MPE/RF EXPOSURE REPORT

FCC CFR 47 Part 1.1310

Report No.: LYFT16-U7 Rev A

Company: Lyft, Inc.

Model Name: STN010

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To: FCC CFR 47 Part 1.1310

Report Serial No.: LYFT16-U7 Rev A

This report supersedes: LYFT16-U7 Draft

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TESTING CERT #2381.01

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels
Power Density = Pd (mW/cm^2) = EIRP/(4*π*d^2)
EIRP = P * G
P = Peak output power (mW)
G = Antenna numeric gain (numeric)
d = Separation distance (cm)
Numeric Gain = 10 ^ (G (dBi)/10)

FCC CFR 47 Part 1.1310 Power Density Limits for General Population/Uncontrolled Exposure:

1.34 – 30 MHz Plane Wave Power Density = (180/f^2) mW/cm^2
300-1,500 MHz; Power Density = f/1500 mW/cm^2
1,500-100,000 MHz; Power Density = 1.0 mW/cm^2

The calculations in the table below use the highest measured conducted power values together with the antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

NFC Output Power is as declared by the manufacturer.

Specification - Maximum Permissible Exposure Limits.
The Limit is defined in Table 1 of FCC §1.1310.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm^2) @ 20cm	Power Density Limit (mW/cm^2)	Min Calculated safe distance for Limit (cm)
NFC 13.56	0.0	1.00	23.00	199.53	0.040	0.98	3.98
LTE Band 2; 1909.3	3.0	2.00	21.21	132.13	0.052	1.0	4.58
LTE Band 4; 1710.7	3.0	2.00	21.97	157.40	0.062	1.0	5.00
LTE Band 5; 824.7	3.0	2.00	22.46	176.20	0.070	0.55	7.13
LTE Band 13; 779.5	3.0	2.00	22.94	196.79	0.078	0.52	7.75
LTE Band 17; 710.0	3.0	2.00	22.89	194.54	0.077	0.47	8.08

Note 1: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Worst Case Simultaneous Operation

These calculations represent worst case in terms of the exposure levels and assume all radio transmitters i.e. LTE Cellular and NFC radio are operating simultaneously.

Freq. Band (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Safe Distance for Summation (cm)	Power Density Limit (mW/cm^2) @ 20cm Pd_{Limit}	Calculated Power Density (mW/cm^2) Pd_{Calc}	Pd_{Calc}/ Pd_{Limit}
13.56	0.0	1.00	23.00	199.53	20.00	0.98	0.040	0.0405
LTE Band 17; 710.0	3.0	2.00	22.89	194.54	20.00	0.47	0.077	0.1631
						Summation Pd_{Calc}/ Pd_{Limit} @ 20 cm distance:		**0.205**

Evaluation for compliance of simultaneous transmission where the power density limits are different is performed by the summation of ratios;

Calculated Power Density/Power Density Limit

$Pd_{Calc1}/Pd_{Limit1} + Pd_{Calc2}/Pd_{Limit2} + Pd_{Calc3}/Pd_{Limit3}$ + etc. < 1.

SUMMARY;Summation of Pd_{Calc}/ Pd_{Limit} @ 20 cm distance < 1, i.e. device meets RF exposure requirements.

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

Specification
Maximum Permissible Exposure Limits

FCC CFR 47 Part 1.1310 Power Density Limits for General Population/Uncontrolled Exposure:
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