

FCC RF Exposure

Product Name: FMRC209W

FCC ID: 2BB9L-FMRC209W

Model(s): FMRC209W

1. Limits

According to KDB 447498 D01 General RF Exposure Guidance v06 The 1 - g and 10 - g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max power of channel, including tune - up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1 - g SAR and ≤ 7.5 for 10 - g extremity SAR,

Where:

Result= $P/D \cdot \sqrt{F}$

F= the RF channel transmit frequency in GHz

P=Maximum turn - up power in mw

D=Min. test separation distance in mm

2. Test Result of RF Exposure Evaluation

Frequency (MHz)	Output power (dBm)	Tune Up Power (dBm)	Max Tune Up power dBm/mW	Min test separation distance mm	Result	Limit	SAR Test Exclusion
BLE: 2440	-12.89	-12 ± 1	-11/0.0794	5	0.0248	3.0	Pass
Zigbee: 2412	-11.33	-11 ± 1	-10/0.1000	5	0.0311	3.0	Pass

Note:

PK Output power= conducted power.

Conducted power see the test report **HK2308033415-1E/2E , antenna gain=1.73dBi(BLE), 3.53dBi(Zigbee)**

Per KDB 447498 D01, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine RF Exposure test exclusion. The test exclusion threshold is 0.0311 which is ≤ 3 , RF Exposure testing is not required.

Note: Exclusion Thresholds Results= $[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Distance=5mm