RF EXPOSURE EVALUATION

EUT Specification

EUT	DOBOT MOOZ
Frequency band (Operating)	☒WLAN: 2.412GHz ~ 2.462GHz ☐WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz ☐WLAN: 5.745GHz ~ 5825GHz ☐Others(Bluetooth: 2.402GHz ~ 2.480GHz)
Device category	☐Portable (<20cm separation) ☒Mobile (>20cm separation) ☐Others ___
Antenna diversity	☒Single antenna ☐Multiple antennas ☐Tx diversity ☐Rx diversity ☐Tx/Rx diversity
Max. output power	16.28 dBm (42.46mW)
Antenna gain	2.75 dBi
Evaluation applied	☒MPE Evaluation ☐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^2)
300-1500	--	--	**F/1500**
1500-100000	--	--	**1**

Friis transmission formula: Pd=(Pout*G)\(4*pi*R^2)

Where
Pd= Power density in mW/cm^2
Pout=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
Pd the limit of MPE, 1mW/cm2. 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.

Measurement Result

Channel	Gain	Channel Frequency (MHz)	Max Output power (dBm)	Tolerance	Max Tune-UP power (mW)	Power density at 20cm (mW/ cm^2)	Power density Limits (mW/cm^2)
802.11b							
Low	2.75	2412	15.28	±0.5	37.844	0.01418	1
Middle	2.75	2437	14.97	±0.5	35.237	0.01320	1
High	2.75	2462	14.80	±0.5	33.884	0.01270	1
802.11g							
Low	2.75	2412	16.22	±0.5	46.989	0.01761	1
Middle	2.75	2437	16.15	±0.5	46.238	0.01733	1
High	2.75	2462	15.67	±0.5	41.400	0.01551	1
802.11n(HT20)							
Low	2.75	2412	16.28	±0.5	47.643	0.01785	1
Middle	2.75	2437	16.21	±0.5	46.881	0.01757	1
High	2.75	2462	15.71	±0.5	41.783	0.01566	1