

Client:	Ericsson Canada	Job Number:	JD99841
Model:	APINM210	T-Log Number:	T99885
Contact:	Nancy Langford	Project Manager:	Christine Krebill
Standard:	FCC 15.247/15.E, RSS-247	Project Coordinator:	-
		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: 10/28/2015

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
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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.

Note: The regulatory power levels were used in the MPE calculations. These represent the worse case condition based on the production target power levels and manufacturing tolerance.

EMC Test Data

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		Class:	N/A

FCC MPE Calculation

Use: General

Antenna: See antenna information

Worse case modes used for each band (including beamforming modes)

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
2412	dBm	mW*						
2412	21.6	144.5	0	5	21.6	457.10	0.091	1.000
2437	24.4	275.4	0	5	24.4	871.00	0.173	1.000
2462	18.5	70.8	0	5	18.5	223.90	0.045	1.000
5180	22.2	166.0	0	6	22.2	660.70	0.131	1.000
5200	23.3	213.8	0	6	23.3	851.10	0.169	1.000
5240	26.4	436.5	0	6	26.4	1737.80	0.346	1.000
5745	18.4	69.2	0	5.2	18.4	229.10	0.046	1.000
5785	23.5	223.9	0	5.2	23.5	741.30	0.147	1.000
5825	18.7	74.1	0	5.2	18.7	245.50	0.049	1.000

Worse case operation of 2.4GHz and 5GHz operating at the same time

Freq. MHz	% of limit	Total % of limit
2437	17.3%	51.9%
5240	34.6%	

EMC Test Data

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		Class:	N/A

Industry Canada MPE Calculation

Use: General

Antenna: See antenna information

Worse case modes used for each band (including beamforming modes)

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*							
Highest EIRP operation in the 2.4GHz band - n20 TxBF								
2412	21.6	144.5	0	5	21.6	457.09	0.091	0.537
2437	24.4	275.4	0	5	24.4	870.96	0.173	0.540
2462	18.5	70.8	0	5	18.5	223.87	0.045	0.544
Highest EIRP operation in the UNII1 band - n40 TxBF								
5190	16.8	47.9	0	6	16.8	190.55	0.038	0.906
5230	16.8	47.9	0	6	16.8	190.55	0.038	0.911
Highest EIRP operation in the UNII3 band - n20 TxBF								
5745	18.4	69.2	0	5.2	18.4	229.09	0.046	0.971
5785	23.5	223.9	0	5.2	23.5	741.31	0.147	0.976
5825	18.7	74.1	0	5.2	18.7	245.47	0.049	0.980

Total Power Density (S) for 2.4GHz + 5GHz operation: 0.321 mW/cm²
3.2 W/m²

Worse case operation of 2.4GHz and 5GHz operating at the same time

Freq. MHz	% of limit	Total % of limit
2437	32.1%	47.2%
5785	15.1%	