

FCC 47 CFR MPE REPORT

TCL OVERSEAS MARKETING LTD

Party Speaker

Model Number: TP300K

Additional Model: TP301K, TP302K, TP300L, TP300K-A, TP300K-B, TP300K-J, TP300K-JN,

TP300L-A, TP300L-B, TP300L-J, TP300L-JN, TP300L-C, TP3*****

(*can be any numerica number "0~9" or alphebtical number "A~Z" or blank)

FCC ID: 2BEHETP300K

Applicant:	TCL OVERSEAS MARKETING LTD			
Address:	Unit 1905, 19/F, Nan Fung Centre, 264-298 Castle Peak Road,			
	Tsuen Wan, New Territories, Hong Kong			
Prepared By:	EST Technology Co., Ltd.			
	Chilingxiang, Qishantou, Santun, Houjie, Dongguan, Guangdong,			
	China			
Tel: 86-769-83081888-808				

Report Number:	ESTE-R2502136		
Date of Test:	Jan. 17, 2025~ Mar. 04, 2025		
Date of Report:	Mar. 06, 2025		



Maximum Permissible Exposure

1. Applicable Standards

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2m normally can be maintained between the user and the device.

1.1. Limits for Maximum Permissible Exposure (MPE)

Frequency	Electric Field	Magnetic Power Density		Averaging Times
Range	Strength (E)	Field Strength (S) (mW/cm ²)		E ² , H ² or
(MHz)	(V/m)	(H) (A/m)		S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-10000			5	6

(a) Limits for Occupational/Controlled Exposure

(b) Limits for General Population / Uncontrolled Exposure

Frequency	Electric Field	Magnetic	Power Density	Averaging Times
Range (MHz)	Strength (E)	Field Strength (S) (mW/cm ²)		E ² , H ² or
	(V/m)	(H) (A/m)		S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-10000			1.o	30

Note: f=frequency in MHz; *Plane-wave equivalent power density



1.2. MPE Calculation Method

E (V/m) =
$$\frac{\sqrt{30 \times P \times G}}{d}$$
 Power Density: Pd (W/m²) = $\frac{E^2}{377}$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$$\mathsf{Pd} = \frac{30 \times \mathsf{P} \times \mathsf{G}}{377 \times \mathsf{d}^2}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained



2. Conducted Power Result

Mode	Frequency (MHz)	Peak output power (dBm)	Peak output power (mW)	
	2402	5.53	3.573	
GFSK	2441	3.72	2.355	
	2480	3.33	2.153	
	2402	7.01	5.023	
π/4-DQPSK	2441	5.36	3.436	
	2480	5.12	3.251	
8-DPSK	2402	7.35	5.433	
	2441	5.67	3.690	
	2480	5.4	3.467	
BLE 1M	2402	4.61	2.891	
	2440	3.02	2.004	
	2480	2.67	1.849	
BLE 2M	2402	4.61	2.891	
	2440	3.14	2.061	
	2480	2.8	1.905	

3. Calculated Result and Limit

				Anter	nna gain		Limited	
	Dook					Power	of	
	output	Target	Target			Density	Power	Toot
Mode	nowor	power (dBm)	power (dBm)	(dBi)	(Linear)	(S)	Density	Result
	(dBm)					(mW	(S)	
	(ubiii)					/cm²)	(mW	
							/cm²)	
	2.4G Band							
GFSK	5.53	5±1	6	3.99	2.506	0.00198	1	Complies
π/4-DQPSK	7.01	7±1	8	3.99	2.506	0.00315	1	Complies
8-DPSK	7.35	7±1	8	3.99	2.506	0.00315	1	Complies
BLE 1M	4.61	4±1	5	3.99	2.506	0.00158	1	Complies
BLE 2M	4.61	4±1	5	3.99	2.506	0.00158	1	Complies

End of Test Report