



A Test Lab Techno Corp.


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MPE Report



Test Report No.	: 1009FS15
Applicant	: SCT Wireless Inc
Manufacturer	: Airgoon LTD.
Product Type	: Wireless Inner Structure
Trade Name	: SCT Wireless
Model Number	: Sphere
Dates of Test	: Sep. 23 ~ 24, 2010
Test Specification	: 47 CFR § 2.1091 47 CFR §1.1310 ANSI / IEEE Std.C95.1-1999 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 **Sep. 24, 2010**
Approve Signer


Alex Wu **Sep. 24, 2010**
Testing Engineer



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1. Description of Equipment under Test (EUT)

Applicant	SCT Wireless Inc		
Applicant Address	1894 US Hwy 50 East Building 4 Suite 281 Carson City NV 89701		
Manufacturer	Airgoon LTD.		
Manufacturer Address	2207 Concord Pike, Suite 700, Wilmington, DELAWARE		
Product Type	Wireless Inner Structure		
Trade Name	SCT Wireless		
Model Number	Sphere		
Frequency Range	Uplink	1852.4 - 1907.6 MHz WCDMA(RMC 12.2K) Band II 826.4 - 846.6 MHz WCDMA(RMC 12.2K) Band V	
	Downlink	1932.4 – 1987.6 MHz WCDMA(RMC 12.2K) Band II 871.4 – 891.6 MHz WCDMA(RMC 12.2K) Band V	
Transmit Power (Average conducted power)	Uplink	WCDMA(RMC 12.2K) Band II: 0.257 W / 24.10 dBm WCDMA(RMC 12.2K) Band V: 0.142 W / 21.51 dBm	
	Downlink	WCDMA(RMC 12.2K) Band II: 0.006 W / 7.47 dBm WCDMA(RMC 12.2K) Band V: 0.009 W / 9.64 dBm	
Type of Antenna	Uplink	Ant. #1	Model No.: E3A-W15, Exterior 360° Antenna
	Downlink	Ant. #2	Model No.: ICA-W8, Exterior 360° Antenna
Antenna Gain (dBi)	Uplink	Ant. #1	WCDMA Band II / WCDMA Band V : 15dBi
	Downlink	Ant. #2	WCDMA Band II / WCDMA Band V : 8dBi
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



1.1 RF Output Power

Band	Ant. Port	CH	Frequency (MHz)	Time-Average Conducted power (dBm)
WCDMA Band II	Uplink	9262	1852.4	22.48
		9400	1880.0	24.10
		9538	1907.6	22.25
	Downlink	9662	1932.4	7.47
		9800	1960.0	6.13
		9938	1987.6	3.90
WCDMA Band V	Uplink	4132	826.4	21.10
		4183	836.6	21.51
		4233	846.4	21.42
	Downlink	4357	871.4	9.35
		4408	881.6	9.47
		4458	891.6	9.64



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

Band	Data Mode	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	[P]+ [G] (W) [TP]	Duty Cycle	Power Density [S]
WCDMA Band II	Uplink	1850.2	1.000	20	22.48	15.00	5.598	1.000	0.679
		1880.0	1.000	20	24.10	15.00	8.128	1.000	0.986
		1909.8	1.000	20	22.25	15.00	5.309	1.000	0.644
	Downlink	1932.4	1.000	20	7.47	8.00	0.035	1.000	0.004
		1960.0	1.000	20	6.13	8.00	0.026	1.000	0.003
		1987.6	1.000	20	3.90	8.00	0.015	1.000	0.002
WCDMA Band V	Uplink	824.2	0.549	20	21.10	15.00	4.074	1.000	0.494
		836.6	0.558	20	21.51	15.00	4.477	1.000	0.543
		848.8	0.566	20	21.42	15.00	4.385	1.000	0.532
	Downlink	871.4	0.581	20	9.35	8.00	0.054	1.000	0.007
		881.6	0.588	20	9.47	8.00	0.056	1.000	0.007
		891.6	0.594	20	9.64	8.00	0.058	1.000	0.007