

RF EXPOSURE EVALUATION REPORT

Applicant : Shanghai Insislink Technology Co., Ltd
Address : TianzhouRoad NO.99, Building NO.9 ROOM 201, Shanghai, China
Manufacturer : Shanghai Insislink Technology Co., Ltd
Address : TianzhouRoad NO.99, Building NO.9 ROOM 201, Shanghai, China
Factory : Shanghai Insislink Technology Co., Ltd
Address : TianzhouRoad NO.99, Building NO.9 ROOM 201, Shanghai, China
E.U.T. : GSM/WCDMA Module
Brand Name : LYNQ
Model No. : L306
Standard : 47 CFR Part 2.1091
FCC ID : 2AHSAL306
Date of Receiver : September 30, 2016
Date of Report : November 12, 2016
This Test Report is Issued Under the Authority of :

Prepared by

Approved & Authorized Signer



Rose Hu / Engineer



Shun / Q.A. Director

Note: This test report is for the customer shown above and their specific product only. It may not be duplicated or used in part without prior written consent from Dongguan Nore Testing Center Co., Ltd. The test results referenced from this report are relevant only to the sample tested.

Revision History of This Test Report

Report Number	Description	Issued Date
NTC1609124F-1	Initial Issue	2016-11-12

1. Product Description of Equipment under Test

EUT	:	GSM/WCDMA Module
Model name	:	L306
Hardware Version	:	L306_V2.0
Software Version	:	V1.0
Antenna Type	:	External
Antenna Gain	:	Permit 3dBi Max.
Operating Frequency Range	:	GSM850: 824.2 ~ 848.8 MHz PCS1900: 1850.2 ~ 1909.8 MHz WCDMA Band V: 826.4 ~ 846.6 MHz WCDMA Band II: 1852.4 ~ 1907.6 MHz
Exposure Category	:	Uncontrolled environment/general population
Device Category	:	Mobile (>20cm separation)
Evaluation applied	:	MPE Evaluation
Note	:	N/A

2. Test Facility and Location

Site Description

Lab	:	Listed by CNAS, August 14, 2015 The certificate is valid until August 13, 2018 The Certificate Registration Number is L5795. Listed by FCC, July 03, 2014 The Certificate Number is 665078. Listed by Industry Canada, June 18, 2014 The Certificate Registration Number. Is 46405-9743
Name of Firm	:	Dongguan Nore Testing Center Co., Ltd. (Dongguan NTC Co., Ltd.)
Site Location	:	Building D, Gaosheng Science & Technology Park, Zhouxi Longxi Road, Nancheng District, Dongguan City, Guangdong Province, China

3. Maximum Permissible RF Exposure

According to FCC §1.1310: The criteria listed in Table 1 shall be used to evaluate the environmental Impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

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)	Average Time (minutes)
(A) Limits for Occupational/Control Exposures				
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
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
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
300-1500			f/1500	30
1500-100000			1.0	30
f = frequency in MHz * = Plane-wave equivalent power density				

The MPE was calculated at **20cm** to show compliance with the power density limit.
The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density in mW/cm²

P = Output Power to antenna in mw

G = Gain of antenna in linear scale.

R = Distance to centre of the antenna in cm.

4. Measurement Result

Band	Mode	Tune-up Tolerance Limit (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	Source-based time-Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)
GSM 850	GMSK	33.5	3	36.5	558.470	0.111	0.549
GPRS 850	slot 1	33.0	3	36.0	497.737	0.099	0.549
GPRS 850	slot 2	32.5	3	35.5	887.156	0.176	0.549
GPRS 850	slot 3	32.0	3	35.0	1185.769	0.236	0.549
GPRS 850	slot 4	29.0	3	32.0	792.501	0.158	0.549
EGPRS 850	slot 1	28.0	3	31.0	157.398	0.031	0.549
EGPRS 850	slot 2	26.0	3	29.0	198.609	0.040	0.549
EGPRS 850	slot 3	24.0	3	27.0	187.932	0.037	0.549
EGPRS 850	slot 4	23.0	3	26.0	199.067	0.040	0.549
PCS 1900	GMSK	30.0	3	33.0	249.459	0.050	1.000
GPRS 1900	slot 1	30.0	3	33.0	249.459	0.050	1.000
GPRS 1900	slot 2	29.0	3	32.0	396.278	0.079	1.000
GPRS 1900	slot 3	28.0	3	31.0	472.063	0.094	1.000
GPRS 1900	slot 4	27.0	3	30.0	500.035	0.100	1.000
EGPRS 1900	slot 1	26.0	3	29.0	99.312	0.020	1.000
EGPRS 1900	slot 2	24.0	3	27.0	125.314	0.025	1.000
EGPRS 1900	slot 3	23.0	3	26.0	149.279	0.030	1.000
EGPRS 1900	slot 4	21.0	3	24.0	125.603	0.025	1.000
WCDMA Band V	RMC 12.2K	23.0	3	26.0	398.107	0.079	0.549
WCDMA Band II	RMC 12.2K	23.0	3	26.0	398.107	0.079	1.000

Remark 1: Source-based time-Average EIRP = Maximum EIRP + Time Average factor

Time Average factor: - 9.03dB (1 slot) / Time Average factor: - 6.02dB (2 slot)

Time Average factor: - 4.26dB (3 slot) / Time Average factor: - 3.01dB (4 slot)

Time Average factor: 0 (WCDMA)

Remark 2: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band.

Conclusion:

According to the table, the max power density level at 20 cm is 0.236mW/cm², which is below the uncontrolled exposure limit of 0.549mW/cm², therefore we can conclude it is into compliance.

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