RF Exposure Report

Report No.:	SA180904C01 R1
FCC ID:	L6AITC100-1
Test Model:	ITC100-1
Series Model:	ITC100-2
Received Date:	Sep. 04, 2018
Date of Evaluation:	Oct. 12, 2018
Issued Date:	Oct. 25, 2018
Applicant:	BlackBerry Limited
Address:	2200 University Avenue East Waterloo, Ontario N2K 0A7 Canada
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)
FCC Registration / Designation Number:	788550 / TW0003

Testing Laboratory
2021

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Release Control Record

Issue No.	Description	Date Issued
SA180904C01	Original Release	Oct. 16, 2018
SA180904C01 R1	Revise maximum power	Oct. 25, 2018

1 Certificate of Conformity

Product:	Asset Tracker
Brand:	BlackBerry
Test Model:	ITC100-1
Series Model:	ITC100-2
Sample Status:	Identical Prototype
Applicant:	BlackBerry Limited
Date of Evaluation:	Oct. 12, 2018
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 : Rona Chen , **Date:** Oct. 25, 2018

Rona Chen / Specialist

Approved by : , **Date:** Oct. 25, 2018

Dylan Chiou / Project Engineer

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				
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

f = Frequency in MHz ; *Plane-wave equivalent power density

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 20 cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 General Description

Brand	Model	Difference
BlackBerry	ITC100-1	Supports SRD function
	ITC100-2	Disable SRD function via software

2.5 Calculation Result of Maximum Conducted Power

Band	Frequency Band (MHz)	Max Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
GSM850	824-849	33.0	-3.1	20	0.194	0.549
PCS1900	1850-1910	30.0	-2.9	20	0.102	1.0
WCDMA II	1850-1910	23.5	-2.9	20	0.023	1.0
WCDMA V	824-849	24.5	-3.1	20	0.027	0.549
LTE 2	1850-1910	23.0	-2.9	20	0.020	1.0
LTE 4	1710-1755	22.0	-3.2	20	0.015	1.0
LTE 5	824-849	22.5	-3.1	20	0.017	0.549
LTE 12	699-716	23.0	-6.3	20	0.009	0.466
SRD	902-928	18.33	-3.6	20	0.006	0.601

Note:
1. Above used Max. Output Power is Max. Tune-up Power.
2. Only SRD use Maximum Conducted Power as Tunp-up Power.

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WWAN + SRD = 0.194/0.549 + 0.006/0.601 = 0.363

Therefore the maximum calculations of above situations are less than the "1" limit.

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