

## SAR test exclusion evaluation compliance requirement

### Model no.: IE-CH1000

#### 1. KDB 447498 D01 v06 requirement

##### Standalone SAR test exclusion considerations:

The transmission frequencies of the device are between 100 MHz and 6 GHz. The worst case test separation distance is **5mm**. The Max Conducted Output Power and SAR Test Exclusion Threshold (mW) are listed below:

##### 2.44GHz:

| Transmit frequency (GHz) | Max Conducted Output Power (mW) | SAR Test Exclusion Threshold (mW) |
|--------------------------|---------------------------------|-----------------------------------|
| 2.440                    | 0.79                            | 9.6                               |

##### 5.150-5.85GHz(wifi) maximum power:

| Transmit Frequency (GHz) | Output power (mW) | SAR Test Exclusion Threshold (mW) |
|--------------------------|-------------------|-----------------------------------|
| 5.19                     | 3.28              | 6.23                              |

The SAR Test Exclusion Threshold is calculated from:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [f(\text{GHz})] \leq 3.0$  for 1-g SAR

- $f(\text{GHz})$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>
- The result is rounded to one decimal place for comparison

##### Simultaneous transmission SAR test exclusion considerations:

KDB 447498 (D01):

When an antenna qualifies for the standalone SAR test exclusion and also transmits simultaneously with other antennas, the standalone SAR value should be estimated according to the following to determine the simultaneous transmission SAR test exclusion:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [f(\text{GHz})/x]$

W/kg, for test separation distances  $\leq 50$  mm;

where  $x = 7.5$  for 1-g SAR and  $x = 18.75$  for 10-g SAR.

The max. power of 2.44GHz + and wifi are both -4dBm as declared by client, min. test separation is 5 mm, x=7.5 for 1-g SAR:

The estimated 1-g SAR1 value of 2.44GHz is: 0.033 W/kg

The estimated 1-g SAR2 value of wifi is: 0.211 W/kg

The EUT estimated 1-g SAR value, the sum result is 0.244 W/kg, it is lower than 1.6W/kg.

According to SAR Exclusion Threshold in KDB 447498 (D01) General RF Exposure Guidance v06, the SAR report is not required.

**Test Location:**

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

All tests were performed at:

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China