



A Test Lab Techno Corp.

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MPE Report

Test Report No.	: 1412FS11
Applicant	: Philips Lighting Electronics North America
Manufacturer	: MiTAC International Corporation
Product Type	: CityTouch OLC
Trade Name	: PHILIPS
Model Number	: LLC7260
Date of Received	: Sep. 23, 2014
Test Period	: Dec. 06, 2014
Date of Issued	: Dec. 25, 2014
Test Specification	: 47 CFR § 2.1091 47 CFR §1.1310 ANSI / IEEE Std.C95.1-1992
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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Approved By : Bill Hu
(Bill Hu)

Tested By : Sky Chou
(Sky Chou)



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1. Description of Equipment under Test (EUT)

Applicant	Philips Lighting Electronics North America
Applicant Address	10275 W. Higgins Road, Rosemont, Illinois, United States, 60018-5603
Manufacturer	MiTAC International Corporation
Manufacturer Address	Building B, No. 209, Sec. 1 Nan Gang Road, Nan Gang District, Taipei Taiwan, Republic of China
Product Type	CityTouch OLC
Trade Name	PHILIPS
Model Number	LLC7260
IMEI No.	014332000001001
Hardware Version	9137 003 63303
Software Version	10880
FCC ID	VBO-LLC7260
Frequency Range	824.2 - 848.8 MHz GPRS/EGPRS 850 1850.2 - 1909.8 MHz GPRS/EGPRS 1900 1852.4 - 1907.6 MHz WCDMA(RMC 12.2K)/HSDPA/HSUPA Band II 826.4 - 846.6 MHz WCDMA(RMC 12.2K)/HSDPA/HSUPA Band V *GPRS/EGPRS Multi Class :12
Transmit Power (conducted power)	GPRS/EGPRS 850: 1.811 W / 32.58 dBm GPRS/EGPRS 1900: 0.796 W / 29.01 dBm WCDMA(RMC 12.2K)/HSDPA/HSUPA Band II: 0.213 W / 23.29 dBm WCDMA(RMC 12.2K)/HSDPA/HSUPA Band V: 0.217 W / 23.37 dBm
Antenna Specification	GPRS 850: -0.49 dBi GPRS 1900: 0.10 dBi WCDMA Band II: 0.10 dBi WCDMA Band V: -0.49 dBi
Antenna Designation	PIFA Antenna
RF Evaluation	1.11 W/m ²

The above equipment was tested by A Test Lab Techno Corp. 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

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

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.

3. RF Output Power

Band	Date Rate	CH	Frequency (MHz)	Average Conducted power (dBm)
GPRS850	4Down1Up	128	824.2	32.58
		190	836.6	32.46
		251	848.8	32.51
	3Down2Up	128	824.2	32.42
		190	836.6	32.28
		251	848.8	32.33
	2Down3Up	128	824.2	31.71
		190	836.6	31.59
		251	848.8	31.63
	1Down4Up	128	824.2	30.55
		190	836.6	30.41
		251	848.8	30.47
EGPRS850	4Down1Up	128	824.2	27.11
		190	836.6	26.97
		251	848.8	27.07
	3Down2Up	128	824.2	26.95
		190	836.6	26.81
		251	848.8	26.91
	2Down3Up	128	824.2	26.21
		190	836.6	26.08
		251	848.8	26.15
	1Down4Up	128	824.2	24.97
		190	836.6	24.78
		251	848.8	24.87

Band	Date Rate	CH	Frequency (MHz)	Average Conducted power (dBm)
GPRS1900	4Down1Up	512	1850.2	29.01
		661	1909.8	28.75
		810	1909.8	28.79
	3Down2Up	512	1850.2	28.83
		661	1909.8	28.57
		810	1909.8	28.61
	2Down3Up	512	1850.2	28.22
		661	1909.8	28.01
		810	1909.8	28.07
	1Down4Up	512	1850.2	27.03
		661	1909.8	26.82
		810	1909.8	26.85
EGPRS1900	4Down1Up	512	1850.2	25.36
		661	1909.8	25.15
		810	1909.8	25.19
	3Down2Up	512	1850.2	25.21
		661	1909.8	25.00
		810	1909.8	25.04
	2Down3Up	512	1850.2	24.53
		661	1909.8	24.31
		810	1909.8	24.36
	1Down4Up	512	1850.2	23.47
		661	1909.8	23.29
		810	1909.8	23.38

Band	Date Rate	CH	Frequency (MHz)	Average Conducted power (dBm)
WCDMA Band II	---	9262	1852.4	23.29
		9400	1880.0	23.07
		9538	1907.6	23.16
HSDPA Band II	1	9262	1852.4	22.43
		9400	1880.0	22.22
		9538	1907.6	22.31
	2	9262	1852.4	22.39
		9400	1880.0	22.19
		9538	1907.6	22.26
	3	9262	1852.4	21.96
		9400	1880.0	21.73
		9538	1907.6	21.83
	4	9262	1852.4	21.93
		9400	1880.0	21.71
		9538	1907.6	21.78
HSUPA Band II	1	9262	1852.4	21.86
		9400	1880.0	21.62
		9538	1907.6	21.75
	2	9262	1852.4	19.88
		9400	1880.0	19.63
		9538	1907.6	19.78
	3	9262	1852.4	20.88
		9400	1880.0	20.65
		9538	1907.6	20.79
	4	9262	1852.4	19.84
		9400	1880.0	19.62
		9538	1907.6	19.74
	5	9262	1852.4	21.84
		9400	1880.0	21.58
		9538	1907.6	21.72

Band	Date Rate	CH	Frequency (MHz)	Average Conducted power (dBm)
WCDMA Band V	---	4132	826.4	23.37
		4183	836.6	23.20
		4233	846.4	23.27
HSDPA Band V	1	4132	826.4	22.57
		4183	836.6	22.35
		4233	846.4	22.45
	2	4132	826.4	22.53
		4183	836.6	22.33
		4233	846.4	22.42
	3	4132	826.4	22.07
		4183	836.6	21.87
		4233	846.4	21.95
	4	4132	826.4	22.05
		4183	836.6	21.82
		4233	846.4	21.94
HSUPA Band V	1	4132	826.4	22.03
		4183	836.6	21.85
		4233	846.4	21.88
	2	4132	826.4	20.05
		4183	836.6	19.89
		4233	846.4	19.91
	3	4132	826.4	21.05
		4183	836.6	20.85
		4233	846.4	20.91
	4	4132	826.4	20.01
		4183	836.6	19.85
		4233	846.4	19.85
	5	4132	826.4	22.01
		4183	836.6	21.82
		4233	846.4	21.83

4. Test Result

Band	Data Rate	Frequency (MHz)	Limit (mw/cm ²)	Distance [R] (cm)	Max. Tune-up Power [P] (dBm)	ANT Gain (dBi)	Numeric Gain [G] (dBi)	Duty Cycle	[P] x [G] with Duty cycle [TP] (mW)	Power Density [S] (mw/cm ²)
GPRS 850	4Down1Up	824.2	0.549	20	33.00	-0.49	0.89	0.125	221.97	0.044
		836.6	0.558	20	33.00	-0.49	0.89	0.125	221.97	0.044
		848.8	0.566	20	33.00	-0.49	0.89	0.125	221.97	0.044
	3Down2Up	824.2	0.549	20	32.50	-0.49	0.89	0.250	395.67	0.079
		836.6	0.558	20	32.50	-0.49	0.89	0.250	395.67	0.079
		848.8	0.566	20	32.50	-0.49	0.89	0.250	395.67	0.079
	2Down3Up	824.2	0.549	20	32.00	-0.49	0.89	0.375	528.96	0.105
		836.6	0.558	20	32.00	-0.49	0.89	0.375	528.96	0.105
		848.8	0.566	20	32.00	-0.49	0.89	0.375	528.96	0.105
	1Down4Up	824.2	0.549	20	31.00	-0.49	0.89	0.500	560.22	0.111
		836.6	0.558	20	31.00	-0.49	0.89	0.500	560.22	0.111
		848.8	0.566	20	31.00	-0.49	0.89	0.500	560.22	0.111
EGPRS 850	4Down1Up	824.2	0.549	20	28.00	-0.49	0.89	0.125	70.19	0.014
		836.6	0.558	20	28.00	-0.49	0.89	0.125	70.19	0.014
		848.8	0.566	20	28.00	-0.49	0.89	0.125	70.19	0.014
	3Down2Up	824.2	0.549	20	27.00	-0.49	0.89	0.250	111.51	0.022
		836.6	0.558	20	27.00	-0.49	0.89	0.250	111.51	0.022
		848.8	0.566	20	27.00	-0.49	0.89	0.250	111.51	0.022
	2Down3Up	824.2	0.549	20	26.50	-0.49	0.89	0.375	149.08	0.030
		836.6	0.558	20	26.50	-0.49	0.89	0.375	149.08	0.030
		848.8	0.566	20	26.50	-0.49	0.89	0.375	149.08	0.030
	1Down4Up	824.2	0.549	20	25.50	-0.49	0.89	0.500	157.89	0.031
		836.6	0.558	20	25.50	-0.49	0.89	0.500	157.89	0.031
		848.8	0.566	20	25.50	-0.49	0.89	0.500	157.89	0.031

Note: The Power [P] is max tune-up power (upper limit).

Band	Data Rate	Frequency (MHz)	Limit (mw/cm ²)	Distance [R] (cm)	Max. Tune-up Power [P] (dBm)	ANT Gain (dBi)	Numeric Gain [G] (dBi)	Duty Cycle	[P] x [G] with Duty cycle [TP] (mW)	Power Density [S] (mw/cm ²)
GPRS 1900	4Down1Up	1850.2	1.000	20	30.00	0.10	1.02	0.125	127.50	0.025
		1880.0	1.000	20	30.00	0.10	1.02	0.125	127.50	0.025
		1909.8	1.000	20	30.00	0.10	1.02	0.125	127.50	0.025
	3Down2Up	1850.2	1.000	20	29.00	0.10	1.02	0.250	202.55	0.040
		1880.0	1.000	20	29.00	0.10	1.02	0.250	202.55	0.040
		1909.8	1.000	20	29.00	0.10	1.02	0.250	202.55	0.040
	2Down3Up	1850.2	1.000	20	28.50	0.10	1.02	0.375	270.79	0.054
		1880.0	1.000	20	28.50	0.10	1.02	0.375	270.79	0.054
		1909.8	1.000	20	28.50	0.10	1.02	0.375	270.79	0.054
	1Down4Up	1850.2	1.000	20	27.50	0.10	1.02	0.500	286.79	0.057
		1880.0	1.000	20	27.50	0.10	1.02	0.500	286.79	0.057
		1909.8	1.000	20	27.50	0.10	1.02	0.500	286.79	0.057
EGPRS 1900	4Down1Up	1850.2	1.000	20	26.00	0.10	1.02	0.125	50.76	0.010
		1880.0	1.000	20	26.00	0.10	1.02	0.125	50.76	0.010
		1909.8	1.000	20	26.00	0.10	1.02	0.125	50.76	0.010
	3Down2Up	1850.2	1.000	20	25.50	0.10	1.02	0.250	90.48	0.018
		1880.0	1.000	20	25.50	0.10	1.02	0.250	90.48	0.018
		1909.8	1.000	20	25.50	0.10	1.02	0.250	90.48	0.018
	2Down3Up	1850.2	1.000	20	25.00	0.10	1.02	0.375	120.96	0.024
		1880.0	1.000	20	25.00	0.10	1.02	0.375	120.96	0.024
		1909.8	1.000	20	25.00	0.10	1.02	0.375	120.96	0.024
	1Down4Up	1850.2	1.000	20	24.00	0.10	1.02	0.500	128.11	0.025
		1880.0	1.000	20	24.00	0.10	1.02	0.500	128.11	0.025
		1909.8	1.000	20	24.00	0.10	1.02	0.500	128.11	0.025

Note: The Power [P] is max tune-up power (upper limit).



Band	Sub-Test	Frequency (MHz)	Limit (mw/cm ²)	Distance [R] (cm)	Max. Tune-up Power [P] (dBm)	ANT Gain (dBi)	Numeric Gain [G] (dBi)	Duty Cycle	[P] x [G] with Duty cycle [TP] (mW)	Power Density [S] (mw/cm ²)
WCDMA Band II	RMC12.2K	1852.4	1.000	20	24.00	0.10	1.02	1.000	256.21	0.051
		1880.0	1.000	20	24.00	0.10	1.02	1.000	256.21	0.051
		1907.6	1.000	20	24.00	0.10	1.02	1.000	256.21	0.051
WCDMA Band V	RMC12.2K	826.4	0.551	20	24.00	0.49	1.12	1.000	281.33	0.056
		836.6	0.558	20	24.00	0.49	1.12	1.000	281.33	0.056
		846.6	0.564	20	24.00	0.49	1.12	1.000	281.33	0.056

Note: The Power [P] is max tune-up power (upper limit).