

RF Exposure Report

Report No.: SA151123E05A

FCC ID: RSE-TG788VV3NP

Equipment Name: Technicolor Gateway

Trade Name: technicolor

Model Number: TG788v v3

Product Code: DSLCBH788PR

Received Date: Feb. 24, 2017

Test Date: Mar. 14, 2017

Issued Date: May 08, 2017

Applicant: Technicolor Delivery Technologies Belgium

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Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
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Release Control Record

Issue No.	Description	Date Issued
SA151123E05A	Original release.	May 08, 2017

1 Certificate of Conformity

Product: Technicolor Gateway

Brand: technicolor

Test Model: TG788v v3

Product Code: DSLCBH788PR

Sample Status: Product Unit

Applicant: Technicolor Delivery Technologies Belgium

Test Date: Mar. 14, 2017

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

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 RF characteristics under the conditions specified in this report.

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

Claire Kuan / Specialist

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

May Chen / 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/cm²

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**.

2.4 Antenna Gain

Antenna Information				
Ant.	Brand	Model No.	Antenna Type	Connector
1	-	-	PCB Antenna	NA
2	-	-	PCB Antenna	NA

Frequency	Antenna Gain (dBi)			
	Ant. A1 (J711)		Ant. A2 (J710)	
	20 MHz	40 MHz	20 MHz	40 MHz
2412MHz	3.02	-	3.22	-
2422MHz	-	3.01	-	3.38
2437MHz	3.06	3.06	3.53	3.53
2452MHz	-	3.06	-	3.61
2462MHz	3.15	-	3.74	-

Frequency	Maximum Gain (dBi) for CDD mode			
	CDD mode (1 Stream 2 TX) for Power Gain		CDD mode (1 Stream 2 TX) for PSD Gain	
	20 MHz	40 MHz	20 MHz	40 MHz
2412MHz	3.22	-	6.13	-
2422MHz		3.38		6.21
2437MHz	3.53	3.53	6.31	6.31
2452MHz		3.61		6.35
2462MHz	3.74	-	6.46	-

Note:

1. Maximum Correlated Directional Gain = $10 \log[(10 G1 / 20 + 10 G2 / 20 + \dots + 10 GN / 20)^2 / N \text{ ANT}] \text{ dBi}$

Number of Transmitter Antennas & Bandwidth

Number of Transmitter Antennas	1TX		2TX	
Bandwidth Mode	20 MHz	40 MHz	20 MHz	40 MHz
802.11b	V	X	X	X
802.11g	V	X	X	X
802.11n	V	V	V	V

2.5 Calculation Result of Maximum Conducted Power

Frequency (MHz)	Max Conducted Power (dBm)	Max Conducted Power (mW)	Directional Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Pass / Fail
2412-2462	20.85	121.545	6.31	20	0.10339	1	Pass

Note:

1. $P_{out} \times G = \text{EIRP Power} = \text{Max Conducted Power(mW)} \times \text{Gain(numeric)}$
2. $\text{Gain(dBi)} \text{ to Gain(numeric)} = 10^{(6.31/10)} = 4.2756$
3. $\text{Distance (cm)} = r = \text{declare by manufacture} = 20 \text{ cm}$
4. $P_d = (P_{out} \times G) / (4 \times \pi \times r^2) = (121.545 \times 4.2756) / (4 \times 3.1416 \times 20^2) = 0.10339 \text{ (mW/cm}^2\text{)}$

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