

RF exposure Estimation for TEMI S1

1. Introduction

Product:	Temi Personal Computer Robot
Model no.:	TEMI S1
FCC ID:	2ASJLTEMIS1
Options and accessories:	Charger and power Cable
Rating:	Supplied by 14.4Vdc, 15.6Ah Li-ion Battery 19Vdc, 5.0A Charged by an external adapter
Adapter information:	Adapter Model: AY120BA-ZF190500M Adapter Input: 100-240Vac, 50/60Hz; 1.8A Max Adapter Output: 19.0Vdc, 5.0A
RF Transmission Frequency:	110-144KHz for WPT 2402MHz-2480MHz for Bluetooth 2412MHz-2462MHz for 802.11b/g/n20 (WiFi) 5150-5350, 5470-5825MHz for 802.11a/n20/n40/ac20/ac40/ac80 (WiFi)
No. of Operated Channel:	79 for Bluetooth 11 for 802.11b/g/n20 (WiFi) 43 for for 802.11a/n20/n40/ac20/ac40/ac80 (WiFi)
Modulation:	GFSK, $\pi/4$ -DQPSK, 8DPSK for Bluetooth DSSS, OFDM for WiFi
Antenna Type:	Integrated antenna
Antenna Gain:	2.0dBi Max for 2.4GHz 2.5dBi Max for 5GHz
Description of the EUT:	The Equipment Under Test (EUT) supporting wireless power transmission which operated at 144kHz.

2. Limit and Guidelines on Exposure to Electromagnetic Fields

According to §1.1310 system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) 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
(B) 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. Lists of Test Instruments

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Exposure Level Tester	Narda	ELT-400	K-0018	2019-5-2

4. Test Result

For 110KHz:

Electric Field Emissions					
Test Position	Test Distance (cm)	Measure Value (V/m)	Limit (V/m)	50% Limit (V/m)	Result
Front	15	22.60	614	307	Pass
Rear	15	20.30	614	307	Pass
Right	15	21.25	614	307	Pass
Left	15	17.12	614	307	Pass
Top	15	12.25	614	307	Pass
Bottom	15	15.21	614	307	Pass
Magnetic Field Emissions					
Test Position	Test Distance (cm)	Measure Value (A/m)	Limit (A/m)	50% Limit (A/m)	Result
Front	15	0.047	1.63	0.815	Pass
Rear	15	0.043	1.63	0.815	Pass
Right	15	0.040	1.63	0.815	Pass
Left	15	0.021	1.63	0.815	Pass
Top	15	0.022	1.63	0.815	Pass
Bottom	15	0.031	1.63	0.815	Pass

Remark: test standard refers to KDB 680106 D01 v03.

For 144KHz:

Electric Field Emissions					
Test Position	Test Distance (cm)	Measure Value (V/m)	Limit (V/m)	50% Limit (V/m)	Result
Front	15	23.10	614	307	Pass
Rear	15	20.40	614	307	Pass
Right	15	21.95	614	307	Pass
Left	15	17.96	614	307	Pass
Top	15	12.47	614	307	Pass
Bottom	15	15.33	614	307	Pass
Magnetic Field Emissions					
Test Position	Test Distance (cm)	Measure Value (A/m)	Limit (A/m)	50% Limit (A/m)	Result
Front	15	0.053	1.63	0.815	Pass
Rear	15	0.041	1.63	0.815	Pass
Right	15	0.044	1.63	0.815	Pass
Left	15	0.024	1.63	0.815	Pass
Top	15	0.026	1.63	0.815	Pass
Bottom	15	0.033	1.63	0.815	Pass

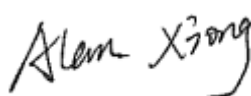
Remark: test standard refers to KDB 680106 D01 v03.

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