

CERTIFICATION TEST REPORT

Report Number. : 11616858-E3V4

- Applicant : Verifone, Inc. 1400 West Stanford Ranch Road Rocklin, CA 95765, U.S.A.
 - Model : V200t Plus 3G/D/E
 - FCC ID : B32V200TPLUS
 - **IC** : 787C-V200TPLUS
- **EUT Description :** Point of Sale Terminal
- Test Standard(s) : FCC 47 CFR PART 15 SUBPART C INDUSTRY CANADA RSS - 247 ISSUE 2 INDUSTRY CANADA RSS-GEN ISSUE 4

Date Of Issue:

April 03, 2018

Prepared by: UL Verification Services Inc. 47173 Benicia Street Fremont, CA 94538, U.S.A. TEL: (510) 771-1000 FAX: (510) 661-0888



Revision History

| Rev. | lssue Date | Revisions | Revised By |
|------|---------------|--------------------------------------------------------------------------------|------------------|
| V1 | 12/07/17 | Initial Issue | |
| V2 | 02/26/18 | Revised Description of EUT. Revised Scope of Testing section. Revised AG | Frank Ibrahim |
| V3 | 03/12/18 | Revised Scope of Testing | Frank Ibrahim |
| V4 | 04/03/18 | Revised Scope of Testing | Glenn Escano |

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1. ATTESTATION OF TEST RESULTS

| COMPANY NAME: | Verifone, Inc. 1400 West Stanford Ranch Road Suite 200 Rocklin, CA 95765, U.S.A. |
|------------------|----------------------------------------------------------------------------------------|
| EUT DESCRIPTION: | Point of Sale Terminal |
| MODEL: | V200t Plus 3G/D/E |
| SERIAL NUMBER: | 401-431-539 |
| DATE TESTED: | November 27 – 28, 2017 |
| | |

| APPLICABLE STANDARDS | | | | | |
|---------------------------------|--------------|--|--|--|--|
| STANDARD | TEST RESULTS | | | | |
| FCC 47 CFR PART 15 SUBPART C | Pass | | | | |
| INDUSTRY CANADA RSS-247 Issue 2 | Pass | | | | |
| INDUSTRY CANADA RSS-GEN Issue 4 | Pass | | | | |

UL Verification Services Inc. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Verification Services Inc. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL Verification Services Inc. By:

FRANK IBRAHIM CONSUMER TECHNOLOGY DIVISION OPERATIONS LEADER UL VERIFICATION SERVICES INC Prepared By:

GLENN ESCANO CONSUMER TECHNOLOGY DIVISION TEST ENGINEER UL VERIFICATION SERVICES INC

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC CFR 47 Part 2, FCC CFR 47 Part 15 Subpart C, KDB 558074 D01 v04, ANSI C63.10-2013, IC RSS-GEN Issue 4, and IC RSS-247 Issue 2.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

| 47173 Benicia Street | 47266 Benicia Street |
|------------------------|------------------------|
| Chamber A (IC:2324B-1) | Chamber D (IC:22541-1) |
| Chamber B (IC:2324B-2) | Chamber E (IC:22541-2) |
| Chamber C (IC:2324B-3) | Chamber F (IC:22541-3) |
| | Chamber G (IC:22541-4) |
| | Chamber H (IC:22541-5) |

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0.

Chambers A through C are covered under Industry Canada Company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively and Chambers D through H are covered under Industry Canada company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB) 36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

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4.3. **MEASUREMENT UNCERTAINTY**

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Parameter | Uncertainty |
|-----------------------------------------------------|-------------|
| Worst Case Conducted Disturbance, 9KHz to 0.15 MHz | 3.84 dB |
| Worst Case Conducted Disturbance, 0.15 to 30 MHz | 3.65 dB |
| Worst Case Radiated Disturbance, 9KHz to 30 MHz | 3.15 dB |
| Worst Case Radiated Disturbance, 30 to 1000 MHz | 5.36 dB |
| Worst Case Radiated Disturbance, 1000 to 18000 MHz | 4.32 dB |
| Worst Case Radiated Disturbance, 18000 to 26000 MHz | 4.45 dB |
| Worst Case Radiated Disturbance, 26000 to 40000 MHz | 5.24 dB |

Uncertainty figures are valid to a confidence level of 95%.

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5. EQUIPMENT UNDER TEST

5.1. **DESCRIPTION OF EUT**

The EUT is a Mobile Point of Sale Terminal which supports the following technologies WLAN 2.4 GHz and 5 GHz, Bluetooth, GSM 850 / GSM 1900, WCDMA Band II / WCDMA Band V, and NFC.

5.2. SCOPE OF TESTING

This report covers radiated emissions portion. For antenna port data refer to report number 11631998-E2V1 (FCC ID: B32V240MPLUS, IC 787C-V240MPLUS) that covered model V240m Plus 3GBW as the Bluetooth radio module covered by this report is identical to the Bluetooth radio module of model V240m Plus 3GBW with same output power values. Output power was confirmed prior to making radiated spurious measurements.

5.3. **DESCRIPTION OF AVAILABLE ANTENNAS**

The radio utilizes a Chip Multilayer Antenna with the following gains:

| Frequency Band (GHz) | Antenna Gain (dBi) | |
|-------------------------|--------------------|--|
| 2402-2480 | 1.90 | |

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was VOS2 30640XXX

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1GHz, above 18GHz, and power line conducted emission were performed with the EUT was set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, & Z, and it was determined that X-Axis orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X-Axis orientation.

All final tests in the BLE mode were made at 1 Mb/s.

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5.6. **DESCRIPTION OF TEST SETUP**

SUPPORT EQUIPMENT

| Support Equipment List | | | | | | |
|----------------------------------------------|----------|-------------|---------------|--|--|--|
| Description Manufacturer Model Serial Number | | | | | | |
| AC Adapter | Verifone | PSA18A-082A | 5A00170801207 | | | |

I/O CABLES (RADIATED EMISSIONS)

| I/O Cable List | | | | | | | |
|----------------|--------------------------------------------------------------------------------------------------------------|-------|------|--|------------|--|--|
| Cable | Cable Port # of identical Connector Cable Type Cable Remarks | | | | | | |
| No | | ports | Туре | | Length (m) | | |
| | | | | | | | |

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RADIATED EMISSIONS SETUP DIAGRAM



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6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

| TEST EQUIPMENT LIST | | | | | | | |
|-------------------------------------------------------|------------------------------------|----------------------------|-------|------------|--|--|--|
| Description | Manufacturer | Model | Asset | Cal Due | | | |
| Antenna, Broadband Hybrid, 30MHz to 2000MHz w/4dB Pad | Sunol Sciences Corp. | JB3 | T899 | 06/15/2018 | | | |
| Antenna, Active Loop 9kHz-30MHz | Com-Power Corp. | AL-130R | T1866 | 10/10/2018 | | | |
| Antenna, Horn 1-18GHz | ETS-Lindgren | 3117 | T863 | 06/09/2018 | | | |
| Antenna, Horn 18-26.5GHz | ARA | MWH-1826/B | T449 | 06/12/2018 | | | |
| Amplifier, 1-26.5GHz | MITEQ | AFS42-00101800- 25-S-42 | T1165 | 08/01/2018 | | | |
| Amplifier, 1-26.5GHz | Agilent (Keysight) Technologies | 8449B | T404 | 06/12/2018 | | | |
| Amplifier, 10kHz-1GHz | HP | 8447D | T10 | 02/15/2018 | | | |
| Amplifier, 1-8 GHz | MITEQ | AFS42-00101800- 25-S-42 | T931 | 08/26/2018 | | | |
| Spectrum Analyzer, PXA, 3Hz to 44GHz | Agilent (Keysight) Technologies | N9030A | T1454 | 12/15/2017 | | | |
| Spectrum Analyzer, PXA, 3Hz to 44GHz | Agilent (Keysight) Technologies | E9030A | T907 | 01/23/2018 | | | |
| Bluetooth Tester | Rohde & Schwarz | CBT | T258 | 07/25/2018 | | | |

| Test Software List | | | | | |
|----------------------------------------|----|--------|-----------------------|--|--|
| Description Manufacturer Model Version | | | | | |
| Radiated Software | UL | UL EMC | Ver 9.5, Dec 01, 2016 | | |

7. RADIATED TEST RESULTS

7.1. ON TIME, DUTY CYCLE

<u>LIMITS</u>

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

| Mode | ON Time | Period | Duty Cycle | Duty | Duty Cycle | 1/T |
|------|----------------|--------|-------------------|--------|--------------------------|-------------|
| | В | | x | Cycle | Correction Factor | Minimum VBW |
| | (msec) | (msec) | (linear) | (%) | (dB) | (kHz) |
| BLE | 0.390 | 0.625 | 0.623 | 62.33% | 2.05 | 2.567 |

DUTY CYCLE PLOT



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7.2. LIMITS AND PROCEDURE

<u>LIMITS</u>

FCC §15.205 and §15.209 IC RSS-GEN, Section 8.9 and 8.10.

| Frequency Range (MHz) | Field Strength Limit (uV/m) at 3 m | Field Strength Limit (dBuV/m) at 3 m |
|--------------------------|---------------------------------------|-----------------------------------------|
| 0.009-0.490 | 2400/F(kHz) @ 300m | 2400/F(kHz) @ 300m |
| 0.490-1.705 | 24000/F(kHz) @ 30m | 24000/F(kHz) @ 30m |
| 1.705-30.0 | 30 @ 30m | 30 @ 30m |
| 30 - 88 | 100 | 40 |
| 88 - 216 | 150 | 43.5 |
| 216 - 960 | 200 | 46 |
| Above 960 | 500 | 54 |

NOTE: KDB 414788 D01 OATS and Chamber Correlation Justification

- Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 120 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements for the 30-1000 MHz range, 9 kHz for peak detection measurements or 9 kHz for quasi-peak detection measurements for the 0.15-30 MHz range and 200 Hz for peak detection measurements or 200 Hz for quasi-peak detection measurements for the 9 to 150 kHz range. Peak detection is used unless otherwise noted as quasi-peak.

For pre-scans above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.

For final measurements above 1 GHz the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 3 MHz for peak measurements and as applicable for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

7.3. SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)



NOTE: KDB 414788 D01 OATS and Chamber Correlation Justification

- Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Trace Markers

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna (dB/m) | Cbl (dB) | Dist Corr 300m | Corrected Reading (dBuVolts) | Peak Limit (dBuV/m) | Margin (dB) | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) |
|--------|--------------------|----------------------------|-----|---------------------------|-------------|-------------------|------------------------------------|------------------------|----------------|-----------------------|----------------|------------------------|----------------|-----------------------|----------------|-------------------|
| 4 | .01405 | 50.05 | Pk | 15.3 | 1.4 | -80 | -13.25 | 64.63 | -77.88 | 44.63 | -57.88 | - | - | - | - | 0-360 |
| 1 | .26493 | 46.93 | Pk | 13.8 | 1.5 | -80 | -17.77 | | - | - | - | 39.15 | -56.92 | 19.15 | -36.92 | 0-360 |

Pk - Peak detector

| Marker | Frequency (MHz) | Meter Reading (dBuV) | Det | Loop Antenna (dB/m) | Cbl (dB) | Dist Corr (dB) 40Log | Corrected Reading (dBuVolts) | QP Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | Margin (dB) | Avg Limit (dBuV/m) | Margin (dB) | Azimuth (Degs) |
|--------|--------------------|----------------------------|-----|---------------------------|-------------|-------------------------|------------------------------------|----------------------|----------------|------------------------|----------------|-----------------------|----------------|-------------------|
| 5 | .65173 | 36.23 | Pk | 14 | 1.5 | -40 | 11.73 | 31.33 | -19.6 | - | - | - | - | 0-360 |
| 2 | 11.89104 | 15.59 | Pk | 14.7 | 1.6 | -40 | -8.11 | 29.5 | -37.61 | - | - | - | - | 0-360 |
| 3 | 15.98452 | 14.21 | Pk | 14.4 | 1.6 | -40 | -9.79 | 29.5 | -39.29 | - | - | - | - | 0-360 |
| 6 | 22.89032 | 22.31 | Pk | 13.8 | 1.7 | -40 | -2.19 | 29.5 | -31.69 | - | - | - | - | 0-360 |

Pk - Peak detector

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7.3.1. SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)





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REPORT NO: 11616858-E3V4 FCC ID: B32V200TPLUS

Trace Markers

| Marker | Frequency | Meter | Det | AF T899 (dB/m) | Amp/Cbl (dB) | Corrected | QPk Limit (dBuV/m) | Margin | Azimuth | Height | Polarity |
|--------|------------|---------|-----|----------------|--------------|-----------|--------------------|--------|---------|--------|----------|
| | (MHz) | Reading | | | | Reading | | (dB) | (Degs) | (cm) | |
| | | (dBuV) | | | | (dBuV/m) | | | | | |
| 4 | * 127.5627 | 37.4 | Pk | 17.7 | -27.6 | 27.5 | 43.52 | -16.02 | 0-360 | 100 | V |
| 1 | * 251.2542 | 49.3 | Qp | 15.5 | -26.3 | 38.5 | 46.02 | -7.52 | 250 | 125 | Н |
| 6 | * 256.8074 | 49.5 | Pk | 15.8 | -26.3 | 39 | 46.02 | -7.02 | 0-360 | 100 | V |
| 3 | 50.7029 | 50.45 | Pk | 11.2 | -28.5 | 33.15 | 40 | -6.85 | 0-360 | 100 | V |
| 5 | 198.1098 | 39.21 | Pk | 16.4 | -26.8 | 28.81 | 43.52 | -14.71 | 0-360 | 100 | V |
| 2 | 316.8651 | 46.54 | Qp | 17.8 | -25.8 | 38.54 | 46.02 | -7.48 | 240 | 108 | Н |

Pk - Peak detector

Qp - Quasi-Peak detector

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7.3.2. TRANSMITTER ABOVE 1 GHz

BANDEDGE (LOW CHANNEL)



Trace Markers

| Marker | Frequency | Meter | Det | AF T863 | Amp/Cbl/Fltr/Pad | DC | Corrected | Average | Margin | Peak Limit | РК | Azimuth | Height | Polarity |
|--------|-----------|---------|-----|---------|------------------|------|-----------|----------|--------|------------|--------|---------|--------|----------|
| | (GHz) | Reading | | (dB/m) | (dB) | Corr | Reading | Limit | (dB) | (dBuV/m) | Margin | (Degs) | (cm) | |
| | | (dBuV) | | | | (dB) | (dBuV/m) | (dBuV/m) | | | (dB) | | | |
| 1 | * 2.39 | 34.65 | Pk | 32 | -21.2 | 0 | 45.45 | - | - | 74 | -28.55 | 217 | 194 | н |
| 2 | * 2.366 | 38.22 | Pk | 31.9 | -21.1 | 0 | 49.02 | - | - | 74 | -24.98 | 217 | 194 | н |
| 3 | * 2.39 | 25.72 | RMS | 32 | -21.2 | 2.05 | 38.57 | 54 | -15.43 | - | - | 217 | 194 | н |
| 4 | * 2.373 | 27.21 | RMS | 31.9 | -21.2 | 2.05 | 39.96 | 54 | -14.04 | - | - | 217 | 194 | Н |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector RMS - RMS detection

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Trace Markers

| Marker | Frequency | Meter | Det | AF T863 | Amp/Cbl/Fltr/Pad | DC | Corrected | Average | Margin | Peak Limit | РК | Azimuth | Height | Polarity |
|--------|-----------|---------|-----|---------|------------------|------|-----------|----------|--------|------------|--------|---------|--------|----------|
| | (GHz) | Reading | | (dB/m) | (dB) | Corr | Reading | Limit | (dB) | (dBuV/m) | Margin | (Degs) | (cm) | |
| | | (dBuV) | | | | (dB) | (dBuV/m) | (dBuV/m) | | | (dB) | | | |
| 1 | * 2.39 | 34.93 | Pk | 32 | -21.2 | 0 | 45.73 | - | - | 74 | -28.27 | 223 | 260 | V |
| 2 | * 2.35 | 37.96 | Pk | 31.8 | -21 | 0 | 48.76 | - | - | 74 | -25.24 | 223 | 260 | V |
| 3 | * 2.39 | 25.63 | RMS | 32 | -21.2 | 2.05 | 38.48 | 54 | -15.52 | - | - | 223 | 260 | V |
| 4 | * 2.377 | 27.16 | RMS | 31.9 | -21.2 | 2.05 | 39.91 | 54 | -14.09 | - | - | 223 | 260 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector RMS - RMS detection

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Trace Markers

| Marker | Frequency | Meter | Det | AF T863 | Amp/Cbl/Fltr/Pad | DC | Corrected | Average | Margin | Peak Limit | РК | Azimuth | Height | Polarity |
|--------|-----------|---------|-----|---------|------------------|------|-----------|----------|--------|------------|--------|---------|--------|----------|
| | (GHz) | Reading | | (dB/m) | (dB) | Corr | Reading | Limit | (dB) | (dBuV/m) | Margin | (Degs) | (cm) | |
| | | (dBuV) | | | | (dB) | (dBuV/m) | (dBuV/m) | | | (dB) | | | |
| 1 | * 2.484 | 36.62 | Pk | 32.5 | -20.9 | 0 | 48.22 | - | - | 74 | -25.78 | 215 | 149 | н |
| 2 | * 2.485 | 38.43 | Pk | 32.5 | -20.8 | 0 | 50.13 | - | - | 74 | -23.87 | 215 | 149 | н |
| 3 | * 2.484 | 26.8 | RMS | 32.5 | -20.9 | 2.05 | 40.45 | 54 | -13.55 | - | - | 215 | 149 | н |
| 4 | 2.53 | 28.08 | RMS | 32.5 | -20.9 | 2.05 | 41.73 | 54 | -12.27 | - | - | 215 | 149 | н |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector RMS - RMS detection

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Trace Markers

| Marker | Frequency | Meter | Det | AF T863 | Amp/Cbl/Fltr/Pad | DC | Corrected | Average | Margin | Peak Limit | РК | Azimuth | Height | Polarity |
|--------|-----------|---------|-----|---------|------------------|------|-----------|----------|--------|------------|--------|---------|--------|----------|
| | (GHz) | Reading | | (dB/m) | (dB) | Corr | Reading | Limit | (dB) | (dBuV/m) | Margin | (Degs) | (cm) | |
| | | (dBuV) | | | | (dB) | (dBuV/m) | (dBuV/m) | | | (dB) | | | |
| 1 | * 2.484 | 35.49 | Pk | 32.5 | -20.9 | 0 | 47.09 | - | - | 74 | -26.91 | 230 | 280 | V |
| 3 | * 2.484 | 26.64 | RMS | 32.5 | -20.9 | 2.05 | 40.29 | 54 | -13.71 | - | - | 230 | 280 | V |
| 4 | * 2.489 | 27.73 | RMS | 32.5 | -21 | 2.05 | 41.28 | 54 | -12.72 | - | - | 230 | 280 | V |
| 2 | 2.524 | 39.09 | Pk | 32.6 | -20.9 | 0 | 50.79 | - | - | 74 | -23.21 | 230 | 280 | V |

* - indicates frequency in CFR47 Pt 15 / IC RSS-Restricted Band Pk - Peak detector RMS - RMS detection

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REPORT NO: 11616858-E3V4 FCC ID: B32V200TPLUS HARMONICS AND SPURIOUS EMISSIONS 1 TO 18 GHz





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REPORT NO: 11616858-E3V4 FCC ID: B32V200TPLUS

Radiated Emissions

| Marker | Frequency (GHz) | Meter Reading | Det | AF T863 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC | Corrected | Avg Limit (dBuV/m) | (dB) | Peak Limit (dBuV/m) | PK Margin | Azimuth (Degs) | Height (cm) | Polarity |
|--------|--------------------|------------------|------|-------------------|--------------------------|------|-----------|-----------------------|--------|------------------------|--------------|-------------------|----------------|----------|
| | (0112) | (dBuV) | | (0.5,, | (00) | (dB) | (dBuV/m) | (0501)) | (0.5) | (0.5007)) | (dB) | (2080) | (011) | |
| 1 | * 1.32 | 34.46 | PK2 | 28.9 | -21.7 | 0 | 41.66 | - | - | 74 | -32.34 | 55 | 199 | Н |
| | * 1.319 | 19.15 | MAv1 | 28.9 | -21.8 | 2.05 | 28.3 | 54 | -25.7 | - | - | 55 | 199 | Н |
| 5 | * 2.225 | 35.2 | PK2 | 31.8 | -21 | 0 | 46 | - | - | 74 | -28 | 223 | 199 | V |
| | * 2.226 | 19.42 | MAv1 | 31.8 | -21.1 | 2.05 | 32.17 | 54 | -21.83 | - | - | 223 | 199 | V |
| 3 | * 3.808 | 39.9 | PK2 | 33.5 | -30.3 | 0 | 43.1 | - | - | 74 | -30.9 | 241 | 104 | Н |
| | * 3.808 | 27.92 | MAv1 | 33.5 | -30.3 | 2.05 | 33.17 | 54 | -20.83 | - | - | 241 | 104 | н |
| 4 | * 4.74 | 39.43 | PK2 | 34.2 | -28.3 | 0 | 45.33 | - | - | 74 | -28.67 | 277 | 104 | н |
| | * 4.739 | 27.43 | MAv1 | 34.2 | -28.3 | 2.05 | 35.38 | 54 | -18.62 | - | - | 277 | 104 | Н |
| 2 | 1.921 | 35.39 | PK2 | 31 | -21 | 0 | 45.39 | - | - | - | - | 195 | 102 | Н |
| 6 | 7.924 | 35.74 | PK2 | 36 | -25.5 | 0 | 46.24 | - | - | - | - | 301 | 198 | V |

* - indicates frequency in CFR15.205/RSS-GEN 8.10 -Restricted Band PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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Radiated Emissions

| Marker | Frequency | Meter | Det | AF T863 | Amp/Cbl/Fltr/Pad | DC | Corrected | Avg Limit | Margin | Peak Limit | PK | Azimuth | Height | Polarity |
|--------|-----------|---------|------|---------|------------------|------|-----------|-----------|--------|------------|--------|---------|--------|----------|
| | (GHz) | Reading | | (dB/m) | (dB) | Corr | Reading | (dBuV/m) | (dB) | (dBuV/m) | Margin | (Degs) | (cm) | |
| | | (dBuV) | | | | (dB) | (dBuV/m) | | | | (dB) | | | |
| 2 | * 4.723 | 38.64 | PK2 | 34.2 | -28.7 | 0 | 44.14 | - | - | 74 | -29.86 | 255 | 100 | Н |
| | * 4.726 | 27 | MAv1 | 34.2 | -28.6 | 2.05 | 34.65 | 54 | -19.35 | - | - | 255 | 100 | Н |
| 4 | * 8.268 | 36.07 | PK2 | 36.1 | -25.4 | 0 | 46.77 | - | - | 74 | -27.23 | 199 | 100 | Н |
| | * 8.267 | 24.1 | MAv1 | 36.1 | -25.4 | 2.05 | 36.85 | 54 | -17.15 | - | - | 199 | 100 | Н |
| 1 | 1.92 | 37.16 | PK2 | 31 | -20.9 | 0 | 47.26 | - | - | - | - | 290 | 100 | Н |
| 5 | 2.174 | 35.71 | PK2 | 31.5 | -21 | 0 | 46.21 | - | - | - | - | 312 | 100 | V |
| 3 | 5.679 | 38.2 | PK2 | 35.1 | -27.8 | 0 | 45.5 | - | - | - | - | 174 | 100 | Н |
| 6 | 7.237 | 37.34 | PK2 | 35.8 | -27.2 | 0 | 45.94 | - | - | - | - | 75 | 100 | V |

* - indicates frequency in CFR15.205/RSS-GEN 8.10 -Restricted Band PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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REPORT NO: 11616858-E3V4 FCC ID: B32V200TPLUS

Radiated Emissions

| Marker | Frequency (GHz) | Meter Reading | Det | AF T863 (dB/m) | Amp/Cbl/Fltr/Pad (dB) | DC Corr | Corrected Reading | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin | Azimuth (Degs) | Height (cm) | Polarity |
|--------|--------------------|------------------|------|-------------------|--------------------------|------------|----------------------|-----------------------|----------------|------------------------|--------------|-------------------|----------------|----------|
| | (, | (dBuV) | | (,, | () | (dB) | (dBuV/m) | (,, | () | (,, | (dB) | (= -8-) | () | |
| 4 | * 2.362 | 36.14 | PK2 | 31.9 | -21.1 | 0 | 46.94 | - | - | 74 | -27.06 | 243 | 101 | V |
| | * 2.361 | 25.08 | MAv1 | 31.9 | -21.1 | 2.05 | 37.93 | 54 | -16.07 | - | - | 243 | 101 | V |
| 5 | * 4.744 | 39.75 | PK2 | 34.2 | -28.4 | 0 | 45.55 | - | - | 74 | -28.45 | 122 | 104 | V |
| | * 4.743 | 28.2 | MAv1 | 34.2 | -28.4 | 2.05 | 36.05 | 54 | -17.95 | - | - | 122 | 104 | V |
| 1 | 1.92 | 37.03 | PK2 | 31 | -20.9 | 0 | 47.13 | - | - | - | - | 306 | 101 | Н |
| 2 | 2.035 | 35.56 | PK2 | 31.4 | -21.2 | 0 | 45.76 | - | - | - | - | 271 | 101 | Н |
| 6 | 7.929 | 35.8 | PK2 | 36 | -25.3 | 0 | 46.5 | - | - | - | - | 169 | 198 | V |
| 3 | 10.339 | 32.58 | PK2 | 37.5 | -22.6 | 0 | 47.48 | - | - | - | - | 212 | 198 | Н |

* - indicates frequency in CFR15.205/RSS-GEN 8.10 -Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

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7.3.3. SPURIOUS EMISSIONS 18 TO 26 GHz (WORST-CASE CONFIGURATION)

| | 28 Nov 2017 18:35:54 |
|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| | RF Emissions |
| | Project Number:11616858 Client:Uerifone Configuration:EUT + AC Adapter |
| | |
| Peak Limit (dBuV/m) | |
| | |
| | |
| Avg Limit (dBuU/m) | |
| | |
| | _ |
| 1 | |
| | |
| | |
| | |
| | |
| | |
| | |
| 3 | 26 |
| 3 | |
| 2anga (SHz) 158W/8U 5cf/kttn Det/hrg Tupe Samep PLs 1:18-25 1141-363/2M 87/8 P2A/Lgg/w− ¹ /deo Hanaer(Auto) 9881 | 26 Frequency (GHz) 15gap/fode Label Range (BHz) RBU/NEW Ref./Httn Det./Hing Type Sweep Pts #Super/fode Label NEW |



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REPORT NO: 11616858-E3V4 FCC ID: B32V200TPLUS

Trace Markers

| Marker | Frequency (GHz) | Meter Reading | Det | T89 AF (dB/m) | Amp/Cbl (dB) | Dist Corr (dB) | Corrected Reading | Avg Limit (dBuV/m) | Margin (dB) | Peak Limit (dBuV/m) | PK Margin (dB) |
|--------|--------------------|------------------|-----|------------------|-----------------|-------------------|----------------------|-----------------------|----------------|------------------------|-------------------|
| | | (dBuV) | | | | | (dBuVolts) | | | | |
| 1 | 20.059 | 38.65 | Pk | 32.9 | -25 | -9.5 | 37.05 | 54 | -16.95 | 74 | -36.95 |
| 2 | 21.225 | 38.88 | Pk | 33.1 | -25 | -9.5 | 37.48 | 54 | -16.52 | 74 | -36.52 |
| 3 | 23.787 | 39.41 | Pk | 33.7 | -24.2 | -9.5 | 39.41 | 54 | -14.59 | 74 | -34.59 |
| 4 | 21.816 | 38.24 | Pk | 33.3 | -24.5 | -9.5 | 37.54 | 54 | -16.46 | 74 | -36.46 |
| 5 | 23.084 | 39.04 | Pk | 33.6 | -25.1 | -9.5 | 38.04 | 54 | -15.96 | 74 | -35.96 |
| 6 | 23.995 | 39.96 | Pk | 33.2 | -24.4 | -9.5 | 39.26 | 54 | -14.74 | 74 | -34.74 |

Pk - Peak detector

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