

## RF Exposure Report

**Report No.:** SA161003E09

**FCC ID:** JNZRR0011

**Test Model:** R-R0011

**Received Date:** Oct. 03, 2016

**Test Date:** Oct. 12, 2016

**Issued Date:** Oct. 17, 2016

**Applicant:** LOGITECH FAR EAST LTD.

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**Issued By:** Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch  
Hsin Chu Laboratory

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### Release Control Record

Issue No.	Description	Date Issued
SA161003E09	Original release.	Oct. 17, 2016

## 1 Certificate of Conformity

**Product:** Wireless Presenter

**Brand:** Logitech

**Test Model:** R-R0011

**Sample Status:** ENGINEERING SAMPLE

**Applicant:** LOGITECH FAR EAST LTD.

**Test Date:** Oct. 12, 2016

**Standards:** FCC Part 2 (Section 2.1093)

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 EMC characteristics under the conditions specified in this report.

**Prepared by :** Wendy Wu , **Date:** Oct. 17, 2016  
Wendy Wu / Specialist

**Approved by :** May Chen , **Date:** Oct. 17, 2016  
May Chen / Manager

## 2 Evaluation Result

Following FCC KDB 447498 D01 “General SAR test exclusion guidance”

The corresponding SAR Exclusion Threshold condition, listed below:

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:  
[[max. power of channel, including tune-up tolerance, mW]/(min. test separation distance, mm)]  $\cdot [\sqrt{f(\text{GHz})}]$   
 $\leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where
  - f(GHz) is the RF channel transmit frequency in GHz.
  - Power and distance are rounded to the nearest mW and mm before calculation.
  - The result is rounded to one decimal place for comparison. The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.
- 2) At 100 MHz to 6 GHz and for test separation distances  $> 50$  mm, the SAR test exclusion threshold is determined according to the following:
  - a) [Threshold at 50 mm in step 1) + (test separation distance - 50mm)  $\cdot$  ( f(MHz)/150)] mW, at 100MHz to 1500 MHz
  - b) [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)  $\cdot$  10] mW at  $> 1500$  MHz and  $\leq 6$  GHz
- 3) At frequencies below 100 MHz, the following may be considered for SAR test exclusion.
  - a) The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by  $[1 + \log(100/f(\text{MHz}))]$  for test separation distances  $> 50$  mm and  $< 200$  mm.
  - b) The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$  for test separation distances  $\leq 50$  mm.
  - c) SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

### 3 SAR Test Exclusion Thresholds

**GFSK Avg. Power Table**

Channel	Frequency (MHz)	Avg. Power	
		(mW)	(dBm)
1	2405	22.233	13.47
8	2444	19.187	12.83
12	2474	18.113	12.58

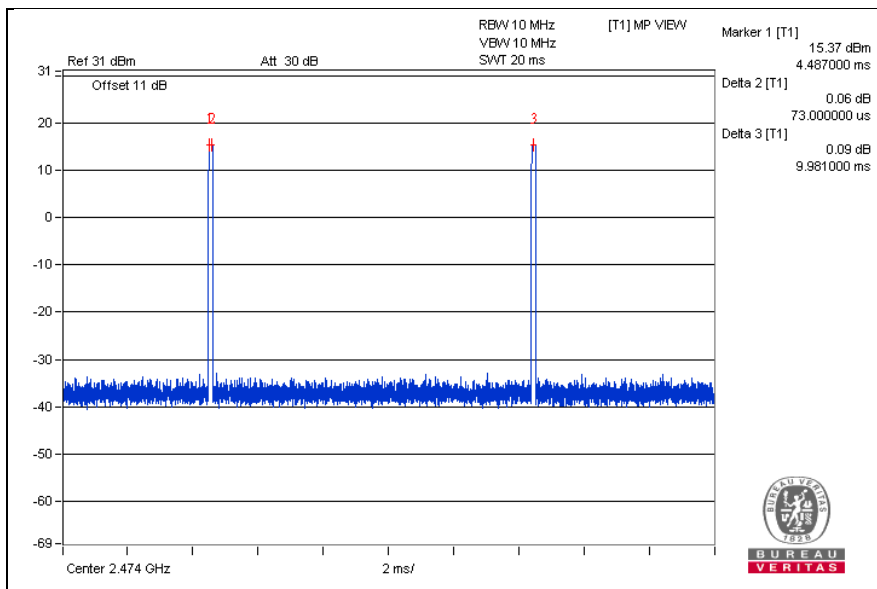
**For GFSK SAR Test Exclusion Thresholds**

Frequency (GHz)	Max Avg. Power (dBm)	*Max Time Avg. Power (dBm)	Max Time Avg. Power (mW)	SAR test exclusion calculation value <sup>(NOTE 1)</sup>	10-g extremity SAR test exclusion thresholds	Result
2.405 ~ 2.474	13.47	-7.89	0.163	0.05055628	7.5	Pass

**NOTE:** 1. Calculate SAR test exclusion thresholds from condition "1" formulas.  
 2. \*Time Avg. Power= Avg. Power+Duty factor

**GFSK Duty Cycle of Test Signal**

Duty Cycle	Tx on (ms)	Tx total (ms)	Duty Factor (dB)
		0.073	9.981



### BT-LE Avg. Power Table

Channel	Frequency (MHz)	Avg. Power	
		(mW)	(dBm)
0	2402	21.677	13.36
19	2440	19.32	12.86
39	2480	17.989	12.55

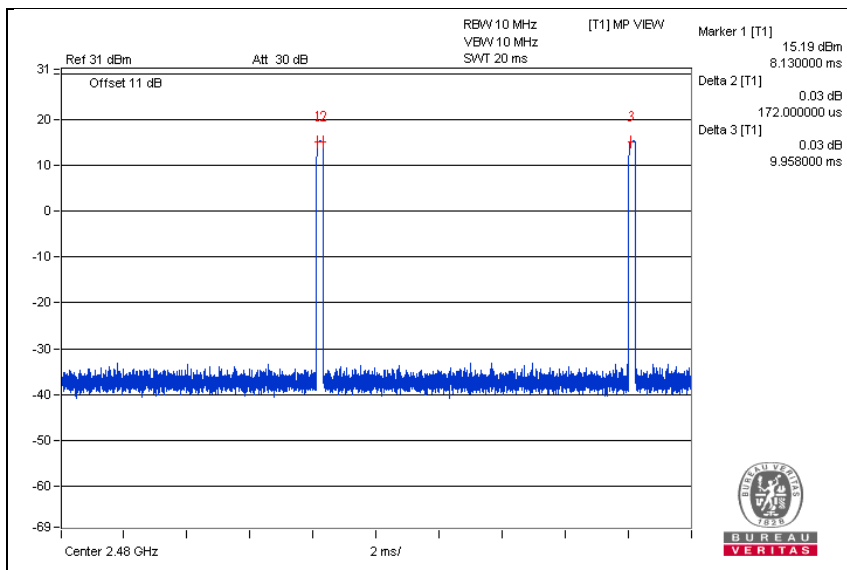
### For BT-LE SAR Test Exclusion Thresholds

Frequency (GHz)	Max Avg. Power (dBm)	*Max Time Avg. Power (dBm)	Max Time Avg. Power (mW)	SAR test exclusion calculation value <sup>(NOTE 1)</sup>	10-g extremity SAR test exclusion thresholds	Result
2.402 ~ 2.480	13.36	-4.27	0.374	0.11592793	7.5	Pass

**NOTE:** 1. Calculate SAR test exclusion thresholds from condition "1" formulas.  
 2. \*Time Avg. Power=Avg. Power+Duty factor

### BT-LE Duty Cycle of Test Signal

Duty Cycle	Tx on (ms)	Tx total (ms)	Duty Factor (dB)
	0.172	9.958	-17.63



## 4 Conclusion

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

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