



A Test Lab Techno Corp.

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MPE Report



Test Report No.	: 1007FS18-01
Applicant	: GlobalSat Technology Corporation
Manufacturer	: GlobalSat Technology Corporation
Product Type	: Tracker
Trade Name	: GlobalSat
Model Number	: TR-151A / TR-151E
Dates of Test	: Aug. 12 , 2010
Test Specification	: 47 CFR § 2.1091 47 CFR §1.1310 ANSI / IEEE Std.C95.1-1999
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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Approve Signer

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1. Description of Equipment under Test (EUT)

Applicant	GlobalSat Technology Corporation
Applicant Address	16F., No. 186, Jian Yi Road, Chung Ho City, Taipei hsien, Taiwan
Manufacturer	GlobalSat Technology Corporation
Manufacturer Address	16F., No. 186, Jian Yi Road, Chung Ho City, Taipei hsien, Taiwan
Product Type	Tracker
Trade Name	GlobalSat
Model Number	TR-151A / TR-151E The different model numbers are sell at different areas. The two model's electrically and mechanically identical.
FCC ID	RID-TR151
Frequency Range	824.2 - 848.8 MHz GSM/GPRS 850 1850.2 - 1909.8 MHz PCS/GPRS 1900
Transmit Power (conducted power)	GSM/GPRS 850: 1.778 W / 32.50 dBm PCS/GPRS 1900: 0.741 W / 28.70 dBm
Antenna Specification	GSM 850: 3.9 dBi DCS 1900: 1.5 dBi
Antenna Designation	Monopole Antenna
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	Date Rate	CH	Frequency (MHz)	Average burst Conducted power (dBm)	Worst Case
GSM850	---	128	824.2	32.25	<input type="checkbox"/>
		190	836.6	32.40	<input type="checkbox"/>
		251	848.8	32.50	<input checked="" type="checkbox"/>
GPRS850	4Down1Up	128	824.2	31.73	<input type="checkbox"/>
		190	836.6	31.88	<input type="checkbox"/>
		251	848.8	31.98	<input type="checkbox"/>
GPRS850	3Down2Up	128	824.2	31.72	<input type="checkbox"/>
		190	836.6	31.87	<input type="checkbox"/>
		251	848.8	31.97	<input checked="" type="checkbox"/>
PCS1900	---	512	1850.2	28.70	<input checked="" type="checkbox"/>
		661	1880.0	28.34	<input type="checkbox"/>
		810	1909.8	28.38	<input type="checkbox"/>
GPRS1900	4Down1Up	512	1850.2	28.64	<input type="checkbox"/>
		661	1909.8	28.29	<input type="checkbox"/>
		810	1909.8	28.34	<input type="checkbox"/>
GPRS1900	3Down2Up	512	1850.2	28.67	<input checked="" type="checkbox"/>
		661	1909.8	28.30	<input type="checkbox"/>
		810	1909.8	28.34	<input type="checkbox"/>



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 Rate	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	[P]+ [G] (W) [TP]	Duty Cycle	Power Density [S]
GSM 850	-----	824.2	0.549	20	32.25	3.90	2.512	1.000	0.500
		836.6	0.558	20	32.40	3.90	2.600	1.000	0.518
		848.8	0.566	20	32.50	3.90	2.661	1.000	0.530
GPRS 850	4Down1Up	824.2	0.549	20	31.73	3.90	1.114	0.500	0.222
		836.6	0.558	20	31.88	3.90	1.153	0.500	0.230
		848.8	0.566	20	31.98	3.90	1.180	0.500	0.235
PCS 1900	-----	1850.2	1.000	20	28.70	1.50	0.638	1.000	0.127
		1880.0	1.000	20	28.34	1.50	0.587	1.000	0.117
		1909.8	1.000	20	28.38	1.50	0.593	1.000	0.118
GPRS 1900	3Down2Up	1850.2	1.000	20	28.67	1.50	0.317	0.500	0.032
		1880.0	1.000	20	28.30	1.50	0.291	0.500	0.029
		1909.8	1.000	20	28.34	1.50	0.294	0.500	0.029

NOTE: The minimum separation distance is 20cm.