Prediction of MPE at a given distance

1. Limits

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)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

According to 680106 D01 RF Exposure Wireless Charging App v03r01

2. Test Procedure

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

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

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

R = distance to the center of radiation of the antenna

3. Result

Mode	Frequency (MHz)	Fundamental Emission (dBμV/m)	Electric field strength (V/m)	Limi (V/m)	SAR Test Exclusion
Wireless charging	0.135	64.25	0.00163	614	Yes

Mode	Frequency (MHz)	Prediction distance (cm)	Rated Peak RF power output		MPE (mW/cm^2)	Limit (mW/cm^2)	SAR Test Exclusion
			dBm	mW			
BLE	2402	20	0.494	1.1205	0.00017	1	Yes

BLE Antenna Gain: -1.3dBi, 0.74(numeric)

Then SAR evaluation is not required.

Simultaneous Transmission with SAR-based Exemptions

For these cases, a device with multiple RF sources transmitting simultaneously will be considered an RF exempt device if the condition of following Formula is satisfied.

$$\sum_{i=1}^{a}\frac{P_i}{P_{th,i}}+\sum_{j=1}^{b}\frac{ERP_j}{ERP_{th,j}}+\sum_{k=1}^{c}\frac{Evaluated_k}{Exposure\ Limit_k}\leq 1$$

BLE	Wireless Charging	∑MPE ratios	Limit	Result
0.00017	0.000003	0.000173	1	PASS

Note:

1. This device is mobile device.
2. The source of the evaluation data results is based on the test report A2506158-C01-R01, A2506158-C01-R02
3. The Maxinum power is less than the limit, complies with the exemption requirements.

-----The End-----