22PR

Brand Name : LG

Serial Number : N/A

Date : October 21, 2022

EQUIPMENT CLASS	Unlicensed National Information Infrastructure (UNII)
E.U.T. DESCRIPTION	Network Webcam
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT	Certification
AUTHORIZATION REQUESTED	
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART E Section 15.407 789033 D02 General UNII Test Procedures New Rules v02r01
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

- The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

## 2. TEST SUMMARY

### 2.1 Test items and results

SECTION	TEST ITEMS	RESULTS
15.407(a)	26 dB Bandwidth	PASS
15.407(a)	Maximum Conducted Output Power	Met the Limit / PASS
15.407(a)	Peak Power Spectral Density	Met the Limit / PASS
15.407(e)	6 dB Bandwidth	Met the Limit / PASS
15.407(g)	Frequency Stability	Met the Limit / PASS
15.407(b)	Undesirable Emissions	Met the Limit / PASS
15.205, 15.407(b)	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	Met the Limit / PASS
15.207	Conducted Limits	Met the Limit / PASS

### 2.2 Additions, deviations, exclusions from standards

No additions, deviations or exclusions have been made from standard.

### 2.3 Related Submittal(s) / Grant(s)

Original submittal only

### 2.4 Purpose of the test

To determine whether the equipment under test fulfills the requirements of the regulation stated in FCC PART 15 SUBPART E Section 15.407

### 2.5 Test Methodology

Both conducted and radiated testing was performed according to the procedures in ANSI C63.10: 2013. Radiated testing was performed at a distance of 3 m from EUT to the antenna.

### 2.6 Test Facility

The Onetech Corp. has been designated to perform equipment testing in compliance with ISO/IEC 17025.

The Electromagnetic compatibility measurement facilities are located at 43-14, Jinsaegol-gil, Chowol-eup, Gwangju-si, Gyeonggi-do, 12735, Korea.

- Site Filing:

VCCI (Voluntary Control Council for Interference) – Registration No. R-20122/ C-14617/ G-10666/ T-11842

ISED (Innovation, Science and Economic Development Canada) – Registration No. Site# 3736A-3

KOLAS (Korea Laboratory Accreditation Scheme) - Accreditation NO. KT085

FCC (Federal Communications Commission) - Accreditation No. KR0013

RRA (Radio Research Agency) – Designation No. KR0013

### 3. GENERAL INFORMATION

#### 3.1 Product Description

The LG Electronics USA, Model AN-VC22PR (referred to as the EUT in this report) is a Network Webcam. The product specification described herein was obtained from product data sheet or user's manual.

DEVICE TYPE	Network Webcam	
OPERATING FREQUENCY	Bluetooth	2 402 MHz ~ 2 480 MHz
	WLAN 2.4 GHz	2 412 MHz ~ 2 462 MHz (802.11b/g/n(HT20))
		2 422 MHz ~ 2 452 MHz (802.11n(HT40))
	WLAN 5 150 MHz ~ 5 250 MHz Band	5 180 MHz ~ 5 240 MHz (802.11a/n(HT20)/ac(VHT20))
		5 190 MHz ~ 5 230 MHz (802.11n(HT40)/ac(VHT40))
		5 210 MHz (802.11ac(VHT80))
	WLAN 5 250 MHz ~ 5 350 MHz Band	5 260 MHz ~ 5 320 MHz (802.11a/n(HT20)/ac(VHT20))
		5 270 MHz ~ 5 310 MHz (802.11n(HT40)/ac(VHT40))
		5 290 MHz (802.11ac(VHT80))
	WLAN 5 470 MHz ~ 5 725 MHz Band	5 500 MHz ~ 5 720 MHz (802.11a/n(HT20)/ac(VHT20))
		5 510 MHz ~ 5 710 MHz (802.11n(HT40)/ac(VHT40))
		5 530 MHz ~ 5 690 MHz (802.11ac(VHT80))
	WLAN 5 725 MHz ~ 5 850 MHz Band	5 745 MHz ~ 5 825 MHz (802.11a/n(HT20)/ac(VHT20))
		5 755 MHz ~ 5 795 MHz (802.11n(HT40)/ac(VHT40))
		5 775 MHz (802.11ac(VHT80))
MODULATION TYPE	Bluetooth	GFSK for 1Mbps, $\pi/4$ -DQPSK for 2Mbps, 8-DPSK for 3Mbps
	WLAN 2.4 GHz	802.11b: DSSS Modulation(DBPSK/DQPSK/CCK)
		802.11g/n(HT20)/n(HT40): OFDM Modulation(BPSK/QPSK/16QAM/64QAM)
	WLAN 5 GHz	802.11a/n(HT20)/n(HT40)/ac(VHT80): OFDM Modulation(BPSK/QPSK/16QAM/64QAM)

RF OUTPUT POWER	Bluetooth	1 Mbps	8.01 dBm
		2 Mbps	7.60 dBm
		3 Mbps	7.89 dBm
	WLAN 2.4 GHz	Antenna 1	17.75 dBm(802.11b) 15.27 dBm(802.11g) 14.52 dBm(802.11n_HT20) 14.54 dBm(802.11n_HT40)
		Antenna 2	18.81 dBm(802.11b) 16.59 dBm(802.11g) 15.56 dBm(802.11n_HT20) 16.44 dBm(802.11n_HT40)
		Multiple Transmit	Antenna 1 11.57 dBm(802.11n_HT20) 12.02 dBm(802.11n_HT40)
		Antenna 2	12.90 dBm(802.11n_HT20) 13.22 dBm(802.11n_HT40)
		Antenna 1 + Antenna 2	15.30 dBm(802.11n_HT20) 15.60 dBm(802.11n_HT40)
	WLAN 5 150 MHz ~ 5 250 MHz Band	Antenna 1	16.73 dBm(802.11a) 16.62 dBm(802.11n_HT20) 15.99 dBm(802.11n_HT40) 14.35 dBm(802.11ac_VHT80)
		Antenna 2	15.77 dBm(802.11a) 15.62 dBm(802.11n_HT20) 15.13 dBm(802.11n_HT40) 12.96 dBm(802.11ac_VHT80)
		Multiple Transmit	Antenna 1 13.48 dBm(802.11n_HT20) 13.01 dBm(802.11n_HT40) 11.60 dBm(802.11ac_VHT80)
		Antenna 2	12.61 dBm(802.11n_HT20) 12.07 dBm(802.11n_HT40) 10.25 dBm(802.11ac_VHT80)
		Antenna 1 + Antenna 2	16.08 dBm(802.11n_HT20) 15.58 dBm(802.11n_HT40) 13.99 dBm(802.11ac_VHT80)

RF OUTPUT POWER	WLAN  5 250 MHz ~ 5 350 MHz Band	Antenna 1	17.43 dBm(802.11a)
			17.35 dBm(802.11n_HT20)
			13.64 dBm(802.11n_HT40)
			13.94 dBm(802.11ac_VHT80)
	Multiple Transmit	Antenna 2	16.61 dBm(802.11a)
			16.41 dBm(802.11n_HT20)
			13.35 dBm(802.11n_HT40)
			12.73 dBm(802.11ac_VHT80)
	WLAN  5 470 MHz ~ 5 725 MHz Band	Antenna 1	14.26 dBm(802.11n_HT20)
			13.26 dBm(802.11n_HT40)
			11.76 dBm(802.11ac_VHT80)
		Antenna 2	13.65 dBm(802.11n_HT20) 12.93 dBm(802.11n_HT40) 10.67 dBm(802.11ac_VHT80)
		Antenna 1 + Antenna 2	16.93 dBm(802.11n_HT20) 16.11 dBm(802.11n_HT40) 14.26 dBm(802.11ac_VHT80)
	WLAN  5 470 MHz ~ 5 725 MHz Band	Antenna 1	16.54 dBm(802.11a) 16.21 dBm(802.11n_HT20) 15.83 dBm(802.11n_HT40) 14.47 dBm(802.11ac_VHT80)
			15.10 dBm(802.11a) 14.87 dBm(802.11n_HT20) 15.08 dBm(802.11n_HT40) 13.68 dBm(802.11ac_VHT80)
		Antenna 2	15.22 dBm(802.11a) 15.10 dBm(802.11n_HT20) 15.08 dBm(802.11n_HT40) 13.63 dBm(802.11ac_VHT80)
			13.92 dBm(802.11a) 13.62 dBm(802.11n_HT20) 13.67 dBm(802.11n_HT40) 12.03 dBm(802.11ac_VHT80)

RF OUTPUT POWER	WLAN 5 470 MHz ~ 5 725 MHz Band	Multiple Transmit	Antenna 1	13.19 dBm(802.11n_HT20) 12.61 dBm(802.11n_HT40) 11.54 dBm(802.11ac_VHT80)
			Antenna 2	12.27 dBm(802.11n_HT20) 12.00 dBm(802.11n_HT40) 10.54 dBm(802.11ac_VHT80)
			Antenna 1 + Antenna 2	15.76 dBm(802.11n_HT20) 15.33 dBm(802.11n_HT40) 14.08 dBm(802.11ac_VHT80)
		Multiple Transmit _Straddle	Antenna 1	11.69 dBm(802.11n_HT20) 11.65 dBm(802.11n_HT40) 11.09 dBm(802.11ac_VHT80)
			Antenna 2	10.91 dBm(802.11n_HT20) 10.87 dBm(802.11n_HT40) 9.37 dBm(802.11ac_VHT80)
			Antenna 1 + Antenna 2	14.33 dBm(802.11n_HT20) 14.29 dBm(802.11n_HT40) 13.32 dBm(802.11ac_VHT80)
WLAN 5 725 MHz ~ 5 850 MHz Band	WLAN 5 725 MHz ~ 5 850 MHz Band	Antenna 1		15.92 dBm(802.11a) 15.56 dBm(802.11n_HT20) 15.00 dBm(802.11n_HT40) 14.39 dBm(802.11ac_VHT80)
				8.87 dBm(802.11a) 9.05 dBm(802.11n_HT20) 4.69 dBm(802.11n_HT40) -0.56 dBm(802.11ac_VHT80)
		Antenna 2		14.31 dBm(802.11a) 14.01 dBm(802.11n_HT20) 13.63 dBm(802.11n_HT40) 13.07 dBm(802.11ac_VHT80)
		Antenna 2_Straddle		7.52 dBm(802.11a) 7.72 dBm(802.11n_HT20) 2.92 dBm(802.11n_HT40) -2.64 dBm(802.11ac_VHT80)

RF OUTPUT POWER	WLAN 5 725 MHz ~ 5 850 MHz Band	Multiple Transmit	Antenna 1	12.57 dBm(802.11n_HT20) 11.97 dBm(802.11n_HT40) 10.44 dBm(802.11ac_VHT80)
			Antenna 2	11.25 dBm(802.11n_HT20) 11.03 dBm(802.11n_HT40) 9.05 dBm(802.11ac_VHT80)
			Antenna 1 + Antenna 2	14.92 dBm(802.11n_HT20) 14.54 dBm(802.11n_HT40) 12.81 dBm(802.11ac_VHT80)
		Multiple Transmit _Straddle	Antenna 1	5.84 dBm(802.11n_HT20) 1.19 dBm(802.11n_HT40) -2.93 dBm(802.11ac_VHT80)
			Antenna 2	4.86 dBm(802.11n_HT20) 0.04 dBm(802.11n_HT40) -5.19 dBm(802.11ac_VHT80)
		Antenna 1 + Antenna 2		8.39 dBm(802.11n_HT20) 3.66 dBm(802.11n_HT40) -0.90 dBm(802.11ac_VHT80)

ANTENNA TYPE	SLOT Antenna		
ANTENNA GAIN	Bluetooth	-0.71 dBi	
	WLAN 2.4 GHz	Antenna 1	-0.71 dBi
		Antenna 2	1.11 dBi
		Multiple Transmit	3.30 dBi
	5 150 MHz ~ 5 250 MHz Band	Antenna 1	2.48 dBi
		Antenna 2	0.71 dBi
		Multiple Transmit	4.69 dBi
	5 250 MHz ~ 5 350 MHz Band	Antenna 1	2.48 dBi
		Antenna 2	0.71 dBi
		Multiple Transmit	4.69 dBi
	5 470 MHz ~ 5 725 MHz Band	Antenna 1	2.78 dBi
		Antenna 2	0.51 dBi
		Multiple Transmit	4.80 dBi
	5 725 MHz ~ 5 850 MHz Band	Antenna 1	2.32 dBi
		Antenna 2	1.02 dBi
		Multiple Transmit	4.73 dBi
List of each Osc. or crystal Freq.(Freq. >= 1 MHz)		48 MHz, 27 MHz, 38.4 MHz	

### 3.2 Alternative type(s)/model(s); also covered by this test report.

- The following lists consist of the added model and their differences.

Model Name	Differences	Tested
AN-VC22PR	Basic Model	<input checked="" type="checkbox"/>
HL-GE1	This model is identical to the basic model except for the model name.	<input type="checkbox"/>

Note: 1. Applicant consigns only basic model to test. Therefore this test report just guarantees the units, which have been tested.

2. The Applicant/manufacturer is responsible for the compliance of all variants.

### 4. EUT MODIFICATIONS

- None

## 5. SYSTEM TEST CONFIGURATION

### 5.1 Justification

This device was configured for testing in a typical way as a normal customer is supposed to be used. During the test, the following components were installed inside of the EUT.

DEVICE TYPE	MANUFACTURER	MODEL/PART NUMBER	FCC ID
Main Board	Hitachi-LG Data Storage Korea, Inc.	N/A	N/A
Sub Board	Hitachi-LG Data Storage Korea, Inc.	N/A	N/A

### 5.2 Peripheral equipment

Defined as equipment needed for correct operation of the EUT, but not considered as tested:

Model	Manufacturer	Description	Connected to
AN-VC22PR	Hitachi-LG Data Storage Korea, Inc.	Network Webcam (EUT)	-
14-n241TU	HP	Notebook PC	EUT
PPP009C	CHICONY POWER TECHNOLOGY (Chong qing) CO., Ltd.	AC Adapter	

### 5.3 Mode of operation during the test

- Duty Cycle (Antenna 1)

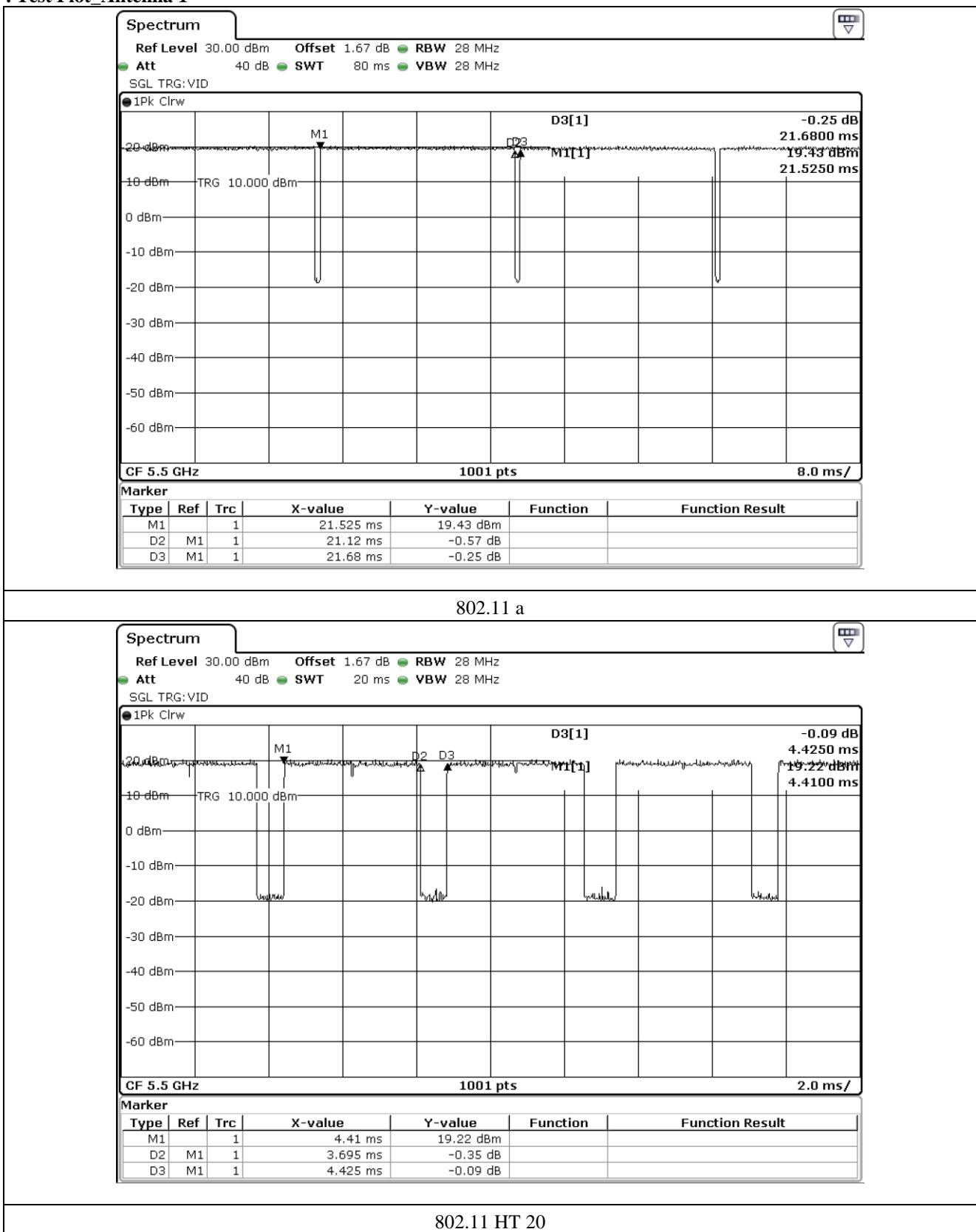
Band	TEST Mode	Data Rate	On Time (ms)	Total Time (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
UNII (5.5 GHz)	802.11 a	6	21.120	21.680	97.42	0.11
		9	14.160	14.660	96.59	0.15
		12	10.720	11.220	95.54	0.20
		18	7.270	7.800	93.21	0.31
		24	5.530	6.080	90.95	0.41
		36	0.355	0.875	40.57	3.92
		48	0.265	0.780	33.97	4.69
		54	0.235	0.765	30.72	5.13
	802.11 n(HT20)	MCS0	3.695	4.425	83.50	0.78
		MCS1	1.865	2.605	71.59	1.45
		MCS2	1.275	2.000	63.75	1.96
		MCS3	0.470	1.070	43.93	3.57
		MCS4	0.315	1.000	31.50	5.02
		MCS5	0.245	0.925	26.49	5.77
		MCS6	0.220	0.855	25.73	5.90
		MCS7	0.195	0.845	23.08	6.37
	802.11 n(HT40)	MCS0	1.825	2.565	71.15	1.48
		MCS1	0.957	1.680	56.96	2.44
		MCS2	0.672	1.405	47.83	3.20
		MCS3	0.255	0.940	27.13	5.67
		MCS4	0.168	0.841	19.98	7.00
		MCS5	0.147	0.823	17.86	7.48
		MCS6	0.135	0.793	17.02	7.69
		MCS7	0.123	0.769	15.99	7.96
	802.11 ac(VHT80)	MCS0	0.507	0.989	51.26	2.90
		MCS1	0.144	0.695	20.72	6.84
		MCS2	0.114	0.671	16.99	7.70
		MCS3	0.096	0.638	15.05	8.23
		MCS4	0.078	0.647	12.06	9.19
		MCS5	0.072	0.632	11.39	9.43
		MCS6	0.066	0.644	10.25	9.89
		MCS7	0.063	0.605	10.41	9.82
		MCS8	0.063	0.623	10.11	9.95
		MCS9	0.060	0.620	9.68	10.14

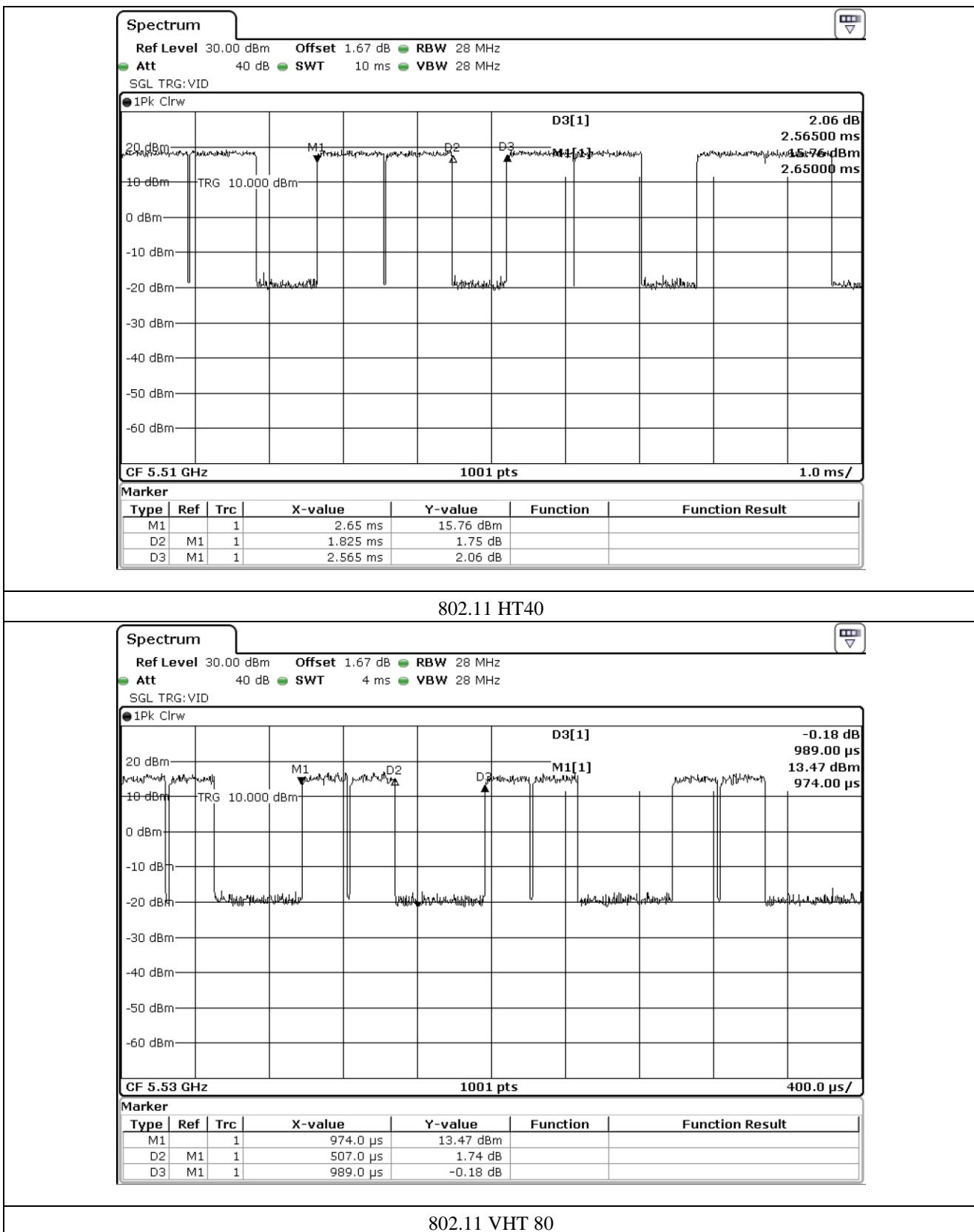
## -. Duty Cycle (Antenna 2)

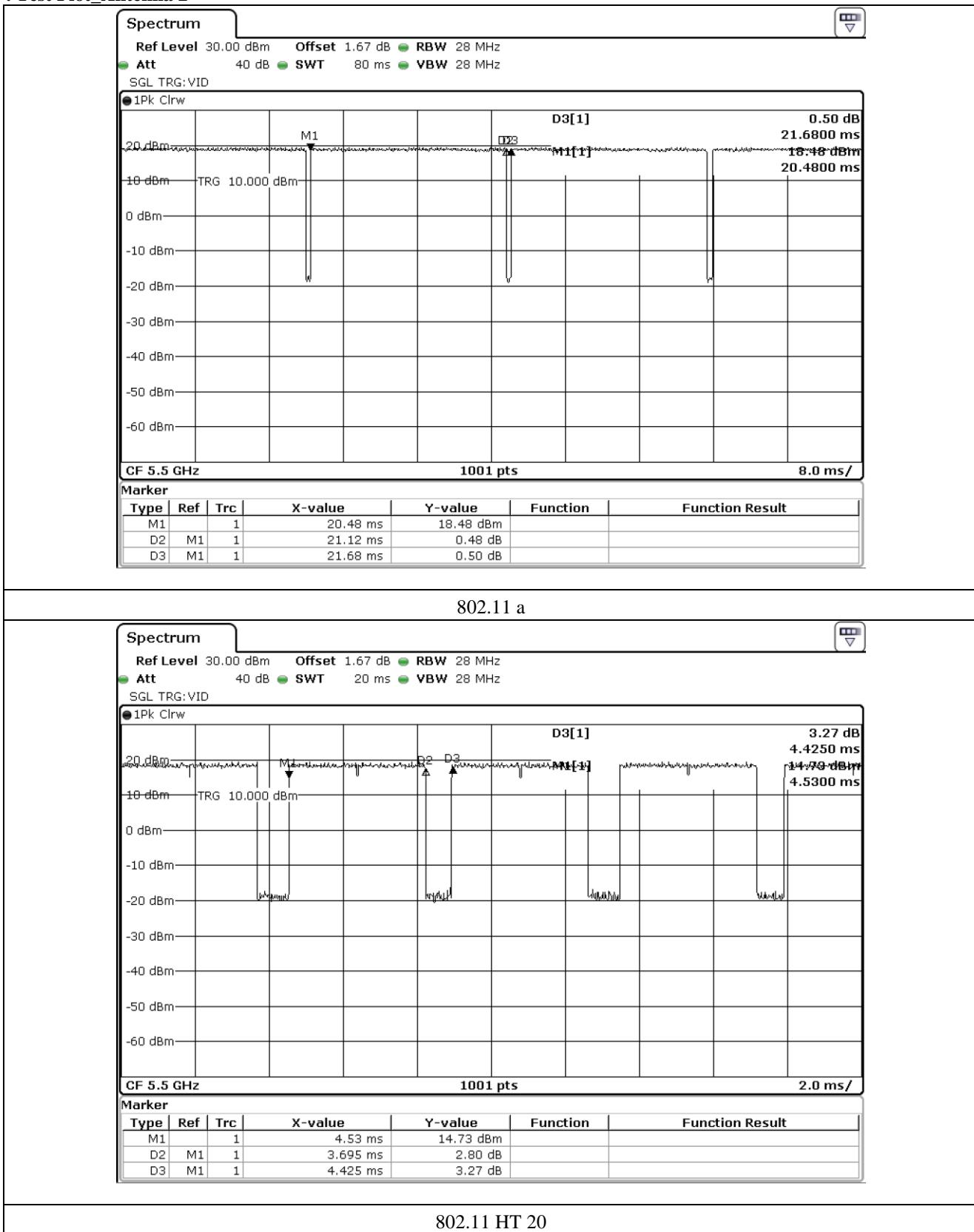
Band	TEST Mode	Data Rate	On Time (ms)	Total Time (ms)	Duty Cycle (%)	Duty Cycle Factor (dB)
UNII (5.5 GHz)	802.11 a	6	21.120	21.680	97.42	0.11
		9	14.160	14.660	96.59	0.15
		12	10.800	11.300	95.58	0.20
		18	7.240	7.870	91.99	0.31
		24	5.540	6.070	91.27	0.41
		36	0.350	0.870	40.23	3.92
		48	0.265	0.780	33.97	4.69
		54	0.235	0.755	31.13	5.13
	802.11 n(HT20)	MCS0	3.695	4.425	83.50	0.78
		MCS1	1.865	2.605	71.59	1.45
		MCS2	1.275	2.010	63.43	1.96
		MCS3	0.475	1.150	41.30	3.57
		MCS4	0.315	0.920	34.24	5.02
		MCS5	0.250	0.895	27.93	5.77
		MCS6	0.215	0.890	24.16	5.90
		MCS7	0.195	0.855	22.81	6.37
	802.11 n(HT40)	MCS0	1.825	2.565	71.15	1.48
		MCS1	0.957	1.680	56.96	2.44
		MCS2	0.672	1.390	48.35	3.20
		MCS3	0.255	0.922	27.66	5.67
		MCS4	0.168	0.841	19.98	7.00
		MCS5	0.147	0.823	17.86	7.48
		MCS6	0.135	0.793	17.02	7.69
		MCS7	0.123	0.772	15.93	7.96
	802.11 ac(VHT80)	MCS0	0.507	0.989	51.26	2.90
		MCS1	0.144	0.694	20.75	6.84
		MCS2	0.111	0.667	16.64	7.70
		MCS3	0.096	0.638	15.05	8.23
		MCS4	0.078	0.635	12.28	9.19
		MCS5	0.072	0.632	11.39	9.43
		MCS6	0.066	0.632	10.44	9.89
		MCS7	0.063	0.611	10.31	9.82
		MCS8	0.063	0.602	10.47	9.95
		MCS9	0.060	0.590	10.17	10.14

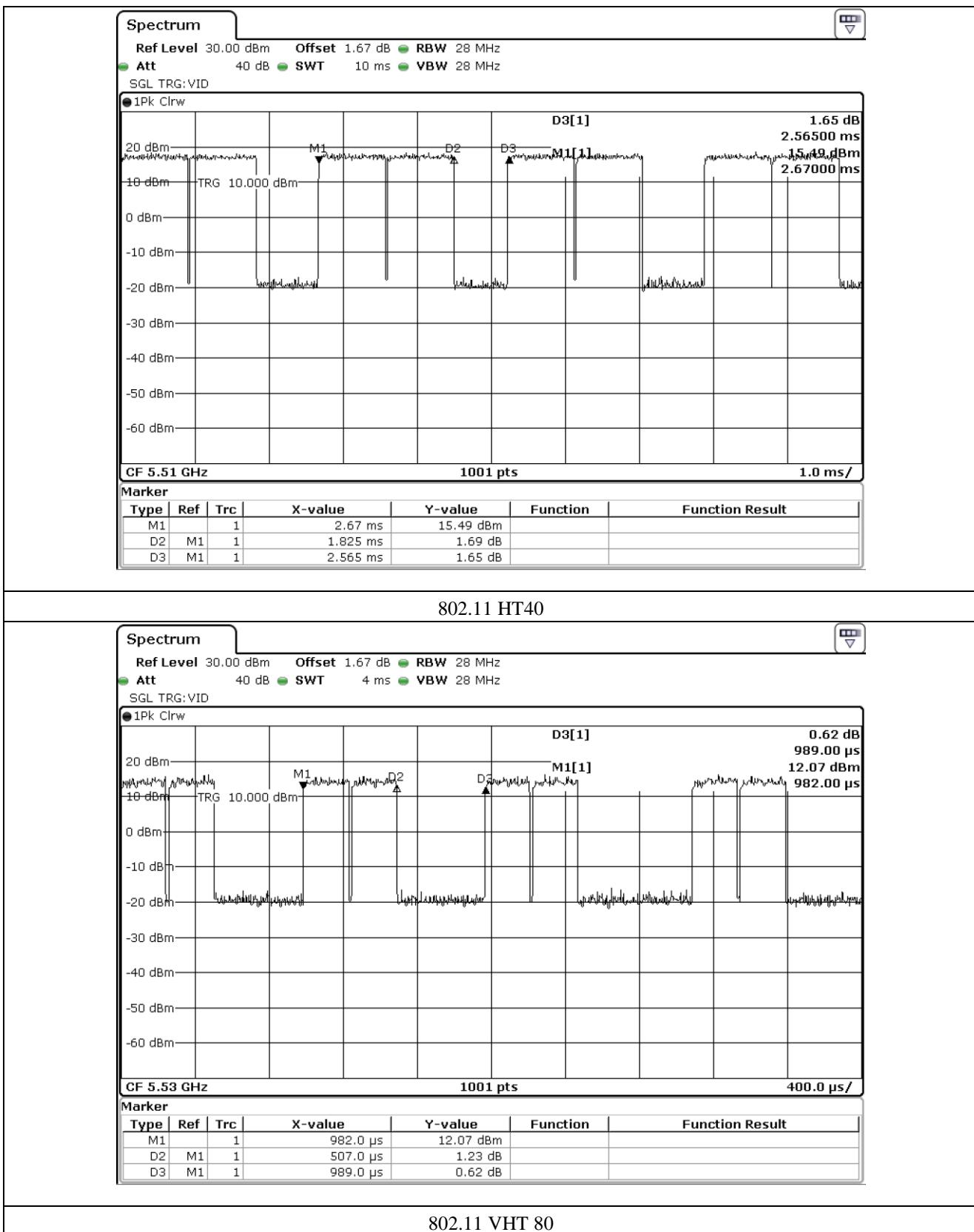
Note – Duty Cycle : (Tx On Time / (Tx On Time + Tx Off Time)) \* 100

Correction Factor : 10 \* Log(1 / (Duty Cycle / 100))

**- Test Plot\_Antenna 1**



**- Test Plot\_Antenna 2**




## 5.4 Configuration of Test System

- Line Conducted Test:** The EUT was tested in the Transmitting mode. All supporting equipment were connected to another LISN. Preliminary Power line Conducted Emission test was performed by using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions.
- Radiated Emission Test:** Preliminary radiated emissions test were conducted using the procedure in ANSI C63.10: 2013 to determine the worse operating conditions. Final radiated emission tests were conducted at 3 meter Semi Anechoic Chamber. The turntable was rotated through 360 degrees and the EUT was tested by positioned three orthogonal planes to obtain the highest reading on the field strength meter. Once maximum reading was determined, the search antenna was raised and lowered in both vertical and horizontal polarization.

## 5.5 Antenna Requirement

For intentional device, according to 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.

### Antenna Construction:

The SLOT Antennas are located the in the EUT internally, so It is not able to be replaced by user.

## 6. PRELIMINARY TEST

### 6.1 AC Power line Conducted Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

### 6.2 General Radiated Emissions Tests

During Preliminary Test, the following operating mode was investigated.

Operation Mode	The Worse operating condition (Please check one only)
Transmitting Mode	X

## 7. MINIMUM 26 dB BANDWIDTH

### 7.1 Operating environment

Temperature : 24 °C  
Relative humidity : 52 % R.H.

### 7.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to approximately 1% of the emission bandwidth, and peak detection was used. The 26 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 26 dB.



### 7.3 Test Date

September 26, 2022 ~ October 21, 2022

## 7.4 Test data for 802.11a RLAN Mode

### 7.4.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	18.58
	Middle	5 220.00	18.58
	High	5 240.00	18.83
5 250 ~ 5 350	Low	5 260.00	19.48
	Middle	5 300.00	20.38
	High	5 320.00	20.38
5 470 ~ 5 725	Low	5 500.00	18.88
	Middle	5 580.00	18.83
	High	5 700.00	18.58
5 725 ~ 5 850	Low	5 745.00	18.53
	Middle	5 785.00	18.58
	High	5 825.00	18.78

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.34
5 725 ~ 5 850	5 720.00	4.24

#### 7.4.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	18.63
	Middle	5 220.00	18.58
	High	5 240.00	18.88
5 250 ~ 5 350	Low	5 260.00	19.08
	Middle	5 300.00	18.63
	High	5 320.00	19.53
5 470 ~ 5 725	Low	5 500.00	18.73
	Middle	5 580.00	18.63
	High	5 700.00	18.63
5 725 ~ 5 850	Low	5 745.00	18.53
	Middle	5 785.00	18.68
	High	5 825.00	18.58

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.39
5 725 ~ 5 850	5 720.00	4.24

## 7.5 Test data for 802.11n\_HT20 RLAN Mode

### 7.5.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	19.98
	Middle	5 220.00	20.23
	High	5 240.00	19.98
5 250 ~ 5 350	Low	5 260.00	20.08
	Middle	5 300.00	20.28
	High	5 320.00	20.18
5 470 ~ 5 725	Low	5 500.00	19.78
	Middle	5 660.00	20.18
	High	5 700.00	20.18
5 725 ~ 5 850	Low	5 745.00	20.08
	Middle	5 785.00	20.13
	High	5 825.00	19.78

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	15.19
5 725 ~ 5 850	5 720.00	4.89

### 7.5.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	20.03
	Middle	5 220.00	19.93
	High	5 240.00	20.03
5 250 ~ 5 350	Low	5 260.00	20.13
	Middle	5 300.00	20.18
	High	5 320.00	20.13
5 470 ~ 5 725	Low	5 500.00	20.03
	Middle	5 580.00	20.13
	High	5 700.00	20.08
5 725 ~ 5 850	Low	5 745.00	19.98
	Middle	5 785.00	19.93
	High	5 825.00	19.83

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.99
5 725 ~ 5 850	5 720.00	4.84

## 7.5.2 Test data for Multiple Transmit

### 7.5.2.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	19.78
	Middle	5 220.00	20.13
	High	5 240.00	20.03
5 250 ~ 5 350	Low	5 260.00	19.98
	Middle	5 300.00	20.28
	High	5 320.00	19.98
5 470 ~ 5 725	Low	5 500.00	20.13
	Middle	5 580.00	19.78
	High	5 700.00	20.03
5 725 ~ 5 850	Low	5 745.00	19.78
	Middle	5 785.00	20.03
	High	5 825.00	19.83

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.99
5 725 ~ 5 850	5 720.00	4.84

### 7.5.2.2 Test data for Antenna 2

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 180.00	19.68
	Middle	5 220.00	19.43
	High	5 240.00	19.63
5 250 ~ 5 350	Low	5 260.00	19.58
	Middle	5 300.00	19.83
	High	5 320.00	19.48
5 470 ~ 5 725	Low	5 500.00	19.48
	Middle	5 580.00	19.83
	High	5 700.00	19.63
5 725 ~ 5 850	Low	5 745.00	19.53
	Middle	5 785.00	19.63
	High	5 825.00	19.88

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 720.00	14.79
5 725 ~ 5 850	5 720.00	4.69

## 7.6 Test data for 802.11n\_HT40 RLAN Mode

### 7.6.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 190.00	39.66
	High	5 230.00	39.66
5 250 ~ 5 350	Low	5 270.00	39.76
	High	5 310.00	39.66
5 470 ~ 5 725	Low	5 510.00	39.86
	Middle	5 550.00	39.76
	High	5 670.00	39.46
5 725 ~ 5 850	Low	5 755.00	39.66
	High	5 795.00	39.46

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	34.88
5 725 ~ 5 850	5 710.00	4.98

### 7.6.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 190.00	39.76
	High	5 230.00	39.56
5 250 ~ 5 350	Low	5 270.00	39.76
	High	5 310.00	39.66
5 470 ~ 5 725	Low	5 510.00	39.86
	Middle	5 550.00	39.66
	High	5 670.00	39.56
5 725 ~ 5 850	Low	5 755.00	39.86
	High	5 795.00	39.76

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	34.68
5 725 ~ 5 850	5 710.00	4.68

### 7.6.3 Test data for Multiple Transmit

#### 7.6.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 190.00	39.56
	High	5 230.00	39.56
5 250 ~ 5 350	Low	5 270.00	39.66
	High	5 310.00	39.36
5 470 ~ 5 725	Low	5 510.00	39.56
	Middle	5 550.00	39.66
	High	5 670.00	39.76
5 725 ~ 5 850	Low	5 755.00	39.86
	High	5 795.00	39.56

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	34.88
5 725 ~ 5 850	5 710.00	4.88

### 7.6.3.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Low	5 190.00	39.66
	High	5 230.00	39.56
5 250 ~ 5 350	Low	5 270.00	39.76
	High	5 310.00	39.66
5 470 ~ 5 725	Low	5 510.00	39.46
	Middle	5 550.00	39.66
	High	5 670.00	39.46
5 725 ~ 5 850	Low	5 755.00	39.56
	High	5 795.00	39.26

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 710.00	34.88
5 725 ~ 5 850	5 710.00	4.68

**7.7 Test data for 802.11ac\_VHT80 RLAN Mode****7.7.1 Test data for Antenna 1**

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Middle	5 210.00	81.72
5 250 ~ 5 350	Middle	5 290.00	80.92
5 470 ~ 5 725	Middle	5 530.00	80.92
5 725 ~ 5 850	Middle	5 775.00	81.52

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	75.56
5 725 ~ 5 850	5 690.00	5.96

### 7.7.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Middle	5 210.00	81.12
5 250 ~ 5 350	Middle	5 290.00	81.72
5 470 ~ 5 725	Middle	5 530.00	81.92
5 725 ~ 5 850	Middle	5 775.00	82.32

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	75.76
5 725 ~ 5 850	5 690.00	5.76

### 7.7.3 Test data for Multiple Transmit

#### 7.7.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Middle	5 210.00	81.52
5 250 ~ 5 350	Middle	5 290.00	81.72
5 470 ~ 5 725	Middle	5 530.00	80.92
5 725 ~ 5 850	Middle	5 775.00	81.92

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	75.36
5 725 ~ 5 850	5 690.00	5.36

**7.7.3.1 Test data for Antenna 2**

-. Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 150 ~ 5 250	Middle	5 210.00	81.32
5 250 ~ 5 350	Middle	5 290.00	81.12
5 470 ~ 5 725	Middle	5 530.00	81.52
5 725 ~ 5 850	Middle	5 775.00	81.12

[Staddle Channel]

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	26 dB Bandwidth (MHz)
5 470 ~ 5 725	5 690.00	75.56
5 725 ~ 5 850	5 690.00	5.16

## 8. 6 dB BANDWIDTH

### 8.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

### 8.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 100 kHz, and peak detection was used. The 6 dB bandwidth is defined as the total spectrum over which the power is higher than the peak power minus 6 dB.



### 8.3 Test Date

September 26, 2022 ~ October 21, 2022

## 8.4 Test data for 802.11a RLAN Mode

### 8.4.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 745.00	16.33	0.50	15.83
	Middle	5 785.00	15.98	0.50	15.48
	High	5 825.00	16.28	0.50	15.78

### 8.4.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 745.00	16.08	0.50	15.58
	Middle	5 785.00	16.33	0.50	15.83
	High	5 825.00	16.28	0.50	15.78

### 8.4.3 Test data for Staddle Channel\_Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 720.00	13.14	0.50	12.64
5 725 ~ 5 850	5 720.00	3.14	0.50	2.64

### 8.4.4 Test data for Staddle Channel\_Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 720.00	13.14	0.50	12.64
5 725 ~ 5 850	5 720.00	3.09	0.50	2.59

## 8.5 Test data for 802.11n\_HT20 RLAN Mode

### 8.5.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 745.00	16.58	0.50	16.08
	Middle	5 785.00	16.78	0.50	16.28
	High	5 825.00	17.13	0.50	16.63

### 8.5.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 745.00	16.78	0.50	16.28
	Middle	5 785.00	16.58	0.50	16.08
	High	5 825.00	16.53	0.50	16.03

### 8.5.3 Test data for Multiple Transmit

#### 8.5.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 745.00	16.58	0.50	16.08
	Middle	5 785.00	16.78	0.50	16.28
	High	5 825.00	16.93	0.50	16.43

#### 8.5.3.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 745.00	16.53	0.50	16.03
	Middle	5 785.00	16.28	0.50	15.78
	High	5 825.00	16.88	0.50	16.38

#### **8.5.4 Test data for Staddle Channel\_Antenna 1**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 720.00	13.14	0.50	12.64
5 725 ~ 5 850	5 720.00	3.39	0.50	2.89

#### **8.5.5 Test data for Staddle Channel\_Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 720.00	13.44	0.50	12.94
5 725 ~ 5 850	5 720.00	3.14	0.50	2.64

#### **8.5.6 Test data for Staddle Channel\_Multiple Transmit**

##### **8.5.6.1 Test data for Antenna 1**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 720.00	13.44	0.50	12.94
5 725 ~ 5 850	5 720.00	3.14	0.50	2.64

##### **8.5.6.2 Test data for Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 720.00	13.14	0.50	12.64
5 725 ~ 5 850	5 720.00	3.09	0.50	2.59

## 8.6 Test data for 802.11n\_HT40 RLAN Mode

### 8.6.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 755.00	35.86	0.50	35.36
	High	5 795.00	35.66	0.50	35.16

### 8.6.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 755.00	35.86	0.50	35.36
	High	5 795.00	35.56	0.50	35.06

### 8.6.3 Test data for Multiple Transmit

#### 8.6.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 755.00	35.56	0.50	35.06
	High	5 795.00	35.96	0.50	35.46

#### 8.6.3.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Low	5 755.00	35.76	0.50	35.26
	High	5 795.00	35.66	0.50	35.16

#### **8.6.4 Test data for Staddle Channel\_Antenna 1**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 710.00	32.78	0.50	32.28
5 725 ~ 5 850	5 710.00	2.78	0.50	2.28

#### **8.6.5 Test data for Staddle Channel\_Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 710.00	32.78	0.50	32.28
5 725 ~ 5 850	5 710.00	2.78	0.50	2.28

#### **8.6.6 Test data for Staddle Channel\_Multiple Transmit**

##### **8.6.6.1 Test data for Antenna 1**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 710.00	32.78	0.50	32.28
5 725 ~ 5 850	5 710.00	2.78	0.50	2.28

##### **8.6.6.2 Test data for Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 710.00	32.98	0.50	32.48
5 725 ~ 5 850	5 710.00	2.68	0.50	2.18

## 8.7 Test data for 802.11ac\_VHT80 RLAN Mode

### 8.7.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Middle	5 775.00	75.52	0.50	75.02

### 8.7.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Middle	5 775.00	75.52	0.50	75.02

### 8.7.3 Test data for Multiple Transmit

#### 8.7.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Middle	5 775.00	75.52	0.50	75.02

#### 8.7.3.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 725 ~ 5 850	Middle	5 775.00	75.52	0.50	75.02

#### **8.7.4 Test data for Staddle Channel\_Antenna 1**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 690.00	72.76	0.50	72.26
5 725 ~ 5 850	5 690.00	2.76	0.50	2.26

#### **8.7.5 Test data for Staddle Channel\_Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 690.00	73.16	0.50	72.46
5 725 ~ 5 850	5 690.00	2.76	0.50	2.26

#### **8.7.6 Test data for Staddle Channel\_Multiple Transmit**

##### **8.7.6.1 Test data for Antenna 1**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 690.00	72.76	0.50	72.26
5 725 ~ 5 850	5 690.00	2.76	0.50	2.26

##### **8.7.6.2 Test data for Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Margin (MHz)
5 470 ~ 5 725	5 690.00	72.76	0.50	72.26
5 725 ~ 5 850	5 690.00	2.76	0.50	2.26

## 9. MAXIMUM CONDUCTED(AVERAGE) OUTPUT POWER

### 9.1 Operating environment

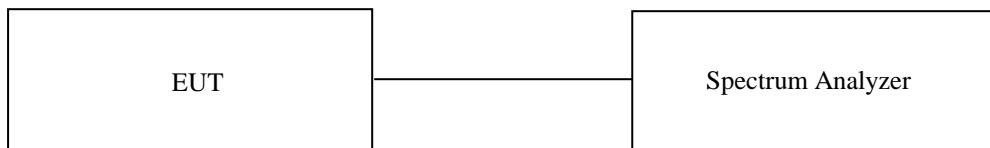
Temperature : 24 °C

Relative humidity : 52 % R.H.

### 9.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer.

The resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 times the resolution bandwidth.



### 9.3 Test Date

September 26, 2022 ~ October 21, 2022

## 9.4 Test data for 802.11a RLAN Mode

### 9.4.1 Test data for Antenna 1

- Test Result : Pass
- Duty Cycle : 97.42 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	15.45	0.11	15.56	24.00	8.44
	Middle	5 220.00	16.56	0.11	16.67	24.00	7.33
	High	5 240.00	16.62	0.11	16.73	24.00	7.27
5 250 ~ 5 350	Low	5 260.00	16.39	0.11	16.50	24.00	7.50
	Middle	5 300.00	17.31	0.11	17.42	24.00	6.58
	High	5 320.00	17.32	0.11	17.43	24.00	6.57
5 470 ~ 5 725	Low	5 500.00	15.90	0.11	16.01	24.00	7.99
	Middle	5 580.00	16.43	0.11	16.54	24.00	7.46
	High	5 700.00	15.79	0.11	15.90	24.00	8.10
5 725 ~ 5 850	Low	5 745.00	15.45	0.11	15.56	30.00	14.44
	Middle	5 785.00	15.45	0.11	15.56	30.00	14.44
	High	5 825.00	15.81	0.11	15.92	30.00	14.08

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

#### 9.4.2 Test data for Antenna 2

- . Test Result : Pass
- . Duty Cycle : 97.42 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	14.29	0.11	14.40	24.00	9.60
	Middle	5 220.00	15.37	0.11	15.48	24.00	8.52
	High	5 240.00	15.66	0.11	15.77	24.00	8.23
5 250 ~ 5 350	Low	5 260.00	15.27	0.11	15.38	24.00	8.62
	Middle	5 300.00	16.21	0.11	16.32	24.00	7.68
	High	5 320.00	16.50	0.11	16.61	24.00	7.39
5 470 ~ 5 725	Low	5 500.00	14.97	0.11	15.08	24.00	8.92
	Middle	5 580.00	15.11	0.11	15.22	24.00	8.78
	High	5 700.00	13.95	0.11	14.06	24.00	9.94
5 725 ~ 5 850	Low	5 745.00	13.81	0.11	13.92	30.00	16.08
	Middle	5 785.00	14.14	0.11	14.25	30.00	15.75
	High	5 825.00	14.20	0.11	14.31	30.00	15.69

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

#### 9.4.3 Test data for Staddle Channel\_Antenna 1

- . Test Result : Pass
- . Duty Cycle : 98.96 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	14.99	0.11	15.10	24.00	8.90
5 725 ~ 5 850	Middle	5 720.00	8.76	0.11	8.87	30.00	21.13

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

#### 9.4.4 Test data for Staddle Channel\_Antenna 2

- . Test Result : Pass
- . Duty Cycle : 98.96 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	13.81	0.11	13.92	24.00	10.08
5 725 ~ 5 850	Middle	5 720.00	7.41	0.11	7.52	30.00	22.48

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

## 9.5 Test data for 802.11n\_HT20 RLAN Mode

### 9.5.1 Test data for Antenna 1

- Test Result : Pass
- Duty Cycle : 83.50 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	14.63	0.78	15.41	24.00	8.59
	Middle	5 220.00	15.83	0.78	16.61	24.00	7.39
	High	5 240.00	15.84	0.78	16.62	24.00	7.38
5 250 ~ 5 350	Low	5 260.00	15.64	0.78	16.42	24.00	7.58
	Middle	5 300.00	16.53	0.78	17.31	24.00	6.69
	High	5 320.00	16.57	0.78	17.35	24.00	6.65
5 470 ~ 5 725	Low	5 500.00	14.96	0.78	15.74	24.00	8.26
	Middle	5 580.00	15.43	0.78	16.21	24.00	7.79
	High	5 700.00	14.84	0.78	15.62	24.00	8.38
5 725 ~ 5 850	Low	5 745.00	14.72	0.78	15.50	30.00	14.50
	Middle	5 785.00	14.66	0.78	15.44	30.00	14.56
	High	5 825.00	14.78	0.78	15.56	30.00	14.44

Remark : Margin = Limit - Total Value (=Measured Value +Duty Factor)

### 9.5.2 Test data for Antenna 2

- . Test Result : Pass
- . Duty Cycle : 83.50 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	13.47	0.78	14.25	24.00	9.75
	Middle	5 220.00	14.63	0.78	15.41	24.00	8.59
	High	5 240.00	14.84	0.78	15.62	24.00	8.38
5 250 ~ 5 350	Low	5 260.00	14.52	0.78	15.30	24.00	8.70
	Middle	5 300.00	15.34	0.78	16.12	24.00	7.88
	High	5 320.00	15.63	0.78	16.41	24.00	7.59
5 470 ~ 5 725	Low	5 500.00	14.10	0.78	14.88	24.00	9.12
	Middle	5 580.00	14.32	0.78	15.10	24.00	8.90
	High	5 700.00	13.24	0.78	14.02	24.00	9.98
5 725 ~ 5 850	Low	5 745.00	13.09	0.78	13.87	30.00	16.13
	Middle	5 785.00	13.10	0.78	13.88	30.00	16.12
	High	5 825.00	13.23	0.78	14.01	30.00	15.99

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### 9.5.3 Test data for Multiple Transmit

#### 9.5.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	11.54	0.78	12.32	24.00	11.68
	Middle	5 220.00	12.61	0.78	13.39	24.00	10.61
	High	5 240.00	12.70	0.78	13.48	24.00	10.52
5 250 ~ 5 350	Low	5 260.00	12.50	0.78	13.28	24.00	10.72
	Middle	5 300.00	13.48	0.78	14.26	24.00	9.74
	High	5 320.00	13.40	0.78	14.18	24.00	9.82
5 470 ~ 5 725	Low	5 500.00	11.95	0.78	12.73	24.00	11.27
	Middle	5 580.00	12.41	0.78	13.19	24.00	10.81
	High	5 700.00	11.74	0.78	12.52	24.00	11.48
5 725 ~ 5 850	Low	5 745.00	11.67	0.78	12.45	30.00	17.55
	Middle	5 785.00	11.44	0.78	12.22	30.00	17.78
	High	5 825.00	11.79	0.78	12.57	30.00	17.43

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### 9.5.3.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	10.43	0.78	11.21	24.00	12.79
	Middle	5 220.00	11.74	0.78	12.52	24.00	11.48
	High	5 240.00	11.83	0.78	12.61	24.00	11.39
5 250 ~ 5 350	Low	5 260.00	11.43	0.78	12.21	24.00	11.79
	Middle	5 300.00	12.54	0.78	13.32	24.00	10.68
	High	5 320.00	12.87	0.78	13.65	24.00	10.35
5 470 ~ 5 725	Low	5 500.00	11.24	0.78	12.02	24.00	11.98
	Middle	5 580.00	11.49	0.78	12.27	24.00	11.73
	High	5 700.00	10.34	0.78	11.12	24.00	12.88
5 725 ~ 5 850	Low	5 745.00	10.33	0.78	11.11	30.00	18.89
	Middle	5 785.00	10.47	0.78	11.25	30.00	18.75
	High	5 825.00	10.35	0.78	11.13	30.00	18.87

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

### 9.5.3.3 Test data for Antenna 1 + Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	14.81	24.00	9.19
	Middle	5 220.00	15.99	24.00	8.01
	High	5 240.00	16.08	24.00	7.92
5 250 ~ 5 350	Low	5 260.00	15.79	24.00	8.21
	Middle	5 300.00	16.83	24.00	7.17
	High	5 320.00	16.93	24.00	7.07
5 470 ~ 5 725	Low	5 500.00	15.40	24.00	8.60
	Middle	5 580.00	15.76	24.00	8.24
	High	5 700.00	14.89	24.00	9.11
5 725 ~ 5 850	Low	5 745.00	14.84	30.00	15.16
	Middle	5 785.00	14.77	30.00	15.23
	High	5 825.00	14.92	30.00	15.08

Remark : Margin = Limit – SUM VALUE

#### 9.5.4 Test data for Staddle Channel\_Antenna 1

- . Test Result : Pass
- . Duty Cycle : 83.50 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	14.09	0.78	14.87	24.00	9.13
5 725 ~ 5 850	Middle	5 720.00	8.27	0.78	9.05	30.00	20.95

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

#### 9.5.5 Test data for Staddle Channel\_Antenna 2

- . Test Result : Pass
- . Duty Cycle : 83.50 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	12.84	0.78	13.62	24.00	10.38
5 725 ~ 5 850	Middle	5 720.00	6.94	0.78	7.72	30.00	22.28

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### **9.5.6 Test data for Staddle Channel\_Multiple Transmit**

#### **9.5.6.1 Test data for Antenna 1**

- . Test Result : Pass
- . Duty Cycle : 83.50 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	10.91	0.78	11.69	24.00	12.31
5 725 ~ 5 850	Middle	5 720.00	5.06	0.78	5.84	30.00	24.16

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

#### **9.5.6.2 Test data for Antenna 2**

- . Test Result : Pass
- . Duty Cycle : 83.50 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	10.13	0.78	10.91	24.00	13.09
5 725 ~ 5 850	Middle	5 720.00	4.08	0.78	4.86	30.00	25.14

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

#### **9.5.6.3 Test data for Antenna 1 + Antenna 2**

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 720.00	14.33	24.00	9.67
5 725 ~ 5 850	Middle	5 720.00	8.39	30.00	21.61

Remark : Margin = Limit – SUM VALUE

## 9.6 Test data for 802.11n\_HT40 RLAN Mode

### 9.6.1 Test data for Antenna 1

- Test Result : Pass
- Duty Cycle : 71.15 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	13.27	1.48	14.75	24.00	9.25
	High	5 230.00	14.51	1.48	15.99	24.00	8.01
5 250 ~ 5 350	Low	5 270.00	10.99	1.48	12.47	24.00	11.53
	High	5 310.00	12.16	1.48	13.64	24.00	10.36
5 470 ~ 5 725	Low	5 510.00	13.46	1.48	14.94	24.00	9.06
	Middle	5 550.00	14.33	1.48	15.81	24.00	8.19
	High	5 670.00	14.35	1.48	15.83	24.00	8.17
5 725 ~ 5 850	Low	5 755.00	13.50	1.48	14.98	30.00	15.02
	High	5 795.00	13.52	1.48	15.00	30.00	15.00

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### 9.6.2 Test data for Antenna 2

- . Test Result : Pass
- . Duty Cycle : 71.15 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	12.52	1.48	14.00	24.00	10.00
	High	5 230.00	13.65	1.48	15.13	24.00	8.87
5 250 ~ 5 350	Low	5 270.00	10.00	1.48	11.48	24.00	12.52
	High	5 310.00	11.87	1.48	13.35	24.00	10.65
5 470 ~ 5 725	Low	5 510.00	12.67	1.48	14.15	24.00	9.85
	Middle	5 550.00	13.60	1.48	15.08	24.00	8.92
	High	5 670.00	12.40	1.48	13.88	24.00	10.12
5 725 ~ 5 850	Low	5 755.00	11.64	1.48	13.12	30.00	16.88
	High	5 795.00	12.15	1.48	13.63	30.00	16.37

Remark : Margin = Limit - Total Value (=Measured Value +Duty Factor)

### 9.6.3 Test data for Multiple Transmit

#### 9.6.3.1 Test data for Antenna 1

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	10.09	1.48	11.57	24.00	12.43
	High	5 230.00	11.53	1.48	13.01	24.00	10.99
5 250 ~ 5 350	Low	5 270.00	11.32	1.48	12.80	24.00	11.20
	High	5 310.00	11.78	1.48	13.26	24.00	10.74
5 470 ~ 5 725	Low	5 510.00	10.85	1.48	12.33	24.00	11.67
	Middle	5 550.00	11.13	1.48	12.61	24.00	11.39
	High	5 670.00	10.93	1.48	12.41	24.00	11.59
5 725 ~ 5 850	Low	5 755.00	10.41	1.48	11.89	30.00	18.11
	High	5 795.00	10.49	1.48	11.97	30.00	18.03

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

#### 9.6.3.2 Test data for Antenna 2

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	9.31	1.48	10.79	24.00	13.21
	High	5 230.00	10.59	1.48	12.07	24.00	11.93
5 250 ~ 5 350	Low	5 270.00	10.47	1.48	11.95	24.00	12.05
	High	5 310.00	11.45	1.48	12.93	24.00	11.07
5 470 ~ 5 725	Low	5 510.00	10.14	1.48	11.62	24.00	12.38
	Middle	5 550.00	10.52	1.48	12.00	24.00	12.00
	High	5 670.00	10.13	1.48	11.61	24.00	12.39
5 725 ~ 5 850	Low	5 755.00	8.88	1.48	10.36	30.00	19.64
	High	5 795.00	9.55	1.48	11.03	30.00	18.97

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

### 9.6.3.3 Test data for Antenna 1 + Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	14.21	24.00	9.79
	High	5 230.00	15.58	24.00	8.42
5 250 ~ 5 350	Low	5 270.00	15.41	24.00	8.59
	High	5 310.00	16.11	24.00	7.89
5 470 ~ 5 725	Low	5 510.00	15.00	24.00	9.00
	Middle	5 550.00	15.33	24.00	8.67
	High	5 670.00	15.04	24.00	8.96
5 725 ~ 5 850	Low	5 755.00	14.20	30.00	15.80
	High	5 795.00	14.54	30.00	15.46

Remark : Margin = Limit – SUM VALUE

#### 9.6.4 Test data for Staddle Channel\_Antenna 1

- . Test Result : Pass
- . Duty Cycle : 71.15 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 710.00	13.60	1.48	15.08	24.00	8.92
5 725 ~ 5 850	Middle	5 710.00	3.21	1.48	4.69	30.00	25.31

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

#### 9.6.5 Test data for Staddle Channel\_Antenna 2

- . Test Result : Pass
- . Duty Cycle : 71.15 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 710.00	12.19	1.48	13.67	24.00	10.33
5 725 ~ 5 850	Middle	5 710.00	1.44	1.48	2.92	30.00	27.08

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

## 9.6.6 Test data for Staddle Channel\_Multiple Transmit

### 9.6.6.1 Test data for Antenna 1

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 710.00	10.17	1.48	11.65	24.00	12.35
5 725 ~ 5 850	Middle	5 710.00	-0.29	1.48	1.19	30.00	28.81

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

### 9.6.6.2 Test data for Antenna 2

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 710.00	9.39	1.48	10.87	24.00	13.13
5 725 ~ 5 850	Middle	5 710.00	-1.44	1.48	0.04	30.00	29.96

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

### 9.6.6.3 Test data for Antenna 1 + Antenna 2

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 710.00	14.29	24.00	9.71
5 725 ~ 5 850	Middle	5 710.00	3.66	30.00	26.34

Remark : Margin = Limit – SUM VALUE

## 9.7 Test data for 802.11ac\_HT80 RLAN Mode

### 9.7.1 Test data for Antenna 1

- . Test Result : Pass
- . Duty Cycle : 51.26 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	11.45	2.90	14.35	24.00	9.65
5 250 ~ 5 350	Middle	5 290.00	11.04	2.90	13.94	24.00	10.06
5 470 ~ 5 725	Middle	5 530.00	11.57	2.90	14.47	24.00	9.53
5 725 ~ 5 850	Middle	5 775.00	11.49	2.90	14.39	30.00	15.61

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### 9.7.2 Test data for Antenna 2

- . Test Result : Pass
- . Duty Cycle : 51.26 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	10.06	2.90	12.96	24.00	11.04
5 250 ~ 5 350	Middle	5 290.00	9.83	2.90	12.73	24.00	11.27
5 470 ~ 5 725	Middle	5 530.00	10.73	2.90	13.63	24.00	10.37
5 725 ~ 5 850	Middle	5 775.00	10.17	2.90	13.07	30.00	16.93

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### 9.7.3 Test data for Multiple Transmit

#### 9.7.3.1 Test data for Antenna 1

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	8.70	2.90	11.60	24.00	12.40
5 250 ~ 5 350	Middle	5 290.00	8.86	2.90	11.76	24.00	12.24
5 470 ~ 5 725	Middle	5 530.00	8.64	2.90	11.54	24.00	12.46
5 725 ~ 5 850	Middle	5 775.00	7.54	2.90	10.44	30.00	19.56

Remark : Margin = Limit – Total Value (=Measured Value + Duty Factor)

#### 9.7.3.2 Test data for Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	7.35	2.90	10.25	24.00	13.75
5 250 ~ 5 350	Middle	5 290.00	7.77	2.90	10.67	24.00	13.33
5 470 ~ 5 725	Middle	5 530.00	7.64	2.90	10.54	24.00	13.46
5 725 ~ 5 850	Middle	5 775.00	6.15	2.90	9.05	30.00	20.95

Remark : Margin = Limit – Total Value (=Measured Value + Duty Factor)

#### 9.7.3.3 Test data for Antenna 1 + Antenna 2

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 150 ~ 5 250	Middle	5 210.00	13.99	24.00	10.01
5 250 ~ 5 350	Middle	5 290.00	14.26	24.00	9.74
5 470 ~ 5 725	Middle	5 530.00	14.08	24.00	9.92
5 725 ~ 5 850	Middle	5 775.00	12.81	30.00	17.19

Remark : Margin = Limit – SUM VALUE

#### 9.7.4 Test data for Staddle Channel\_Antenna 1

- . Test Result : Pass
- . Duty Cycle : 51.26 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 690.00	10.78	2.90	13.68	24.00	10.32
5 725 ~ 5 850	Middle	5 690.00	-3.46	2.90	-0.56	30.00	30.56

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

#### 9.7.5 Test data for Staddle Channel\_Antenna 2

- . Test Result : Pass
- . Duty Cycle : 51.26 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 690.00	9.13	2.90	12.03	24.00	11.97
5 725 ~ 5 850	Middle	5 690.00	-5.54	2.90	-2.64	30.00	32.64

Remark : Margin = Limit –Total Value (=Measured Value +Duty Factor)

### 9.7.6 Test data for Staddle Channel\_Multiple Transmit

#### 9.7.6.1 Test data for Antenna 1

- . Test Result : Pass
- . Duty Cycle : 51.26 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 690.00	8.19	2.90	11.09	24.00	12.91
5 725 ~ 5 850	Middle	5 690.00	-5.83	2.90	-2.93	30.00	32.93

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

#### 9.7.6.2 Test data for Antenna 2

- . Test Result : Pass
- . Duty Cycle : 51.26 %

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Total Value (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 690.00	6.47	2.90	9.37	24.00	14.63
5 725 ~ 5 850	Middle	5 690.00	-8.09	2.90	-5.19	30.00	35.19

Remark : Margin = Limit – Total Value (=Measured Value +Duty Factor)

#### 9.7.6.3 Test data for Antenna 1 + Antenna 2

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm)	MARGIN (dB)
5 470 ~ 5 725	Middle	5 690.00	13.32	24.00	10.68
5 725 ~ 5 850	Middle	5 690.00	-0.90	30.00	30.90

Remark : Margin = Limit – SUM VALUE

## 10. PEAK POWER SPECTRUL DENSITY

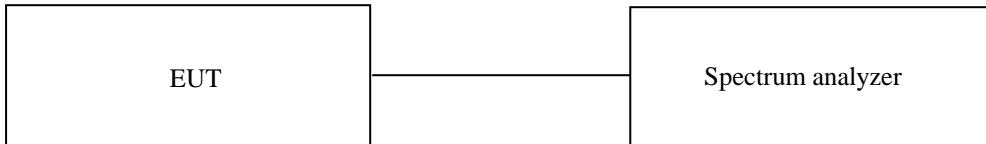
### 10.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

### 10.2 Test set-up

The antenna output of the EUT was connected to the spectrum analyzer. The resolution bandwidth is set to 1 MHz, the video bandwidth is set to 3 times the resolution bandwidth. The maximum level form the EUT in 1 MHz bandwidth was measured with above condition.



### 10.3 Test Date

September 26, 2022 ~ October 21, 2022

## 10.4 Test data for 802.11a RLAN Mode

### 10.4.1 Test data for Antenna 1

- Operating condition : Highest Output Power Transmitting Mode

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	4.70	0.11	4.81	11.00	6.19
	Middle	5 220.00	5.35	0.11	5.46	11.00	5.54
	High	5 240.00	5.44	0.11	5.55	11.00	5.45
5 250 ~ 5 350	Low	5 260.00	5.15	0.11	5.26	11.00	5.74
	Middle	5 300.00	6.05	0.11	6.16	11.00	4.84
	High	5 320.00	6.26	0.11	6.37	11.00	4.63
5 470 ~ 5 725	Low	5 500.00	4.58	0.11	4.69	11.00	6.31
	Middle	5 580.00	5.06	0.11	5.17	11.00	5.83
	High	5 700.00	4.91	0.11	5.02	11.00	5.98
5 725 ~ 5 850	Low	5 745.00	1.31	0.11	1.42	30.00	28.58
	Middle	5 785.00	1.52	0.11	1.63	30.00	28.37
	High	5 825.00	1.48	0.11	1.59	30.00	28.41

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.4.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	3.15	0.11	3.26	11.00	7.74
	Middle	5 220.00	4.15	0.11	4.26	11.00	6.74
	High	5 240.00	4.53	0.11	4.64	11.00	6.36
5 250 ~ 5 350	Low	5 260.00	4.03	0.11	4.14	11.00	6.86
	Middle	5 300.00	5.07	0.11	5.18	11.00	5.82
	High	5 320.00	5.57	0.11	5.68	11.00	5.32
5 470 ~ 5 725	Low	5 500.00	3.71	0.11	3.82	11.00	7.18
	Middle	5 580.00	3.97	0.11	4.08	11.00	6.92
	High	5 700.00	3.05	0.11	3.16	11.00	7.84
5 725 ~ 5 850	Low	5 745.00	-0.33	0.11	-0.22	30.00	30.22
	Middle	5 785.00	0.24	0.11	0.35	30.00	29.65
	High	5 825.00	0.24	0.11	0.35	30.00	29.65

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.4.3 Test data for Staddle Channel\_Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	5.05	0.11	5.16	11.00	5.84
5 725 ~ 5 850	5 720.00	1.36	0.11	1.47	30.00	28.53

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.4.4 Test data for Staddle Channel\_Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	3.59	0.11	3.70	11.00	7.30
5 725 ~ 5 850	5 720.00	0.19	0.11	0.30	30.00	29.70

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

## 10.5 Test data for 802.11n\_HT20 RLAN Mode

### 10.5.1 Test data for Antenna 1

- Operating condition : Highest Output Power Transmitting Mode

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	3.26	0.78	4.04	11.00	6.96
	Middle	5 220.00	4.65	0.78	5.43	11.00	5.57
	High	5 240.00	4.40	0.78	5.18	11.00	5.82
5 250 ~ 5 350	Low	5 260.00	4.23	0.78	5.01	11.00	5.99
	Middle	5 300.00	5.21	0.78	5.99	11.00	5.01
	High	5 320.00	5.54	0.78	6.32	11.00	4.68
5 470 ~ 5 725	Low	5 500.00	3.51	0.78	4.29	11.00	6.71
	Middle	5 580.00	4.07	0.78	4.85	11.00	6.15
	High	5 700.00	3.67	0.78	4.45	11.00	6.55
5 725 ~ 5 850	Low	5 745.00	0.55	0.78	1.33	30.00	28.67
	Middle	5 785.00	0.55	0.78	1.33	30.00	28.67
	High	5 825.00	0.39	0.78	1.17	30.00	28.83

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.5.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	2.59	0.78	3.37	11.00	7.63
	Middle	5 220.00	3.41	0.78	4.19	11.00	6.81
	High	5 240.00	3.71	0.78	4.49	11.00	6.51
5 250 ~ 5 350	Low	5 260.00	3.09	0.78	3.87	11.00	7.13
	Middle	5 300.00	4.27	0.78	5.05	11.00	5.95
	High	5 320.00	4.67	0.78	5.45	11.00	5.55
5 470 ~ 5 725	Low	5 500.00	2.68	0.78	3.46	11.00	7.54
	Middle	5 580.00	2.90	0.78	3.68	11.00	7.32
	High	5 700.00	1.74	0.78	2.52	11.00	8.48
5 725 ~ 5 850	Low	5 745.00	-1.17	0.78	-0.39	30.00	30.39
	Middle	5 785.00	-1.31	0.78	-0.53	30.00	30.53
	High	5 825.00	-1.04	0.78	-0.26	30.00	30.26

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.5.3 Test data for Multiple Transmit

#### 10.5.3.1 Test data for Antenna 1

- Operating condition : Highest Output Power Transmitting Mode

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-0.37	0.78	0.41	11.00	10.59
	Middle	5 220.00	0.48	0.78	1.26	11.00	9.74
	High	5 240.00	0.57	0.78	1.35	11.00	9.65
5 250 ~ 5 350	Low	5 260.00	1.16	0.78	1.94	11.00	9.06
	Middle	5 300.00	2.33	0.78	3.11	11.00	7.89
	High	5 320.00	1.94	0.78	2.72	11.00	8.28
5 470 ~ 5 725	Low	5 500.00	0.18	0.78	0.96	11.00	10.04
	Middle	5 580.00	1.23	0.78	2.01	11.00	8.99
	High	5 700.00	0.38	0.78	1.16	11.00	9.84
5 725 ~ 5 850	Low	5 745.00	-2.35	0.78	-1.57	30.00	31.57
	Middle	5 785.00	-2.78	0.78	-2.00	30.00	32.00
	High	5 825.00	-2.46	0.78	-1.68	30.00	31.68

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.5.3.2 Test data for Antenna 2

- Operating condition : Highest Output Power Transmitting Mode

- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result value' (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	-1.10	0.78	-0.32	11.00	11.32
	Middle	5 220.00	0.27	0.78	1.05	11.00	9.95
	High	5 240.00	0.39	0.78	1.17	11.00	9.83
5 250 ~ 5 350	Low	5 260.00	0.28	0.78	1.06	11.00	9.94
	Middle	5 300.00	1.28	0.78	2.06	11.00	8.94
	High	5 320.00	1.62	0.78	2.40	11.00	8.60
5 470 ~ 5 725	Low	5 500.00	0.06	0.78	0.84	11.00	10.16
	Middle	5 580.00	0.35	0.78	1.13	11.00	9.87
	High	5 700.00	-0.83	0.78	-0.05	11.00	11.05
5 725 ~ 5 850	Low	5 745.00	-3.54	0.78	-2.76	30.00	32.76
	Middle	5 785.00	-3.83	0.78	-3.05	30.00	33.05
	High	5 825.00	-3.79	0.78	-3.01	30.00	33.01

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.5.3.3 Test data for Antenna 1 + Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 180.00	3.07	11.00	7.93
	Middle	5 220.00	4.17	11.00	6.83
	High	5 240.00	4.27	11.00	6.73
5 250 ~ 5 350	Low	5 260.00	4.53	11.00	6.47
	Middle	5 300.00	5.63	11.00	5.37
	High	5 320.00	5.57	11.00	5.43
5 470 ~ 5 725	Low	5 500.00	3.91	11.00	7.09
	Middle	5 580.00	4.60	11.00	6.40
	High	5 700.00	3.61	11.00	7.39
5 725 ~ 5 850	Low	5 745.00	0.89	30.00	29.11
	Middle	5 785.00	0.52	30.00	29.48
	High	5 825.00	0.72	30.00	29.28

#### 10.5.4 Test data for Staddle Channel\_Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	3.62	0.78	4.40	11.00	6.60
5 725 ~ 5 850	5 720.00	0.40	0.78	1.18	30.00	28.82

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.5.5 Test data for Staddle Channel\_Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	2.31	0.78	3.09	11.00	7.91
5 725 ~ 5 850	5 720.00	-1.16	0.78	-0.38	30.00	30.38

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.5.6 Test data for Staddle Channel\_Multiple Transmit

#### 10.5.6.1 Test data for Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	0.31	0.78	1.09	11.00	9.91
5 725 ~ 5 850	5 720.00	-3.31	0.78	-2.53	30.00	32.53

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.5.6.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	-0.09	0.78	0.69	11.00	10.31
5 725 ~ 5 850	5 720.00	-3.92	0.78	-3.14	30.00	33.14

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.5.6.3 Test data for Antenna 1 + Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 720.00	3.90	11.00	7.10
5 725 ~ 5 850	5 720.00	0.19	30.00	29.81

## 10.6 Test data for 802.11n\_HT40 RLAN Mode

### 10.6.1 Test data for Antenna 1

- Operating condition : Highest Output Power Transmitting Mode
- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-0.66	1.48	0.82	11.00	10.18
	High	5 230.00	0.24	1.48	1.72	11.00	9.28
5 250 ~ 5 350	Low	5 270.00	-2.99	1.48	-1.51	11.00	12.51
	High	5 310.00	-1.74	1.48	-0.26	11.00	11.26
5 470 ~ 5 725	Low	5 510.00	-0.22	1.48	1.26	11.00	9.74
	Middle	5 550.00	0.20	1.48	1.68	11.00	9.32
	High	5 670.00	-0.36	1.48	1.12	11.00	9.88
5 725 ~ 5 850	Low	5 755.00	-3.86	1.48	-2.38	30.00	32.38
	High	5 795.00	-3.72	1.48	-2.24	30.00	32.24

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.6.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode

- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-1.87	1.48	-0.39	11.00	11.39
	High	5 230.00	-0.45	1.48	1.03	11.00	9.97
5 250 ~ 5 350	Low	5 270.00	-4.17	1.48	-2.69	11.00	13.69
	High	5 310.00	-2.62	1.48	-1.14	11.00	12.14
5 470 ~ 5 725	Low	5 510.00	-1.15	1.48	0.33	11.00	10.67
	Middle	5 550.00	-1.11	1.48	0.37	11.00	10.63
	High	5 670.00	-1.82	1.48	-0.34	11.00	11.34
5 725 ~ 5 850	Low	5 755.00	-5.42	1.48	-3.94	30.00	33.94
	High	5 795.00	-4.81	1.48	-3.33	30.00	33.33

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.6.3 Test data for Multiple Transmit

#### 10.6.3.1 Test data for Antenna 1

- Operating condition : Highest Output Power Transmitting Mode
- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-3.99	1.48	-2.51	11.00	13.51
	High	5 230.00	-2.76	1.48	-1.28	11.00	12.28
5 250 ~ 5 350	Low	5 270.00	-3.35	1.48	-1.87	11.00	12.87
	High	5 310.00	-1.67	1.48	-0.19	11.00	11.19
5 470 ~ 5 725	Low	5 510.00	-3.42	1.48	-1.94	11.00	12.94
	Middle	5 550.00	-2.88	1.48	-1.40	11.00	12.40
	High	5 670.00	-3.28	1.48	-1.80	11.00	12.80
5 725 ~ 5 850	Low	5 755.00	-6.84	1.48	-5.36	30.00	35.36
	High	5 795.00	-6.70	1.48	-5.22	30.00	35.22

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.6.3.2 Test data for Antenna 2

- Operating condition : Highest Output Power Transmitting Mode
- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	-4.86	1.48	-3.38	11.00	14.38
	High	5 230.00	-3.58	1.48	-2.10	11.00	13.1
5 250 ~ 5 350	Low	5 270.00	-3.98	1.48	-2.50	11.00	13.50
	High	5 310.00	-2.22	1.48	-0.74	11.00	11.74
5 470 ~ 5 725	Low	5 510.00	-4.30	1.48	-2.82	11.00	13.82
	Middle	5 550.00	-3.70	1.48	-2.22	11.00	13.22
	High	5 670.00	-4.39	1.48	-2.91	11.00	13.91
5 725 ~ 5 850	Low	5 755.00	-7.42	1.48	-5.94	30.00	35.94
	High	5 795.00	-8.42	1.48	-6.94	30.00	36.94

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.6.3.3 Test data for Antenna 1 + Antenna 2

- Operating condition : Highest Output Power Transmitting Mode
- Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 190.00	0.09	11.00	10.91
	High	5 230.00	1.34	11.00	9.66
5 250 ~ 5 350	Low	5 270.00	0.84	11.00	10.16
	High	5 310.00	2.55	11.00	8.45
5 470 ~ 5 725	Low	5 510.00	0.65	11.00	10.35
	Middle	5 550.00	1.22	11.00	9.78
	High	5 670.00	0.69	11.00	10.31
5 725 ~ 5 850	Low	5 755.00	-2.63	30.00	32.63
	High	5 795.00	-2.99	30.00	32.99

#### 10.6.4 Test data for Staddle Channel\_Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	DUTY FACTOR (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-0.32	1.48	1.16	11.00	9.84
5 725 ~ 5 850	5 710.00	-4.42	1.48	-2.94	30.00	32.94

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.6.5 Test data for Staddle Channel\_Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	DUTY FACTOR (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-1.76	1.48	-0.28	11.00	11.28
5 725 ~ 5 850	5 710.00	-5.61	1.48	-4.13	30.00	34.13

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.6.6 Test data for Staddle Channel\_Multiple Transmit

#### 10.6.6.1 Test data for Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	DUTY FACTOR (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-3.28	1.48	-1.80	11.00	12.80
5 725 ~ 5 850	5 710.00	-7.26	1.48	-5.78	30.00	35.78

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.6.6.2 Test data for Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	MEASURED VALUE (dBm)	DUTY FACTOR (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	-4.40	1.48	-2.92	11.00	13.92
5 725 ~ 5 850	5 710.00	-8.71	1.48	-7.23	30.00	37.23

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.6.6.3 Test data for Antenna 1 + Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUENCY (MHz)	SUM VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 710.00	0.69	11.00	10.31
5 725 ~ 5 850	5 710.00	-3.43	30.00	33.43

## 10.7 Test data for 802.11ac\_HT80 RLAN Mode

### 10.7.1 Test data for Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-5.53	2.90	-2.63	11.00	13.63
5 250 ~ 5 350	Low	5 290.00	-6.10	2.90	-3.20	11.00	14.20
5 470 ~ 5 725	Low	5 530.00	-5.94	2.90	-3.04	11.00	14.04
5 725 ~ 5 850	Low	5 775.00	-8.78	2.90	-5.88	30.00	35.88

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.7.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-7.09	2.90	-4.19	11.00	15.19
5 250 ~ 5 350	Low	5 290.00	-7.54	2.90	-4.64	11.00	15.64
5 470 ~ 5 725	Low	5 530.00	-6.94	2.90	-4.04	11.00	15.04
5 725 ~ 5 850	Low	5 775.00	-9.99	2.90	-7.09	30.00	37.09

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

### 10.7.3 Test data for Multiple Transmit

#### 10.7.3.1 Test data for Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-8.61	2.90	-5.71	11.00	16.71
5 250 ~ 5 350	Low	5 290.00	-8.42	2.90	-5.52	11.00	16.52
5 470 ~ 5 725	Low	5 530.00	-8.39	2.90	-5.49	11.00	16.49
5 725 ~ 5 850	Low	5 775.00	-12.42	2.90	-9.52	30.00	39.52

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.7.3.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-9.50	2.90	-6.60	11.00	17.60
5 250 ~ 5 350	Low	5 290.00	-9.09	2.90	-6.19	11.00	17.19
5 470 ~ 5 725	Low	5 530.00	-9.51	2.90	-6.61	11.00	17.61
5 725 ~ 5 850	Low	5 775.00	-14.01	2.90	-11.11	30.00	41.11

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.7.3.3 Test data for Antenna 1 + Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	CHANNEL	FREQUENCY (MHz)	SUM Value (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 150 ~ 5 250	Low	5 210.00	-3.12	11.00	14.12
5 250 ~ 5 350	Low	5 290.00	-2.83	11.00	13.83
5 470 ~ 5 725	Low	5 530.00	-3.00	11.00	14.00
5 725 ~ 5 850	Low	5 775.00	-7.23	30.00	37.23

#### 10.7.4 Test data for Staddle Channel\_Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUEN CY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-6.08	2.90	-3.18	11.00	14.18
5 725 ~ 5 850	5 690.00	-10.90	2.90	-8.00	30.00	38.00

Remark: Peak Power Spectrul Density = Reading Value + Duty Cycle Factor

#### 10.7.5 Test data for Staddle Channel\_Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUEN CY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-8.02	2.90	-5.12	11.00	16.12
5 725 ~ 5 850	5 690.00	-12.78	2.90	-9.88	30.00	39.88

Remark: Peak Power Spectrul Density = Reading Value + Duty Cycle Factor

### 10.7.6 Test data for Staddle Channel\_Multiple Transmit

#### 10.7.6.1 Test data for Antenna 1

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUEN CY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-8.68	2.90	-5.78	11.00	16.78
5 725 ~ 5 850	5 690.00	-12.94	2.90	-10.04	30.00	40.04

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.7.6.2 Test data for Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUEN CY (MHz)	MEASURED VALUE (dBm)	Duty Factor (dB)	Result VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-10.45	2.90	-7.55	11.00	18.55
5 725 ~ 5 850	5 690.00	-15.76	2.90	-12.86	30.00	42.86

Remark: Peak Power Spectral Density = Reading Value + Duty Cycle Factor

#### 10.7.6.3 Test data for Antenna 1 + Antenna 2

- . Operating condition : Highest Output Power Transmitting Mode
- . Test Result : Pass

FREQUENCY RANGE (MHz)	FREQUEN CY (MHz)	SUM VALUE (dBm)	LIMIT (dBm / MHz)	MARGIN (dB)
5 470 ~ 5 725	5 690.00	-3.57	11.00	14.57
5 725 ~ 5 850	5 690.00	-8.21	30.00	38.21

## 11. FREQUENCY STABILITY WITH TEMPERATURE VARIATION

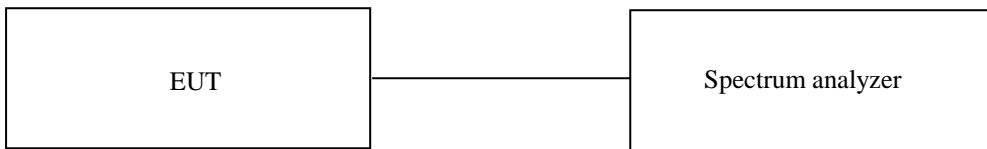
### 11.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

### 11.2 Test set-up

Turn EUT off and set chamber temperature to -5 °C and then allow sufficient time (approximately 20 min to 30 min after chamber reach the assigned temperature) for EUT to stabilize. Turn on the EUT and measure the EUT operating frequency and then turn off the EUT after the measurement. The temperature in the chamber was raised 10 °C step from -5 °C to +45 °C. Repeat above method for frequency measurements every 10 °C step and then record all measured frequencies on each temperature step.



### 11.3 Test Date

September 26, 2022 ~ October 21, 2022

### 11.4 Test Data for U-NII-1

- . Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-5	5 180 000 000	5 180 003 147	3 147
5		5 180 000 663	663
15		5 179 991 941	-8 059
25		5 179 980 056	-19 944
35		5 179 973 631	-26 369
45		5 179 958 857	-41 143
-5	5 220 000 000	5 220 002 897	2 897
5		5 220 000 286	286
15		5 219 991 696	-8 304
25		5 219 979 646	-20 354
35		5 219 972 953	-27 047
45		5 219 958 367	-41 633
-5	5 240 000 000	5 240 003 047	3 047
5		5 239 999 848	-152
15		5 239 990 968	-9 032
25		5 239 979 456	-20 544
35		5 239 972 062	-27 938
45		5 239 958 613	-41 387

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.  
Four measurements in total are made.(ANSI C63.10-2013)

### 11.5 Test Data for U-NII-2A

- . Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-5	5 260 000 000	5 260 002 647	2 647
5		5 259 999 741	-259
15		5 259 991 083	-8 917
25		5 259 979 318	-20 682
35		5 259 970 304	-29 696
45		5 259 956 131	-43 869
-5	5 300 000 000	5 300 002 904	2 904
5		5 299 999 756	-244
15		5 299 990 201	-9 799
25		5 299 978 083	-21 917
35		5 299 969 576	-30 424
45		5 299 955 568	-44 432
-5	5 320 000 000	5 320 003 029	3 029
5		5 319 999 701	-299
15		5 319 989 898	-10 102
25		5 319 977 441	-22 559
35		5 319 969 271	-30 729
45		5 319 955 371	-44 629

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.  
Four measurements in total are made.(ANSI C63.10-2013)

## 11.6 Test Data for U-NII-2C

- Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-5	5 500 000 000	5 500 003 209	3 209
5		5 499 999 783	-217
15		5 499 989 456	-10 544
25		5 499 976 483	-23 517
35		5 499 968 183	-31 817
45		5 499 953 853	-46 147
-5	5 580 000 000	5 580 003 194	3 194
5		5 579 999 516	-484
15		5 579 989 393	-10 607
25		5 579 976 161	-23 839
35		5 579 967 686	-32 314
45		5 579 953 068	-46 932
-5	5 700 000 000	5 700 003 309	3 309
5		5 699 999 376	-624
15		5 699 989 128	-10 872
25		5 699 975 586	-24 414
35		5 699 966 975	-33 025
45		5 699 952 076	-47 924

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the

operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.

Four measurements in total are made.(ANSI C63.10-2013)

### 11.7 Test Data for U-NII-3

- Result : Pass

Temperature (°C)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
-5	5 745 000 000	5 745 003 264	3 264
5		5 744 999 568	-432
15		5 744 988 991	-11 009
25		5 744 975 269	-24 731
35		5 744 966 626	-33 374
45		5 744 951 659	-48 341
-5	5 785 000 000	5 785 003 229	3 229
5		5 784 999 636	-364
15		5 784 988 743	-11 257
25		5 784 975 155	-24 845
35		5 784 966 414	-33 586
45		5 784 951 220	-48 780
-5	5 825 000 000	5 825 003 396	3 396
5		5 824 999 713	-287
15		5 824 988 886	-11 114
25		5 824 974 999	-25 001
35		5 824 966 162	-33 838
45		5 824 950 902	-49 098

Note : While maintaining a constant temperature inside the environmental chamber, turn the EUT ON and record the operating frequency at startup, and at 2 minutes, 5 minutes, and 10 minutes after the EUT is energized.  
Four measurements in total are made.(ANSI C63.10-2013)

## 12. FREQUENCY STABILITY WITH VOLTAGE VARIATION

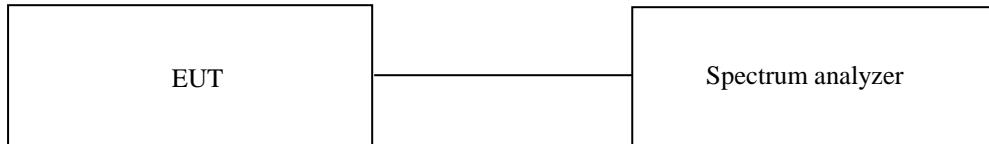
### 12.1 Operating environment

Temperature : 23 °C

Relative humidity : 45 % R.H.

### 12.2 Test set-up

An external DC power supply was connected to the input of the EUT. The voltage of EUT set to 115.0 % of the nominal value and then was reduced to 85.0 % of nominal voltage. The output frequency was recorded at each step.



### 12.3 Test Date

September 26, 2022 ~ October 21, 2022

## 12.4 Test Data for U-NII-1

- Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
12.0	5 180 000 000	5 179 976 720	-23 280
10.2		5 179 975 655	-24 345
13.8		5 179 977 530	-22 470
12.0	5 220 000 000	5 219 977 420	-22 580
10.2		5 219 976 635	-23 365
13.8		5 219 978 843	-21 157
12.0	5 240 000 000	5 239 977 623	-22 377
10.2		5 239 977 105	-22 895
13.8		5 239 978 476	-21 524

## 12.5 Test Data for U-NII-2A

- Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
12.0	5 260 000 000	5 259 976 623	-23 377
10.2		5 259 975 940	-24 060
13.8		5 259 977 746	-22 254
12.0	5 300 000 000	5 299 977 273	-22 727
10.2		5 299 977 056	-22 944
13.8		5 299 979 054	-20 946
12.0	5 320 000 000	5 319 977 522	-22 478
10.2		5 319 976 420	-23 580
13.8		5 319 977 961	-22 039

## 12.6 Test Data for U-NII-2C

- Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
12.0	5 500 000 000	5 499 976 424	-23 576
10.2		5 499 974 395	-25 605
13.8		5 499 977 967	-22 033
12.0	5 580 000 000	5 579 977 023	-22 977
10.2		5 579 976 040	-23 960
13.8		5 579 978 405	-21 595
12.0	5 700 000 000	5 699 976 174	-23 826
10.2		5 699 974 290	-25 710
13.8		5 699 978 040	-21 960

## 12.7 Test Data for U-NII-3

- Result : Pass

Voltage (VDC)	Carrier Freq. (Hz)	Measured Freq. (Hz)	Frequency Error (Hz)
12.0	5 745 000 000	5 744 975 774	-24 226
10.2		5 744 975 542	-24 458
13.8		5 744 976 004	-23 996
12.0	5 785 000 000	5 784 976 623	-23 377
10.2		5 784 975 843	-24 157
13.8		5 784 977 001	-22 999
12.0	5 825 000 000	5 824 976 573	-23 427
10.2		5 824 976 630	-23 370
13.8		5 824 977 690	-22 310

## 13. RADIATED SPURIOUS EMISSIONS

### 13.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

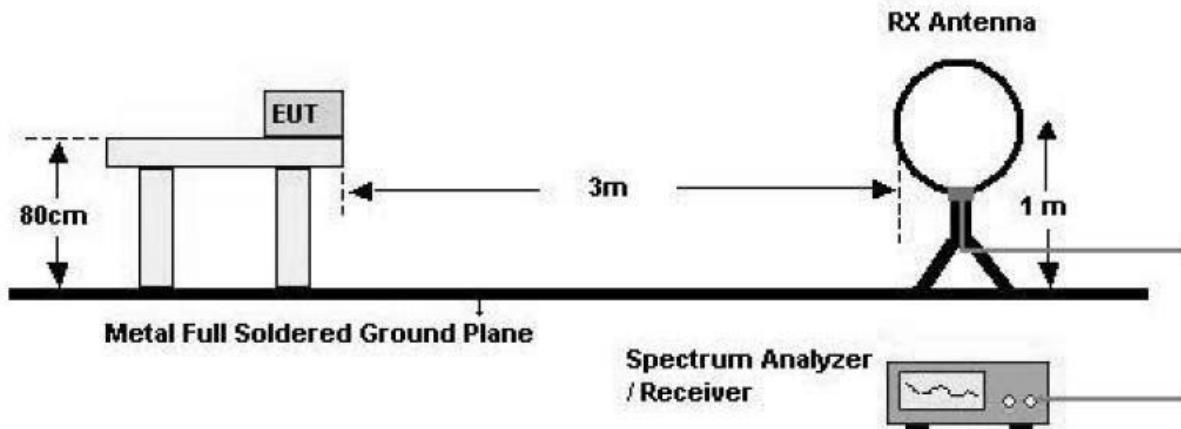
### 13.2 Test set-up for radiated measurement

The radiated emissions measurements were on the 3 m semi anechoic chamber. The EUT and other support equipment were placed on a non-conductive turntable above the ground plane. The interconnecting cables from outside test site were inserted into ferrite clamps at the point where the cables reach the turntable.

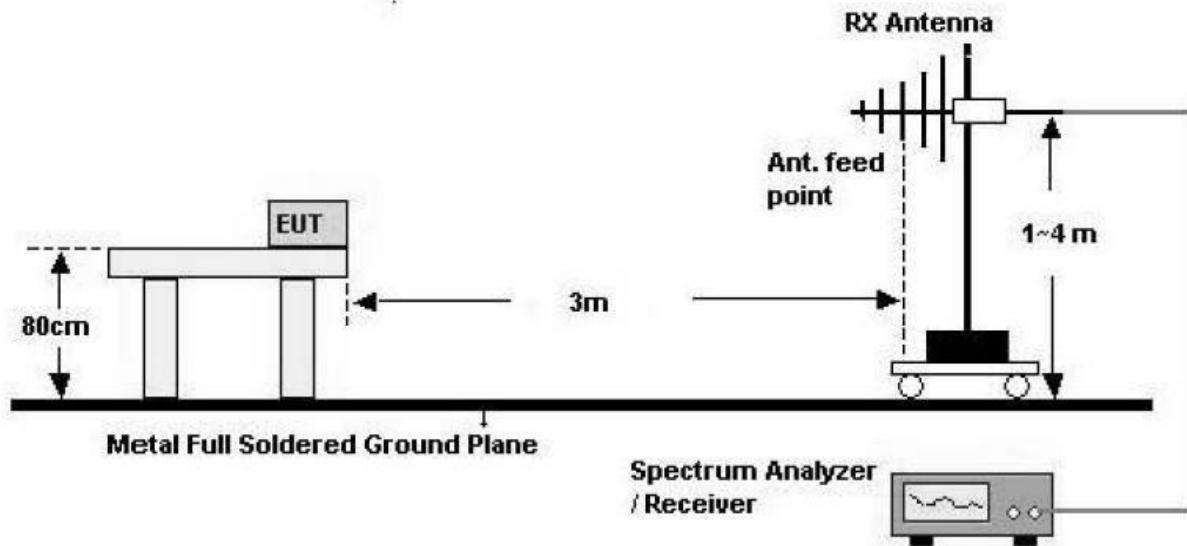
The frequency spectrum from 30 MHz to 40 GHz was scanned and maximum emission levels at each frequency recorded. The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

#### - Test Configuration

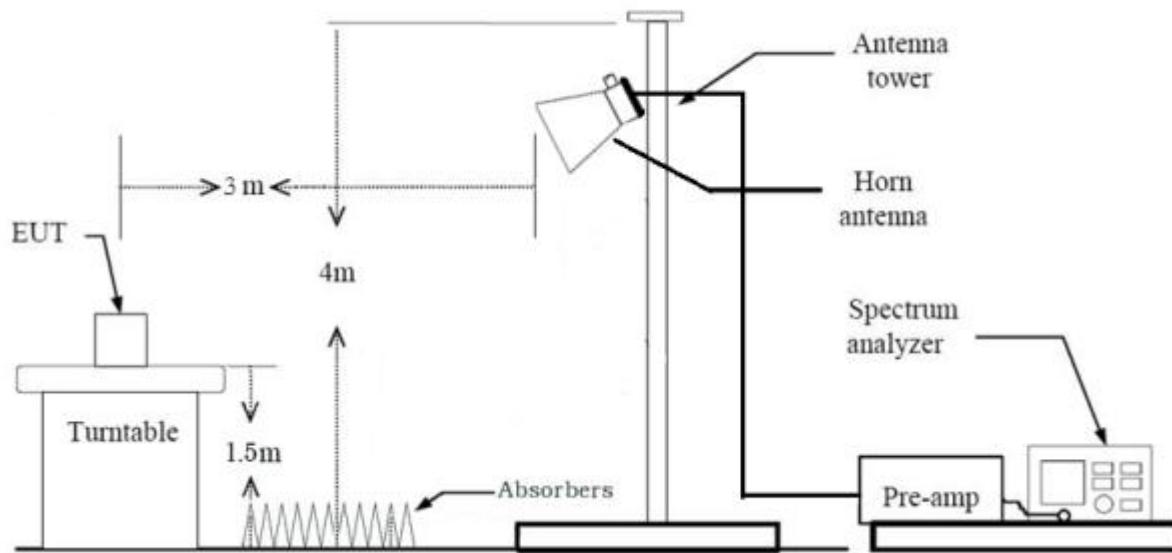
##### 1. Below 30 MHz



## 2. 30 MHz - 1 GHz



## 3. Above 1 GHz

**13.3 Test Date**

September 26, 2022 ~ October 21, 2022

**13.4 Test data for Below 30 MHz**

- . Resolution bandwidth : 200 Hz (from 9 kHz to 0.15 MHz), 9 kHz (from 0.15 MHz to 30 MHz)
- . Frequency range : 9 kHz ~ 30 MHz
- . Measurement distance : 3 m
- . Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Ant. Pol. (H/V)	Ant. Height (m)	Angle (°)	Ant. Factor (dB/m)	Cable Loss	Emission Level(dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
Emission from the EUT more than 20 dB below the limit in each frequency range.									

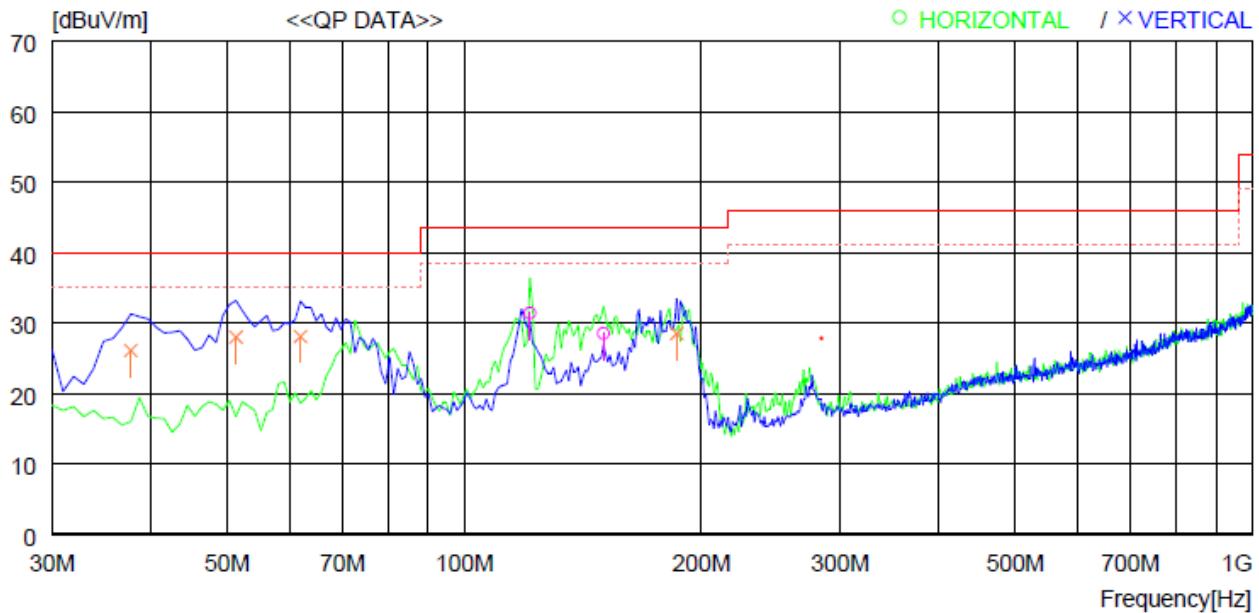
## 13.5 Test data for 30 MHz ~ 1 000 MHz

### 13.5.1 Test data for WLAN 5 GHz

Humidity Level : 52 % R.H. Temperature: 24 °C  
 Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247  
 Result : PASSED

EUT : Network Webcam  
 Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)  
 -. Antenna 1, Antenna 2 and Multiple transmit tested, but the worst data were recorded.

LIMIT : FCC Part15 Subpart.B Class B (3m)  
 MARGIN: 5 dB

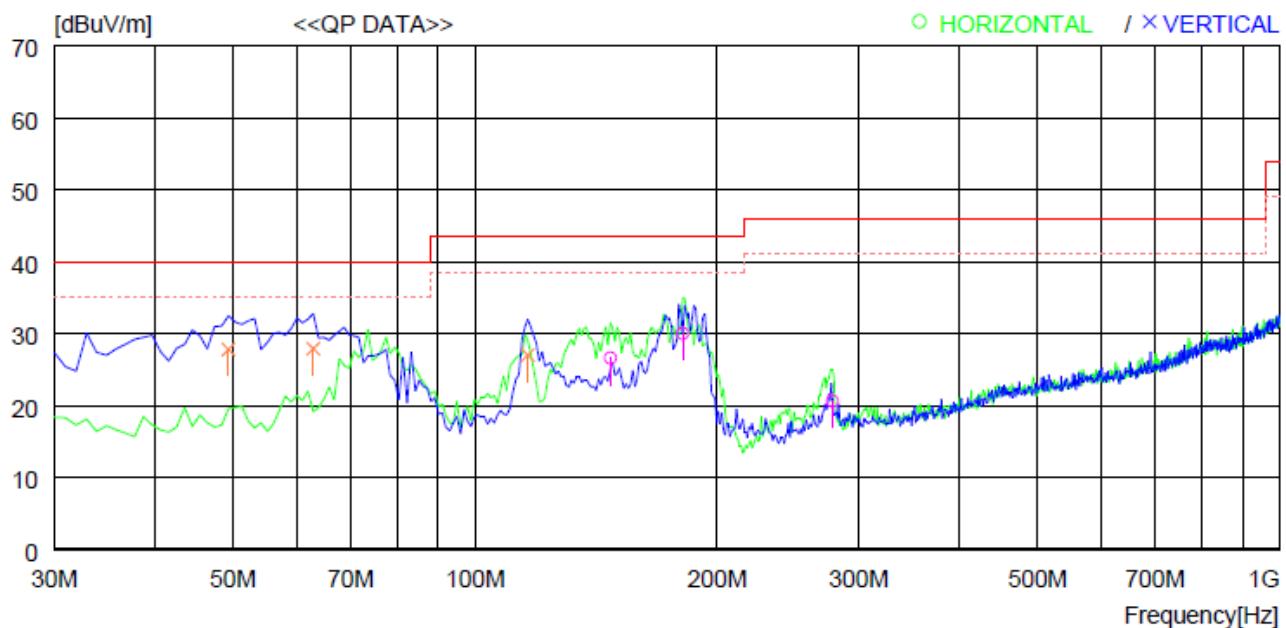


No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
<hr/>										
----- Horizontal -----										
1	121.180	43.5	18.8	2.1	33.0	31.4	43.5	12.1	100	359
2	150.280	40.6	18.6	2.3	33.0	28.5	43.5	15.0	200	0
<hr/>										
----- Vertical -----										
3	37.760	39.8	18.2	1.2	33.1	26.1	40.0	13.9	100	0
4	51.340	47.1	12.8	1.2	33.1	28.0	40.0	12.0	100	102
5	62.010	47.3	12.5	1.4	33.1	28.1	40.0	11.9	100	276
6	186.170	42.6	16.3	2.6	33.0	28.5	43.5	15.0	100	276

**13.5.2 Test data for Intermodulation Mode(WLAN 5 GHz + Bluetooth)**Humidity Level : 52 % R.H. Temperature: 24 °CLimits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247Result : PASSED

EUT : Network Webcam

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

LIMIT : FCC Part15 Subpart.B Class B (3m)  
MARGIN: 5 dB

No.	FREQ	READING	ANT	LOSS	GAIN	RESULT	LIMIT	MARGIN	ANTENNA	TABLE
	QP		FACTOR				[dBuV/m]	[dBuV/m]	[cm]	[DEG]
----- Horizontal -----										
1	147.370	38.5	18.8	2.3	33.0	26.6	43.5	16.9	300	231
2	181.320	43.8	16.7	2.5	33.0	30.0	43.5	13.5	200	282
3	278.320	31.4	18.9	3.2	32.9	20.6	46.0	25.4	100	359
----- Vertical -----										
4	49.400	46.3	13.4	1.2	33.1	27.8	40.0	12.2	100	0
5	62.980	46.9	12.6	1.5	33.1	27.9	40.0	12.1	100	99
6	116.330	39.7	18.2	2.1	33.0	27.0	43.5	16.5	100	115

### 13.5.3 Test data for Intermodulation Mode(WLAN 5 GHz + WLAN 2.4 GHz)

Humidity Level : 52 % R.H. Temperature: 24 °C

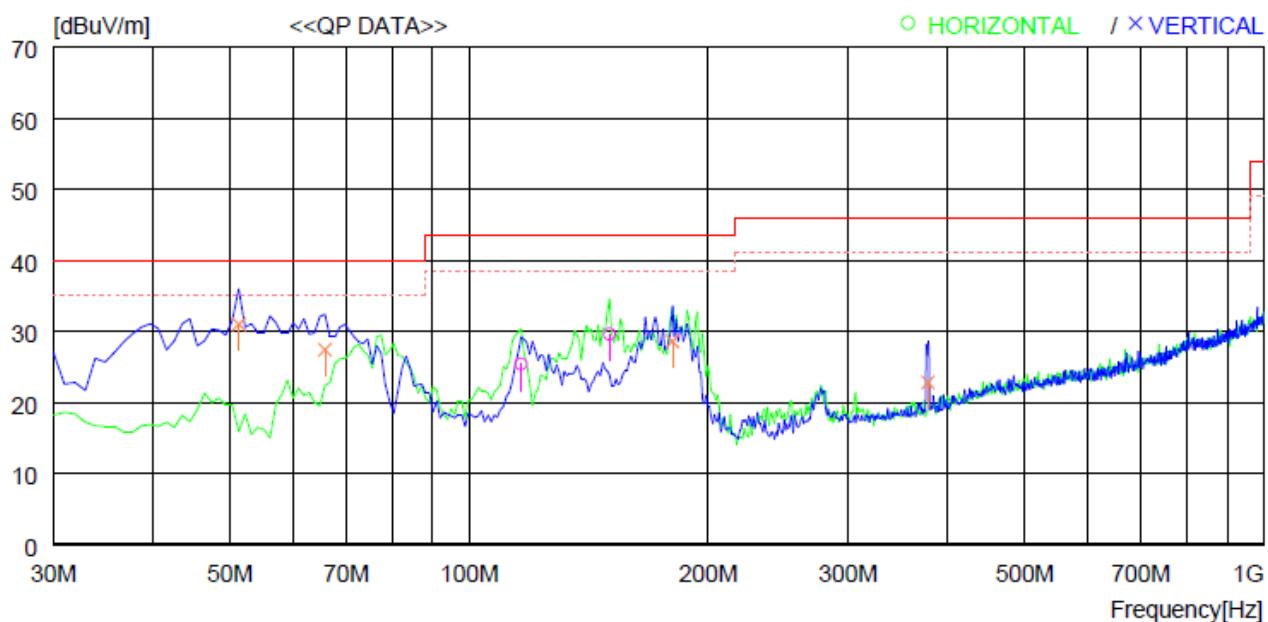
Limits apply to : FCC CFR 47, PART 15, SUBPART C, SECTION 15.247

Result : PASSED

EUT : Network Webcam

Detector : CISPR Quasi-Peak (6 dB Bandwidth: 120 kHz)

LIMIT : FCC Part15 Subpart.B Class B (3m)  
MARGIN: 5 dB



No.	FREQ [MHz]	READING QP [dBuV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBuV/m]	LIMIT [dBuV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
<hr/>										
1	116.330	38.1	18.2	2.1	33.0	25.4	43.5	18.1	400	0
2	150.280	41.7	18.6	2.3	33.0	29.6	43.5	13.9	200	0
<hr/>										
----- Vertical -----										
3	51.340	50.1	12.8	1.2	33.1	31.0	40.0	9.0	100	173
4	65.890	46.2	12.8	1.5	33.1	27.4	40.0	12.6	200	359
5	180.350	42.3	16.8	2.5	33.0	28.6	43.5	14.9	100	0
6	378.230	31.2	20.8	3.8	33.0	22.8	46.0	23.2	400	40

## 13.6 Test data for Above 1 GHz

### 13.6.1 Test data for Frequency UNII I

#### 13.6.1.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
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#### Antenna 1

10 360.00	49.38	Peak	H	39.32	16.70	45.33	-	60.07	68.20	8.13
10 360.00	50.26	Peak	V	39.32	16.70	45.33	-	60.95	68.20	7.25
10 440.00	49.52	Peak	H	39.40	16.70	45.32	-	60.30	68.20	7.90
10 440.00	49.13	Peak	V	39.40	16.70	45.32	-	59.91	68.20	8.29
10 480.00	48.97	Peak	H	39.48	16.70	45.30	-	59.85	68.20	8.35
10 480.00	49.28	Peak	V	39.48	16.70	45.30	-	60.16	68.20	8.04

#### Antenna 2

10 360.00	49.29	Peak	H	39.34	16.70	45.33	-	60.00	68.20	8.20
10 360.00	49.22	Peak	V	39.34	16.70	45.33	-	59.93	68.20	8.27
10 440.00	49.25	Peak	H	39.40	16.70	45.32	-	60.03	68.20	8.17
10 440.00	48.78	Peak	V	39.40	16.70	45.32	-	59.56	68.20	8.64
10 480.00	48.63	Peak	H	39.48	16.70	45.30	-	59.51	68.20	8.69
10 480.00	49.48	Peak	V	39.48	16.70	45.30	-	60.36	68.20	7.84

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 360.00	49.61	Peak	H	39.32	16.70	45.33	-	60.30	68.20	7.90
10 360.00	49.06	Peak	V	39.32	16.70	45.33	-	59.75	68.20	8.45
10 440.00	50.66	Peak	H	39.40	16.70	45.32	-	61.44	68.20	6.76
10 440.00	48.67	Peak	V	39.40	16.70	45.32	-	59.45	68.20	8.75
10 480.00	48.63	Peak	H	39.48	16.70	45.30	-	59.51	68.20	8.69
10 480.00	48.42	Peak	V	39.48	16.70	45.30	-	59.30	68.20	8.90
<b>Antenna 2</b>										
10 360.00	49.20	Peak	H	39.32	16.70	45.33	-	59.89	68.20	8.31
10 360.00	49.64	Peak	V	39.32	16.70	45.33	-	60.33	68.20	7.87
10 440.00	48.80	Peak	H	39.40	16.70	45.32	-	59.58	68.20	8.62
10 440.00	49.07	Peak	V	39.40	16.70	45.32	-	59.85	68.20	8.35
10 480.00	48.27	Peak	H	39.48	16.70	45.30	-	59.15	68.20	9.05
10 480.00	48.77	Peak	V	39.48	16.70	45.30	-	59.65	68.20	8.55
<b>Multiple Transmit</b>										
10 360.00	50.07	Peak	H	39.32	16.70	45.33	-	60.76	68.20	7.44
10 360.00	50.09	Peak	V	39.32	16.70	45.33	-	60.78	68.20	7.42
10 440.00	49.62	Peak	H	39.40	16.70	45.32	-	60.40	68.20	7.80
10 440.00	49.85	Peak	V	39.40	16.70	45.32	-	60.63	68.20	7.57
10 480.00	49.61	Peak	H	39.48	16.70	45.30	-	60.49	68.20	7.71
10 480.00	49.15	Peak	V	39.48	16.70	45.30	-	60.03	68.20	8.17

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 380.00	49.44	Peak	H	39.32	16.70	45.33	-	60.13	68.20	8.07
10 380.00	48.94	Peak	V	39.32	16.70	45.33	-	59.63	68.20	8.57
10 460.00	49.07	Peak	H	39.40	16.70	45.32	-	59.85	68.20	8.35
10 460.00	48.82	Peak	V	39.40	16.70	45.32	-	59.60	68.20	8.60
<b>Antenna 2</b>										
10 380.00	49.72	Peak	H	39.32	16.70	45.33	-	60.41	68.20	7.79
10 380.00	48.97	Peak	V	39.32	16.70	45.33	-	59.66	68.20	8.54
10 460.00	49.70	Peak	H	39.40	16.70	45.32	-	60.48	68.20	7.72
10 460.00	49.00	Peak	V	39.40	16.70	45.32	-	59.78	68.20	8.42
<b>Multiple Transmit</b>										
10 380.00	50.07	Peak	H	39.32	16.70	45.33	-	60.76	68.20	7.44
10 380.00	50.20	Peak	V	39.32	16.70	45.33	-	60.89	68.20	7.31
10 460.00	49.94	Peak	H	39.40	16.70	45.32	-	60.72	68.20	7.48
10 460.00	49.42	Peak	V	39.40	16.70	45.32	-	60.20	68.20	8.00

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 420.00	48.14	Peak	H	39.40	16.70	45.32	-	58.92	68.20	9.28
10 420.00	48.90	Peak	V	39.40	16.70	45.32	-	59.68	68.20	8.52
<b>Antenna 2</b>										
10 420.00	48.57	Peak	H	39.40	16.70	45.32	-	59.35	68.20	8.85
10 420.00	48.59	Peak	V	39.40	16.70	45.32	-	59.37	68.20	8.83
<b>Multiple Transmit</b>										
10 420.00	49.08	Peak	H	39.40	16.70	45.32	-	59.86	68.20	8.34
10 420.00	49.44	Peak	V	39.40	16.70	45.32	-	60.22	68.20	7.98

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.2 Test data for Frequency UNII 2A

#### 13.6.2.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 520.00	48.53	Peak	H	39.50	16.70	45.30	-	59.43	68.20	8.77
10 520.00	49.27	Peak	V	39.50	16.70	45.30	-	60.17	68.20	8.03
10 600.00	48.32	Peak	H	39.50	16.70	45.30	-	59.22	74.00	14.78
10 600.00	36.27	Average	H	39.50	16.70	45.30	0.11	47.28	54.00	6.72
10 600.00	49.05	Peak	V	39.50	16.70	45.30	-	59.95	74.00	14.05
10 600.00	36.87	Average	V	39.50	16.70	45.30	0.11	47.88	54.00	6.12
10 640.00	48.03	Peak	H	39.50	16.70	45.30	-	58.93	74.00	15.07
10 640.00	36.09	Average	H	39.50	16.70	45.30	0.11	47.10	54.00	6.90
10 640.00	48.94	Peak	V	39.50	16.70	45.30	-	59.84	74.00	14.16
10 640.00	36.87	Average	V	39.50	16.70	45.30	0.11	47.88	54.00	6.12

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>										
10 520.00	48.50	Peak	H	39.50	16.70	45.30	-	59.40	68.20	8.80
10 520.00	48.71	Peak	V	39.50	16.70	45.30	-	59.61	68.20	8.59
10 600.00	49.11	Peak	H	39.50	16.70	45.30		60.01	74.00	13.99
10 600.00	36.85	Average	H	39.50	16.70	45.30	0.11	47.86	54.00	6.14
10 600.00	49.08	Peak	V	39.50	16.70	45.30		59.98	74.00	14.02
10 600.00	36.78	Average	V	39.50	16.70	45.30	0.11	47.79	54.00	6.21
10 640.00	48.73	Peak	H	39.50	16.70	45.30	-	59.63	74.00	14.37
10 640.00	36.58	Average	H	39.50	16.70	45.30	0.11	47.59	54.00	6.41
10 640.00	48.41	Peak	V	39.50	16.70	45.30	-	59.31	74.00	14.69
10 640.00	36.63	Average	V	39.50	16.70	45.30	0.11	47.64	54.00	6.36

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 520.00	48.55	Peak	H	39.50	16.70	45.30	-	59.45	68.20	8.75
10 520.00	49.10	Peak	V	39.49	16.70	45.30	-	59.99	68.20	8.21
10 600.00	49.37	Peak	H	39.50	16.70	45.30	-	60.27	74.00	13.73
10 600.00	37.24	Average	H	39.50	16.70	45.30	0.78	48.92	54.00	5.08
10 600.00	48.99	Peak	V	39.50	16.70	45.30	-	59.89	74.00	14.11
10 600.00	36.93	Average	V	39.50	16.70	45.30	0.78	48.61	54.00	5.39
10 640.00	50.67	Peak	H	39.50	16.70	45.30	-	61.57	74.00	12.43
10 640.00	38.01	Average	H	39.50	16.70	45.30	0.78	49.69	54.00	4.31
10 640.00	48.97	Peak	V	39.50	16.70	45.30	-	59.87	74.00	14.13
10 640.00	36.73	Average	V	39.50	16.70	45.30	0.78	48.41	54.00	5.59
<b>Antenna 2</b>										
10 520.00	48.70	Peak	H	39.50	16.70	45.30	-	59.60	68.20	8.60
10 520.00	48.31	Peak	V	39.50	16.70	45.30	-	59.21	68.20	8.99
10 600.00	48.46	Peak	H	39.50	16.70	45.30	-	59.36	74.00	14.64
10 600.00	36.79	Average	H	39.50	16.70	45.30	0.78	48.47	54.00	5.53
10 600.00	49.09	Peak	V	39.50	16.70	45.30	-	59.99	74.00	14.01
10 600.00	36.91	Average	V	39.50	16.70	45.30	0.78	48.59	54.00	5.41
10 640.00	49.07	Peak	H	39.50	16.70	45.30	-	59.97	74.00	14.03
10 640.00	36.71	Average	H	39.50	16.70	45.30	0.78	48.39	54.00	5.61
10 640.00	48.92	Peak	V	39.50	16.70	45.30	-	59.82	74.00	14.18
10 640.00	36.60	Average	V	39.50	16.70	45.30	0.78	48.28	54.00	5.72

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>										
10 520.00	51.44	Peak	H	39.50	16.70	45.30	-	62.34	68.20	5.86
10 520.00	49.66	Peak	V	39.50	16.70	45.30	-	60.56	68.20	7.64
10 600.00	49.52	Peak	H	39.50	16.70	45.30	-	60.42	74.00	13.58
10 600.00	37.87	Average	H	39.50	16.70	45.30	0.78	49.55	54.00	4.45
10 600.00	50.26	Peak	V	39.50	16.70	45.30	-	61.16	74.00	12.84
10 600.00	37.89	Average	V	39.50	16.70	45.30	0.78	49.57	54.00	4.43
10 640.00	50.53	Peak	H	39.50	16.70	45.30	-	61.43	74.00	12.57
10 640.00	38.42	Average	H	39.50	16.70	45.30	0.78	50.10	54.00	3.90
10 640.00	50.04	Peak	V	39.50	16.70	45.30	-	60.94	74.00	13.06
10 640.00	37.68	Average	V	39.50	16.70	45.30	0.78	49.36	54.00	4.64

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 540.00	49.31	Peak	H	39.50	16.70	45.30	-	60.21	68.20	7.99
10 540.00	49.51	Peak	V	39.50	16.70	45.30	-	60.41	68.20	7.79
10 620.00	50.22	Peak	H	39.50	16.70	45.30	-	61.12	74.00	12.88
10 620.00	37.59	Average	H	39.50	16.70	45.30	1.48	49.97	54.00	4.03
10 620.00	49.96	Peak	V	39.50	16.70	45.30	-	60.86	74.00	13.14
10 620.00	37.54	Average	V	39.50	16.70	45.30	1.48	49.92	54.00	4.08
<b>Antenna 2</b>										
10 540.00	49.25	Peak	H	39.50	16.70	45.30	-	60.15	68.20	8.05
10 540.00	49.04	Peak	V	39.50	16.70	45.30	-	59.94	68.20	8.26
10 620.00	49.60	Peak	H	39.50	16.70	45.30	-	60.50	74.00	13.50
10 620.00	37.46	Average	H	39.50	16.70	45.30	1.48	49.84	54.00	4.16
10 620.00	49.47	Peak	V	39.50	16.70	45.30	-	60.37	74.00	13.63
10 620.00	37.35	Average	V	39.50	16.70	45.30	1.48	49.73	54.00	4.27

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>										
10 540.00	49.98	Peak	H	39.50	16.70	45.30	-	60.88	68.20	7.32
10 540.00	49.92	Peak	V	39.50	16.70	45.30	-	60.82	68.20	7.38
10 620.00	50.42	Peak	H	39.50	16.70	45.30	-	61.32	74.00	12.68
10 620.00	37.89	Average	H	39.50	16.70	45.30	1.48	50.27	54.00	3.73
10 620.00	49.88	Peak	V	39.50	16.70	45.30	-	60.78	74.00	13.22
10 620.00	37.84	Average	V	39.50	16.70	45.30	1.48	50.22	54.00	3.78

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
10 580.00	47.92	Peak	H	39.50	16.70	45.30	-	58.82	68.20	9.38
10 580.00	47.97	Peak	V	39.50	16.70	45.30	-	58.87	68.20	9.33
<b>Antenna 2</b>										
10 580.00	48.15	Peak	H	39.50	16.70	45.30	-	59.05	68.20	9.15
10 580.00	48.35	Peak	V	39.50	16.70	45.30	-	59.25	68.20	8.95
<b>Multiple Transmit</b>										
10 580.00	49.52	Peak	H	39.50	16.70	45.30	-	60.42	68.20	7.78
10 580.00	49.58	Peak	V	39.50	16.70	45.30	-	60.48	68.20	7.72

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.3 Test data for Frequency UNII 2C

#### 13.6.3.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 000.000	50.36	Peak	H	39.30	17.48	45.30	-	61.84	74.00	12.16
11 000.000	38.94	Average	H	39.30	17.48	45.30	0.11	50.53	54.00	3.47
11 000.000	49.74	Peak	V	39.30	17.48	45.30	-	61.22	74.00	12.78
11 000.000	37.66	Average	V	39.30	17.48	45.30	0.11	49.25	54.00	4.75
11 160.000	51.06	Peak	H	39.30	17.48	45.30	-	62.54	74.00	11.46
11 160.000	39.57	Average	H	39.30	17.48	45.30	0.11	51.16	54.00	2.84
11 160.000	50.18	Peak	V	39.30	17.48	45.30	-	61.66	74.00	12.34
11 160.000	37.61	Average	V	39.30	17.48	45.30	0.11	49.20	54.00	4.80
11 400.000	50.18	Peak	H	39.30	17.48	45.30	-	61.66	74.00	12.34
11 400.000	37.83	Average	H	39.30	17.48	45.30	0.11	49.42	54.00	4.58
11 400.000	49.02	Peak	V	39.30	17.48	45.30	-	60.50	74.00	13.50
11 400.000	37.15	Average	V	39.30	17.48	45.30	0.11	48.74	54.00	5.26

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>										
11 000.000	49.83	Peak	H	39.30	17.48	45.30		61.31	74.00	12.69
11 000.000	37.26	Average	H	39.30	17.48	45.30	0.11	48.85	54.00	5.15
11 000.000	49.41	Peak	V	39.30	17.48	45.30		60.89	74.00	13.11
11 000.000	37.07	Average	V	39.30	17.48	45.30	0.11	48.66	54.00	5.34
11 160.000	49.38	Peak	H	39.30	17.48	45.30		60.86	74.00	13.14
11 160.000	37.46	Average	H	39.30	17.48	45.30	0.11	49.05	54.00	4.95
11 160.000	49.54	Peak	V	39.30	17.48	45.30		61.02	74.00	12.98
11 160.000	37.40	Average	V	39.30	17.48	45.30	0.11	48.99	54.00	5.01
11 400.000	48.99	Peak	H	39.30	17.48	45.30		60.47	74.00	13.53
11 400.000	37.17	Average	H	39.30	17.48	45.30	0.11	48.76	54.00	5.24
11 400.000	49.55	Peak	V	39.30	17.48	45.30		61.03	74.00	12.97
11 400.000	37.22	Average	V	39.30	17.48	45.30	0.11	48.81	54.00	5.19

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 000.00	50.84	Peak	H	39.30	17.48	45.30	-	62.32	74.00	11.68
11 000.00	38.43	Average	H	39.30	17.48	45.30	0.78	50.69	54.00	3.31
11 000.00	49.79	Peak	V	39.30	17.48	45.30	-	61.27	74.00	12.73
11 000.00	37.56	Average	V	39.30	17.48	45.30	0.78	49.82	54.00	4.18
11 160.00	52.69	Peak	H	39.30	17.48	45.30	-	64.17	74.00	9.83
11 160.00	39.33	Average	H	39.30	17.48	45.30	0.78	51.59	54.00	2.41
11 160.00	49.83	Peak	V	39.30	17.48	45.30	-	61.31	74.00	12.69
11 160.00	37.27	Average	V	39.30	17.48	45.30	0.78	49.53	54.00	4.47
11 400.00	50.00	Peak	H	39.30	17.48	45.30	-	61.48	74.00	12.52
11 400.00	38.08	Average	H	39.30	17.48	45.30	0.78	50.34	54.00	3.66
11 400.00	48.87	Peak	V	39.30	17.48	45.30	-	60.35	74.00	13.65
11 400.00	37.00	Average	V	39.30	17.48	45.30	0.78	49.26	54.00	4.74

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>										
11 000.00	49.09	Peak	H	39.30	17.48	45.30	-	60.57	74.00	13.43
11 000.00	37.01	Average	H	39.30	17.48	45.30	0.78	49.27	54.00	4.73
11 000.00	48.97	Peak	V	39.30	17.48	45.30	-	60.45	74.00	13.55
11 000.00	37.05	Average	V	39.30	17.48	45.30	0.78	49.31	54.00	4.69
11 160.00	49.62	Peak	H	39.30	17.48	45.30	-	61.10	74.00	12.90
11 160.00	37.42	Average	H	39.30	17.48	45.30	0.78	49.68	54.00	4.32
11 160.00	49.33	Peak	V	39.30	17.48	45.30	-	60.81	74.00	13.19
11 160.00	37.32	Average	V	39.30	17.48	45.30	0.78	49.58	54.00	4.42
11 400.00	49.41	Peak	H	39.30	17.48	45.30	-	60.89	74.00	13.11
11 400.00	36.95	Average	H	39.30	17.48	45.30	0.78	49.21	54.00	4.79
11 400.00	48.67	Peak	V	39.30	17.48	45.30	-	60.15	74.00	13.85
11 400.00	37.14	Average	V	39.30	17.48	45.30	0.78	49.40	54.00	4.60

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>										
11 000.00	51.73	Peak	H	39.30	17.48	45.30	-	63.21	74.00	10.79
11 000.00	39.24	Average	H	39.30	17.48	45.30	0.78	51.50	54.00	2.50
11 000.00	50.68	Peak	V	39.30	17.48	45.30	-	62.16	74.00	11.84
11 000.00	38.81	Average	V	39.30	17.48	45.30	0.78	51.07	54.00	2.93
11 160.00	52.96	Peak	H	39.20	17.48	45.30	-	64.34	74.00	9.66
11 160.00	39.98	Average	H	39.20	17.48	45.30	0.78	52.14	54.00	1.86
11 160.00	50.49	Peak	V	39.20	17.48	45.30	-	61.87	74.00	12.13
11 160.00	38.18	Average	V	39.20	17.48	45.30	0.78	50.34	54.00	3.66
11 400.00	50.86	Peak	H	39.30	17.48	45.30	-	62.34	74.00	11.66
11 400.00	38.53	Average	H	39.30	17.48	45.30	0.78	50.79	54.00	3.21
11 400.00	49.88	Peak	V	39.30	17.48	45.30	-	61.36	74.00	12.64
11 400.00	37.73	Average	V	39.30	17.48	45.30	0.78	49.99	54.00	4.01

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 020.00	49.80	Peak	H	39.30	17.48	45.30	-	61.28	74.00	12.72
11 020.00	37.14	Average	H	39.30	17.48	45.30	1.48	50.10	54.00	3.90
11 020.00	48.97	Peak	V	39.30	17.48	45.30	-	60.45	74.00	13.55
11 020.00	37.16	Average	V	39.30	17.48	45.30	1.48	50.12	54.00	3.88
11 100.00	50.02	Peak	H	39.30	17.48	45.30	-	61.50	74.00	12.50
11 100.00	37.95	Average	H	39.30	17.48	45.30	1.48	50.91	54.00	3.09
11 100.00	49.38	Peak	V	39.30	17.48	45.30	-	60.86	74.00	13.14
11 100.00	37.23	Average	V	39.30	17.48	45.30	1.48	50.19	54.00	3.81
11 340.00	49.14	Peak	H	39.30	17.48	45.30	-	60.62	74.00	13.38
11 340.00	37.72	Average	H	39.30	17.48	45.30	1.48	50.68	54.00	3.32
11 340.00	48.90	Peak	V	39.30	17.48	45.30	-	60.38	74.00	13.62
11 340.00	37.10	Average	V	39.30	17.48	45.30	1.48	50.06	54.00	3.94

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>										
11 020.00	48.95	Peak	H	39.30	17.48	45.30	-	60.43	74.00	13.57
11 020.00	37.20	Average	H	39.30	17.48	45.30	1.48	50.16	54.00	3.84
11 020.00	49.63	Peak	V	39.30	17.48	45.30	-	61.11	74.00	12.89
11 020.00	37.28	Average	V	39.30	17.48	45.30	1.48	50.24	54.00	3.76
11 100.00	49.19	Peak	H	39.30	17.48	45.30	-	60.67	74.00	13.33
11 100.00	37.20	Average	H	39.30	17.48	45.30	1.48	50.16	54.00	3.84
11 100.00	49.44	Peak	V	39.30	17.48	45.30	-	60.92	74.00	13.08
11 100.00	37.21	Average	V	39.30	17.48	45.30	1.48	50.17	54.00	3.83
11 340.00	49.00	Peak	H	39.30	17.48	45.30	-	60.48	74.00	13.52
11 340.00	36.95	Average	H	39.30	17.48	45.30	1.48	49.91	54.00	4.09
11 340.00	49.31	Peak	V	39.30	17.48	45.30	-	60.79	74.00	13.21
11 340.00	36.94	Average	V	39.30	17.48	45.30	1.48	49.90	54.00	4.10

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>										
11 020.00	50.56	Peak	H	39.30	17.48	45.30	-	62.04	74.00	11.96
11 020.00	39.10	Average	H	39.30	17.48	45.30	1.48	52.06	54.00	1.94
11 020.00	49.93	Peak	V	39.30	17.48	45.30	-	61.41	74.00	12.59
11 020.00	37.92	Average	V	39.30	17.48	45.30	1.48	50.88	54.00	3.12
11 100.00	50.72	Peak	H	39.30	17.48	45.30	-	62.20	74.00	11.80
11 100.00	38.92	Average	H	39.30	17.48	45.30	1.48	51.88	54.00	2.12
11 100.00	50.03	Peak	V	39.30	17.48	45.30	-	61.51	74.00	12.49
11 100.00	37.92	Average	V	39.30	17.48	45.30	1.48	50.88	54.00	3.12
11 340.00	50.13	Peak	H	39.30	17.48	45.30	-	61.61	74.00	12.39
11 340.00	38.31	Average	H	39.30	17.48	45.30	1.48	51.27	54.00	2.73
11 340.00	49.61	Peak	V	39.30	17.48	45.30	-	61.09	74.00	12.91
11 340.00	37.68	Average	V	39.30	17.48	45.30	1.48	50.64	54.00	3.36

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 060.00	49.23	Peak	H	39.30	17.48	45.30	-	60.71	74.00	13.29
11 060.00	37.40	Average	H	39.30	17.48	45.30	2.90	51.78	54.00	2.22
11 060.00	48.62	Peak	V	39.30	17.48	45.30	-	60.10	74.00	13.90
11 060.00	37.22	Average	V	39.30	17.48	45.30	2.90	51.60	54.00	2.40
<b>Antenna 2</b>										
11 060.00	48.42	Peak	H	39.30	17.48	45.30	-	59.90	74.00	14.10
11 060.00	37.10	Average	H	39.30	17.48	45.30	2.90	51.48	54.00	2.52
11 060.00	49.19	Peak	V	39.30	17.48	45.30	-	60.67	74.00	13.33
11 060.00	37.11	Average	V	39.30	17.48	45.30	2.90	51.49	54.00	2.51
<b>Multiple Transmit</b>										
11 060.00	50.15	Peak	H	39.30	17.48	45.30	-	61.63	74.00	12.37
11 060.00	38.08	Average	H	39.30	17.48	45.30	2.90	52.46	54.00	1.54
11 060.00	50.30	Peak	V	39.30	17.48	45.30	-	61.78	74.00	12.22
11 060.00	38.02	Average	V	39.30	17.48	45.30	2.90	52.40	54.00	1.60

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.4 Test data for Frequency UNII 3

#### 13.6.4.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 490.000	48.26	Peak	H	39.48	18.17	45.30	-	60.61	74.00	13.39
11 490.000	36.68	Average	H	39.48	18.17	45.30	0.11	49.14	54.00	4.86
11 490.000	48.35	Peak	V	39.48	18.17	45.30	-	60.70	74.00	13.30
11 490.000	36.34	Average	V	39.48	18.17	45.30	0.11	48.80	54.00	5.20
11 570.000	47.84	Peak	H	39.60	18.17	45.30	-	60.31	74.00	13.69
11 570.000	35.40	Average	H	39.60	18.17	45.30	0.11	47.98	54.00	6.02
11 570.000	49.48	Peak	V	39.60	18.17	45.30	-	61.95	74.00	12.05
11 570.000	36.64	Average	V	39.60	18.17	45.30	0.11	49.22	54.00	4.78
11 650.000	48.52	Peak	H	39.88	18.17	45.30	-	61.27	74.00	12.73
11 650.000	36.62	Average	H	39.88	18.17	45.30	0.11	49.48	54.00	4.52
11 650.000	49.18	Peak	V	39.88	18.17	45.30	-	61.93	74.00	12.07
11 650.000	36.83	Average	V	39.88	18.17	45.30	0.11	49.69	54.00	4.31

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>										
11 490.000	48.97	Peak	H	39.48	18.17	45.30	-	61.32	74.00	12.68
11 490.000	36.46	Average	H	39.48	18.17	45.30	0.11	48.92	54.00	5.08
11 490.000	49.08	Peak	V	39.48	18.17	45.30	-	61.43	74.00	12.57
11 490.000	36.45	Average	V	39.48	18.17	45.30	0.11	48.91	54.00	5.09
11 570.000	48.88	Peak	H	39.60	18.17	45.30	-	61.35	74.00	12.65
11 570.000	36.67	Average	H	39.60	18.17	45.30	0.11	49.25	54.00	4.75
11 570.000	48.71	Peak	V	39.60	18.17	45.30	-	61.18	74.00	12.82
11 570.000	36.64	Average	V	39.60	18.17	45.30	0.11	49.22	54.00	4.78
11 650.000	48.84	Peak	H	39.88	18.17	45.30	-	61.59	74.00	12.41
11 650.000	36.81	Average	H	39.88	18.17	45.30	0.11	49.67	54.00	4.33
11 650.000	49.13	Peak	V	39.88	18.17	45.30	-	61.88	74.00	12.12
11 650.000	36.78	Average	V	39.88	18.17	45.30	0.11	49.64	54.00	4.36

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 490.000	48.78	Peak	H	39.48	18.17	45.30	-	61.13	74.00	12.87
11 490.000	36.54	Average	H	39.48	18.17	45.30	0.78	49.67	54.00	4.33
11 490.000	48.74	Peak	V	39.48	18.17	45.30	-	61.09	74.00	12.91
11 490.000	36.56	Average	V	39.48	18.17	45.30	0.78	49.69	54.00	4.31
11 570.000	48.76	Peak	H	39.60	18.17	45.30	-	61.23	74.00	12.77
11 570.000	37.15	Average	H	39.60	18.17	45.30	0.78	50.40	54.00	3.60
11 570.000	48.88	Peak	V	39.60	18.17	45.30	-	61.35	74.00	12.65
11 570.000	36.69	Average	V	39.60	18.17	45.30	0.78	49.94	54.00	4.06
11 650.000	48.86	Peak	H	39.88	18.17	45.30	-	61.61	74.00	12.39
11 650.000	37.11	Average	H	39.88	18.17	45.30	0.78	50.64	54.00	3.36
11 650.000	49.23	Peak	V	39.88	18.17	45.30	-	61.98	74.00	12.02
11 650.000	36.88	Average	V	39.88	18.17	45.30	0.78	50.41	54.00	3.59

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>										
11 490.000	48.31	Peak	H	39.48	18.17	45.30	-	60.66	74.00	13.34
11 490.000	36.51	Average	H	39.48	18.17	45.30	0.78	49.64	54.00	4.36
11 490.000	48.71	Peak	V	39.48	18.17	45.30	-	61.06	74.00	12.94
11 490.000	36.44	Average	V	39.48	18.17	45.30	0.78	49.57	54.00	4.43
11 570.000	49.28	Peak	H	39.60	18.17	45.30	-	61.75	74.00	12.25
11 570.000	36.80	Average	H	39.60	18.17	45.30	0.78	50.05	54.00	3.95
11 570.000	48.65	Peak	V	39.60	18.17	45.30	-	61.12	74.00	12.88
11 570.000	36.77	Average	V	39.60	18.17	45.30	0.78	50.02	54.00	3.98
11 650.000	49.00	Peak	H	39.88	18.17	45.30	-	61.75	74.00	12.25
11 650.000	36.79	Average	H	39.88	18.17	45.30	0.78	50.32	54.00	3.68
11 650.000	48.95	Peak	V	39.88	18.17	45.30	-	61.70	74.00	12.30
11 650.000	36.86	Average	V	39.88	18.17	45.30	0.78	50.39	54.00	3.61

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>										
11 490.000	47.75	Peak	H	39.48	18.17	45.30	-	60.10	74.00	13.90
11 490.000	35.79	Average	H	39.48	18.17	45.30	0.78	48.92	54.00	5.08
11 490.000	48.76	Peak	V	39.48	18.17	45.30	-	61.11	74.00	12.89
11 490.000	37.16	Average	V	39.48	18.17	45.30	0.78	50.29	54.00	3.71
11 570.000	47.84	Peak	H	39.60	18.17	45.30	-	60.31	74.00	13.69
11 570.000	35.49	Average	H	39.60	18.17	45.30	0.78	48.74	54.00	5.26
11 570.000	48.64	Peak	V	39.60	18.17	45.30	-	61.11	74.00	12.89
11 570.000	36.56	Average	V	39.60	18.17	45.30	0.78	49.81	54.00	4.19
11 650.000	48.06	Peak	H	39.88	18.17	45.30	-	60.81	74.00	13.19
11 650.000	36.02	Average	H	39.88	18.17	45.30	0.78	49.55	54.00	4.45
11 650.000	48.88	Peak	V	39.88	18.17	45.30	-	61.63	74.00	12.37
11 650.000	36.68	Average	V	39.88	18.17	45.30	0.78	50.21	54.00	3.79

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 510.000	48.76	Peak	H	39.48	18.17	45.30	-	61.11	74.00	12.89
11 510.000	36.58	Average	H	39.48	18.17	45.30	1.48	50.41	54.00	3.59
11 510.000	48.68	Peak	V	39.48	18.17	45.30	-	61.03	74.00	12.97
11 510.000	36.63	Average	V	39.48	18.17	45.30	1.48	50.46	54.00	3.54
11 590.000	49.67	Peak	H	39.60	18.17	45.30	-	62.14	74.00	11.86
11 590.000	36.90	Average	H	39.60	18.17	45.30	1.48	50.85	54.00	3.15
11 590.000	49.05	Peak	V	39.60	18.17	45.30	-	61.52	74.00	12.48
11 590.000	37.05	Average	V	39.60	18.17	45.30	1.48	51.00	54.00	3.00
<b>Antenna 2</b>										
11 510.000	49.16	Peak	H	39.48	18.17	45.30	-	61.51	74.00	12.49
11 510.000	36.79	Average	H	39.48	18.17	45.30	1.48	50.62	54.00	3.38
11 510.000	48.45	Peak	V	39.48	18.17	45.30	-	60.80	74.00	13.20
11 510.000	36.56	Average	V	39.48	18.17	45.30	1.48	50.39	54.00	3.61
11 590.000	48.67	Peak	H	39.60	18.17	45.30	-	61.14	74.00	12.86
11 590.000	36.64	Average	H	39.60	18.17	45.30	1.48	50.59	54.00	3.41
11 590.000	48.33	Peak	V	39.60	18.17	45.30	-	60.80	74.00	13.20
11 590.000	36.51	Average	V	39.60	18.17	45.30	1.48	50.46	54.00	3.54

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>										
11 510.000	48.49	Peak	H	39.48	18.17	45.30	-	60.84	74.00	13.16
11 510.000	36.32	Average	H	39.48	18.17	45.30	1.48	50.15	54.00	3.85
11 510.000	48.56	Peak	V	39.48	18.17	45.30	-	60.91	74.00	13.09
11 510.000	36.35	Average	V	39.48	18.17	45.30	1.48	50.18	54.00	3.82
11 590.000	48.90	Peak	H	39.60	18.17	45.30	-	61.37	74.00	12.63
11 590.000	36.73	Average	H	39.60	18.17	45.30	1.48	50.68	54.00	3.32
11 590.000	48.87	Peak	V	39.60	18.17	45.30	-	61.34	74.00	12.66
11 590.000	36.65	Average	V	39.60	18.17	45.30	1.48	50.60	54.00	3.40

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 13.6.1.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode for the emissions fall in restricted band,  
1 MHz and RMS Detector for Average Mode for the emissions fall in restricted band  
100 kHz for Peak Mode for the emissions outside restricted band
- Video bandwidth : 3 MHz for Peak and Average Mode
- Frequency range : 1 GHz ~ 40 GHz
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Operating mode : Transmitting mode

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>										
11 550.000	46.98	Peak	H	39.60	18.17	45.30	-	59.45	74.00	14.55
11 550.000	35.73	Average	H	39.60	18.17	45.30	2.90	51.10	54.00	2.90
11 550.000	47.44	Peak	V	39.60	18.17	45.30	-	59.91	74.00	14.09
11 550.000	35.75	Average	V	39.60	18.17	45.30	2.90	51.12	54.00	2.88
<b>Antenna 2</b>										
11 550.000	47.68	Peak	H	39.60	18.17	45.30	-	60.15	74.00	13.85
11 550.000	35.84	Average	H	39.60	18.17	45.30	2.90	51.21	54.00	2.79
11 550.000	47.88	Peak	V	39.60	18.17	45.30	-	60.35	74.00	13.65
11 550.000	35.87	Average	V	39.60	18.17	45.30	2.90	51.24	54.00	2.76
<b>Multiple Transmit</b>										
11 550.000	48.70	Peak	H	39.60	18.17	45.30	-	61.17	74.00	12.83
11 550.000	36.51	Average	H	39.60	18.17	45.30	2.90	51.88	54.00	2.12
11 550.000	49.73	Peak	V	39.60	18.17	45.30	-	62.20	74.00	11.80
11 550.000	36.41	Average	V	39.60	18.17	45.30	2.90	51.78	54.00	2.22

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

## 14. RADIATED RESTRICTED BAND EDGE MEASUREMENTS

### 14.1 Operating environment

Temperature : 24 °C

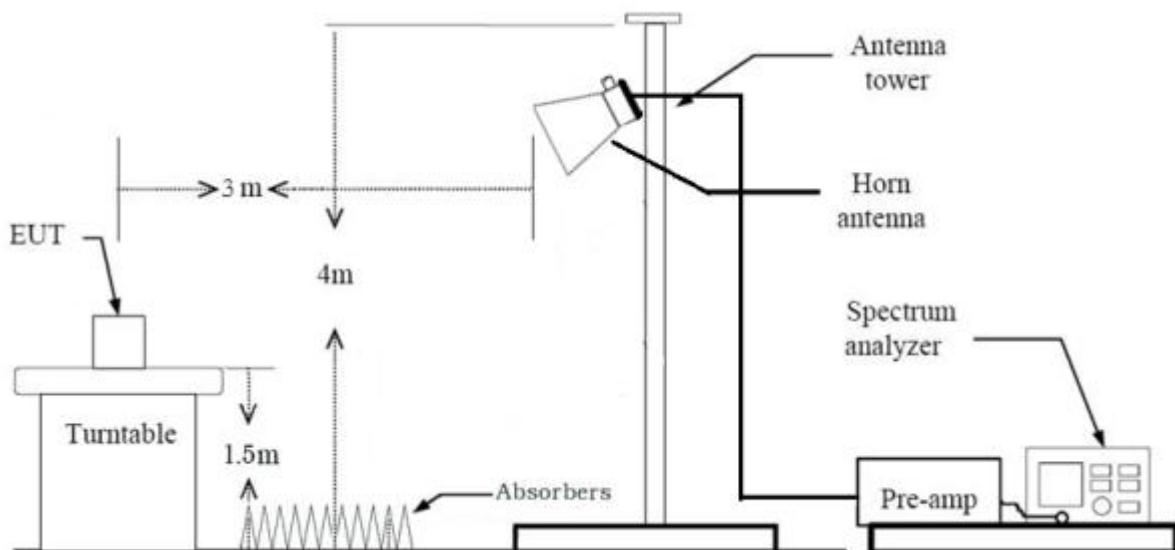
Relative humidity : 52 % R.H.

### 14.2 Test set-up for radiated measurement

The radiated emissions measurements were performed on the 3 m, open-field test site. The EUT was placed on a non-conductive turntable above the ground plane.

The system was rotated 360°, and the antenna was varied in the height between 1.0 m and 4.0 m in order to determine the maximum emission levels. This procedure was performed for horizontal and vertical polarization of the receiving antenna.

#### - Test Configuration



### 14.3 Test Date

September 26, 2022 ~ October 21, 2022

## 14.4 Test data for Frequency UNII I

### 14.4.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 145.01	57.49	Peak	H	34.29	10.89	44.73	-	-	57.94	74.00	16.06
5 073.69	45.44	Average	H	34.09	10.94	44.71	-	0.11	45.87	54.00	8.13
4 604.28	56.45	Peak	V	33.02	10.22	44.62	-	-	55.07	74.00	18.93
5 081.16	45.59	Average	V	34.12	10.94	44.72	-	0.11	46.04	54.00	7.96
<b>Antenna 2</b>											
5 121.92	56.24	Peak	H	34.24	10.94	44.72	-	-	56.70	74.00	17.30
5 145.69	45.67	Average	H	34.29	10.89	44.73	-	0.11	46.23	54.00	7.77
4 801.28	56.83	Peak	V	33.50	10.75	44.66	-	-	56.42	74.00	17.58
5 136.86	45.44	Average	V	34.27	10.89	44.73	-	0.11	45.98	54.00	8.02

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.4.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
4 886.87	57.38	Peak	H	33.47	10.75	44.68	-	-	56.92	74.00	17.08
5 073.69	45.59	Average	H	34.09	10.94	44.71	-	0.78	46.69	54.00	7.31
5 070.29	56.96	Peak	V	34.08	10.94	44.71	-	-	57.27	74.00	16.73
5 147.73	45.69	Average	V	34.30	10.89	44.73	-	0.78	46.93	54.00	7.07
<b>Antenna 2</b>											
5 045.83	57.41	Peak	H	33.97	10.75	44.71	-	-	57.42	74.00	16.58
5 069.61	45.48	Average	H	34.08	10.94	44.71	-	0.78	46.57	54.00	7.43
4 840.68	56.84	Peak	V	33.42	10.75	44.67	-	-	56.34	74.00	17.66
5 077.76	45.38	Average	V	34.11	10.94	44.72	-	0.78	46.49	54.00	7.51
<b>Multiple Transmit</b>											
5134.83	57.34	Peak	H	34.27	10.89	44.73	-	-	57.77	74.00	16.23
5073.69	46.11	Average	H	34.09	10.94	44.71	-	0.78	47.21	54.00	6.79
5071.65	57.39	Peak	V	34.09	10.94	44.71	-	-	57.71	74.00	16.29
5059.42	45.98	Average	V	34.04	10.94	44.71	-	0.78	47.03	54.00	6.97

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.4.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 149.68	59.60	Peak	H	34.30	10.89	44.73	-	-	60.06	74.00	13.94
5 149.68	48.06	Average	H	34.30	10.89	44.73	-	1.48	50.00	54.00	4.00
5 148.99	62.01	Peak	V	34.30	10.89	44.73	-	-	62.47	74.00	11.53
5 149.68	50.55	Average	V	34.30	10.89	44.73	-	1.48	52.49	54.00	1.51
<b>Antenna 2</b>											
4 975.28	56.68	Peak	H	33.65	10.75	44.70	-	-	56.38	74.00	17.62
5 097.29	45.43	Average	H	34.19	10.94	44.72	-	1.48	47.32	54.00	6.68
4 816.05	56.32	Peak	V	33.47	10.75	44.66	-	-	55.88	74.00	18.12
5 149.68	46.01	Average	V	34.30	10.89	44.73	-	1.48	47.95	54.00	6.05
<b>Multiple Transmit</b>											
5 062.82	57.56	Peak	H	34.05	10.94	44.71	-	-	57.84	74.00	16.16
5 036.63	45.88	Average	H	33.92	10.75	44.71	-	1.48	47.32	54.00	6.68
5 148.99	57.79	Peak	V	34.30	10.89	44.73	-	-	58.25	74.00	15.75
5 148.99	47.79	Average	V	34.30	10.89	44.73	-	1.48	49.73	54.00	4.27

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.4.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
4 567.03	56.92	Peak	H	32.93	10.22	44.61	-	-	55.46	74.00	18.54
5 149.36	46.72	Average	H	34.30	10.89	44.73	-	2.90	50.08	54.00	3.92
5 147.23	60.29	Peak	V	34.29	10.89	44.73	-	-	60.74	74.00	13.26
5 150.00	49.24	Average	V	34.30	10.89	44.73	-	2.90	52.60	54.00	1.40
<b>Antenna 2</b>											
5 150.00	58.16	Peak	H	34.30	10.89	44.73	-	-	58.62	74.00	15.38
5 145.81	46.22	Average	H	34.29	10.89	44.73	-	2.90	49.57	54.00	4.43
5 150.00	59.43	Peak	V	34.30	10.89	44.73	-	-	59.89	74.00	14.11
5 148.65	49.50	Average	V	34.30	10.89	44.73	-	2.90	52.86	54.00	1.14
<b>Multiple Transmit</b>											
4 793.29	57.21	Peak	H	33.50	10.75	44.66	-	-	56.80	74.00	17.20
5 150.00	45.96	Average	H	34.30	10.89	44.73	-	2.90	49.32	54.00	4.68
5 134.46	58.25	Peak	V	34.27	10.89	44.73	-	-	58.68	74.00	15.32
5 150.00	46.41	Average	V	34.30	10.89	44.73	-	2.90	49.77	54.00	4.23

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

## 14.5 Test data for Frequency UNII 2A

### 14.5.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 437.13	57.91	Peak	H	34.13	11.29	44.79	-	-	58.54	74.00	15.46
5 358.95	46.38	Average	H	34.28	11.22	44.77	-	0.11	47.22	54.00	6.78
5 427.20	57.70	Peak	V	34.15	11.29	44.79	-	-	58.35	74.00	15.65
5 350.70	46.80	Average	V	34.30	11.22	44.77	-	0.11	47.66	54.00	6.34
<b>Antenna 2</b>											
5 395.59	57.91	Peak	H	34.21	11.29	44.78	-	-	58.63	74.00	15.37
5 350.42	46.40	Average	H	34.30	11.22	44.77	-	0.11	47.26	54.00	6.74
5 429.02	58.61	Peak	V	34.14	11.29	44.79	-	-	59.25	74.00	14.75
5 426.92	46.42	Average	V	34.15	11.29	44.79	-	0.11	47.18	54.00	6.82

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.5.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 415.73	57.96	Peak	H	34.17	11.29	44.78	-	-	58.64	74.00	15.36
5 362.31	46.48	Average	H	34.28	11.29	44.77	-	0.78	48.06	54.00	5.94
5 377.27	57.99	Peak	V	34.25	11.29	44.78	-	-	58.75	74.00	15.25
5 384.13	46.44	Average	V	34.23	11.29	44.78	-	0.78	47.96	54.00	6.04
<b>Antenna 2</b>											
5 364.69	57.76	Peak	H	34.27	11.22	44.77	-	-	58.48	74.00	15.52
5 364.69	46.41	Average	H	34.27	11.22	44.77	-	0.78	47.91	54.00	6.09
5 415.59	58.34	Peak	V	34.17	11.29	44.78	-	-	59.02	74.00	14.98
5 377.83	46.41	Average	V	34.24	11.29	44.78	-	0.78	47.94	54.00	6.06
<b>Multiple Transmit</b>											
5 443.57	58.95	Peak	H	34.11	11.29	44.79	-	-	59.56	74.00	14.44
5 361.05	47.16	Average	H	34.28	11.22	44.77	-	0.78	48.67	54.00	5.33
5 351.96	58.49	Peak	V	34.30	11.22	44.77	-	-	59.24	74.00	14.76
5 359.23	46.90	Average	V	34.28	11.22	44.77	-	0.78	48.41	54.00	5.59

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 14.5.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 352.63	58.86	Peak	H	34.29	11.22	44.77	-	-	59.60	74.00	14.40
5 351.58	48.40	Average	H	34.30	11.22	44.77	-	1.48	50.63	54.00	3.37
5 351.43	61.97	Peak	V	34.30	11.22	44.77	-	-	62.72	74.00	11.28
5 351.13	49.99	Average	V	34.30	11.22	44.77	-	1.48	52.22	54.00	1.78
<b>Antenna 2</b>											
5 453.48	58.02	Peak	H	34.10	11.50	44.79	-	-	58.83	74.00	15.17
5 350.98	47.47	Average	H	34.30	11.22	44.77	-	1.48	49.70	54.00	4.30
5 350.53	58.12	Peak	V	34.30	11.22	44.77	-	-	58.87	74.00	15.13
5 350.98	47.51	Average	V	34.30	11.22	44.77	-	1.48	49.74	54.00	4.26
<b>Multiple Transmit</b>											
5 356.98	60.26	Peak	H	34.29	11.22	44.77	-	-	61.00	74.00	13.00
5 349.94	48.94	Average	H	34.30	11.22	44.77	-	1.48	51.17	54.00	2.83
5 350.38	61.97	Peak	V	34.30	11.22	44.77	-	-	62.72	74.00	11.28
5 355.63	47.77	Average	V	34.29	11.22	44.77	-	1.48	49.99	54.00	4.01

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.5.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 352.58	60.89	Peak	H	34.29	11.22	44.77	-	-	61.63	74.00	12.37
5 350.03	48.33	Average	H	34.30	11.22	44.77	-	2.90	51.98	54.00	2.02
5 352.41	62.81	Peak	V	34.30	11.22	44.77	-	-	63.56	74.00	10.44
5 350.03	49.20	Average	V	34.30	11.22	44.77	-	2.90	52.85	54.00	1.15
<b>Antenna 2</b>											
5 355.98	58.61	Peak	H	34.29	11.22	44.77	-	-	59.35	74.00	14.65
5 354.79	47.13	Average	H	34.29	11.22	44.77	-	2.90	50.77	54.00	3.23
5 358.19	57.59	Peak	V	34.28	11.22	44.77	-	-	58.32	74.00	15.68
5 350.03	46.73	Average	V	34.30	11.22	44.77	-	2.90	50.38	54.00	3.62
<b>Multiple Transmit</b>											
5 361.41	59.78	Peak	H	34.28	11.22	44.77	-	-	60.51	74.00	13.49
5 350.88	47.69	Average	H	34.30	11.22	44.77	-	2.90	51.34	54.00	2.66
5 359.55	58.84	Peak	V	34.28	11.22	44.77	-	-	59.57	74.00	14.43
5 357.85	47.67	Average	V	34.28	11.22	44.77	-	2.90	51.30	54.00	2.70

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

## 14.6 Test data for Frequency UNII 2C

### 14.6.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 393.68	58.19	Peak	H	34.21	11.29	44.78	-	-	58.91	74.00	15.09
5 405.67	46.32	Average	H	34.19	11.29	44.78	-	0.11	47.13	54.00	6.87
5 379.90	57.91	Peak	V	34.24	11.29	44.78	-	-	58.66	74.00	15.34
5 433.09	46.53	Average	V	34.13	11.29	44.79	-	0.11	47.27	54.00	6.73
<b>Antenna 2</b>											
5 402.07	58.17	Peak	H	34.20	11.29	44.78	-	-	58.88	74.00	15.12
5 383.94	46.38	Average	H	34.23	11.29	44.78	-	0.11	47.23	54.00	6.77
5 362.36	57.81	Peak	V	34.28	11.22	44.77	-	-	58.54	74.00	15.46
5 360.26	46.25	Average	V	34.28	11.22	44.77	-	0.11	47.09	54.00	6.91

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.6.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 357.27	58.04	Peak	H	34.29	11.22	44.77	-	-	58.78	74.00	15.22
5 394.13	46.35	Average	H	34.21	11.29	44.78	-	0.78	47.85	54.00	6.15
5 387.24	57.99	Peak	V	34.23	11.29	44.78	-	-	58.73	74.00	15.27
5 434.14	46.43	Average	V	34.13	11.29	44.79	-	0.78	47.84	54.00	6.16
<b>Antenna 2</b>											
5 371.20	58.25	Peak	H	34.26	11.22	44.77	-	-	58.96	74.00	15.04
5 399.98	46.22	Average	H	34.20	11.29	44.78	-	0.78	47.71	54.00	6.29
5 404.62	57.98	Peak	V	34.19	11.29	44.78	-	-	58.68	74.00	15.32
5 362.36	46.41	Average	V	34.28	11.22	44.77	-	0.78	47.92	54.00	6.08
<b>Multiple Transmit</b>											
5 368.81	59.10	Peak	H	34.26	11.22	44.77	-	-	59.81	74.00	14.19
5 350.22	46.89	Average	H	34.30	11.22	44.77	-	0.78	48.42	54.00	5.58
5 371.80	58.94	Peak	V	34.26	11.22	44.77	-	-	59.65	74.00	14.35
5 367.01	46.97	Average	V	34.27	11.22	44.77	-	0.78	48.47	54.00	5.53

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 14.6.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 372.30	57.72	Peak	H	34.26	11.22	44.77	-	-	58.43	74.00	15.57
5 432.72	46.43	Average	H	34.13	11.29	44.79	-	1.48	48.54	54.00	5.46
5 387.16	58.07	Peak	V	34.23	11.29	44.78	-	-	58.81	74.00	15.19
5 455.41	46.44	Average	V	34.10	11.50	44.79	-	1.48	48.73	54.00	5.27
<b>Antenna 2</b>											
5 353.12	57.96	Peak	H	34.29	11.22	44.77	-	-	58.70	74.00	15.30
5 362.23	46.37	Average	H	34.28	11.22	44.77	-	1.48	48.58	54.00	5.42
5 367.98	57.82	Peak	V	34.26	11.22	44.77	-	-	58.53	74.00	15.47
5 370.86	46.38	Average	V	34.26	11.22	44.77	-	1.48	48.57	54.00	5.43
<b>Multiple Transmit</b>											
5 416.89	59.12	Peak	H	34.17	11.29	44.78	-	-	59.80	74.00	14.20
5 459.41	47.27	Average	H	34.10	11.50	44.79	-	1.48	49.56	54.00	4.44
5 401.87	59.26	Peak	V	34.20	11.29	44.78	-	-	59.97	74.00	14.03
5 460.05	47.79	Average	V	34.10	11.50	44.79	-	1.48	50.08	54.00	3.92

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.6.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 457.26	59.48	Peak	H	34.10	11.50	44.79	-	-	60.29	74.00	13.71
5 458.88	48.42	Average	H	34.10	11.50	44.79	-	2.90	52.13	54.00	1.87
5 458.52	60.31	Peak	V	34.10	11.50	44.79	-	-	61.12	74.00	12.88
5 458.16	48.60	Average	V	34.10	11.50	44.79	-	2.90	52.31	54.00	1.69
<b>Antenna 2</b>											
5 459.78	59.81	Peak	H	34.10	11.50	44.79	-	-	60.62	74.00	13.38
5 458.52	47.38	Average	H	34.10	11.50	44.79	-	2.90	51.09	54.00	2.91
5 459.78	58.82	Peak	V	34.10	11.50	44.79	-	-	59.63	74.00	14.37
5 457.80	46.57	Average	V	34.10	11.50	44.79	-	2.90	50.28	54.00	3.72
<b>Multiple Transmit</b>											
5 442.34	59.35	Peak	H	34.12	11.29	44.79	-	-	59.97	74.00	14.03
5 358.90	47.48	Average	H	34.28	11.22	44.77	-	2.90	51.11	54.00	2.89
5 410.33	58.85	Peak	V	34.18	11.29	44.78	-	-	59.54	74.00	14.46
5 354.77	47.57	Average	V	34.29	11.22	44.77	-	2.90	51.21	54.00	2.79

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

## 14.7 Test data for Frequency U-NII-3

### 14.7.1 Test data for 802.11a RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 97.42 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 663.96	54.78	Peak	H	34.10	11.55	44.67	-	-	55.76	78.53	22.77
5 712.26	54.95	Peak	H	34.15	11.77	44.63	-	-	56.24	108.63	52.39
5 724.76	57.78	Peak	H	34.20	11.77	44.62	-	-	59.13	121.65	62.52
5 854.56	53.54	Peak	H	34.62	11.90	44.52	-	-	55.54	111.80	56.26
5 866.94	53.13	Peak	H	34.67	11.90	44.51	-	-	55.19	107.46	52.27
5 912.99	53.91	Peak	H	34.85	11.90	44.47	-	-	56.19	77.09	20.90
5 671.80	53.44	Peak	V	34.10	11.55	44.66	-	-	54.43	84.33	29.90
5 708.40	54.17	Peak	V	34.13	11.77	44.63	-	-	55.44	107.55	52.11
5 724.88	58.56	Peak	V	34.20	11.77	44.62	-	-	59.91	121.93	62.02
5 852.29	53.36	Peak	V	34.61	11.90	44.52	-	-	55.35	116.98	61.63
5 867.74	53.39	Peak	V	34.67	11.90	44.51	-	-	55.45	107.23	51.78
5 875.82	54.00	Peak	V	34.70	11.90	44.50	-	-	56.10	104.59	48.49
5 679.00	55.08	Peak	H	34.10	11.77	44.66	-	-	56.29	89.66	33.37
5 701.21	54.94	Peak	H	34.10	11.77	44.64	-	-	56.17	105.54	49.37
5 724.27	53.55	Peak	H	34.20	11.77	44.62	-	-	54.90	120.54	65.64
5 855.00	52.30	Peak	H	34.62	11.90	44.52	-	-	54.30	110.80	56.50
5 866.30	53.67	Peak	H	34.67	11.90	44.51	-	-	55.73	107.64	51.91
5 898.20	53.89	Peak	H	34.79	11.90	44.48	-	-	56.10	88.03	31.93
5 694.38	53.48	Peak	V	34.10	11.77	44.64	-	-	54.71	101.04	46.33
5 716.21	53.83	Peak	V	34.16	11.77	44.63	-	-	55.13	109.74	54.61
5 724.64	53.06	Peak	V	34.20	11.77	44.62	-	-	54.41	121.38	66.97
5 854.19	53.14	Peak	V	34.62	11.90	44.52	-	-	55.14	112.65	57.51
5 869.48	53.76	Peak	V	34.68	11.90	44.50	-	-	55.84	106.75	50.91
5 914.69	53.94	Peak	V	34.86	11.90	44.47	-	-	56.23	75.83	19.60

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Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>											
5 680.09	54.81	Peak	H	34.10	11.77	44.66	-	-	56.02	90.47	34.45
5 705.74	53.98	Peak	H	34.12	11.77	44.64	-	-	55.23	106.81	51.58
5 720.32	53.00	Peak	H	34.18	11.77	44.62	-	-	54.33	111.53	57.20
5 850.17	53.59	Peak	H	34.60	11.90	44.52	-	-	55.57	121.81	66.24
5 871.77	53.86	Peak	H	34.69	11.90	44.50	-	-	55.95	106.10	50.15
5 918.33	54.05	Peak	H	34.87	11.90	44.47	-	-	56.35	73.14	16.79
5 696.43	53.60	Peak	V	34.10	11.77	44.64	-	-	54.83	102.56	47.73
5 709.28	54.75	Peak	V	34.14	11.77	44.63	-	-	56.03	107.80	51.77
5 723.63	53.74	Peak	V	34.19	11.77	44.62	-	-	55.08	119.08	64.00
5 851.57	52.07	Peak	V	34.61	11.90	44.52	-	-	54.06	118.62	64.56
5 868.52	53.00	Peak	V	34.67	11.90	44.51	-	-	55.06	107.01	51.95
5 885.31	53.97	Peak	V	34.74	11.90	44.49	-	-	56.12	97.57	41.45
5 677.40	53.55	Peak	H	34.10	11.77	44.66	-	-	54.76	88.48	33.72
5 707.30	54.75	Peak	H	34.13	11.77	44.63	-	-	56.02	107.24	51.22
5 720.58	53.59	Peak	H	34.18	11.77	44.62	-	-	54.92	112.12	57.20
5 854.82	52.17	Peak	H	34.62	11.90	44.52	-	-	54.17	111.21	57.04
5 869.24	53.58	Peak	H	34.68	11.90	44.50	-	-	55.66	106.81	51.15
5 890.66	54.54	Peak	H	34.76	11.90	44.49	-	-	56.71	93.61	36.90
5 684.69	53.69	Peak	V	34.10	11.77	44.65	-	-	54.91	93.87	38.96
5 719.63	53.10	Peak	V	34.18	11.77	44.62	-	-	54.43	110.70	56.27
5 724.12	53.91	Peak	V	34.20	11.77	44.62	-	-	55.26	120.19	64.93
5 851.92	53.21	Peak	V	34.61	11.90	44.52	-	-	55.20	117.82	62.62
5 866.40	53.11	Peak	V	34.67	11.90	44.51	-	-	55.17	107.61	52.44
5 905.54	54.16	Peak	V	34.82	11.90	44.48	-	-	56.40	82.60	26.20

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.7.2 Test data for 802.11n\_HT20 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 83.50 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 689.24	54.17	Peak	H	34.10	11.77	44.65	-	-	55.39	97.24	41.85
5 719.51	54.40	Peak	H	34.18	11.77	44.62	-	-	55.73	110.66	54.93
5 724.57	59.27	Peak	H	34.20	11.77	44.62	-	-	60.62	121.22	60.60
5 850.23	54.56	Peak	H	34.60	11.90	44.52	-	-	56.54	121.68	65.14
5 869.38	53.54	Peak	H	34.68	11.90	44.50	-	-	55.62	106.77	51.15
5 904.35	54.56	Peak	H	34.82	11.90	44.48	-	-	56.80	83.48	26.68
5 654.82	54.12	Peak	V	34.10	11.55	44.68	-	-	55.09	71.77	16.68
5 711.30	54.42	Peak	V	34.15	11.77	44.63	-	-	55.71	108.36	52.65
5 724.58	57.99	Peak	V	34.20	11.77	44.62	-	-	59.34	121.24	61.90
5 854.87	52.16	Peak	V	34.62	11.90	44.52	-	-	54.16	111.10	56.94
5 867.28	53.61	Peak	V	34.67	11.90	44.51	-	-	55.67	107.36	51.69
5 876.12	53.68	Peak	V	34.70	11.90	44.50	-	-	55.78	104.37	48.59
5 658.97	54.13	Peak	H	34.10	11.55	44.67	-	-	55.11	74.84	19.73
5 717.73	53.60	Peak	H	34.17	11.77	44.63	-	-	54.91	110.16	55.25
5 721.64	52.80	Peak	H	34.19	11.77	44.62	-	-	54.14	114.54	60.40
5 850.35	53.26	Peak	H	34.60	11.90	44.52	-	-	55.24	121.40	66.16
5 870.85	55.01	Peak	H	34.68	11.90	44.50	-	-	57.09	106.36	49.27
5 911.39	54.24	Peak	H	34.85	11.90	44.47	-	-	56.52	78.27	21.75
5 650.52	53.89	Peak	V	34.10	11.55	44.68	-	-	54.86	68.58	13.72
5 715.79	54.26	Peak	V	34.16	11.77	44.63	-	-	55.56	109.62	54.06
5 720.00	52.84	Peak	V	34.18	11.77	44.62	-	-	54.17	110.80	56.63
5 850.00	52.88	Peak	V	34.60	11.90	44.52	-	-	54.86	122.20	67.34
5 856.99	53.75	Peak	V	34.63	11.90	44.51	-	-	55.77	110.24	54.47
5 885.46	53.42	Peak	V	34.74	11.90	44.49	-	-	55.57	97.46	41.89

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>											
5 690.28	53.37	Peak	H	34.10	11.77	44.65	-	-	54.59	98.01	43.42
5 704.63	54.18	Peak	H	34.12	11.77	44.64	-	-	55.43	106.50	51.07
5 722.02	53.57	Peak	H	34.19	11.77	44.62	-	-	54.91	115.41	60.50
5 850.28	54.13	Peak	H	34.60	11.90	44.52	-	-	56.11	121.56	65.45
5 869.66	53.52	Peak	H	34.68	11.90	44.50	-	-	55.60	106.70	51.10
5 902.50	54.34	Peak	H	34.81	11.90	44.48	-	-	56.57	84.85	28.28
5 681.84	53.81	Peak	V	34.10	11.77	44.65	-	-	55.03	91.76	36.73
5 718.09	54.12	Peak	V	34.17	11.77	44.63	-	-	55.43	110.27	54.84
5 720.74	54.42	Peak	V	34.18	11.77	44.62	-	-	55.75	112.49	56.74
5 850.00	52.25	Peak	V	34.60	11.90	44.52	-	-	54.23	122.20	67.97
5 872.77	54.14	Peak	V	34.69	11.90	44.50	-	-	56.23	105.82	49.59
5 907.49	53.59	Peak	V	34.83	11.90	44.47	-	-	55.85	81.16	25.31
5 688.89	54.11	Peak	H	34.10	11.77	44.65	-	-	55.33	96.98	41.65
5 701.35	53.58	Peak	H	34.11	11.77	44.64	-	-	54.82	105.58	50.76
5 723.10	53.54	Peak	H	34.19	11.77	44.62	-	-	54.88	117.87	62.99
5 853.28	52.92	Peak	H	34.61	11.90	44.52	-	-	54.91	114.72	59.81
5 874.43	53.98	Peak	H	34.70	11.90	44.50	-	-	56.08	105.36	49.28
5 916.38	54.07	Peak	H	34.87	11.90	44.47	-	-	56.37	74.58	18.21
5 661.26	54.28	Peak	V	34.10	11.55	44.67	-	-	55.26	76.53	21.27
5 717.03	54.72	Peak	V	34.17	11.77	44.63	-	-	56.03	109.97	53.94
5 722.23	53.75	Peak	V	34.19	11.77	44.62	-	-	55.09	115.88	60.79
5 852.74	52.75	Peak	V	34.61	11.90	44.52	-	-	54.74	115.95	61.21
5 860.12	53.14	Peak	V	34.64	11.90	44.51	-	-	55.17	109.37	54.20
5 893.41	54.81	Peak	V	34.77	11.90	44.49	-	-	56.99	91.58	34.59

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>											
5 693.03	54.93	Peak	H	34.10	11.77	44.65	-	-	56.15	100.04	43.89
5 701.69	54.17	Peak	H	34.11	11.77	44.64	-	-	55.41	105.67	50.26
5 725.00	58.02	Peak	H	34.20	11.77	44.62	-	-	59.37	122.20	62.83
5 855.00	53.68	Peak	H	34.62	11.90	44.52	-	-	55.68	110.80	55.12
5 865.48	54.74	Peak	H	34.66	11.90	44.51	-	-	56.79	107.87	51.08
5 877.72	54.72	Peak	H	34.71	11.90	44.50	-	-	56.83	103.19	46.36
5 688.49	54.23	Peak	V	34.10	11.77	44.65	-	-	55.45	96.68	41.23
5 701.47	53.71	Peak	V	34.11	11.77	44.64	-	-	54.95	105.61	50.66
5 720.52	53.31	Peak	V	34.18	11.77	44.62	-	-	54.64	111.99	57.35
5 852.27	53.34	Peak	V	34.61	11.90	44.52	-	-	55.33	117.02	61.69
5 869.90	54.99	Peak	V	34.68	11.90	44.50	-	-	57.07	106.63	49.56
5 879.67	53.98	Peak	V	34.72	11.90	44.50	-	-	56.10	101.74	45.64
5 699.13	53.41	Peak	H	34.10	11.77	44.64	-	-	54.64	104.56	49.92
5 709.04	54.09	Peak	H	34.14	11.77	44.63	-	-	55.37	107.73	52.36
5 724.28	54.51	Peak	H	34.20	11.77	44.62	-	-	55.86	120.56	64.70
5 851.68	53.21	Peak	H	34.61	11.90	44.52	-	-	55.20	118.37	63.17
5 859.13	54.39	Peak	H	34.64	11.90	44.51	-	-	56.42	109.64	53.22
5 880.67	55.26	Peak	H	34.72	11.90	44.50	-	-	57.38	101.00	43.62
5 696.28	53.39	Peak	V	34.10	11.77	44.64	-	-	54.62	102.45	47.83
5 716.49	54.75	Peak	V	34.17	11.77	44.63	-	-	56.06	109.82	53.76
5 723.31	53.33	Peak	V	34.19	11.77	44.62	-	-	54.67	118.35	63.68
5 854.29	53.74	Peak	V	34.62	11.90	44.52	-	-	55.74	112.42	56.68
5 867.66	53.70	Peak	V	34.67	11.90	44.51	-	-	55.76	107.26	51.50
5 898.05	53.95	Peak	V	34.79	11.90	44.48	-	-	56.16	88.14	31.98

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

### 14.7.3 Test data for 802.11n\_HT40 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 71.15 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 677.45	54.53	Peak	H	34.10	11.77	44.66	-	-	55.74	88.51	32.77
5 719.87	59.23	Peak	H	34.18	11.77	44.62	-	-	60.56	110.76	50.20
5 725.00	62.20	Peak	H	34.20	11.77	44.62	-	-	63.55	122.20	58.65
5 853.97	53.45	Peak	H	34.62	11.90	44.52	-	-	55.45	113.15	57.70
5 869.14	53.76	Peak	H	34.68	11.90	44.50	-	-	55.84	106.84	51.00
5 919.68	54.38	Peak	H	34.88	11.90	44.46	-	-	56.70	72.14	15.44
5 693.03	54.13	Peak	V	34.10	11.77	44.65	-	-	55.35	100.04	44.69
5 718.97	57.07	Peak	V	34.18	11.77	44.62	-	-	58.40	110.51	52.11
5 724.57	59.87	Peak	V	34.20	11.77	44.62	-	-	61.22	121.22	60.00
5 853.77	53.02	Peak	V	34.62	11.90	44.52	-	-	55.02	113.60	58.58
5 871.09	54.36	Peak	V	34.68	11.90	44.50	-	-	56.44	106.29	49.85
5 891.26	53.88	Peak	V	34.77	11.90	44.49	-	-	56.06	93.17	37.11
5 678.10	53.79	Peak	H	34.10	11.77	44.66	-	-	55.00	88.99	33.99
5 701.23	54.01	Peak	H	34.10	11.77	44.64	-	-	55.24	105.54	50.30
5 720.56	53.67	Peak	H	34.18	11.77	44.62	-	-	55.00	112.08	57.08
5 852.53	52.48	Peak	H	34.61	11.90	44.52	-	-	54.47	116.43	61.96
5 866.34	54.07	Peak	H	34.67	11.90	44.51	-	-	56.13	107.62	51.49
5 896.45	53.60	Peak	H	34.79	11.90	44.48	-	-	55.81	89.33	33.52
5 696.83	53.57	Peak	V	34.10	11.77	44.64	-	-	54.80	102.85	48.05
5 717.71	53.94	Peak	V	34.17	11.77	44.63	-	-	55.25	110.16	54.91
5 720.33	52.73	Peak	V	34.18	11.77	44.62	-	-	54.06	111.55	57.49
5 850.03	53.27	Peak	V	34.60	11.90	44.52	-	-	55.25	122.13	66.88
5 863.78	54.50	Peak	V	34.66	11.90	44.51	-	-	56.55	108.34	51.79
5 880.02	53.47	Peak	V	34.72	11.90	44.50	-	-	55.59	101.49	45.90

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>											
5 689.69	54.34	Peak	H	34.10	11.77	44.65	-	-	55.56	97.57	42.01
5 718.23	54.17	Peak	H	34.17	11.77	44.63	-	-	55.48	110.30	54.82
5 725.00	52.52	Peak	H	34.20	11.77	44.62	-	-	53.87	122.20	68.33
5 852.63	53.20	Peak	H	34.61	11.90	44.52	-	-	55.19	116.20	61.01
5 865.92	53.48	Peak	H	34.66	11.90	44.51	-	-	55.53	107.74	52.21
5 876.87	54.79	Peak	H	34.71	11.90	44.50	-	-	56.90	103.82	46.92
5 665.56	53.45	Peak	V	34.10	11.55	44.67	-	-	54.43	79.71	25.28
5 712.18	53.93	Peak	V	34.15	11.77	44.63	-	-	55.22	108.61	53.39
5 723.11	53.81	Peak	V	34.19	11.77	44.62	-	-	55.15	117.89	62.74
5 852.35	53.52	Peak	V	34.61	11.90	44.52	-	-	55.51	116.84	61.33
5 869.66	54.27	Peak	V	34.68	11.90	44.50	-	-	56.35	106.70	50.35
5 924.78	54.23	Peak	V	34.90	11.90	44.46	-	-	56.57	68.36	11.79
5 661.11	54.56	Peak	H	34.10	11.55	44.67	-	-	55.54	76.42	20.88
5 706.06	53.53	Peak	H	34.12	11.77	44.64	-	-	54.78	106.90	52.12
5 720.74	53.44	Peak	H	34.18	11.77	44.62	-	-	54.77	112.49	57.72
5 852.97	52.83	Peak	H	34.61	11.90	44.52	-	-	54.82	115.43	60.61
5 866.18	54.03	Peak	H	34.66	11.90	44.51	-	-	56.08	107.67	51.59
5 901.55	54.21	Peak	H	34.81	11.90	44.48	-	-	56.44	85.55	29.11
5 682.24	54.13	Peak	V	34.10	11.77	44.65	-	-	55.35	92.06	36.71
5 709.20	53.78	Peak	V	34.14	11.77	44.63	-	-	55.06	107.78	52.72
5 724.93	53.11	Peak	V	34.20	11.77	44.62	-	-	54.46	122.04	67.58
5 855.00	52.72	Peak	V	34.62	11.90	44.52	-	-	54.72	110.80	56.08
5 869.62	54.20	Peak	V	34.68	11.90	44.50	-	-	56.28	106.71	50.43
5 898.25	54.17	Peak	V	34.79	11.90	44.48	-	-	56.38	88.00	31.62

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>											
5 689.79	54.42	Peak	H	34.10	11.77	44.65	-	-	55.64	97.64	42.00
5 716.85	57.94	Peak	H	34.17	11.77	44.63	-	-	59.25	109.92	50.67
5 723.90	59.93	Peak	H	34.20	11.77	44.62	-	-	61.28	119.69	58.41
5 854.91	53.79	Peak	H	34.62	11.90	44.52	-	-	55.79	111.01	55.22
5 871.39	54.59	Peak	H	34.69	11.90	44.50	-	-	56.68	106.21	49.53
5 921.53	54.17	Peak	H	34.89	11.90	44.46	-	-	56.50	70.77	14.27
5 653.72	53.50	Peak	V	34.10	11.55	44.68	-	-	54.47	70.95	16.48
5 719.65	59.77	Peak	V	34.18	11.77	44.62	-	-	61.10	110.70	49.60
5 725.00	59.49	Peak	V	34.20	11.77	44.62	-	-	60.84	122.20	61.36
5 854.86	53.45	Peak	V	34.62	11.90	44.52	-	-	55.45	111.12	55.67
5 871.17	54.50	Peak	V	34.68	11.90	44.50	-	-	56.58	106.27	49.69
5 885.26	54.29	Peak	V	34.74	11.90	44.49	-	-	56.44	97.61	41.17
5 667.26	54.82	Peak	H	34.10	11.55	44.67	-	-	55.80	80.97	25.17
5 717.21	53.87	Peak	H	34.17	11.77	44.63	-	-	55.18	110.02	54.84
5 721.97	53.76	Peak	H	34.19	11.77	44.62	-	-	55.10	115.29	60.19
5 851.69	55.05	Peak	H	34.61	11.90	44.52	-	-	57.04	118.35	61.31
5 857.45	53.99	Peak	H	34.63	11.90	44.51	-	-	56.01	110.11	54.10
5 901.35	53.89	Peak	H	34.81	11.90	44.48	-	-	56.12	85.70	29.58
5 693.53	54.42	Peak	V	34.10	11.77	44.65	-	-	55.64	100.41	44.77
5 712.06	53.49	Peak	V	34.15	11.77	44.63	-	-	54.78	108.58	53.80
5 721.49	52.86	Peak	V	34.19	11.77	44.62	-	-	54.20	114.20	60.00
5 850.25	52.62	Peak	V	34.60	11.90	44.52	-	-	54.60	121.63	67.03
5 867.66	53.79	Peak	V	34.67	11.90	44.51	-	-	55.85	107.26	51.41
5 924.08	53.92	Peak	V	34.90	11.90	44.46	-	-	56.26	68.88	12.62

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

#### 14.7.4 Test data for 802.11ac\_VHT80 RLAN Mode

- Resolution bandwidth : 1 MHz and Peak Detector for Peak Mode  
1 MHz and RMS Detector for Average Mode
- Video bandwidth : 3 MHz for Peak and Average Mode
- Measurement distance : 3 m
- Duty Cycle : 51.26 %
- Result : Pass

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 1</b>											
5 699.28	56.16	Peak	H	34.10	11.77	44.64	-	-	57.39	104.67	47.28
5 716.97	60.28	Peak	H	34.17	11.77	44.63	-	-	61.59	109.95	48.36
5 722.70	57.52	Peak	H	34.19	11.77	44.62	-	-	58.86	116.96	58.10
5 851.59	58.32	Peak	H	34.61	11.90	44.52	-	-	60.31	118.57	58.26
5 866.08	57.36	Peak	H	34.66	11.90	44.51	-	-	59.41	107.70	48.29
5 875.67	54.02	Peak	H	34.70	11.90	44.50	-	-	56.12	104.70	48.58
5 697.13	54.45	Peak	V	34.10	11.77	44.64	-	-	55.68	103.08	47.40
5 718.47	59.44	Peak	V	34.17	11.77	44.63	-	-	60.75	110.37	49.62
5 722.05	59.01	Peak	V	34.19	11.77	44.62	-	-	60.35	115.47	55.12
5 854.51	56.80	Peak	V	34.62	11.90	44.52	-	-	58.80	111.92	53.12
5 857.57	55.60	Peak	V	34.63	11.90	44.51	-	-	57.62	110.08	52.46
5 913.84	53.77	Peak	V	34.86	11.90	44.47	-	-	56.06	76.46	20.40

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Antenna 2</b>											
5 697.38	56.70	Peak	H	34.10	11.77	44.64	-	-	57.93	103.26	45.33
5 718.35	60.40	Peak	H	34.17	11.77	44.63	-	-	61.71	110.34	48.63
5 723.18	62.76	Peak	H	34.19	11.77	44.62	-	-	64.10	118.05	53.95
5 851.08	57.43	Peak	H	34.60	11.90	44.52	-	-	59.41	119.74	60.33
5 857.89	56.36	Peak	H	34.63	11.90	44.51	-	-	58.38	109.99	51.61
5 875.82	54.75	Peak	H	34.70	11.90	44.50	-	-	56.85	104.59	47.74
5 697.23	57.19	Peak	V	34.10	11.77	44.64	-	-	58.42	103.15	44.73
5 719.53	60.60	Peak	V	34.18	11.77	44.62	-	-	61.93	110.67	48.74
5 724.00	58.88	Peak	V	34.20	11.77	44.62	-	-	60.23	119.92	59.69
5 850.00	56.93	Peak	V	34.60	11.90	44.52	-	-	58.91	122.20	63.29
5 855.37	56.12	Peak	V	34.62	11.90	44.52	-	-	58.12	110.70	52.58
5 896.10	54.34	Peak	V	34.78	11.90	44.48	-	-	56.54	89.59	33.05

Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

Frequency (MHz)	Reading (dB $\mu$ V)	Detector Mode	Ant. Pol. (H/V)	Ant. Factor	Cable Loss	AMP Gain (dB)	ATT (dB)	Duty (dB)	Total (dB $\mu$ V/m)	Limits (dB $\mu$ V/m)	Margin (dB)
<b>Multiple Transmit</b>											
5 661.11	55.12	Peak	H	34.10	11.55	44.67	-	-	56.10	104.67	48.57
5 715.00	55.88	Peak	H	34.16	11.77	44.63	-	-	57.18	109.95	52.77
5 722.23	54.78	Peak	H	34.19	11.77	44.62	-	-	56.12	116.96	60.84
5 852.66	53.23	Peak	H	34.61	11.90	44.52	-	-	55.22	118.57	63.35
5 855.47	55.21	Peak	H	34.62	11.90	44.52	-	-	57.21	107.70	50.49
5 924.38	55.59	Peak	H	34.90	11.90	44.46	-	-	57.93	104.70	46.77
5 697.18	54.83	Peak	V	34.10	11.77	44.64	-	-	56.06	103.08	47.02
5 713.48	55.62	Peak	V	34.15	11.77	44.63	-	-	56.91	110.37	53.46
5 720.77	53.86	Peak	V	34.18	11.77	44.62	-	-	55.19	115.47	60.28
5 854.59	54.76	Peak	V	34.62	11.90	44.52	-	-	56.76	111.92	55.16
5 858.57	55.06	Peak	V	34.63	11.90	44.51	-	-	57.08	110.08	53.00
5 915.98	55.33	Peak	V	34.86	11.90	44.47	-	-	57.62	76.46	18.84

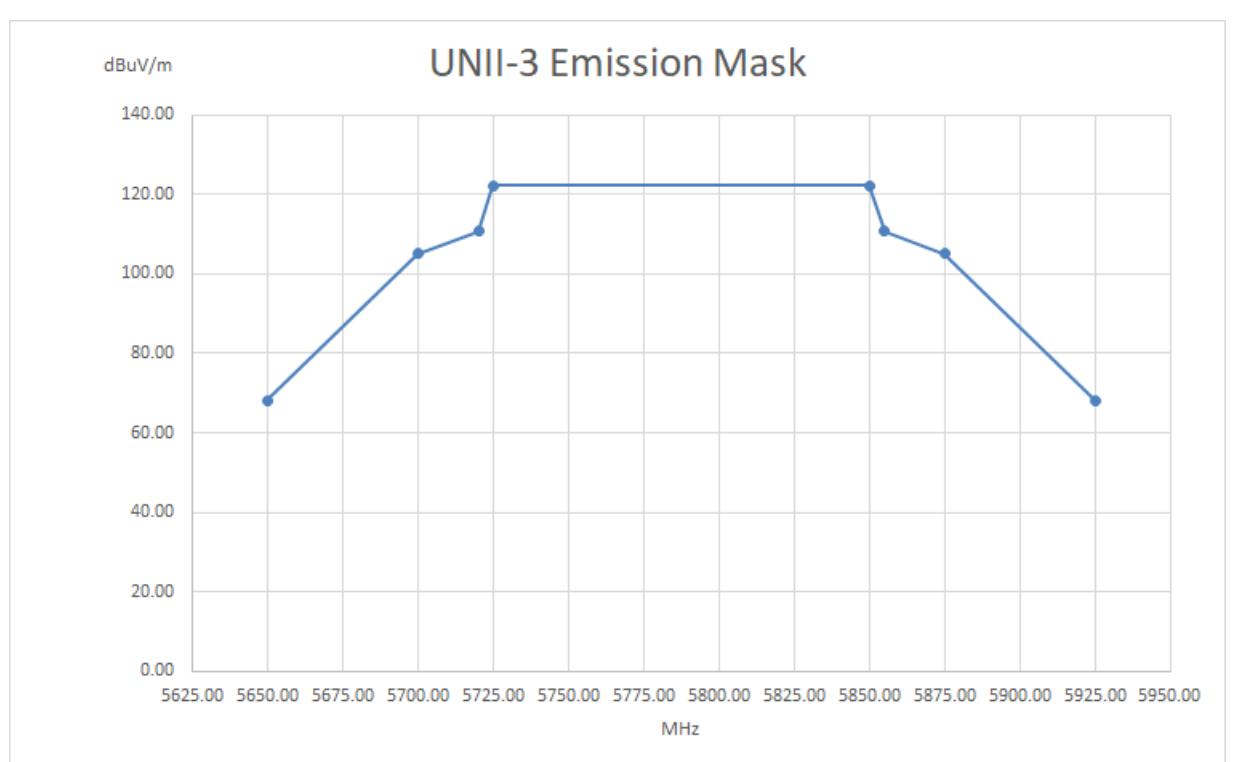
Tabulated test data for Restricted Band

Remark - "H": Horizontal, "V": Vertical

Margin (dB) = Limits (dB $\mu$ V/m) - Emission Level (dB $\mu$ V/m)

## 14.7.5 U-NII-3 Emission Limits

### 14.7.5.1 Emission Mask Plots



Remark.

- . Title 47 → Part 15 → Subpart E—UNLICENSED NATIONAL INFORMATION INFRASTRUCTURE DEVICES

§ 15.407 General technical requirements.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of  $-27 \text{ dBm/MHz}$  at  $75 \text{ MHz}$  or more above or below the band edge increasing linearly to  $10 \text{ dBm/MHz}$  at  $25 \text{ MHz}$  above or below the band edge, and from  $25 \text{ MHz}$  above or below the band edge increasing linearly to a level of  $15.6 \text{ dBm/MHz}$  at  $5 \text{ MHz}$  above or below the band edge, and from  $5 \text{ MHz}$  above or below the band edge increasing linearly to a level of  $27 \text{ dBm/MHz}$  at the band edge.

## 15. CONDUCTED EMISSION TEST

### 15.1 Operating environment

Temperature : 24 °C

Relative humidity : 52 % R.H.

### 15.2 Test set-up

The EUT was placed on a wooden table, 0.8 m height above the floor. Power was fed to the EUT through a  $50 \Omega / 50 \mu\text{H} + 5 \Omega$  Artificial Mains Network (AMN). The ground plane was electrically bonded to the reference ground system and all power lines were filtered from ambient.

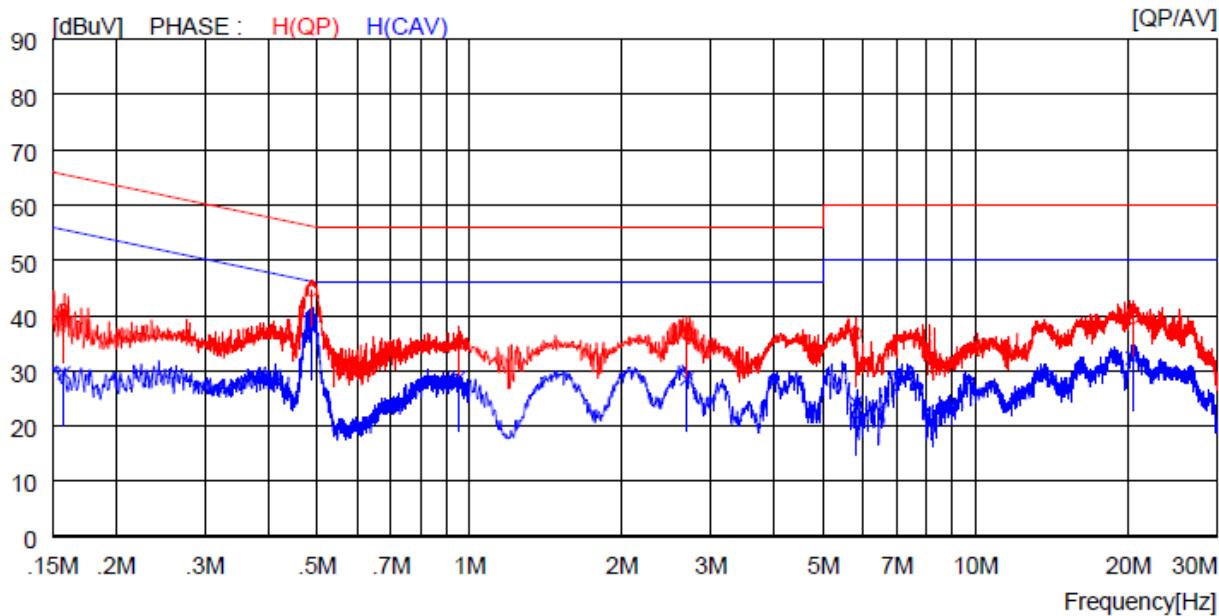
### 15.3 Test Date

September 26, 2022 ~ October 21, 2022

## 15.4 Test data for WLAN 5 GHz

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE
- Antenna 1, Antenna 2 and Multiple transmit tested, but the worst data were recorded.

LIMIT : EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Quasi-Peak Limits (Mains Ports)  
EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Average Limits (Mains Ports)



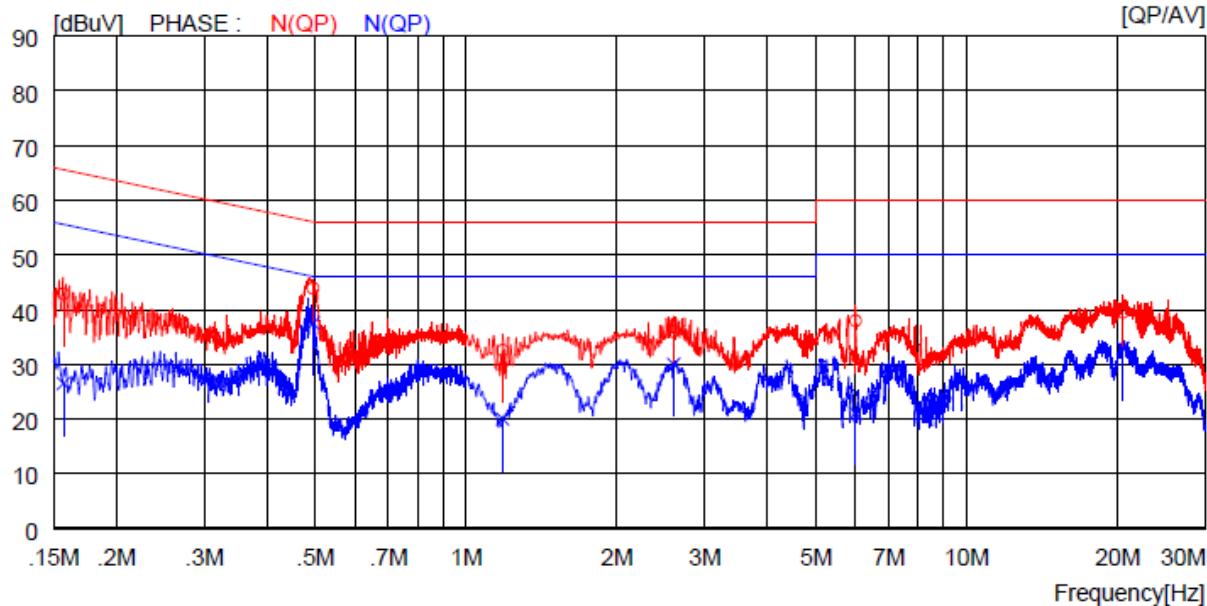
NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15800	31.0	----	10.0	41.0	----	65.6	----	24.6	----	H (QP)
2	0.48700	34.6	----	10.0	44.6	----	56.2	----	11.6	----	H (QP)
3	0.95200	24.9	----	10.0	34.9	----	56.0	----	21.1	----	H (QP)
4	2.68800	26.7	----	10.1	36.8	----	56.0	----	19.2	----	H (QP)
5	5.80000	26.5	----	10.2	36.7	----	60.0	----	23.3	----	H (QP)
6	20.43000	29.2	----	10.5	39.7	----	60.0	----	20.3	----	H (QP)
7	0.15800	----	19.6	10.0	----	29.6	----	55.6	----	26.0	H (CAV)
8	0.48700	----	27.7	10.0	----	37.7	----	46.2	----	8.5	H (CAV)
9	0.95200	----	18.7	10.0	----	28.7	----	46.0	----	17.3	H (CAV)
10	2.68800	----	18.4	10.1	----	28.5	----	46.0	----	17.5	H (CAV)
11	5.80000	----	14.1	10.2	----	24.3	----	50.0	----	25.7	H (CAV)
12	20.43000	----	21.8	10.5	----	32.3	----	50.0	----	17.7	H (CAV)

- Tested Line : NEUTRAL LINE

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

LIMIT : EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Quasi-Peak Limits (Mains Ports)  
 EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Average Limits (Mains Ports)

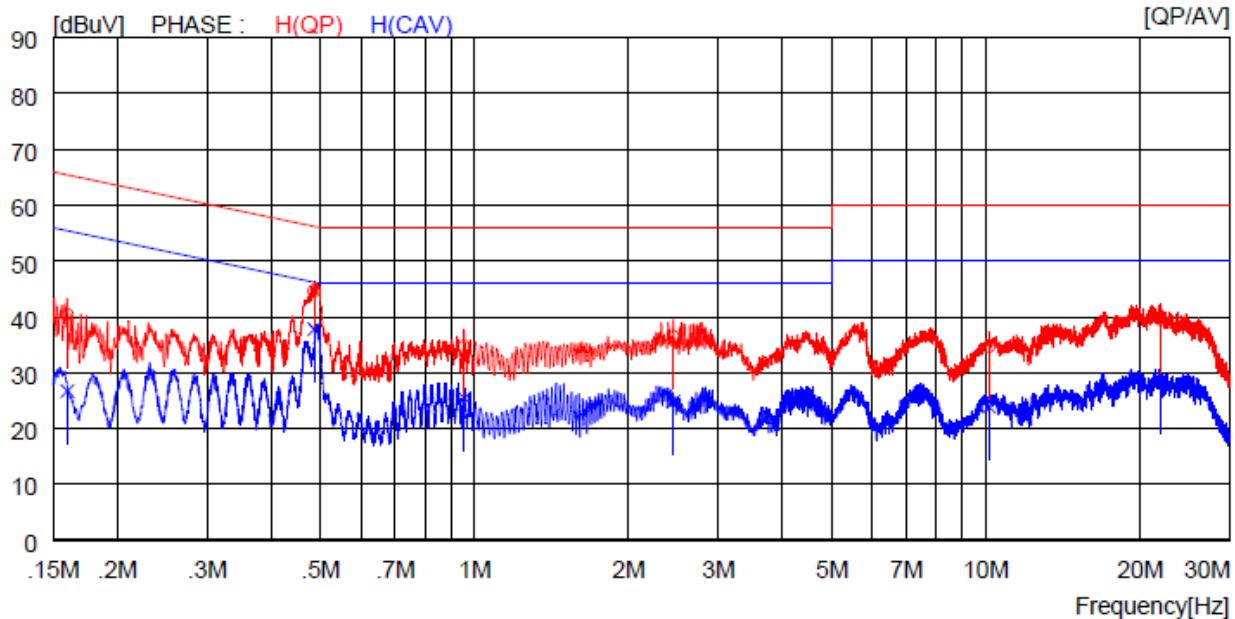


NO	FREQ [MHz]	READING		C. FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.15700	32.9	----	10.0	42.9	----	65.6	----	22.7	----	N (QP)
2	0.49500	33.9	----	10.0	43.9	----	56.1	----	12.2	----	N (QP)
3	1.18400	22.5	----	10.1	32.6	----	56.0	----	23.4	----	N (QP)
4	2.60000	25.9	----	10.1	36.0	----	56.0	----	20.0	----	N (QP)
5	6.00000	27.8	----	10.2	38.0	----	60.0	----	22.0	----	N (QP)
6	20.53000	29.0	----	10.5	39.5	----	60.0	----	20.5	----	N (QP)
7	0.15700	----	16.5	10.0	----	26.5	----	55.6	----	29.1	N (CAV)
8	0.49500	----	27.5	10.0	----	37.5	----	46.1	----	8.6	N (CAV)
9	1.18400	----	9.9	10.1	----	20.0	----	46.0	----	26.0	N (CAV)
10	2.60000	----	19.9	10.1	----	30.0	----	46.0	----	16.0	N (CAV)
11	6.00000	----	10.8	10.2	----	21.0	----	50.0	----	29.0	N (CAV)
12	20.53000	----	22.5	10.5	----	33.0	----	50.0	----	17.0	N (CAV)

### 15.5 Test data for Intermodulation Mode(WLAN 5 GHz + Bluetooth)

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE

LIMIT : EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Quasi-Peak Limits (Mains Ports)  
EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Average Limits (Mains Ports)



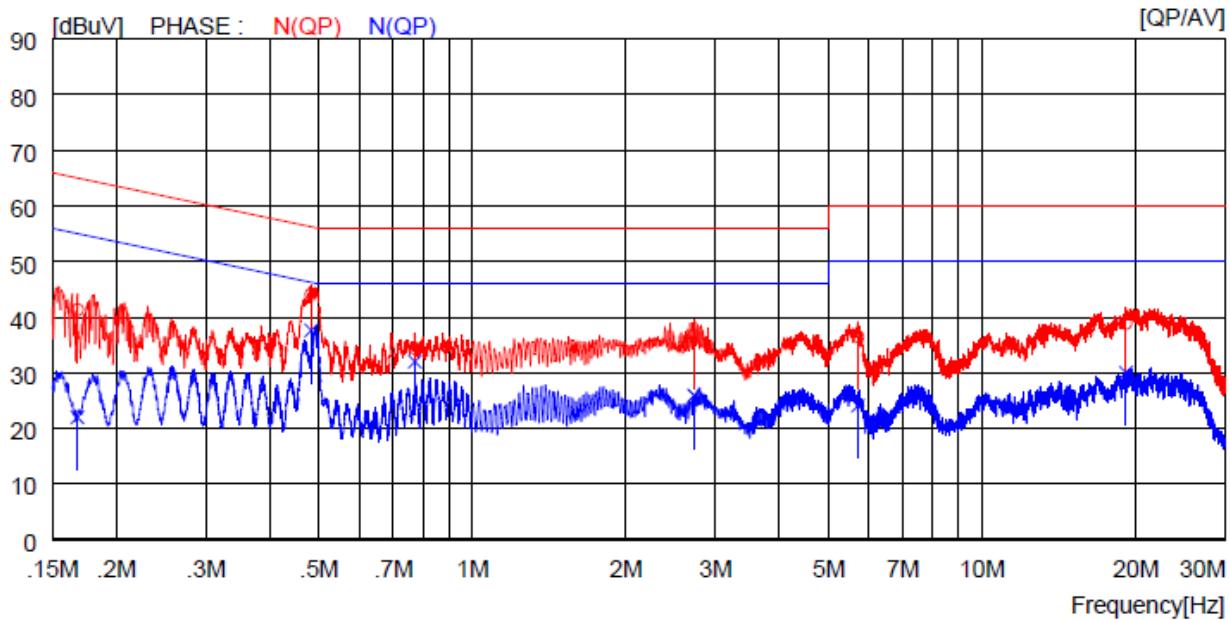
NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.16000	30.4	----	10.0	40.4	----	65.5	----	25.1	----	H (QP)
2	0.48600	34.7	----	10.0	44.7	----	56.2	----	11.5	----	H (QP)
3	0.95600	24.7	----	10.0	34.7	----	56.0	----	21.3	----	H (QP)
4	2.44800	26.4	----	10.1	36.5	----	56.0	----	19.5	----	H (QP)
5	10.15000	24.5	----	10.2	34.7	----	60.0	----	25.3	----	H (QP)
6	22.00000	29.0	----	10.5	39.5	----	60.0	----	20.5	----	H (QP)
7	0.16000	----	16.7	10.0	----	26.7	----	55.5	----	28.8	H (CAV)
8	0.48600	----	27.8	10.0	----	37.8	----	46.2	----	8.4	H (CAV)
9	0.95600	----	15.4	10.0	----	25.4	----	46.0	----	20.6	H (CAV)
10	2.44800	----	14.7	10.1	----	24.8	----	46.0	----	21.2	H (CAV)
11	10.15000	----	13.7	10.2	----	23.9	----	50.0	----	26.1	H (CAV)
12	22.00000	----	18.0	10.5	----	28.5	----	50.0	----	21.5	H (CAV)

- Tested Line : NEUTRAL LINE

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

LIMIT : EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Quasi-Peak Limits (Mains Ports)  
 EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Average Limits (Mains Ports)

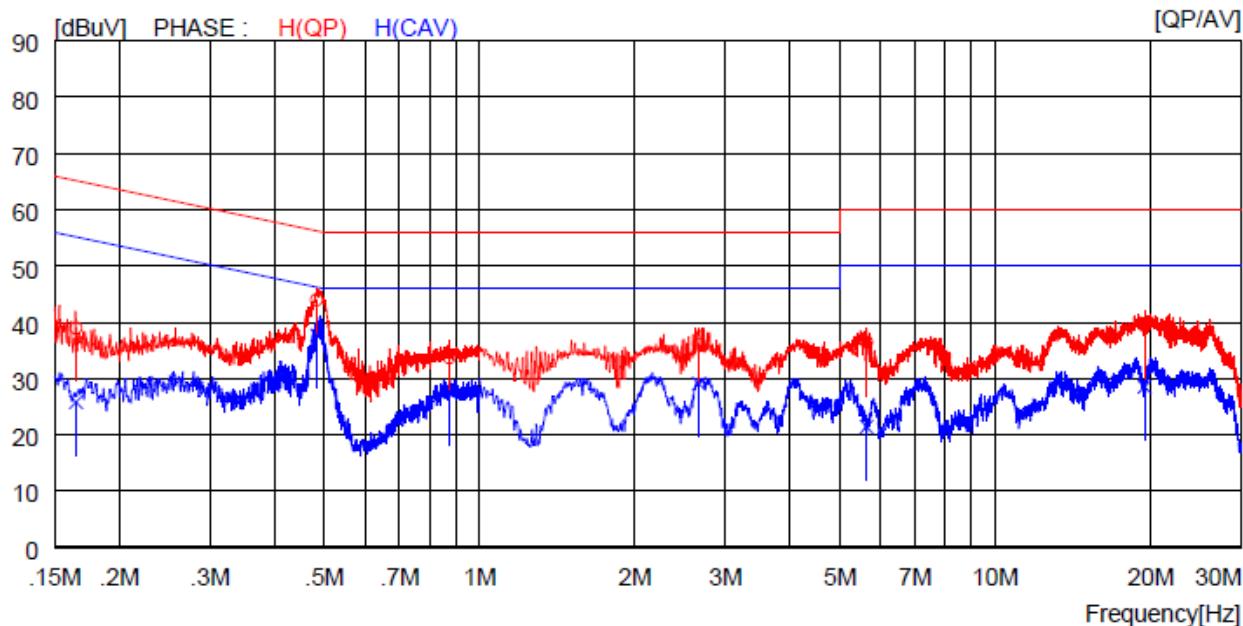


NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN [dBuV]	PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]		
1	0.16800	31.3	----	10.0	41.3	----	65.1	----	23.8	N (QP)
2	0.48300	34.1	----	10.0	44.1	----	56.3	----	12.2	N (QP)
3	0.77100	24.4	----	10.0	34.4	----	56.0	----	21.6	N (QP)
4	2.72400	26.6	----	10.1	36.7	----	56.0	----	19.3	N (QP)
5	5.71000	26.3	----	10.2	36.5	----	60.0	----	23.5	N (QP)
6	19.16000	28.4	----	10.5	38.9	----	60.0	----	21.1	N (QP)
7	0.16800	----	12.0	10.0	----	22.0	----	55.1	----	33.1 N (CAV)
8	0.48300	----	27.6	10.0	----	37.6	----	46.3	----	8.7 N (CAV)
9	0.77100	----	22.0	10.0	----	32.0	----	46.0	----	14.0 N (CAV)
10	2.72400	----	15.8	10.1	----	25.9	----	46.0	----	20.1 N (CAV)
11	5.71000	----	13.9	10.2	----	24.1	----	50.0	----	25.9 N (CAV)
12	19.16000	----	19.5	10.5	----	30.0	----	50.0	----	20.0 N (CAV)

### 15.6 Test data for Intermodulation Mode(WLAN 5 GHz + WLAN 2.4 GHz)

- Resolution bandwidth : 9 kHz
- Frequency range : 0.15 MHz ~ 30 MHz
- Tested Line : LIVE LINE

LIMIT : EN KN FCC VCCI CISPR Pub.32 Class B, Quasi-Peak Limits (Mains Ports)  
EN KN FCC VCCI CISPR Pub.32 Class B, Average Limits (Mains Ports)



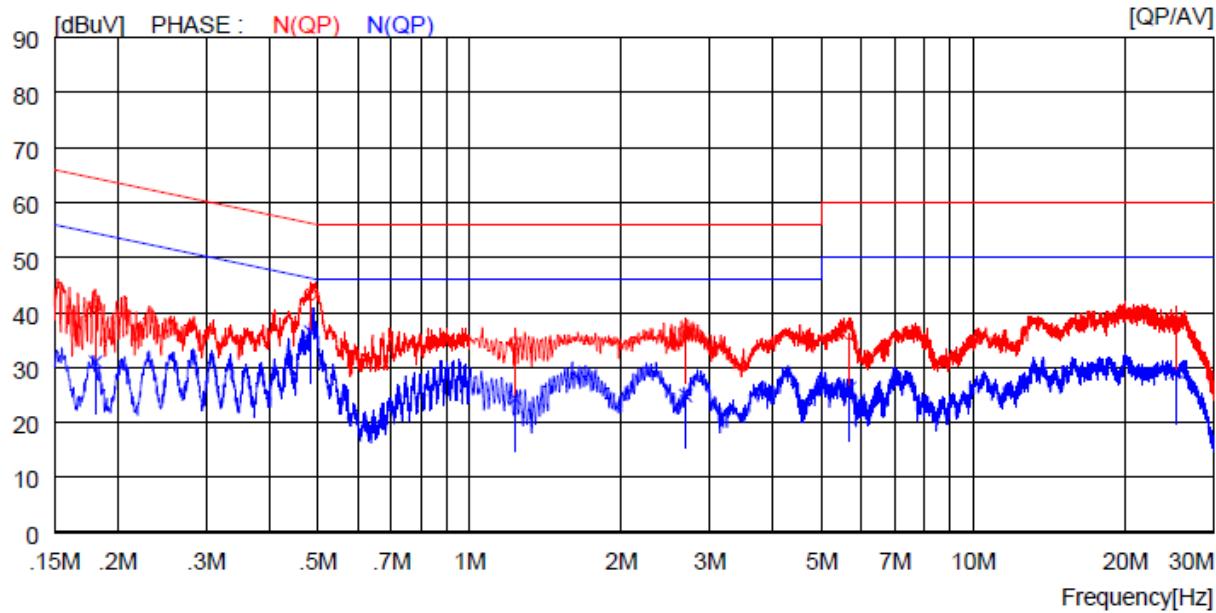
NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN [dBuV]	PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]		
1	0.16500	29.0	----	10.0	39.0	----	65.2	----	26.2	---- H (QP)
2	0.48400	34.0	----	10.0	44.0	----	56.3	----	12.3	---- H (QP)
3	0.87500	23.7	----	10.0	33.7	----	56.0	----	22.3	---- H (QP)
4	2.66400	26.0	----	10.1	36.1	----	56.0	----	19.9	---- H (QP)
5	5.63500	26.2	----	10.2	36.4	----	60.0	----	23.6	---- H (QP)
6	19.49000	28.9	----	10.5	39.4	----	60.0	----	20.6	---- H (QP)
7	0.16500	----	15.8	10.0	----	25.8	----	55.2	----	29.4 H (CAV)
8	0.48400	----	27.7	10.0	----	37.7	----	46.3	----	8.6 H (CAV)
9	0.87500	----	17.6	10.0	----	27.6	----	46.0	----	18.4 H (CAV)
10	2.66400	----	19.0	10.1	----	29.1	----	46.0	----	16.9 H (CAV)
11	5.63500	----	11.2	10.2	----	21.4	----	50.0	----	28.6 H (CAV)
12	19.49000	----	18.0	10.5	----	28.5	----	50.0	----	21.5 H (CAV)

- Tested Line : NEUTRAL LINE

Remark: Margin (dB) = Limit – Level (Result)

The emission level in above table is included the transducer factor that means insertion loss (LISN), cable loss and attenuator.

LIMIT : EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Quasi-Peak Limits (Mains Ports)  
 EN.KN.FCC.VCCI\_CISPR Pub.32 Class B, Average Limits (Mains Ports)



NO	FREQ [MHz]	READING		C.FACTOR [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	
1	0.18100	31.2	----	10.0	41.2	----	64.4	----	23.2	----	N (QP)
2	0.48400	33.3	----	10.0	43.3	----	56.3	----	13.0	----	N (QP)
3	1.23200	24.3	----	10.1	34.4	----	56.0	----	21.6	----	N (QP)
4	2.68400	26.4	----	10.1	36.5	----	56.0	----	19.5	----	N (QP)
5	5.68000	26.0	----	10.2	36.2	----	60.0	----	23.8	----	N (QP)
6	25.29000	27.7	----	10.6	38.3	----	60.0	----	21.7	----	N (QP)
7	0.18100	----	21.0	10.0	----	31.0	----	54.4	----	23.4	N (CAV)
8	0.48400	----	26.5	10.0	----	36.5	----	46.3	----	9.8	N (CAV)
9	1.23200	----	14.2	10.1	----	24.3	----	46.0	----	21.7	N (CAV)
10	2.68400	----	14.8	10.1	----	24.9	----	46.0	----	21.1	N (CAV)
11	5.68000	----	16.0	10.2	----	26.2	----	50.0	----	23.8	N (CAV)
12	25.29000	----	18.6	10.6	----	29.2	----	50.0	----	20.8	N (CAV)

## 16. DYNAMIC FREQUENCY SELECTION (DFS)

### 16.1 Operating environment

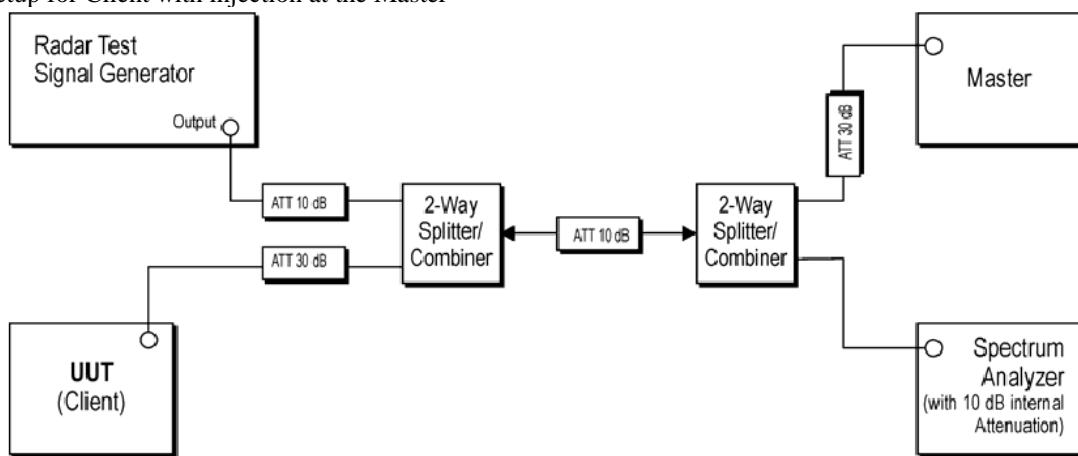
Temperature : 24 °C

Relative humidity : 52 % R.H.

### 16.2 Test set-ups

The FCC 06-96 and RSS-210 A9.3 describes a conducted test setup. A conducted test setup was used for this testing. Figure 1 shows the typical test setup. Each one channel selected between 5 250 MHz and 5 350 MHz, 5 470 MHz and 5 725 MHz is chosen for the testing.

Figure 1. Setup for Client with injection at the Master



The operational behavior and individual DFS requirements that are associated with these modes are as follows:

#### <Master Devices>

- The Master Device will use DFS in order to detect Radar Waveforms with received signal strength above the DFS Detection Threshold in the 5 250 – 5 350 MHz and 5 470 – 5 725 MHz bands. DFS is not required in the 5 150 – 5 250 MHz or 5 725 – 5 825 MHz bands.
- Before initiating a network on a Channel, the Master Device will perform a Channel Availability Check for a specified time duration (Channel Availability Check Time) to ensure that there is no radar system operating on the Channel, using DFS described under subsection a) above.
- The Master Device initiates a U-NII network by transmitting control signals that will enable other U-NII devices to Associate with the Master Device.
- During normal operation, the Master Device will monitor the Channel (In-Service Monitoring) to ensure that there is no radar system operating on the Channel, using DFS described under a).
- If the Master Device has detected a Radar Waveform during In-Service Monitoring as described under d), the Operating Channel of the U-NII network is no longer an Available Channel. The Master Device will instruct all associated Client Device(s) to stop transmitting on this Channel within the Channel Move Time. The transmissions during the Channel Move Time will be limited to the Channel Closing Transmission Time.

- f) Once the Master Device has detected a Radar Waveform it will not utilize the Channel for the duration of the Non-Occupancy Period. 3
- g) If the Master Device delegates the In-Service Monitoring to a Client Device, then the combination will be tested to the requirements described under d) through f) above.

#### <Client Devices>

- a) A Client Device will not transmit before having received appropriate control signals from a Master Device.
- b) A Client Device will stop all its transmissions whenever instructed by a Master Device to which it is associated and will meet the Channel Move Time and Channel Closing Transmission Time requirements. The Client Device will not resume any transmissions until it has again received control signals from a Master Device.
- c) If a Client Device is performing In-Service Monitoring and detects a Radar Waveform above the DFS Detection Threshold, it will inform the Master Device. This is equivalent to the Master Device detecting the Radar Waveform and d) through f) of section 5.1.1 apply.
- d) Irrespective of Client Device or Master Device detection the Channel Move Time and Channel Closing Transmission Time requirements remain the same.
- e) The client test frequency must be monitored to ensure no transmission of any type has occurred for 30 minutes. Note: If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear.

#### <Channel Connection Information>

- a) Master Devices : RT-AX88U
- b) Client(=EUT) Devices : AN-VC22PR
- c) Connect to test channel : See next page for measurement data.

Note : TPC is not required since the maximum EIRP is less than 500mW(27dBm).

### 16.3 DFS Test Signals

**Table 5 – Short Pulse Radar Test Waveforms**

Radar Type	Pulse Width ( $\mu\text{sec}$ )	PRI ( $\mu\text{sec}$ )	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\lceil \left( \frac{1}{\frac{360}{19 \cdot 10^6}} \right) \right\rceil$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 $\mu\text{sec}$ , with a minimum increment of 1 $\mu\text{sec}$ , excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

**Table 6 – Long Pulse Radar Test Waveform**

Radar Type	Pulse Width ( $\mu\text{sec}$ )	Chirp Width (MHz)	PRI ( $\mu\text{sec}$ )	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

## 16.4 Technical Requirement Specification

**Table 1: Applicability of DFS Requirements Prior to Use of a Channel**

<b>Requirement</b>	<b>Operational Mode</b>		
	<b>Master</b>	<b>Client (without DFS )</b>	<b>Client (with DFS )</b>
<i>Non-Occupancy Period</i>	Yes	Not required	Yes
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Availability Check Time</i>	Yes	Not required	Not required
<i>Uniform Spreading</i>	Yes	Not required	Not required
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

**Table 2: Applicability of DFS requirements during normal operation**

<b>Requirement</b>	<b>Operational Mode</b>		
	<b>Master</b>	<b>Client (without DFS)</b>	<b>Client (with DFS)</b>
<i>DFS Detection Threshold</i>	Yes	Not required	Yes
<i>Channel Closing Transmission Time</i>	Yes	Yes	Yes
<i>Channel Move Time</i>	Yes	Yes	Yes
<i>U-NII Detection Bandwidth</i>	Yes	Not required	Yes

## 16.5 Test Date

September 26, 2022 ~ October 21, 2022

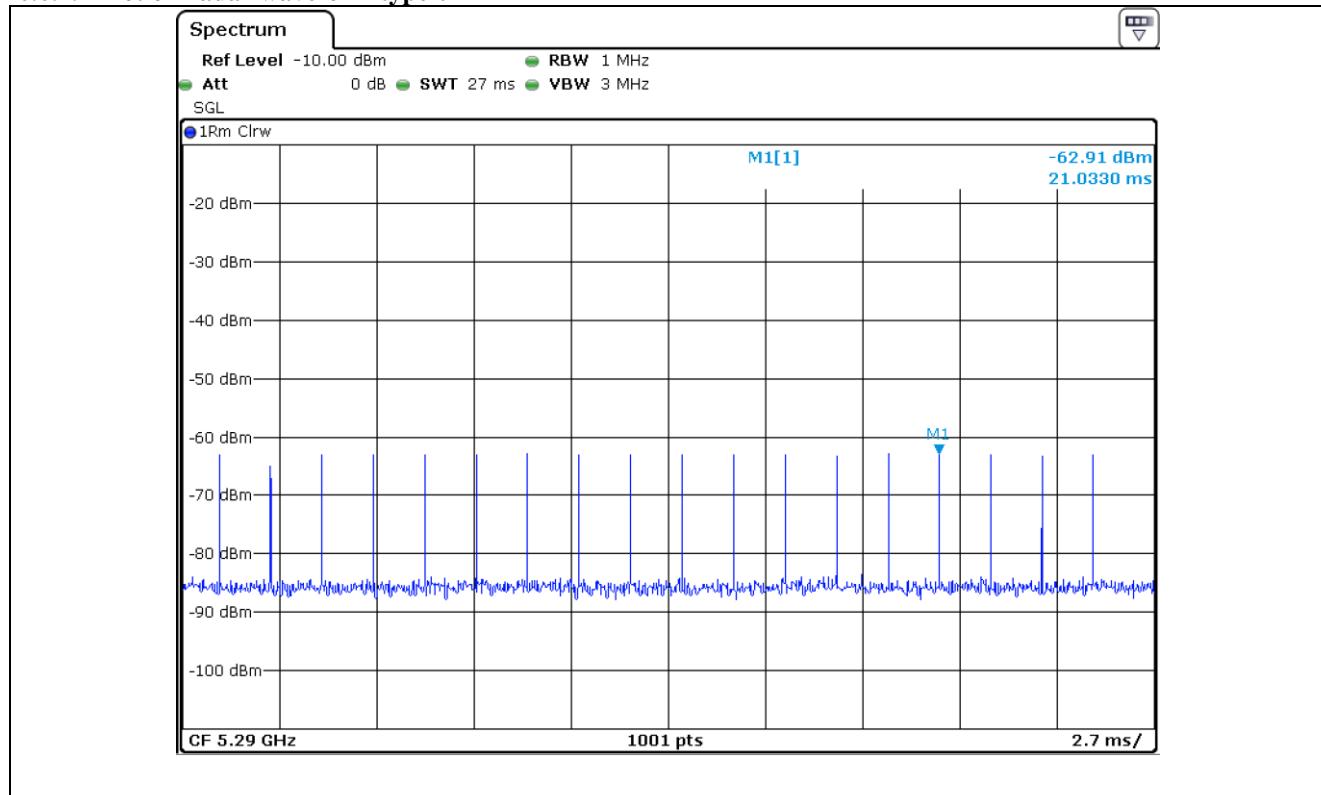
## 16.6 Test data

Band	Frequency (MHz)	Channel move time(s)		Channel closing transmission time(ms)	
		Measured	Limit	Measured	Limit
UNII 2A	5 290.00	1.06	10.00	4.4	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period.
UNII 2C	5 530.00	0.82		4.4	

Note. Channel closing transmission time:  $0.4 \times 11 = 4.4$  ms,  $0.4 \times 11 = 4.4$  ms

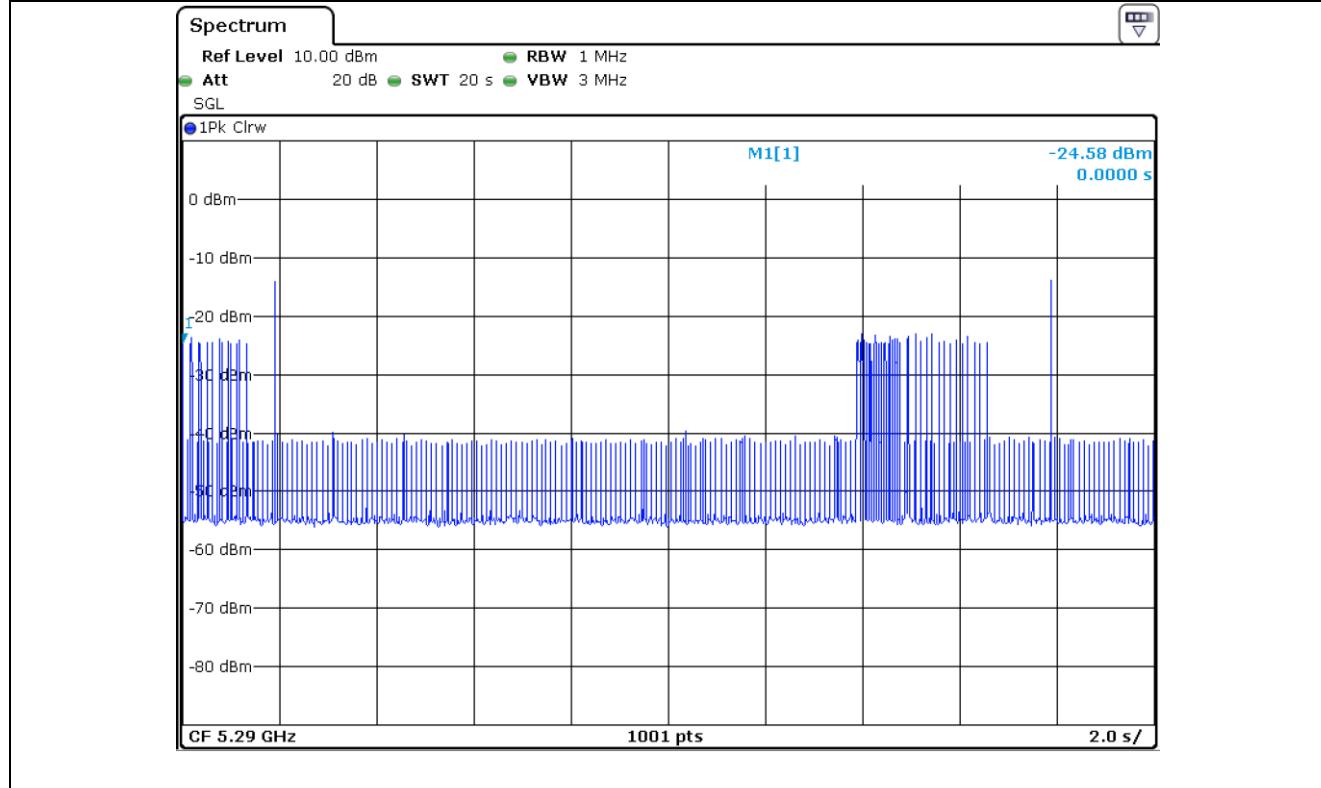
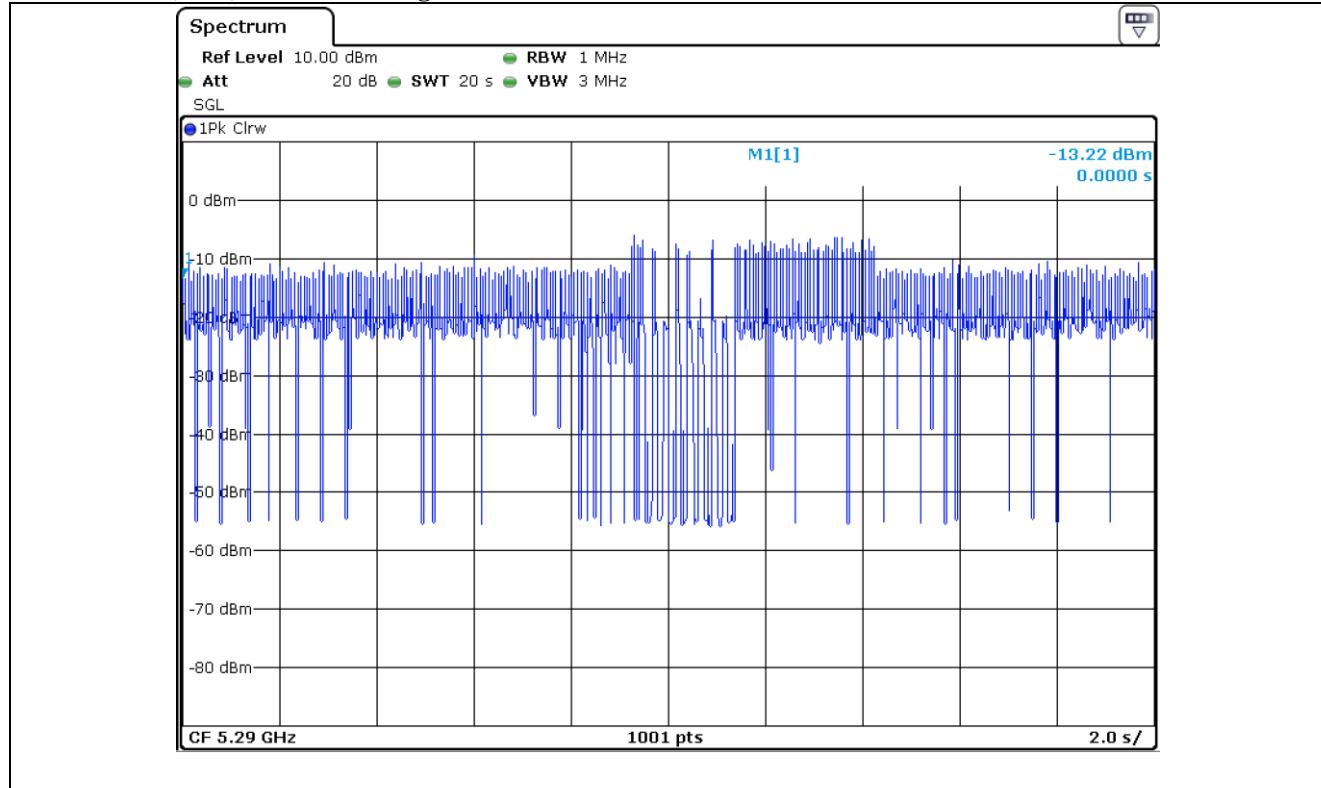
### 16.6.1 UNII 2A

#### 16.6.1.1 Plot of Radar waveform type 0

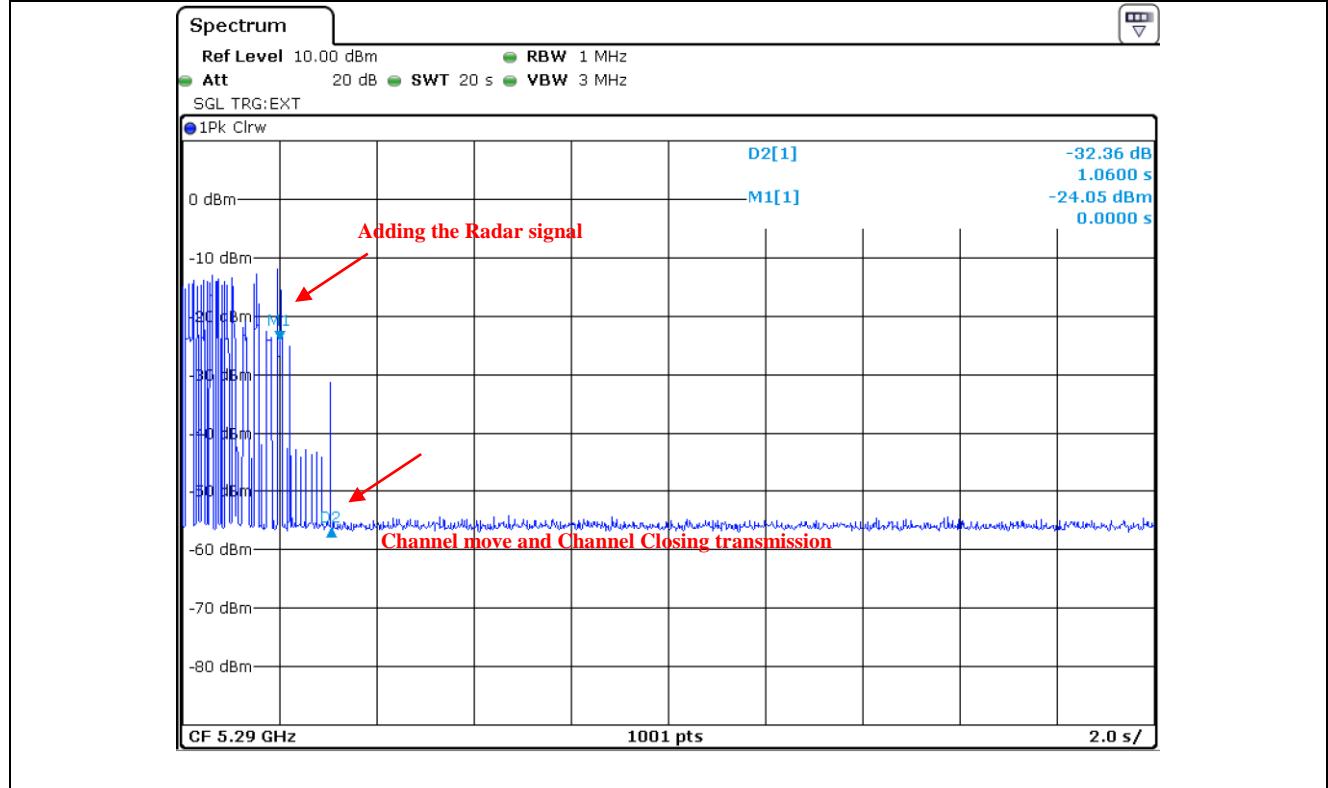


Note: The calibrated conducted DFS detection threshold level is set to -62.91 dBm

DFS Detection Thresholds Level :  $(-62 + 1 + 2.48) = -58.52$  dBm

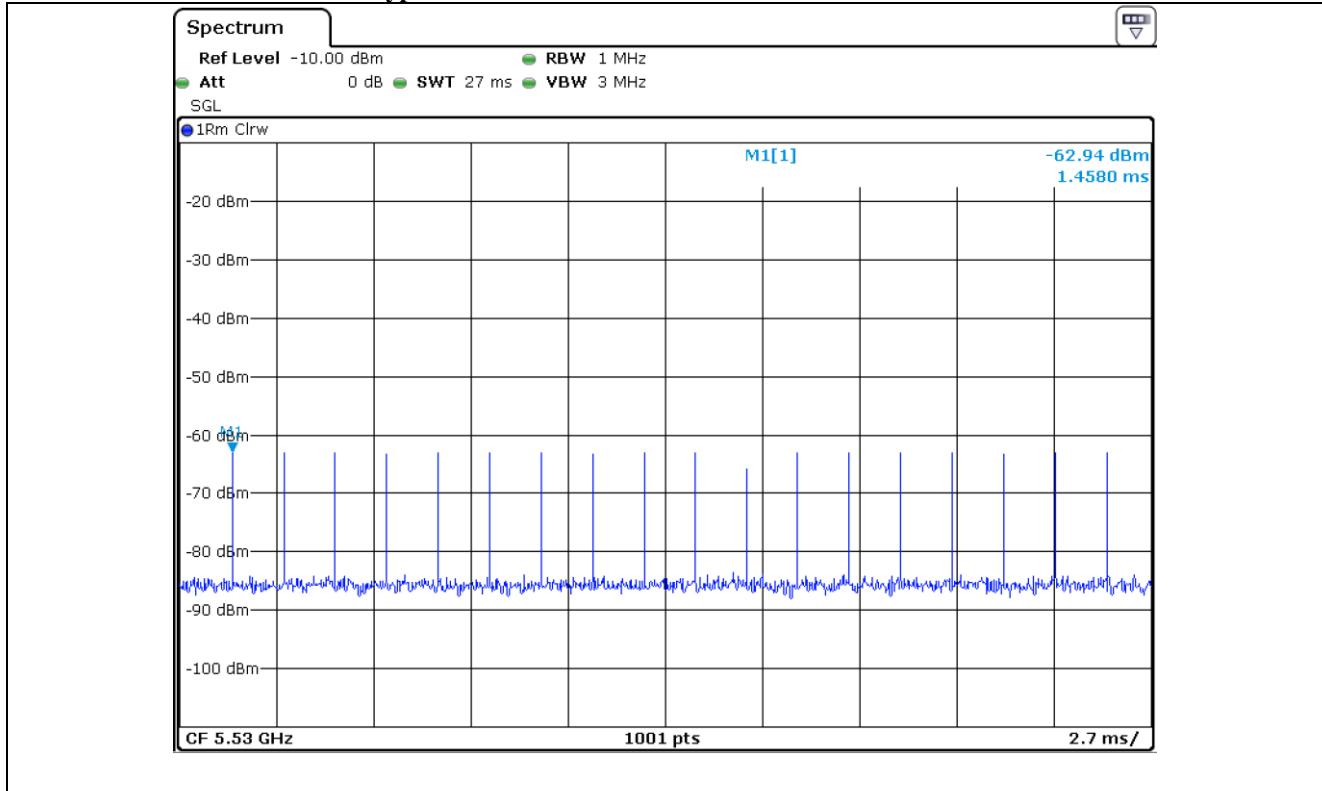
**16.6.1.2 No traffic signal(master signal)****16.6.1.3 Client(EUT) Data Traffic Signal**

#### 16.6.1.4 Channel move and Channel Closing transmission time



## 16.6.2 UNII 2C

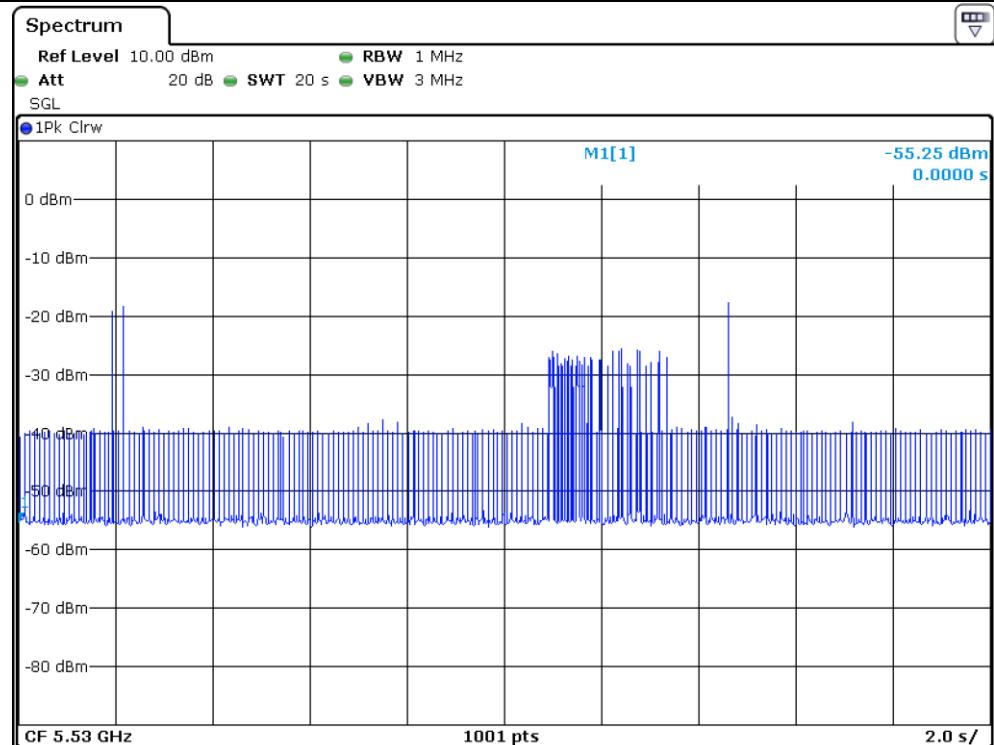
### 16.6.2.1 Plot of Radar waveform type 1



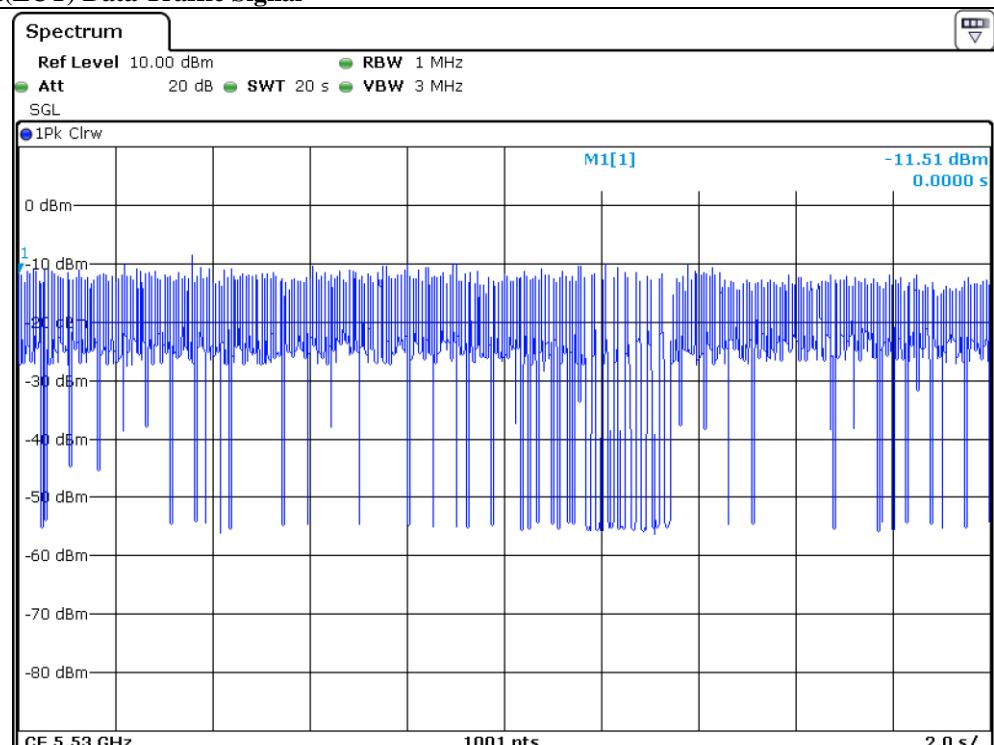
Note: The calibrated conducted DFS detection threshold level is set to **-62.94 dBm**

DFS Detection Thresholds Level :  $(-62 + 1 + 2.48) = -58.22 \text{ dBm}$

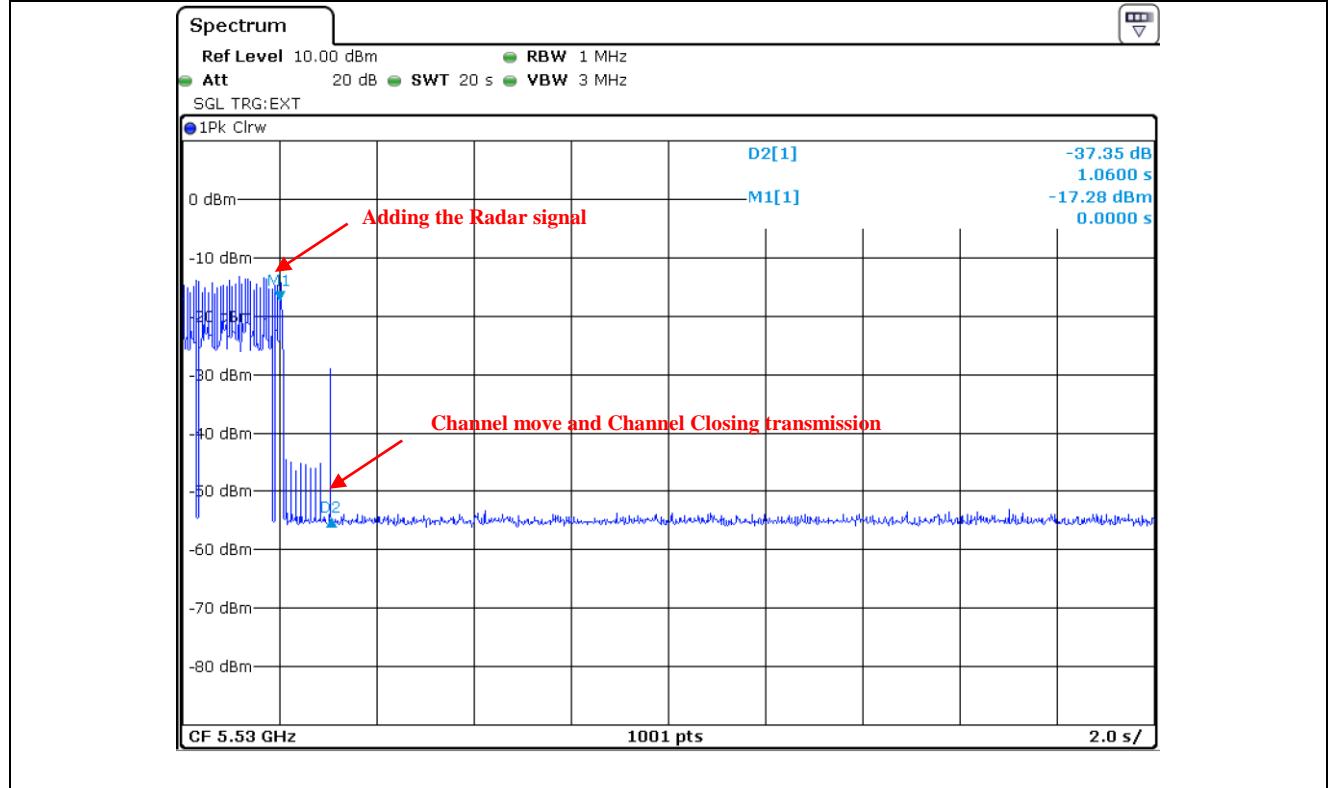
### 16.6.2.2 No traffic signal(master signal)



### 16.6.2.3 Client(EUT) Data Traffic Signal



#### 16.6.2.4 Channel move and Channel Closing transmission time



## 17. LIST OF TEST EQUIPMENT

Model Number	Manufacturer	Description	Serial Number	Last Cal.(Interval)
FSV30	Rohde & Schwarz	Signal Analyzer	101372	Jul. 14, 2022 (1Y)
ESU	Rohde & Schwarz	EMI Test Receiver	100261	Mar. 07, 2022 (1Y)
SMBV100A	Rohde & Schwarz	Vector Signal Generator	260423	Jan. 17, 2022 (1Y)
QPD2-0-26500-2-S	Qualwave	Combiner	22175075	Jun. 21, 2022 (1Y)
QPD2-0-26500-2-S	Qualwave	Combiner	22175076	Jun. 21, 2022 (1Y)
89-30-11	WEINSCHEL	Fixed Coaxial Attenuator	687	Jan. 06, 2022 (1Y)
8494B	Agilent	Attenuator	MY42142590	Jan. 19, 2022 (1Y)
RT-AX88U	ASUS	Dual Band Gigabit Router	N/A	N/A
310N	Sonoma Instrument	Pre-Amplifier	392756	Oct. 13, 2022 (1Y)
SCU18	Rohde & Schwarz	Signal Conditioning unit	102266	Jul. 12, 2022 (1Y)
SCU40A	Rohde & Schwarz	Signal Conditioning unit	100436	Jan. 18, 2022 (1Y)
WT-A5852-R12	Microwave	Cavity Band Rejection Filter	WT22040502-3	Jun. 21, 2022 (1Y)
WT-A5851-R12	Microwave	Cavity Band Rejection Filter	WT22040502-2	Jun. 21, 2022 (1Y)
WT-A1856-R12	Microwave	Cavity Band Rejection Filter	WT22040502-4	Jun. 21, 2022 (1Y)
1205D	INTERACT	DC Power Supply	00240704	Apr. 22, 2022 (1Y)
SH-242	ESPEC	Temperature & Humidity Chamber	0093001589	Mar. 18, 2022 (1Y)
DT2000-2t	Innco System	Turn Table	N/A	N/A
MA-4640-XPET	Innco System	Antenna Master	MA4640/652/43100318/P	N/A
CO3000	Innco System	Controller	1026/40960617/P	N/A
FMZB 1513	Schwarzbeck	Loop Antenna	1513-235	Mar. 24, 2022 (2Y)
HLP-2008	TDK	Hybrid Antenna	131316	Mar. 07, 2022 (2Y)
AH-118	Com-Power	Horn Antenna	10050061	Oct. 21, 2022 (1Y)
BBHA9170	Schwarzbeck	Horn Antenna	BBHA9170178	Jan. 06, 2022(1Y)
ESCI	Rohde & Schwarz	EMI Test RECEIVER	101012	Oct. 12, 2022 (1Y)
NSLK8128	Schwarzbeck	AMN	8218-216	Mar. 14, 2022 (1Y)
ESH3-Z2	Rohde & Schwarz	PULSE LIMITER	100655	Mar. 14, 2022 (1Y)