Product operation frequency range and FCC ID number information.

Power Supply:	AC 100-240V, 50/60Hz by AC/DC adapter		
	MODEL: GM53-090300-F		
	INPUT: 100-240V, 50/60Hz, 2A		
	OUTPUT: 9.0V--3.0A, 27W		
Test Voltage:	AC 110V, 60Hz		
Cable:	AC mains (unshielded, 1.5m)		
Operating Temperature:	-25 to +55 ℃		
	Lower 700MHz	Uplink:	698MHz to 716MHz
		Downlink:	728MHz to 746MHz
	Upper 700MHz	Uplink:	777MHz to 787MHz
		Downlink:	746MHz to 756MHz
	Cellular	Uplink:	824MHz to 849MHz
		Downlink:	869MHz to 894MHz
	AWS-1	Uplink:	1710MHz to 1755MHz
		Downlink:	2110MHz to 2155MHz
	Broadband PCS	Uplink:	1850MHz to 1910MHz
		Downlink:	1930MHz to 1990MHz
Interface:	RF Port:	2 (N-F)	
	Power Jack:	1	
Max. Output Power:	Uplink:	17dBm	
(Conducted)	Downlink:	7dBm for SZZJ-A17LF-LCPA	
		3dBm for SZZJ-A13LF-LCPA	
		0dBm for SZZJ-A10LF-LCPA	
Max. Gain:	Uplink:	63dB	
	Downlink:	63dB for SZZJ-A17LF-LCPA	
		60dB for SZZJ-A13LF-LCPA	
		58dB for SZZJ-A10LF-LCPA	
Antenna Type:	External Dedicated Antenna		
Permission Antenna Gain:	10dBi or less		
Software Version:	SZZJ_AV1.01.17.00 for SZZJ-A17LF-LCPA		
	SZZJ_AV1.01.17.01 for SZZJ-A13LF-LCPA		
	SZZJ_AV1.01.17.02 for SZZJ-A10LF-LCPA		

1. Standard requirement

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

(a) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm^2)	Averaging Times $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100000			5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S)(mW/cm^2)	Averaging Times $\|E\|^2$,$\|H\|^2$or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100000			1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density

1. MPE Calculation Method

$$R = \sqrt{\frac{PG}{4\pi S}}$$

$S\ (mW/cm^2)=P*G/4Pi*R^2$

S= Power Density (mW/cm^2)

P=Peak RF conducted output Power (mW)

G=EUT Antenna numeric gain (numeric)

R= Separation distance between radiator and human body (cm);

From the maximum EUT RF output power, as well as the gain of the used antenna, according to the RF power density limit above, the minimum distance between the antenna and human body will be calculated.

2. Calculated Result

The permitted max antenna gain for the device is 10dBi.

Take the Limits for General Population / Uncontrolled Exposure.

The limit for Power Density (S)(mW/cm2) = F/1500

Here, F is the highest operation frequency for worst-case (in MHz)

3. Conducted power list:

According to the test report GZEM210100041802, the tested max conducted power :

Maximum Output Power					
Path	**Band**	**Test frequency**	**Conducted Output Power (dBm)**	**Conducted Output Power (W)**	**EIRP [2] (dBm)**
Uplink	Lower 700MHz	709.63MHz	16.23	0.042	25.23
	Upper 700MHz	781.97MHz	15.83	0.0383	24.83
	Cellular	836.35MHz	15.72	0.0373	24.72
	AWS-1	1745.29MHz	15.16	0.0328	24.16
	Broadband PCS	1883.38MHz	16.16	0.0413	25.16

Downlink	700MHz	746.10MHz	6.93	0.0049	15.93
	Cellular	887.45MHz	6.53	0.0045	15.53
	AWS-1	2149.83MHz	7.36	0.0054	16.36
	Broadband PCS	1958.68MHz	7.34	0.0054	16.34
Remark: 1. The input power was a level just below and within 0.5dB of the AGC limit without triggering the AGC. Please refer to the following table for more details for AGC level. 2. ERIP = Conducted Output Power + Antenna Gain – Cable loss					

Frequency (MHz)	Maximum Antenna Gain (Numeric)	Total conducted power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Minimum Distance to human body (cm)
709.63MHz	10	42	0.083	0.473	20
781.97MHz	10	38.3	0.076	0.521	20
836.35MHz	10	37.3	0.074	0.557	20
1745.29MHz	10	32.8	0.065	1	20
1883.38MHz	10	41.3	0.082	1	20
746.10MHz	10	4.9	0.009	0.497	20
887.45MHz	10	4.5	0.008	0.591	20
2149.83MHz	10	5.4	0.010	1	20
1958.68MHz	10	5.4	0.010	1	20

The worst case for UL and DL simultaneous transmitting.

The max power is Uplink lower 700Mhz with conducted power 42mw with PSD 0.083, and Downlink PCS Band with max power 5.4mw PSD 0.01; the Total PSD for DL and UL is 0.093 lower the worst limit 0.473

Conclusion:

The equipment meets compliance requirements by MPE calculations without further testing.