

9. MPE ESTIMATION

9.1. Limit for General Population/ Uncontrolled Exposures

Frequency	Power density (mW/ cm ²)	Averaging time(minutes)
300MHz----1.5GHz	F/1500	30
1.5GHz---100GHz	1.0	30

Note: F= Frequency in MHz

9.2. Estimation Result

U-NII 5180-5240MHz Band

EUT:Complex Set-Top Box		
M/N:P2571		
Test date: 2014-12-20	Pressure: 101.2±1.0 kpa	Humidity: 49.3±3.0%
Tested by: kobe_huang	Test site: RF site	Temperature:22.9±0.6 °C

Correlated signal

Test Mode	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	5180	14.37	27.35	6.93	4.93	0.0269
	5200	13.87	24.38	6.93	4.93	0.0239
	5240	14.42	27.67	6.93	4.93	0.0272
11n HT20	5180	12.32	17.06	9.53	8.97	0.0305
	5200	12.27	16.87	9.53	8.97	0.0301
	5240	12.54	17.95	9.53	8.97	0.0321
11n HT40	5190	15.20	33.11	9.53	8.97	0.0591
	5230	15.81	38.11	9.53	8.97	0.0681
11ac VHT20	5180	14.93	31.12	9.53	8.97	0.0556
	5200	14.68	29.38	9.53	8.97	0.0525
	5240	14.35	27.23	9.53	8.97	0.0486
11ac VHT40	5190	15.94	39.26	9.53	8.97	0.0701
	5230	15.96	39.45	9.53	8.97	0.0705
11ac VHT80	5210	15.92	39.08	9.53	8.97	0.0698

Uncorrelated signal

11a	5180	14.37	27.35	6.93	4.93	0.0269
	5200	13.87	24.38	6.93	4.93	0.0239
	5240	14.42	27.67	6.93	4.93	0.0272
11n HT20	5180	12.32	17.06	6.53	4.50	0.0153
	5200	12.27	16.87	6.53	4.50	0.0151
	5240	12.54	17.95	6.53	4.50	0.0161
11n HT40	5190	15.20	33.11	6.53	4.50	0.0296
	5230	15.81	38.11	6.53	4.50	0.0341
11ac VHT20	5180	14.93	31.12	6.53	4.50	0.0279
	5200	14.68	29.38	6.53	4.50	0.0263
	5240	14.35	27.23	6.53	4.50	0.0244
11ac VHT40	5190	15.94	39.26	6.53	4.50	0.0352
	5230	15.96	39.45	6.53	4.50	0.0353
11ac VHT80	5210	15.92	39.08	6.53	4.50	0.0350

$$MPE = \frac{PG}{4\pi R^2} \quad (R=20cm)$$

U-NII 5745-5825MHz Band

EUT: Complex Set-Top Box		
M/N: P2571		
Test date: 2014-12-30	Pressure: 101.5±1.0 kpa	Humidity: 50.9±3.0%
Tested by: Kobe_Huang	Test site: RF site	Temperature:22.1±0.6 °C

Correlated signal

Test Mode	Frequency (MHz)	Peak Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
11a	5745	13.85	24.27	6.99	5.00	0.0242
	5785	18.29	67.45	6.99	5.00	0.0671
	5825	15.39	34.59	6.99	5.00	0.0344
11n HT20	5745	14.67	29.31	9.59	9.10	0.0531
	5785	20.44	110.66	9.59	9.10	0.2004
	5825	18.07	64.12	9.59	9.10	0.1161
11n HT40	5755	11.81	15.17	9.59	9.10	0.0275
	5795	16.93	49.32	9.59	9.10	0.0893
11ac VHT20	5745	13.54	22.59	9.59	9.10	0.0409
	5785	20.89	122.74	9.59	9.10	0.2223
	5825	17.70	58.88	9.59	9.10	0.1066
11ac VHT40	5755	11.78	15.07	9.59	9.10	0.0273
	5795	16.90	48.98	9.59	9.10	0.0887
11ac VHT80	5775	13.17	20.75	9.59	9.10	0.0376

Uncorrelated signal

11a	5745	13.85	24.27	6.99	5.00	0.0242
	5785	18.29	67.45	6.99	5.00	0.0671
	5825	15.39	34.59	6.99	5.00	0.0344
11n HT20	5745	14.67	29.31	6.59	4.56	0.0266
	5785	20.44	110.66	6.59	4.56	0.1005
	5825	18.07	64.12	6.59	4.56	0.0582
11n HT40	5755	11.81	15.17	6.59	4.56	0.0138
	5795	16.93	49.32	6.59	4.56	0.0448
11ac VHT20	5745	13.54	22.59	6.59	4.56	0.0205
	5785	20.89	122.74	6.59	4.56	0.1114
	5825	17.70	58.88	6.59	4.56	0.0535
11ac VHT40	5755	11.78	15.07	6.59	4.56	0.0137
	5795	16.90	48.98	6.59	4.56	0.0445
11ac VHT80	5775	13.17	20.75	6.59	4.56	0.0188

$$MPE = \frac{PG}{4\pi R^2} \quad (R=20cm)$$