



A Test Lab Techno Corp.

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MPE Report



Test Report No.	: 1002FS11-02
Applicant	: Telit Communications S.p.A.
Manufacturer	: Telit Communications S.p.A.
Product Type	: GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module
Trade Mark	: Telit
Model Number	: UC864-G
FCC ID	: RI7UC864G
IC ID	: 5131A-UC864G
Application Purpose	: Class II Permissive Change
Dates of Test	: Feb. 24, 2010
Test Specification	: 47 CFR § 2.1091 47 CFR §1.1310 ANSI / IEEE Std.C95.1: 2005 H46_2/99_237E: 1999
Location of Test Lab.	: Chang-an Lab.

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
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Sam Chuang 20100225
Approve Signer

Alex Wu 20100225
Testing Engineer



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1. Description of Equipment under Test (EUT)

Applicant :	Telit Wireless Solutions Co., Ltd.		
Applicant Address :	Viale Stazione di Prosecco, 5/B 34010 Trieste, Italy		
Manufacturer :	Telit Communications S.p.A.		
Manufacturer Address :	Via Stazione di Prosecco, 5/B 34010 Sgonico (TS) - Italy		
Product Name :	GSM/GPRS/EGPRS quad-band and UMTS/HSDPA tri-band Module		
Trade Name :	Telit		
Model Number :	UC864-G		
FCC ID :	RI7UC864G		
IC ID :	5131A-UC864G		
Hardware Version :	1.1.0 (1H10)		
Software Version :	08.01.126-B024		
Frequency Range :	GSM/GPRS/EDGE 850	: 824.2 - 848.8 MHz	
	GSM/GPRS/EDGE 1900	: 1850.2 - 1909.8 MHz	
	WCDMA/HSDPA Band II	: 1852.4 - 1907.6 MHz	
	WCDMA/HSDPA Band V	: 826.4 - 844.6 MHz	
Transmit Power : (mean conducted power)	GSM/GPRS/EDGE 850	: 32.40 dBm / 1.738 W	
	GSM/GPRS/EDGE 1900	: 29.30 dBm / 0.851 W	
	WCDMA/HSDPA Band II	: 22.90 dBm / 0.195 W	
	WCDMA/HSDPA Band V	: 23.22 dBm / 0.210 W	
Modulation Technique :	GSM/GPRS/EDGE 850	: GMSK, 8PSK	
	GSM/GPRS/EDGE 1900	: GMSK, 8PSK	
	WCDMA/HSDPA Band II	: QPSK	
	WCDMA/HSDPA Band V	: QPSK	
Antenna Designation :	Dipole Antenna		
Antenna Specification :	GSM/GPRS/EDGE 850	: 0.9 dBi	
	GSM/GPRS/EDGE 1900	: 4.2 dBi	
	WCDMA/HSDPA Band II	: 4.2 dBi	
	WCDMA/HSDPA Band V	: 0.9 dBi	
Temperature Range :	-30 ~ +70°C		

The above equipment was tested by Compliance Certification Services Inc. For compliance with the requirements set forth in 47 CFR § 2.1091 & 47 CFR § 1.1310. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties



2. Human Exposure Assessment

Due to the design and installation of this product, it is not possible to conduct SAR evaluation. This is because client either manufactures or supplies the antenna(s) that will be used in the installation of this product. Therefore, this product will be evaluated as a mobile device per 47 CFR §1.1310 titled "Radiofrequency radiation exposure limits", generally referred to as MPE limits.

In 47 CFR § 2.1091, paragraph (b) defines a mobile device as "a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons." This product is intended to be installed into a vehicle such that the unit is physically secured at one location. In the installation guide supplied with the product,

Client has made the following statement: "IMPORTANT: To meet the FCC's RF Exposure Guidelines, the antenna should be installed so there is at least 20 cm of separation between the body of the user and nearby persons and the antenna". Based on the installation of the transceiver and the antenna, the transmitters radiating structure is more than 20 cm from the user. Thus, this product is a "mobile device" as defined in section § 2.1091 paragraph (b).

Exposure evaluation

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

Where

S: power density

P: power input to the 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.



2.1 Test Result

GSM/GPRS/EDGE 850

Band	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+ Ant Gain (W) [TP]	Power Density [S]	Min. distance (cm)
GSM 850	824.2	1.000	20	32.0	0.9	1.950	0.388	20
	836.6	1.000	20	32.3	0.9	2.089	0.416	20
	848.8	1.000	20	32.4	0.9	2.138	0.426	20
GPRS 850	824.2	1.000	20	32.0	0.9	1.950	0.388	20
	836.6	1.000	20	32.2	0.9	2.042	0.406	20
	848.8	1.000	20	32.3	0.9	2.089	0.416	20
EDGE 850	824.2	1.000	20	26.8	0.9	0.589	0.117	20
	836.6	1.000	20	26.7	0.9	0.575	0.115	20
	848.8	1.000	20	26.9	0.9	0.603	0.120	20

GSM/GPRS/EDGE 1900

Band	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+ Ant Gain (W) [TP]	Power Density [S]	Min. distance (cm)
GSM 1900	1850.2	1.000	20	28.90	4.2	2.042	0.406	20
	1880.0	1.000	20	29.20	4.2	2.188	0.435	20
	1909.8	1.000	20	29.30	4.2	2.239	0.446	20
GPRS 1900	1850.2	1.000	20	28.90	4.2	2.042	0.406	20
	1880.0	1.000	20	29.00	4.2	2.089	0.416	20
	1909.8	1.000	20	29.20	4.2	2.188	0.435	20
EDGE 1900	1850.2	1.000	20	25.60	4.2	0.955	0.190	20
	1880.0	1.000	20	25.70	4.2	0.977	0.195	20
	1909.8	1.000	20	25.90	4.2	1.023	0.204	20



WCDMA/HSDPA Band II

Band	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+ Ant Gain (W) [TP]	Power Density [S]	Min. distance (cm)
WCDMA Band II	1852.4	1.000	20	22.90	4.2	0.513	0.102	20
	1880.0	1.000	20	22.65	4.2	0.484	0.096	20
	1909.7	1.000	20	22.83	4.2	0.505	0.100	20
WCDMA Band II Sub-test 1	1852.4	1.000	20	22.87	4.2	0.509	0.101	20
	1880.0	1.000	20	22.62	4.2	0.481	0.096	20
	1909.7	1.000	20	22.78	4.2	0.499	0.099	20

WCDMA/HSDPA Band V

Band	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	Power+ Ant Gain (W) [TP]	Power Density [S]	Min. distance (cm)
WCDMA Band V	826.4	1.000	20	23.22	0.9	0.258	0.051	20
	836.4	1.000	20	23.13	0.9	0.253	0.050	20
	846.4	1.000	20	23.11	0.9	0.252	0.050	20
WCDMA Band V Sub-test 1	826.4	1.000	20	23.15	0.9	0.254	0.051	20
	836.4	1.000	20	23.11	0.9	0.252	0.050	20
	846.4	1.000	20	23.12	0.9	0.252	0.050	20