



EMC Test Data

| | |
|--------------------------------|------------------------------------|
| Client: Aruba Networks | Job Number: JD99613 |
| Model: APINH205 | T-Log Number: T101553 |
| | Project Manager: Christine Krebill |
| Contact: Rob Hastings | Project Coordinator: - |
| Standard: FCC 15.407 / RSS-210 | Class: N/A |

Maximum Permissible Exposure / SAR Exclusion

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 5/13/2016

Test Engineer: Mark Hill

General Test Configuration

Calculation uses the free space transmission formula:

$$S = (PG)/(4 \pi d^2)$$

Where: S is power density (W/m^2), P is output power (W), G is antenna gain relative to isotropic, d is separation distance from the transmitting antenna (m).

Summary of Results

| | |
|---|-----|
| Device complies with Power Density requirements at 20cm separation: | Yes |
|---|-----|

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



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FCC MPE Calculation

Use: General
 Antenna: 4dBi @ 2.4GHz, 6dBi @ 5GHz

| Band | Mode | Output Power | | Antenna gain (Max) | EIRP | | Channels Available | Channels Used | Total EIRP | |
|--|------|--------------|---------|--------------------|------|-------|--------------------|---------------|------------|-------|
| | | Peak | Average | | dBm | W | | | W | dBm |
| 2400 - 2483.5 | OFDM | - | 21.5 | 4.0 | 25.5 | 0.355 | 11 | 1 | 0.447 | 25.50 |
| 2401 - 2483.5 | CCK | - | 22.5 | 4.0 | 26.5 | 0.447 | | | | |
| 5150 - 5250 | OFDM | - | 19.2 | 6.0 | 25.2 | 0.331 | 4 | 0 | 0.000 | - |
| 5250 - 5350 | OFDM | - | 18.9 | 6.0 | 24.9 | 0.309 | 4 | 0 | 0.000 | - |
| 5470 - 5725 | OFDM | - | 19.5 | 6.0 | 25.5 | 0.355 | 4 | 1 | 0.355 | 25.50 |
| 5725 - 5850 | OFDM | - | 19.5 | 6.0 | 25.5 | 0.355 | 5 | 0 | 0.000 | - |
| Worse case totals for simultaneous transmission: | | | | | | | | 2 | 0.801 | 29.04 |

| | | | |
|-----------------------|---------|---|---------------------------------------|
| Worse case condition: | EIRP mW | Power Density (S) at 20 cm mW/cm ² | MPE Limit at 20 cm mW/cm ² |
| | 801 | 0.159 | 1.000 |

Note: Manufacturer stated the output power reported is the maximum output power, including manufacturing tolerances/tune-up.



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IC MPE Calculation

Use: General
 Antenna: 4dBi @ 2.4GHz, 6dBi @ 5GHz

| Freq. MHz | EUT Power | | Cable Loss Loss dB | Ant Gain dBi | Power at Ant dBm | EIRP mW | Power Density (S) at 20 cm mW/cm ² | MPE Limit at 20 cm mW/cm ² |
|-----------|-----------|-------|--------------------|--------------|------------------|---------|---|---------------------------------------|
| | dBm | mW* | | | | | | |
| 2462 | 22.5 | 177.8 | 0 | 4 | 22.5 | 446.7 | 0.089 | 0.544 |
| 5180 | 15.1 | 32.0 | 0 | 6 | 15.1 | 127.4 | 0.025 | 0.905 |
| 5260 | 18.9 | 77.6 | 0 | 6 | 18.9 | 309.0 | 0.061 | 0.914 |
| 5500 | 19.5 | 89.1 | 0 | 6 | 19.5 | 354.8 | 0.071 | 0.943 |
| 5745 | 19.5 | 89.1 | 0 | 6 | 19.5 | 354.8 | 0.071 | 0.971 |

Simultaneous transmission

| Transmitter | MPE @ 20cm mW/cm ² | % of limit |
|-------------|-------------------------------|------------|
| 2.4G | 0.089 | 16.33% |
| 5G | 0.071 | 7.49% |
| Total: | | 23.82% |

Using worse case band for simultaneous transmissions

Section 2.5.2 Exemption Calculation

At or above 300MHz and below 6GHz, the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W

| Freq (MHz) | Threshold (W) | Threshold (dBm) | Total EIRP (dBm) |
|------------|---------------|-----------------|------------------|
| 2412 | 2.684 | 34.29 | 27.59 |

Note - used the worse case frequency for the calculation

Note: Manufacturer stated the output power reported is the maximum output power, including manufacturing tolerances/tune-up.