RF Exposure Report

Report No.:	SA170320C02
FCC ID:	ACQ-DSR800
Test Model:	DSR800
Received Date:	Mar. 20, 2017
Test Date:	Mar. 23 ~ Apr. 27, 2017
Issued Date:	May 08, 2017
Applicant:	ARRIS Group, Inc.
Address:	101 Tournament Drive, Horsham, Pennsylvania, United States, 19044
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Lab Address:	No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan (R.O.C.)
Test Location:	No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, TAIWAN (R.O.C.)

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Release Control Record

Issue No.	Description	Date Issued
SA170320C02	Original release.	May 08, 2017

1 Certificate of Conformity

Product:	Satellite Set-Top Box
Brand:	ARRIS Group, Inc.
Test Model:	DSR800
Sample Status:	Engineering sample
Applicant:	ARRIS Group, Inc.
Test Date:	Mar. 23 ~ Apr. 27, 2017
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : _____ , **Date:** May 08, 2017

Suntee Liu / Specialist

Approved by : _____ , **Date:** May 08, 2017

Ken Liu / Senior Manager

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$
where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

3 Calculation Result of Maximum Conducted Power

Frequency Band (MHz)	TX Function	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
CDD Mode						
WLAN 2412~2462	1TX	20.11	2.33	20	0.035	1
	2TX	22.86	5.14	20	0.126	1
WLAN 5180~5240	1TX	19.63	4.17	20	0.048	1
	2TX	23.59	6.65	20	0.210	1
WLAN 5745~5825	1TX	19.94	5.58	20	0.071	1
	2TX	22.73	7.77	20	0.223	1

Beamforming Mode					
Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
WLAN 2412~2462	22.00	5.14	20	0.103	1
WLAN 5180~5240	23.16	6.65	20	0.190	1
WLAN 5745~5825	22.64	7.77	20	0.219	1

Note:
2412~2462MHz Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/N] = 5.14$dBi
5180~5240MHz Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/N] = 6.65$dBi
5745~5825MHz Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20} + ... + 10^{GN/20})^2/N] = 7.77$dBi

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