



# RF Exposure Evaluation

## FCC ID: 2AAL7-FM0222

### 1. Client Information

<b>Applicant</b>	:	FORM ELECTRONICS CO.,Ltd
<b>Address</b>	:	4F Bldg E, Junfeng Science&Technology Park, Lezhujiao, Xixiang, Bao'an Dist, Shenzhen, China
<b>Manufacturer</b>	:	FORM ELECTRONICS CO.,Ltd
<b>Address</b>	:	4F Bldg E, Junfeng Science&Technology Park, Lezhujiao, Xixiang, Bao'an Dist, Shenzhen, China

### 2. General Description of EUT

<b>EUT Name</b>	:	Bluetooth Speaker
<b>Model(s) No.</b>	:	FM0222
<b>Model Difference</b>	:	----
<b>Product Description</b>	Operation Frequency:	Bluetooth 5.2(BR+EDR): 2402MHz~2480MHz
	Number of Channel:	79 channels
	Antenna Gain:	1.7dBi PCB Antenna
	Modulation Type:	GFSK(1Mbps) $\pi$ /4-DQPSK(2Mbps) 8-DPSK(3Mbps)
<b>Power Supply</b>	:	Input: DC 5V/650mA DC 3.7V 1200mAh 4.44Wh Rechargeable Li-ion battery
<b>Software Version</b>	:	MZH_147016F3(FM0222)_20231204
<b>Hardware Version</b>	:	FM0222-V04 2024-01-16
<b>Remark:</b> The antenna gain provided by the applicant, the adapter and verified for the RF conduction test and adapter provided by TOBY test lab.		

**Note:** More test information about the EUT please refer the RF Test Report.

## SAR Test Exclusion Calculations

1. FCC: According to KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

(1) Clause 4.3: General SAR test reduction and exclusion guidance

Sub clause 4.31: Standalone SAR test exclusion considerations

1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6GHz at test separation distance  $\leq 5$  mm are determined by:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation, mm}} \right] * \left[ \sqrt{f_{\text{(GHz)}}} \right] \leq 3.0 \text{ for 1-g SAR}$$

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{min. test separation, mm}} \right] * \left[ \sqrt{f_{\text{(GHz)}}} \right] \leq 7.5.0 \text{ for 10-g SAR}$$



**2. Calculation:**

Test separation: 5mm						
Bluetooth Mode (GFSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	1.378	1±1	2	1.585	0.491	3.0
2.441	0.755	0±1	1	1.259	0.393	3.0
2.480	0.322	0±1	1	1.259	0.397	3.0
Bluetooth Mode (Pi/4-DQPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	3.480	3±1	4	2.512	0.779	3.0
2.441	2.824	2±1	3	1.995	0.623	3.0
2.480	2.319	2±1	3	1.995	0.628	3.0
Bluetooth Mode (8-DPSK)						
Frequency (GHz)	Conducted Power (dBm)	Turn-up Power Tolerance (dB)	Max power of tune up tolerance (dBm)	Max power of tune up tolerance (mw)	Calculation Value	Threshold Value
2.402	4.270	4±1	5	3.162	0.980	3.0
2.441	3.602	3±1	4	2.512	0.785	3.0
2.480	3.137	3±1	4	2.512	0.791	3.0

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB 447498 v06.

-----END OF THE REPORT-----

