

## Appendix Test Data for SRD (Conducted Measurement)

Product Name: Wireless Mechanical Keyboard

Trade Mark: Keychron

Test Model: Q5 MAX

FCC ID: 2ASF4-Q5MAX

### Environmental Conditions

|                    |           |
|--------------------|-----------|
| Temperature:       | 22.8° C   |
| Relative Humidity: | 56%       |
| ATM Pressure:      | 100.0 kPa |
| Test Engineer:     | Anna Hu   |
| Supervised by:     | Hugo Chen |
| NOTE               | N/A       |

## Appendix A: DTS Bandwidth

### Test Result

| TestMode | Antenna | Frequency[MHz] | DTS BW [MHz] | FL[MHz]  | FH[MHz]  | Limit[MHz] | Verdict |
|----------|---------|----------------|--------------|----------|----------|------------|---------|
| SRD      | Ant1    | 2402           | 1.264        | 2401.412 | 2402.676 | 0.5        | PASS    |
| SRD      | Ant1    | 2440           | 1.240        | 2439.376 | 2440.616 | 0.5        | PASS    |
| SRD      | Ant1    | 2480           | 1.368        | 2479.276 | 2480.644 | 0.5        | PASS    |

## Test Graphs

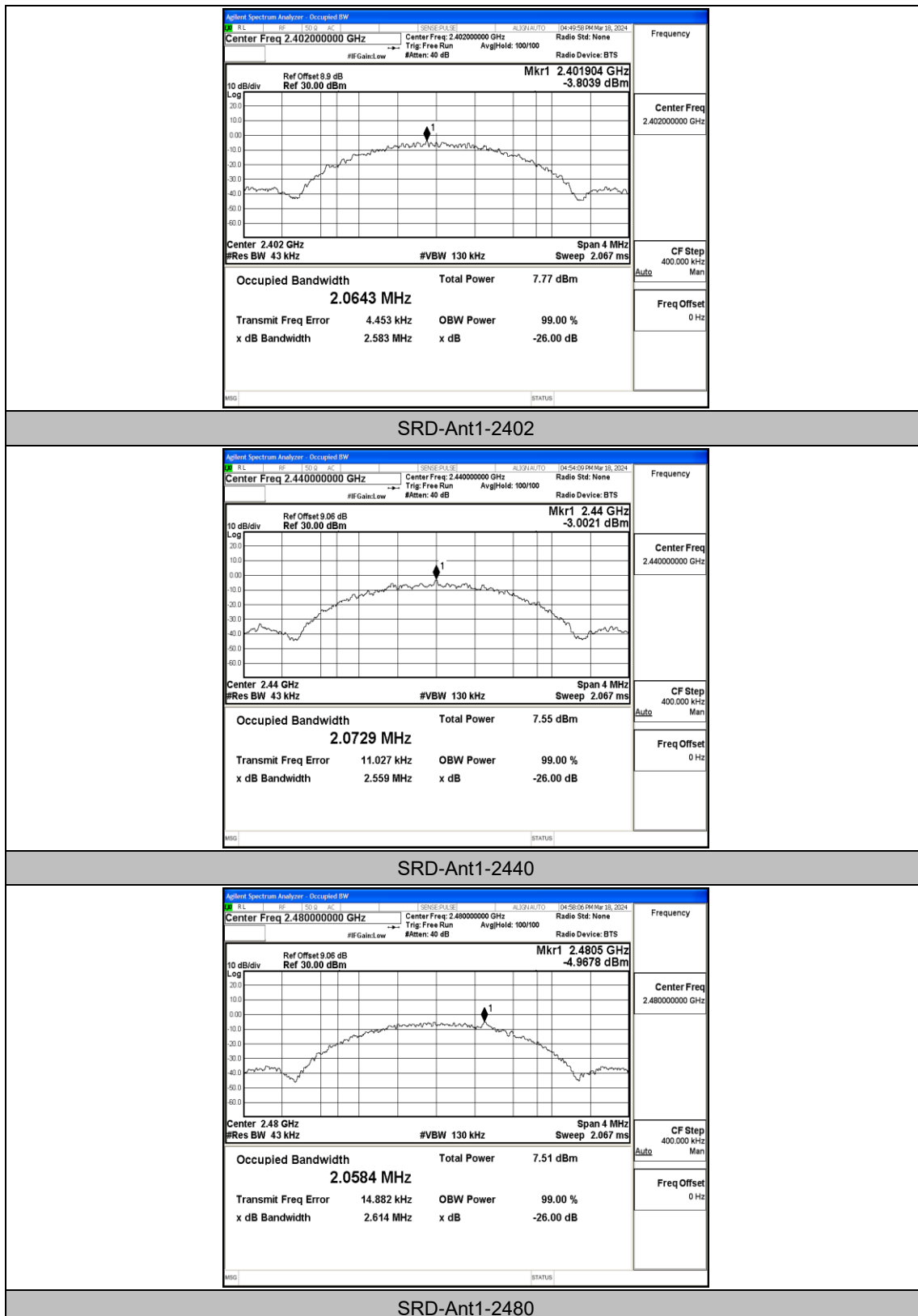


## Appendix B: Occupied Channel Bandwidth

### Test Result

| TestMode | Antenna | Frequency[MHz] | OCB<br>[MHz] | FL[MHz]   | FH[MHz]   | Limit[MHz] | Verdict |
|----------|---------|----------------|--------------|-----------|-----------|------------|---------|
| SRD      | Ant1    | 2402           | 2.0643       | 2400.9723 | 2403.0366 | ---        | ---     |
| SRD      | Ant1    | 2440           | 2.0729       | 2438.9746 | 2441.0475 | ---        | ---     |
| SRD      | Ant1    | 2480           | 2.0584       | 2478.9857 | 2481.0441 | ---        | ---     |

## Test Graphs

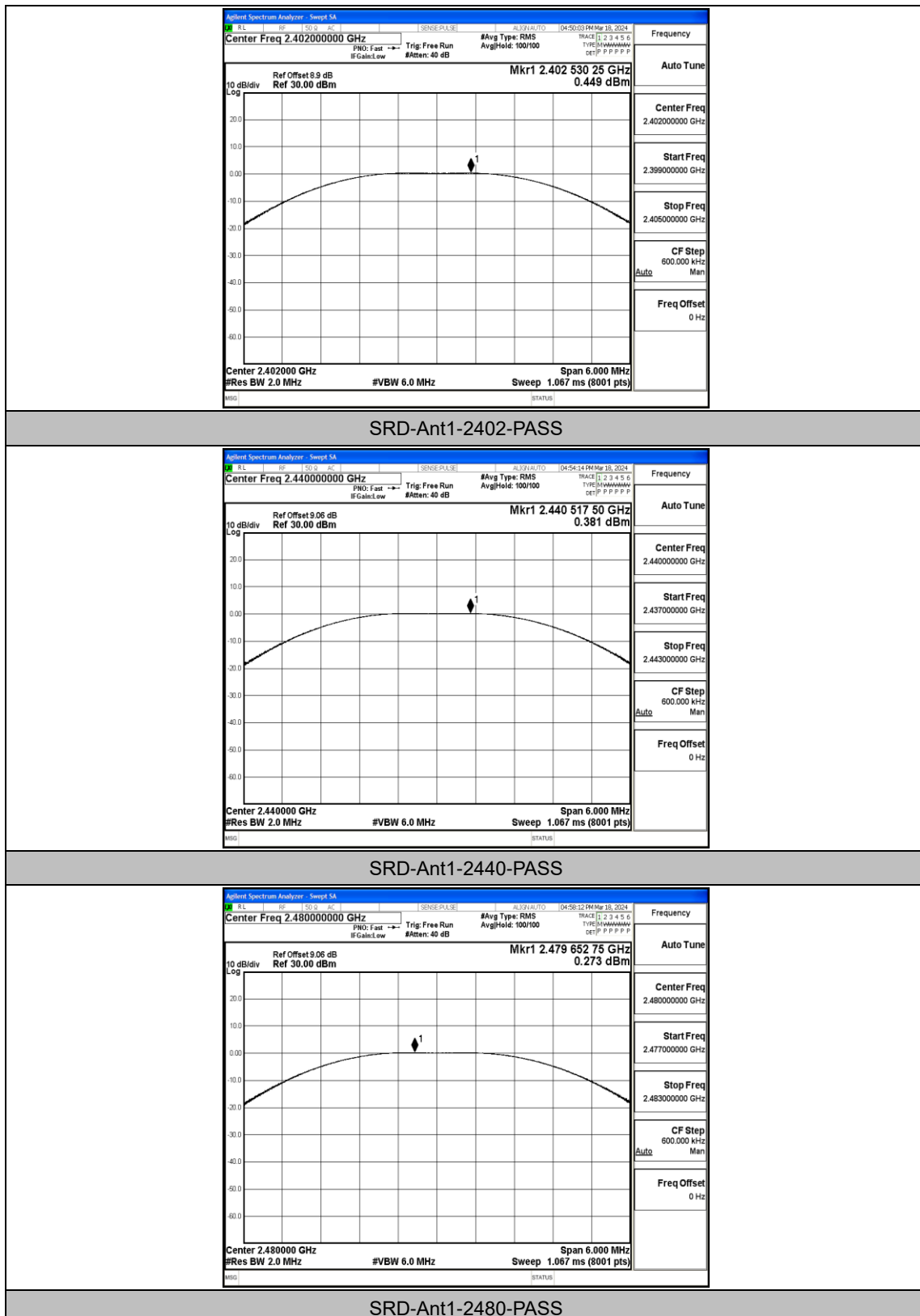


## Appendix C: Maximum peak conducted output power

### Test Result Peak

| TestMode | Antenna | Frequency[MHz] | Conducted Peak Power[dBm] | Conducted Limit[dBm] | Verdict |
|----------|---------|----------------|---------------------------|----------------------|---------|
| SRD      | Ant1    | 2402           | 0.45                      | ≤30                  | PASS    |
| SRD      | Ant1    | 2440           | 0.38                      | ≤30                  | PASS    |
| SRD      | Ant1    | 2480           | 0.27                      | ≤30                  | PASS    |

## Test Graphs Peak

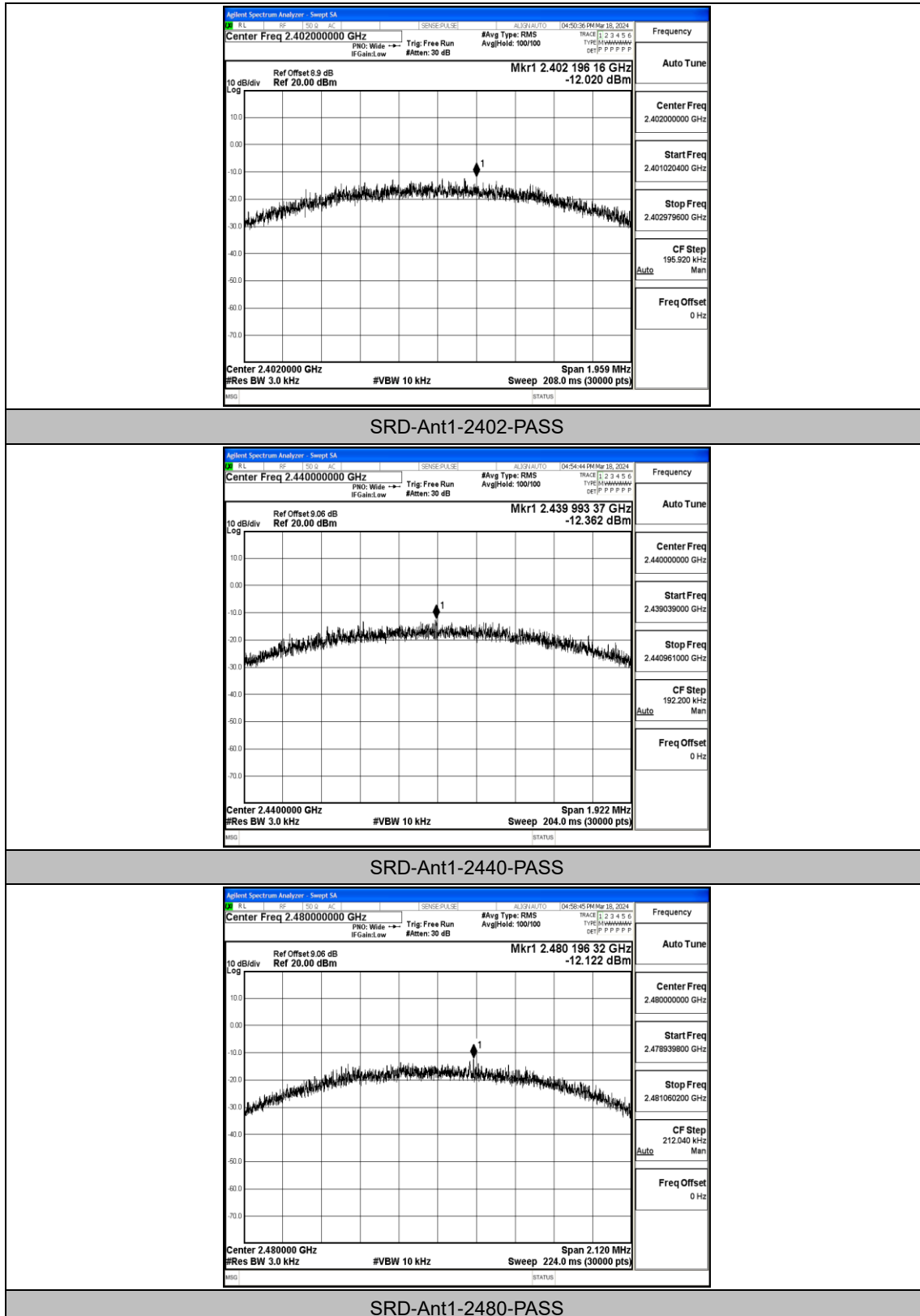


## Appendix D: Maximum peak power spectral density

### Test Result

| TestMode | Antenna | Frequency[MHz] | Result[dBm/3kHz] | Limit[dBm/3kHz] | Verdict |
|----------|---------|----------------|------------------|-----------------|---------|
| SRD      | Ant1    | 2402           | -12.02           | ≤8.00           | PASS    |
| SRD      | Ant1    | 2440           | -12.36           | ≤8.00           | PASS    |
| SRD      | Ant1    | 2480           | -12.12           | ≤8.00           | PASS    |

## Test Graphs

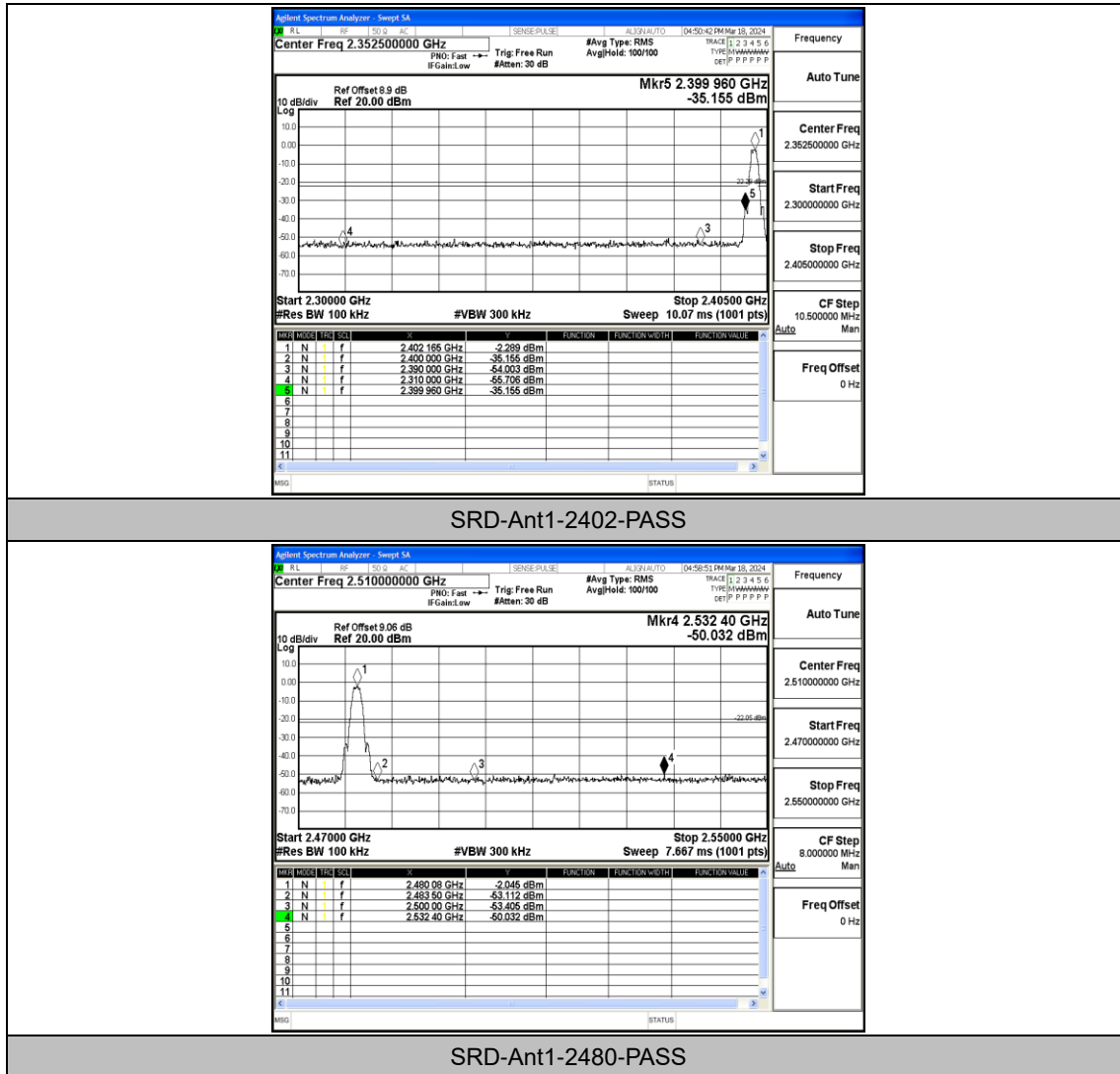


## Appendix E: Band edge measurements

### Test Result

| TestMode | Antenna | Channel | Frequency[MHz] | RefLevel[dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|---------|----------------|---------------|-------------|------------|---------|
| SRD      | Ant1    | Low     | 2402           | -2.29         | -35.16      | ≤-22.29    | PASS    |
| SRD      | Ant1    | High    | 2480           | -2.05         | -50.03      | ≤-22.05    | PASS    |

## Test Graphs

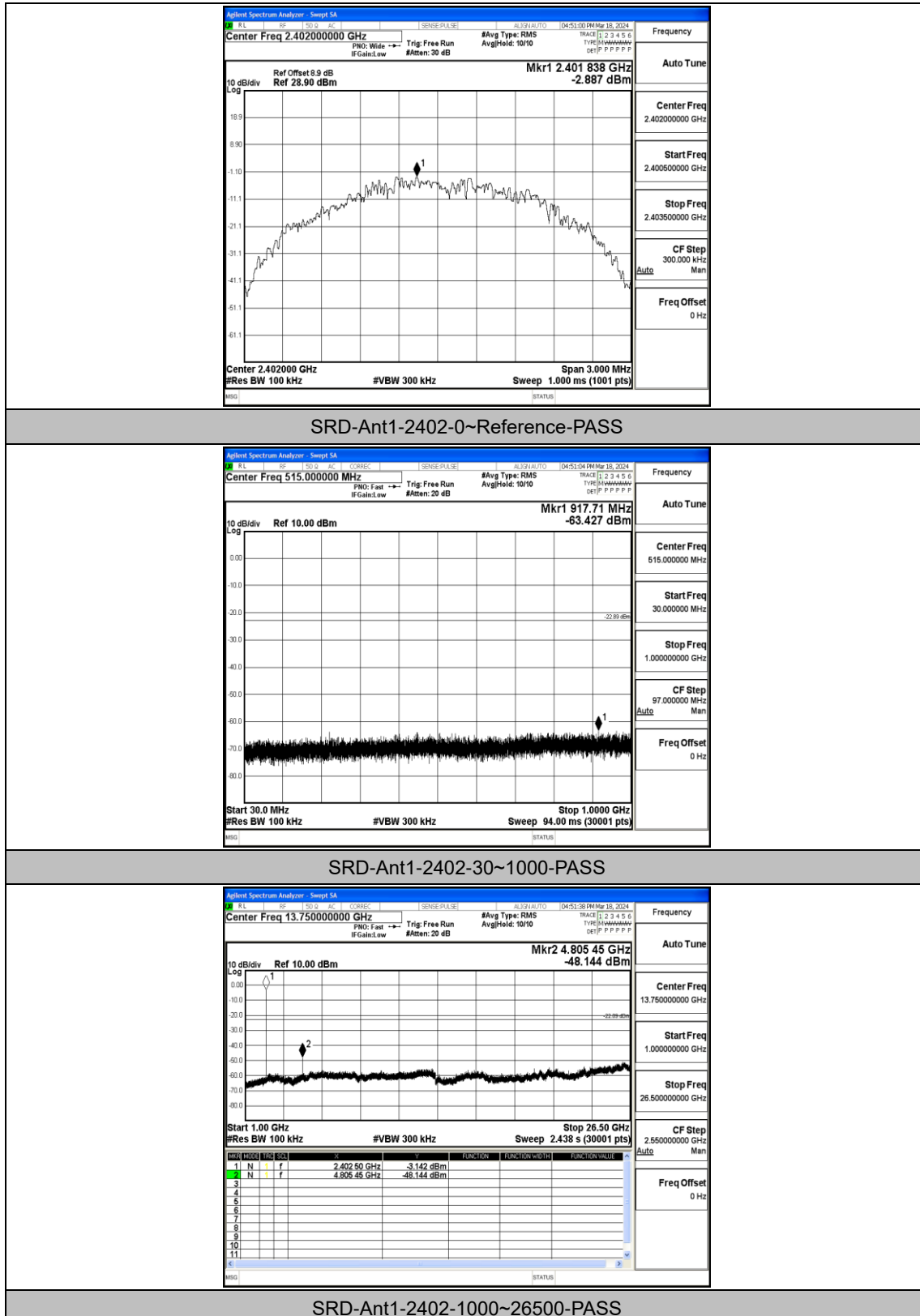


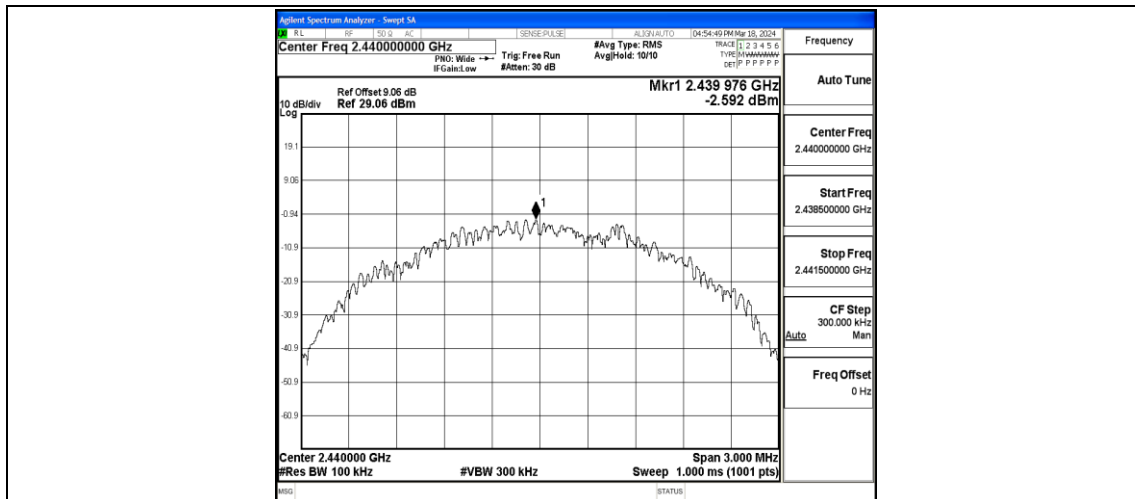
## Appendix F: Conducted Spurious Emission

### Test Result

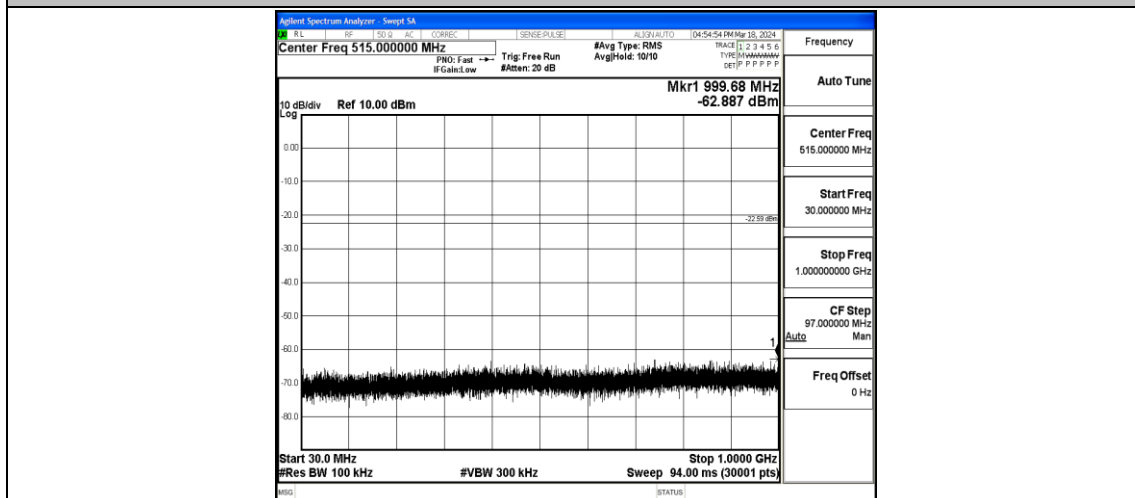
| TestMode | Antenna | Frequency[MHz] | FreqRange [MHz] | RefLevel [dBm] | Result[dBm] | Limit[dBm] | Verdict |
|----------|---------|----------------|-----------------|----------------|-------------|------------|---------|
| SRD      | Ant1    | 2402           | 0~Reference     | -2.89          | -2.89       | ---        | PASS    |
| SRD      | Ant1    | 2402           | 30~1000         | -2.89          | -63.43      | ≤-22.89    | PASS    |
| SRD      | Ant1    | 2402           | 1000~26500      | -2.89          | -48.14      | ≤-22.89    | PASS    |
| SRD      | Ant1    | 2440           | 0~Reference     | -2.59          | -2.59       | ---        | PASS    |
| SRD      | Ant1    | 2440           | 30~1000         | -2.59          | -62.89      | ≤-22.59    | PASS    |
| SRD      | Ant1    | 2440           | 1000~26500      | -2.59          | -46.37      | ≤-22.59    | PASS    |
| SRD      | Ant1    | 2480           | 0~Reference     | -3.40          | -3.40       | ---        | PASS    |
| SRD      | Ant1    | 2480           | 30~1000         | -3.40          | -62.8       | ≤-23.4     | PASS    |
| SRD      | Ant1    | 2480           | 1000~26500      | -3.40          | -49.13      | ≤-23.4     | PASS    |

## Test Graphs

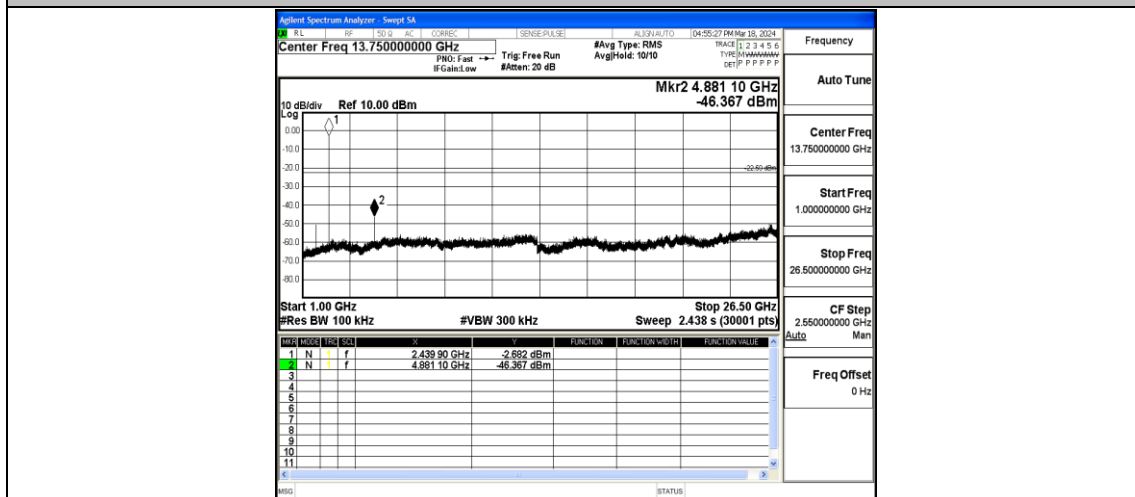




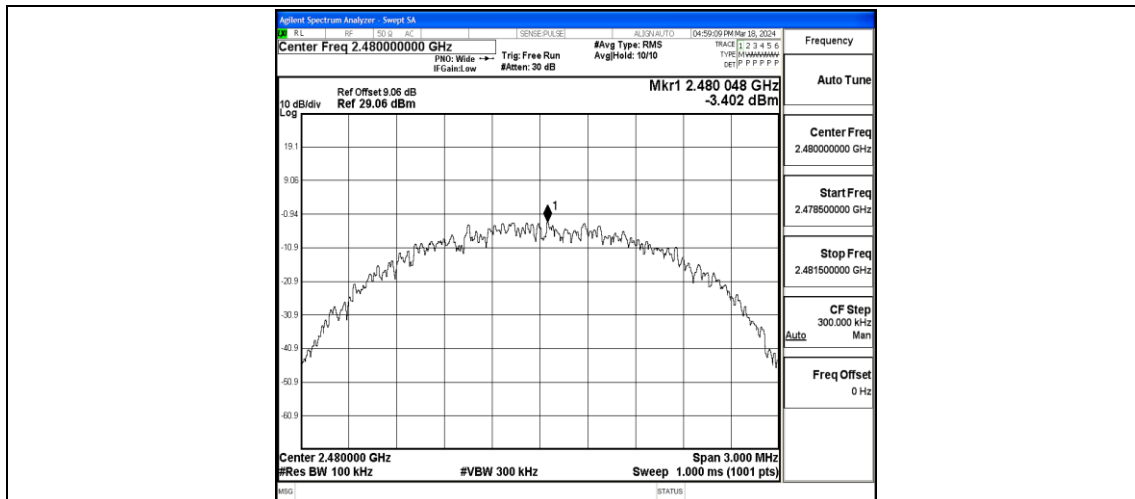
SRD-Ant1-2440-0~Reference-PASS



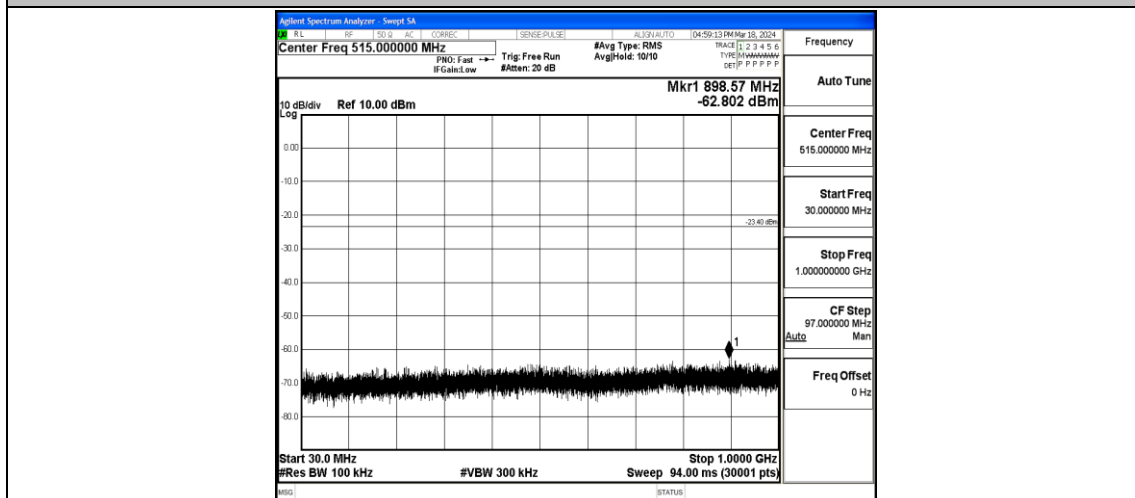
SRD-Ant1-2440-30~1000-PASS



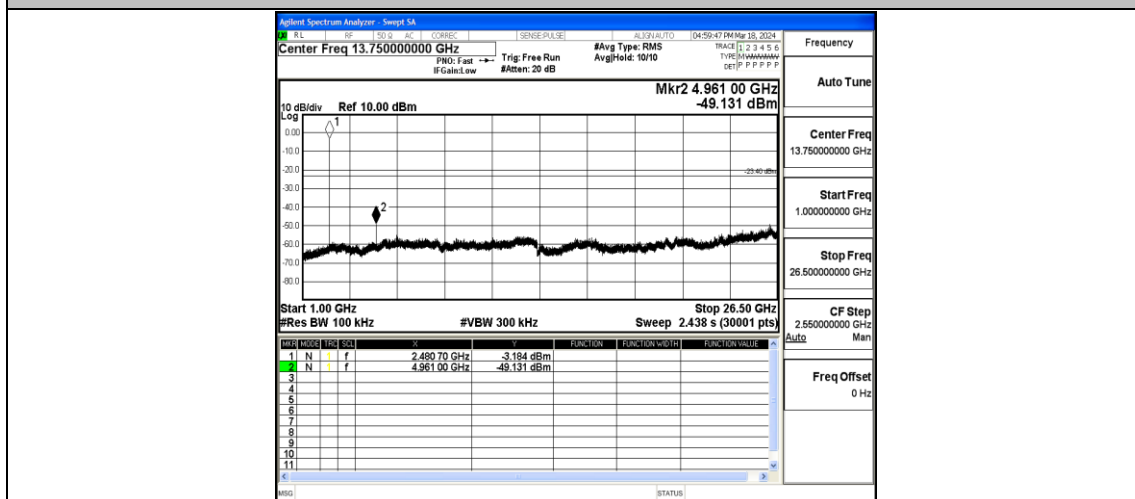
SRD-Ant1-2440-1000~26500-PASS



## SRD-Ant1-2480-0~Reference-PASS



## SRD-Ant1-2480-30~1000-PASS



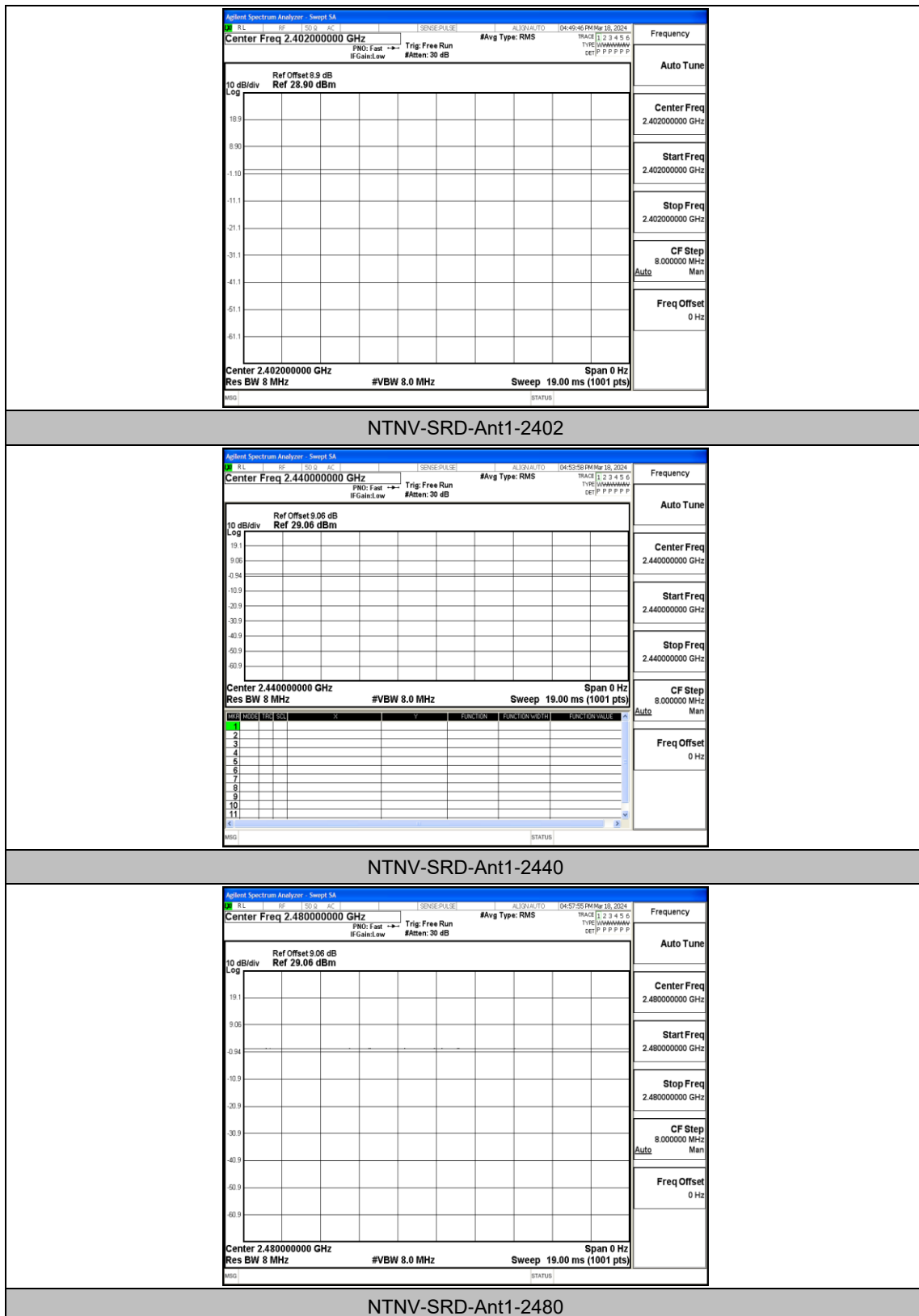
## SRD-Ant1-2480-1000~26500-PASS

## Appendix G: Duty Cycle

### Test Result

| TestMode | Antenna | Frequency[MHz] | ON Time<br>[ms] | Period<br>[ms] | Duty Cycle<br>[%] | Duty Cycle<br>Factor[dB] |
|----------|---------|----------------|-----------------|----------------|-------------------|--------------------------|
| SRD      | Ant1    | 2402           | 19.00           | 19.00          | 100.00            | 0                        |
| SRD      | Ant1    | 2440           | 19.00           | 19.00          | 100.00            | 0                        |
| SRD      | Ant1    | 2480           | 19.00           | 19.00          | 100.00            | 0                        |

## Test Graphs



## Appendix H: Emissions in Restricted Bands

### Test Result

| TestMode | Antenna | ChName | Frequency[MHz] | Detector | Freq [MHz] | Result [dBm] | Limit [dBm] | Result [dBuV/m] | Limit [dBuV/m] | Verdict |
|----------|---------|--------|----------------|----------|------------|--------------|-------------|-----------------|----------------|---------|
| SRD      | Ant1    | Low    | 2402           | Peak     | 2390.000   | -42.89       | ≤-21.20     | 52.31           | ≤74            | PASS    |
| SRD      | Ant1    | Low    | 2402           | Peak     | 2310.000   | -43.04       | ≤-21.20     | 52.16           | ≤74            | PASS    |
| SRD      | Ant1    | Low    | 2402           | Peak     | 2328.455   | -40.48       | ≤-21.20     | 54.72           | ≤74            | PASS    |
| SRD      | Ant1    | Low    | 2402           | AV       | 2390.000   | -50.54       | ≤-41.20     | 44.66           | ≤54            | PASS    |
| SRD      | Ant1    | Low    | 2402           | AV       | 2310.000   | -50.78       | ≤-41.20     | 44.42           | ≤54            | PASS    |
| SRD      | Ant1    | Low    | 2402           | AV       | 2388.305   | -49.53       | ≤-41.20     | 45.67           | ≤54            | PASS    |
| SRD      | Ant1    | High   | 2480           | Peak     | 2483.500   | -42.64       | ≤-21.20     | 52.56           | ≤74            | PASS    |
| SRD      | Ant1    | High   | 2480           | Peak     | 2500.000   | -42.71       | ≤-21.20     | 52.49           | ≤74            | PASS    |
| SRD      | Ant1    | High   | 2480           | Peak     | 2491.600   | -39.86       | ≤-21.20     | 55.34           | ≤74            | PASS    |
| SRD      | Ant1    | High   | 2480           | AV       | 2483.500   | -48.63       | ≤-41.20     | 46.57           | ≤54            | PASS    |
| SRD      | Ant1    | High   | 2480           | AV       | 2500.000   | -49.79       | ≤-41.20     | 45.41           | ≤54            | PASS    |
| SRD      | Ant1    | High   | 2480           | AV       | 2483.520   | -48.63       | ≤-41.20     | 46.57           | ≤54            | PASS    |

Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

## Test Graphs

