







## ISO/IEC17025 Accredited Lab.

Report No: FCC 0809163 File reference No: 2008-10-08

Applicant: Bosch Automotive Diagnostics Equipment(Shenzhen) Limited

Product: KT300

Brand Name: N/A

Model No: KT300 IO KT300main

Test Standards: FCC Part 15 Subpart B: 2006

Test result:

It is herewith confirmed and found to comply with the requirements

set up by ANSI C63.4&FCC Part 15 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: OCT.10 . 2008

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

## SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. Chegongmiao, FuTian District, Shenzhen, CHINA.

Tel (755) 83448688 Fax (755) 83442996

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Date: 2008-10-10



## **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

## **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

## FCC-Registration No.: 899988

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 899988.

## IC-Registration No.: IC5205A-01

The EMC Laboratory has been registered and fully described in a report filed with the (IC) Industry Canada. The acceptance letter from the IC is maintained in our files. Registration IC No.: 5205A-01.

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Date: 2008-10-10



## 1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TECHNOLOGY CONSULTING CO LTD

Address: East 5/Block 4, Anhua Industrial Zone, No.8, Tairan Rd. CheGongMiao, FuTian District,

Shenzhen, CHINA.

Telephone: (755) 83448688 Fax: (755) 83442996

1.2 Applicant Details

Applicant: Bosch Automotive Diagnostics Equipment(Shenzhen) Limited

Address: Room 2501A, Tianan Cyber Par, Shennan Road, Shenzhen

Telephone: 0755-83476767 Fax: 0755-83476707

1.3 Description of EUT

Product: KT300

Manufacturer: Bosch Automotive Diagnostics Equipment(Shenzhen) Limited

Address: Room 2501A, Tianan Cyber Par, Shennan Road, Shenzhen

Brand Name: N/A

Model Number: KT300 IO KT300main

Additional Model N/A

Number:

Rating: Input: DC 12~24V, 0.5A

1.4 Submitted Sample: 1 Sample

The sample tested by

1.5 Test Duration

2008-09-26 to 2008-10.10

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB Radiated Emissions Uncertainty = 4.7dB

1.7 Test Engineer

lemy any

Print Name: Terry Tang

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### 2.0 List of Measurement Equipment

#### 2.1 **Conducted Emission Test**

|                   |           |            |              | Calibration | Calibration |
|-------------------|-----------|------------|--------------|-------------|-------------|
| Name              | Model No. | Serial No. | Manufacturer | Date        | Cycle       |
| EMI Test Receiver | ESCS30    | 830245/009 | RS           | 2008.2.23   | 1Year       |
| Coaxial Switch    | MP59B     | M70585     | ANRITSU      | N/A         | N/A         |
| LISN              | NTFM8132  | 8132137    | SCHWARZBECK  | 2008.2.24   | 1Year       |
| LISN              | NTFM8134  | 8134109    | SCHWARZBECK  | 2008.2.24   | 1Year       |
| LISN              | NTFM8136  | 8136102    | SCHWARZBECK  | 2008.2.24   | 1Year       |

### 2.2 Radiated electromagnetic disturbance test

|                        |           |            |              | Calibration | Calibration |
|------------------------|-----------|------------|--------------|-------------|-------------|
| Name                   | Model No. | Serial No. | Manufacturer | Date        | Cycle       |
| EMI Test Receiver      | ESCS30    | 830245/009 | RS           | 2008.2.23   | 1Year       |
| Coaxial Switch         | MP59B     | M70585     | ANRITSU      | N/A         | N/A         |
| Spectrum Analyzer(with |           |            |              |             |             |
| Tracking Generator)    | MS2661C   | MT72089    | ANRITSU      | 2008.2.23   | 1Year       |
| Amplifier              | MH648A    | M20494     | ANRITSU      | 2008.2.24   | 1Year       |
| Bilog Antenna          | CBL6101C  | 2576       | CHASE        | 2008.2.23   | 1Year       |
|                        |           |            |              |             |             |

#### 2.3 **Auxiliary Equipment**

|            |                |             |              |                  | Calibration |
|------------|----------------|-------------|--------------|------------------|-------------|
| Name       | Model No.      | Serial No.  | Manufacturer | Calibration Date | Cycle       |
| Electronic |                |             |              |                  |             |
| Equipment  | MT-20          | WNDGDZC-080 | Derfu        | N/A              | N/A         |
| Adaptor    | SB3D-040-1MWND | 9960641     | SUNSHEN      | N/A              | N/A         |

#### 2.4 I/O Cable

| Cable No. | Port               | Connector Type | Cable Type         | Cable Length |
|-----------|--------------------|----------------|--------------------|--------------|
| 1         | Communication port | N/A            | Data communication | 1.0          |

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#### 3.0 **Technical Details**

3.1 **Investigations Requested** Perform Electromagnetic Interference [EMI] tests for FCC Requirement.

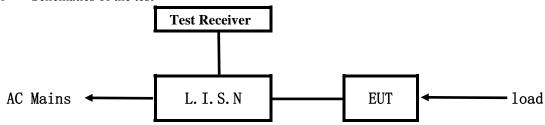
3.2 **Test Standards** 

FCC Part 15 Subpart B: 2006



## 4.0 Conducted Power line Test

### 4.1 Schematics of the test

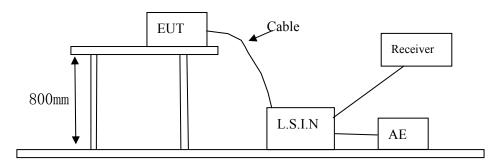


**EUT: Equipment Under Test** 

## 4.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2003. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4 –2003. Cables and peripherals were moved to find the maximum emission levels for each frequency.

## Block diagram of Test setup



## 4.3 Power line conducted Emission Limit

| Eraguanay (MHz)  | Class A Li       | mits dB(μV)   | Class B Limits dB(µV) |               |  |
|------------------|------------------|---------------|-----------------------|---------------|--|
| Frequency(MHz)   | Quasi-peak Level | Average Level | Quasi-peak Level      | Average Level |  |
| 0.15 ~ 0.50      | 79.00            | 66.00         | 66.00~56.00*          | 56.00~46.00*  |  |
| $0.50 \sim 5.00$ | 73.00            | 60.00         | 56.00                 | 46.00         |  |
| 5.00 ~ 30.00     | 73.00            | 60.00         | 60.00                 | 50.00         |  |

Notes:

- 1. \*decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

## 4.4 Test Results

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

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## Conducted Emission on Live Terminal of the power line (150kHz to 30MHz)

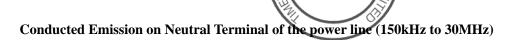
EUT set Condition: Running

**Results:** Pass

Please refer to following diagram for individual

# 

| Emagnaman       | Reading(dB µ V) |         |            |         | Limit      |         |
|-----------------|-----------------|---------|------------|---------|------------|---------|
| Frequency (MHz) | Live            | Live    |            | Neutral |            | V)      |
| (WITIZ)         | Quasi-peak      | Average | Quasi-peak | Average | Quasi-peak | Average |
| 0.1575          | 51.01           | 38.31   |            |         | 65.59      | 55.59   |
| 0.2365          | 44.59           | 37.79   |            |         | 62.22      | 52.22   |
| 4.4861          | 40.09           | 39.18   |            |         | 56.00      | 46.00   |
| 24.0955         | 42.12           | 38.77   |            |         | 60.00      | 50.00   |
| 24.6510         | 41.32           | 37.15   |            |         | 60.00      | 50.00   |

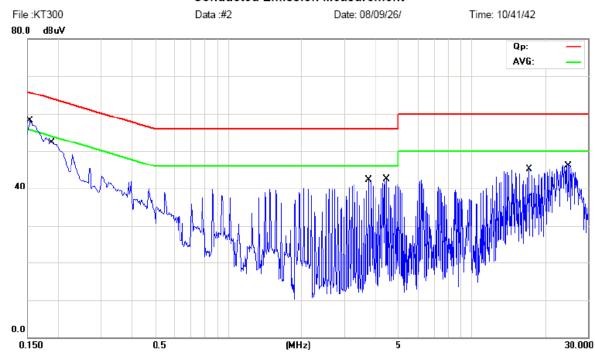


EUT set Condition: Running

**Results:** Pass

Please refer to following diagram for individual

## **Conducted Emission Measurement**

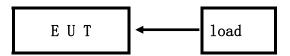


| Eraguanav       | Reading(dB µ V) |         |            |         | Limit      |         |
|-----------------|-----------------|---------|------------|---------|------------|---------|
| Frequency (MHz) | Live            |         | Neutral    |         | (dB µ V)   |         |
| (IVITIZ)        | Quasi-peak      | Average | Quasi-peak | Average | Quasi-peak | Average |
| 0.1540          |                 |         | 50.01      | 37.31   | 65.59      | 55.59   |
| 0.2316          |                 |         | 44.96      | 38.79   | 62.22      | 52.22   |
| 4.4861          |                 |         | 40.65      | 39.77   | 56.00      | 46.00   |
| 24.1566         |                 |         | 43.11      | 38.71   | 60.00      | 50.00   |
| 24.6135         |                 |         | 40.32      | 37.27   | 60.00      | 50.00   |



## 5.0 Radiated Disturbance Test

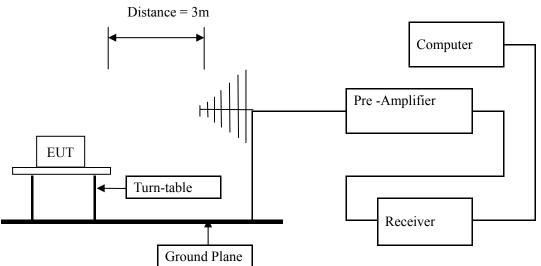
## 5.1 Schematics of the test



## 5.2 Test Method and test Procedure:

The EUT was tested according to ANSI C63.4 –2003, The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak 0values with a resolution bandwidth of 120KHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

## **Block diagram of Test setup**



## 5.3 Radiated Emission Limit

| Frequency Range (MHz) | Distance (m) | Field strength (dB µ V/m) |
|-----------------------|--------------|---------------------------|
| 30-88                 | 3            | 40.00                     |
| 88-216                | 3            | 43.50                     |
| 216-960               | 3            | 46.00                     |
| Above 960             | 3            | 54.00                     |

Note: The lower limit shall apply at the transition frequencies

## 5.4 Test result

The frequency spectrum from 30MHz to 1GHz was investigated. All reading from 30MHz to 1GHz are quasi-peak values with a resolution bandwidth of 120KHz. All readings are above 1GHz, peak values with a resolution bandwidth of 1MHz. Measurements were made at 3 meters.

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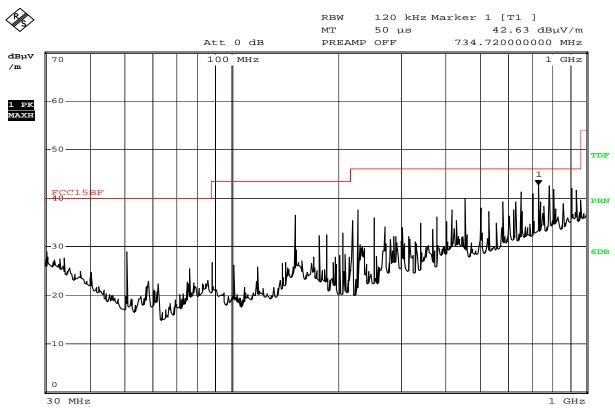
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EUT set Condition: Running
Level: Class B
Results: PASS

Please refer to following diagram for individual

Picture of the test



Comment: KT300 H

Date: 23.SEP.2008 17:57:34

| Frequency (MHz) | Level@3m ( $dB\mu V/m$ ) | Antenna Polarity | $Limit@3m (dB\mu V/m)$ |
|-----------------|--------------------------|------------------|------------------------|
| 152.00          | 36.5                     | Н                | 43.50                  |
| 219.56          | 35.36                    | Н                | 46.00                  |
| 228.04          | 37.49                    | Н                | 46.00                  |
| 734.72          | 42.63                    | Н                | 46.00                  |
| 785.40          | 42.55                    | Н                | 46.00                  |

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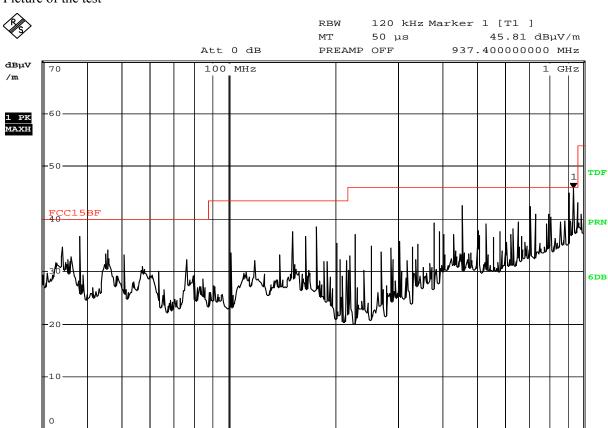


## B: Radiated Disturbance In Vertical (30MHz --- 1000MHz)

EUT set Condition: Running
Level: Class B
Results: PASS

Please refer to following diagram for individual

Picture of the test



Comment: KT300 V

30 MHz

Date: 23.SEP.2008 17:53:48

| Frequency (MHz) | Level@3m (dBµV/m) | Antenna Polarity | Limit@3m (dBµV/m) |
|-----------------|-------------------|------------------|-------------------|
| 152.00          | 37.65             | V                | 43.50             |
| 177.36          | 38.42             | V                | 43.50             |
| 456.04          | 42.57             | V                | 46.00             |
| 912.08          | 44.92             | V                | 46.00             |
| 937.40          | 45.81             | V                | 46.00             |

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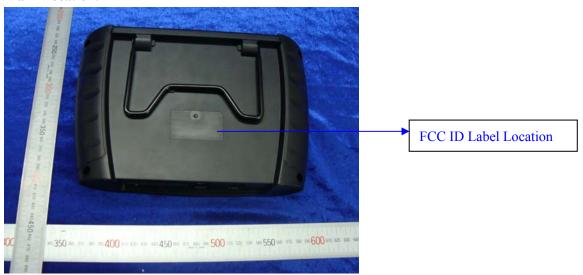
## 6.0 FCC ID Label

## FCC ID: WSOKT300-2008

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

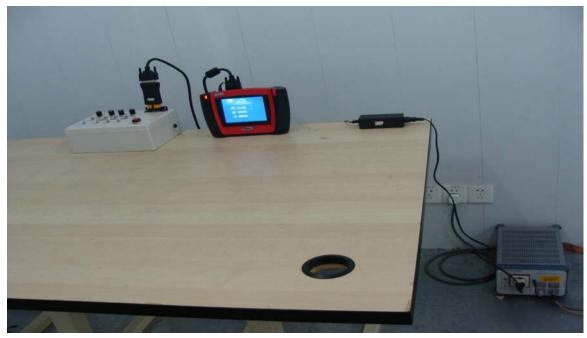
### **Mark Location:**





### 7.0 **Photo of testing**

#### 7.1 Conducted test View—



#### 7.2 Radiated emission test view--



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#### 7.3 Photo for the EUT

## Front View



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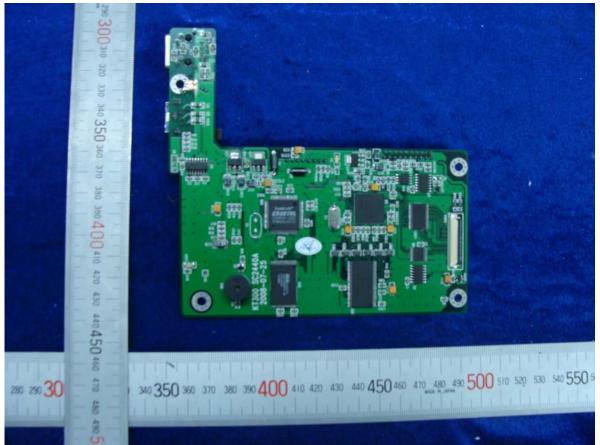
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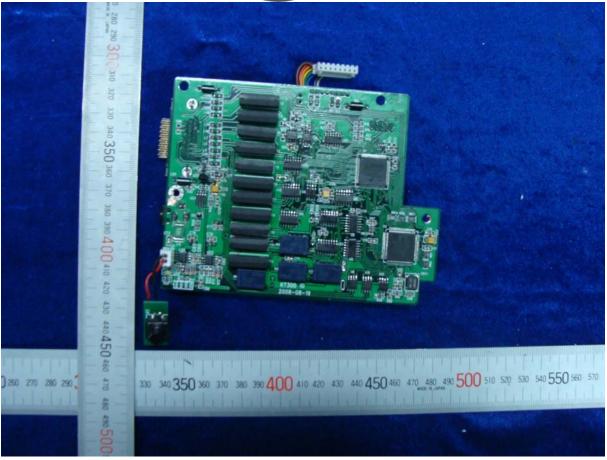
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-End of the report-