Radio Frequency Exposure

EUT INFORMATION

FCC ID	H5OTR75
EUT	Car alarm 2 way main unit
Frequency band (Operating)	908.3 MHz ~ 923.783 MHz
Max. output power	17.29 dBm
Antenna gain (Max)	3.1 dBi

According to KDB 447498 D01 and FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency Radiation as specified in § 1.1307(b).

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

TEST RESULT

The modular use shall be at least 20cm distance away from human body.

MPE Calculation Method

$$E\ (V/m) = \frac{\sqrt{30*P*G}}{d}$$

Power Density = Pd (mW/cm^2) = E^2 / 3770

Combine these two formulas can be changed to

Pd = (30*P*G) / (3770*d^2)

Note:

1. “E” means Electric field (V/m).
2. “P” means Peak RF output power (W).
3. “G” means EUT Antenna numeric gain (numeric).
4. “d” means the minimum mobile separation distance is 0.2m between radiator and human body.

$G=10^{(3.1/10)}=2.041$

Channel	Frequency (MHz)	Output Power to Antenna (dBm)	Tune-up power (dBm)	Power Density (mW/cm^2)	Limit of Power Density (mW/cm^2)
1	908.3	17.29	18±1	0.0323	0.605
13	915.444	16.69	17±1	0.0256	0.61
25	923.783	14.72	15±1	0.0162	0.615

Tested By:

Sep. 23, 2019 (Date)

Bing / Engineer

Reviewed by:

Sep. 23, 2019 (Date)

Bell / Manager

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