Maximum Permissible Exposure Report

1. Product Information

FCC ID	:	2AJAN-6071T
EUT	:	Siyata T600 Cellular Booster
Equipment Type	:	Industrial Signal Booster
Test Model	:	6071T
Additional Models No		6071T13;6071T10
Models Declaration		PCB board, structure and internal of these model(s) are the same, So no additional models were tested
Power Supply	:	Adapter Information: MODEL:GM53-120300-F For AC Adapter Input: 100-240V~, 50/60Hz Adapter Output: 12V⎓3A
Hardware Version	:	L600-5G-V02
Software Version	:	L600-5G-V02.HEX
Frequency Range	:	Uplink: 663 MHz~698MHz Downlink: 617MHz ~652MHz
Antenna Type	:	Outdoor: Yagi antenna/ Panel antenna Indoor: Omni Antenna/ Panel Antenna
Antenna Gain	:	Outdoor: 9.5dBi (Max.) Indoor: 7.0dBi (Max.)
Operating Temperature	:	-25ºC~+55ºC
Exposure category	:	General population/uncontrolled environment
EUT Type	:	Production Unit
Device Type	:	fixed Device

2. Evaluation Method

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.
In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modelled or measured field strengths or power density, is ≤ 1.0. The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

3. Limit

3. 1 Refer Evaluation Method

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.
FCC CFR 47 part1 1.1310: Radiofrequency radiation exposure limits.
FCC CFR 47 part2 2.1091: Radiofrequency radiation exposure evaluation: mobile devices

3. 2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	($900/f^2$)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	($180/f^2$)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz
*=Plane-wave equivalent power density

4. MPE Calculation Method

Predication of MPE limit at a given distance
Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S=power density
P=power input to 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

5. Antenna Information and Conducted Output Power

Hero 100 DAS can only use antennas certificated as follows provided by manufacturer;

Internal Identification	Antenna type and antenna number	Maximum antenna gain	Notes
Outdoor Antenna	Yagi antenna	9.5 dBi	Antenna for Band 71
Indoor Antenna	Omni Antenna	3.0 dBi	Antenna for Band 71
Outdoor Antenna	Panel antenna	7.0 dBi	Antenna for Band 71
Indoor Antenna	Panel Antenna	7.0 dBi	Antenna for Band 71

Band 71

Mode	Frequency (MHz)	Signal Type	AGC threshold level (dBm)	Signal Level	Input Power (dBm)	Output Power (dBm)	Gain (dB)	Cable Loss	Output Power-CableLoss
Uplink	691.35	AWGN	-27.231	Pre-AGC	-25.871	22.315	48.186	0.8	21.515
				3dB above AGC	-22.871	22.253	45.124	0.8	21.453
		GSM	-27.123	Pre-AGC	-22.325	22.421	44.746	0.8	21.621
				3dB above AGC	-19.325	22.035	41.360	0.8	21.235
Downlink	621.025	AWGN	-32.365	Pre-AGC	-23.852	15.050	38.902	1.7	13.350
				3dB above AGC	-20.852	15.123	35.975	1.7	13.423
		GSM	-32.365	Pre-AGC	-22.361	15.312	37.673	1.7	13.612
				3dB above AGC	-19.361	15.356	34.717	1.7	13.656

6. Measurement Results

Band 71

Uplink（AWAG Signal）	
Frequency（MHz）	691.35
Target (dBm)	21.0
Tolerance ±(dB)	1.0
Downlink（AWAG Signal）	
Frequency（MHz）	621.025
Target (dBm)	13.0
Tolerance ±(dB)	1.0

7. Limits for General /Uncontrolled Exposure

Maximum permissible exposure :

Note:For Outdoor Antenna（Yagi antenna),Indoor Antenna(Omni Antenna);Outdoor Antenna（Panel antenna),Indoor Antenna(Panel Antenna) were estimated ,the report recorded the worst result of Outdoor Antenna（Yagi antenna),Indoor Antenna(Panel Antenna)

Band 71

Band/Mode	RF output power		Antenna Gain (dBi)	MPE (mW/cm2)	MPE Limits (mW/cm2)
	dBm	mW			
Uplink	22.0	158.4893	7.0	0.1580	0.442
Downlink	14.0	25.1189	9.5	0.0397	0.411

Remark:
1. Output power including turn-up tolerance;
2. Output power is burst average power;
3. MPE evaluate distance is 20cm from user manual provide by manufacturer;
4. MPE values = $PG/4\pi R^2$

8. Evaluation Results

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20**cm** from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, **r =20cm**, as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

Simultaneous Transmission MPE

Not need consider simultaneous transmission

9. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

----------THE END OF TEST REPORT----------