

FCC PART 15.107,109
EMI MEASUREMENT AND TEST REPORT
For

ADESSO Technologies Inc.

Room 501,2 Block, Gaoxin 9th South Road,Vision Business Park,
Shenzhen Hi-Tech Industrial park, Zip code 518057

FCC ID: XGNWKB-32

Jun. 08, 2009

| | |
|--|---|
| This Report Concerns: Original Report | Equipment Type : Wireless 2.4 GHz RF Mini Trackball Keyboard |
| Test Engineer: | Eric Li <i>Eric Li</i> |
| Report No.: | F09052702A |
| Receive EUT Date/Test Date: | May. 28, 2009/ May. 28-Jun. 08, 2009 |
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1. GENERAL INFORMATION

1.1. Report information

1.1.1. This report is not a certificate of quality; it only applies to the sample of the specific product/equipment given at the time of its testing. The results are not used to indicate or imply that they are application to the similar items. In addition, such results must not be used to indicate or imply that BST approves recommends or endorses the manufacture, supplier or use of such product/equipment, or that BST in any way guarantees the later performance of the product/equipment.

1.1.2. The sample/s mentioned in this report is/are supplied by Applicant, BST therefore assumes no responsibility for the accuracy of information on the brand name, model number, origin of manufacture or any information supplied.

Additional copies of the report are available to the Applicant at an additional fee. No third part can obtain a copy of this report through BST, unless the applicant has authorized BST in writing to do so.

Test Facility -

The test site used to collect the radiated data is located on the address of Solid Industrial Co., Ltd. (FCC Registered Test Site Number: 759397) on 333 Bulong Highway Buji, Longgang Shenzhen, Guangdong, China

The Test Site is constructed and calibrated to meet the FCC requirements.

1.2. Measurement Uncertainty

Available upon request.

2. PRODUCT DESCRIPTION

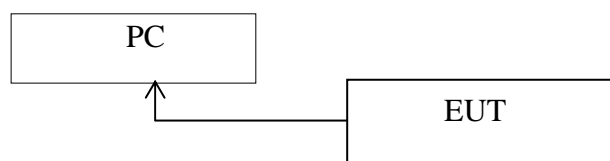
2.1. EUT Description

Description : Wireless 2.4 GHz RF Mini Trackball Keyboard
 Applicant : ADESSO Technologies Inc.
 Room 501,2 Block, Gaoxin 9th South Road,
 Vision Business Park,
 Shenzhen Hi-Tech Industrial park, Zip code 518057
 Model Number : WKB-3100UB,
 KB-31XXYZ,WKB-32XXYZ,WKB-33XXYZ,
 WKB-34XXYZ,WKB-35XXYZ,WKB-36XXYZ,
 WKB-37XXYZ,WKB-38XXYZ,WKB-39XXYZ

Additional Information

Frequency : 2402MHZ~2480MHZ
 Number : -
 of Channels
 Power Supply : DC 5V (Supplied by PC)
 Maximum : N/A
 Range
 Transmitter : -
 Antenna
 Current : N/A
 Consumption

2.2. Block Diagram of EUT Configuration



2.3. Support Equipment List

IBM Laptop

R60

2.4. Test Conditions

Temperature: 23~25
 Relative Humidity: 55~63 %

3. FCC ID LABEL

FCC ID: XGNWKB-32

Label Location on EUT

EUT Bottom View/ FCC ID Label Location



4. TEST RESULTS SUMMARY

FCC 15 Subpart B,

| Test Standards | Test Items | Test Results |
|-------------------------------|----------------|--------------|
| FCC Part 15, Paragraph 15.107 | Conducted Test | Pass |
| FCC Part 15, Paragraph 15.109 | Radiated Test | Pass |

Remark: "N/A" means "Not applicable."

Modifications

No modification was made.

5. TEST EQUIPMENT USED

| Equipment/Facilities | Manufacturer | Model # | Serial no. | Date of Cal. | Cal. Interval |
|---------------------------------|--------------------|--------------|------------|---------------|---------------|
| Cable | Resenberger | N/A | NO.1 | Mar 10 , 2009 | 1 Year |
| Cable | SCHWARZBECK | N/A | NO.2 | Mar 10 , 2009 | 1 Year |
| Cable | SCHWARZBECK | N/A | NO.3 | Mar 10 , 2009 | 1 Year |
| LISN | Rohde & Schwarz | ESH3-Z5 | 100305 | Mar 10 , 2009 | 1 Year |
| 50 Coaxial Switch | ANRITSU CORP | MP59B | 6200283933 | Mar 10, 2009 | 1 Year |
| EMI Test Receiver | Rohde & Schwarz | ESP13 | 100180 | Oct.18,2008 | 1 Year |
| Spectrum Analyzer | Rohde & Schwarz | FSP40 | 100273 | Sep.10,2008 | 1 Year |
| 3m Semi-Anechoic Chamber | Albatross Projects | 9m×6m×6m | N/A | Feb.20,2009 | 1 Year |
| Signal Generator | FLUKE | PM5418 + Y/C | LO747012 | Feb.20,2009 | 1 Year |
| Signal Generator | FLUKE | PM5418TX | LO738007 | Feb.20,2009 | 1 Year |
| Loop Antenna | SCHWARZBECK | FMZB1516 | 113 | Jan.30,2009 | 1 Year |
| Trilog-Super Broadband Antenna | SCHWARZBECK | VULB9161 | 9161-4079 | Sep.22,2008 | 1 Year |
| Broad-Band Horn Antenna | SCHWARZBECK | BBHA9120D | 9120D-564 | Sep.22,2008 | 1 Year |
| Ultra Broadband Antenna | Rohde & Schwarz | HL-562 | 100110 | June.15,2008 | 1 Year |
| AMN | Rohde & Schwarz | ESH3-Z5 | 100196 | Oct.11,2008 | 1 Year |
| AMN | Rohde & Schwarz | ESH3-Z5 | 100197 | Oct.11,2008 | 1 Year |
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | N/A | N/A | N/A |
| Power Meter | Rohde & Schwarz | NRVD | 100041 | Feb.20,2009 | 1 Year |
| EMI Test Receiver | Rohde & Schwarz | ESCS30 | 100003 | Feb.20,2009 | 1 Year |
| Coaxial Cable with N-connectors | SCHWARZBECK | AK9515H | 95549 | Sep.22,2008 | 1 Year |
| Radio Communication Test Set | Rohde & Schwarz | CMS 54 | 846621/024 | Feb.20,2009 | 1 Year |
| Modulation Analyzer | Hewlett-Packard | 8901B | 2303A00362 | Feb.20,2009 | 1 Year |
| Absorbing clamp | Rohde & Schwarz | MDS-21 | N/A | Oct.29,2008 | 1 Year |

6. CONDUCTED POWER LINE TEST

6.1. Test Equipment

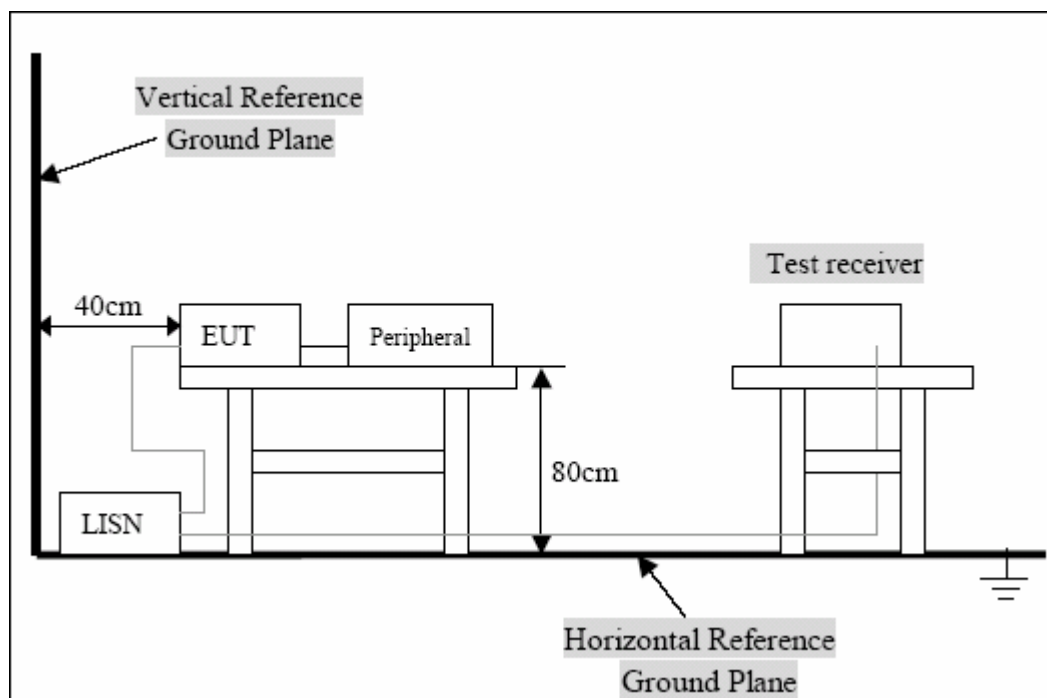
Please refer to section 4 this report.

6.2. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uh coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uh coupling impedance with 50ohm termination.

Both sides of A.C. Line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ASIN C63.4:2003 on conducted measurement. Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9KHz.

6.3. Test Setup



For the actual test configuration, please refer to the related items-Photos of testing

6.4. Configuring of the EUT

The EUT was configured according to ASIN C63.4:4-2003. Enable the signal transmitted from the external antenna from EUT to receiver. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

Note:

Below 1GHZ, the channel low, middle, high were pre-tested, The channel low, worst case one, was chosen for conducted and radiated emission test.

Above 1GHZ, the channel low, middle, high were tested individually.

A.EUT

| Device | Manufacturer | Model # | FCC ID |
|---|--------------------------|------------|-----------|
| Wireless 2.4 GHz RF Mini Trackball Keyboard | ADESSO Technologies Inc. | WKB-3100UB | XGNWKB-32 |

B.Internal

Devices

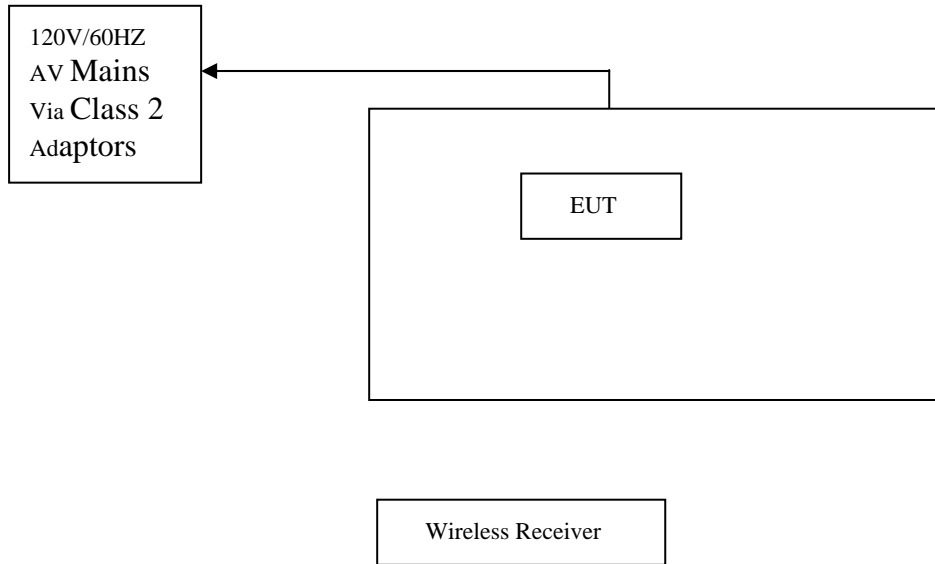
| Device | Manufacturer | Model # | FCC ID |
|--------|--------------|---------|--------|
| N/A | | | |
| | | | |
| | | | |
| | | | |
| | | | |

C.Peripherals

| Device | Manufacturer | Model # Serial # | FCC ID/ Doc | Cable |
|--------|--------------|---------------------|----------------|-------|
| N/A | | | | |
| | | | | |
| | | | | |
| | | | | |

6.5. EUT Operating Condition

Operating condition is according to ANSI C63.4-2003.
 Setup the EUT and simulators as shown on follow.
 Enable RF signal and confirm EUT active.
 Modulate output capacity of EUT up to specification.



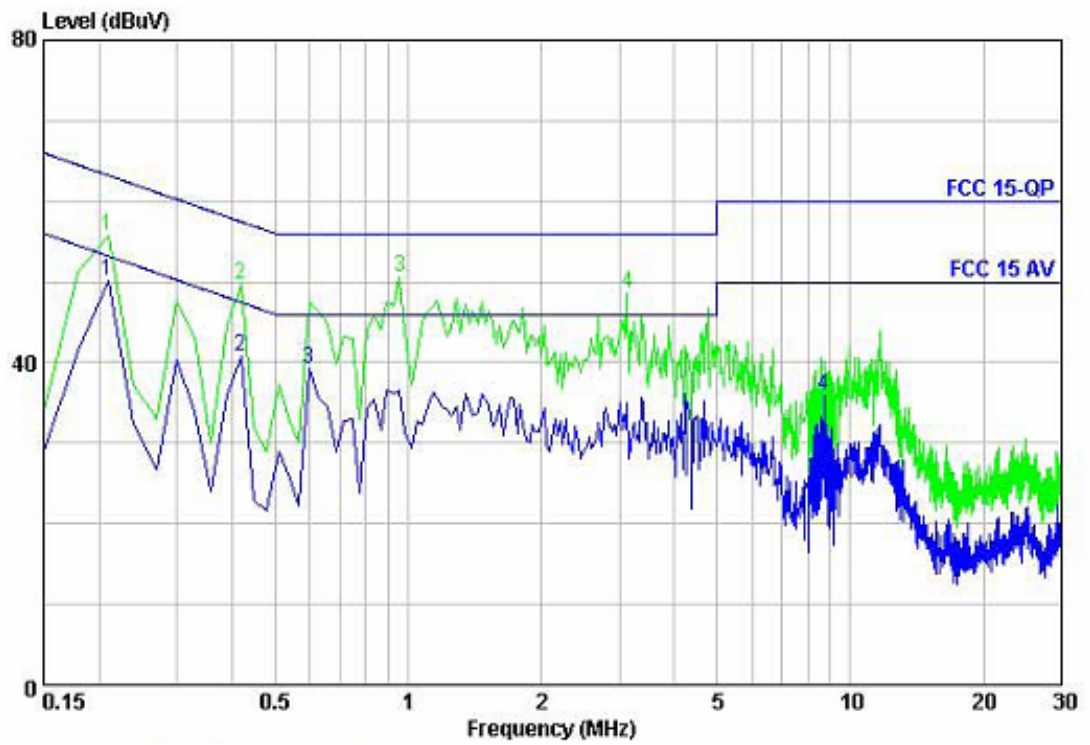
6.6. Conducted Power line Emission Limits

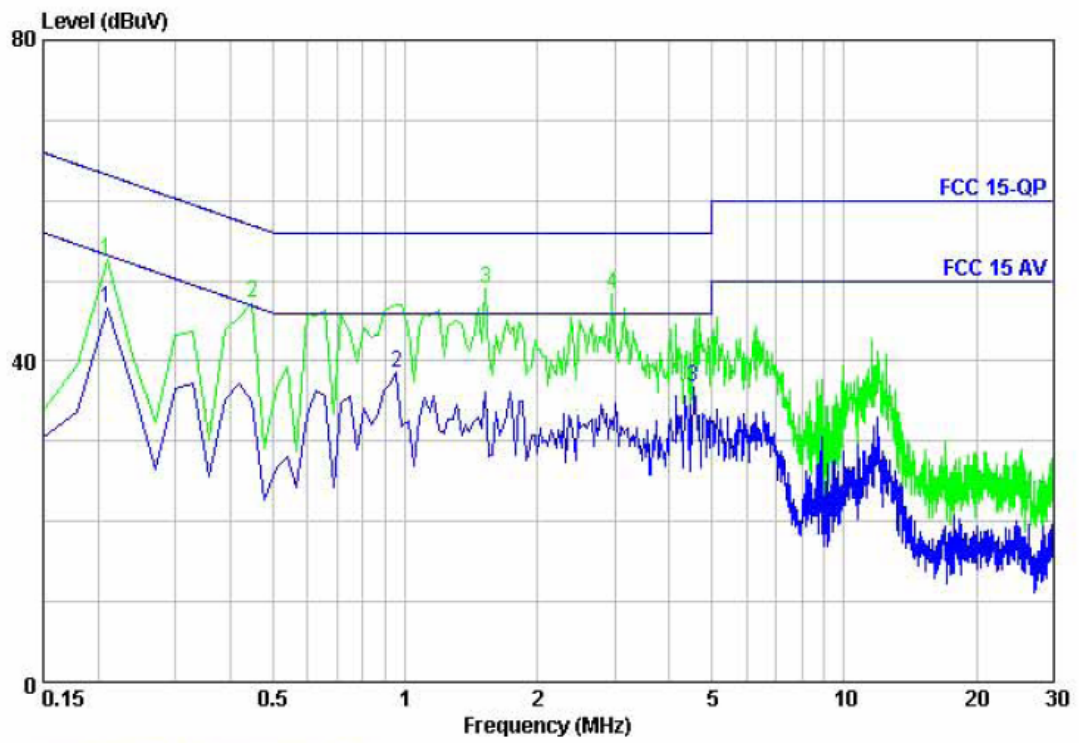
| FCC Part 15 Paragraph 15.107 (dBuV) | | |
|-------------------------------------|---------------|---------------|
| Frequency Range (MHZ) | Class A QP/AV | Class B QP/AV |
| 0.15-0.5 | 79/66 | 65-56/56-46 |
| 0.5-5.0 | 73/60 | 56-46 |
| 5.0-3.0 | 73/60 | 60-50 |

Note: In the above table, the tighter limit applies at the band edges.

6.7. Conducted Power Line Test Result

| Model No.: WKB-3100UB | | | | | | | | | |
|-----------------------|----------------|--------------|----------------|--------------|-----------------|----------------|--------------|----------------|--------------|
| Test Mode: 1 | | | | | | | | | |
| Line | | | | | Neutral | | | | |
| Frequency (MHz) | Quasi-Peak | | Average | | Frequency (MHz) | Quasi-Peak | | Average | |
| | Reading (dBµV) | Limit (dBµV) | Reading (dBµV) | Limit (dBµV) | | Reading (dBµV) | Limit (dBµV) | Reading (dBµV) | Limit (dBµV) |
| 0.21 | 55.63 | 65-56 | 50.22 | 56-46 | 0.21 | 52.48 | 65-56 | 46.63 | 56-46 |
| 0.42 | 49.68 | 56 | 40.76 | 46 | 0.96 | 47.25 | 56 | 38.57 | 46 |
| 8.72 | 41.23 | 60 | 35.82 | 50 | 4.54 | 47.01 | 60 | 36.82 | 50 |





7. RADIATED EMISSION TEST

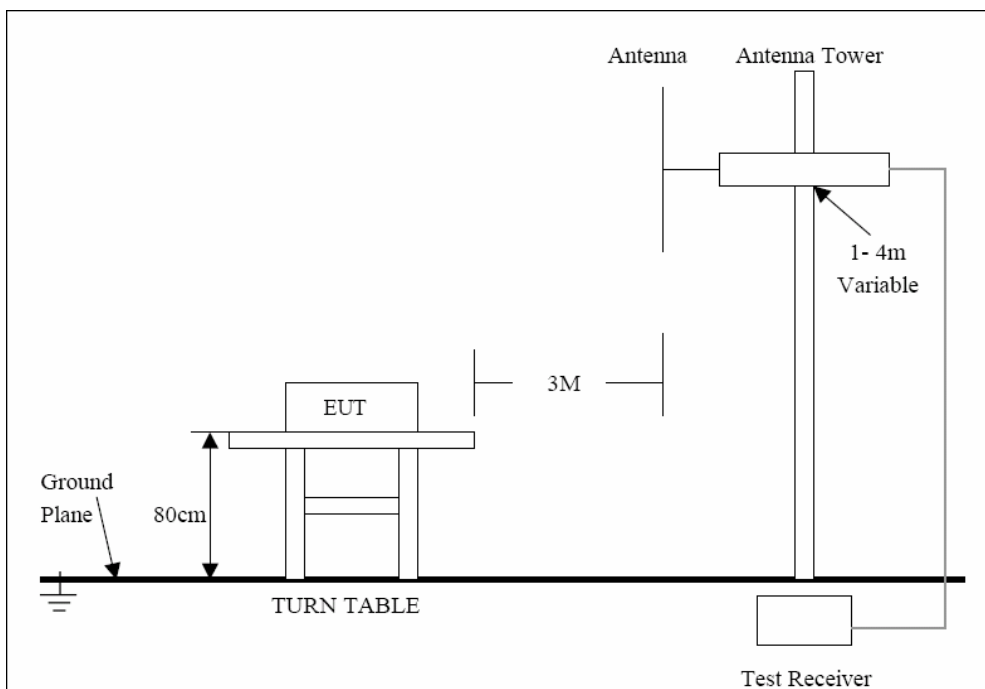
7.1. Test Equipment

Please refer to section 4 this report.

7.2. Test Procedure

1. The EUT was tested according C63.4-2003.The radiated test was performed at FCC Registration laboratory .
2. The EUT,peripherals were put on the turntable which table size od 1m×1.5m,table high 0.8m.All set up is according tl ANSI C63.4-2003.
3. The frequency spectrum from 30MHZ to 1 GHZ was investigated.All readings from 30MHZ to 1 GHZ are quasi-peak values with a resolution bandwidth of 120 KHZ. All readings are above 1GHZ ,prak values with a resolution bandwidth of 1 MHZ.Measurements were made at 3 merers.
4. The antenna high is varied from 1m to 4m high to find the maximum emission for each frequency.
5. Maximizing procedure was performed on the six(6)highest emissions to ensure EUT compliace is with all installation combinations.All data was recorded in the peak detection mode.Quasi-peak readings was performed only when an emission was found to be marginal (within -4 Db of specification limit),and are distinguished with a “QP”in the data table.
6. The antenna polarization:Vertical polarization and Horizontal polarization.

7.3. Radiated Test Setup



For the accrual test configuration, please refer to the related items-photos of Testing.

7.4. Configuration of the EUT

Same as section 5.4 of this report

7.5. EUT Operating Condition

Same as section 5.5 of this report.

7.6. Radiated Emission Limit

All emission from a digital device,including any network of conductors and apparatus connected thereto,shall not exceed the level of field strength specified below :

Limit

| Frequency (MHZ) | Distance (m) | Field Strength (dBuV/m) |
|-----------------|--------------|-------------------------|
| 30-88 | 3 | 40.0 |
| 88-*216 | 3 | 43.5 |
| 216-960 | 3 | 46.0 |
| ABOVE 960 | 3 | 54.0 |

- Note: (1) RF Voltage (DbUv)=20 log Voltage(Uv)
 (2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
 (3) The emission limit in this paragraph os based on measurement instrumentation employing an average detector.Measurement using instrumentation with a peak detector function,corresponding to 20dB above the maximum permitted average limit.

7.7. Radiated Emission Test Result

| | | | |
|---------------|--|--------------|-------|
| Product: | Wireless 2.4 GHz RF Mini Trackball Keyboard | Test mode: | - |
| Test Item: | Radiated Emission Data | Temperature: | 25 |
| Test Voltage: | DC 5V | Humidity: | 56%RH |
| Test Result: | PASS | | |

| Freq. (MHz) | Emission(dBuV/m) Peak Detector | HORIZ/ VERT | Limits(dBuV/m) Peak/ACERAGE | Margin (Db) |
|-------------|--------------------------------|-------------|-----------------------------|-------------|
| 101.78 | 34.64 | HORIZ | 43.5 | 8.86 |
| 42.61 | 31.38 | VERT | 40 | 8.62 |
| 191.99 | 30.85 | HORIZ | 43.5 | 12.65 |
| 75.59 | 29.63 | VERT | 40 | 10.37 |
| 239.52 | 32.45 | HORIZ | 46.0 | 13.55 |
| 722.58 | 33.05 | VERT | 46.0 | 12.95 |