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Maximum Permissible Exposure Evaluation

Model No: 2AWEX080WPC008

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)

EUT Specification

EUT	Pass Management Module Device of Face Recognition
Frequency band (Operating)	☐BT: 2.402GHz ~ 2.480GHz ☐BLE: 2.402GHz ~ 2.480GHz ☒WLAN: 2.412GHz ~ 2.462GHz ☐RLAN: 5.180GHz ~ 5.240GHz ☐RLAN: 5.745GHz ~ 5.825GHz ☒Others: NFC 13.56MHz
Device category	☐Portable (<20cm separation) ☐Mobile (>20cm separation) ☒fixed (>20cm separation) ☐Others ___
Exposure classification	☐Occupational/Controlled exposure (S=5mW/cm2) ☒General Population/Uncontrolled exposure (S=1mW/cm2)
Antenna diversity	☒Single antenna ☐Multiple antennas ☐Tx diversity ☐Rx diversity ☐Tx/Rx diversity
Antenna gain (Max)	-1.0dBi
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)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

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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/cm^2. 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

2.4G WIFI							
Type	Channel frequency (MHz)	Max. Measured Power (dBm)	Tune up tolerance (dBm)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Power density at 20cm (mW/cm^2)	Power density Limits (mW/cm^2)
802.11G	2437	21.90	21.90±1	22.90	-1.0	0.0308	1

13.56MHz: 63.43dBuV/m@ 3m
@20cm=@3m+40*log(3/0.02)=150.47dBuV/m

For 13.56MHz: 150.47dBuV/m=33.38V/m< 60.77 V/m.

13.56MHz and WiFi modules can simultaneous transmitting， so the maximum rate of MPE is 33.38/60.77+0.0308/1.0 =0.580<=1.0. according to the KDB447498 section 7 .2 determine the device is exclusion from SAR test.

Note
For a more detailed features description, please refer to the RF Test Report.

**************************THE END**************************