FCC RADIO TEST REPORT
FCC ID: 2A6ZO-ONESCREENMSR1

Product: OneScreen Meerkat Safe Reader
Trade Mark: ONESCREEN
Model No.: OneScreenMSR1
Family Model: N/A
Report No.: S22052001302003
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Prepared for

NZS Inc. DBA OneScreen Solutions

12335 World Trade Drive, Suite 9, San Diego, CA 92128 UNITED STATES

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.
1/F, Building E, Fenda Science Park, Sanwei Community,
Xixiang Street Bao'an District, Shenzhen 518126 P.R. China
Tel. 400-800-6106, 0755-2320 0050, 0755-2320 0090
Website: http://www.ntek.org.cn

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Maximum Permissible Exposure (MPE)

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

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

MPE Calculation Method

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

E = Electric field (V/m)

P = Average 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

$Pd = \frac{30*P*G}{377*D^2}$

From the 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.

Measurement Result
BT:
Operation Frequency: 2402MHz~2480MHz
Power density limited: 1mW/ cm^2
Antenna Type: FPC antenna
BT antenna gain: 6 dBi ;
R=20cm
mW=10^(dBm/10)

BLE

Transmitting Mode	Maximum output power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	R(cm)	S (mW/cm^2)	MPE Limit (mW/cm^2)	Conclusion
BLE	2.52	6	8.52	7.112	20	0.0014	1	Pass

2.4G:
Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,
WIFI 802.11n HT40:2422-2452MHz
Power density limited: 1mW/ cm^2

Antenna Type: FPC antenna
WIFI antenna gain: Antenna 1: 6dB, Antenna 2: 6dBi;

R=20cm
mW=10^(dBm/10)

WLAN2.4G 802.11b SISO MODE

Transmitting Mode	Maximum output power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	R (cm)	S (mW/cm^2)	MPE Limit (mW/cm^2)	Conclusion
WIFI 802.11b Ant 1	16.18	6.00	22.18	165.20	20	0.0329	1	Pass
WIFI 802.11b Ant 2	16.05	6.00	22.05	160.32	20	0.0319	1	

WLAN2.4G 802.11n SISO Mode

Transmitting Mode	Maximum output power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	R (cm)	S (mW/cm^2)	MPE Limit (mW/cm^2)	Conclusion
WIFI 802.11n40 Ant 1	12.75	6.00	18.75	74.99	20	0.0149	1	Pass
WIFI 802.11n20 Ant 2	12.52	6.00	18.52	71.12	20	0.0141	1	

SIMULTANEOUS TRANSMISSIONS

When a number of sources at different frequencies, and/or broadband sources, contribute to the total exposure, it becomes necessary to weigh each contribution relative to the MPE. To comply with the MPE, the fraction of the MPE in terms of E^2, H^2 (or power density) incurred within each frequency interval should be determined and the sum of all such fractions should not exceed unity. In order to ensure compliance with the MPE for a controlled environment, the sum of the ratios of the power density to the corresponding MPE should not exceed unity. That is

$$\sum_{i=1}^{n} \frac{S_i}{MPE_i} \leq 1$$

Measurement Result For multiple Transmitting:

The test result as below:

Transmitting Mode	R(cm)	S (mW/cm^2)	Total S (mW/cm^2)	MPE Limit (mW/cm^2)	Conclusion
BLE	20	0.0014	0.0343	1.000	Pass
WIFI 802.11b ANT1		0.0329			

Transmitting Mode	R(cm)	S (mW/cm^2)	Total S (mW/cm^2)	MPE Limit (mW/cm^2)	Conclusion
BLE	20	0.0014	0.0333	1.000	Pass
WIFI 802.11b ANT2		0.0319			

Transmitting Mode	R(cm)	S (mW/cm^2)	Total S (mW/cm^2)	MPE Limit (mW/cm^2)	Conclusion
BLE	20	0.0014	0.0301	1.000	Pass
WiFI 802.11n Ant1		0.0149			
WiFI 802.11n Ant2		0.0138			

Conclusion:

The conclusion for multiple transmitting should be 0.0343＜1 for Max Power Density, Compliance the

Signature:
Date: 2022-06-30

Alex

NAME AND TITLE (Please print or type): alex li/Manager

COMPANY (Please print or type): Shenzhen NTEK Testing Technology Co., Ltd./ 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street Bao'an District, Shenzhen P.R. China.