

**MAXIMUM PERMISSIBLE EXPOSURE (MPE)****Standard Applicable**

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1093 RF exposure is calculated.

**Limits for Maximum Permissive Exposure (MPE)**

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-15000	/	/	1.0	30

F = frequency in MHz

\* = Plane-wave equipment power density

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FCC ID: KDZVM2W01  
IC: 1693B-VM2W01

## Maximum Permissible Exposure (MPE) Evaluation

### Internal Antenna

#### 802.11a 5150~5250 Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5180.00	11.31	11.31	0.01352	1
5220.00	11.11	11.11	0.01291	1
5240.00	11.14	11.14	0.01300	1

### MPE Prediction (802.11a 5150~5250)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	11.31	(dBm)
Maximum peak output power at antenna input terminal:	13.52072563	(mW)
Duty cycle:	100	(%)
Maximum Pav :	13.52072563	(mW)
Antenna gain (typical):	3.92	(dBi)
Maximum antenna gain:	2.466039337	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5180	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0066367	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.00664 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5180MHz.

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### 802.11a 5250~5350 Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5260.00	12.65	12.65	0.01840	1
5300.00	12.41	12.41	0.01742	1
5320.00	11.22	11.22	0.01324	1

### MPE Prediction (802.11a 5250~5350)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	12.65	(dBm)
Maximum peak output power at antenna input terminal:	18.40772001	(mW)
Duty cycle:	100	(%)
Maximum Pav :	18.40772001	(mW)
Antenna gain (typical):	3.92	(dBi)
Maximum antenna gain:	2.466039337	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5260	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0090355	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.00903 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5260MHz.

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### 802.11a 5470~5725 Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5500.00	8.78	8.78	0.00755	1
5580.00	9.66	9.66	0.00925	1
5700.00	<b>10.27</b>	10.27	0.01064	1

### MPE Prediction (802.11a 5470~5725)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	10.27	(dBm)
Maximum peak output power at antenna input terminal:	10.64143018	(mW)
Duty cycle:	100	(%)
Maximum Pav :	10.64143018	(mW)
Antenna gain (typical):	4.97	(dBi)
Maximum antenna gain:	3.140508694	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5700	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0066520	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.00665 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5700MHz.

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### 802.11n HT20 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5180.00	11.37	11.37	0.01371	1
5220.00	11.16	11.16	0.01306	1
5240.00	<b>11.70</b>	11.70	0.01479	1

### MPE Prediction (802.11n HT20 MIMO operation (CH 0 + CH 1) 5150~5250)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	11.70	(dBm)
Maximum peak output power at antenna input terminal:	14.79108388	(mW)
Duty cycle:	100	(%)
Maximum Pav :	14.79108388	(mW)
Antenna gain (typical):	6.93	(dBi)
Maximum antenna gain:	4.93173804	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5240	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0145195	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.01452 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5240MHz.

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### 802.11n HT20 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5260.00	<b>15.30</b>	15.30	0.03388	1
5300.00	14.93	14.93	0.03112	1
5320.00	15.06	15.06	0.03206	1

### MPE Prediction (802.11n HT20 MIMO operation (CH 0 + CH 1) 5250~5350)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	<b>15.3</b>	(dBm)
Maximum peak output power at antenna input terminal:	33.88441561	(mW)
Duty cycle:	<b>100</b>	(%)
Maximum Pav :	33.88441561	(mW)
Antenna gain (typical):	<b>6.93</b>	(dBi)
Maximum antenna gain:	4.93173804	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	<b>5260</b>	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0332622	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.03326 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5260MHz.

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### 802.11n HT20 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5500.00	12.83	12.83	0.01919	1
5580.00	12.68	12.68	0.01854	1
5700.00	<b>13.06</b>	13.06	0.02023	1

### MPE Prediction (802.11n HT20 MIMO operation (CH 0 + CH 1) 5470~5725)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	13.06	(dBm)
Maximum peak output power at antenna input terminal:	20.23019179	(mW)
Duty cycle:	100	(%)
Maximum Pav :	20.23019179	(mW)
Antenna gain (typical):	7.98	(dBi)
Maximum antenna gain:	6.280583588	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5700	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0252901	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.02529 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5700MHz.

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### 802.11n HT40 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5190.00	11.53	11.53	0.01422	1
5230.00	<b>11.56</b>	11.56	0.01432	1

### MPE Prediction (802.11n HT40 MIMO operation (CH 0 + CH 1) 5150~5250)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	<b>11.56</b>	(dBm)
Maximum peak output power at antenna input terminal:	14.32187899	(mW)
Duty cycle:	<b>100</b>	(%)
Maximum Pav :	14.32187899	(mW)
Antenna gain (typical):	<b>6.93</b>	(dBi)
Maximum antenna gain:	4.93173804	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	<b>5230</b>	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0140589	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.01429 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5230MHz.

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#### 802.11n HT40 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5270.00	13.94	15.30	0.02477	1
5310.00	13.69	14.93	0.02339	1

#### MPE Prediction (802.11n HT40 MIMO operation (CH 0 + CH 1) 5250~5350)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	13.94	(dBm)
Maximum peak output power at antenna input terminal:	24.77422058	(mW)
Duty cycle:	100	(%)
Maximum Pav :	24.77422058	(mW)
Antenna gain (typical):	6.93	(dBi)
Maximum antenna gain:	4.93173804	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5270	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0243193	(mW/cm <sup>2</sup> )

#### Measurement Result

The predicted power density level at 20 cm is 0.02432 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5270MHz.

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### 802.11n HT40 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5510.00	10.99	10.99	0.01256	1
5590.00	11.50	11.50	0.01413	1
5670.00	<b>11.78</b>	11.78	0.01507	1

### MPE Prediction (802.11n HT40 MIMO operation (CH 0 + CH 1) 5470~5725)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	11.78	(dBm)
Maximum peak output power at antenna input terminal:	15.06607066	(mW)
Duty cycle:	100	(%)
Maximum Pav :	15.06607066	(mW)
Antenna gain (typical):	7.98	(dBi)
Maximum antenna gain:	6.280583588	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5670	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0188343	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.01883 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5670MHz.

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## External Antenna

### 802.11a 5150~5250 Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5180.00	<b>11.31</b>	11.31	0.01352	1
5220.00	11.11	11.11	0.01291	1
5240.00	11.14	11.14	0.01300	1

### MPE Prediction (802.11a 5150~5250)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	<b>11.31</b>	(dBm)
Maximum peak output power at antenna input terminal:	13.52072563	(mW)
Duty cycle:	<b>100</b>	(%)
Maximum Pav :	13.52072563	(mW)
Antenna gain (typical):	<b>3.88</b>	(dBi)
Maximum antenna gain:	2.443430553	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	<b>5180</b>	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0065758	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.00658mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5180MHz.

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### 802.11a 5250~5350 Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5260.00	12.65	12.65	0.01840	1
5300.00	12.41	12.41	0.01742	1
5320.00	11.22	11.22	0.01324	1

### MPE Prediction (802.11a 5250~5350)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	12.65	(dBm)
Maximum peak output power at antenna input terminal:	18.40772001	(mW)
Duty cycle:	100	(%)
Maximum Pav :	18.40772001	(mW)
Antenna gain (typical):	3.88	(dBi)
Maximum antenna gain:	2.443430553	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5260	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0089526	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.00895mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5260MHz.

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### 802.11a 5470~5725 Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5500.00	8.78	8.78	0.00755	1
5580.00	9.66	9.66	0.00925	1
5700.00	<b>10.27</b>	10.27	0.01064	1

### MPE Prediction (802.11a 5470~5725)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	10.27	(dBm)
Maximum peak output power at antenna input terminal:	10.64143018	(mW)
Duty cycle:	100	(%)
Maximum Pav :	10.64143018	(mW)
Antenna gain (typical):	4.85	(dBi)
Maximum antenna gain:	3.054921113	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5700	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0064707	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.00647mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5700MHz.

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### 802.11n HT20 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5180.00	11.37	11.37	0.01371	1
5220.00	11.16	11.16	0.01306	1
5240.00	<b>11.70</b>	11.70	0.01479	1

### MPE Prediction (802.11n HT20 MIMO operation (CH 0 + CH 1) 5150~5250)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	11.70	(dBm)
Maximum peak output power at antenna input terminal:	14.79108388	(mW)
Duty cycle:	100	(%)
Maximum Pav :	14.79108388	(mW)
Antenna gain (typical):	6.89	(dBi)
Maximum antenna gain:	4.886523593	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5240	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0143863	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.01439 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5240MHz.

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### 802.11n HT20 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5260.00	15.30	15.30	0.03388	1
5300.00	14.93	14.93	0.03112	1
5320.00	15.06	15.06	0.03206	1

### MPE Prediction (802.11n HT20 MIMO operation (CH 0 + CH 1) 5250~5350)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	15.3	(dBm)
Maximum peak output power at antenna input terminal:	33.88441561	(mW)
Duty cycle:	100	(%)
Maximum Pav :	33.88441561	(mW)
Antenna gain (typical):	6.89	(dBi)
Maximum antenna gain:	4.886523593	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5260	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0329572	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.03296 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5260MHz.

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### 802.11n HT20 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5500.00	12.83	12.83	0.01919	1
5580.00	12.68	12.68	0.01854	1
5700.00	<b>13.06</b>	13.06	0.02023	1

### MPE Prediction (802.11n HT20 MIMO operation (CH 0 + CH 1) 5470~5725)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	13.06	(dBm)
Maximum peak output power at antenna input terminal:	20.23019179	(mW)
Duty cycle:	100	(%)
Maximum Pav :	20.23019179	(mW)
Antenna gain (typical):	7.86	(dBi)
Maximum antenna gain:	6.109420249	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5700	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0246009	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.02460 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5700MHz.

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### 802.11n HT40 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5190.00	11.53	11.53	0.01422	1
5230.00	<b>11.56</b>	11.56	0.01432	1

### MPE Prediction (802.11n HT40 MIMO operation (CH 0 + CH 1) 5150~5250)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	<b>11.56</b>	(dBm)
Maximum peak output power at antenna input terminal:	14.32187899	(mW)
Duty cycle:	<b>100</b>	(%)
Maximum Pav :	14.32187899	(mW)
Antenna gain (typical):	<b>6.89</b>	(dBi)
Maximum antenna gain:	4.886523593	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	<b>5230</b>	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0139300	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.01393 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5230MHz.

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### 802.11n HT40 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5270.00	<b>13.94</b>	15.30	0.02477	1
5310.00	13.69	14.93	0.02339	1

### MPE Prediction (802.11n HT40 MIMO operation (CH 0 + CH 1) 5250~5350)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	<b>13.94</b>	(dBm)
Maximum peak output power at antenna input terminal:	24.77422058	(mW)
Duty cycle:	<b>100</b>	(%)
Maximum Pav :	24.77422058	(mW)
Antenna gain (typical):	<b>6.89</b>	(dBi)
Maximum antenna gain:	4.886523593	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	<b>5270</b>	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0240963	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.02410 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5270MHz.

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### 802.11n HT40 MIMO operation (CH 0 + CH 1) Power Table

Frequency (MHz)	Reading Power (dBm)	Output Power (dBm)	Output Power (W)	Limit (W)
5510.00	10.99	10.99	0.01256	1
5590.00	11.50	11.50	0.01413	1
5670.00	<b>11.78</b>	11.78	0.01507	1

### MPE Prediction (802.11n HT40 MIMO operation (CH 0 + CH 1) 5470~5725)

Prediction of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4 \pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

Maximum peak output power at antenna input terminal:	11.78	(dBm)
Maximum peak output power at antenna input terminal:	15.06607066	(mW)
Duty cycle:	100	(%)
Maximum Pav :	15.06607066	(mW)
Antenna gain (typical):	7.86	(dBi)
Maximum antenna gain:	6.109420249	(numeric)
Prediction distance:	20	(cm)
Prediction frequency:	5670	(MHz)
MPE limit for uncontrolled exposure at prediction	1	(mW/cm <sup>2</sup> )
Power density at predication frequency at 20 (cm)	0.0183211	(mW/cm <sup>2</sup> )

### Measurement Result

The predicted power density level at 20 cm is 0.01832 mW/cm<sup>2</sup>. This is below the uncontrolled exposure limit of 1 mW/cm<sup>2</sup> at 5670MHz.

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