

FCC MPE TEST REPORT

Project Number : EA1702Q-179
Test Report Number : TR-W1704-028
Type of Equipment : SCOPE2.0 Plus
FCC ID : A3LGIS-PAMSC3
Model Name : GIS-PAMSC3
Multiple Model Name : N/A
Applicant : SAMSUNG Electronics
Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742, Korea
Manufacturer : SAMSUNG Electronics
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Regulation : FCC Part 15 Subpart C 15.247
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Test Result : PASS

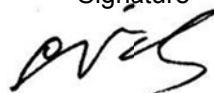
This test report only contains the result of a single test of the sample supplied for the examination.
It is not a generally valid assessment of the features of the respective products of the mass-production.

Prepared by Song, In-young / Senior Engineer


Signature

2017-04-27
Date

Reviewed by Youn, In-soub / Technical Manager


Signature

2017-04-27
Date

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Release Control Record

Issue Report No.	Issued Date	Revisions	Effect Section
TR-W1704-028	2017-04-27	Initial Release	All

1. EUT (Equipment Under Test)

1.1 General Description

The EUT is a device for transferring voltage signal and equipment information to an agent PC through wired/wireless communication. For wireless communication, the EUT has WLAN module has function for 802.11a/b/g, and measure RF output power is as following table..

1.2 RF Output Power

Operating Mode	Channel	Frequency (MHz)	Data rate (Mbps)	Output Power (dBm)
802.11b	Low	2 412	11	17.76
	Middle	2 437	11	18.25
	High	2 462	11	18.84
802.11g	Low	2 412	54	19.47
	Middle	2 437	54	19.97
	High	2 462	54	20.63
802.11a (U-NII Band 1)	Low	5 180	54	14.29
	Middle	5 200	54	14.39
	High	5 240	54	14.37
802.11a (U-NII Band 3)	Low	5 745	54	8.43
	Middle	5 765	54	8.01
	High	5 805	54	7.74

2. TEST RESULT

2.1 RF Exposure Limit

According to the FCC rule 1.1310 table 1B, the limit for the maximum permissible RF exposure for an uncontrolled environment are 1.0 mW/cm² for the frequency range between 1 500 MHz and 100 000 MHz.

2.2 RF Exposure Calculation

This calculation is based on the highest EIRP possible from the EUT., considering maximum power and antenna gain, and considering RF Exposure limit, 1.0 mW/cm². For getting power density, the Furiis formula used was:

$$S = \text{EIRP} / (4 * \pi * D^2)$$

Where

S = Power density in mW/cm²

EIRP = Equivalent Isotropic Radiated Power in mW, = P x G

P = Maximum Antenna Output Power in W

G = Numerical Antenna Gain

D = Separation distance in cm = 20 cm

Also separation distance is given by:

$$D = \sqrt{(P \times G) / (4 \times \pi \times S)}$$

2.3 RF Exposure Data

Mode	P (dBm)	P (mW)	G (dBi), Log	G (dBi),Linear	S (mW/cm ²) @ 20 cm
802.11b	18.84	76.56	4.16	2.61	0.040
802.11g	20.63	115.61			0.060
802.11a (U-Nii Band 1)	14.39	27.48	3.92	2.47	0.013
802.11a (U-NII Band 3)	8.43	6.97			0.003

2.4 Conclusion

The EUT met the requirement for General population / Uncontrolled environment of power density at 20 cm separation distance.