



## Radio Frequency Exposure

### EUT INFORMATION

|                                   |                           |
|-----------------------------------|---------------------------|
| <b>FCC ID</b>                     | H5OTR75                   |
| <b>EUT</b>                        | Car alarm 2 way main unit |
| <b>Frequency band (Operating)</b> | 908.3 MHz ~ 923.783 MHz   |
| <b>Max. output power</b>          | 17.29 dBm                 |
| <b>Antenna gain (Max)</b>         | 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 <sup>2</sup> ) | 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

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

$$\text{Power Density} = P_d \text{ (mW/cm}^2\text{)} = E^2 / 3770$$

Combine these two formulas can be changed to

$$P_d = (30 \cdot P \cdot G) / (3770 \cdot d^2)$$

**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 <sup>2</sup> ) | Limit of Power Density (mW/cm <sup>2</sup> ) |
|---------|-----------------|-------------------------------|---------------------|-------------------------------------|----------------------------------------------|
| 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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