

RF Exposure Evaluation Declaration

Product Name: GPS Locator

Model No.: GV50LTA

FCC ID: YQD-GV50LTA

Applicant: Queclink Wireless Solutions Co.,Ltd.

Address: Room 501, Building 9, No. 99 Tianzhou Road, Xuhui District,

Shanghai, China.

Date of Receipt: 01-20-2017

Test Date: 02-09-2017~03-02-2017

Issued Date: 03-02-2017

Report No.: UL12620170120FCC001-2

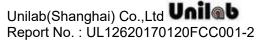
Report Version: V1.0

The test results relate only to the samples tested.

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The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, CNAS or any agency of the Government.



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Address: Room 501, Building 9, No. 99 Tianzhou Road, Xuhui District, Shanghai, China.

Manufacturer: Queclink Wireless Solutions Co.,Ltd.

Address: Room 501, Building 9, No. 99 Tianzhou Road, Xuhui District, Shanghai, China.

Model No. : GV50LTA

EUT Voltage: MIN: 8.0V, NOR:12Vor24V, MAX:32V (DC)

Brand Name: QUECLINK

FCC ID: YQD-GV50LTA

Applicable Standard: FCC's Rules (47 C.F.R. §1.1310 and 2.1091)

Industry Canada RSS-102, Issue 5

Test Result: Complied

Performed Location: Unilab (Shanghai) Co.,Ltd.

FCC 2.948 register number is 714465

IC register number is 11025A-1

No.1350, Lianxi Road, Pudong New District, Shangha, China

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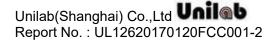
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	(Senior Engineer: Forest Cao)
Approved by :	Eva wang
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Product Name:	GPS Locator		
Model Name:	GV50LTA		
Hardware Version:	GV50LTA_V1.02		
Software Version:	GV50LTAR00A01V18		
RF Exposure Environment:	Uncontrolled		
LTE			
Support Band:	LTE Band 4		
Tx FrequencyRange:	LTE Band 4:1710 MHz -1755 MHz		
Rx FrequencyRange:	LTE Band 4:2110 MHz -2155 MHz		
Type of modulation:	LTE: QPSK,16-QAM		
Antenna Type:	Connector		
AntennaPeak Gain:	LTE Band 4: 1.42dBi		
Support Band:	LTE Band 13		
Tx FrequencyRange:	LTE Band 13:777 MHz -787 MHz		
Rx FrequencyRange:	LTE Band 13:746 MHz -756 MHz		
Type of modulation:	LTE: QPSK,16-QAM		
Antenna Type:	Connector		
AntennaPeak Gain:	LTE Band 13: -0.39dBi		



2. RF Exposure Evaluation

2.1 Limits

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	Electric Filed	Magnetic Filed	Power Density	Average Time		
Range(MHz)	Strength	Strength	(mW/cm ²)	(Minutes)		
	(V/m)	(A/m)				
(A)Limits for Occupation/Control Exposures						
300-1500			F/300	6		
1500-100,000			5	6		
(B)Limits for General Occupation/UnControlled Exposures						
300-1500			F/1500	6		
1500-100,000			1	30		

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout*G)/(4*Pi*R^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2.Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 20°Cand 56%RH.



2.3. Test Result of RF Exposure Evaluation

This device is evaluated by mobile device with general population/uncontrolled exposure condition For this device, the calculation is using the most conservative values, and the results are as follows:

Test Mode	Band Width (MHz)	Antenna Gain (dBi)	Maximum Output Power (dBm)	Maximum Output Power (mW)	Calculated RF Exposure at d = 20cm (mW/cm²)	MPE Limit (mW/cm²)
LTE	5	1.42	25	438.5	0.09	1 00
Band4	10	1.42	25	438.5	0.09	1.00
LTE	5	-0.39	25	289.1	0.06	0.52
Band13	10	-0.39	25	289.1	0.06	0.52
Duty cycle =100%						

Test Mode	Band Width (MHz)	ERP (dBm)	EIRP (dBm)	Maximum Output Power (mW)	Calculated RF Exposure at d = 20cm (mW/cm²)	MPE Limit (mW/cm²)
LTE	5		23.84	242.1	0.05	1.00
Band4	10		23.67	232.8	0.05	1.00
LTE	5	22.55	24.70	295.1	0.06	0.52
Band13	10	22.50	24.65	291.7	0.06	0.52
Duty cycle =100%						

This device can pass RF exposure limit.