

RF Exposure Evaluation

FCC ID: 2AN03PA-25W

1. Client Information

Applicant	:	ShenZhen SHIDU Digital Technolgy Co.,Ltd
Address	:	F6, Zhaofeng, HangKong Rd, Bao'an, Shenzhen, China
Manufacturer	:	ShenZhen SHIDU Digital Technolgy Co.,Ltd
Address	:	F6, Zhaofeng, HangKong Rd, Bao'an, Shenzhen, China

2. General Description of EUT

EUT Name	:	Wireless Microphone	
Model(s) No.	:	PA-25W, SD-U2, SD-U6, SD-U8, SD-U9, SD-U10, SD-U15, SDU16, SD-U17, SD-U18, SD-U20, SD-U30, SD-S28, SD-S20, SD-S30, SD-S278, SD-298, SD-S40, SD-S611, SD-S613, SD-S615, SD-S619, SD-S92, SD-S93, SD-S94, SD-S96, SD-97, SD-S98, SD-S99, SD-M500, SD-M800, SD-M900, SD-M1000, SD-M2000	
Model Different	:	All these models are identical in the same PCB, layout and electrical circuit, the only difference is appearance.	
Sample ID	:	20201217-20-1#&20201217-20-2#	
Product Description	:	Operation Frequency:	501MHz~540MHz
	:	Number of Channel:	40 channels
	:	Max Power Output:	7.49dBm
	:	Antenna Gain:	1.95dBi External Antenna
	:	Equipment System:	Digital systems
Power Rating	:	USB Input: DC 5V DC 3.7V 550mAh by Li-ion Battery	
Software Version	:	SD-PA25W-V1.4	
Hardware Version	:	SHIDU-U8-V2.2	
Remark	:	The antenna gain provided by the applicant, the 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 ≤ 5 mm are determined by:

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

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

2. Calculation:

Test separation: 5mm						
Frequency (MHz)	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
501	5.54	5 ± 1	6	3.981	0.564	3.0
520	4.50	5 ± 1	6	3.981	0.574	3.0
540	4.36	5 ± 1	6	3.981	0.585	3.0

Conclusion:

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.

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