

#### RF EXPOSURE EVALUATION METHOD

## FCC ID: 2AEBY-FG02A

## Applicable standard:

In accordance with FCC 47 CFR part 2 (2.1093) this device has been defined as a portable device which is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

Portable devices must be evaluated using the specified in FCC 47 CFR part 2 (2.1093) and ANSI/IEEEC95.1-1992. and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003.

Per FCC KDB 447498 D01 v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances s 50 mm are determined by:

## SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and $\leq$ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table.

MHz	5	10	15	20	25	mm		
150	39	77	116	155	194			
300	27	55	82	110	137			
450	22	45	67	89	112			
835	16	33	49	66	82			
900	16	32	47	63	79	SAR Test Exclusion		
1500	12	24	37	49	61			
1900	11	22	33	44	54	Threshold (mW)		
2450	10	19	29	38	48			
3600	8	16	24	32	40			
5200	7	13	20	26	33			
5400	6	13	19	26	32			
5800	6	12	19	25	31			

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:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] • [ $\sqrt{f(GHz)}$ ]  $\leq$  3.0 for 1-g SAR and  $\leq$  7.5 for 10-g extremity SAR,where f(GHz) is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation. The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test

exclusion.



# BLE

Modulation	Test Channel	Output Power (dBm)	Limit (dBm)
GFSK	2402	-2.23	30
GFSK	2440	-2.41	30
GFSK	2480	-2.70	30

max possible output power (PK,conducted): -2±1dBm 0dBi logarithmic terms convert to numeric result is nearly 1.000 -1dBm=0.79mW

### 2402MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]= 0.79/5\* $\sqrt{2.402}$ =0.25≤3.0

### 2440MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]= 0.79/5\* $\sqrt{2.440}$ =0.25≤3.0

## 2480MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]= 0.79/5\* $\sqrt{2.48}$ =0.25≤3.0



#### **EDR**

Modulation	Test Channel	Output Power (dBm)	Limit (dBm)
GFSK	2402	-2.11	21
GFSK	2441	-3.40	21
GFSK	2480	-4.85	21
π/4DQPSK	2402	0.14	21
π/4DQPSK	2441	-1.17	21
π/4DQPSK	2480	-2.61	21
8DPSK	2402	0.62	21
8DPSK	2441	-0.62	21
8DPSK	2480	-2.13	21

max possible output power (PK,conducted): 1±1dBm

-1.42dBi logarithmic terms convert to numeric result is nearly 0.721 2dBm=1.58mW

### 2402MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]= 1.58/5\* $\sqrt{2.402}$ =0.49≤3.0

# 2441MHz

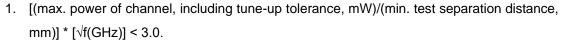
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]= 1.58/5\* $\sqrt{2.441}$ =0.50≤3.0

### 2480MHz

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance,mm)]  $\cdot$  [ $\sqrt{f(GHz)}$ ]= 1.58/5\* $\sqrt{2.48}$ =0.50≤3.0







- 2. SAR Test Exclusion Thresholds is 3.0 for separation distance 5mm. Therefore, SAR test is not required.
- 2. The product does not support co-transmit.