FCC RF EXPOSURE REPORT

FCC ID: VW3FAST286

Project No.	:	2007C003
Equipment	:	Smart Wi-Fi extender
Brand Name	:	SAGEMCOM
Test Model	:	F286 US
Series Model	:	N/A
Applicant	:	SAGEMCOM BROADBAND SAS
Address	:	250 Route de l' Empereur - 92848 RUEIL MALMAISONCEDEX-FRANCE
Manufacturer	:	SAGEMCOM BROADBAND SAS
Address	:	250 Route de l' Empereur - 92848 RUEIL MALMAISONCEDEX-FRANCE
Date of Receipt	:	Jul. 01, 2020
Date of Test	:	Jul. 02, 2020 ~ Aug. 03, 2020
Issued Date	:	Jun. 02, 2021
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG20200701165
Standard(s)	:	FCC Guidelines for Human Exposure IEEE C95.1 & FCC Part 2.1091 FCC Title 47 Part 2.1091, OET Bulletin 65 Supplement C

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

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Certificate #5123.02

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue	Jun. 02, 2021

1. TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.
BTL's Test Firm Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

2. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

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

Table for Filed Antenna:
For WLAN 2.4GHz:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	3
2	N/A	N/A	Internal	N/A	3

Note:
1) This EUT supports MIMO 2X2, and all antennas have the same gain, any transmit signals are uncorrelated with each other, so the Directional Gain=Antenna Gain=3.
2) Beamforming Gain: 1.5 dB. So the Directional gain=1.5+3=4.5.

For WLAN 5GHz:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	3
2	N/A	N/A	Internal	N/A	3
3	N/A	N/A	Internal	N/A	3
4	N/A	N/A	Internal	N/A	3

Note:
1) This EUT supports MIMO 4X4, and all antennas have the same gain, any transmit signals are uncorrelated with each other, so the Directional Gain=Antenna Gain=3.
2) Beamforming Gain: 3 dB. So the Directional gain=3+3=6.

3. TEST RESULTS

For 2.4GHz Non Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3	1.9953	28.42	695.0243	0.12268	1	Complies

For 2.4GHz Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
4.5	2.8184	27.93	620.8690	0.15480	1	Complies

For 5GHz UNII-1 Non Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3	1.9953	28.98	790.6786	0.13956	1	Complies

For 5GHz UNII-2A Non Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3	1.9953	23.96	248.8857	0.04393	1	Complies

For 5GHz UNII-2C Non Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3	1.9953	23.95	248.3133	0.04383	1	Complies

For 5GHz UNII-3 Non Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3	1.9953	29.75	944.0609	0.16664	1	Complies

For 5GHz UNII-1 Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
6	3.9811	28.59	722.7698	0.25455	1	Complies

For 5GHz UNII-2A Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
6	3.9811	23.7	234.4229	0.08256	1	Complies

For 5GHz UNII-2C Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
6	3.9811	23.76	237.6840	0.08371	1	Complies

For 5GHz UNII-3 Beamforming:

Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
6	3.9811	29.46	883.0799	0.31101	1	Complies

Note:
1)The calculated distance is 30 cm.
2)Both of the WLAN 2.4GHz and WLAN 5GHz device can’t transmit simultaneously.

End of Test Report