

## RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

FCC ID: 2A3XD-TAB-002

### EUT Specification

EUT	Tablet
Frequency band (Operating)	<input checked="" type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input checked="" type="checkbox"/> WLAN: 5.18GHz ~ 5.24GHz <input checked="" type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input checked="" type="checkbox"/> Others: BLE: 2402-2480MHz <input checked="" type="checkbox"/> Others:GSM 850: 824.2MHz~848.8 MHz <input checked="" type="checkbox"/> Others:PCS 1900: 1850.2MHz~1909.8 MHz <input checked="" type="checkbox"/> Others:FDD Band II: 1852.40MHz~1907.60MHz <input checked="" type="checkbox"/> Others:FDD Band V: 826.40MHz~846.60MHz <input checked="" type="checkbox"/> Others:FDD Band 2: 1850.7 MHz – 1909.3 MHz <input checked="" type="checkbox"/> Others:FDD Band 4: 1710.7 MHz – 1754.3 MHz <input checked="" type="checkbox"/> Others:FDD Band 5: 824.7 MHz – 848.3 MHz <input checked="" type="checkbox"/> Others:FDD Band 7: 2502.5 MHz – 2567.5 MHz <input checked="" type="checkbox"/> Others:FDD Band 17: 706.5 MHz – 713.5 MHz
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others ____
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm2) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm2)
Antenna diversity	<input type="checkbox"/> Single antenna <input checked="" type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
Antenna gain (Max)	BLE: 1.25 dBi WiFi 2.4G : 1.25 dBi WiFi 5G :1.25 dBi GSM 850: 1.1 dBi (Provided by customer) PCS 1900: 1.1 dBi (Provided by customer) FDD Band II: 0.8 dBi (Provided by customer) FDD Band V: 0.8 dBi (Provided by customer) FDD Band 2: 1dBi (Provided by customer) FDD Band 4: 1dBi (Provided by customer) FDD Band 5: 1dBi (Provided by customer) FDD Band 7: 1dBi (Provided by customer)

	FDD Band 17: 1dBi (Provided by customer)
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation

Limits for Maximum Permissible Exposure(MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
<b>300-1500</b>	--	--	<b>F/300</b>	<b>6</b>
<b>1500-100000</b>	--	--	<b>5</b>	<b>6</b>
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
<b>300-1500</b>	--	--	<b>F/1500</b>	<b>6</b>
<b>1500-100000</b>	--	--	<b>1</b>	<b>30</b>

**Friis transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * R^2)$**

Where

$P_d$ = Power density in mW/cm<sup>2</sup>

$P_{out}$ =output power to antenna in Mw

G= gain of antenna in linear scale

$\pi$ =3.1416

R= distance between observation point and center of the radiator in cm

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

## Max Measurement Result

Operating Mode	Measured Power	Tune up tolerance		Max. Tune up Power	Antenna Gain	Power density at 20cm	Power density Limits (mW/cm <sup>2</sup> )
	(dBm)	(dBm)		(dBm)	(dBi)	(mW/ cm <sup>2</sup> )	
BLE	0.29	0.29	±1	1.29	1.25	0.0004	1
2.4G WIFI	15.61	15.61	±1	16.61	1.25	0.0122	1
5.2G WIFI	12.36	12.36	±1	13.36	1.25	0.0058	1
5.8WIFI	13.58	13.58	±1	14.58	1.25	0.0076	1
GSM 850	33.77	33.77	±1	34.770	1.1	0.7690	0.549
PCS 1900	29.11	29.11	±1	30.11	1.1	0.2629	1
WCDMA Band2	22.52	22.52	±1	23.52	0.8	0.0538	1
WCDMA Band5	24.01	24.01	±1	25.010	0.8	0.0758	0.549
LYE Band 2	21.9	21.9	±1	22.9	1	0.0488	1

LYE Band 4	23.05	23.05 ±1	24.05	1	0.0636	1
LYE Band 5	25.84	25.84 ±1	26.84	1	0.1210	0.549
LYE Band 7	22.21	22.21 ±1	23.21	1	0.0524	1
LYE Band 17	23.36	23.36 ±1	24.36	1	0.0683	0.469

**Result:** No Standalone SAR test is required.