

# 1 RF Exposure Compliance

## 1.1 Test Standards

### Test Specification

Test item	:	Connect Monitor
Identification / Type No.	:	Monitor
FCC ID	:	2AHCE-MON1
IC:	:	21145-MON1
HVIN	:	MONITOR
Test standard	:	CFR47 FCC Part 2: Section 2.1093 CFR47 FCC Part 2: Section 1.1307 FCC KDB Publication 447498 v06 RSS-102 Issue 5 March 2015

### Measurement Record:

The minimum distance for the EUT is less than 5mm.

## 1.2 FCC RF Exposure Compliance Requirement

Since maximum peak output power of the transmitter is  $4.52 \text{ dBm} \approx 2.83 \text{ mW} < 10 \text{ mW}$ .

Hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v06.

## 1.3 IC RF Exposure Compliance Requirement

### 1.3.1 Standard Requirement

According to RSS-102 Issue 5 March 2015

#### 2.5.1 Exemption Limits for Routine Evaluation – SAR Evaluation

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

### 1.3.2 Limits

**Table 1: SAR evaluation – Exemption limits for routine evaluation based on frequency and separation distance<sup>4,5</sup>**

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

### 1.3.3 EUT RF Exposure

a) Stand-alone Operation Mode

**For BLE:**  
**Measurement Data**

Test mode : GFSK_1Mbps			
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (mW)	Limit (mW)
Lowest (2402MHz)	4.52	2.831	< 4mW
Middle (2440MHz)	4.37	2.735	< 4mW
Highest (2480MHz)	4.36	2.729	< 4mW
Conclusion: E.i.r.p. calculation value < limit, SAR is exempted.			

Test mode : GFSK_2Mbps			
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum Peak Conducted Output Power (mW)	Limit (mW)
Lowest (2402MHz)	4.40	2.754	< 4mW
Middle (2440MHz)	4.28	2.679	< 4mW
Highest (2480MHz)	4.29	2.685	< 4mW
Conclusion: E.i.r.p. calculation value < limit, SAR is exempted.			

Remark: 1) The Max Conducted Peak Output Power data refer to report Report No.: 60419852 001

**For NFC:**

The worst case (refer to report 60419852 002) is below:

Frequency (MHz)	Level (dBμV/m)	Output Power (dBm)	Output Power (mW)	Limit (mW)
13.56	47.88	-47.38	0.00002	71

So the SAR report is not required.

b) Simultaneous Transmission Operation Mode

Simultaneous transmission mode	The sum of the ratios	Result
BLE + NFC	2.831/4+0.00002/71	0.708<1