FCC PART 15
TEST REPORT
No. I16Z40476-EMC03

for

OnePlus Technology(Shenzhen) Co., Ltd.

Mobile Phone

Model name: ONEPLUS A3000

With

FCC ID: 2ABZ2-A3000

Hardware Version: 16

Software Version: Qxygen OS 3.1.0

Issued Date: 2016-05-05

中国认可
国际互认
检测
TESTING
CNAS L0570

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

FCC 2.948 Listed: No. 525429

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REPORT HISTORY

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CONTENTS

CONTENTS **3**

1. TEST LATORATORY **9**

1.1. TESTING LOCATION 9
1.2. TESTING ENVIRONMENT 9
1.3. PROJECT DATA 9
1.4. SIGNATURE 9

2. CLIENT INFORMATION **10**

2.1. APPLICANT INFORMATION 10
2.2. MANUFACTURER INFORMATION 10

3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) **11**

3.1. ABOUT EUT 11
3.2. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST 11
3.3. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST 11
3.4. GENERAL DESCRIPTION 12
3.5. EUT SET-UPS 12

4. REFERENCE DOCUMENTS **13**

4.1. DOCUMENTS SUPPLIED BY APPLICANT 13
4.2. REFERENCE DOCUMENTS FOR TESTING 13

5. LABORATORY ENVIRONMENT **14**

6. SUMMARY OF TEST RESULTS **15**

6.1. SUMMARY OF TEST RESULTS 15
6.2. STATEMENTS 15
6.3. TEST CONDITIONS 15

7. TEST EQUIPMENTS UTILIZED **16**

ANNEX A: MEASUREMENT RESULTS **17**

A.1. MEASUREMENT METHOD 17
A.2. BAND EDGES COMPLIANCE 18
FIG. 1 BAND EDGES (802.11A, 5180MHZ) 19
FIG. 2 BAND EDGES (802.11N-HT20, 5180MHZ) 20
FIG. 3 BAND EDGES (802.11N-HT40, 5190MHZ) 20
FIG. 4 BAND EDGES (802.11AC-HT20, 5180MHZ) 21
FIG. 5 BAND EDGES (802.11AC-HT40, 5190MHZ) 21
FIG. 6 BAND EDGES (802.11A, 5320MHZ) 22
FIG. 7 BAND EDGES (802.11N-HT20, 5320MHZ) 22
FIG. 8 BAND EDGES (802.11N-HT40, 5310MHZ) 23
FIG. 9 BAND EDGES (802.11AC-HT20, 5320MHZ) 23
FIG. 10 BAND EDGES (802.11AC-HT40, 5310MHZ) 24

FIG. 11 BAND EDGES (802.11A, 5500MHZ) 24
FIG. 12 BAND EDGES (802.11A, 5700MHZ) 25
FIG. 13 BAND EDGES (802.11N-HT20, 5500MHZ) 25
FIG. 14 BAND EDGES (802.11N-HT20, 5700MHZ) 26
FIG. 15 BAND EDGES (802.11N-HT40, 5510MHZ) 26
FIG. 16 BAND EDGES (802.11N-HT40, 5670MHZ) 27
FIG. 17 BAND EDGES (802.11AC-HT20, 5500MHZ) 27
FIG. 18 BAND EDGES (802.11AC-HT20, 5700MHZ) 28
FIG. 19 BAND EDGES (802.11AC-HT40, 5510MHZ) 28
FIG. 20 BAND EDGES (802.11AC-HT40, 5670MHZ) 29
FIG. 21 BAND EDGES (802.11AC-HT80, 5210MHZ) 29
FIG. 22 BAND EDGES (802.11AC-HT80, 5290MHZ) 30
FIG. 23 BAND EDGES (802.11AC-HT80, 5530MHZ) 30
A.3. TRANSMITTER SPURIOUS EMISSION 31
FIG. 24 RADIATED SPURIOUS EMISSION (802.11A, CH36, 1 GHZ-3 GHZ) 40
FIG. 25 RADIATED SPURIOUS EMISSION (802.11A, CH36, 3 GHZ-6 GHZ) 40
FIG. 26 RADIATED SPURIOUS EMISSION (802.11A, CH36, 6 GHZ-18 GHZ) 41
FIG. 27 RADIATED SPURIOUS EMISSION (802.11A, CH40, 30 MHZ-1 GHZ) 41
FIG. 28 RADIATED SPURIOUS EMISSION (802.11A, CH40, 1 GHZ-3GHZ) 42
FIG. 29 RADIATED SPURIOUS EMISSION (802.11A, CH40, 3GHZ-6GHZ) 42
FIG. 30 RADIATED SPURIOUS EMISSION (802.11A, CH40, 6 GHZ-18 GHZ) 43
FIG. 31 RADIATED SPURIOUS EMISSION (802.11A, CH40, 18 GHZ-26.5 GHZ) 43
FIG. 32 RADIATED SPURIOUS EMISSION (802.11A, CH40, 26.5 GHZ-40 GHZ) 44
FIG. 33 RADIATED SPURIOUS EMISSION (802.11A, CH48, 1 GHZ-3 GHZ) 44
FIG. 34 RADIATED SPURIOUS EMISSION (802.11A, CH48, 3GHZ- 6GHZ) 45
FIG. 35 RADIATED SPURIOUS EMISSION (802.11A, CH48, 6 GHZ-18GHZ) 45
FIG. 36 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH36, 1 GHZ-3GHZ) 46
FIG. 37 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH36, 3GHZ-6GHZ) 46
FIG. 38 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH36, 6 GHZ-18GHZ) 47
FIG. 39 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH40, 30 MHZ-1 GHZ) 47
FIG. 40 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH40, 1 GHZ-3 GHZ) 48
FIG. 41 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH40, 3 GHZ-6 GHZ) 48
FIG. 42 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH40, 6 GHZ-18 GHZ) 49
FIG. 43 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH40, 18 GHZ-26.5 GHZ) 49
FIG. 44 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH40, 26.5 GHZ-40 GHZ) 50
FIG. 45 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH48, 1 GHZ-3GHZ) 50
FIG. 46 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH48, 3 GHZ-6GHZ) 51
FIG. 47 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH48, 6 GHZ-18 GHZ) 51
FIG. 48 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH38, 30 MHZ-1 GHZ) 52
FIG. 49 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH38, 1 GHZ-3GHZ) 52
FIG. 50 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH38, 3 GHZ-6GHZ) 53
FIG. 51 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH38, 6 GHZ-18 GHZ) 53
FIG. 52 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH38, 18 GHZ-26.5 GHZ) 54
FIG. 53 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH38, 26.5 GHZ-40 GHZ) 54

FIG. 54 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH46, 1 GHZ-3GHZ) 55
FIG. 55 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH46, 3GHZ-6GHZ) 55
FIG. 56 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH46, 6 GHZ-18 GHZ) 56
FIG. 57 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH36, 1 GHZ-3 GHZ) 56
FIG. 58 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH36, 3 GHZ-6 GHZ) 57
FIG. 59 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH36, 6 GHZ-18GHZ) 57
FIG. 60 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH40, 30 MHZ-1 GHZ) 58
FIG. 61 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH40, 1 GHZ-3 GHZ) 58
FIG. 62 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH40, 3 GHZ-6 GHZ) 59
FIG. 63 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH40, 6 GHZ-18 GHZ) 59
FIG. 64 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH40, 18 GHZ-26.5 GHZ) 60
FIG. 65 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH40, 26.5 GHZ-40 GHZ) 60
FIG. 66 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH48, 1 GHZ-3GHZ) 61
FIG. 67 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH48, 3 GHZ-6GHZ) 61
FIG. 68 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH48, 6 GHZ-18 GHZ) 62
FIG. 69 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH38, 30 MHZ-1 GHZ) 62
FIG. 70 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH38, 1 GHZ-3 GHZ) 63
FIG. 71 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH38, 3 GHZ-6 GHZ) 63
FIG. 72 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH38, 6 GHZ-18 GHZ) 64
FIG. 73 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH38, 18 GHZ-26.5 GHZ) 64
FIG. 74 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH38, 26.5 GHZ-40 GHZ) 65
FIG. 75 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH46, 1 GHZ-3 GHZ) 65
FIG. 76 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH46, 3 GHZ-6 GHZ) 66
FIG. 77 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH46, 6 GHZ-18 GHZ) 66
FIG. 78 RADIATED SPURIOUS EMISSION (802.11A, CH52, 1 GHZ-3 GHZ) 76
FIG. 79 RADIATED SPURIOUS EMISSION (802.11A, CH52, 3 GHZ-6 GHZ) 76
FIG. 80 RADIATED SPURIOUS EMISSION (802.11A, CH52, 6 GHZ-18 GHZ) 77
FIG. 81 RADIATED SPURIOUS EMISSION (802.11A, CH56, 30 MHZ-1 GHZ) 77
FIG. 82 RADIATED SPURIOUS EMISSION (802.11A, CH56, 1 GHZ-3 GHZ) 78
FIG. 83 RADIATED SPURIOUS EMISSION (802.11A, CH56, 3 GHZ-6 GHZ) 78
FIG. 84 RADIATED SPURIOUS EMISSION (802.11A, CH56, 6 GHZ-18 GHZ) 79
FIG. 85 RADIATED SPURIOUS EMISSION (802.11A, CH56, 18 GHZ-26.5 GHZ) 79
FIG. 86 RADIATED SPURIOUS EMISSION (802.11A, CH56, 26.5 GHZ-40 GHZ) 80
FIG. 87 RADIATED SPURIOUS EMISSION (802.11A, CH64, 1 GHZ-3 GHZ) 80
FIG. 88 RADIATED SPURIOUS EMISSION (802.11A, CH64, 3GHZ- 6 GHZ) 81
FIG. 89 RADIATED SPURIOUS EMISSION (802.11A, CH64, 6 GHZ-18GHZ) 81
FIG. 90 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH52, 1 GHZ-3 GHZ) 82
FIG. 91 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH52, 3 GHZ-6GHZ) 82
FIG. 92 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH52, 6 GHZ-18GHZ) 83
FIG. 93 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH56, 30 MHZ-1 GHZ) 83
FIG. 94 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH56, 1 GHZ-3 GHZ) 84
FIG. 95 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH56, 3GHZ-6 GHZ) 84
FIG. 96 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH56, 6 GHZ-18 GHZ) 85
FIG. 97 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH56, 18 GHZ-26.5 GHZ) 85

FIG. 98 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH56, 26.5 GHZ-40 GHZ) 86
FIG. 99 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH64, 1 GHZ-3GHZ) 86
FIG. 100 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH64, 3 GHZ-6GHZ) 87
FIG. 101 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH64, 6 GHZ-18 GHZ) 87
FIG. 102 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH54, 30 MHZ-1 GHZ) 88
FIG. 103 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH54, 1 GHZ-3 GHZ) 88
FIG. 104 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH54, 3 GHZ-6 GHZ) 89
FIG. 105 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH54, 6 GHZ-18 GHZ) 89
FIG. 106 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH54, 18 GHZ-26.5 GHZ) 90
FIG. 107 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH54, 26.5 GHZ-40 GHZ) 90
FIG. 108 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH62, 1 GHZ-3 GHZ) 91
FIG. 109 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH62, 3 GHZ-6 GHZ) 91
FIG. 110 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH62, 6 GHZ-18 GHZ) 92
FIG. 111 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH52, 1 GHZ-3 GHZ) 92
FIG. 112 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH52, 3 GHZ-6 GHZ) 93
FIG. 113 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH52, 6 GHZ-18GHZ) 93
FIG. 114 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH56, 30 MHZ-1 GHZ) 94
FIG. 115 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH56, 1 GHZ-3 GHZ) 94
FIG. 116 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH56, 3 GHZ-6 GHZ) 95
FIG. 117 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH56, 6 GHZ-18 GHZ) 95
FIG. 118 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH56, 18 GHZ-26.5 GHZ) 96
FIG. 119 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH56, 26.5 GHZ-40 GHZ) 96
FIG. 120 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH64, 1 GHZ-3GHZ) 97
FIG. 121 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH64, 3 GHZ-6GHZ) 97
FIG. 122 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH64, 6 GHZ-18 GHZ) 98
FIG. 123 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH54, 30 MHZ-1 GHZ) 98
FIG. 124 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH54, 1 GHZ-3 GHZ) 99
FIG. 125 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH54, 3 GHZ-6 GHZ) 99
FIG. 126 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH54, 6 GHZ-18 GHZ) 100
FIG. 127 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH54, 18 GHZ-26.5 GHZ) 100
FIG. 128 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH54, 26.5 GHZ-40 GHZ) 101
FIG. 129 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH62, 1 GHZ-3 GHZ) 101
FIG. 130 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH62, 3GHZ-6 GHZ) 102
FIG. 131 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH62, 6 GHZ-18 GHZ) 102
FIG. 132 RADIATED SPURIOUS EMISSION (802.11A, CH100, 1 GHZ-3 GHZ) 114
FIG. 133 RADIATED SPURIOUS EMISSION (802.11A, CH100, 3 GHZ-6GHZ) 114
FIG. 134 RADIATED SPURIOUS EMISSION (802.11A, CH100, 6 GHZ-18 GHZ) 115
FIG. 135 RADIATED SPURIOUS EMISSION (802.11A, CH120, 30 MHZ-1 GHZ) 115
FIG. 136 RADIATED SPURIOUS EMISSION (802.11A, CH120, 1 GHZ-3 GHZ) 116
FIG. 137 RADIATED SPURIOUS EMISSION (802.11A, CH120, 3 GHZ-6GHZ) 116
FIG. 138 RADIATED SPURIOUS EMISSION (802.11A, CH120, 6 GHZ-18 GHZ) 117
FIG. 139 RADIATED SPURIOUS EMISSION (802.11A, CH120, 18 GHZ-26.5 GHZ) 117
FIG. 140 RADIATED SPURIOUS EMISSION (802.11A, CH120, 26.5 GHZ-40 GHZ) 118
FIG. 141 RADIATED SPURIOUS EMISSION (802.11A, CH140, 1 GHZ-3 GHZ) 118

FIG. 142 RADIATED SPURIOUS EMISSION (802.11A, CH140, 3 GHZ-6 GHZ).....119
FIG. 143 RADIATED SPURIOUS EMISSION (802.11A, CH140, 6 GHZ-18GHZ) 119
FIG. 144 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH100, 1 GHZ-3 GHZ) 120
FIG. 145 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH100, 3 GHZ-6 GHZ) 120
FIG. 146 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH100, 6 GHZ-18GHZ)..... 121
FIG. 147 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH120, 30 MHZ-1 GHZ) 121
FIG. 148 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH120 1 GHZ-3 GHZ) 122
FIG. 149 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH120 3 GHZ-6 GHZ) 122
FIG. 150 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH120, 6 GHZ-18 GHZ) 123
FIG. 151 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH120, 18 GHZ-26.5 GHZ) 123
FIG. 152 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH120, 26.5 GHZ-40 GHZ) 124
FIG. 153 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH140, 1 GHZ-3GHZ)..... 124
FIG. 154 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH140, 3 GHZ-6GHZ)..... 125
FIG. 155 RADIATED SPURIOUS EMISSION (802.11N-HT20, CH140, 6 GHZ-18 GHZ) 125
FIG. 156 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH102, 1 GHZ-3 GHZ) 126
FIG. 157 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH102, 3 GHZ-6 GHZ) 126
FIG. 158 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH102, 6 GHZ-18 GHZ) 127
FIG. 159 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH118, 30 MHZ-1 GHZ)..... 127
FIG. 160 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH118, 1 GHZ-3 GHZ) 128
FIG. 161 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH118, 3 GHZ-6 GHZ) 128
FIG. 162 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH118, 6 GHZ-18 GHZ) 129
FIG. 163 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH118, 18 GHZ-26.5 GHZ) 129
FIG. 164 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH118, 26.5 GHZ-40 GHZ) 130
FIG. 165 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH134, 1 GHZ-3 GHZ) 130
FIG. 166 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH134, 3 GHZ-6 GHZ) 131
FIG. 167 RADIATED SPURIOUS EMISSION (802.11N-HT40, CH134, 6 GHZ-18 GHZ) 131
FIG. 168 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH100, 1 GHZ-3 GHZ)..... 132
FIG. 169 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH100, 3 GHZ-6 GHZ)..... 132
FIG. 170 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH100, 6 GHZ-18GHZ)..... 133
FIG. 171 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH120, 30 MHZ-1 GHZ) 133
FIG. 172 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH120, 1 GHZ-3 GHZ)..... 134
FIG. 173 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH120, 3 GHZ-6 GHZ)..... 134
FIG. 174 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH120, 6 GHZ-18 GHZ)..... 135
FIG. 175 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH120, 18 GHZ-26.5 GHZ)..... 135
FIG. 176 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH120, 26.5 GHZ-40 GHZ)..... 136
FIG. 177 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH140, 1 GHZ-3GHZ)..... 136
FIG. 178 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH140, 3GHZ-6GHZ) 137
FIG. 179 RADIATED SPURIOUS EMISSION (802.11AC-HT20, CH140, 6 GHZ-18 GHZ)..... 137
FIG. 180 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH102, 1 GHZ-3 GHZ)..... 138
FIG. 181 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH102, 3 GHZ-6 GHZ)..... 138
FIG. 182 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH102, 6 GHZ-18 GHZ)..... 139
FIG. 183 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH118, 30 MHZ-1 GHZ) 139
FIG. 184 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH118, 1 GHZ-3 GHZ)..... 140
FIG. 185 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH118, 3 GHZ-6 GHZ)..... 140

FIG. 186 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH118, 6 GHZ-18 GHZ) 141
FIG. 187 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH118, 18 GHZ-26.5 GHZ) 141
FIG. 188 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH118, 26.5 GHZ-40 GHZ) 142
FIG. 189 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH134, 1 GHZ-3 GHZ) 142
FIG. 190 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH134, 3 GHZ-6 GHZ) 143
FIG. 191 RADIATED SPURIOUS EMISSION (802.11AC-HT40, CH134, 6 GHZ-18 GHZ) 143
FIG. 192 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH42, 1 GHZ-3 GHZ) 147
FIG. 193 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH42, 3 GHZ-6 GHZ) 147
FIG. 194 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH42, 6 GHZ-18 GHZ) 148
FIG. 195 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH58, 30 MHZ-1 GHZ) 148
FIG. 196 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH58, 1 GHZ-3 GHZ) 149
FIG. 197 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH58, 3 GHZ-6 GHZ) 149
FIG. 198 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH58, 6 GHZ-18 GHZ) 150
FIG. 199 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH58, 18 GHZ-26.5 GHZ) 150
FIG. 200 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH58, 26.5 GHZ-40 GHZ) 151
FIG. 201 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH106, 1 GHZ-3 GHZ) 151
FIG. 202 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH106, 3 GHZ-6 GHZ) 152
FIG. 203 RADIATED SPURIOUS EMISSION (802.11AC-HT80, CH106, 6 GHZ-18 GHZ) 152
A.4. SPURIOUS EMISSIONS RADIATED < 30MHZ 153
FIG. 204 RADIATED SPURIOUS EMISSION (802.11A, CH40, 9 KHZ ~30 MHZ) 153

1. TEST LATORATORY

1.1. Testing Location

Location 1: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing, P. R. China 100191

Location 4: CTTL(BDA)

Address: No.18A, Kangding Street, Beijing Economic-Technology Development Area, Beijing, P. R. China 100176

1.2. Testing Environment

Normal Temperature: 15-35℃

Relative Humidity: 20-75%

1.3. Project data

Testing Start Date: 2016-04-20

Testing End Date: 2016-05-04

1.4. Signature

Wang Junqing

(Prepared this test report)

Qu Pengfei

(Reviewed this test report)

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Deputy Director of the laboratory

(Approved this test report)

2. CLIENT INFORMATION

2.1. Applicant Information

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2.2. Manufacturer Information

Company Name:	OnePlus Technology(Shenzhen) Co., Ltd.
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Postal Code:	/
Country:	China
Contact Person:	Kevin Ke
Contact Email	keyoujiang@oneplus.cn
Telephone:	0755 61898696 EXT 7023
Fax:	/

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Mobile Phone
Model name	ONEPLUS A3000
FCC ID	2ABZ2-A3000
WLAN Frequency Range	ISM Bands: 5150MHz~5250MHz, 5250MHz~5350MHz, 5470MHz~5725MHz
Type of modulation	OFDM
Antenna	Integral Antenna

Note: Components list, please refer to documents of the manufacturer; it is also included in the original test record of CTTL, Telecommunication Technology Labs, Academy of telecommunication Research, MIIT.

3.2. Internal Identification of EUT used during the test

EUT ID*	S/N	HW Version	SW Version
EUT3	860152030018277	16	Qxygen OS 3.1.0

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

AE ID*	Description	Type	Note
AE1	Battery	/	inbuilt
AE2	USB cable	/	1640476DC001
AE3	Travel charger	/	1640476CH002

AE1

Model	/
Manufacturer	/
Capacitance	mAh
Nominal voltage	V

AE2

Model	/
Manufacturer	/
Length of cable	105cm

AE3

Model	HK0504
Manufacturer	HUNTKEY
Length of cable	/

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

Equipment Under Test (EUT) is model of Mobile Phone with integrated antenna and inbuilt battery. It supports GSM 850/1900MHz bands, WCDMA Bands 2/4/5 and LTE FDD Band2/4/5/7/12/17/30 and LTE TDD Band41. It also supports GPRS service with multi-slots class 33 and EGPRS class33. The HSDPA, HSUPA, HSPA+ and DC-HSDPA services are also supported.

It has MP3, Camera, FM radio, USB, Bluetooth (EDR and LE), WLAN (802.11a/b/g/n/ac, 11n 20MHz and 40MHz, 11ac 20MHz, 40MHz and 80MHz) and GPS functions.

Manual and specifications of the EUT were provided to fulfill the test.

Samples undergoing test were selected by the Client.

3.5. EUT set-ups

EUT set-up No.	Combination of EUT and AE	Remarks
Set.2	EUT3+ AE1+ AE2 +AE3	Charger

4. REFERENCE DOCUMENTS

4.1. Documents supplied by applicant

EUT feature information is supplied by the applicant or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

FCC Part15	FCC CFR 47, Part 15: 15.205 Restricted bands of operation; 15.209 Radiated emission limits, general requirements; 15.407 General technical requirements.	2015
ANSI C63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013

5. LABORATORY ENVIRONMENT

Semi-anechoic chamber SAC-2 (10 meters×6.7meters×6.1meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ˚C, Max. = 35 ˚C
Relative humidity	Min. = 15 %, Max. = 75 %
Shielding effectiveness	0.014MHz - 1MHz, >60dB; 1MHz - 1000MHz, >90dB.
Electrical insulation	> 2 MΩ
Ground system resistance	< 4Ω
Normalised site attenuation (NSA)	< ± 4 dB, 3m distance, from 30 to 1000 MHz
Site voltage standing-wave ratio (S_{VSWR})	Between 0 and 6 dB, from 1GHz to 18GHz
Uniformity of field strength	Between 0 and 6 dB, from 80 to 3000 MHz

6. SUMMARY OF TEST RESULTS

6.1. Summary of Test Results

SUMMARY OF MEASUREMENT RESULTS	Sub-clause of Part15	Sub-clause of IC	Verdict
Band edge compliance	15.209	/	**P**
Transmitter spurious emissions radiated	15.407, 15.205, 15.209	/	**P**
Spurious emissions radiated < 30 MHz	15.407, 15.209	/	**P**

Please refer to **ANNEX A** for detail.

Terms used in Verdict column

P	Pass, The EUT complies with the essential requirements in the standard.
NM	Not measured, The test was not measured by CTTL
NA	Not Applicable, The test was not applicable
F	Fail, The EUT does not comply with the essential requirements in the standard

6.2. Statements

CTTL has evaluated the test cases requested by the client/manufacturer as listed in section 6.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.1.

This report only deals with the WLAN function among the features described in section 3.

6.3. Test Conditions

For this report, all the test cases are tested under normal temperature and normal voltage, and also under norm humidity, the specific condition is shown as follows:

Temperature	15℃~35℃
Voltage	3.82V
Humidity	15%~75%

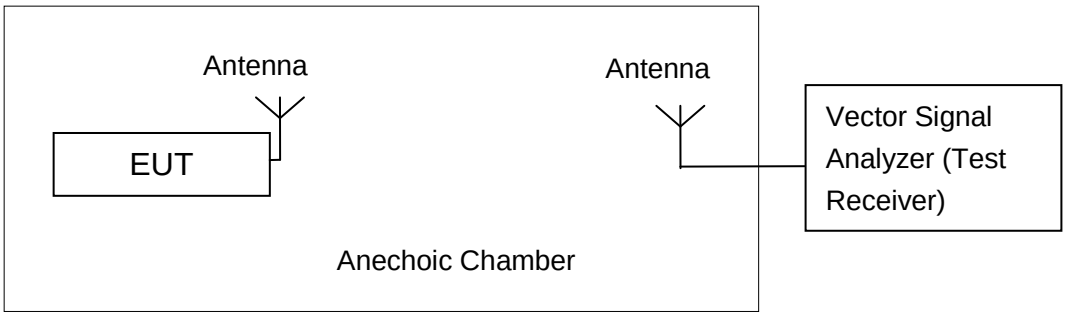
7. TEST EQUIPMENTS UTILIZED

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESU26	100376	R&S	2016-10-29	1 Year
2	Test Receiver	FSV40	101047	R&S	2016-07-02	1 Year
3	Loop Antenna	HFH2-Z2	829324/007	R&S	2017-12-16	3 Years
4	EMI Antenna	VULB9163	9163-514	Schwarzbeck	2017-11-24	3 Years
5	EMI Antenna	3117	00139065	ETS-Lindgren	2017-07-01	3 Years
6	EMI Antenna	3116	2661	ETS-Lindgren	2017-06-17	3 Years

ANNEX A: MEASUREMENT RESULTS

A.1. Measurement Method

In the case of radiated emission, the used settings are as follows,
Sweep frequency from 30 MHz to 1GHz, RBW = 100 kHz, VBW = 300 kHz;
Sweep frequency from 1 GHz to 40GHz, RBW = 1MHz, VBW = 3MHz;



The measurement is made according to ANSI C63.10
For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m.
The radiated emission test is performed in semi-anechoic chamber. The distance from the EUT to the reference point of measurement antenna is 3m or 10m. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated 360° and the measurement antenna is moved from 1m to 4m to get the maximization result.

A.2. Band Edges Compliance

Measurement Limit:

Standard	Limit (dB μ V/m)	
FCC 47 CFR Part 15.209	Peak	74
	Average	54

The measurement is made according to ANSI C63.10

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Measurement Uncertainty:

Measurement Uncertainty	0.75dB

Measurement Result:

5GHz U-NII 1

Mode	Channel	Test Results	Conclusion
802.11a	5180 MHz	Fig.1	P
802.11n-HT20	5180 MHz	Fig.2	P
802.11n-HT40	5190 MHz	Fig.3	P
802.11ac-HT20	5180 MHz	Fig.4	P
802.11ac-HT40	5190 MHz	Fig.5	P

5GHz U-NII 2A

Mode	Channel	Test Results	Conclusion
802.11a	5230 MHz	Fig.6	P
802.11n-HT20	5230 MHz	Fig.7	P
802.11n-HT40	5310 MHz	Fig.8	P
802.11ac-HT20	5230 MHz	Fig.9	P
802.11ac-HT40	5310 MHz	Fig.10	P

5GHz U-NII 2C

Mode	Channel	Test Results	Conclusion
802.11a	5500 MHz	Fig.11	P
802.11a	5700 MHz	Fig.12	P
802.11n-HT20	5500 MHz	Fig.13	P
802.11n-HT20	5700 MHz	Fig.14	P
802.11n-HT40	5510 MHz	Fig.15	P
802.11n-HT40	5670 MHz	Fig.16	P
802.11ac-HT20	5500 MHz	Fig.17	P
802.11ac-HT20	5700 MHz	Fig.18	P
802.11ac-HT40	5510 MHz	Fig.19	P
802.11ac-HT40	5670 MHz	Fig.20	P

5GHz 802.11ac 80MHz

Mode	Channel	Test Results	Conclusion
802.11ac-HT80	5210 MHz	Fig.21	P
802.11ac-HT80	5290 MHz	Fig.22	P
802.11ac-HT80	5530 MHz	Fig.23	P

Conclusion: PASS

Test graphs as below:

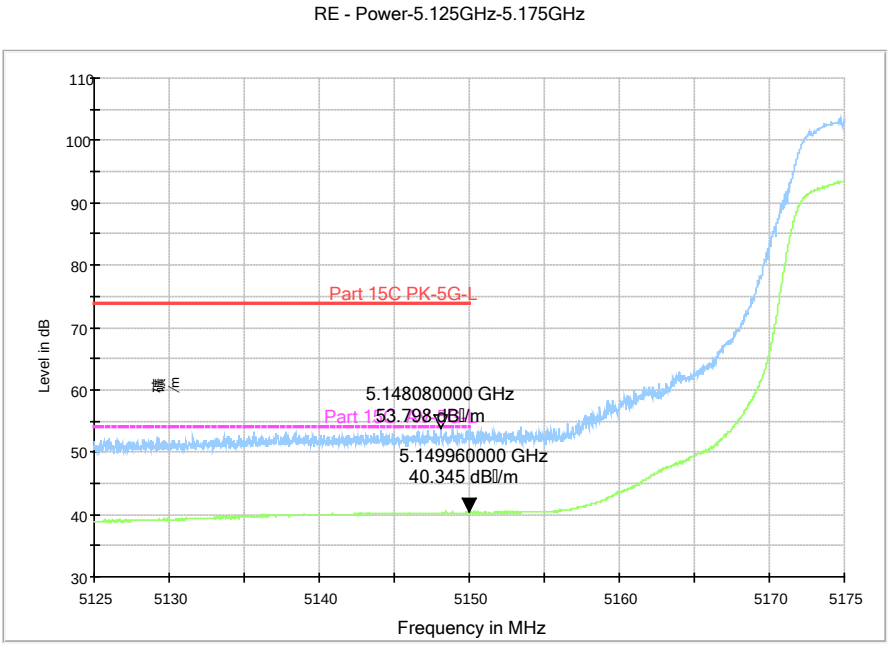


Fig. 1 Band Edges (802.11a, 5180MHz)

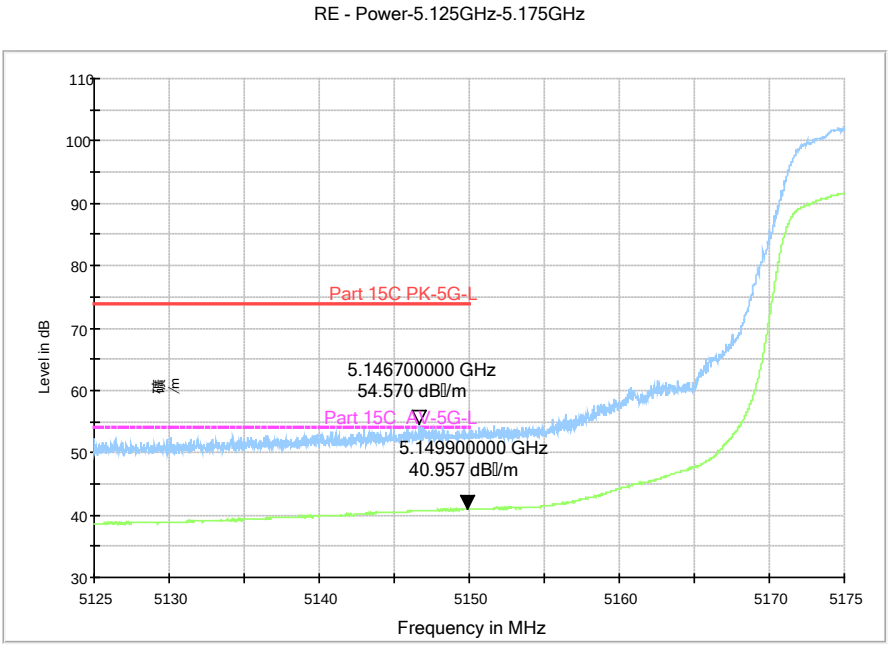


Fig. 2 Band Edges (802.11n-HT20, 5180MHz)

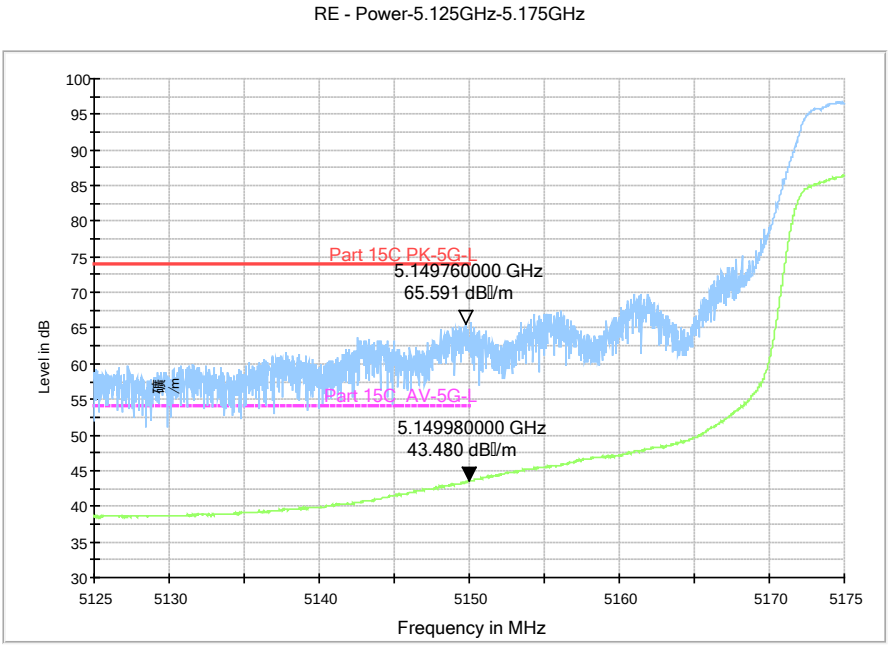


Fig. 3 Band Edges (802.11n-HT40, 5190MHz)

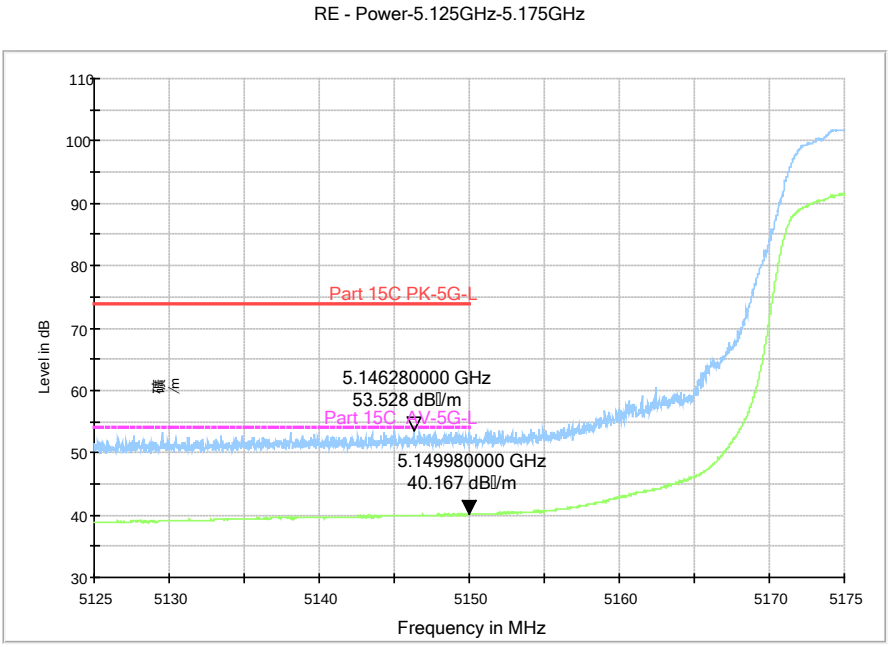


Fig. 4 Band Edges (802.11ac-HT20, 5180MHz)

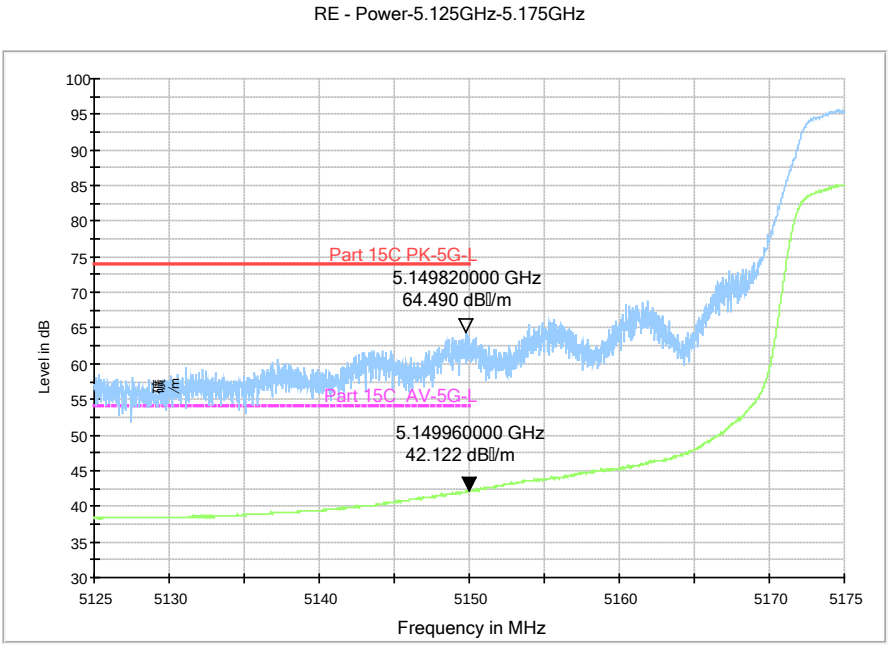


Fig. 5 Band Edges (802.11ac-HT40, 5190MHz)

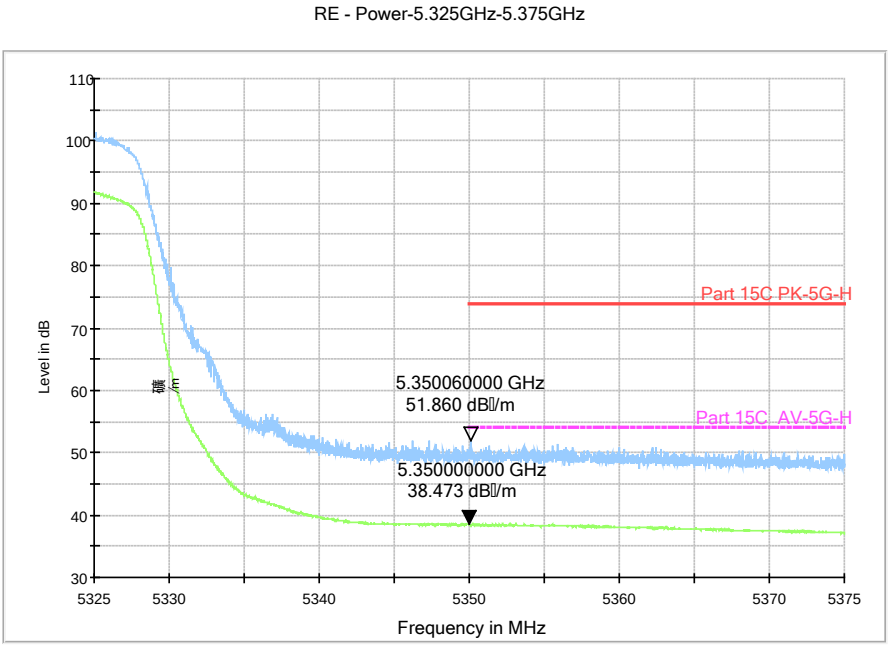


Fig. 6 Band Edges (802.11a, 5320MHz)

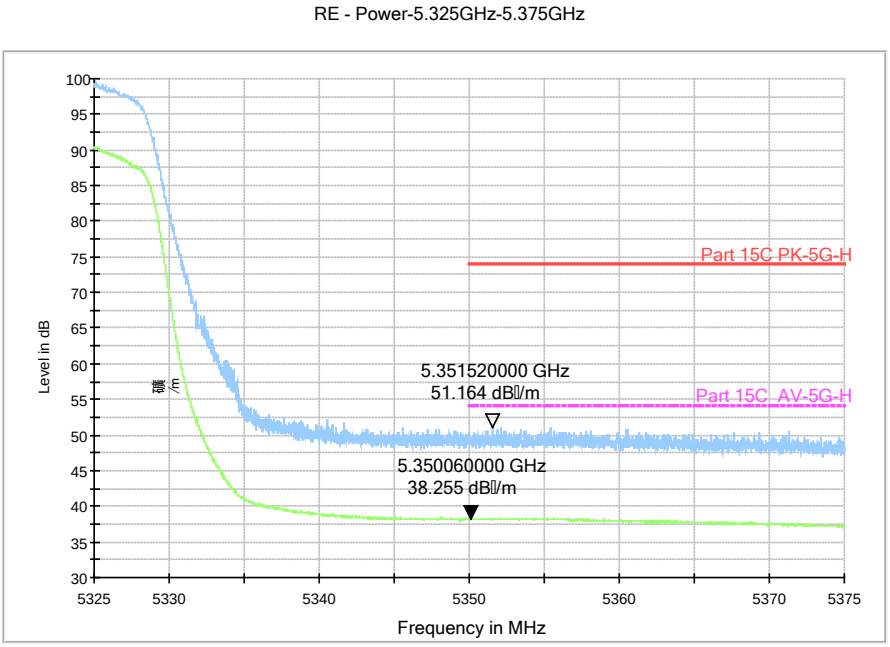


Fig. 7 Band Edges (802.11n-HT20, 5320MHz)

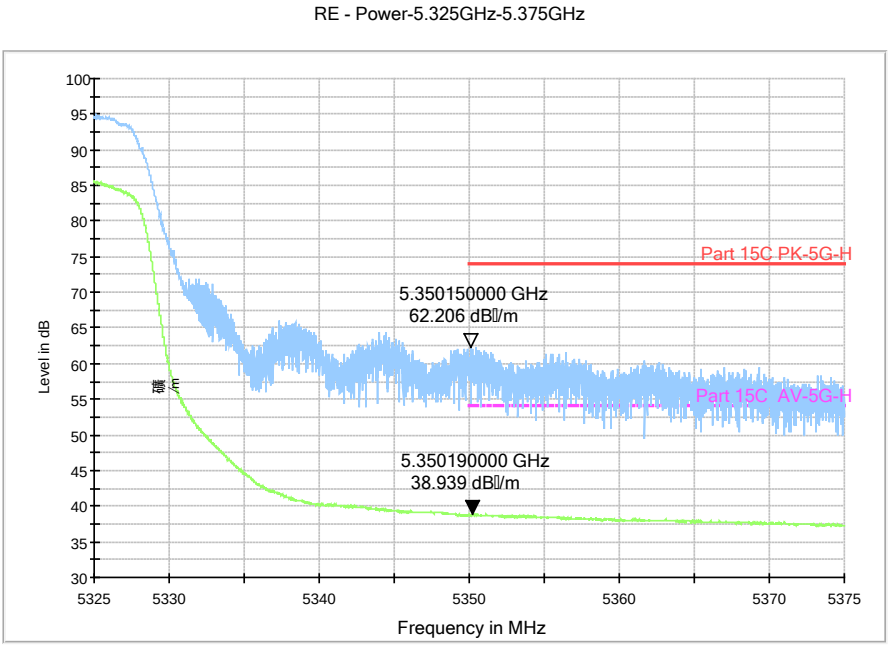


Fig. 8 Band Edges (802.11n-HT40, 5310MHz)

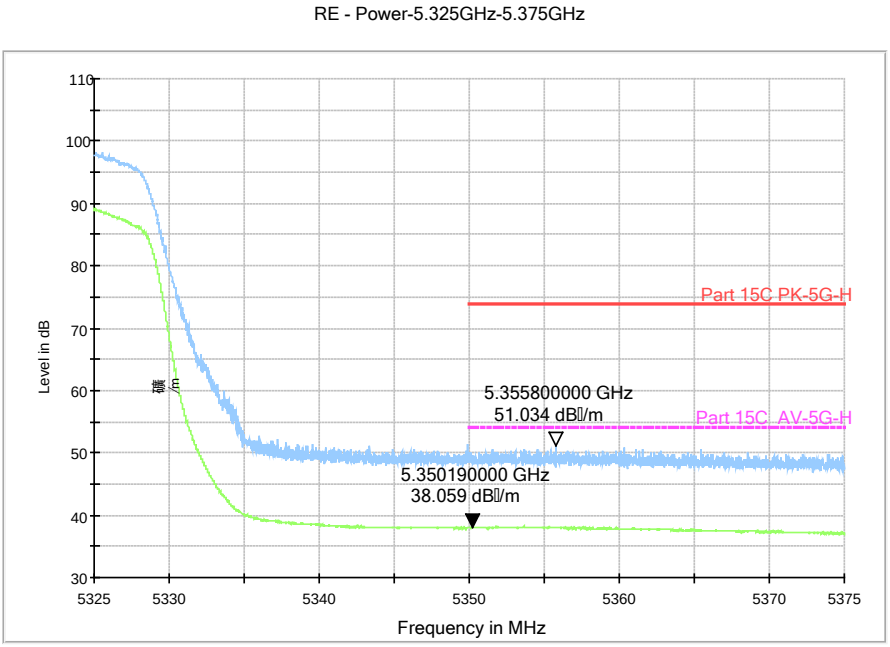


Fig. 9 Band Edges (802.11ac-HT20, 5320MHz)

RE - Power-5.325GHz-5.375GHz

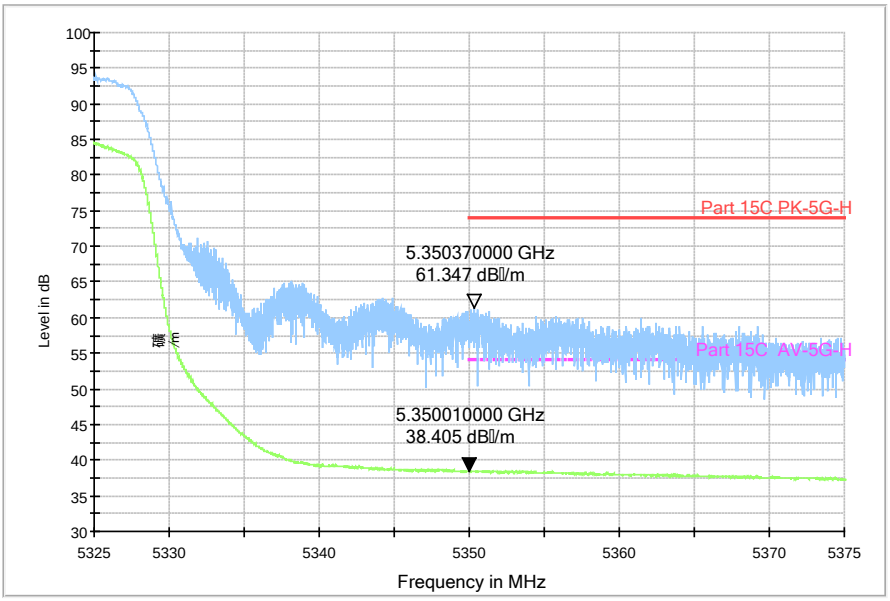


Fig. 10 Band Edges (802.11ac-HT40, 5310MHz)

RE - Power-5.45GHz-5.50GHz

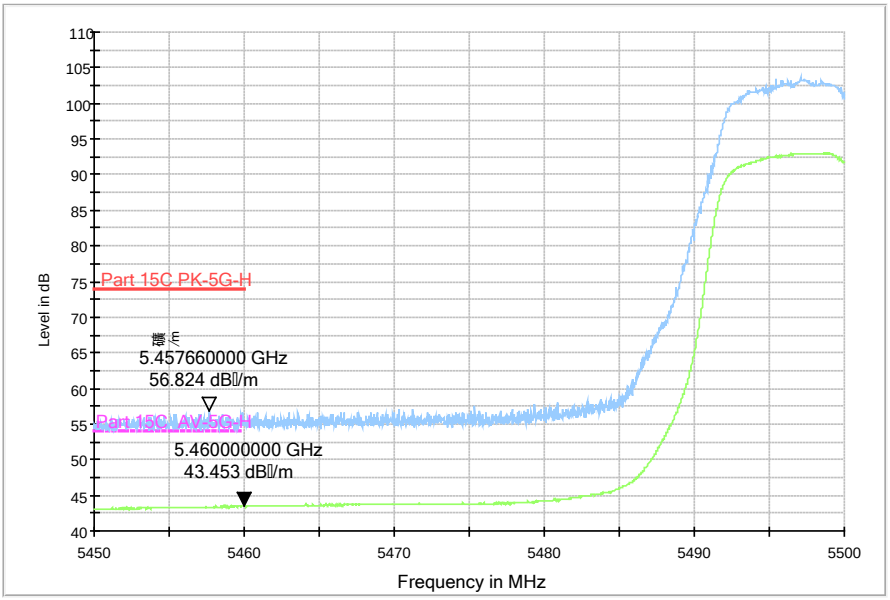


Fig. 11 Band Edges (802.11a, 5500MHz)

RE - Power-5.70GHz-5.75GHz

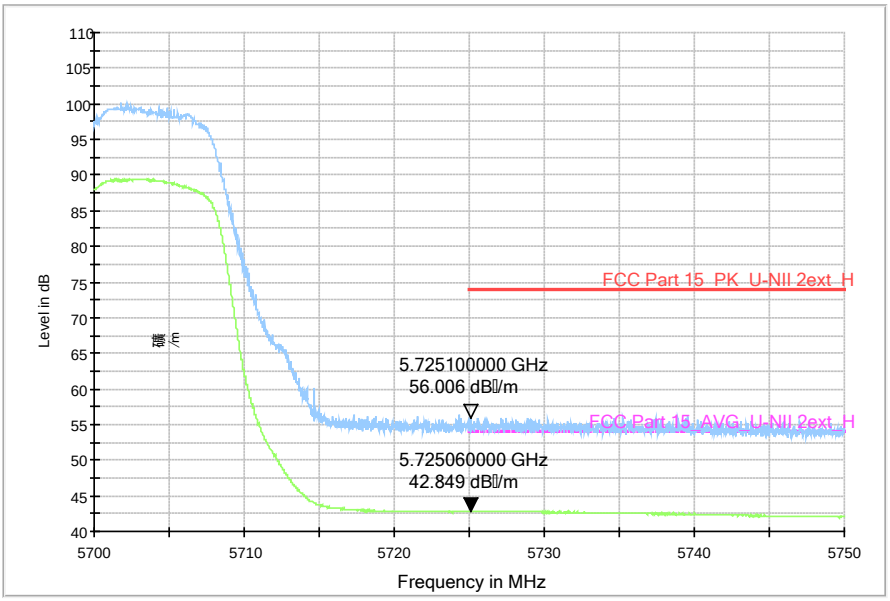


Fig. 12 Band Edges (802.11a, 5700MHz)

RE - Power-5.45GHz-5.50GHz

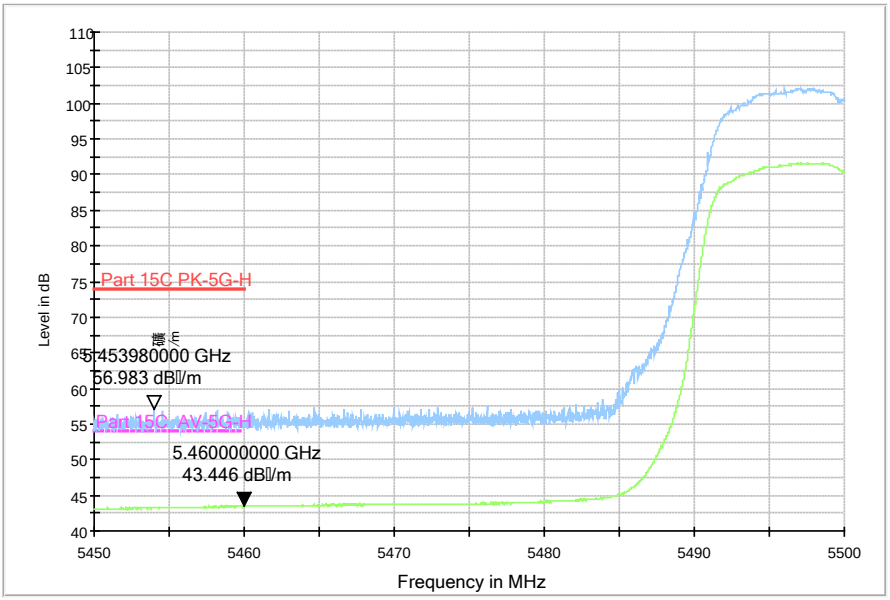


Fig. 13 Band Edges (802.11n-HT20, 5500MHz)

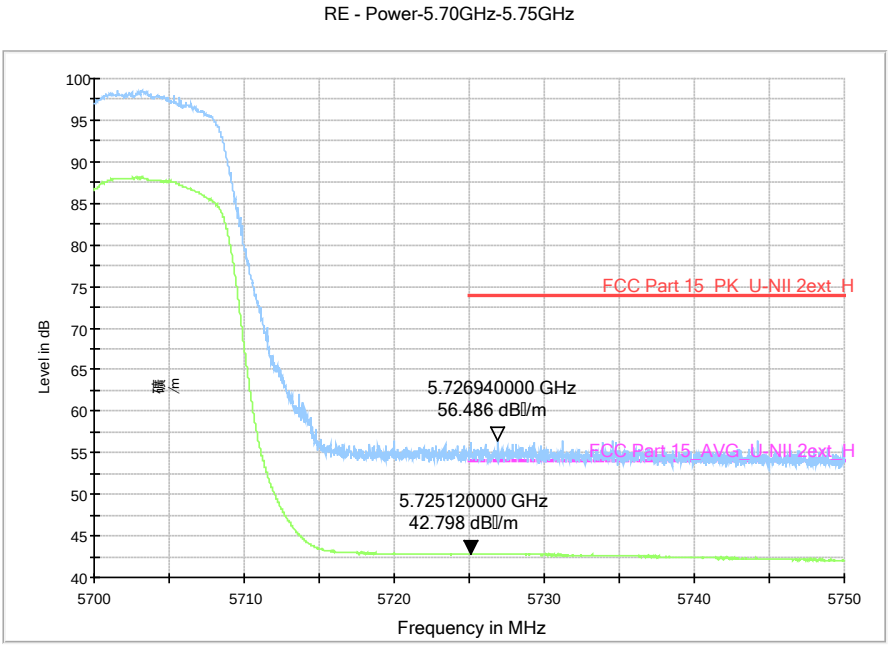


Fig. 14 Band Edges (802.11n-HT20, 5700MHz)

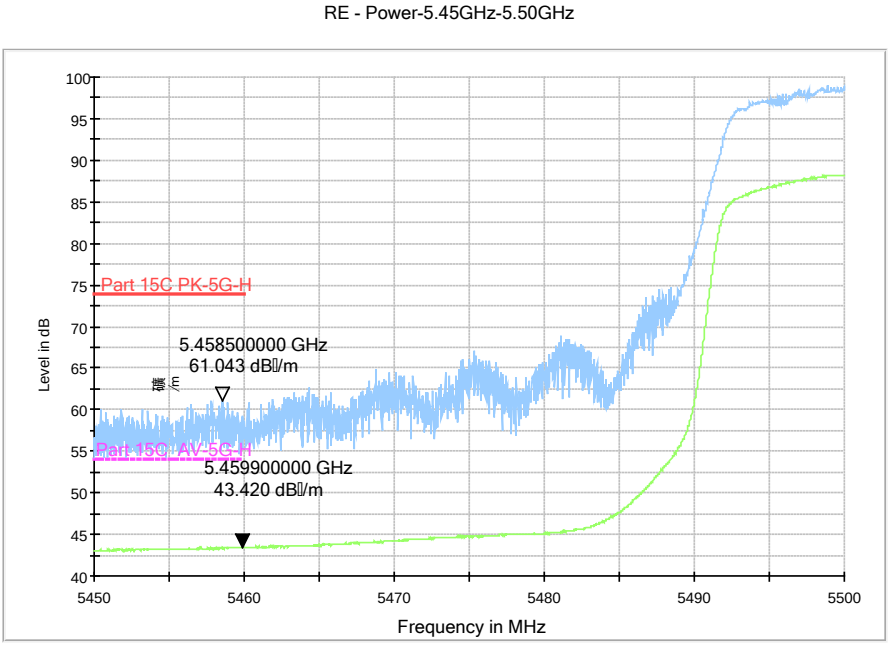


Fig. 15 Band Edges (802.11n-HT40, 5510MHz)

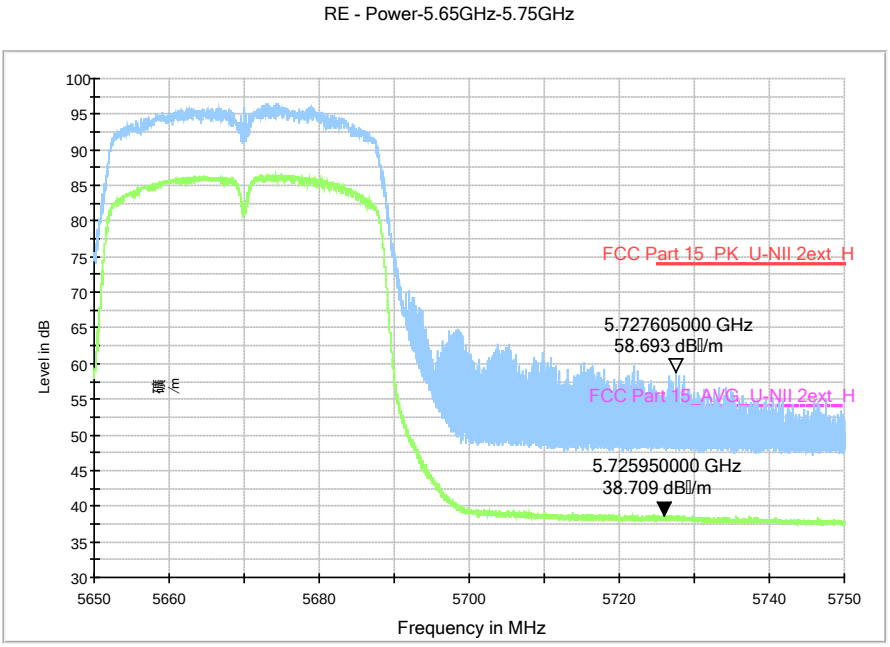


Fig. 16 Band Edges (802.11n-HT40, 5670MHz)

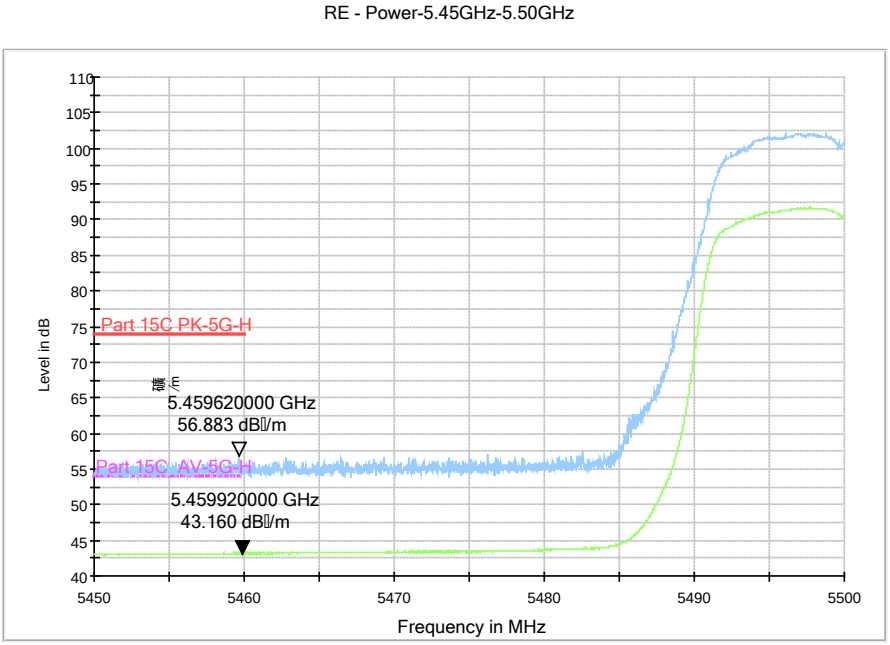


Fig. 17 Band Edges (802.11ac-HT20, 5500MHz)

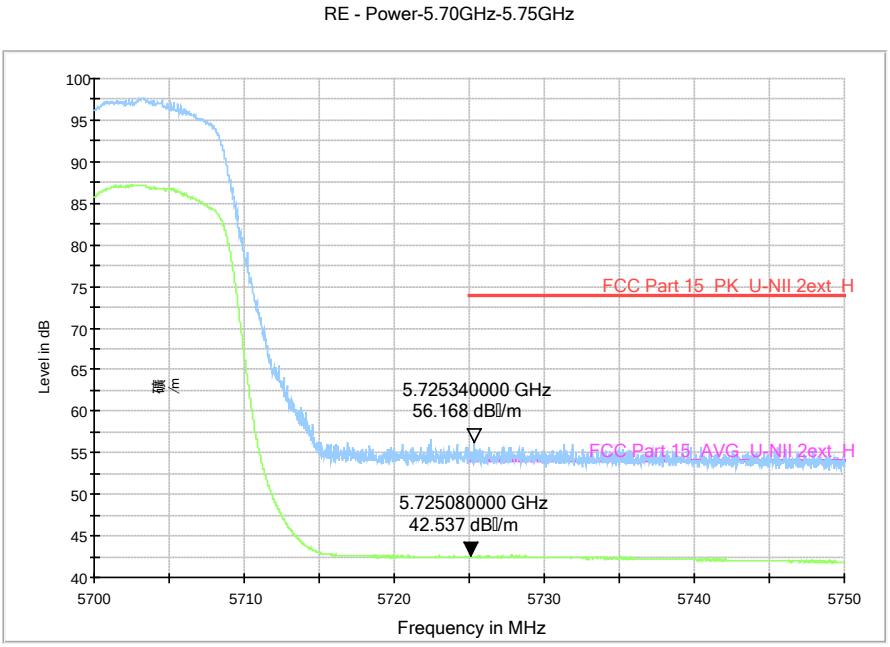


Fig. 18 Band Edges (802.11ac-HT20, 5700MHz)

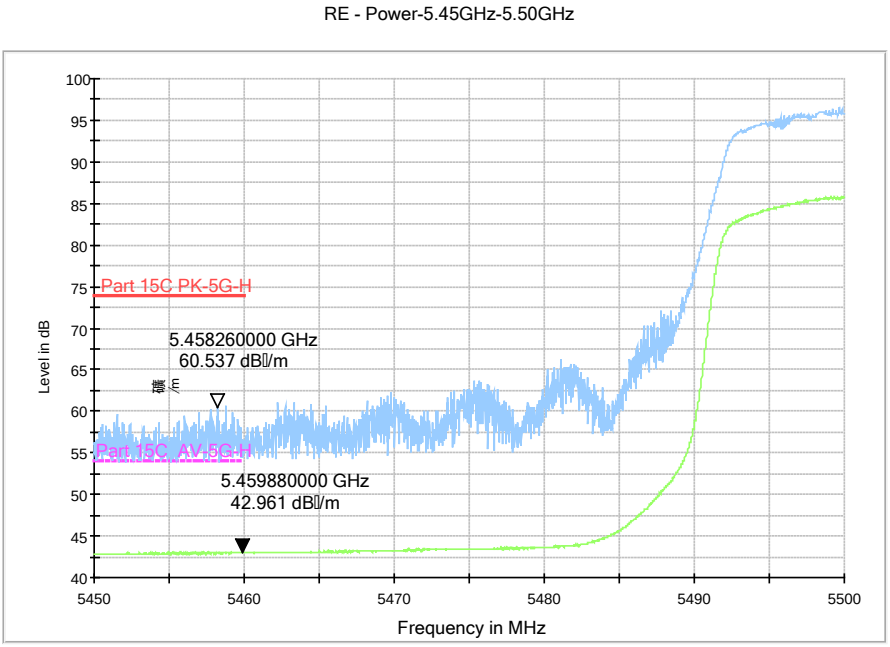


Fig. 19 Band Edges (802.11ac-HT40, 5510MHz)

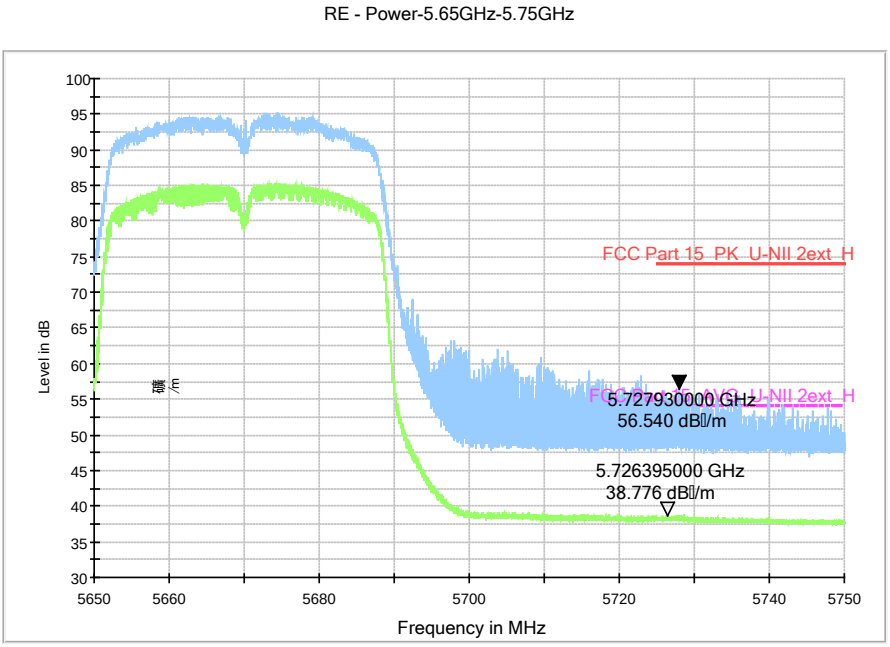


Fig. 20 Band Edges (802.11ac-HT40, 5670MHz)

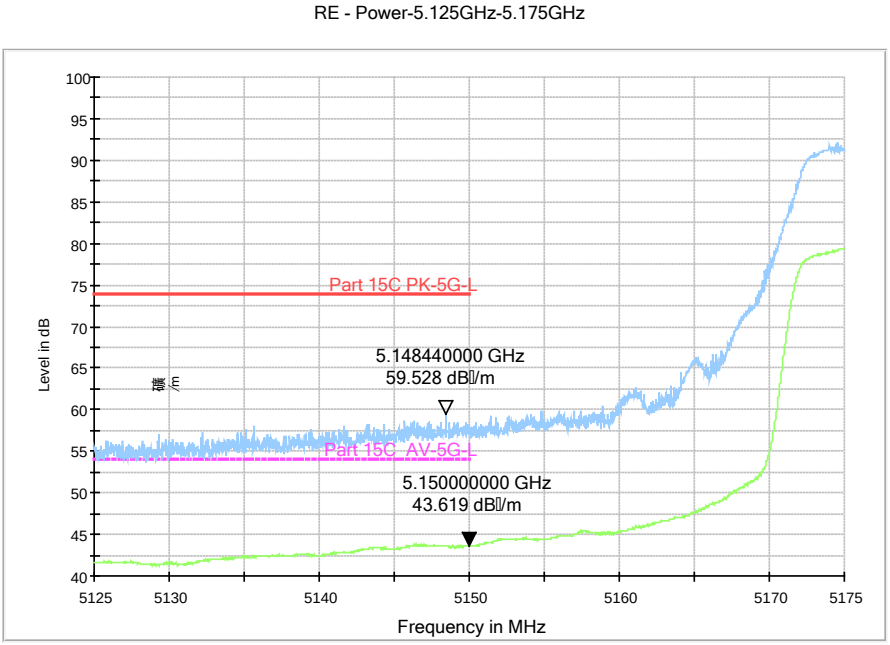


Fig. 21 Band Edges (802.11ac-HT80, 5210MHz)

RE - Power-5.325GHz-5.375GHz

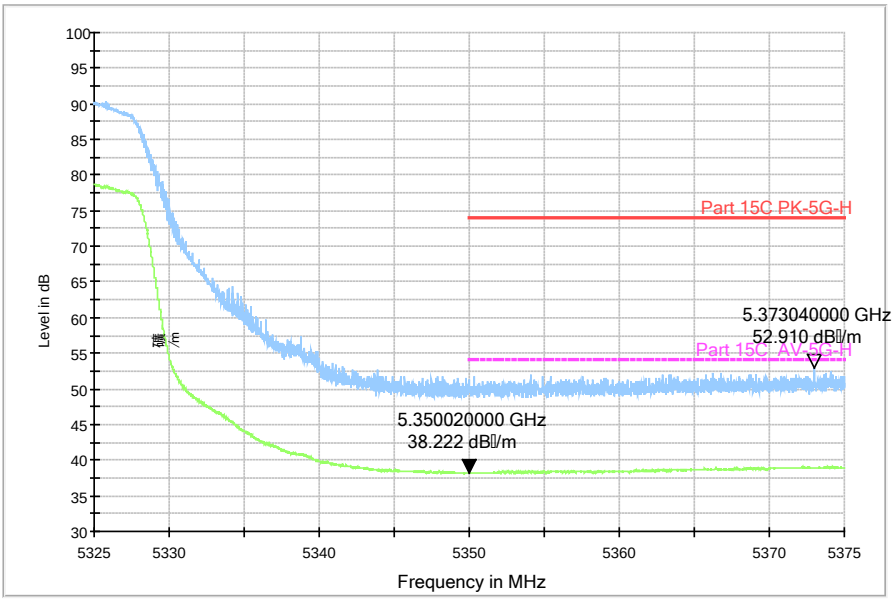


Fig. 22 Band Edges (802.11ac-HT80, 5290MHz)

RE - Power-5.45GHz-5.50GHz

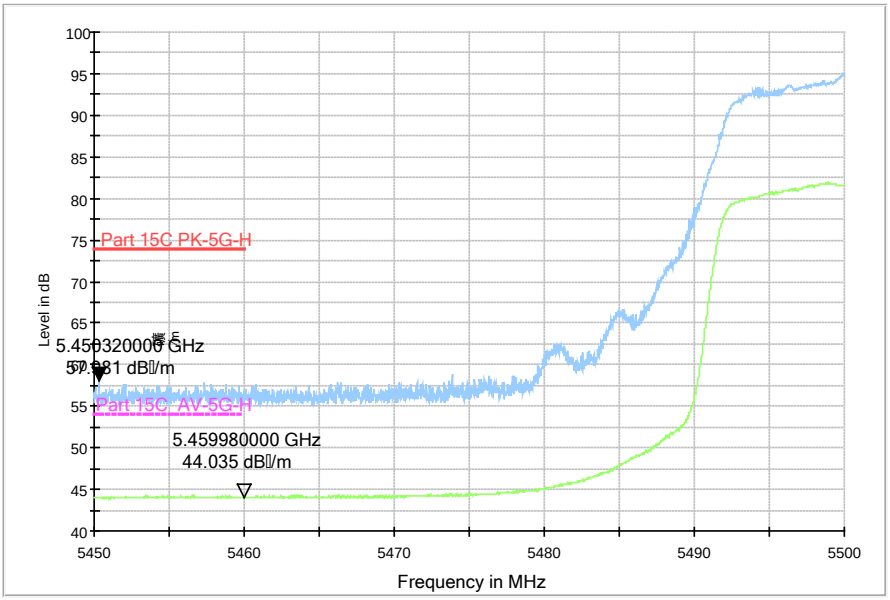


Fig. 23 Band Edges (802.11ac-HT80, 5530MHz)

A.3. Transmitter Spurious Emission

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

The measurement is made according to ANSI C63.10.

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Limit in restricted band:

Frequency of emission (MHz)	Field strength (uV/m)	Field strength (dBμV/m)	Measurement distance(m)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Measurement uncertainty:

Frequency Range	Uncertainty(dB)	Note
f ≤ 1GHz	3.9	k=2
f>1GHz	4.3	

Measurement Results:

5GHz U-NII 1

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	36(5180MHz)	1 GHz ~3 GHz	Fig.24	P
		3 GHz ~6 GHz	Fig.25	P
		6 GHz ~ 18 GHz	Fig.26	P
	40(5200MHz)	30 MHz ~1 GHz	Fig.27	P
		1 GHz ~ 3 GHz	Fig.28	P
		3 GHz ~ 6 GHz	Fig.29	P
		6 GHz ~ 18 GHz	Fig.30	P
		18 GHz ~ 26.5 GHz	Fig.31	P
		26.5 GHz ~ 40 GHz	Fig.32	P
	48(5240MHz)	1 GHz ~ 3 GHz	Fig.33	P
		3 GHz ~6 GHz	Fig.34	P
		6 GHz ~ 18 GHz	Fig.35	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	36(5180MHz)	1 GHz ~3 GHz	Fig.36	P
		3 GHz ~6 GHz	Fig.37	P
		6 GHz ~ 18 GHz	Fig.38	P
	40(5200MHz)	30 MHz ~1 GHz	Fig.39	P
		1 GHz ~ 3 GHz	Fig.40	P
		3 GHz ~ 6 GHz	Fig.41	P
		6 GHz ~ 18 GHz	Fig.42	P
		18 GHz ~ 26.5 GHz	Fig.43	P
		26.5 GHz ~ 40 GHz	Fig.44	P
	48(5240MHz)	1 GHz ~ 3 GHz	Fig.45	P
		3 GHz ~ 6 GHz	Fig.46	P
		6 GHz ~ 18 GHz	Fig.47	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	38(5190MHz)	30 MHz ~1 GHz	Fig.48	P
		1 GHz ~3 GHz	Fig.49	P
		3 GHz ~6 GHz	Fig.50	P
		6 GHz ~ 18 GHz	Fig.51	P
		18 GHz ~ 26.5 GHz	Fig.52	P
		26.5 GHz ~ 40 GHz	Fig.53	P
	46(5230MHz)	1 GHz ~ 3 GHz	Fig.54	P
		3 GHz ~6 GHz	Fig.55	P
		6 GHz ~ 18 GHz	Fig.56	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	36(5180MHz)	1 GHz ~3 GHz	Fig.57	P
		3 GHz ~6 GHz	Fig.58	P
		6 GHz ~ 18 GHz	Fig.59	P
	40(5200MHz)	30 MHz ~1 GHz	Fig.60	P
		1 GHz ~ 3 GHz	Fig.61	P
		3 GHz ~ 6 GHz	Fig.62	P
		6 GHz ~ 18 GHz	Fig.63	P
		18 GHz ~ 26.5 GHz	Fig.64	P
		26.5 GHz ~ 40 GHz	Fig.65	P
	48(5240MHz)	1 GHz ~ 3 GHz	Fig.66	P
		3 GHz ~ 6 GHz	Fig.67	P
		6 GHz ~ 18 GHz	Fig.68	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	38(5190MHz)	30 MHz ~1 GHz	Fig.69	P
		1 GHz ~3 GHz	Fig.70	P
		3 GHz ~6 GHz	Fig.71	P
		6 GHz ~ 18 GHz	Fig.72	P
		18 GHz ~ 26.5 GHz	Fig.73	P
		26.5 GHz ~ 40 GHz	Fig.74	P
	46(5230MHz)	1 GHz ~ 3 GHz	Fig.75	P
		3 GHz ~6 GHz	Fig.76	P
		6 GHz ~ 18 GHz	Fig.77	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

5GHz U-NII 1

802.11a

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5148.960	36.0	-19.5	34.5	21.047	H
17653.800	46.5	-13.0	41.2	18.305	V
17634.000	46.4	-13.0	41.2	18.205	V
17669.400	46.4	-13.0	41.2	18.205	V
17622.600	46.3	-14.9	41.2	20.018	V
17632.800	46.3	-14.9	41.2	20.018	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5133.980	49.3	-18.3	34.5	33.108	V
17668.800	59.3	-13.0	41.2	31.105	H
17779.200	58.7	-13.0	41.0	30.705	H
17705.400	58.6	-13.0	41.2	30.405	H
17760.000	58.3	-13.0	41.0	30.305	V
17258.400	58.2	-15.1	41.2	32.093	H

Channel 40

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17638.800	46.5	-13.0	41.2	18.305	H
17679.000	46.4	-13.0	41.2	18.205	V
17628.600	46.4	-14.9	41.2	20.118	H
17631.000	46.4	-14.9	41.2	20.118	H
17616.600	46.3	-14.9	41.2	20.018	H
17670.000	46.3	-13.0	41.2	18.105	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17602.800	58.7	-14.9	41.2	32.418	H
17182.200	58.5	-15.1	41.4	32.193	H
17544.600	58.1	-14.9	41.2	31.818	H
17512.800	58.0	-14.9	41.2	31.718	H
17599.200	58.0	-14.9	41.2	31.718	H
17773.800	58.0	-13.0	41.0	30.005	V

Channel 48

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17634.000	46.5	-13.0	41.2	18.305	H
17659.800	46.4	-13.0	41.2	18.205	V
17617.800	46.3	-14.9	41.2	20.018	H
17627.400	46.3	-14.9	41.2	20.018	V
17726.400	46.3	-13.0	41.2	18.105	H
17738.400	46.3	-13.0	41.2	18.105	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17781.000	59.5	-13.0	41.0	31.505	H
17262.000	59.3	-15.1	41.2	33.193	H
17692.200	58.4	-13.0	41.2	30.205	H
17944.200	58.3	-13.5	41.0	30.762	V
17931.600	58.2	-13.5	41.0	30.662	H
17271.600	58.2	-15.1	41.2	32.093	V

802.11n-HT20

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5150.000	37.2	-19.5	34.5	22.247	V
17729.400	46.4	-13.0	41.2	18.205	H
17638.200	46.4	-13.0	41.2	18.205	H
17725.800	46.4	-13.0	41.2	18.205	H
17658.000	46.4	-13.0	41.2	18.205	V
17709.000	46.3	-13.0	41.2	18.105	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5136.620	51.0	-19.5	34.5	36.047	V
17732.400	58.5	-13.0	41.2	30.305	V
17617.200	58.4	-14.9	41.2	32.118	V
17742.000	58.4	-13.0	41.2	30.205	H
17658.000	58.3	-13.0	41.2	30.105	H
17629.200	58.3	-14.9	41.2	32.018	V

Channel 40

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17627.400	46.4	-14.9	41.2	20.118	V
17704.800	46.4	-13.0	41.2	18.205	V
17634.000	46.3	-13.0	41.2	18.105	H
17633.400	46.3	-13.0	41.2	18.105	V
17677.800	46.3	-13.0	41.2	18.105	H
17732.400	46.3	-13.0	41.2	18.105	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17685.600	59.2	-13.0	41.2	31.005	V
17814.600	58.7	-13.5	41.0	31.162	V
17612.400	58.5	-14.9	41.2	32.218	H
17279.400	58.2	-15.1	41.2	32.093	H
17623.800	58.1	-14.9	41.2	31.818	H
17569.200	58.1	-14.9	41.2	31.818	V

Channel 48

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17633.400	46.4	-13.0	41.2	18.205	V
17664.000	46.4	-13.0	41.2	18.205	V
17653.200	46.4	-13.0	41.2	18.205	V
17722.800	46.3	-13.0	41.2	18.105	V
17659.200	46.3	-13.0	41.2	18.105	H
17746.800	46.3	-13.0	41.2	18.105	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17830.200	59.0	-13.5	41.0	31.462	V
17695.200	58.6	-13.0	41.2	30.405	V
17248.200	58.5	-15.1	41.4	32.193	H
17789.400	58.5	-13.0	41.0	30.505	V
17174.400	58.4	-15.1	41.4	32.093	V
17757.600	58.3	-13.0	41.0	30.305	H

802.11n-HT40

Channel 38

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5150.000	37.7	-19.5	34.5	22.747	H
17724.600	46.4	-13.0	41.2	18.205	V
17679.000	46.4	-13.0	41.2	18.205	V
17640.000	46.4	-13.0	41.2	18.205	V
17632.200	46.3	-14.9	41.2	20.018	H
17637.600	46.3	-13.0	41.2	18.105	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5149.460	59.9	-19.5	34.5	44.947	V
17646.000	58.7	-13.0	41.2	30.505	V
17723.400	58.5	-13.0	41.2	30.305	H
17953.800	58.3	-13.5	41.0	30.762	V
17619.600	58.3	-14.9	41.2	32.018	V
17262.000	58.2	-15.1	41.2	32.093	V

Channel 46

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17659.800	46.5	-13.0	41.2	18.305	H
17662.200	46.5	-13.0	41.2	18.305	V
17655.000	46.4	-13.0	41.2	18.205	H
17707.800	46.3	-13.0	41.2	18.105	H
17677.800	46.3	-13.0	41.2	18.105	H
17691.600	46.3	-13.0	41.2	18.105	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17599.800	58.7	-14.9	41.2	32.418	H
17586.000	58.6	-14.9	41.2	32.318	V
17791.800	58.4	-13.0	41.0	30.405	H
17494.200	58.4	-14.9	41.2	32.118	H
17332.800	58.3	-13.9	41.2	31.023	H
17671.200	58.2	-13.0	41.2	30.005	V

802.11ac-HT20

Channel 36

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5149.900	39.8	-19.5	34.5	24.847	H
17701.200	46.7	-13.0	41.2	18.505	V
17692.800	46.6	-13.0	41.2	18.405	H
17679.600	46.6	-13.0	41.2	18.405	V
17676.000	46.6	-13.0	41.2	18.405	V
17633.400	46.5	-13.0	41.2	18.305	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5146.740	53.4	-19.5	34.5	38.447	V
17766.000	60.2	-13.0	41.0	32.205	H
17299.200	58.9	-13.9	41.2	31.623	H
17289.000	58.4	-13.9	41.2	31.123	H
17744.400	58.4	-13.0	41.2	30.205	V
17600.400	58.2	-14.9	41.2	31.918	H

Channel 40

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17679.600	46.7	-13.0	41.2	18.505	V
17694.000	46.6	-13.0	41.2	18.405	H
17635.800	46.6	-13.0	41.2	18.405	V
17701.200	46.6	-13.0	41.2	18.405	H
17694.600	46.5	-13.0	41.2	18.305	H
17696.400	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17268.000	58.8	-15.1	41.2	32.693	H
17657.400	58.6	-13.0	41.2	30.405	H
17806.200	58.5	-13.0	41.0	30.505	H
17899.800	58.4	-13.5	41.0	30.862	V
17643.600	58.3	-13.0	41.2	30.105	H
17675.400	58.3	-13.0	41.2	30.105	H

Channel 48

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17637.600	46.7	-13.0	41.2	18.505	V
17656.800	46.6	-13.0	41.2	18.405	H
17693.400	46.6	-13.0	41.2	18.405	H
17719.800	46.6	-13.0	41.2	18.405	H
17631.000	46.6	-14.9	41.2	20.318	V
17663.400	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17667.000	58.5	-13.0	41.2	30.305	V
17620.800	58.4	-14.9	41.2	32.118	H
17715.600	58.3	-13.0	41.2	30.105	H
17718.600	58.3	-13.0	41.2	30.105	V
17700.000	58.1	-13.0	41.2	29.905	H
17589.000	58.1	-14.9	41.2	31.818	V

802.11ac-HT40

Channel 38

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5149.960	42.1	-19.5	34.5	27.147	V
17682.000	46.7	-13.0	41.2	18.505	V
17682.600	46.6	-13.0	41.2	18.405	H
17700.600	46.6	-13.0	41.2	18.405	H
17664.600	46.5	-13.0	41.2	18.305	V
17641.800	46.5	-13.0	41.2	18.305	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5149.820	64.5	-19.5	34.5	49.547	H
17622.000	58.7	-14.9	41.2	32.418	V
17623.200	58.4	-14.9	41.2	32.118	H
17314.800	58.4	-13.9	41.2	31.123	V
17615.400	58.3	-14.9	41.2	32.018	H
17529.600	58.3	-14.9	41.2	32.018	V

Channel 46

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17667.600	46.6	-13.0	41.2	18.405	H
17624.400	46.5	-14.9	41.2	20.218	V
17704.200	46.5	-13.0	41.2	18.305	V
17669.400	46.5	-13.0	41.2	18.305	H
17672.400	46.5	-13.0	41.2	18.305	H
17652.000	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17618.400	58.7	-14.9	41.2	32.418	V
17940.600	58.7	-13.5	41.0	31.162	V
17717.400	58.6	-13.0	41.2	30.405	V
17725.800	58.4	-13.0	41.2	30.205	H
17623.800	58.3	-14.9	41.2	32.018	H
17628.600	58.2	-14.9	41.2	31.918	V

Test graphs as below:

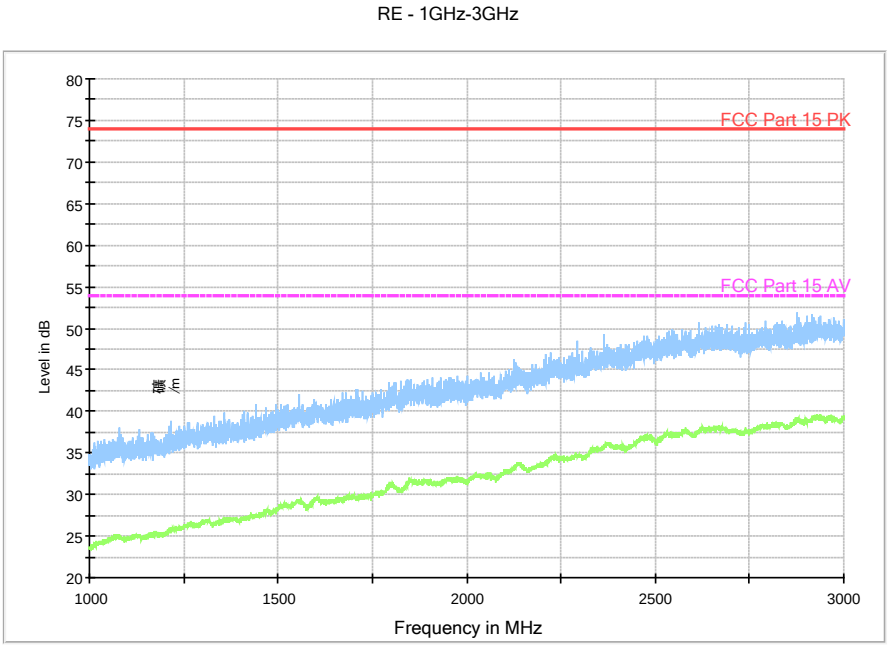
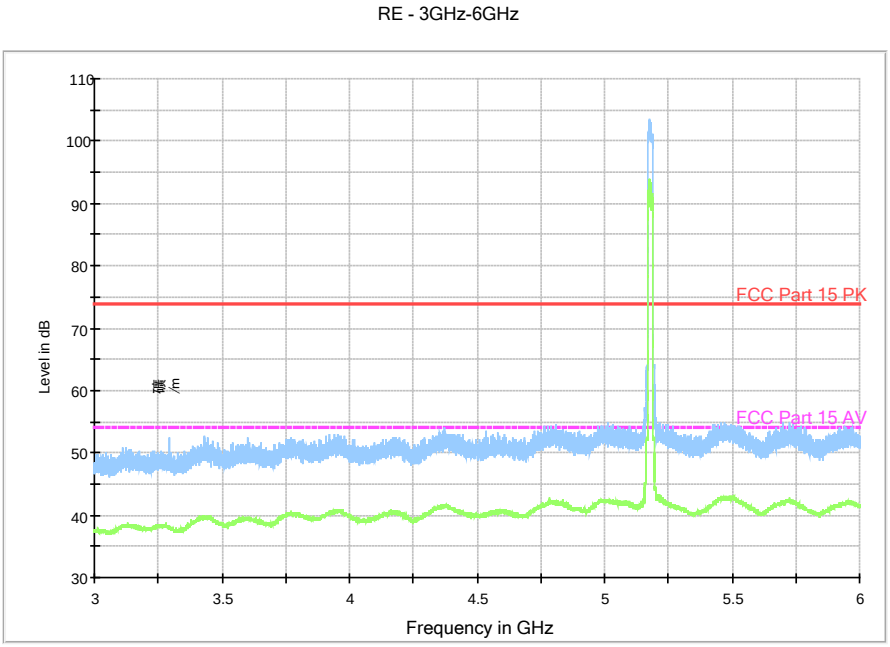


Fig. 24 Radiated Spurious Emission (802.11a, ch36, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 25 Radiated Spurious Emission (802.11a, ch36, 3 GHz-6 GHz)

RE - 6GHz-18GHz

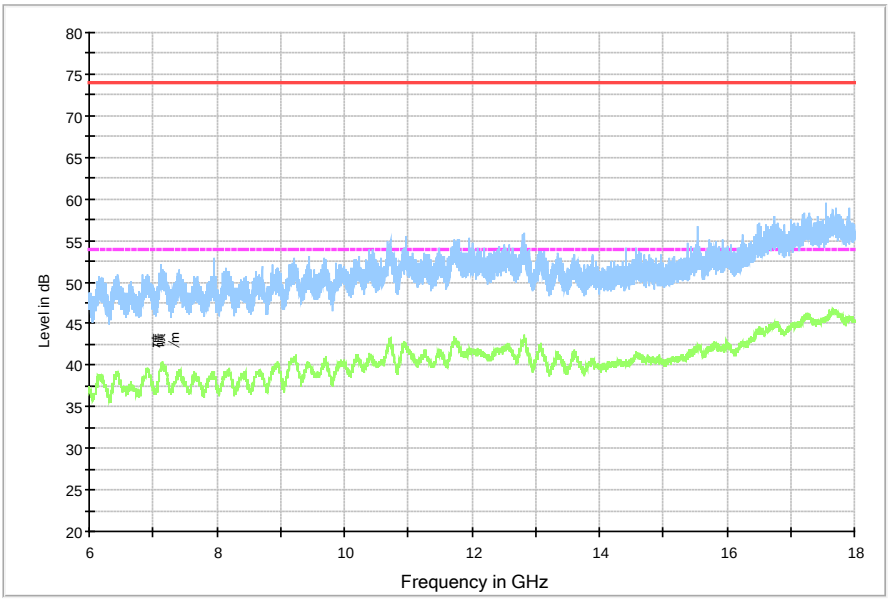


Fig. 26 Radiated Spurious Emission (802.11a, ch36, 6 GHz-18 GHz)

RE 30MHz-1GHz

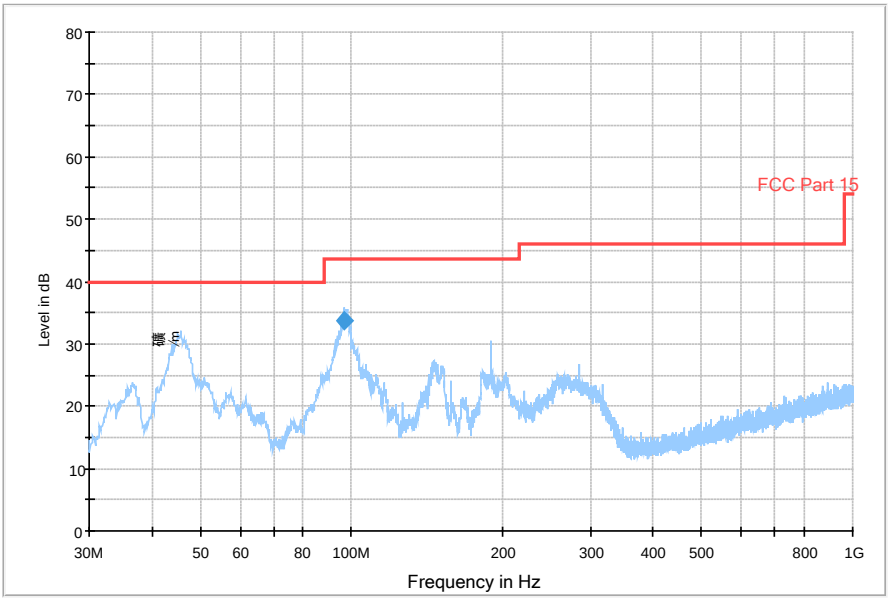


Fig. 27 Radiated Spurious Emission (802.11a, ch40, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
96.930000	33.8	115.0	V	306.0	-25.5	9.7	43.5	

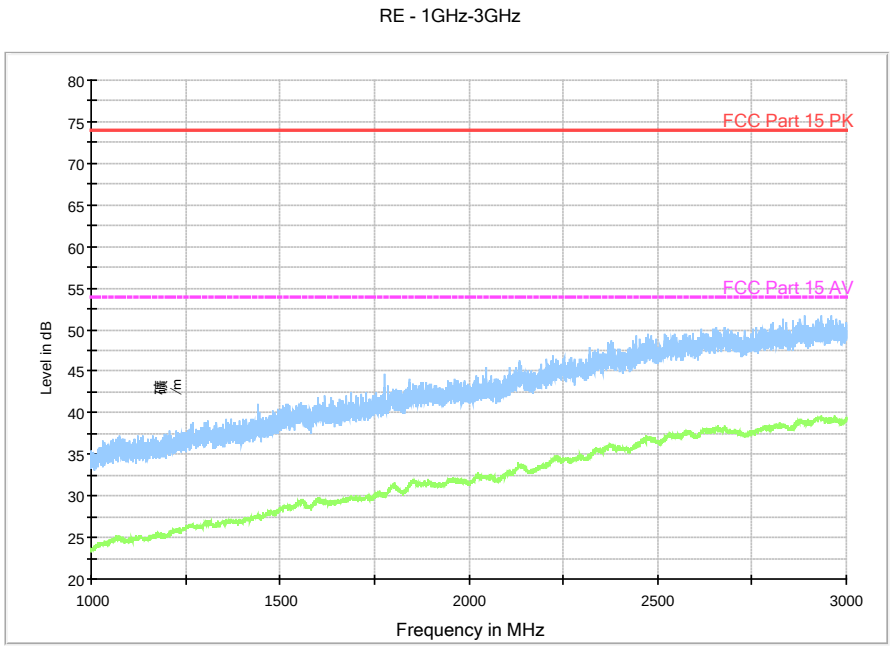
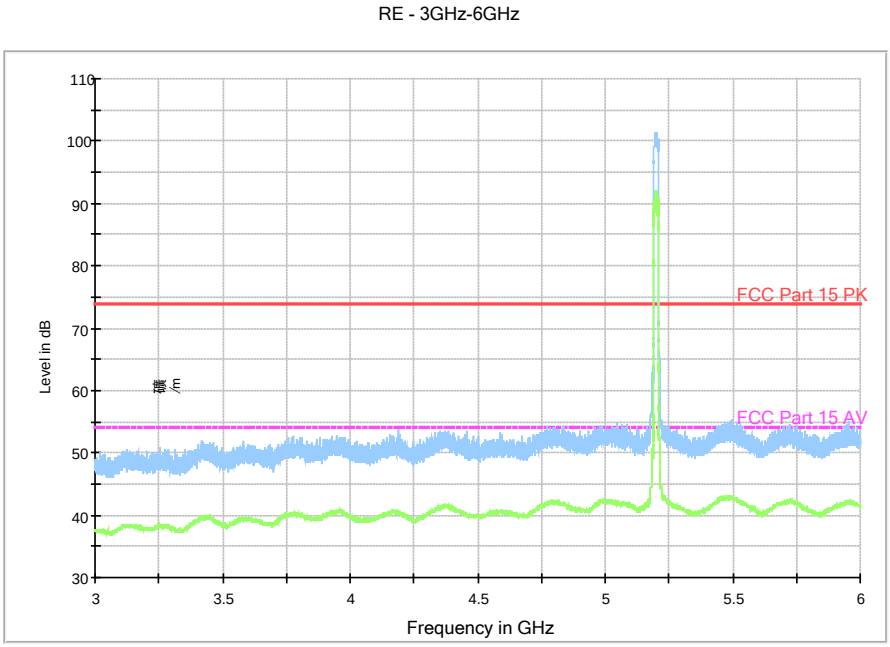


Fig. 28 Radiated Spurious Emission (802.11a, ch40, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 29 Radiated Spurious Emission (802.11a, ch40, 3GHz-6GHz)

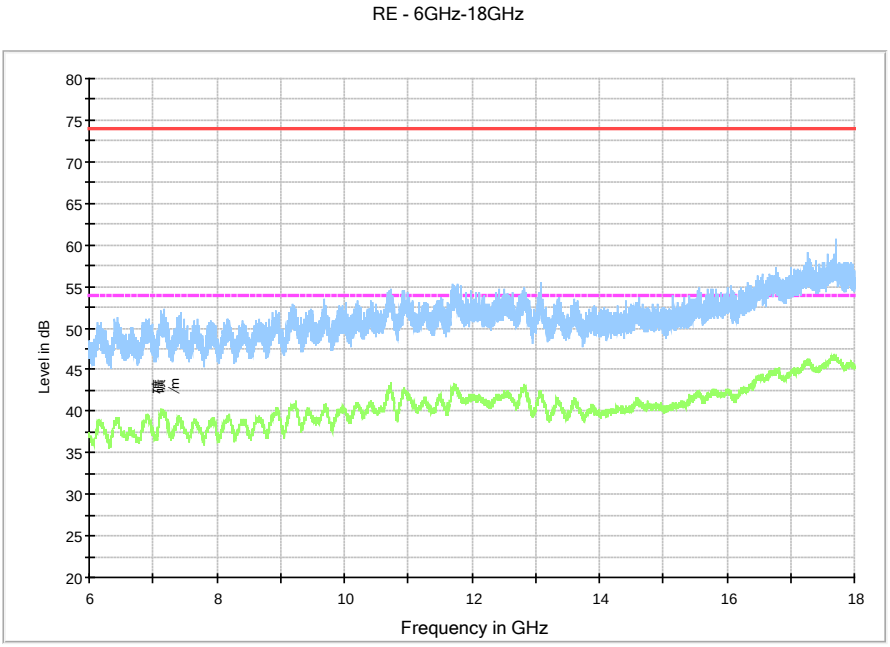


Fig. 30 Radiated Spurious Emission (802.11a, ch40, 6 GHz-18 GHz)

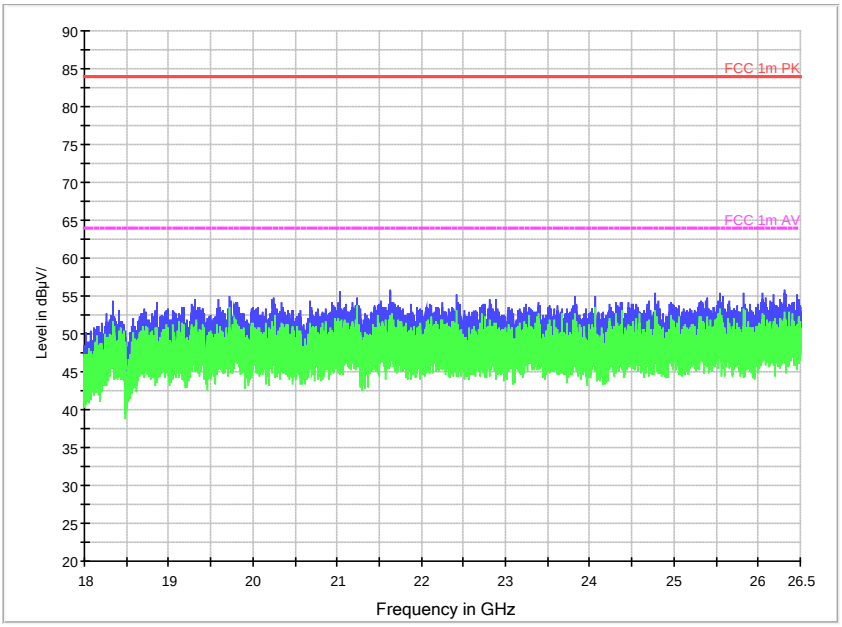


Fig. 31 Radiated Spurious Emission (802.11a, ch40, 18 GHz-26.5 GHz)

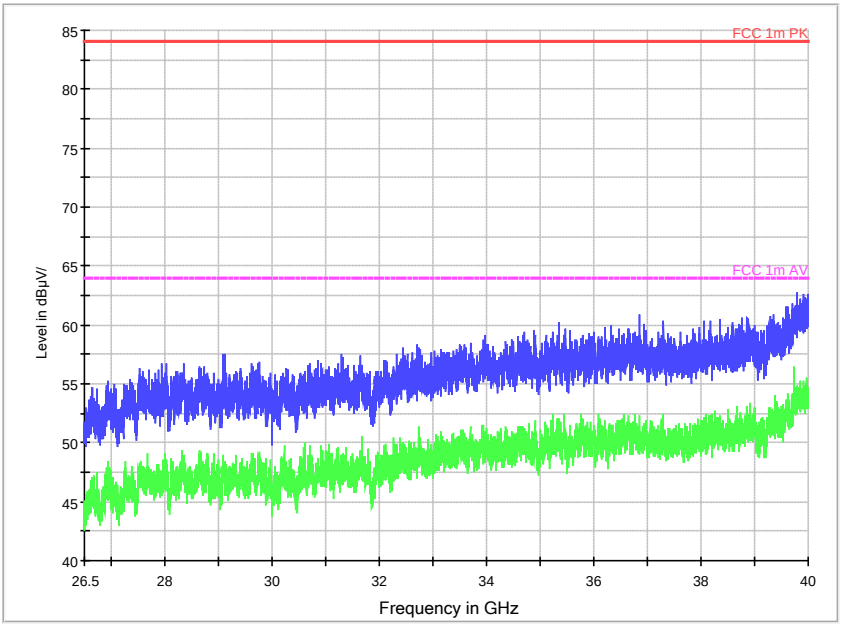


Fig. 32 Radiated Spurious Emission (802.11a, ch40, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

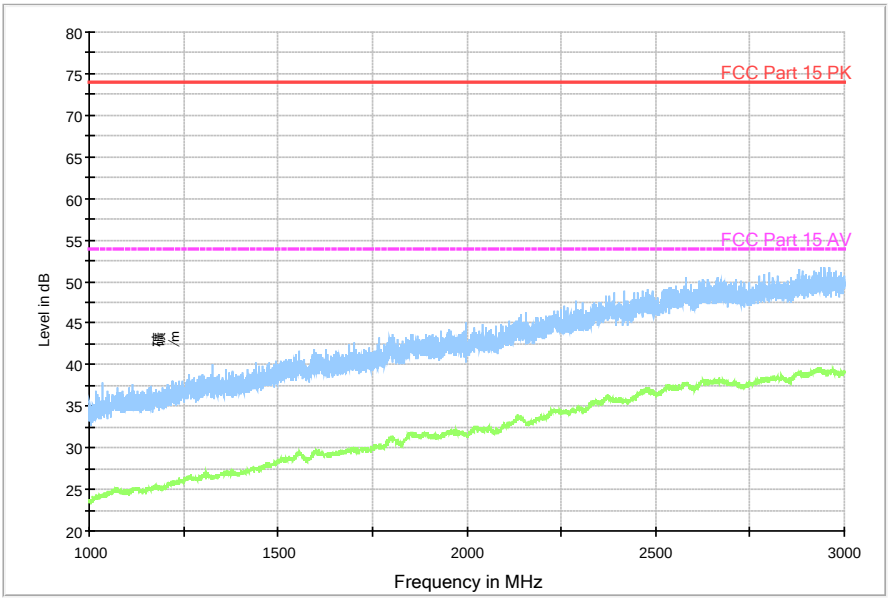
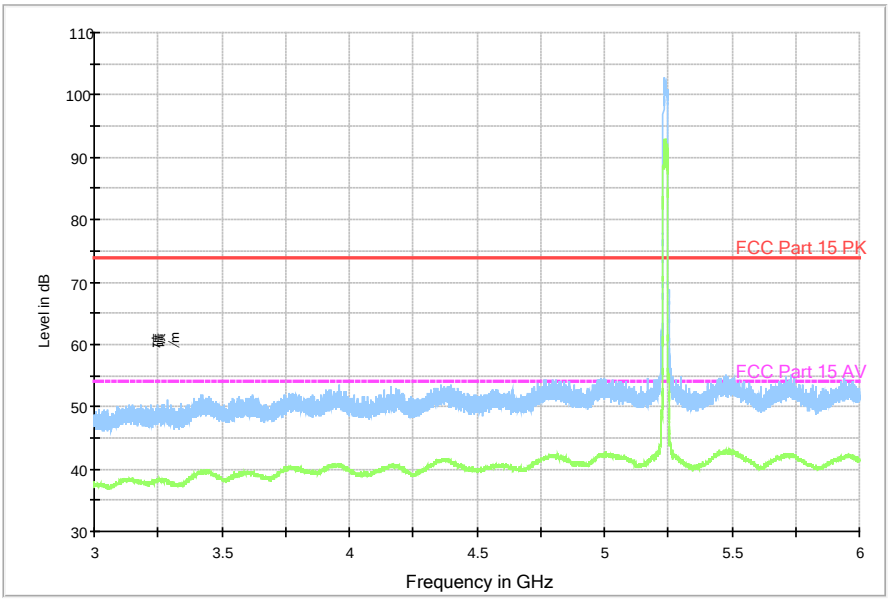


Fig. 33 Radiated Spurious Emission (802.11a, ch48, 1 GHz-3 GHz)

RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 34 Radiated Spurious Emission (802.11a, ch48, 3GHz- 6GHz)

RE - 6GHz-18GHz

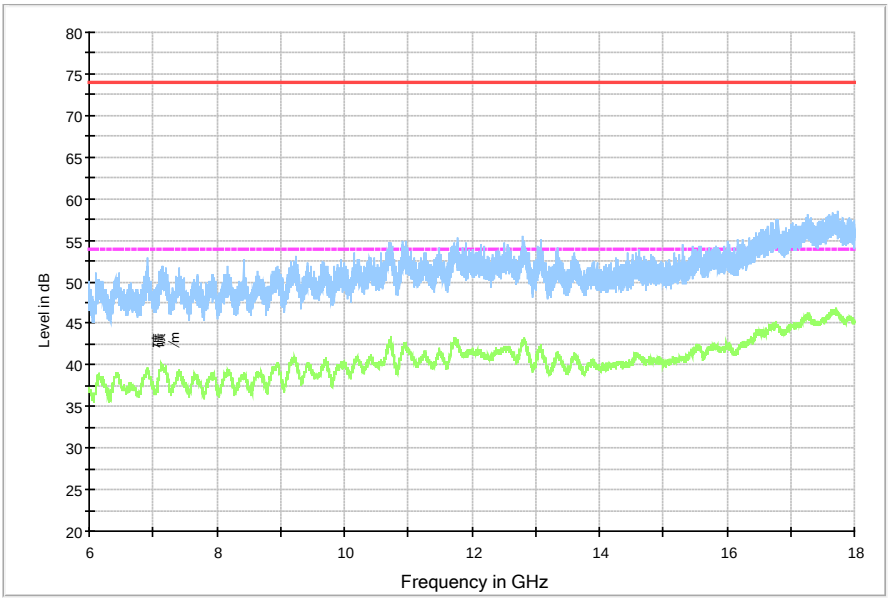


Fig. 35 Radiated Spurious Emission (802.11a, ch48, 6 GHz-18GHz)

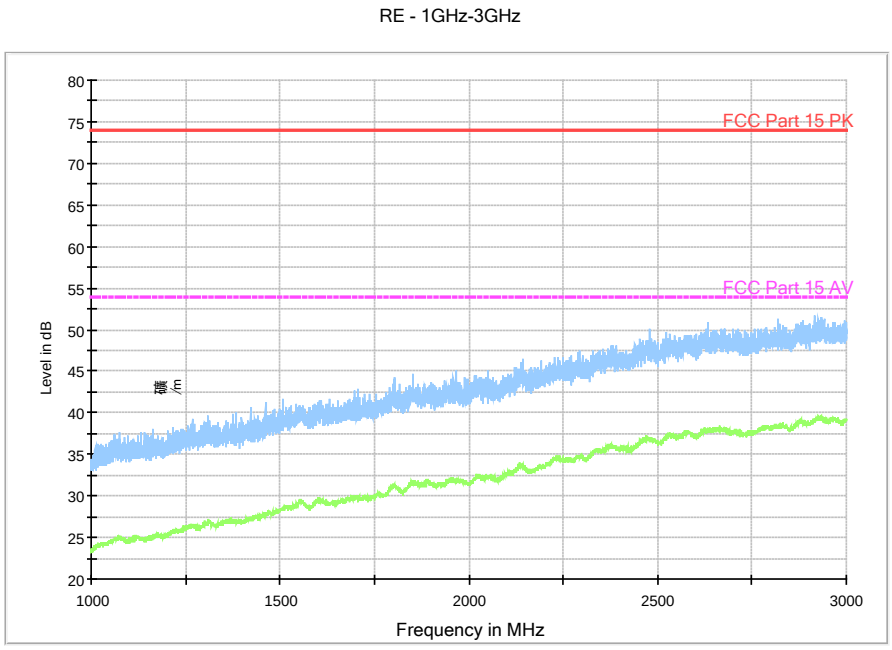
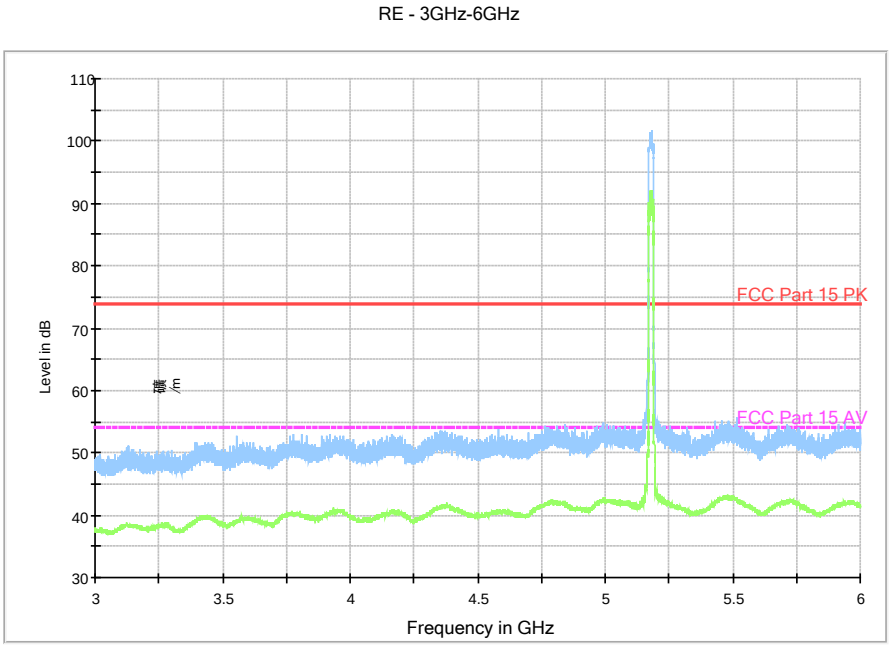


Fig. 36 Radiated Spurious Emission (802.11n-HT20, ch36, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 37 Radiated Spurious Emission (802.11n-HT20, ch36, 3GHz-6GHz)

RE - 6GHz-18GHz

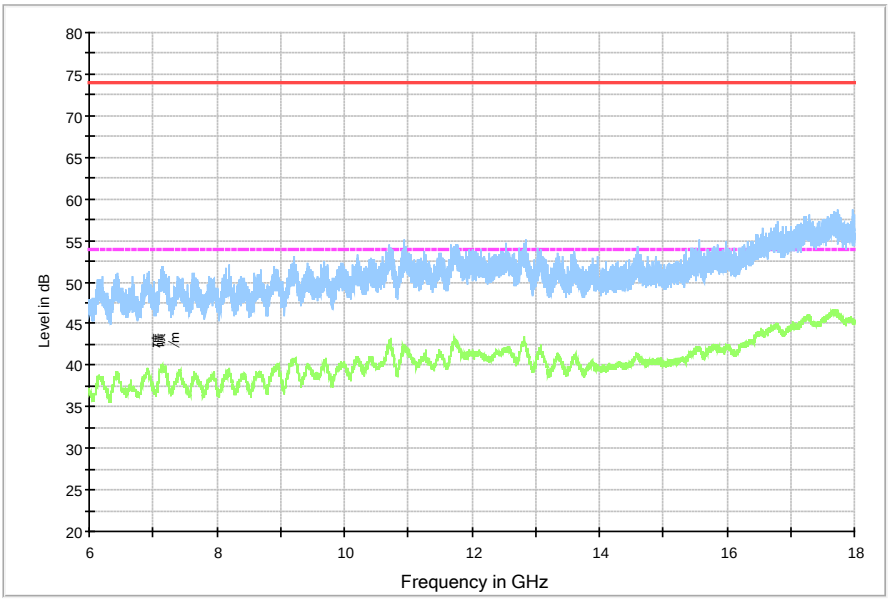


Fig. 38 Radiated Spurious Emission (802.11n-HT20, ch36, 6 GHz-18GHz)

RE 30MHz-1GHz

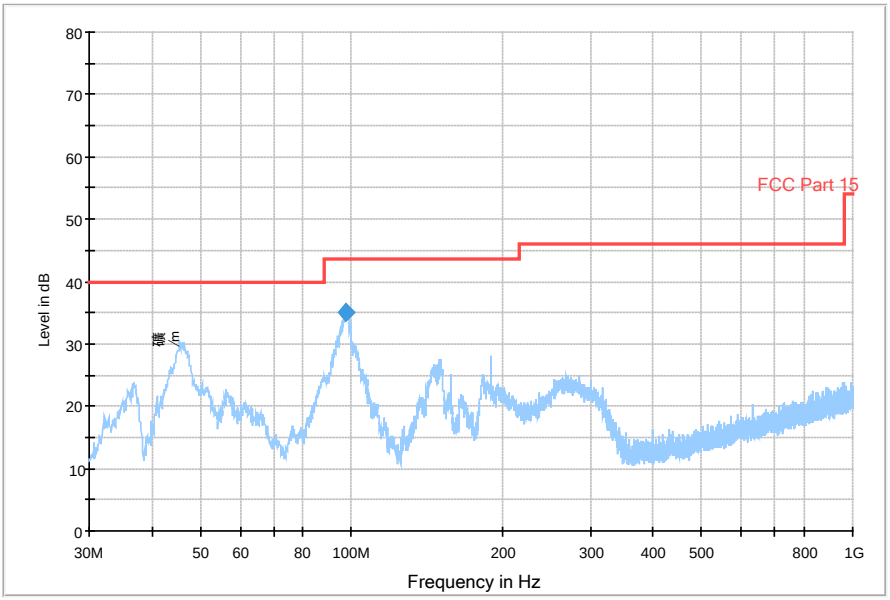


Fig. 39 Radiated Spurious Emission (802.11n-HT20, ch40, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.512000	35.1	100.0	V	297.0	-25.5	8.4	43.5	

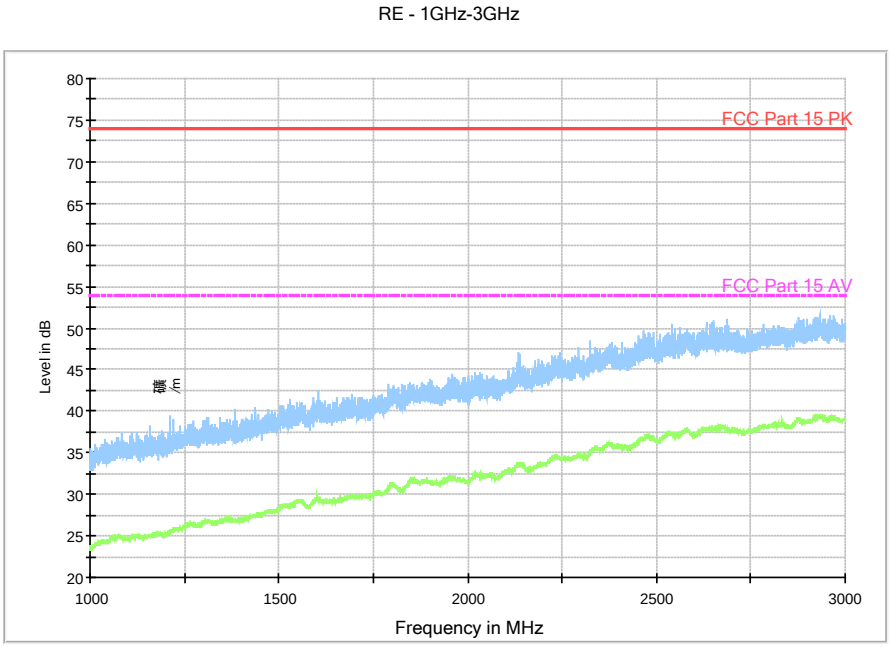
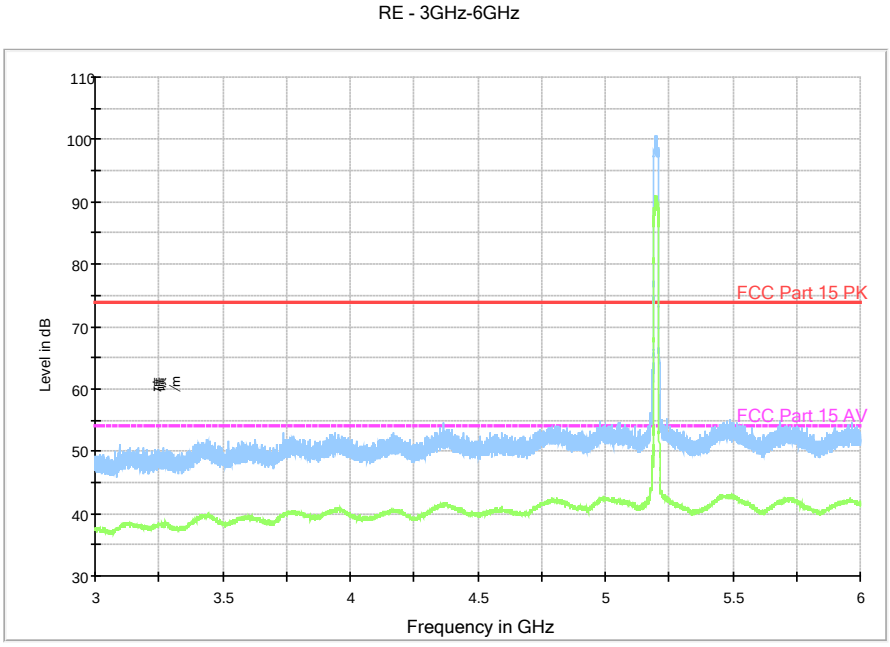


Fig. 40 Radiated Spurious Emission (802.11n-HT20, ch40, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 41 Radiated Spurious Emission (802.11n-HT20, ch40, 3 GHz-6 GHz)

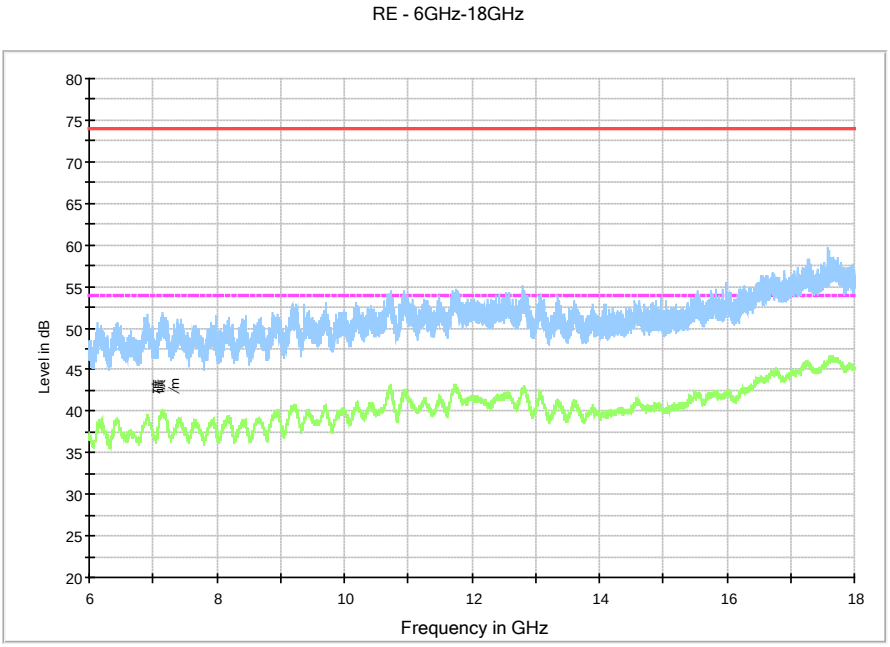


Fig. 42 Radiated Spurious Emission (802.11n-HT20, ch40, 6 GHz-18 GHz)

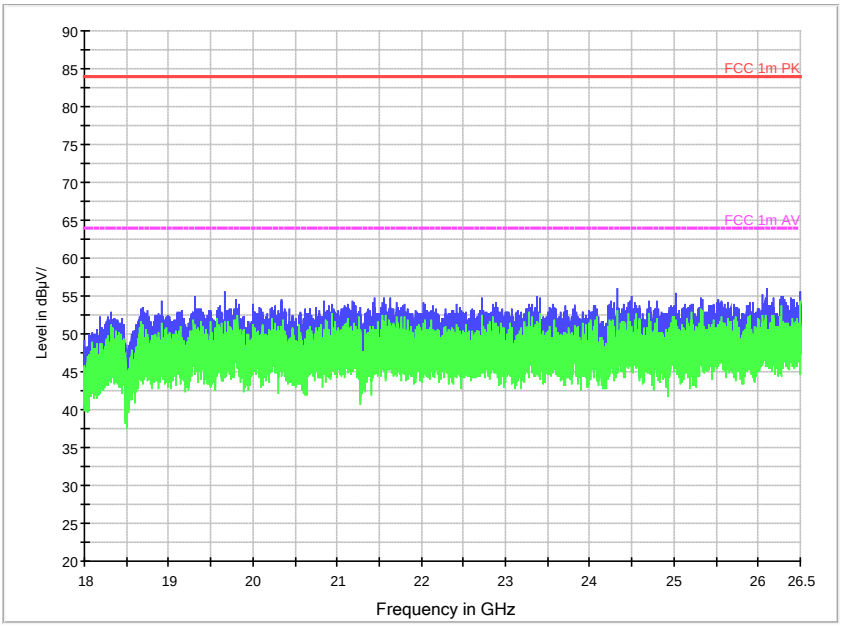


Fig. 43 Radiated Spurious Emission (802.11n-HT20, ch40, 18 GHz-26.5 GHz)

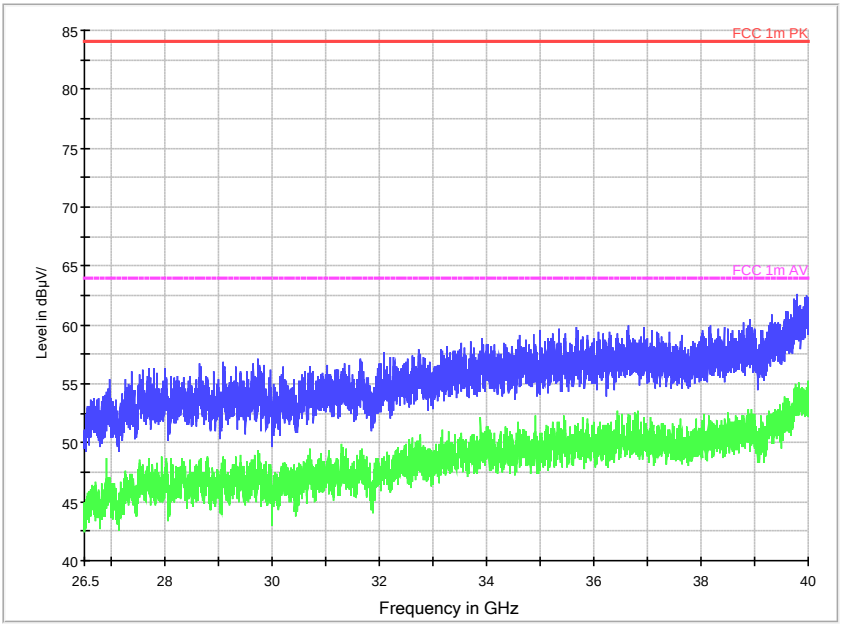


Fig. 44 Radiated Spurious Emission (802.11n-HT20, ch40, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

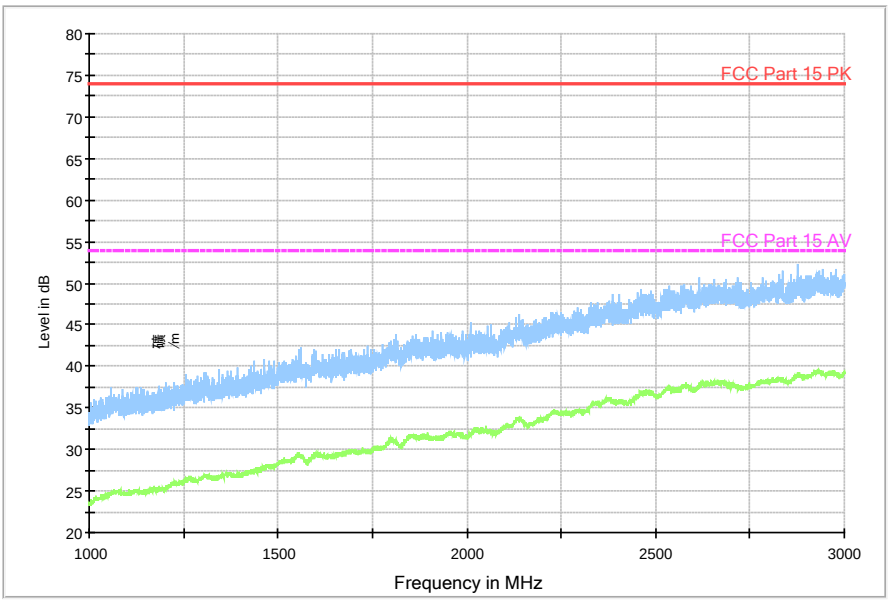
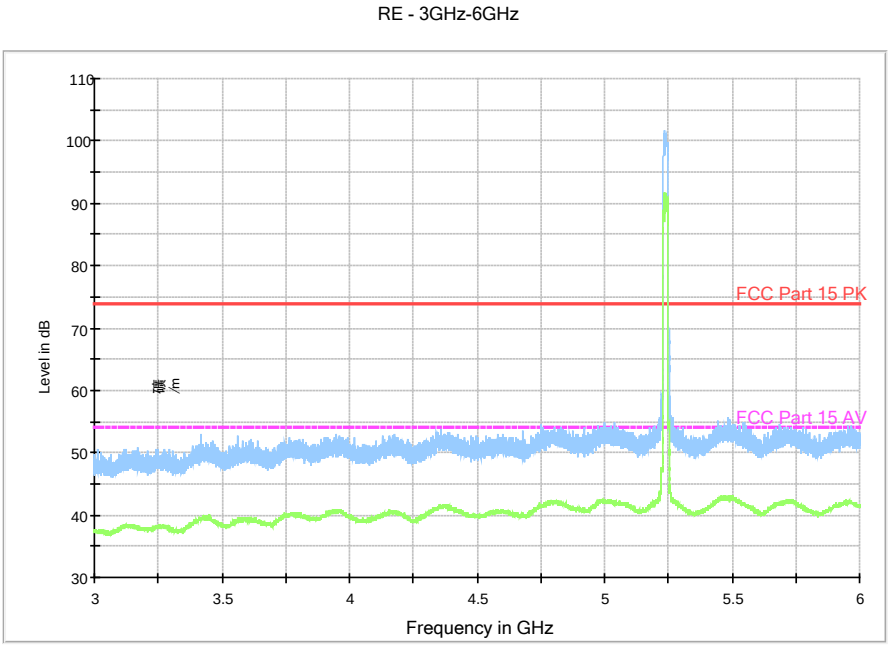


Fig. 45 Radiated Spurious Emission (802.11n-HT20, ch48, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 46 Radiated Spurious Emission (802.11n-HT20, ch48, 3 GHz-6GHz)

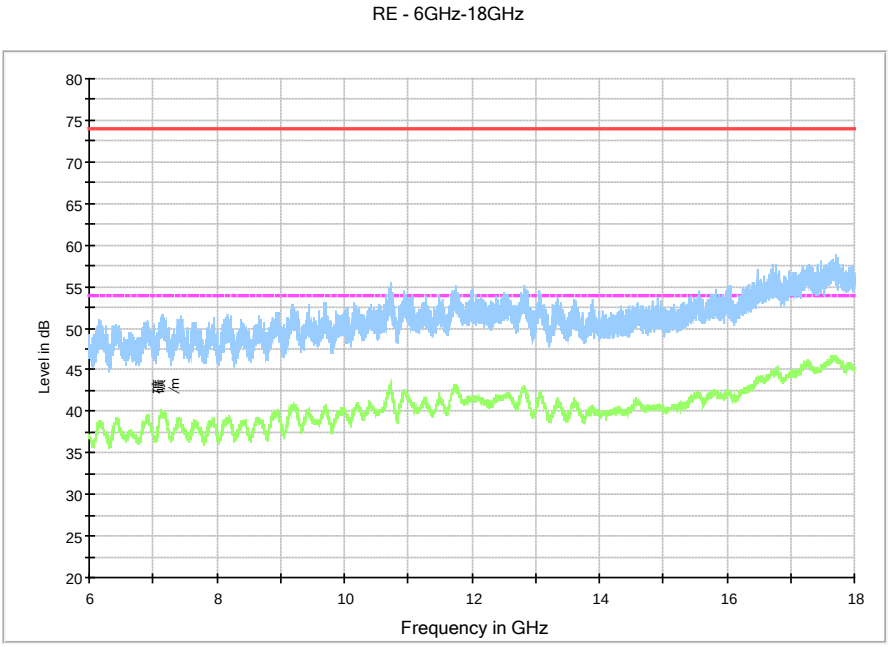


Fig. 47 Radiated Spurious Emission (802.11n-HT20, ch48, 6 GHz-18 GHz)

RE 30MHz-1GHz

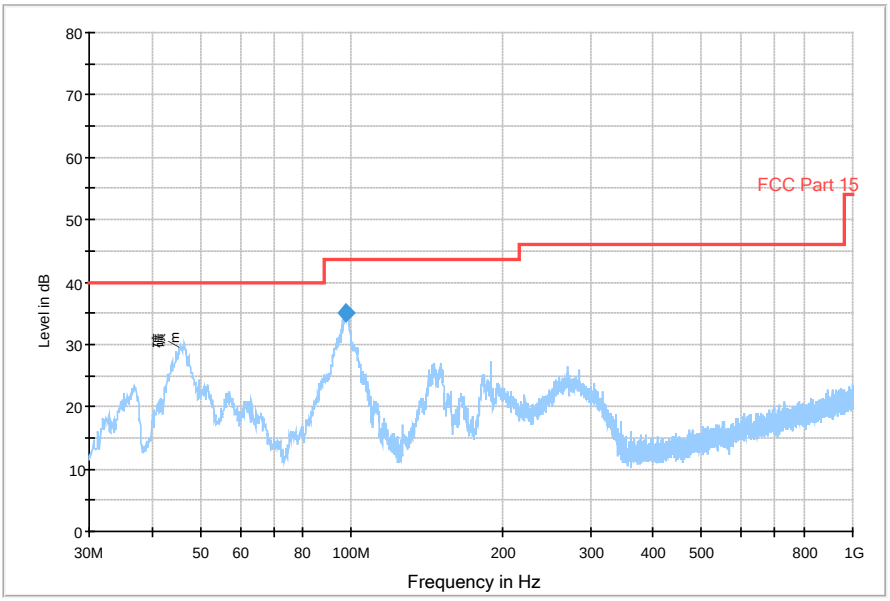


Fig. 48 Radiated Spurious Emission (802.11n-HT40, ch38, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
97.803000	35.1	100.0	V	305.0	-25.5	8.4	43.5

RE - 1GHz-3GHz

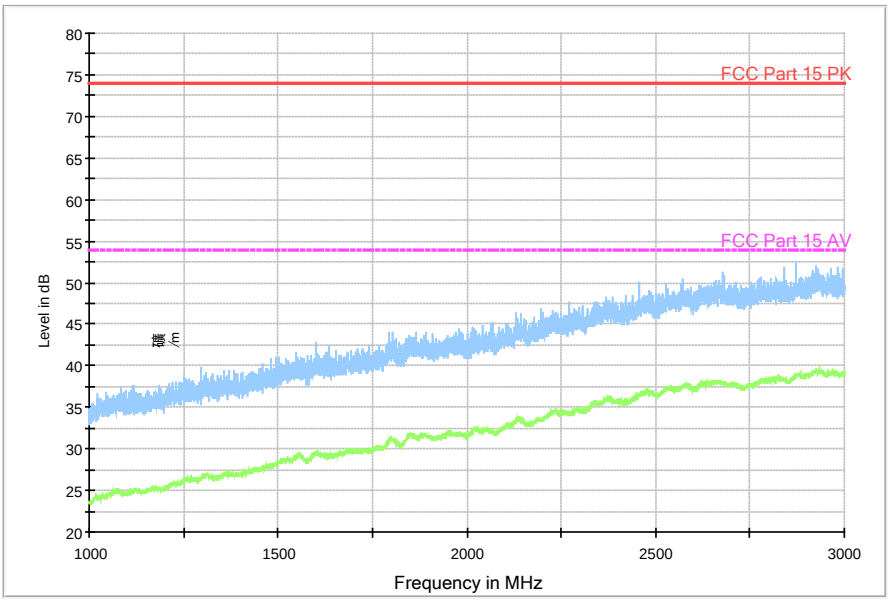
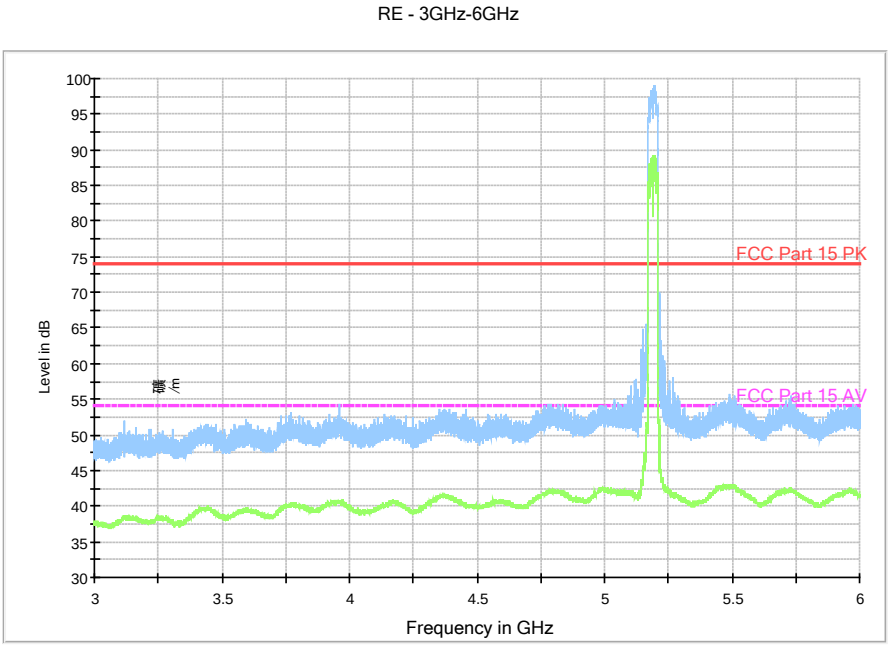


Fig. 49 Radiated Spurious Emission (802.11n-HT40, ch38, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 50 Radiated Spurious Emission (802.11n-HT40, ch38, 3 GHz-6GHz)

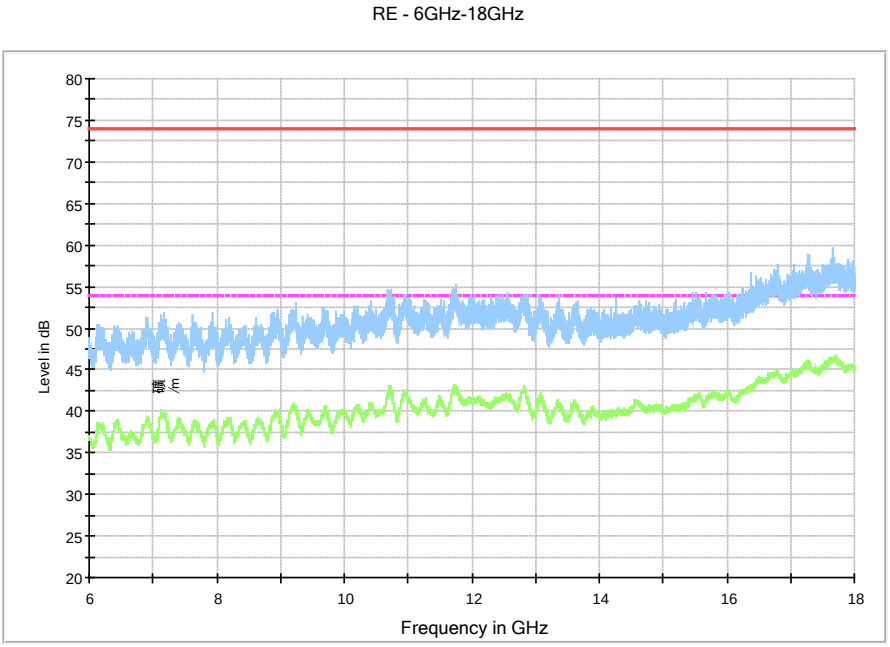


Fig. 51 Radiated Spurious Emission (802.11n-HT40, ch38, 6 GHz-18 GHz)

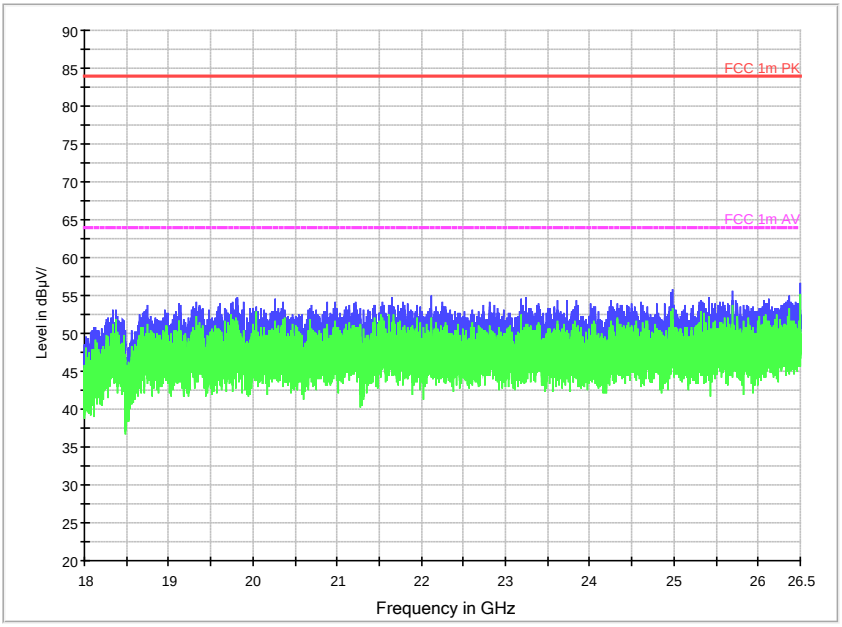


Fig. 52 Radiated Spurious Emission (802.11n-HT40, ch38, 18 GHz-26.5 GHz)

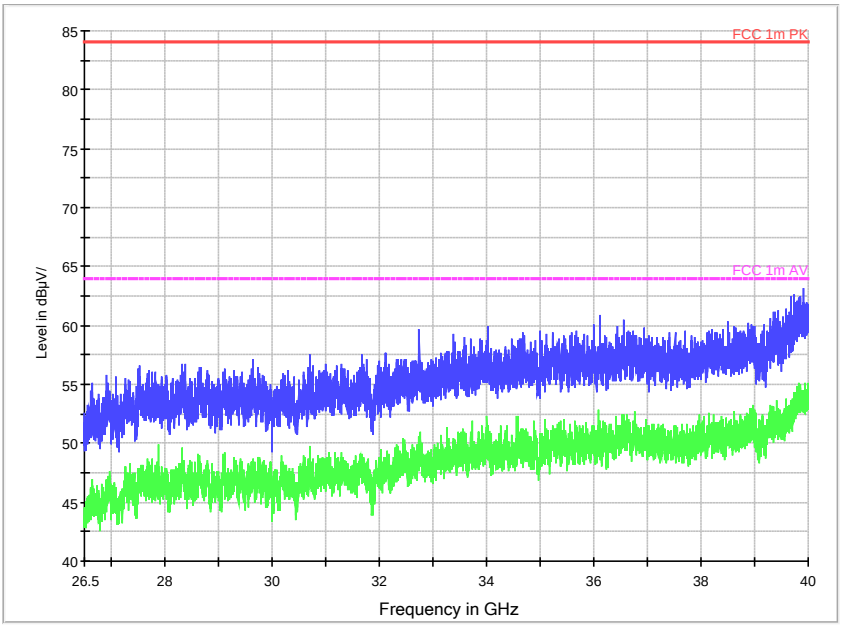


Fig. 53 Radiated Spurious Emission (802.11n-HT40, ch38, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

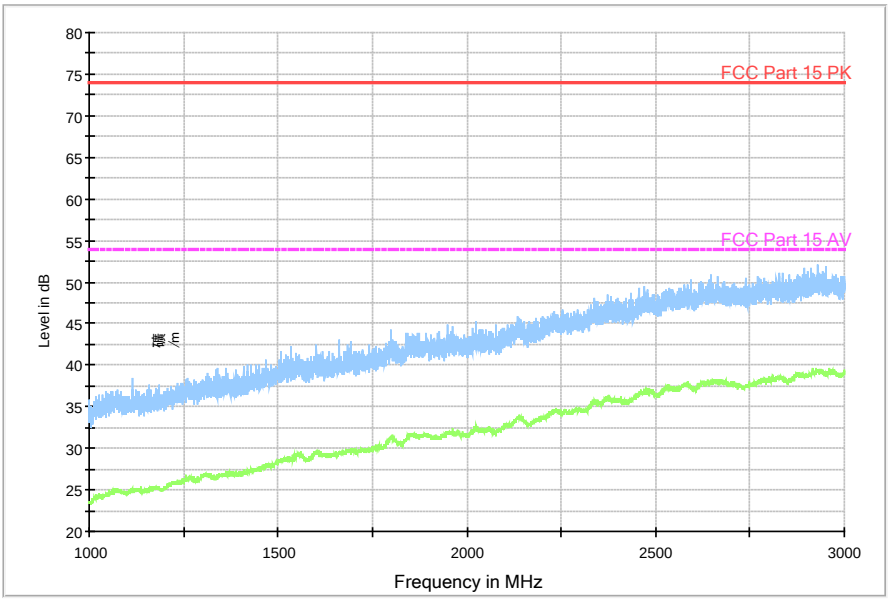
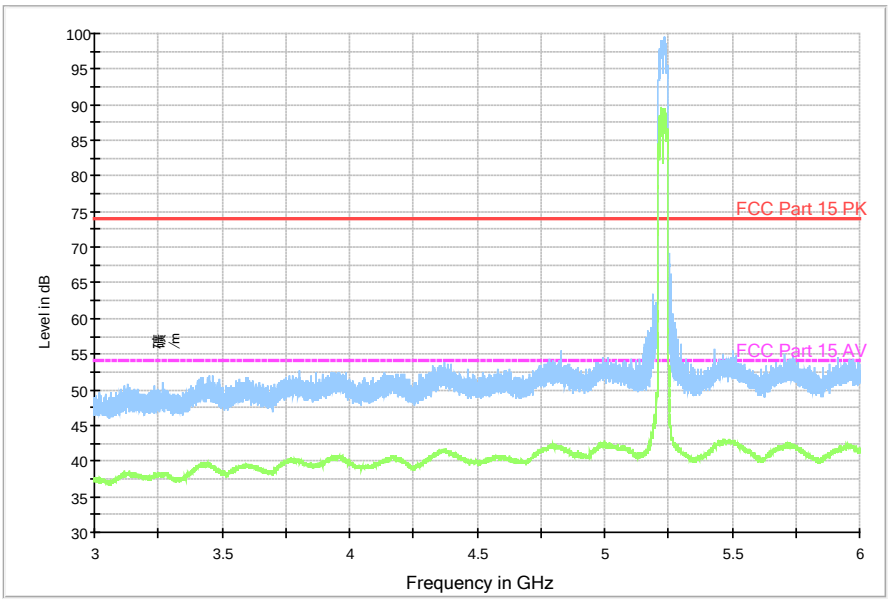


Fig. 54 Radiated Spurious Emission (802.11n-HT40, ch46, 1 GHz-3GHz)

RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 55 Radiated Spurious Emission (802.11n-HT40, ch46, 3GHz-6GHz)

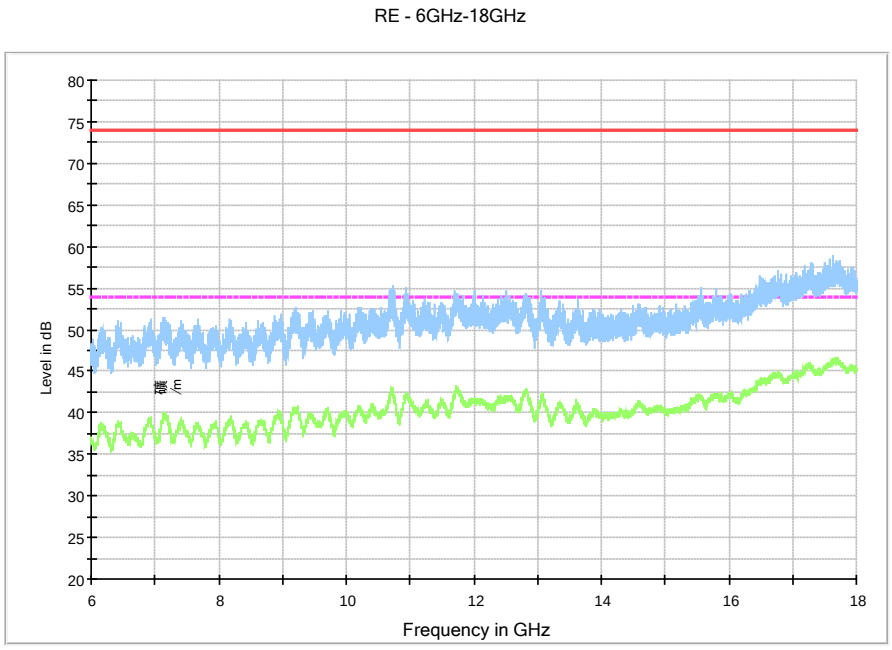


Fig. 56 Radiated Spurious Emission (802.11n-HT40, ch46, 6 GHz-18 GHz)

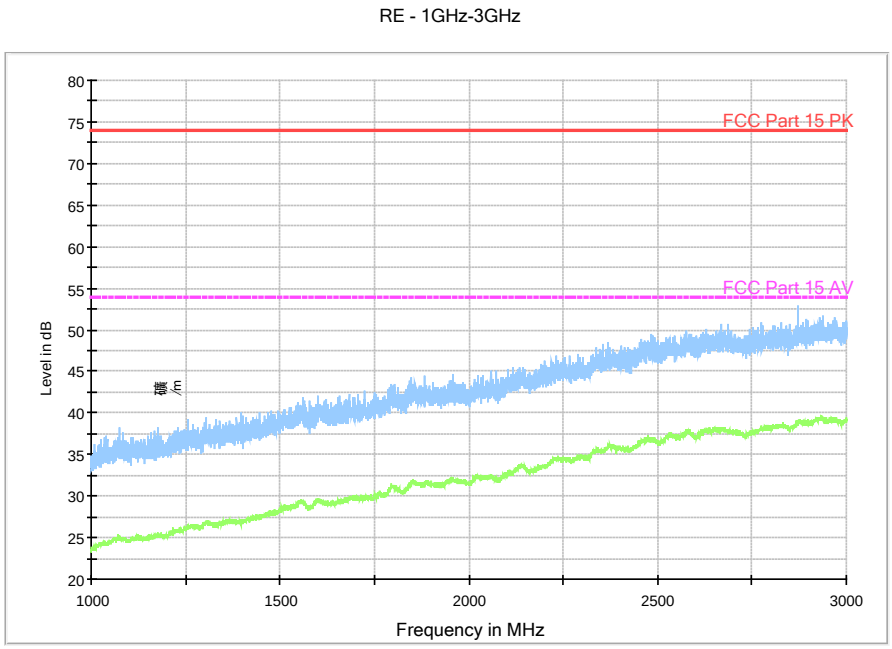
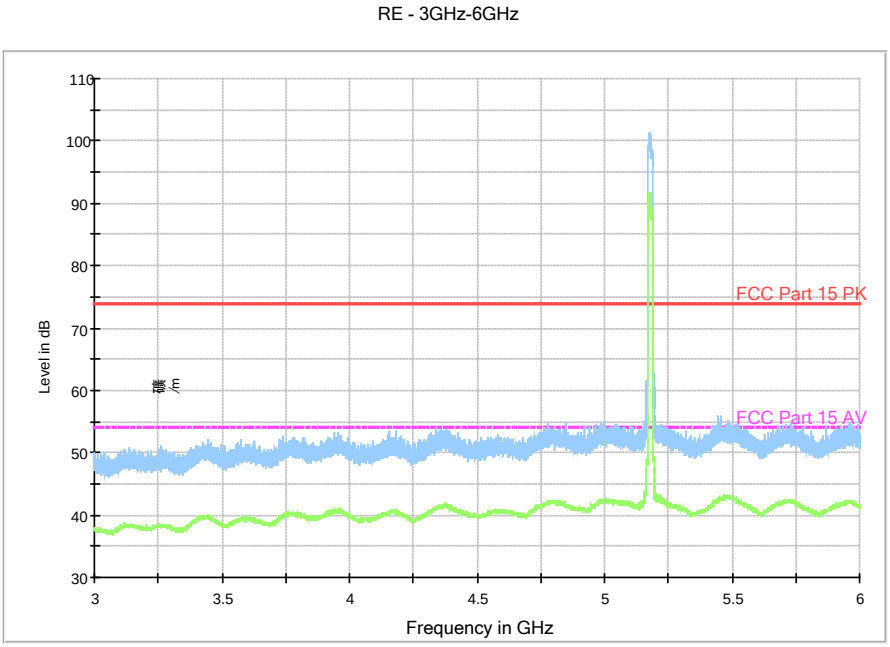


Fig. 57 Radiated Spurious Emission (802.11ac-HT20, ch36, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 58 Radiated Spurious Emission (802.11ac-HT20, ch36, 3 GHz-6 GHz)

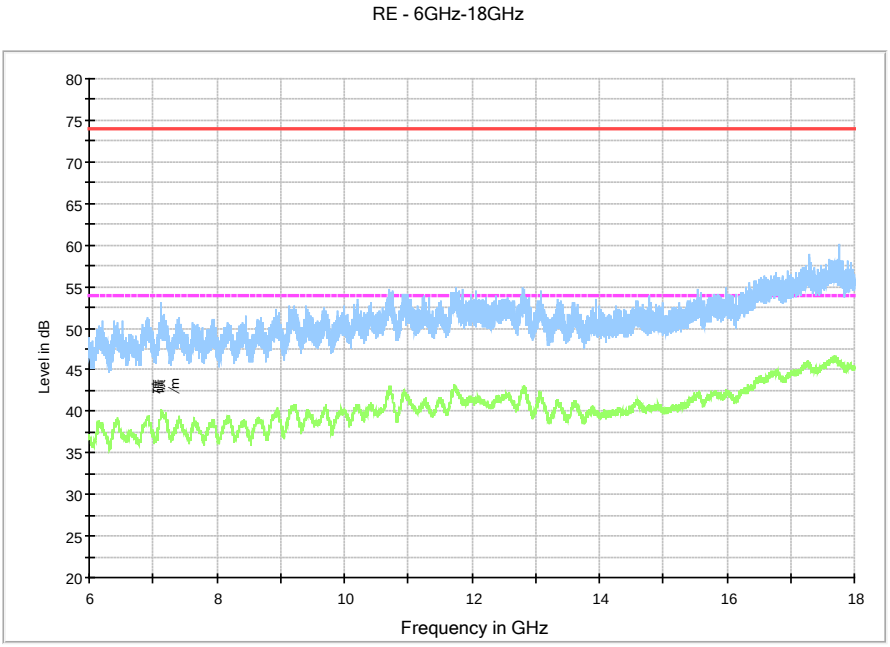


Fig. 59 Radiated Spurious Emission (802.11ac-HT20, ch36, 6 GHz-18GHz)

RE 30MHz-1GHz

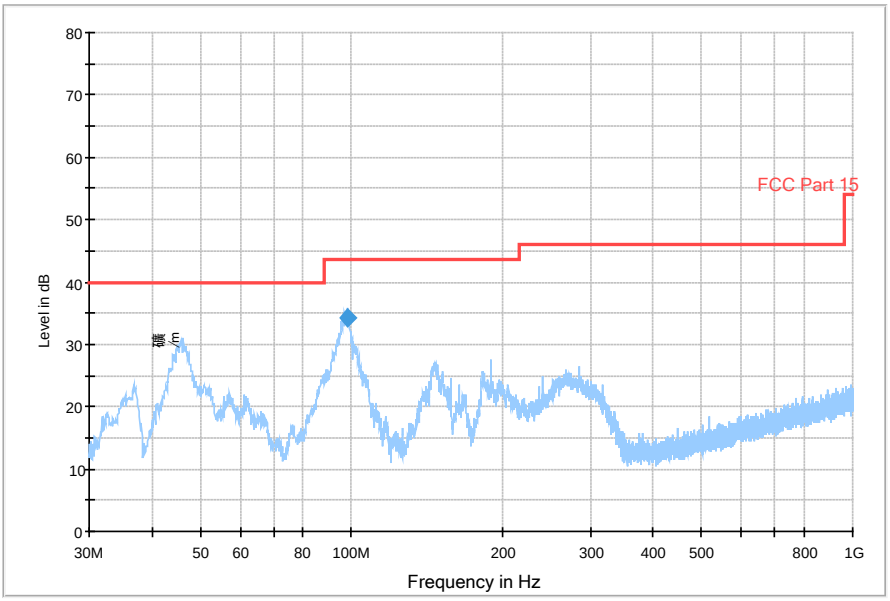


Fig. 60 Radiated Spurious Emission (802.11ac-HT20, ch40, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
98.288000	34.3	100.0	V	301.0	-25.5	9.2	43.5

RE - 1GHz-3GHz

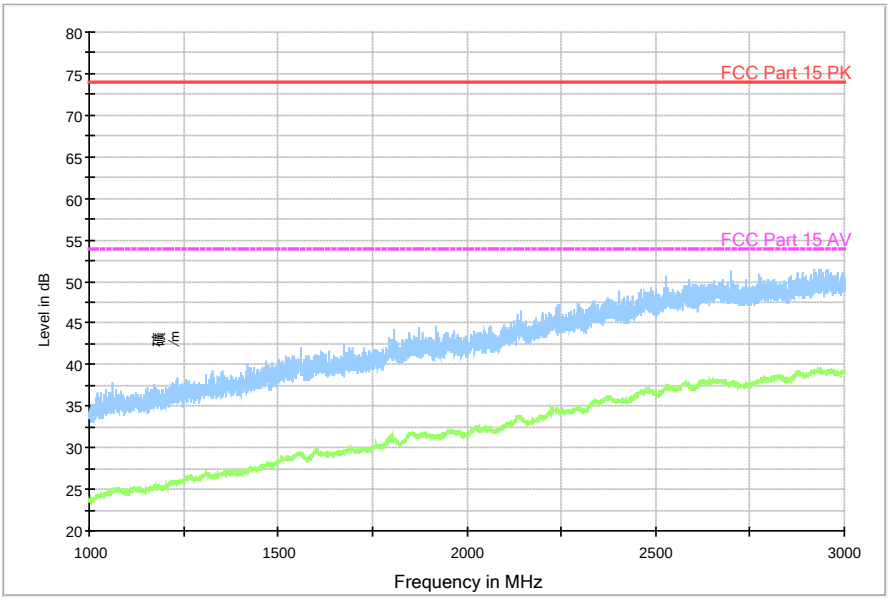
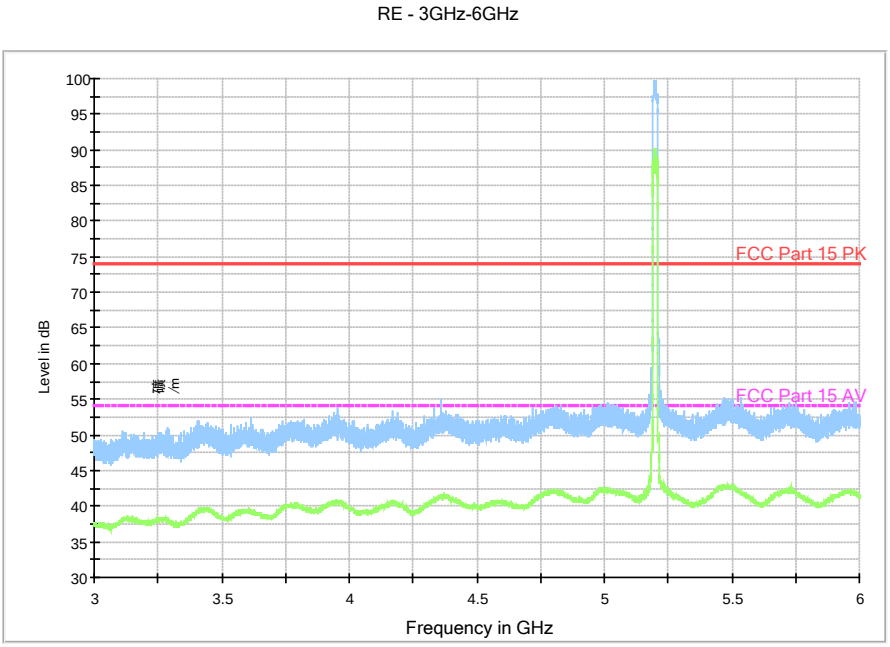


Fig. 61 Radiated Spurious Emission (802.11ac-HT20, ch40, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 62 Radiated Spurious Emission (802.11ac-HT20, ch40, 3 GHz-6 GHz)

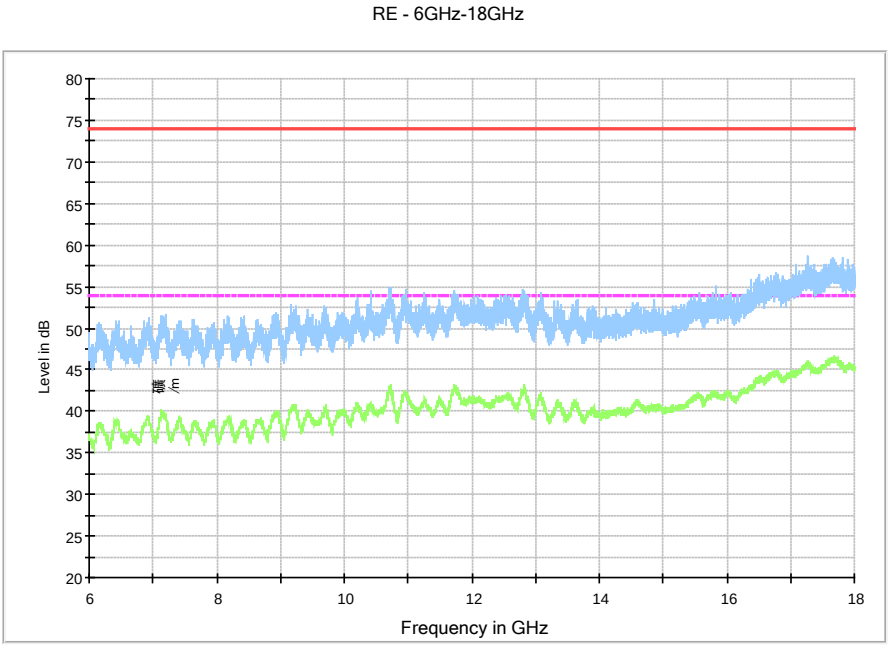


Fig. 63 Radiated Spurious Emission (802.11ac-HT20, ch40, 6 GHz-18 GHz)

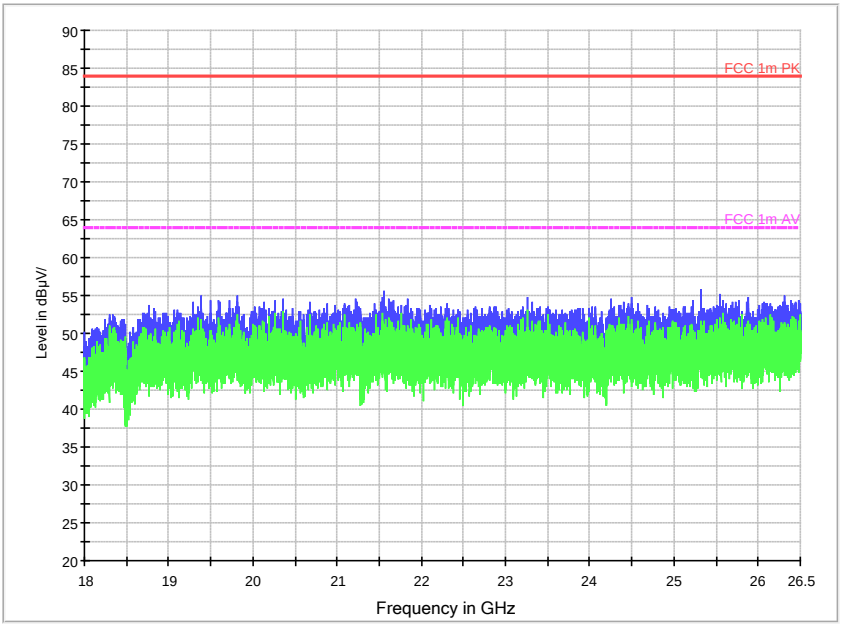


Fig. 64 Radiated Spurious Emission (802.11ac-HT20, ch40, 18 GHz-26.5 GHz)

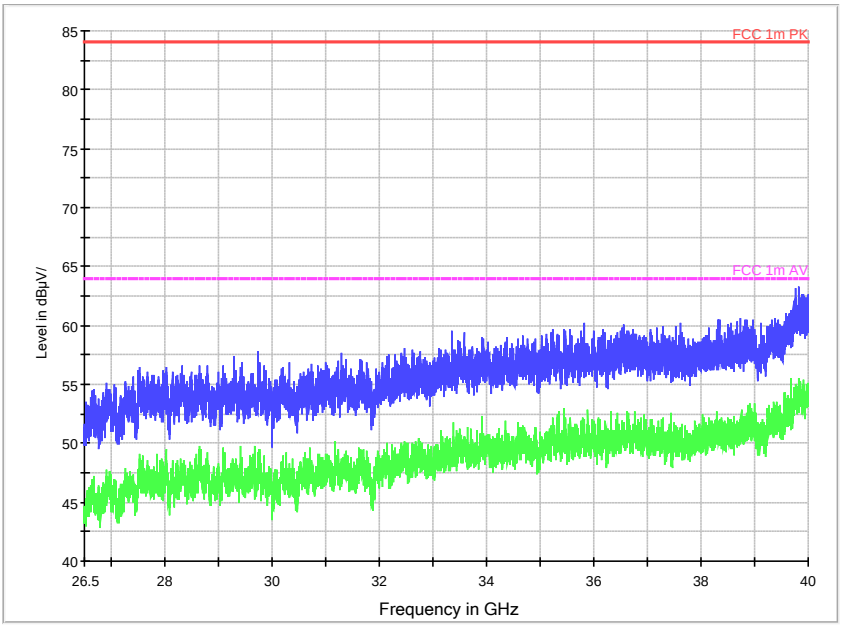


Fig. 65 Radiated Spurious Emission (802.11ac-HT20, ch40, 26.5 GHz-40 GHz)

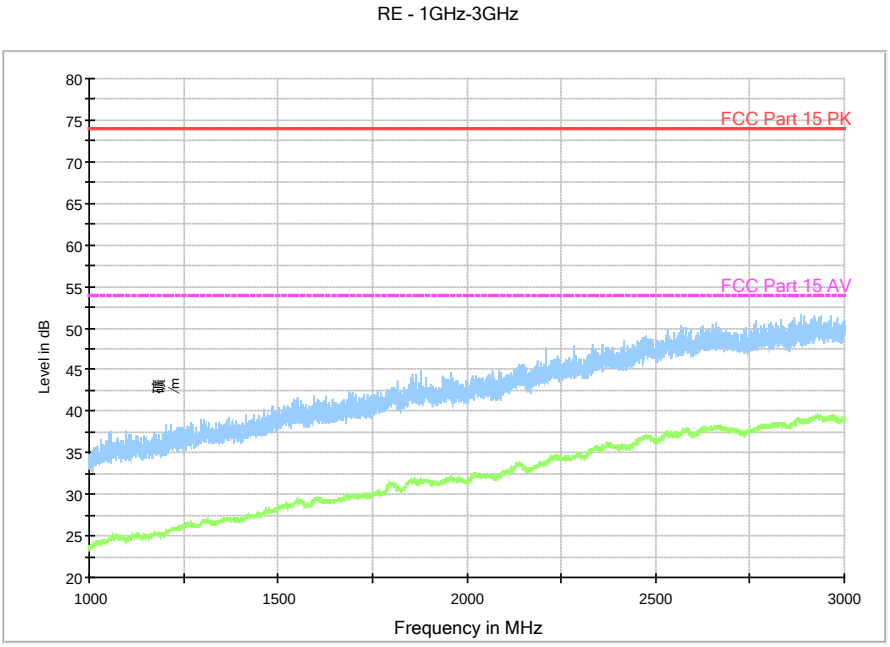
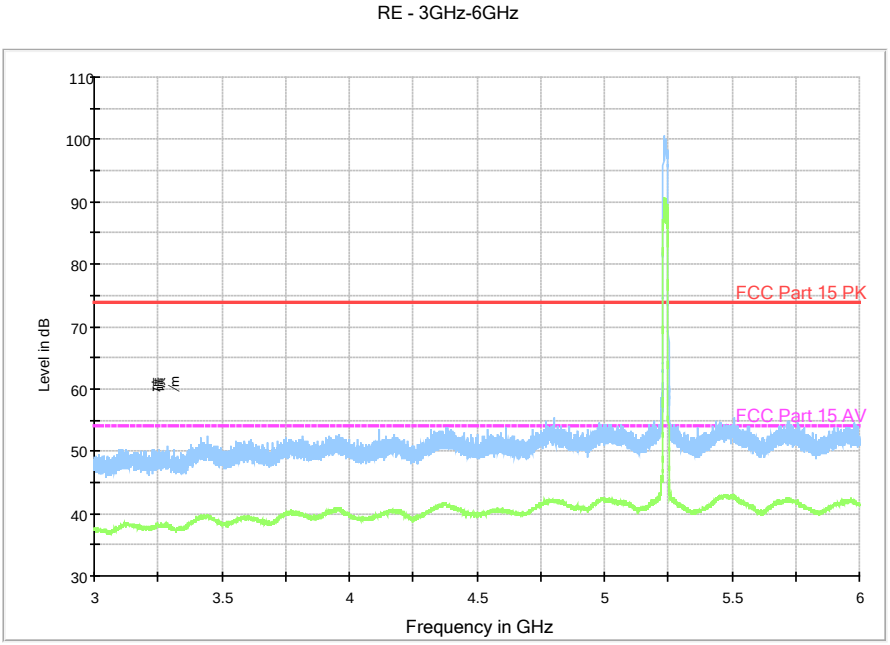


Fig. 66 Radiated Spurious Emission (802.11ac-HT20, ch48, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 67 Radiated Spurious Emission (802.11ac-HT20, ch48, 3 GHz-6GHz)

RE - 6GHz-18GHz

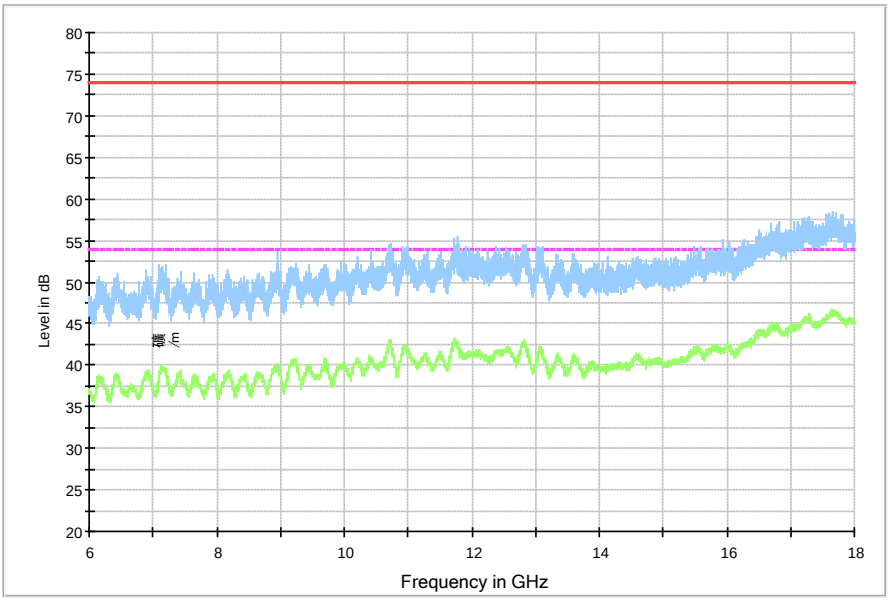


Fig. 68 Radiated Spurious Emission (802.11ac-HT20, ch48, 6 GHz-18 GHz)

RE 30MHz-1GHz

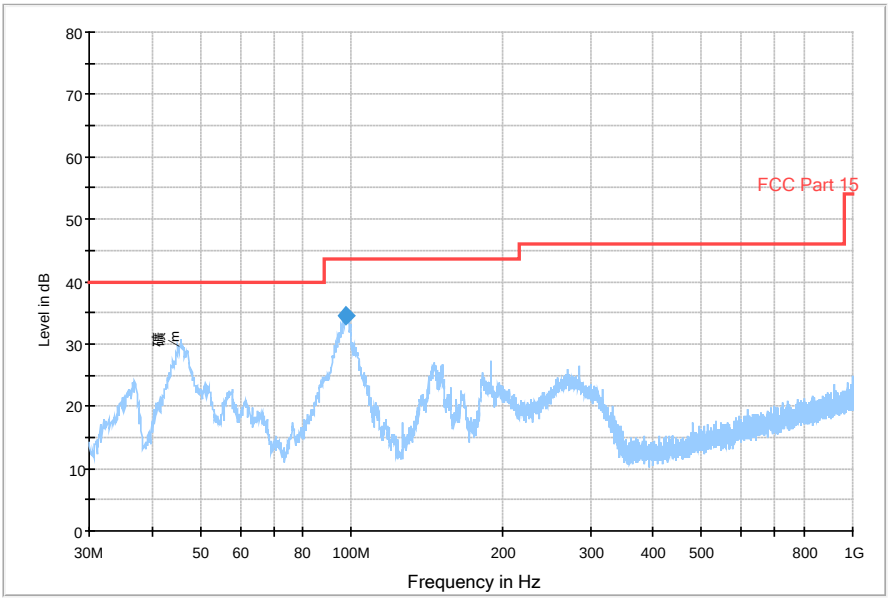


Fig. 69 Radiated Spurious Emission (802.11ac-HT40, ch38, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.318000	34.5	110.0	V	294.0	-25.5	9.0	43.5	

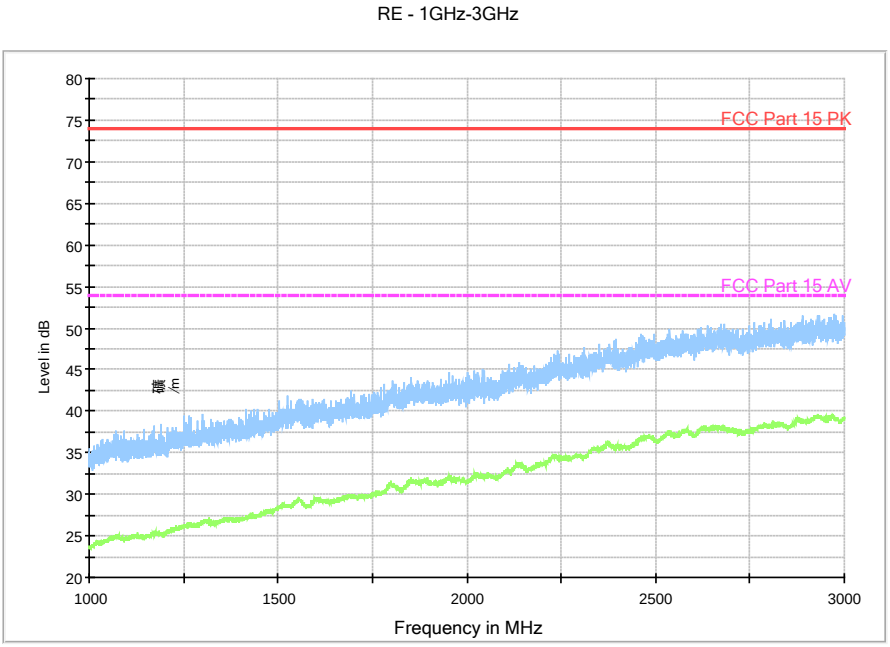
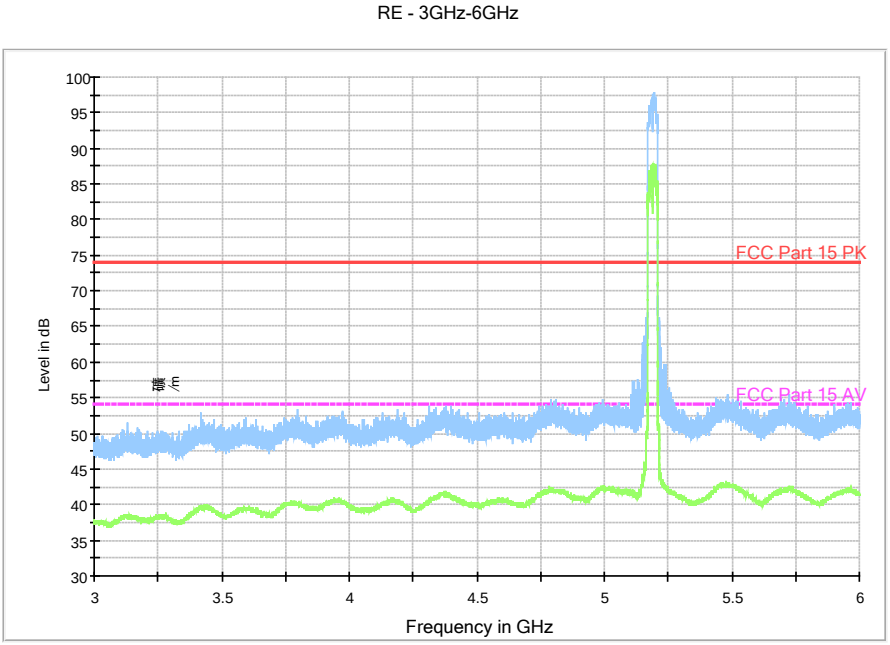


Fig. 70 Radiated Spurious Emission (802.11ac-HT40, ch38, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 71 Radiated Spurious Emission (802.11ac-HT40, ch38, 3 GHz-6 GHz)

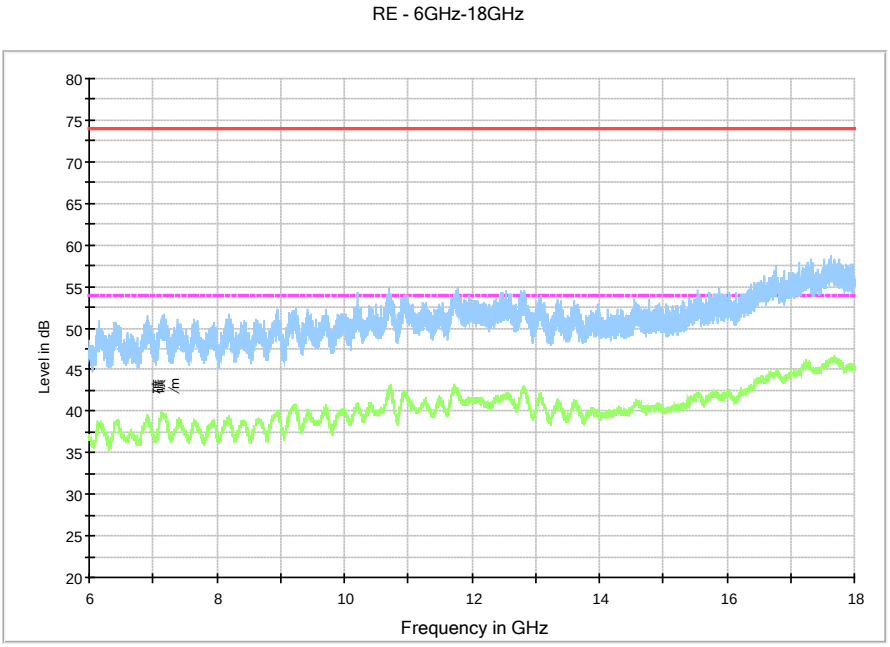


Fig. 72 Radiated Spurious Emission (802.11ac-HT40, ch38, 6 GHz-18 GHz)

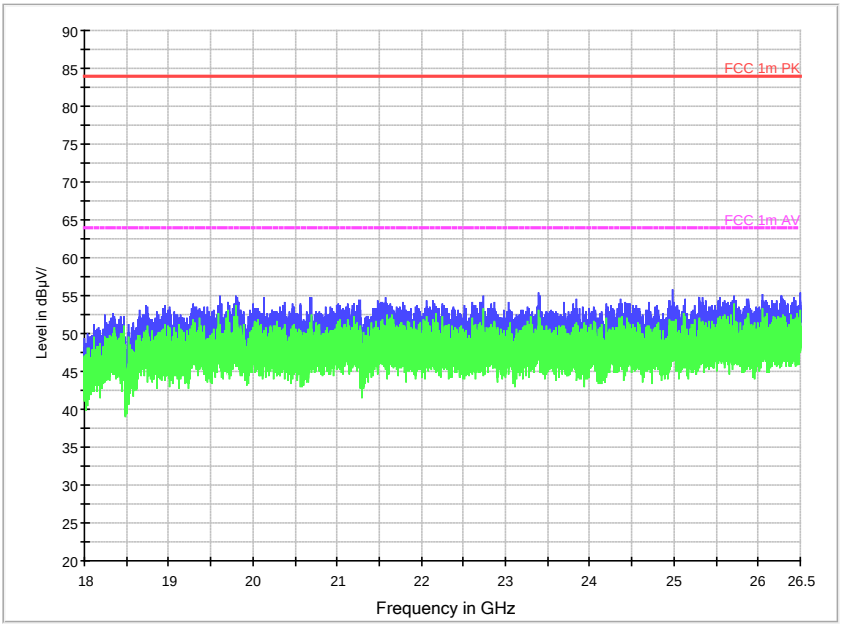


Fig. 73 Radiated Spurious Emission (802.11ac-HT40, ch38, 18 GHz-26.5 GHz)

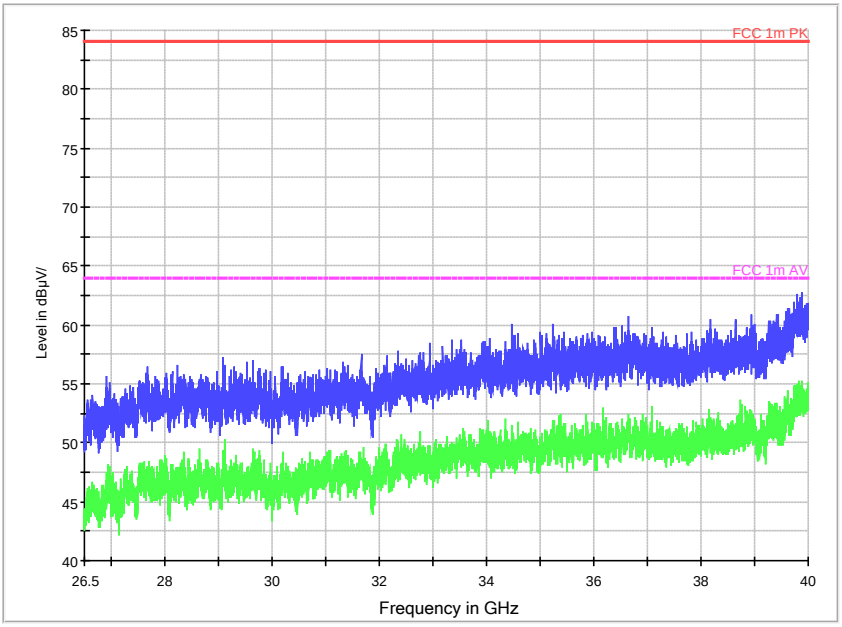


Fig. 74 Radiated Spurious Emission (802.11ac-HT40, ch38, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

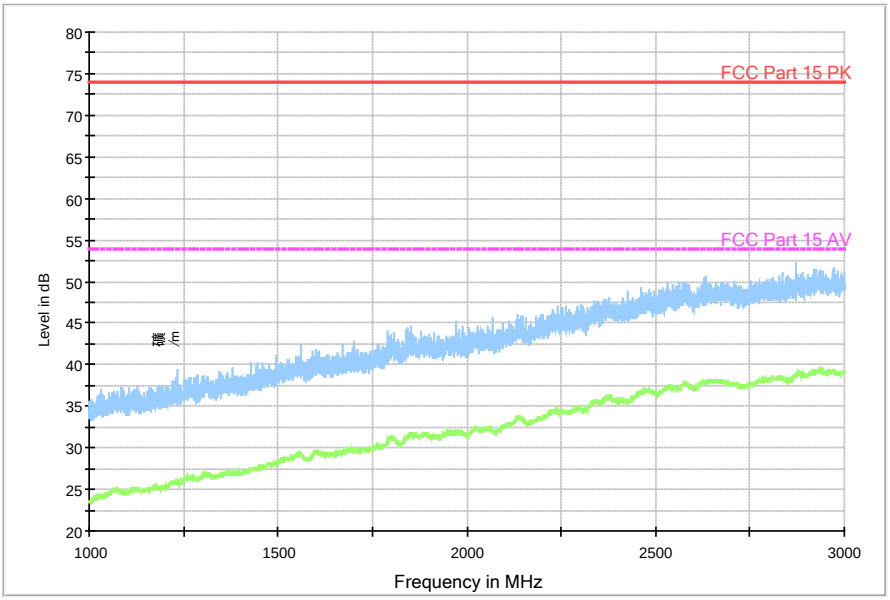
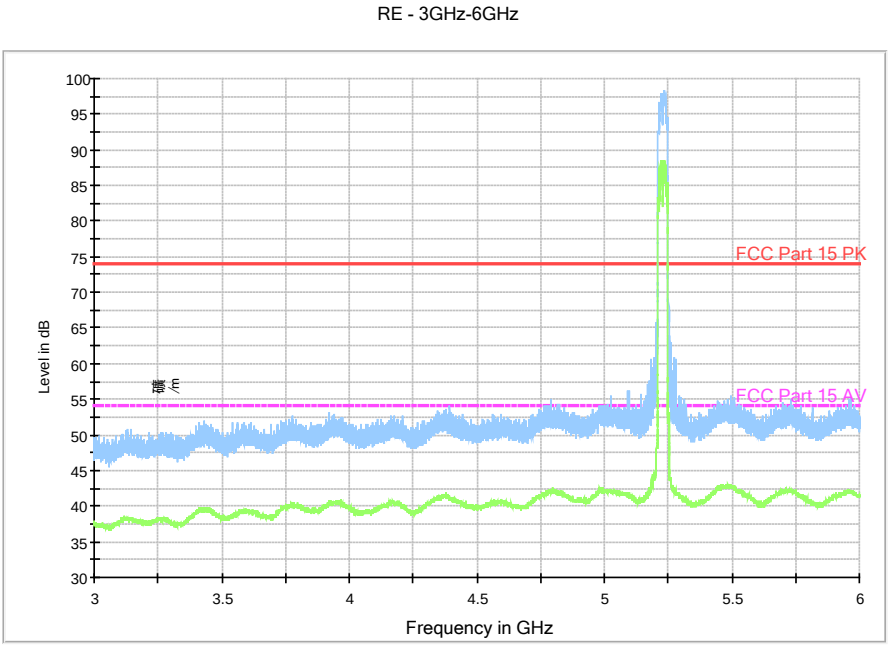


Fig. 75 Radiated Spurious Emission (802.11ac-HT40, ch46, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 76 Radiated Spurious Emission (802.11ac-HT40, ch46, 3 GHz-6 GHz)

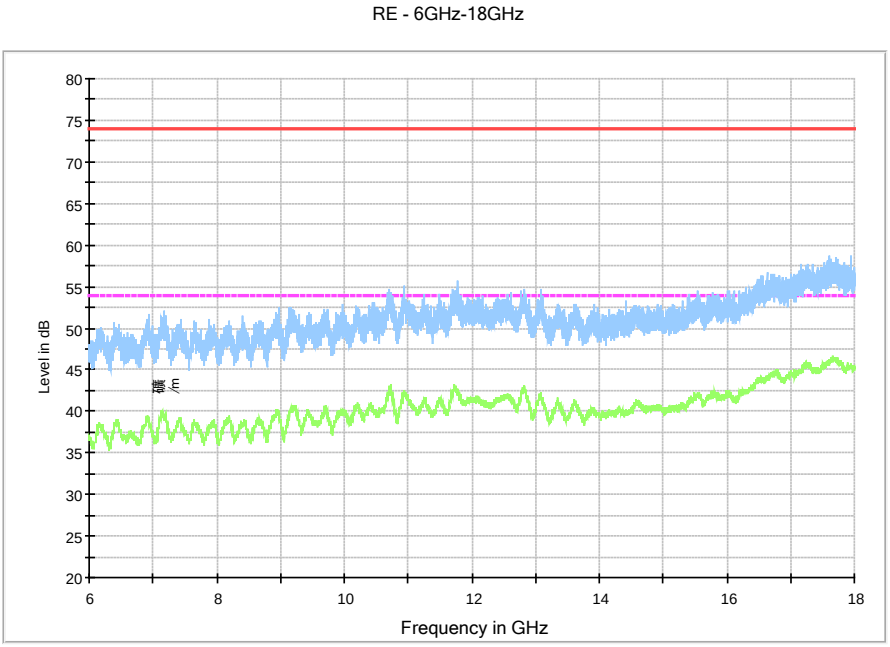


Fig. 77 Radiated Spurious Emission (802.11ac-HT40, ch46, 6 GHz-18 GHz)

5GHz U-NII 2A

802.11a mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a	52(5260MHz)	1 GHz ~ 3 GHz	Fig.78	P
		3 GHz ~ 6 GHz	Fig.79	P
		6 GHz ~ 18 GHz	Fig.80	P
	56(5280MHz)	30 MHz ~1 GHz	Fig.81	P
		1 GHz ~ 3 GHz	Fig.82	P
		3 GHz ~ 6 GHz	Fig.83	P
		6 GHz ~ 18 GHz	Fig.84	P
		18 GHz ~ 26.5 GHz	Fig.85	P
		26.5 GHz ~ 40 GHz	Fig.86	P
	64(5320MHz)	1 GHz ~ 3 GHz	Fig.87	P
		3 GHz ~ 6 GHz	Fig.88	P
		6 GHz ~ 18 GHz	Fig.89	P

802.11n-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	52(5260MHz)	1 GHz ~ 3 GHz	Fig.90	P
		3 GHz ~ 6 GHz	Fig.91	P
		6 GHz ~ 18 GHz	Fig.92	P
	56(5280MHz)	30 MHz ~1 GHz	Fig.93	P
		1 GHz ~ 3 GHz	Fig.94	P
		3 GHz ~ 6 GHz	Fig.95	P
		6 GHz ~ 18 GHz	Fig.96	P
		18 GHz ~ 26.5 GHz	Fig.97	P
		26.5 GHz ~ 40 GHz	Fig.98	P
	64(5320MHz)	1 GHz ~ 3 GHz	Fig.99	P
		3 GHz ~ 6 GHz	Fig.100	P
		6 GHz ~ 18 GHz	Fig.101	P

802.11n-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	54(5270MHz)	30 MHz ~1 GHz	Fig.102	P
		1 GHz ~ 3 GHz	Fig.103	P
		3 GHz ~ 6 GHz	Fig.104	P
		6 GHz ~ 18 GHz	Fig.105	P
		18 GHz ~ 26.5 GHz	Fig.106	P
		26.5 GHz ~ 40 GHz	Fig.107	P
	62(5310MHz)	1 GHz ~ 3 GHz	Fig.108	P
		3 GHz ~ 6 GHz	Fig.109	P
		6 GHz ~ 18 GHz	Fig.110	P

802.11ac-HT20 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20	52(5260MHz)	1 GHz ~ 3 GHz	Fig.111	P
		3 GHz ~ 6 GHz	Fig.112	P
		6 GHz ~ 18 GHz	Fig.113	P
	56(5280MHz)	30 MHz ~1 GHz	Fig.114	P
		1 GHz ~ 3 GHz	Fig.115	P
		3 GHz ~ 6 GHz	Fig.116	P
		6 GHz ~ 18 GHz	Fig.117	P
		18 GHz ~ 26.5 GHz	Fig.118	P
		26.5 GHz ~ 40 GHz	Fig.119	P
	64(5320MHz)	1 GHz ~ 3 GHz	Fig.120	P
		3 GHz ~ 6 GHz	Fig.121	P
		6 GHz ~ 18 GHz	Fig.122	P

802.11ac-HT40 mode

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40	54(5270MHz)	30 MHz ~1 GHz	Fig.123	P
		1 GHz ~ 3 GHz	Fig.124	P
		3 GHz ~ 6 GHz	Fig.125	P
		6 GHz ~ 18 GHz	Fig.126	P
		18 GHz ~ 26.5 GHz	Fig.127	P
		26.5 GHz ~ 40 GHz	Fig.128	P
	62(5310MHz)	1 GHz ~ 3 GHz	Fig.129	P
		3 GHz ~ 6 GHz	Fig.130	P
		6 GHz ~ 18 GHz	Fig.131	P

Conclusion: PASS

Note:

A "reference path loss" is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

P_{Mea} is the field strength recorded from the instrument.

The measurement results are obtained as described below:

Result=P_{Mea}+$A_{Rpl=}$ P_{Mea}+Cable Loss+Antenna Factor

5GHz U-NII 2A

802.11a

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17683.800	46.6	-13.0	41.2	18.405	V
17711.400	46.5	-13.0	41.2	18.305	V
17700.000	46.5	-13.0	41.2	18.305	V
17638.200	46.5	-13.0	41.2	18.305	H
17682.000	46.5	-13.0	41.2	18.305	V
17641.800	46.5	-13.0	41.2	18.305	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17692.800	58.9	-13.0	41.2	30.705	V
17702.400	58.7	-13.0	41.2	30.505	V
17679.600	58.6	-13.0	41.2	30.405	V
17724.000	58.4	-13.0	41.2	30.205	H
17493.600	58.1	-14.9	41.2	31.818	H
17737.200	58.1	-13.0	41.2	29.905	V

Channel 56

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17671.800	46.8	-13.0	41.2	18.605	V
17704.800	46.7	-13.0	41.2	18.505	V
17701.800	46.6	-13.0	41.2	18.405	H
17641.200	46.6	-13.0	41.2	18.405	H
17694.600	46.6	-13.0	41.2	18.405	V
17680.800	46.6	-13.0	41.2	18.405	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17610.000	59.0	-14.9	41.2	32.718	V
17745.600	58.8	-13.0	41.2	30.605	H
17658.600	58.6	-13.0	41.2	30.405	H
17669.400	58.3	-13.0	41.2	30.105	V
17662.200	58.2	-13.0	41.2	30.005	V
17716.200	58.2	-13.0	41.2	30.005	H

Channel 64

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.000	38.5	-19.6	34.4	23.670	V
17669.400	46.7	-13.0	41.2	18.505	V
17682.600	46.7	-13.0	41.2	18.505	V
17679.000	46.6	-13.0	41.2	18.405	V
17677.800	46.6	-13.0	41.2	18.405	V
17709.000	46.6	-13.0	41.2	18.405	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.060	51.9	-19.6	34.4	37.070	H
17799.600	58.5	-13.0	41.0	30.505	H
17677.200	58.5	-13.0	41.2	30.305	H
17668.200	58.5	-13.0	41.2	30.305	V
17667.600	58.4	-13.0	41.2	30.205	H
17676.000	58.4	-13.0	41.2	30.205	H

802.11n-HT20

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17637.600	46.6	-13.0	41.2	18.405	H
17681.400	46.6	-13.0	41.2	18.405	H
17692.200	46.5	-13.0	41.2	18.305	H
17661.000	46.5	-13.0	41.2	18.305	V
17704.200	46.5	-13.0	41.2	18.305	V
17680.200	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17711.400	58.6	-13.0	41.2	30.405	V
17617.800	58.5	-14.9	41.2	32.218	H
17897.400	58.3	-13.5	41.0	30.762	H
17649.000	58.3	-13.0	41.2	30.105	V
17678.400	58.2	-13.0	41.2	30.005	H
17664.600	58.1	-13.0	41.2	29.905	V

Channel 56

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17661.600	46.7	-13.0	41.2	18.505	V
17664.000	46.6	-13.0	41.2	18.405	H
17701.200	46.6	-13.0	41.2	18.405	V
17724.000	46.6	-13.0	41.2	18.405	H
17660.400	46.6	-13.0	41.2	18.405	H
17635.200	46.5	-13.0	41.2	18.305	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17242.800	58.7	-15.1	41.4	32.393	H
17623.800	58.6	-14.9	41.2	32.318	V
17608.800	58.5	-14.9	41.2	32.218	V
17660.400	58.3	-13.0	41.2	30.105	H
17943.000	58.1	-13.5	41.0	30.562	H
17659.200	58.0	-13.0	41.2	29.805	V

Channel 64

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.060	38.3	-19.6	34.4	23.470	V
17637.600	46.6	-13.0	41.2	18.405	H
17706.600	46.6	-13.0	41.2	18.405	V
17654.400	46.6	-13.0	41.2	18.405	H
17621.400	46.6	-14.9	41.2	20.318	H
17653.200	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5351.520	51.2	-19.6	34.4	36.370	H
17670.600	59.3	-13.0	41.2	31.105	H
17770.200	58.9	-13.0	41.0	30.905	H
17718.600	58.9	-13.0	41.2	30.705	V
17650.200	58.9	-13.0	41.2	30.705	V
17812.200	58.4	-13.5	41.0	30.862	H

802.11n-HT40

Channel 54

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17654.400	46.6	-13.0	41.2	18.405	V
17683.200	46.6	-13.0	41.2	18.405	H
17711.400	46.6	-13.0	41.2	18.405	H
17622.000	46.6	-14.9	41.2	20.318	H
17695.200	46.5	-13.0	41.2	18.305	H
17706.000	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17826.000	58.8	-13.5	41.0	31.262	H
17782.800	58.7	-13.0	41.0	30.705	V
17686.800	58.6	-13.0	41.2	30.405	V
17677.800	58.3	-13.0	41.2	30.105	V
17650.800	58.3	-13.0	41.2	30.105	H
17667.000	58.2	-13.0	41.2	30.005	H

Channel 62

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.190	38.9	-19.6	34.4	24.070	H
17704.800	46.7	-13.0	41.2	18.505	H
17658.000	46.6	-13.0	41.2	18.405	H
17700.600	46.6	-13.0	41.2	18.405	H
17635.200	46.6	-13.0	41.2	18.405	V
17674.200	46.6	-13.0	41.2	18.405	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.150	62.2	-19.6	34.4	47.370	H
17673.600	58.6	-13.0	41.2	30.405	H
17657.400	58.6	-13.0	41.2	30.405	H
17699.400	58.5	-13.0	41.2	30.305	V
17632.800	58.5	-14.9	41.2	32.218	V
17997.600	58.5	-13.6	41.0	31.142	V

802.11ac-HT20

Channel 52

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17680.800	46.6	-13.0	41.2	18.405	H
17699.400	46.6	-13.0	41.2	18.405	H
17658.600	46.5	-13.0	41.2	18.305	H
17701.200	46.5	-13.0	41.2	18.305	H
17711.400	46.5	-13.0	41.2	18.305	V
17634.000	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17214.600	58.8	-15.1	41.4	32.493	V
17629.800	58.8	-14.9	41.2	32.518	H
17746.200	58.6	-13.0	41.2	30.405	H
17248.800	58.4	-15.1	41.4	32.093	V
17677.200	58.4	-13.0	41.2	30.205	V
17710.800	58.4	-13.0	41.2	30.205	H

Channel 56

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17640.000	46.7	-13.0	41.2	18.505	H
17630.400	46.6	-14.9	41.2	20.318	H
17721.600	46.5	-13.0	41.2	18.305	V
17687.400	46.5	-13.0	41.2	18.305	V
17710.800	46.5	-13.0	41.2	18.305	V
17706.000	46.5	-13.0	41.2	18.305	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17640.000	58.6	-13.0	41.2	30.405	H
17671.200	58.4	-13.0	41.2	30.205	H
17776.800	58.3	-13.0	41.0	30.305	V
17905.800	58.1	-13.5	41.0	30.562	H
17723.400	58.1	-13.0	41.2	29.905	H
17966.400	57.9	-13.5	41.0	30.362	V

Channel 64

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.190	38.1	-19.6	34.4	23.270	V
17620.200	46.6	-14.9	41.2	20.318	V
17690.400	46.5	-13.0	41.2	18.305	H
17674.200	46.5	-13.0	41.2	18.305	H
17691.000	46.5	-13.0	41.2	18.305	H
17678.400	46.5	-13.0	41.2	18.305	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5355.800	51.0	-19.6	34.4	36.170	H
17662.800	59.6	-13.0	41.2	31.405	H
17657.400	59.3	-13.0	41.2	31.105	V
17301.600	58.6	-13.9	41.2	31.323	V
17688.600	58.5	-13.0	41.2	30.305	H
17592.000	58.4	-14.9	41.2	32.118	H

802.11ac-HT40

Channel 54

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17701.200	46.8	-13.0	41.2	18.605	V
17726.400	46.7	-13.0	41.2	18.505	H
17691.600	46.6	-13.0	41.2	18.405	H
17652.000	46.6	-13.0	41.2	18.405	V
17656.800	46.6	-13.0	41.2	18.405	V
17631.600	46.6	-14.9	41.2	20.318	H

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
17675.400	58.7	-13.0	41.2	30.505	V
17237.400	58.6	-15.1	41.4	32.293	V
17692.200	58.5	-13.0	41.2	30.305	V
17634.600	58.5	-13.0	41.2	30.305	V
17765.400	58.2	-13.0	41.0	30.205	V
17320.800	58.2	-13.9	41.2	30.923	H

Channel 62

Average:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.010	38.4	-19.6	34.4	23.570	V
17636.400	46.7	-13.0	41.2	18.505	H
17680.800	46.7	-13.0	41.2	18.505	V
17662.200	46.6	-13.0	41.2	18.405	V
17669.400	46.6	-13.0	41.2	18.405	V
17631.000	46.6	-14.9	41.2	20.318	V

Peak:

Frequency(MHz)	Result (dBuV/m)	Cable Loss	Antenna Factor	P_{Mea} (dBuV/m)	Polarization
5350.370	61.3	-19.6	34.4	46.470	V
17700.600	58.5	-13.0	41.2	30.305	V
17274.600	58.4	-15.1	41.2	32.293	V
17544.600	58.2	-14.9	41.2	31.918	V
17641.200	58.1	-13.0	41.2	29.905	H
17752.200	58.0	-13.0	41.0	30.005	V

Test graphs as below:

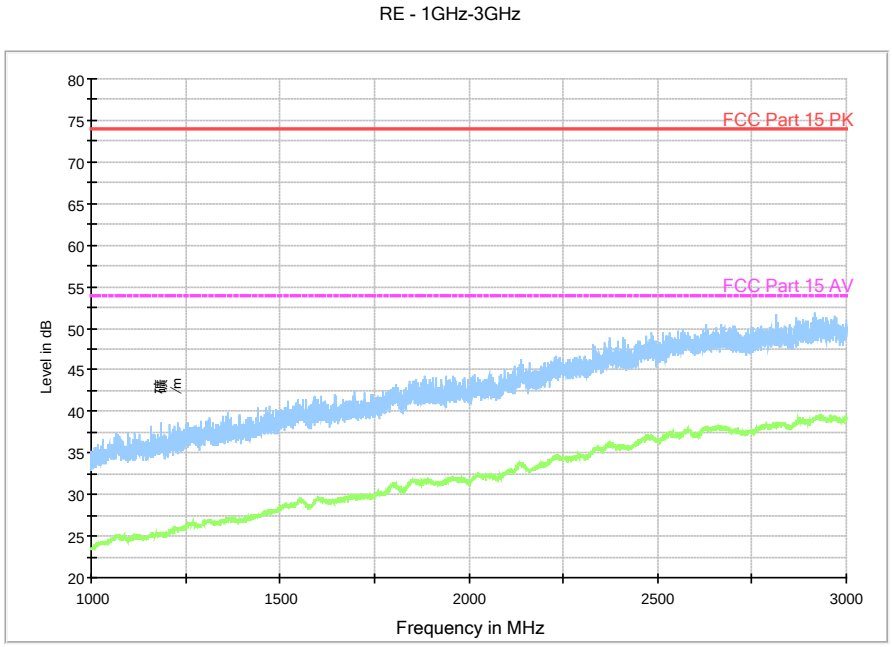
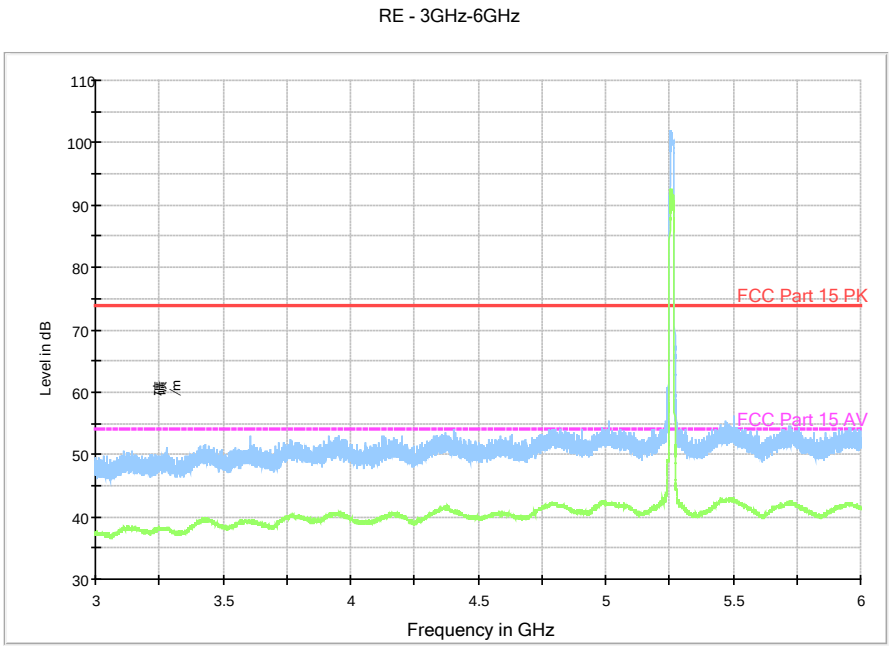


Fig. 78 Radiated Spurious Emission (802.11a, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 79 Radiated Spurious Emission (802.11a, ch52, 3 GHz-6 GHz)

RE - 6GHz-18GHz

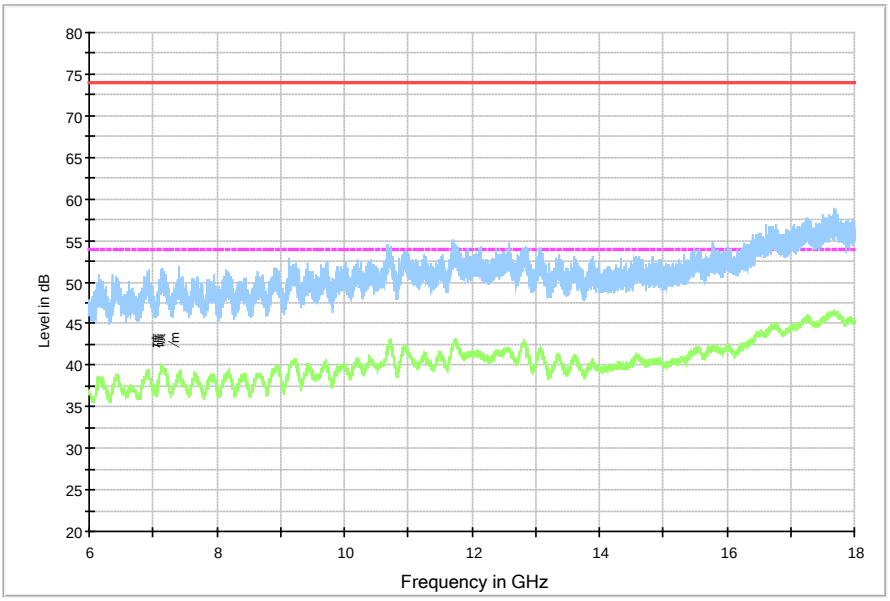


Fig. 80 Radiated Spurious Emission (802.11a, ch52, 6 GHz-18 GHz)

RE 30MHz-1GHz

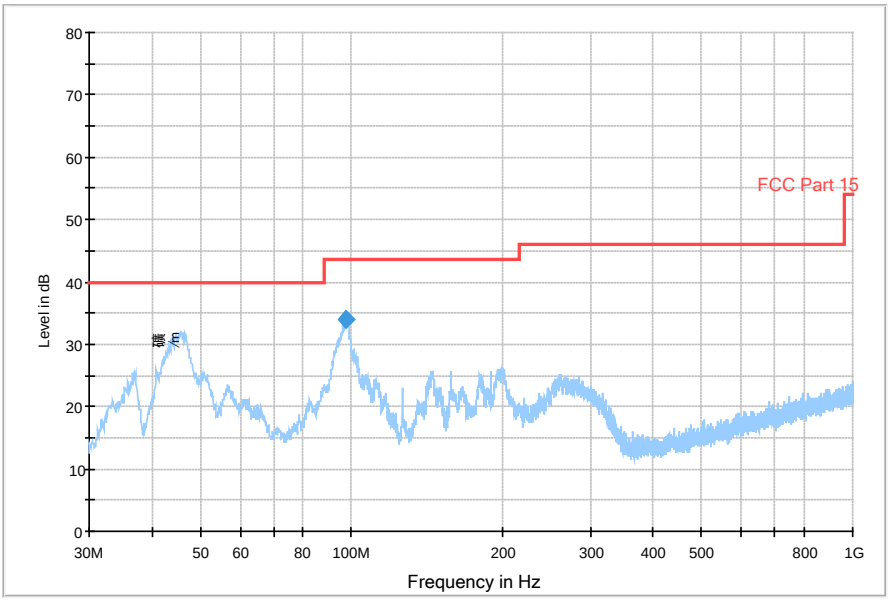


Fig. 81 Radiated Spurious Emission (802.11a, ch56, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.415000	33.9	100.0	V	298.0	-25.5	9.6	43.5	

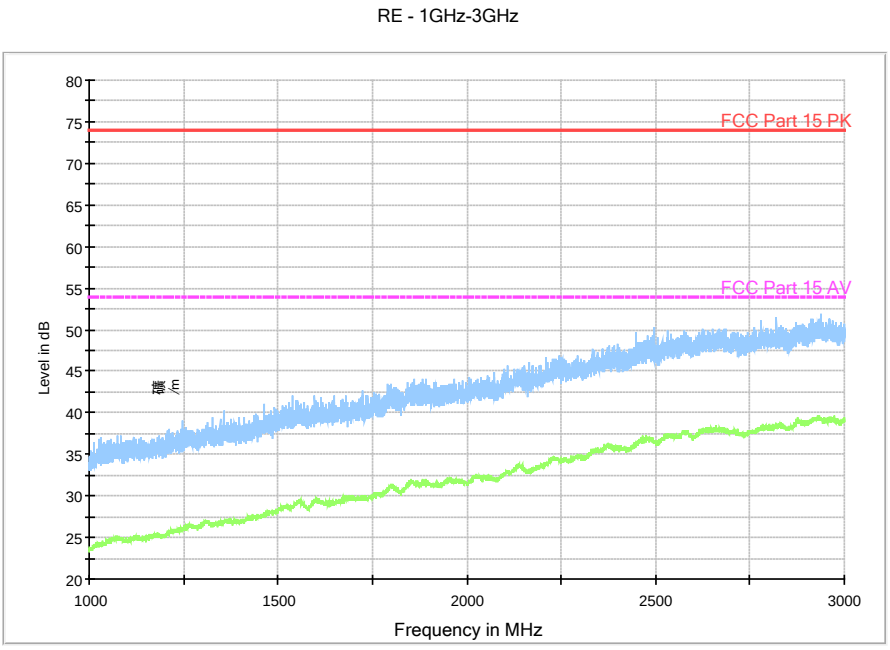
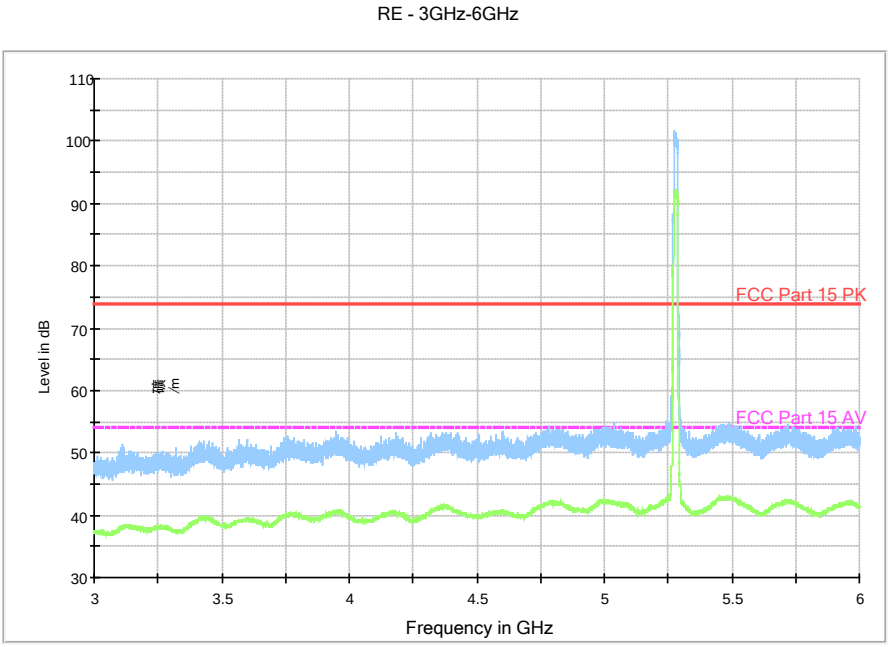


Fig. 82 Radiated Spurious Emission (802.11a, ch56, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 83 Radiated Spurious Emission (802.11a, ch56, 3 GHz-6 GHz)

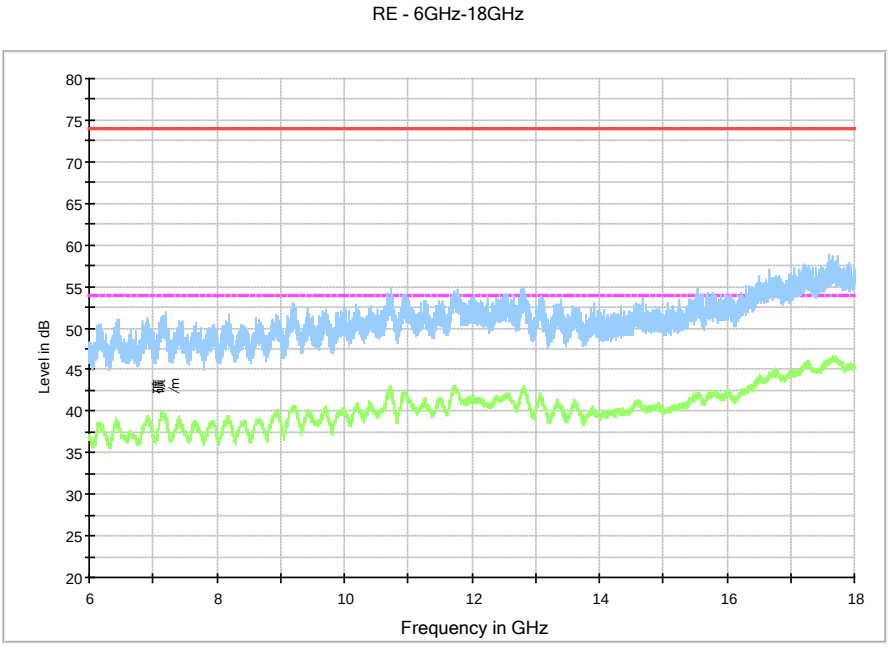


Fig. 84 Radiated Spurious Emission (802.11a, ch56, 6 GHz-18 GHz)

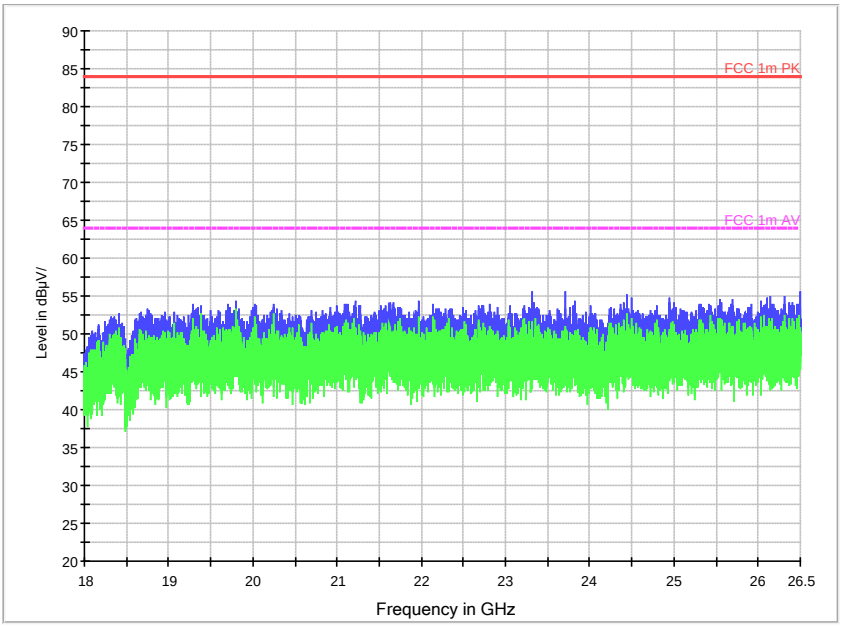


Fig. 85 Radiated Spurious Emission (802.11a, ch56, 18 GHz-26.5 GHz)

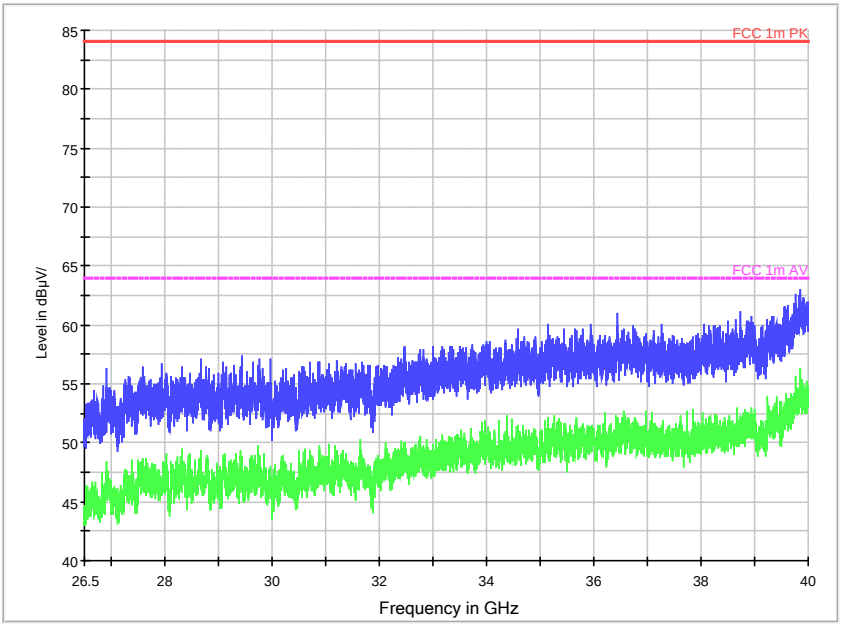


Fig. 86 Radiated Spurious Emission (802.11a, ch56, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

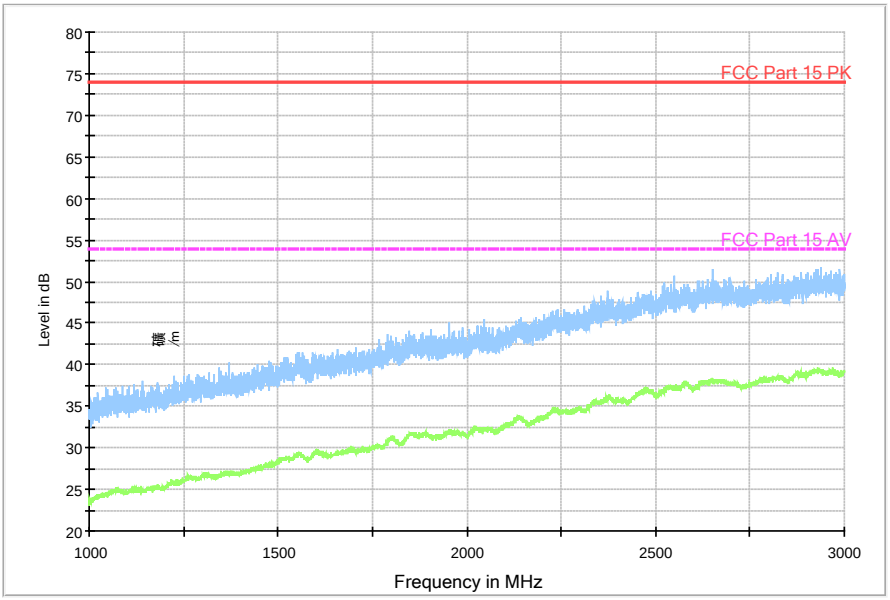
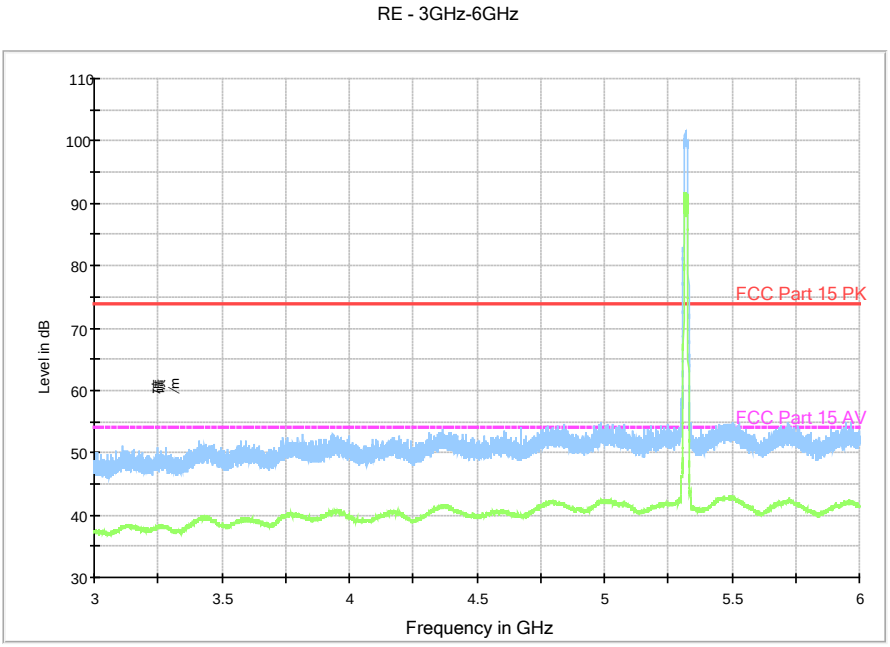


Fig. 87 Radiated Spurious Emission (802.11a, ch64, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 88 Radiated Spurious Emission (802.11a, ch64, 3GHz- 6 GHz)

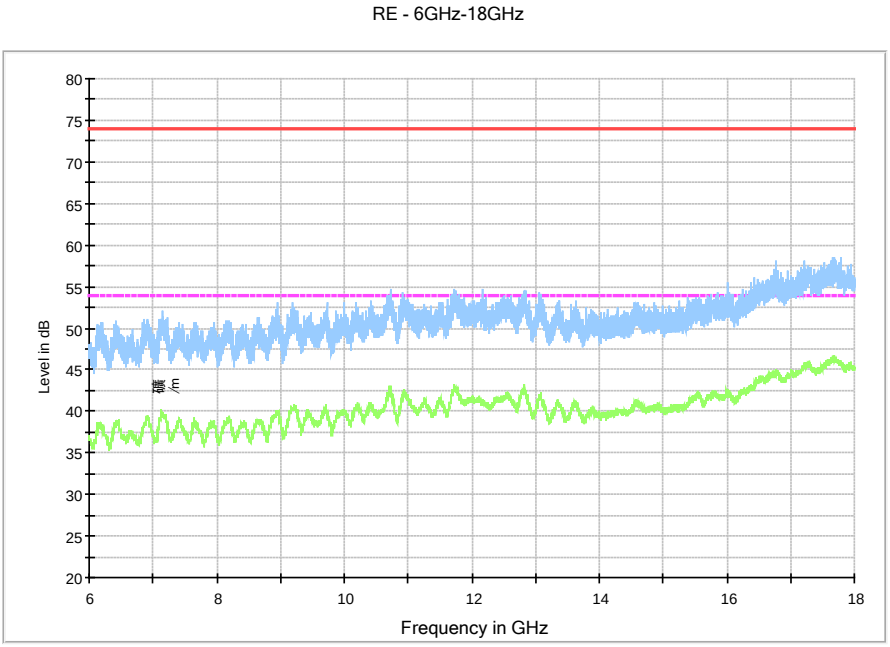


Fig. 89 Radiated Spurious Emission (802.11a, ch64, 6 GHz-18GHz)

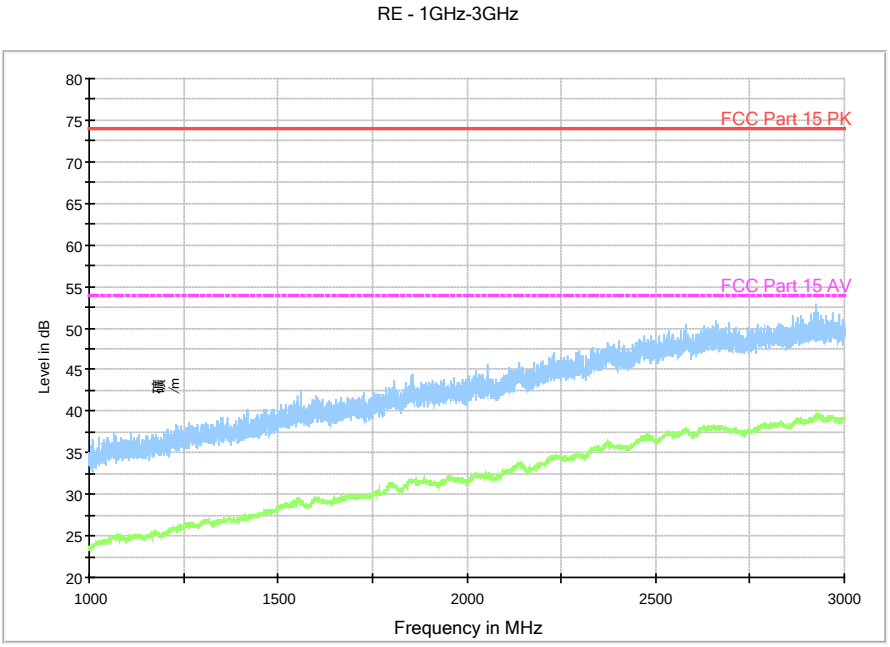
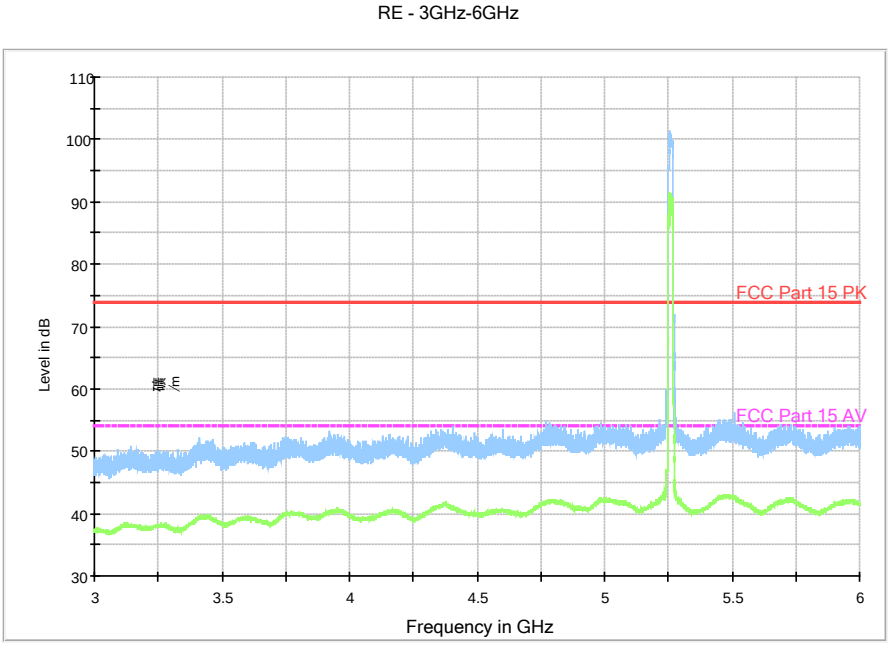


Fig. 90 Radiated Spurious Emission (802.11n-HT20, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 91 Radiated Spurious Emission (802.11n-HT20, ch52, 3 GHz-6GHz)

RE - 6GHz-18GHz

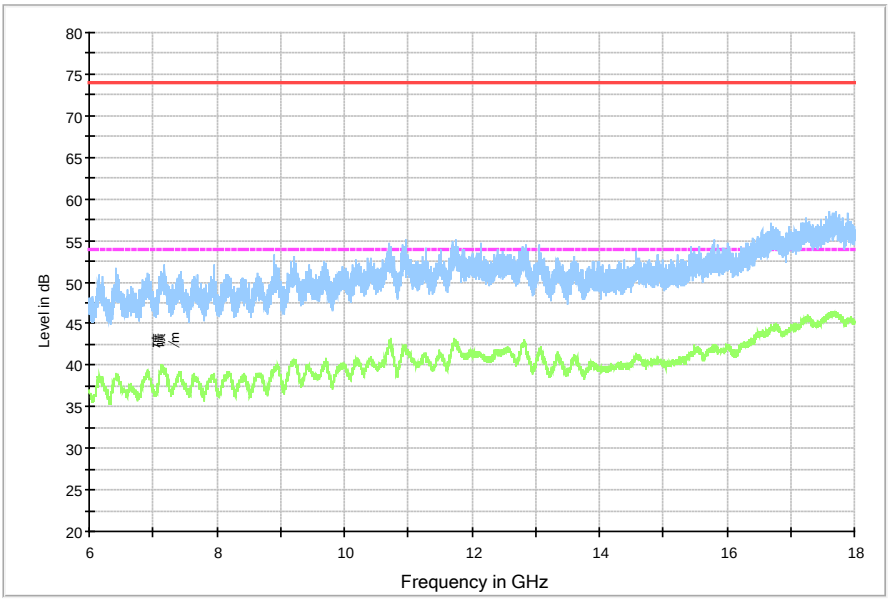


Fig. 92 Radiated Spurious Emission (802.11n-HT20, ch52, 6 GHz-18GHz)

RE 30MHz-1GHz

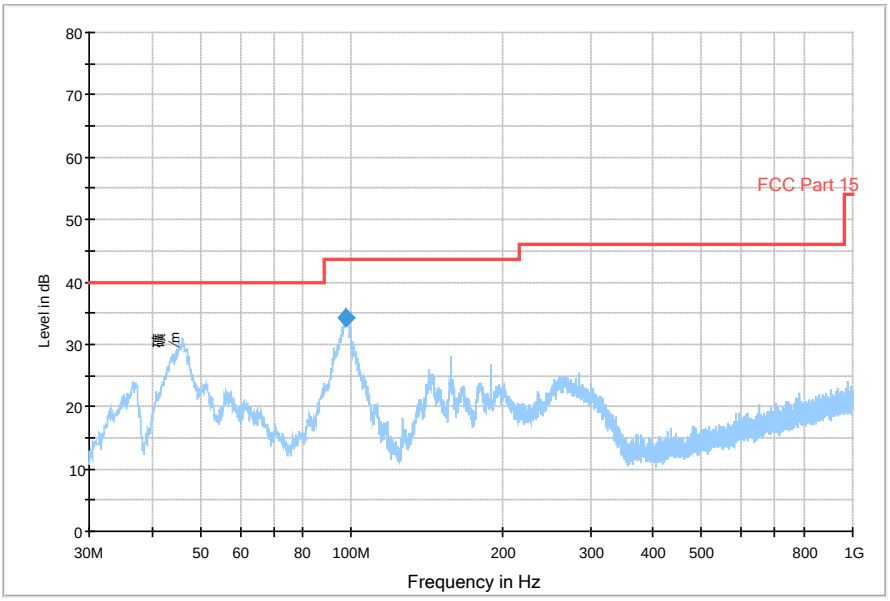


Fig. 93 Radiated Spurious Emission (802.11n-HT20, ch56, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.803000	34.1	100.0	V	315.0	-25.5	9.4	43.5	

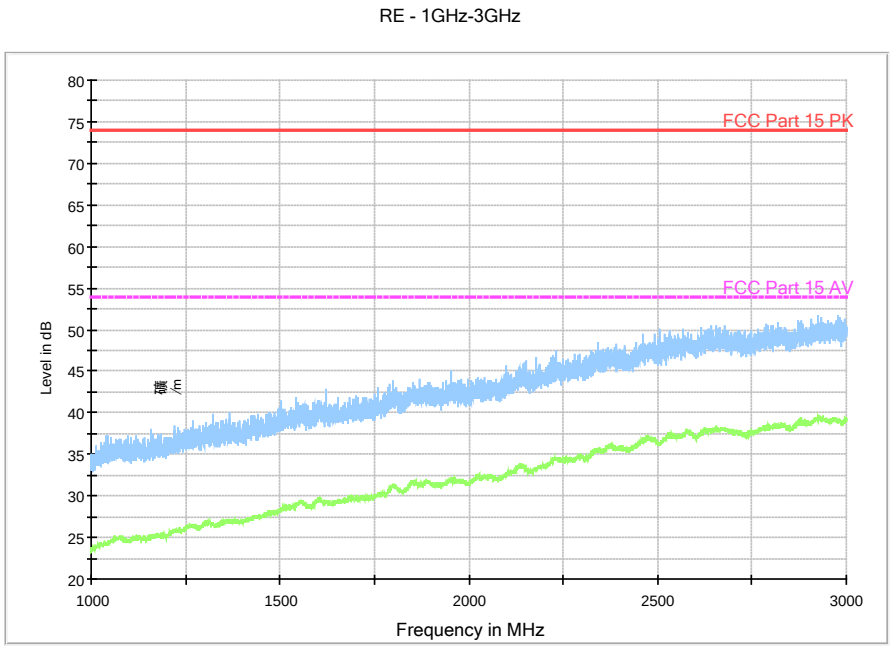
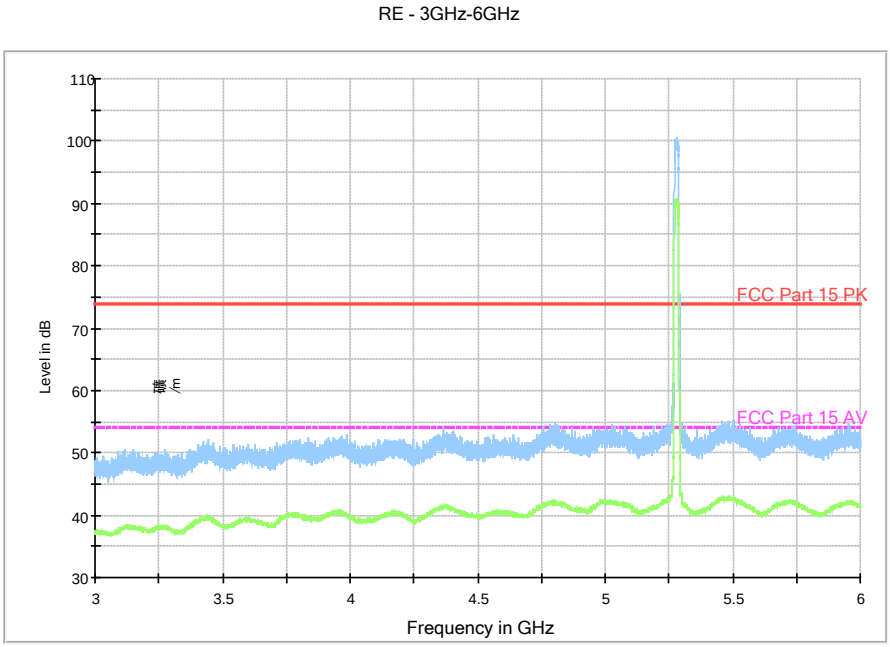


Fig. 94 Radiated Spurious Emission (802.11n-HT20, ch56, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 95 Radiated Spurious Emission (802.11n-HT20, ch56, 3GHz-6 GHz)

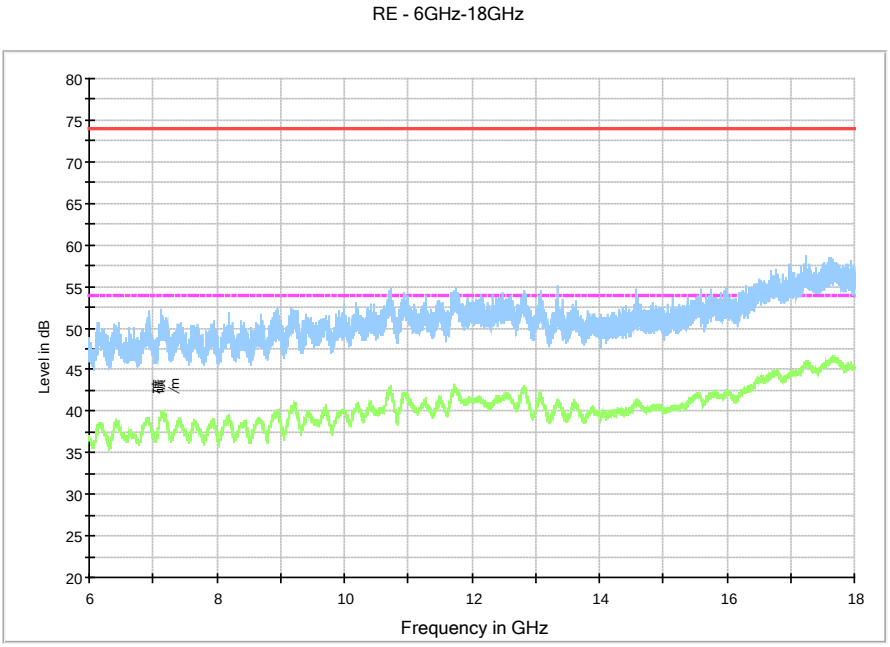


Fig. 96 Radiated Spurious Emission (802.11n-HT20, ch56, 6 GHz-18 GHz)

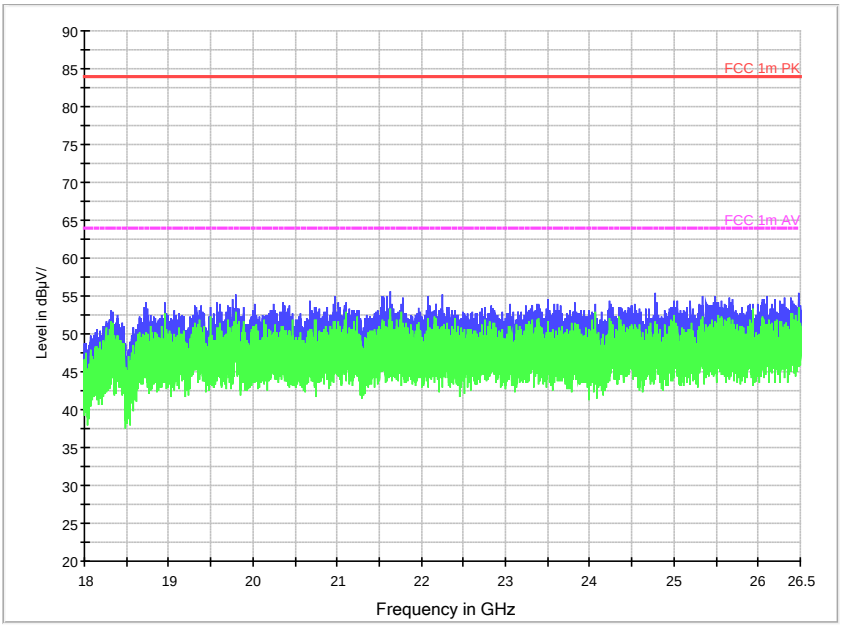


Fig. 97 Radiated Spurious Emission (802.11n-HT20, ch56, 18 GHz-26.5 GHz)

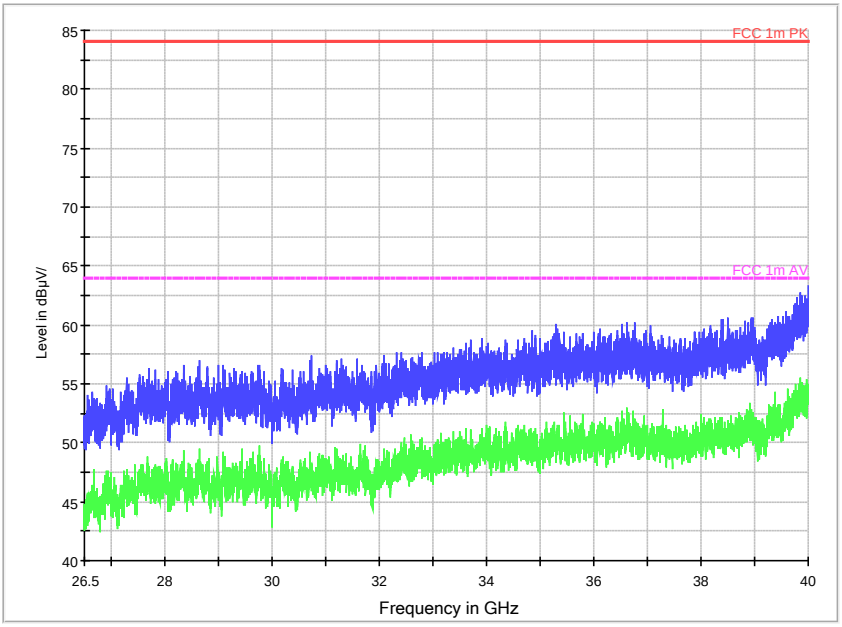


Fig. 98 Radiated Spurious Emission (802.11n-HT20, ch56, 26.5 GHz-40 GHz)

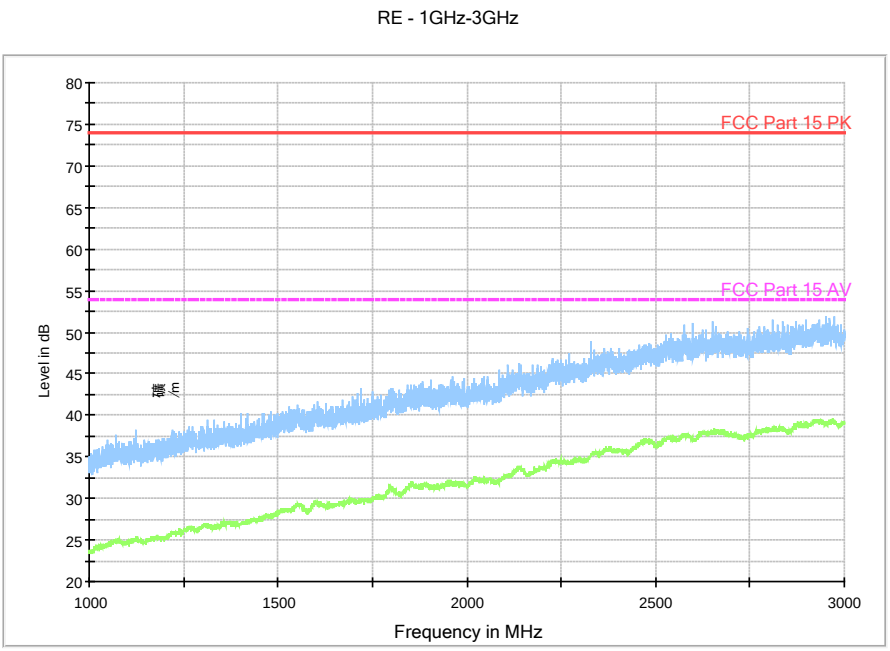
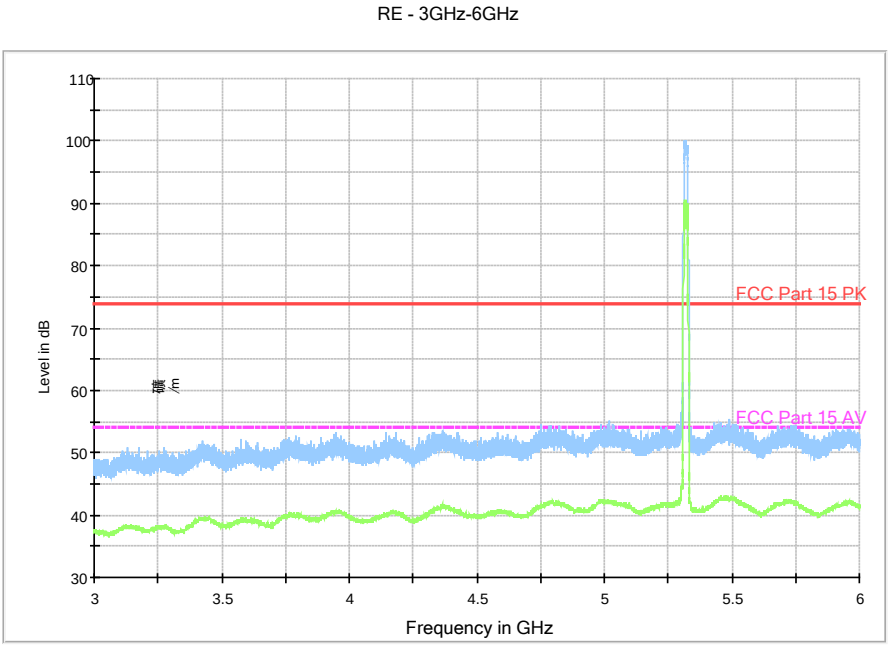


Fig. 99 Radiated Spurious Emission (802.11n-HT20, ch64, 1 GHz-3GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 100 Radiated Spurious Emission (802.11n-HT20, ch64, 3 GHz-6GHz)

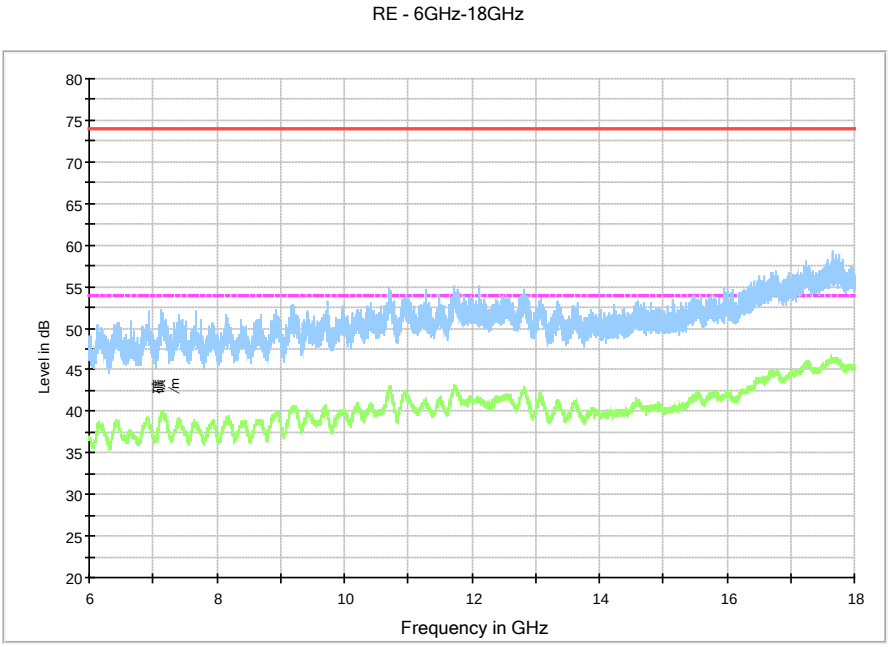


Fig. 101 Radiated Spurious Emission (802.11n-HT20, ch64, 6 GHz-18 GHz)

RE 30MHz-1GHz

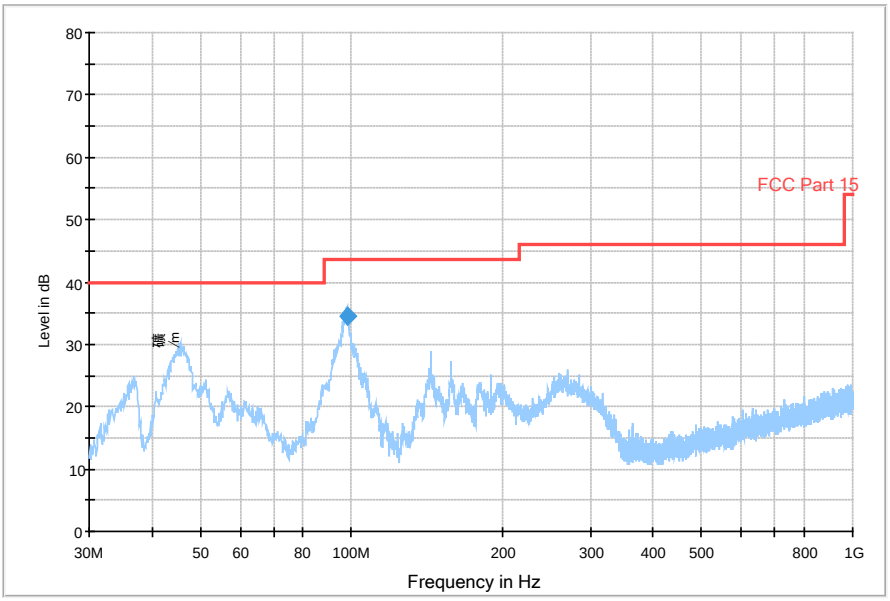


Fig. 102 Radiated Spurious Emission (802.11n-HT40, ch54, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.997000	34.6	100.0	V	298.0	-25.5	8.9	43.5	

RE - 1GHz-3GHz

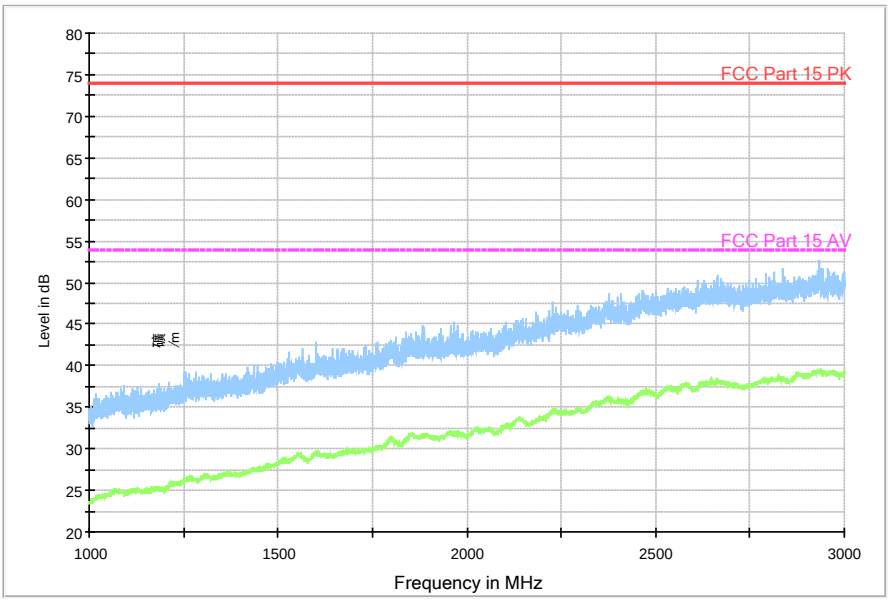
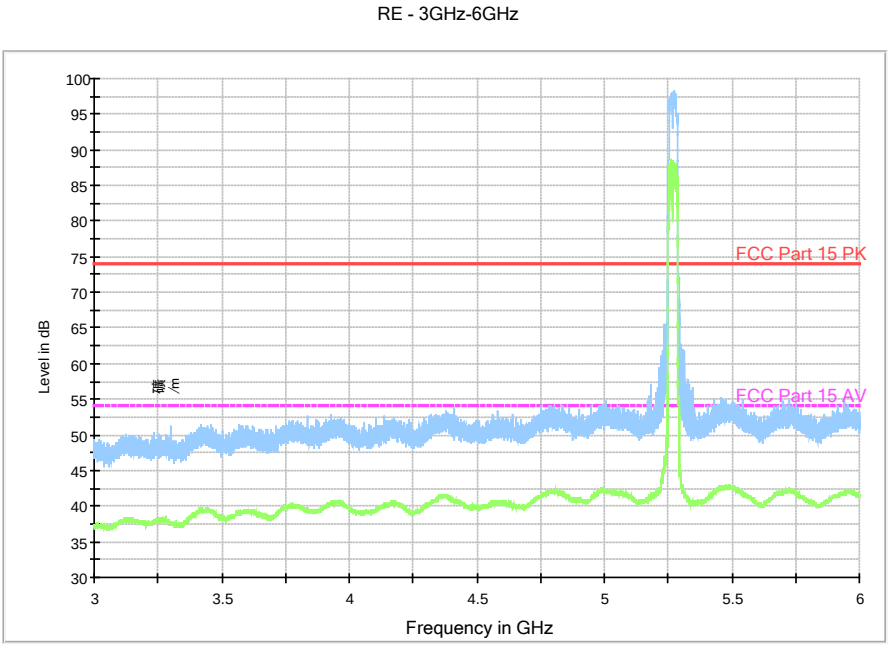


Fig. 103 Radiated Spurious Emission (802.11n-HT40, ch54, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 104 Radiated Spurious Emission (802.11n-HT40, ch54, 3 GHz-6 GHz)

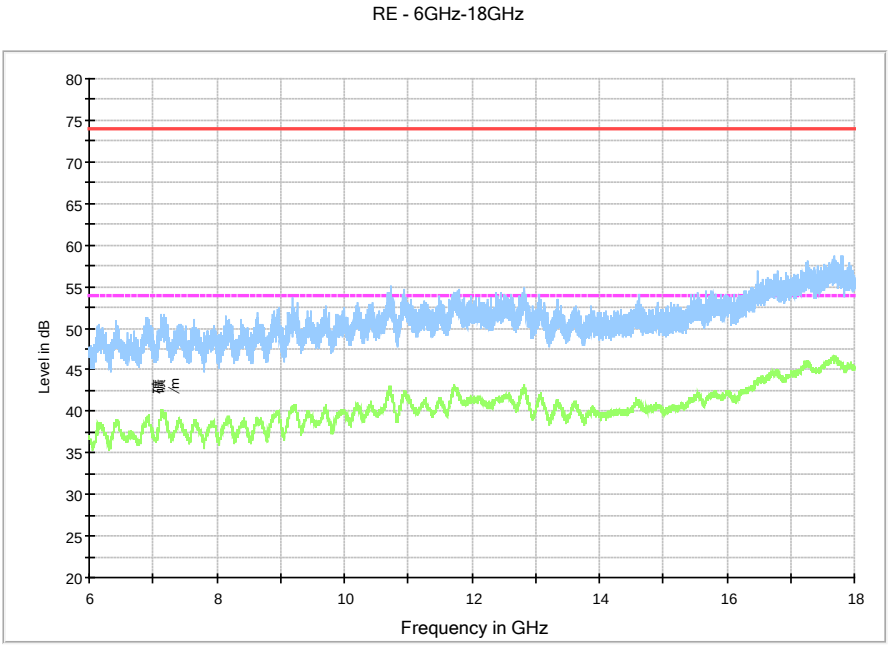


Fig. 105 Radiated Spurious Emission (802.11n-HT40, ch54, 6 GHz-18 GHz)

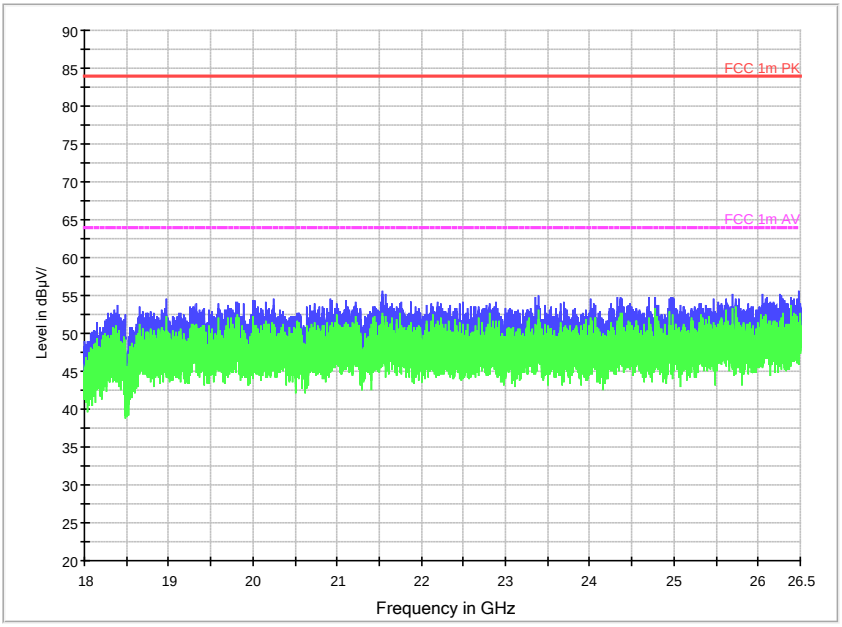


Fig. 106 Radiated Spurious Emission (802.11n-HT40, ch54, 18 GHz-26.5 GHz)

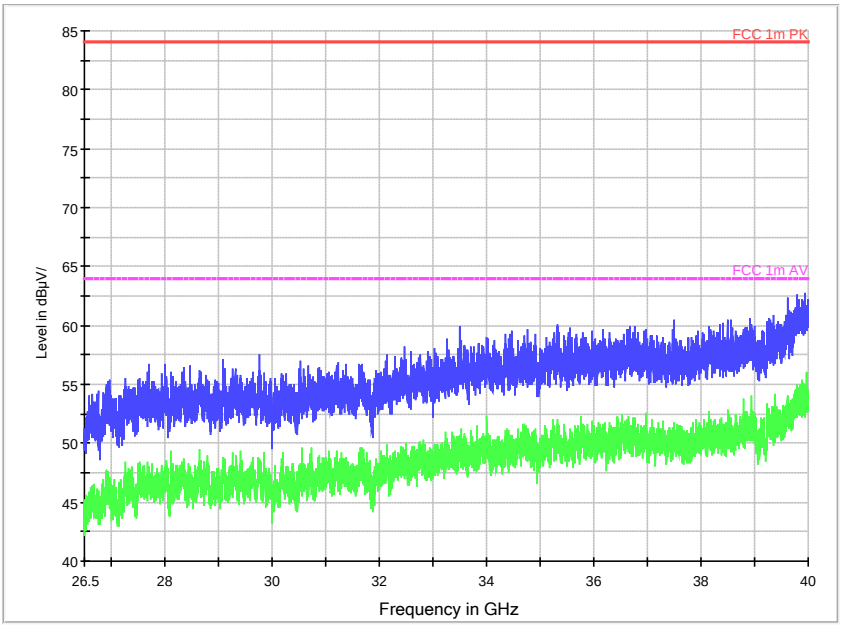


Fig. 107 Radiated Spurious Emission (802.11n-HT40, ch54, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

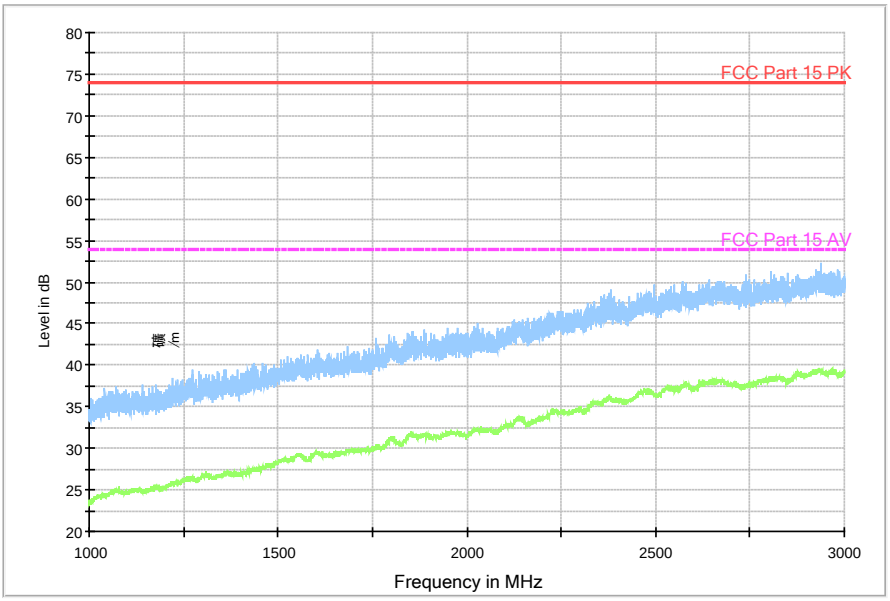
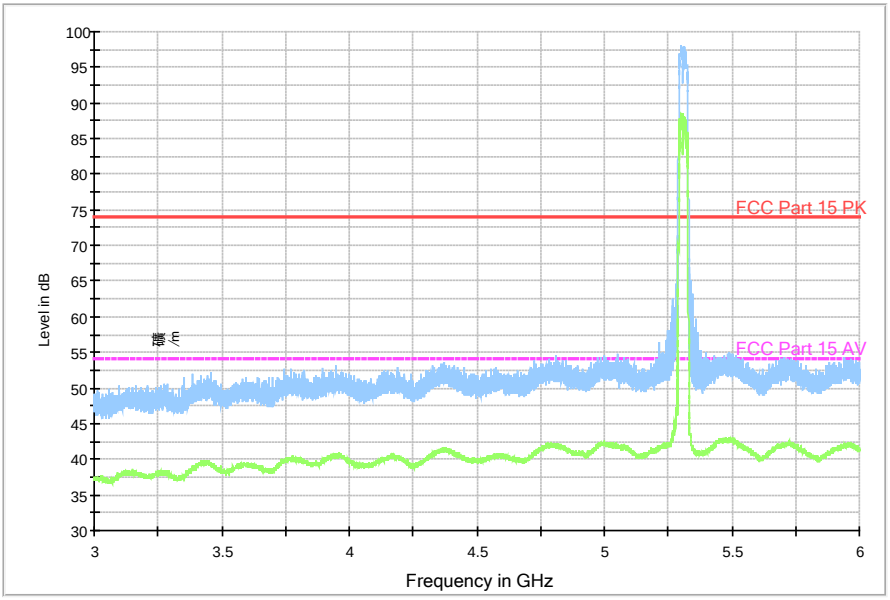


Fig. 108 Radiated Spurious Emission (802.11n-HT40, ch62, 1 GHz-3 GHz)

RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 109 Radiated Spurious Emission (802.11n-HT40, ch62, 3 GHz-6 GHz)

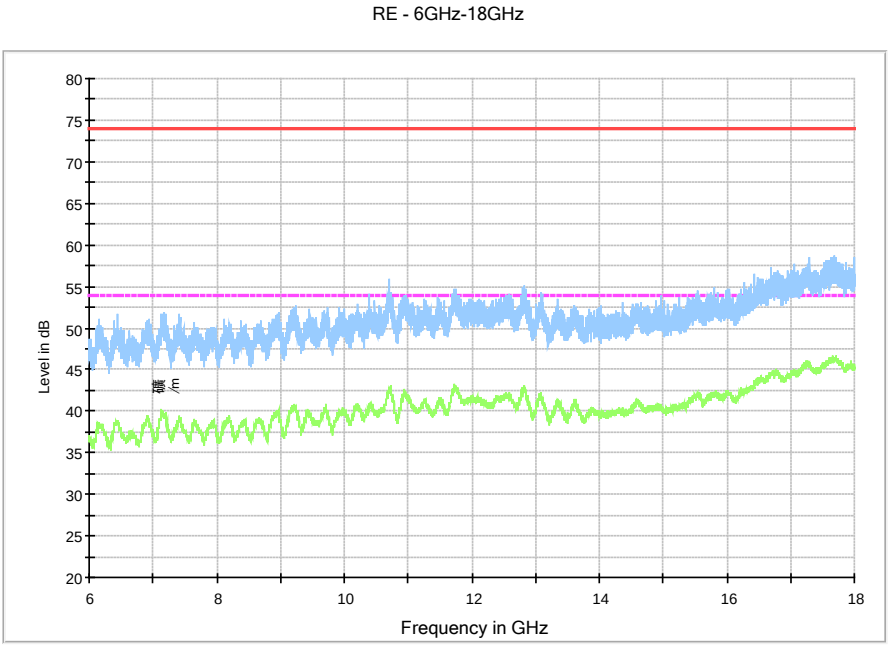


Fig. 110 Radiated Spurious Emission (802.11n-HT40, ch62, 6 GHz-18 GHz)

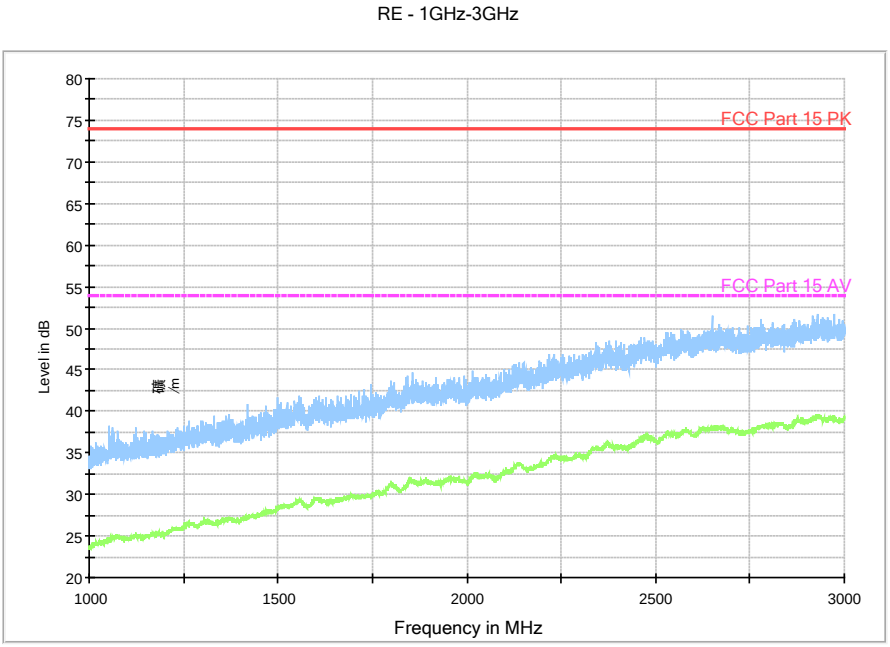
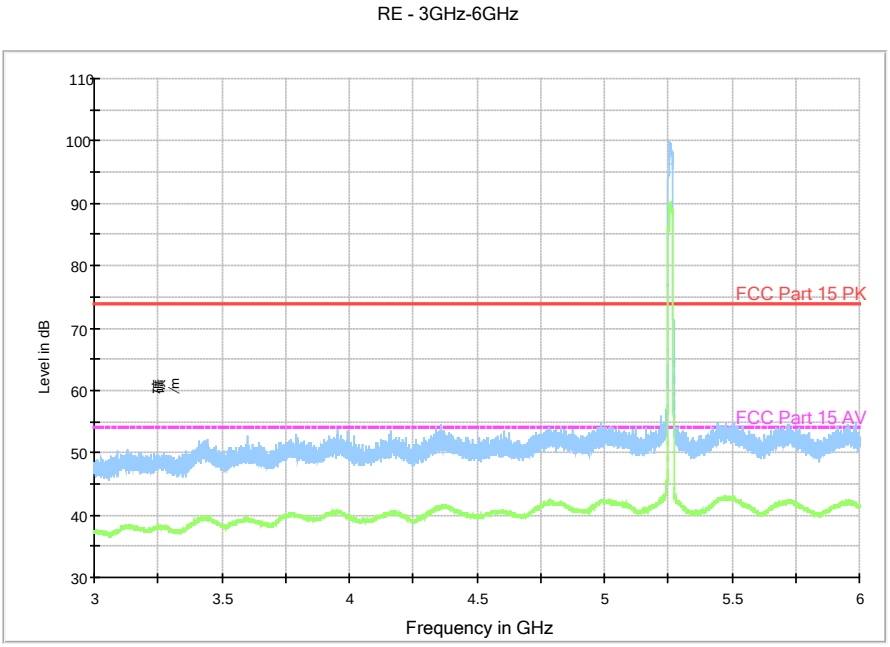


Fig. 111 Radiated Spurious Emission (802.11ac-HT20, ch52, 1 GHz-3 GHz)



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 112 Radiated Spurious Emission (802.11ac-HT20, ch52, 3 GHz-6 GHz)

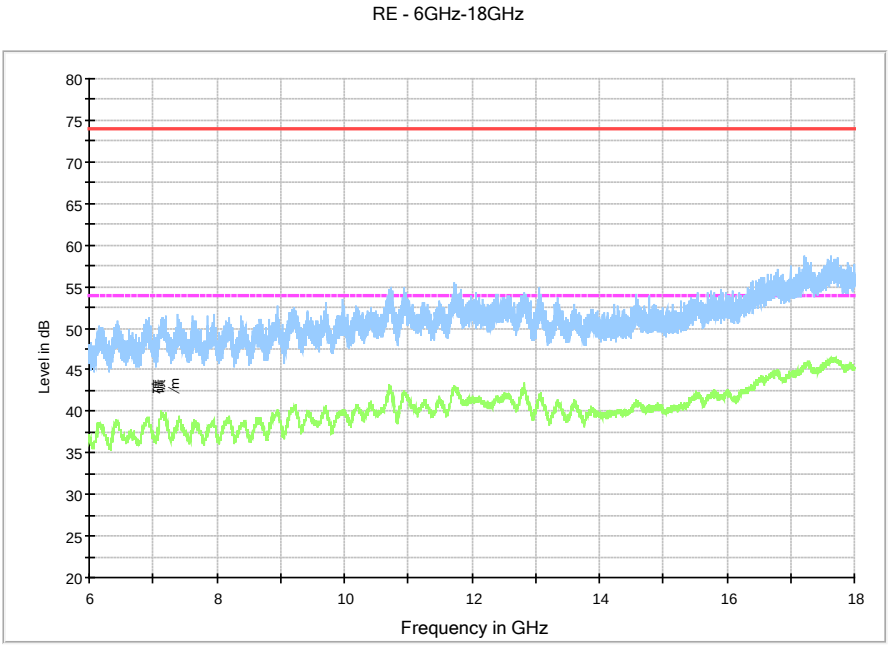


Fig. 113 Radiated Spurious Emission (802.11ac-HT20, ch52, 6 GHz-18GHz)

RE 30MHz-1GHz

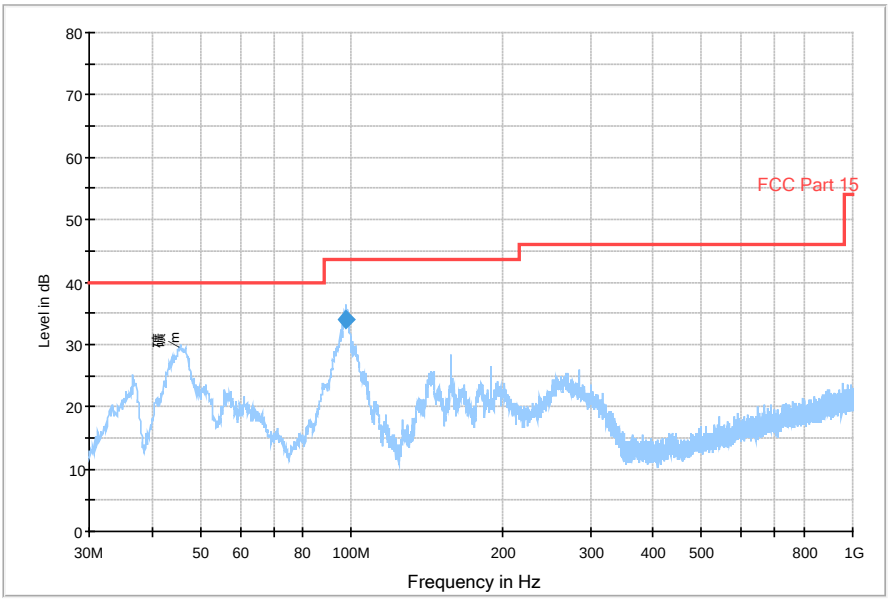


Fig. 114 Radiated Spurious Emission (802.11ac-HT20, ch56, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.706000	33.9	100.0	V	315.0	-25.5	9.6	43.5	

RE - 1GHz-3GHz

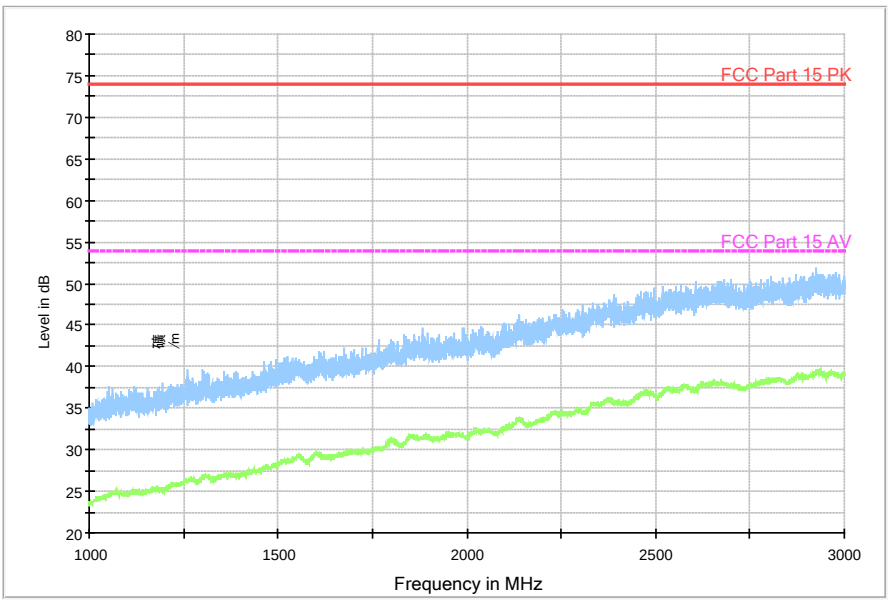
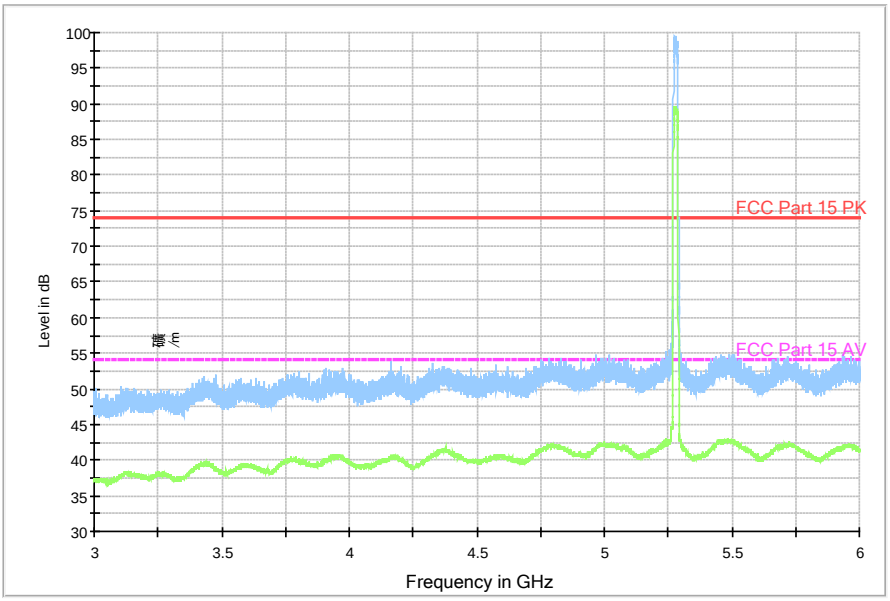


Fig. 115 Radiated Spurious Emission (802.11ac-HT20, ch56, 1 GHz-3 GHz)

RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 116 Radiated Spurious Emission (802.11ac-HT20, ch56, 3 GHz-6 GHz)

RE - 6GHz-18GHz

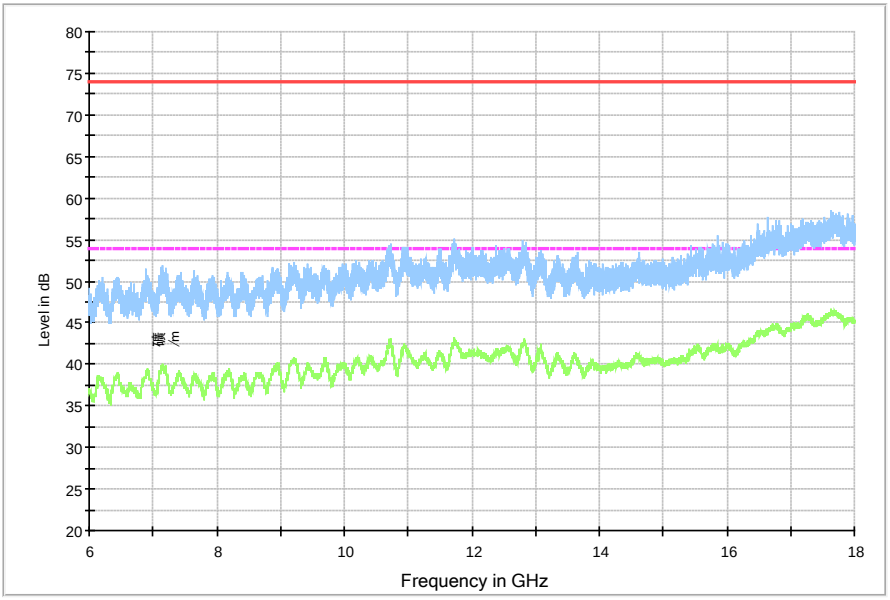


Fig. 117 Radiated Spurious Emission (802.11ac-HT20, ch56, 6 GHz-18 GHz)

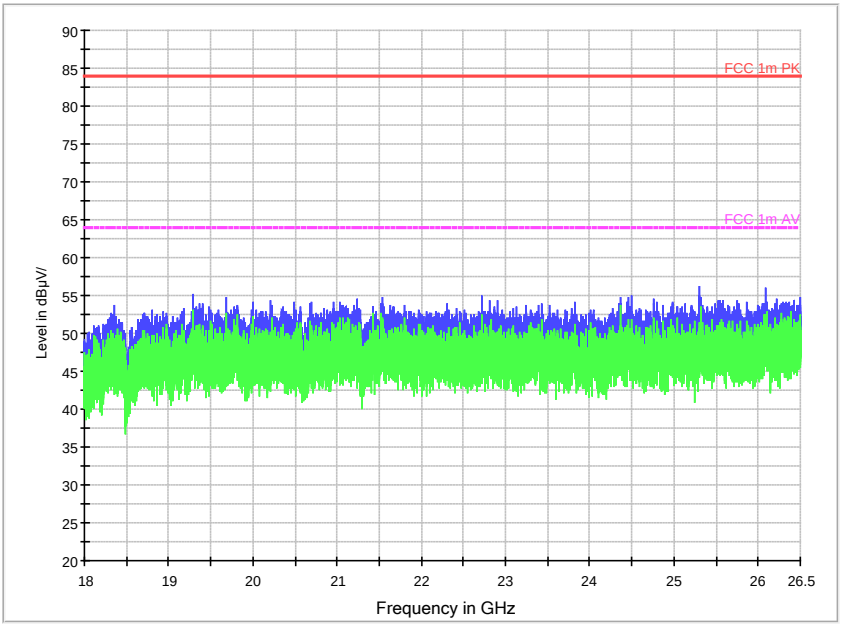


Fig. 118 Radiated Spurious Emission (802.11ac-HT20, ch56, 18 GHz-26.5 GHz)

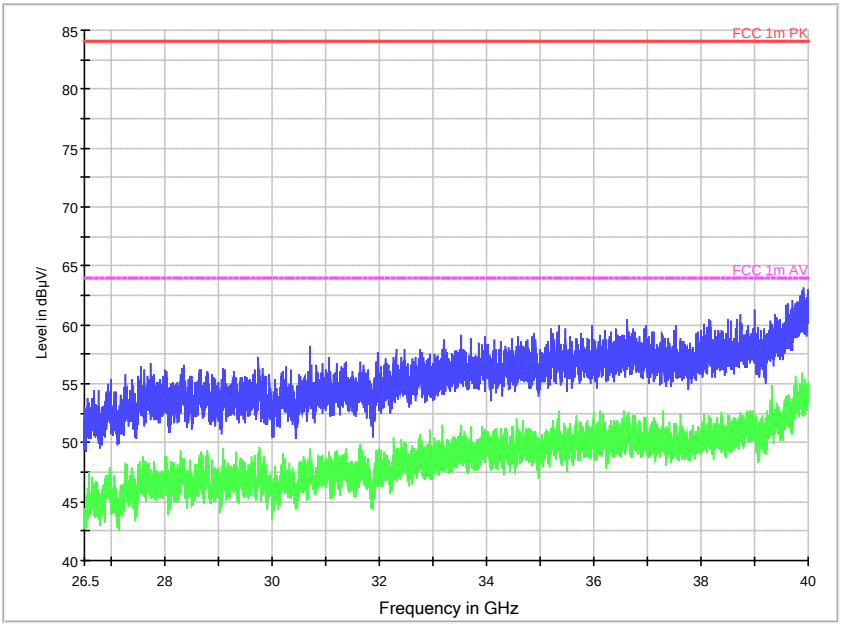


Fig. 119 Radiated Spurious Emission (802.11ac-HT20, ch56, 26.5 GHz-40 GHz)

RE - 1GHz-3GHz

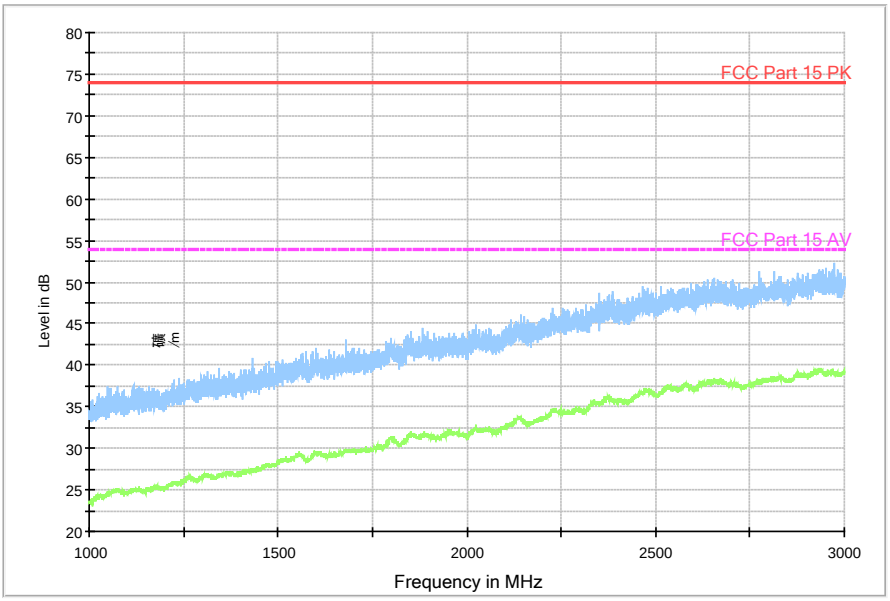
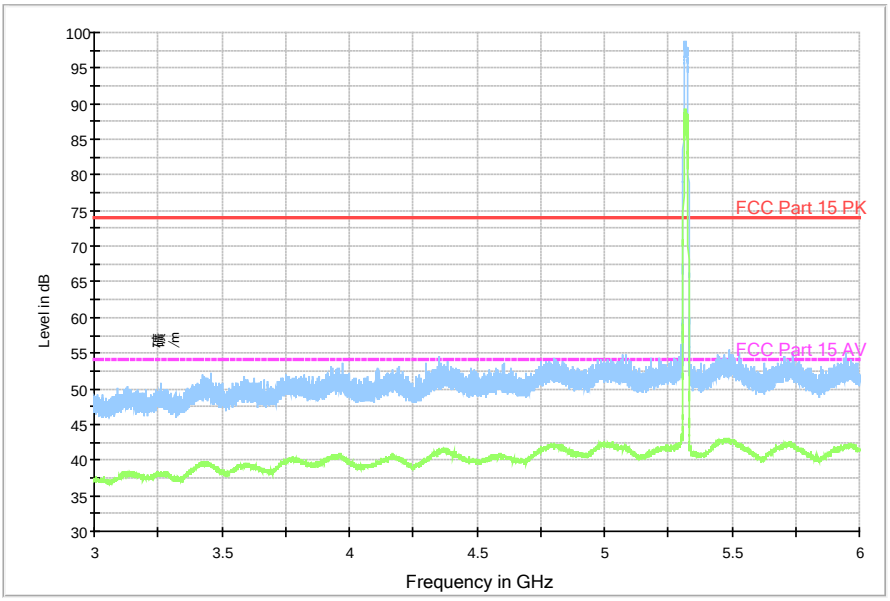


Fig. 120 Radiated Spurious Emission (802.11ac-HT20, ch64, 1 GHz-3GHz)

RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 121 Radiated Spurious Emission (802.11ac-HT20, ch64, 3 GHz-6GHz)

RE - 6GHz-18GHz

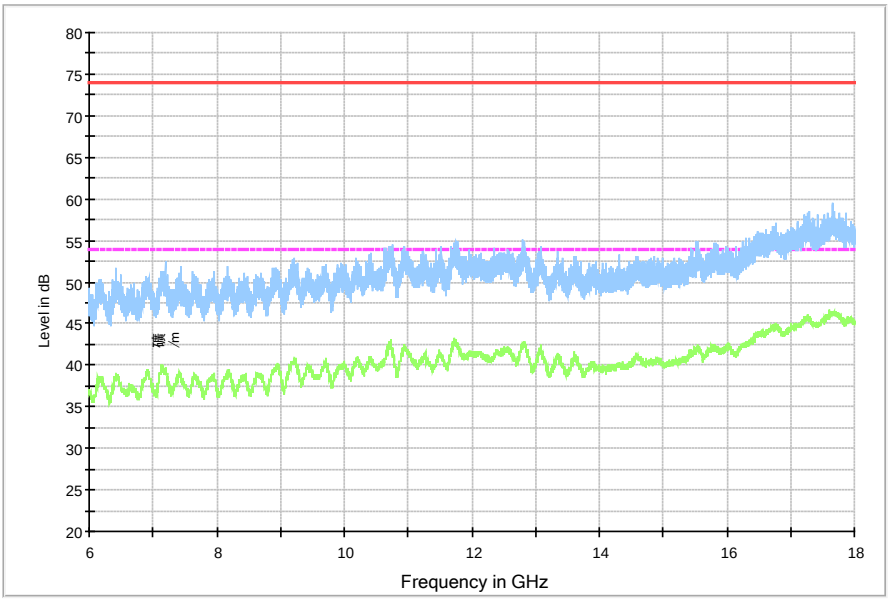


Fig. 122 Radiated Spurious Emission (802.11ac-HT20, ch64, 6 GHz-18 GHz)

RE 30MHz-1GHz

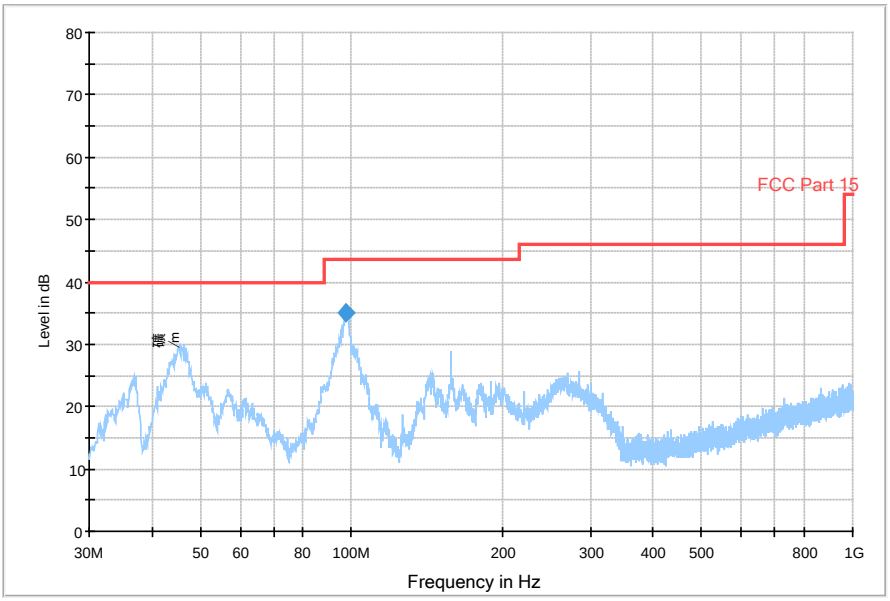


Fig. 123 Radiated Spurious Emission (802.11ac-HT40, ch54, 30 MHz-1 GHz)

Final Result 1

Frequency (MHz)	QuasiPeak (dBµV/m)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Comment
97.803000	35.0	100.0	V	291.0	-25.5	8.5	43.5	

RE - 1GHz-3GHz

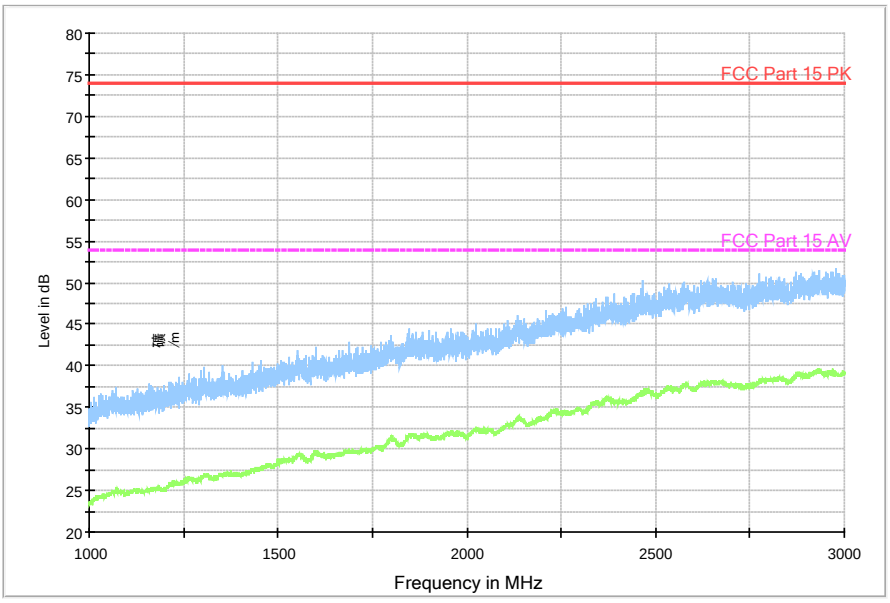
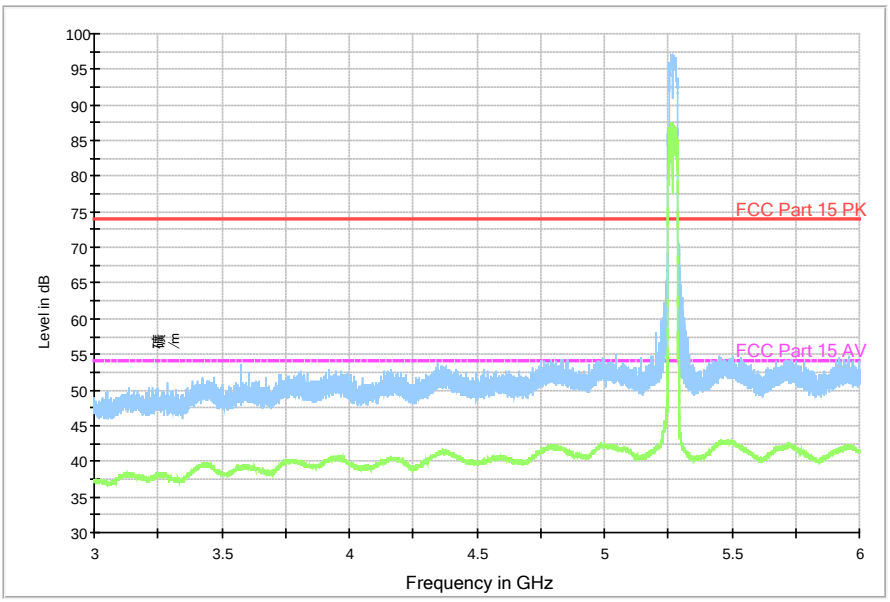


Fig. 124 Radiated Spurious Emission (802.11ac-HT40, ch54, 1 GHz-3 GHz)

RE - 3GHz-6GHz



Note: the spike over the limit is the WLAN carrier frequency and coming from the radio equipment.

Fig. 125 Radiated Spurious Emission (802.11ac-HT40, ch54, 3 GHz-6 GHz)

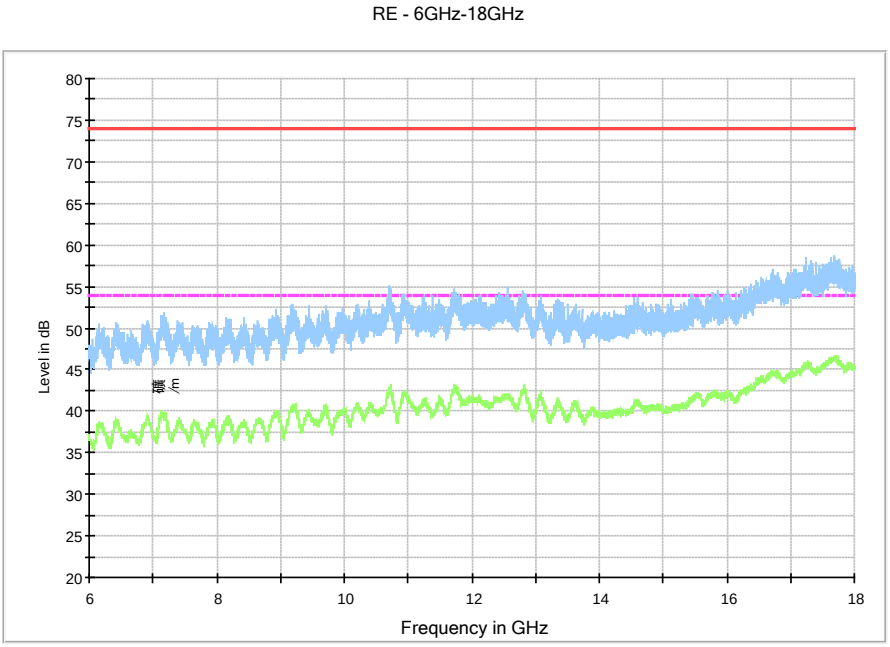


Fig. 126 Radiated Spurious Emission (802.11ac-HT40, ch54, 6 GHz-18 GHz)

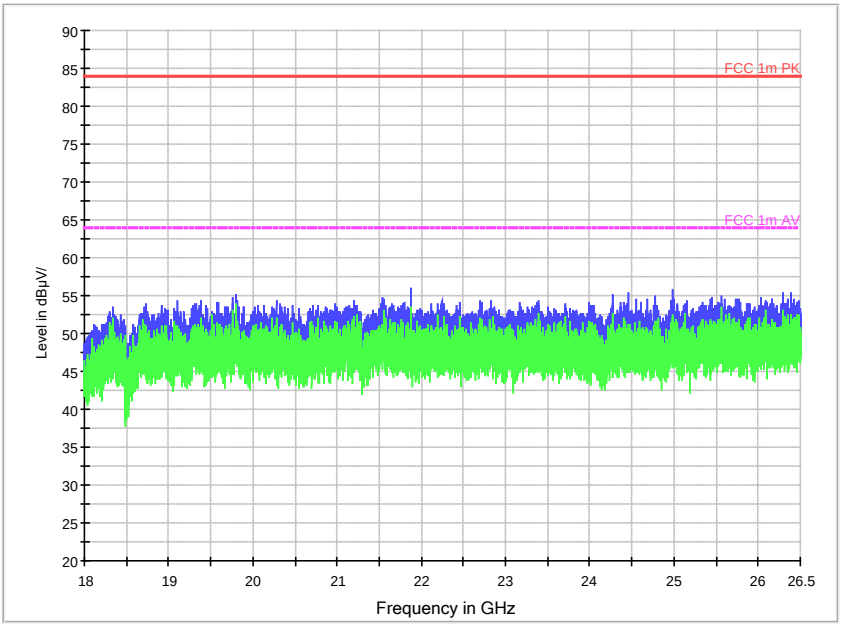


Fig. 127 Radiated Spurious Emission (802.11ac-HT40, ch54, 18 GHz-26.5 GHz)