

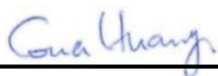
RF EXPOSURE EVALUATION REPORT

FCC ID : H8N-RTL0055VW
Equipment : EQUIPO 4G VOLTE
Brand Name : Movistar
Model Name : RTL0055VW-D112
Applicant : ASKEY COMPUTER CORPORATION
10F, No. 119, Jiankang Road, Zhonghe Dist.,
New Taipei City, Taiwan
Manufacturer : ASKEY COMPUTER CORPORATION
10F, No. 119, Jiankang Road, Zhonghe Dist.,
New Taipei City, Taiwan
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated in accordance with 47 CFR Part 2.1091 for the device and pass the limit.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The results in this variant report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager

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History of this test report

Report No.	Version	Description	Issued Date
FA891815	Rev. 01	Initial issue of report	Oct. 18, 2018
FA891815	Rev. 02	Revised address on page 1.	Oct. 22, 2018

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	EQUIPO 4G VOLTE
Brand Name	Movistar
Model Name	RTL0055VW-D112
FCC ID	H8N-RTL0055VW
Wireless Technology and Frequency Range	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz
Mode	GPRS/EGPRS RMC 12.2Kbps HSDPA HSUPA DC-HSDPA LTE: QPSK, 16QAM 802.11a/b/g/n HT20/HT40
HW Version	REV2
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Reviewed by: Jason Wang

Report Producer: Wan Liu

2. Maximum RF average output power among production units

Mode	Burst average power(dBm)	
	GSM 850	GSM 1900
GPRS (GMSK, 1 Tx slot)	32.5	29.5
GPRS (GMSK, 2 Tx slots)	32.0	29.5
GPRS (GMSK, 3 Tx slots)	32.0	29.0
GPRS (GMSK, 4 Tx slots)	31.5	29.0
EDGE (8PSK, 1 Tx slot)	26.0	25.0
EDGE (8PSK, 2 Tx slots)	26.0	25.0
EDGE (8PSK, 3 Tx slots)	25.5	24.5
EDGE (8PSK, 4 Tx slots)	25.5	24.5

Mode		Maximum Average power(dBm)
WCDMA	Band II	24.0
	Band V	24.0
LTE	Band 2	24.0
	Band 4	24.0

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Tune-Up Limit
	802.11b	CH 1	2412	22.50
		CH 6	2437	24.50
		CH 11	2462	22.00
	802.11g	CH 1	2412	17.00
		CH 6	2437	22.00
		CH 11	2462	17.00
	802.11n-HT20	CH 1	2412	17.00
		CH 6	2437	22.00
		CH 11	2462	17.00
	802.11n-HT40	CH 3	2422	15.00
		CH 6	2437	18.00
		CH 9	2452	18.00

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	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

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

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

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
GPRS 850 (1 Tx slot)	824.2	0.90	32.50	33.400	2.188	275.423	0.055	0.549	0.100
GPRS 850 (2 Tx slots)	824.2	0.90	32.00	32.900	1.950	489.779	0.097	0.549	0.177
GPRS 850 (3 Tx slots)	824.2	0.90	32.00	32.900	1.950	731.139	0.146	0.549	0.265
GPRS 850 (4 Tx slots)	824.2	0.90	31.50	32.400	1.738	870.964	0.173	0.549	0.316
EGPRS 850 (1 Tx slot)	824.2	0.90	26.00	26.900	0.490	61.660	0.012	0.549	0.022
EGPRS 850 (2 Tx slots)	824.2	0.90	26.00	26.900	0.490	123.027	0.024	0.549	0.045
EGPRS 850 (3 Tx slots)	824.2	0.90	25.50	26.400	0.437	163.682	0.033	0.549	0.059
EGPRS 850 (4 Tx slots)	824.2	0.90	25.50	26.400	0.437	218.776	0.044	0.549	0.079
GPRS 1900 (1 Tx slot)	1850.2	3.50	29.50	33.000	1.995	251.189	0.050	1.000	0.050
GPRS 1900 (2 Tx slots)	1850.2	3.50	29.50	33.000	1.995	501.187	0.100	1.000	0.100
GPRS 1900 (3 Tx slots)	1850.2	3.50	29.00	32.500	1.778	666.807	0.133	1.000	0.133
GPRS 1900 (4 Tx slots)	1850.2	3.50	29.00	32.500	1.778	891.251	0.177	1.000	0.177
EGPRS 1900 (1 Tx slot)	1850.2	3.50	25.00	28.500	0.708	89.125	0.018	1.000	0.018
EGPRS 1900 (2 Tx slots)	1850.2	3.50	25.00	28.500	0.708	177.828	0.035	1.000	0.035
EGPRS 1900 (3 Tx slots)	1850.2	3.50	24.50	28.000	0.631	236.592	0.047	1.000	0.047
EGPRS 1900 (4 Tx slots)	1850.2	3.50	24.50	28.000	0.631	316.228	0.063	1.000	0.063
WCDMA Band 2	1852.4	3.50	24.00	27.500	0.562	562.341	0.112	1.000	0.112
WCDMA Band 5	826.4	0.90	24.00	24.900	0.309	309.030	0.062	0.551	0.112
LTE Band 2	1850.7	3.50	24.00	27.500	0.562	562.341	0.112	1.000	0.112
LTE Band 4	1710.7	3.40	24.00	27.400	0.550	549.541	0.109	1.000	0.109
2.4GHz WLAN	2412.0	2.90	24.50	27.400	0.550	549.541	0.109	1.000	0.109

Note: For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band

4.2. Collocated Power Density Calculation

WWAN Power Density / Limit	WLAN Power Density / Limit	Σ (Power Density / Limit) of WWAN+WLAN
0.316	0.109	0.425

Note:

1. Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WWAN + WLAN.
2. Considering the WWAN module collocation with the WLAN transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 2 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.