RF Exposure Compliance Requirement

Calculation formula：

$E (V/m) = (30*P*G)^{0.5}/d$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between EUT and antenna (m)

Remark: $P=(E*d)^2/30G$

in the formula above, d=3m, field strength= 51.4dBuV/m (max described by client), G=1.0 (Antenna gain=0 dBi)

so P=0.00004mW

The worst case test separation distance is **5mm.**

The product belongs to **standalone portable device** base the FCC rule part 2.1091&2.1093. The transmission frequency of the device is below 100 MHz.

In KDB 447498 D01 v06: 4.3.1 c)2) Standalone SAR test exclusion considerations:

The SAR Test Exclusion Threshold is calculated from:

$0.5 \times [1+\log(100/f_{(MHz)})]$ mW = 0.93mW

The Max Conducted Output Power and SAR Test Exclusion Threshold (mW) are listed below:

Transmit Frequency (MHz)	Output power (mW)	SAR Test Exclusion Threshold (mW)
13.56	0.00004	0.93

RFID MPE Ratio: 0.00004/0.93=0.00004

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

WIFI/BT module's MPE ratio:

WIFI: 0.2183/1 = 0.2183

BT: 0.0035/1 =0.0035

Sum of the MPE ratio for all simultaneously transmitting antennas:

0.00004+0.2183+0.0035<1

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