Maximum Permissible Exposure Report

1. Product Information

EUT	:	Real-time temperature logger
Model Number	:	FlashLink RTL, 22330, 22362
Test Model	:	FlashLink RTL
Power Supply	:	1,DC 3.7V by battery 2,DC 5.0V charged by adapter
Hardware version	:	V50MR41C
Software version	:	V5L_DeltaTrak_L02
Sample ID	:	TZ220202952–1# & TZ220202952–2#
GSM		
GSM FCC Operation Frequency	:	GSM850(UL: 824 – 849 MHz/DL: 869 – 894 MHz) GSM1900(UL: 1850 –1910 MHz/DL: 1930 – 1990 MHz)
Channel Separation	:	0.2MHz
Modulation Technology	:	GMSK
Antenna Type And Gain	:	Internal Antenna GSM850: -0.9 dBi PCS1900: -0.8 dBi

Note: Antenna position refer to EUT Photos.

2. Refer evaluation method

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.
FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.

3. Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
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 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	($180/f^2$)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density

4. MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S=power density
P=power input to 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

5. Antenna Information

This Product can only use antennas certificated as follows provided by manufacturer;

Note: The Antenna gain shows in section 1 of this file

6. Max Conducted Power

According to test report: TZ220202952-E.

7. Manufacturing Tolerance

<GPRS>

Band	Mode	The Tune-up Maximum Power (Customer Declared)(dBm)
GSM 850	GPRS(GMSK, 1 Tx slot)	31.5+/-1
	GPRS(GMSK, 2 Tx slot)	30.0+/-1
	GPRS(GMSK, 3 Tx slot)	29.0+/-1
	GPRS(GMSK, 4 Tx slot)	27.0+/-1
GSM 1900	GPRS(GMSK, 1 Tx slot)	29.5+/-1
	GPRS(GMSK, 2 Tx slot)	27.5+/-1
	GPRS(GMSK, 3 Tx slot)	26.5+/-1
	GPRS(GMSK, 4 Tx slot)	25.5+/-1

8. Measurement Results

8.1 Standalone MPE

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

GSM850:

Frequency(MHz)	Max Output power		Antenna Gain (dBi)	Antenna Gain (linear)	Duty Cycle	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	dBm	mW					
824.2	32.5	1778.2794	-0.9	0.8128	100%	0.3540	0.5495
836.6	32.5	1778.2794	-0.9	0.8128	100%	0.3540	0.5577
848.8	32.5	1778.2794	-0.9	0.8128	100%	0.3540	0.5659

GSM1900:

Frequency(MHz)	Max Output power		Antenna Gain (dBi)	Antenna Gain (linear)	Duty Cycle	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
	dBm	mW					
1850.2	30.5	1122.0185	-0.8	0.8318	100%	0.2233	1.0000
1880	30.5	1122.0185	-0.8	0.8318	100%	0.2233	1.0000
1909.8	30.5	1122.0185	-0.8	0.8318	100%	0.2233	1.0000

Remark:
1. Output power including tune-up tolerance;
2. MPE evaluate distance is 20cm from user manual provide by manufacturer;

8.2 Simultaneous Transmission MPE

N/A

9. Conclusion

Compliance

----------THE END OF REPORT----------