

**FCC RF EXPOSURE REPORT**

EUT	Smart Mirror
Frequency band (Operating)	☒ WLAN: 2.412GHz ~ 2.462GHz ☒ WLAN: 2.422GHz ~ 2.452GHz ☐ WLAN: 5.180GHz ~ 5.240GHz ☐ WLAN: 5.260GHz ~ 5.320GHz ☐ WLAN: 5.500GHz ~ 5.700GHz ☒ BLE: 2.402GHz ~ 2.480GHz ☒ Bluetooth: 2.402GHz ~ 2.480GHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm ²) ☒ General Population/Uncontrolled exposure (S=1mW/cm ²)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Antenna gain (Max)	1.88dBi for WiFi (Numeric gain:1.54) 3dBi for Bluetooth(Numeric gain:2)
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A



TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where E = Field strength in Volts / meter
 P = Power in Watts
 G = Numeric antenna gain
 d = Distance in meters
 S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$
$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P / 1000) \times G}{3770 \times (d / 100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm
 P = Power in mW
 G = Numeric antenna gain
 S = Power density in mW / cm²

**Maximum Permissible Exposure****WIFI**

Modulation Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
802.11b	2412-2462	19.72	93.75620069	1.88	1.54	20	0.02876425	1
802.11g	2412-2462	22.64	183.6538343	1.88	1.54	20	0.0563447	1
802.11n HT20	2412-2462	22.31	170.2158508	1.88	1.54	20	0.05222195	1
802.11n HT40	2422-2452	21.10	128.8249552	1.88	1.54	20	0.03952329	1

Bluetooth 3.0

Modulation Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
GFSK	2402-2480	5.47	3.526143643	3	2.00	20	0.00140008	1
$\pi/4$ DQPSK	2402-2480	6.35	4.315190768	3	2.00	20	0.00171338	1
8DPSK	2402-2480	6.48	4.446312675	3	2.00	20	0.00176544	1

Bluetooth LE

Modulation Mode	Frequency band (MHz)	Peak output power(dBm)	Peak output power(mW)	Antenna Gain (dBi)	Antenna gain (Numeric)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
GFSK	2402-2480	6.86	4.852885002	3	2.00	20	0.00192687	1