Client:	Vivint, Inc.	Job Number:	PR079234
Model:	CE04	T-Log Number:	TL079234-RA
		Project Manager:	Deepa Shetty
Contact:	Greg Hansen	Project Coordinator:	David Bare
Standard:	FCC 15.255	Class:	N/A

Maximum Permissible Exposure

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.

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:	No
If not, required separation distance (in cm):	27.3

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.

Client:	Vivint, Inc.	Job Number:	PR079234
Model:	CE04	T-Log Number:	TL079234-RA
		Project Manager:	Deepa Shetty
Contact:	Greg Hansen	Project Coordinator:	David Bare
Standard:	FCC 15.255	Class:	N/A

MPE Calculation for 60 GHz Wi-Fi radio (Worst case of FCC and ISEDC limits)
Use: General Listed EUT powers are average
Antenna: Integral 23 dBi

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 30 cm mW/cm^2	MPE Limit at 30 cm mW/cm^2
58,320	7.4	5.5	0	23	7.4	1096.48	0.097	1.000
60,480	16.4	43.7	0	23	16.4	8709.64	0.770	1.000
62,640	16.7	46.8	0	23	16.7	9332.54	0.825	1.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 30 cm mW/cm^2	MPE Limit mW/cm^2	Distance where S <= MPE Limit	Ratio of PD to limit
58320	0.097	1.000	9.3cm	9.7%
60480	0.770	1.000	26.3cm	77.0%
62640	0.825	1.000	27.3cm	82.5%

MPE Calculation for 2.4 GHz Wi-Fi radio (Worst case of FCC and ISEDC limits)
Use: General
Antenna: Integral

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 30 cm mW/cm^2	MPE Limit at 30 cm mW/cm^2
2,412	18.0	63.1	0	3.2	18.0	131.83	0.012	0.537
2,437	19.0	79.4	0	3.2	19.0	165.96	0.015	0.540
2,462	18.0	63.1	0	3.2	18.0	131.83	0.012	0.544

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 30 cm mW/cm^2	MPE Limit at 30 cm mW/cm^2	Distance where S <= MPE Limit	Ratio of PD to limit
2412	0.012	0.537	4.4cm	2.2%
2437	0.015	0.540	4.9cm	2.7%
2462	0.012	0.544	4.4cm	2.1%

Worst case RF exposure is the sum of the ratios for the two radios, 82.5% + 2.7% = 85.2% of the limit.

Client:	Vivint, Inc.	Job Number:	PR079234
Model:	CE04	T-Log Number:	TL079234-RA
		Project Manager:	Deepa Shetty
Contact:	Greg Hansen	Project Coordinator:	David Bare
Standard:	FCC 15.255	Class:	N/A

MPE Calculation for 60 GHz Wi-Fi radio (Worst case of FCC and ISEDC limits)
Use: Controlled Listed EUT powers are average
Antenna: Integral 23 dBi

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 15 cm mW/cm^2	MPE Limit at 15 cm mW/cm^2
58,320	7.4	5.5	0	23	7.4	1096.48	0.388	5.000
60,480	16.4	43.7	0	23	16.4	8709.64	3.080	5.000
62,640	16.7	46.8	0	23	16.7	9332.54	3.301	5.000

For the cases where S > the MPE Limit

Freq. MHz	S @ 15 cm mW/cm^2	MPE Limit mW/cm^2	Distance where S <= MPE Limit	Ratio of PD to limit
58320	0.388	5.000	4.2cm	7.8%
60480	3.080	5.000	11.8cm	61.6%
62640	3.301	5.000	12.2cm	66.0%

MPE Calculation for 2.4 GHz Wi-Fi radio (Worst case of FCC and ISEDC limits)
Use: Controlled
Antenna: Integral

Freq. MHz	EUT Power dBm	EUT Power mW*	Cable Loss Loss dB	Ant Gain dBi	Power at Ant dBm	EIRP mW	Power Density (S) at 15 cm mW/cm^2	MPE Limit at 15 cm mW/cm^2
2,412	18.0	63.1	0	3.2	18.0	131.83	0.047	3.170
2,437	19.0	79.4	0	3.2	19.0	165.96	0.059	3.187
2,462	18.0	63.1	0	3.2	18.0	131.83	0.047	3.203

For the cases where S > the MPE Limit

Freq. MHz	Power Density (S) at 15 cm mW/cm^2	MPE Limit at 15 cm mW/cm^2	Distance where S <= MPE Limit	Ratio of PD to limit
2412	0.047	3.170	1.8cm	1.5%
2437	0.059	3.187	2.0cm	1.8%
2462	0.047	3.203	1.8cm	1.5%

Worst case RF exposure is the sum of the ratios for the two radios, 66% + 1.8% = 67.8% of the limit.