



# EMC Test Data

Client:	Aruba, a Hewlett Packard Enterprise company	Job Number:	PR107760
Model:	ARCN9004LTE	T-Log Number:	TL107760-RA
		Project Manager:	Christine Krebill
Contact:	Mark Hill	Project Coordinator:	David Bare
Standard:	FCC 15.247, RSS-247	Class:	N/A

## Maximum Permissible Exposure / SAR Exclusion

### Test Specific Details

Objective: Evaluate the RF Exposure requirements per 2.1091

Date of Test: 11/18/2019

Test Engineer: David Bare

### 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
If not, required separation distance (in cm):	-

### Deviations From The Standard

No deviations were made from the requirements of the standard.

FCC MPE Calculation

Use: General

Antenna: Integral

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*						
2402	7.1	5.1	0	-6.2	7.1	1.23	0.000245	1.000
2440	7.1	5.1	0	-4.0	7.1	2.04	0.000406	1.000
2480	6.9	4.9	0	-4.4	6.9	1.78	0.000354	1.000

Freq. MHz	S @ 20 cm mW/cm^2	MPE Limit mW/cm^2	Distance where S <= MPE Limit
2402	0.000245	1.000	0.31cm
2440	0.000406	1.000	0.40cm
2480	0.000354	1.000	0.38cm

FCC MPE Calculation (LTE)

Use: General

Antenna: Varies with band

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*						
707.5	24.5	281.8	0	5	24.5	891.25	0.177	0.472
793	24.5	281.8	0	5	24.5	891.25	0.177	0.529
836.5	24.5	281.8	0	6	24.5	1122.02	0.223	0.558
1745	24.5	281.8	0	5	24.5	891.25	0.177	1.000
1882.5	24.5	281.8	0	7	24.5	1412.54	0.281	1.000
2310	24.5	281.8	0	4	24.5	707.95	0.141	1.000
782	24.5	281.8	0	5	24.5	891.25	0.177	0.521

Freq. MHz	S @ 20 cm mW/cm^2	MPE Limit mW/cm^2	Distance where S <= MPE Limit
707.5	0.177	0.472	12.3cm
793	0.177	0.529	11.6cm
836.5	0.177	0.558	11.3cm
1745	0.281	1.000	10.6cm
1882.5	0.141	1.000	7.5cm
2310	0.177	1.000	8.4cm
782	0.177	0.521	11.7cm

Combined exposure from both radios (highest contribution from each radio) as a percentage of the corresponding limit

FCC

LTE	37.6%	
BLE	0.0%	
Total	37.6%	Complies

ISED MPE Calculation

Use: General  
 Antenna: Integral

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 <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
2402	7.1	5.1	0	-6.2	7.1	1.23	0.000245	0.535
2440	7.1	5.1	0	-4.0	7.1	2.04	0.000406	0.541
2480	6.9	4.9	0	-4.4	6.9	1.78	0.000354	0.547

RSS-102 (2.5.2)

Freq. MHz	S @ 20 cm mW/cm <sup>2</sup>	MPE Limit mW/cm <sup>2</sup>	Distance where S <= MPE Limit	1.31 x 10 <sup>-2</sup> x f <sup>0.6834</sup> (W)
2402	0.000245	0.535	0.43cm	2.676
2440	0.000406	0.541	0.55cm	2.705
2480	0.000354	0.547	0.51cm	2.736

ISED MPE Calculation (LTE)

Use: General  
 Antenna: Varies with band

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 <sup>2</sup>	MPE Limit at 20 cm mW/cm <sup>2</sup>
	dBm	mW*						
707.5	24.5	281.8	0	5	24.5	891.25	0.177	0.232
793	24.5	281.8	0	5	24.5	891.25	0.177	0.251
836.5	24.5	281.8	0	6	24.5	1122.02	0.223	0.260
1745	24.5	281.8	0	5	24.5	891.25	0.177	0.430
1882.5	24.5	281.8	0	7	24.5	1412.54	0.281	0.453
2310	24.5	281.8	0	4	24.5	707.95	0.141	0.521
782	24.5	281.8	0	5	24.5	891.25	0.177	0.249

RSS-102 (2.5.2)

Freq. MHz	S @ 20 cm mW/cm <sup>2</sup>	MPE Limit mW/cm <sup>2</sup>	Distance where S <= MPE Limit	1.31 x 10 <sup>-2</sup> x f <sup>0.6834</sup> (W)
707.5	0.177	0.232	17.5cm	1.161
793	0.177	0.251	16.8cm	1.255
836.5	0.177	0.260	16.5cm	1.302
1745	0.281	0.430	16.2cm	2.151
1882.5	0.141	0.453	11.2cm	2.266
2310	0.177	0.521	11.7cm	2.606
782	0.177	0.249	16.9cm	1.243

Combined exposure from both radios (highest contribution from each radio) as a percentage of the corresponding limit

ISED

LTE	76.4%	
BLE	0.04%	
Total	76.4%	Complies

Combined exposure meets exemption limits per RSS-102 2.5.2