

RF Exposure Evaluation

Test report
On Behalf of

Wan You Innovation Technology HeBei Co.Ltd

For
FeiDu true diversity wireless microphone

Model No.: FM-40, FM-10, FM-10S, FM-20, FM-20S, FM-30, FM-30S, FM-40S, FM-40pro, FM-50, FM-50S, FM-60, FM-60S, FM-70, FM-70S, FM-80, FM-80S, FM-90, FM-90S, FM-100, FM-100S, FM-102, FM-102S, FM-102N, FM-102pro, FM-103, FM-103S, FM-103pro

FCC ID: 2AR7K-FM40N

Prepared for : **Wan You Innovation Technology HeBei Co.Ltd**
FangDa Science Park, Ningjin County, XingTai City, HeBei Province, China

Prepared By : **Shenzhen HUAK Testing Technology Co., Ltd.**
1F, B2 Building, Junfeng Zhongcheng Zhizao Innovation Park, Fuhai Street, Bao'an District, Shenzhen City, China

Date of Test: **Sep. 07, 2020~ Sep. 17, 2020**
Date of Report: **Sep. 17, 2020**

1 General Description of EUT

Equipment	FeiDu true diversity wireless microphone
Model Name	FM-40
Serial No.	FM-10, FM-10S, FM-20, FM-20S, FM-30, FM-30S, FM-40S, FM-40pro, FM-50, FM-50S, FM-60, FM-60S, FM-70, FM-70S, FM-80, FM-80S, FM-90, FM-90S, FM-100, FM-100S, FM-102, FM-102S, FM-102N, FM-102pro, FM-103, FM-103S, FM-103pro
Trade Mark	FD
FCC ID	2AR7K-FM40N
Hardware Version:	V1.0
Software Version:	V1.2.31-2
Operation frequency	566MHz – 595.5MHz
Number of Channels	60
Antenna Type	Integral Antenna
Antenna Gain	-2dBi
Modulation Type	FM
Power Source	DC 3.7V from battery DC 5.0V from adapter/PC/others

2 RF Exposure Compliance Requirement

2.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.2 Limits

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:

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

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

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 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

3 EUT RF Exposure

FM modulation						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (566.0MHz)	8.992	9±1	10	10.000	1.505	3.0
Middle (580.5MHz)	8.896	9±1	10	10.000	1.524	
Highest (595.5MHz)	8.903	9±1	10	10.000	1.543	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: HK2009142569-E