

RF Exposure Evaluation Report

Report Reference No...... : **MTEB24110090-H**

FCC ID..... : **2BLXP-TK9400**

Compiled by

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Date of issue..... : **Nov.08,2024**

Representative Laboratory Name. : **Shenzhen Most Technology Service Co., Ltd.**

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Nanshan, Shenzhen, Guangdong, China.

Applicant's name..... : **TK PRODUCTS LLC**

Address..... : 4109 BLACK OAK DR, CLEBURNE, TX, 76031-0199

Test specification/ Standard..... : **47 CFR Part 1.1307**

47 CFR Part 2.1093

TRF Originator..... : Shenzhen Most Technology Service Co., Ltd.

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Test item description.....: Portable Voice Amplifier

Trade Mark.....: VoiceBooster

Model/Type reference.....: TK 9400

Listed Models: MR2500, MR1505, MR1506, MR1700, MR2700, MR2200,
MR2800, MRAK28, MRAK38

Modulation Type.....: GFSK, $\pi/4$ DQPSK, 8DPSK
 $\pi/4$ DQPSK

Operation Frequency.....: From 2402MHz to 2480MHz
671MHz~687MHz

Hardware Version..... MR2500_V6.5

Software Version..... AC706N_soundbox_V1.0.0

Rating.....: DC 9.5V by Adapter
DC 7.4V by Battery

Result.....: PASS

TEST REPORT

Equipment under Test : Portable Voice Amplifier

Model /Type : TK 9400

Listed Models : MR2500, MR1505, MR1506, MR1700, MR2700, MR2200,
MR2800, MRAK28, MRAK38

Remark : Only the product model name is different, the others are the same.

Applicant : TK PRODUCTS LLC

Address : 4109 BLACK OAK DR, CLEBURNE, TX, 76031-0199

Manufacturer : TK PRODUCTS LLC

Address : 4109 BLACK OAK DR, CLEBURNE, TX, 76031-0199

Test Result:	PASS
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2024.11.08	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 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.

2.1.2 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:

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

2.1.3 EUT RF Exposure

Measurement Data

EDR

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	-1.351	-1.351 ± 1	-0.351
Middle(2441MHz)	-1.776	-1.776 ± 1	-0.776
Highest(2480MHz)	-2.530	-2.530 ± 1	-1.53

π/4DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	-0.474	-0.474 ± 1	0.526
Middle(2441MHz)	-0.910	-0.910 ± 1	0.09
Highest(2480MHz)	-1.619	-1.619 ± 1	-0.619

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	-0.037	-0.037 ± 1	0.963
Middle(2441MHz)	-0.494	-0.494 ± 1	0.506
Highest(2480MHz)	-1.191	-1.191 ± 1	-0.191

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold	SAR Test Exclusion
		(dBm)	(mW)			
Lowest(2402MHz)	-0.037	0.963	1.25	0.38	3.0	Yes

671MHz~687MHz

pi/4 DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
671MHz	-9.164	-9.164 ± 1	-8.164
679MHz	-8.653	-8.653 ± 1	-7.653
687MHz	-7.672	-7.672 ± 1	-6.672

Worst case: pi/4 DQPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold	SAR Test Exclusion
		(dBm)	(mW)			
687MHz	-7.672	-6.672	0.22	0.036	3.0	Yes

.....THE END OF REPORT.....