RF EXPOSURE

REPORT

FOR

Product Name: Tapo Smart Water Leak Sensor

Model :TAPO T300
Trade Name : tp-link、tapo

Issued to

TP-Link Corporation Limited
Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong

Issued by

Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd., Xizhi Dist.,New Taipei City 221,
Taiwan (R.O.C.)

The decision rule is according to the standard test method and request, that measurement result doesn't consider uncertainty.

Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
1.	351602	FR0-351602	May.27.2023	Original Report	Judy

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1. GENERAL INFORMATION

Applicant	:	TP-Link Corporation Limited
Address	:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer	:	TP-Link Corporation Limited
Address	:	Room 901, 9/F. , New East Ocean Centre, 9 Science Museum Road, Tsim Sha Tsui, Kowloon, Hong Kong
EUT	:	Tapo Smart Water Leak Sensor
Model No.	:	TAPO T300
Trade Name	:	tp-link、tapo
Model Differences	:	--

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations. The said equipment has been tested and found compliance with the requirement of the relative standards .

Test Standard : FCC Title 47 Part 2.1091, KDB 447498 D01 V06

Tested By:

May.27.2023
Date

Ken. Huang

Ken Huang, Engineer

Approved by:

May.27.2023
Date

Adam Chou

Adam Chou, Manager

Designation Number: TW1640

1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name	:	Tapo Smart Water Leak Sensor
Model	:	TAPO T300
FCC ID	:	2AXJ4T300
Power From		☑Inside☐Outside ☐Adaptor ☑Battery ☐Power Supply ☐DC Power Source ☐Support Unit PC
Power Rating(Battery)	:	3 Vdc
Power Rating(Adapter)		--
Operate Frequency	:	Refer to the channel list as described below
Basic Spec	:	☐Bluetooth ☐Bluetooth LE ☐802.11b ☐802.11g ☐802.11n HT20/HT40
Operate Frequency	:	920.9 MHz, 921.7 MHz, 922.3 MHz
Number of Channels	:	3
Step of Channel	:	☑N/A ☐ _____MHz
Modulation Type	:	☑GFSK ☐FHSS ☐DSSS ☐CCK ☐OFDM
Antenna Quantity	:	1Tx/1Rx
Antenna Type	:	IFA
Antenna gain	:	-6.53 dBi
EUT Received Date	:	May.16.2023
EUT Channel List	:	

Channels	Frequencies(MHz)
1	920.9
2	921.7
3	922.3

2. GENERAL SAR TEST REDUCTION AND EXCLUSION GUIDANCE

2.1 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)] ·

- [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,21 where
□f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation22
- 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.

2.2 At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following

- [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
- [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz

2.3 At frequencies below 100 MHz, the following may be considered for SAR test exclusion

- The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by [1 + log(100/f(MHz))] for test separation distances > 50 mm and < 200 mm
- The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by ½ for test separation distances ≤ 50 mm
- SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

3. MPE CALCULATION METHOD

3.1 LIMIT

Limits for Maximum Permissible Exposure

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≦6
3.0-30	1842/f	4.89/f	*($900/f^2$)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*($180/f^2$)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

f = frequency in MHz. * = Plane-wave equivalent power density.

3.2. CACULATION METHOD

Calculation Method of RF Safety Distance:
$S=PG/4\pi R\text{^}2=EIRP/4\pi R\text{^}2$

where:
S = power density
P = power input to the antenna
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna

3.3. CALCULATED RESULT

Test Mode	Frequency (MHz)	Max Output Power (dbm)	Max Output Power (mW)	Power Density (mW / cm2)	Limit of Power Density (mW / cm2)
Sub 1G	921.7	15.44	34.995	0.0015	0.6145

The calculated distance is 20 cm.

END