



**CTS (NINGBO) TESTING SERVICE TECHNOLOGY  
INTERNATIONAL**

**OPERATE ACCORDING TO ISO/IEC 17025**

# **EMC TEST REPORT**

**TEST REPORT NUMBER : CNB3120711-01157-E**



**CTS (Ningbo) Testing Service Technology Co., Ltd.  
2/F., South Tower, Huoju Building, No.181, Canghai Road,  
Jiangdong Science and Technology Park, Ningbo, Zhejiang, China**



<b>TEST REPORT</b> <b>EN 55015:2006+A1:2007+A2:2009</b> Limits and methods of measurements of radio disturbance characteristics of electrical lighting and similar equipment. <b>EN 61547:2009</b> Equipment for general lighting purposes-EMC immunity requirements.	
<b>Report Reference No.</b> .....	CNB3120711-01157-E
<b>Date of issue</b> .....	17 July 2012
<b>Testing Laboratory Name</b> .....	<b>CTS (Ningbo) Testing Service Technology Co., Ltd.</b>
<b>Address</b> .....	GZ test site; Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China.
<b>Testing location/ procedure</b> .....	Full application of Harmonised standards <input checked="" type="checkbox"/> Partial application of Harmonised standards <input type="checkbox"/> Other standard testing method <input type="checkbox"/>
<b>Applicant's name</b> .....	JIASHAN SHENGGUANG ELECTRONICS CO., LTD.
<b>Address</b> .....	JIASHAN DAYUN INDUSTRY GARDEN AREA, ZHEJIANG PROVINCE, CHINA
<b>Test specification:</b> Standard..... <b>EN 55015: 2006+A1: 2007+A2:2009, EN 61547: 2009</b> <b>Test Report Form No.</b> ..... CTSEMC-1.0 TRF Originator ..... CTS (Ningbo) Testing Service Technology Co., Ltd. Master TRF ..... Dated 2009-01	
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<b>Test item description.</b> ..... HORN FOR VEHICLE Trade Mark ..... JINGYI Manufacturer ..... JIASHAN SHENGGUANG ELECTRONICS CO., LTD. Model/Type reference ..... JY-325(60822/60660) Ratings ..... Battery 1.5V*2 Result ..... <b>PASSED</b>	

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**EMC -- TEST REPORT****Test Report No. : CNB3120711-01157-E**17 July 2012  
Date of issue

Type / Model.....	JY-325(60822/60660)
EUT.....	HORN FOR VEHICLE
<b>Applicant</b> .....	JIASHAN SHENGGUANG ELECTRONICS CO., LTD.
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The test report merely corresponds to the test sample.  
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## 1 TEST STANDARDS

The tests were performed according to following standards:

EN 55015:2006+A1:2007+A2:2009 Limits and methods of measurements of radio disturbance characteristics of electrical lighting and similar equipment.

EN 61547:2009 Equipment for general lighting purposes-EMC immunity requirements.

## 2 SUMMARY

### 2.1 GENERAL REMARKS

Date of receipt of test sample	12 July 2012
Testing commenced on	15 July 2012
Testing concluded on	17 July 2012

### 2.2 FINAL ASSESSMENT

The EMC requirements pertaining to the technical standards and tested operation modes are

☒ - fulfilled.

☐ - **not** fulfilled.

The equipment under test

☒ - fulfils the EMC requirements cited on page 1.

☐ - **does not** fulfil the EMC requirements cited on page 1.

### 3 EQUIPMENT UNDER TEST

#### 3.1 Power supply system utilised

Power supply voltage: ☒ Battery 1.5V\*2  
☐ Other

#### 3.2 Short description of the Equipment under Test (EUT)

Number of tested samples: 1  
Serial number: Prototype

#### 3.3 EUT operation mode

The equipment under test was operated during the measurement under the following conditions:

☒ – Normal

Operating Mode: Normal

Emissions tests.....: According to EN 55015,, searching for the highest disturbance.

Immunity tests .....: According to EN 61547, searching for the highest susceptibility.

### 3.4 EUT configuration

(The CDF filled by the applicant can be viewed at the test laboratory.)

The following peripheral devices and interface cables were connected during the measurement:

Not Applicable

### 3.5 Performance level

The test results shall be classified in terms of the loss of function or degradation of performance of the equipment under test, relative to a performance level defined by its manufacturer or the requestor of the test, or agreed between the manufacturer and the purchaser of the product.

### 3.6 Definition related to the performance level

- ☒ based on the used product standard
- ☐ based on the declaration of the manufacturer, requestor or purchaser

**Criterion A:**

Definition: normal performance within limits specified by the manufacturer, requestor or purchaser:

**Criterion B:**

Definition: temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention:

**Criterion C:**

Definition: temporary loss of function or degradation of performance, the correction of which requires operator intervention:

**Criterion D:**

Definition: loss of function or degradation of performance, which is not recoverable, owing to damage to hardware or software, or loss of data:

## 4 TEST ENVIRONMENT

### 4.1 Address of the test laboratory

GZ test site; Building F, Dachuang industrial park, No.379, Zhongshan Dadao, Guangzhou, China

Tel: +86-20-85543113 (32 lines)

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### 4.2 Test facility

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

#### **CNAS-Lab Code: L3394**

CTS (Ningbo) Testing Service Technology Co., Ltd. Has been assessed and proved to be in compliance with CNAS-CL01: 2006 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

#### **IC-Registration No.: 8374A**

The 3m Alternate Test Site of CTS (Ningbo) Testing Service Technology Co., Ltd. Has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 8374A on June 06, 2011 .

#### **FCC-Registration No.: 971995**

CTS (Ningbo) Testing Service Technology Co., Ltd., 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.971995, July 21, 2009.

### 4.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35 ° C
Humidity:	25~75 %
Atmospheric pressure:	86~106 kPa

### 4.4 Definitions of symbols used in this test report

- - The black square indicates that the listed condition, standard or equipment is applicable for this report.
- - The empty square indicates that the listed condition, standard or equipment is **not** applicable for this report.

### 4.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the CTS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

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#### 4.6 Measurement Uncertainty

Test Item	Frequency Range	Uncertainty	Note
Conduction disturbance	150kHz~30MHz	$\pm 1.22\text{dB}$	(1)
Power disturbance	30MHz~300MHz	$\pm 1.38\text{dB}$	(1)
Radiation emission (3m)	30MHz~300MHz	$\pm 3.14\text{dB}$	(1)
	300MHz~1000MHz	$\pm 3.18\text{dB}$	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .
- (2) The actual EUT tested items in this test report, only applies to this "measurement uncertainty" in part / all of the corresponding data.

#### 4.7 Test Description

##### 4.7.1 Description of Standards and Results

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted disturbance	EN 55015: 2006+A1: 2007+A2:2009	-----	N/A
Radiated Disturbance (Magnetic)	EN 55015: 2006+A1: 2007+A2:2009	-----	PASS
Radiated Disturbance (Electric)	EN 55015: 2006+A1: 2007+A2:2009	-----	PASS
Harmonic current emissions	EN 61000-3-2: 2006+A1:2009+A2:2009	Class C	N/A
Voltage fluctuations & flicker	EN 61000-3-3: 2008	-----	N/A
IMMUNITY (EN 61547: 2009)			
Description of Test Item	Basic Standard	Performance Criteria	Results
Electrostatic discharge (ESD)	IEC 61000-4-2: 2008	B	PASS
Radio-frequency, Continuous radiated disturbance	IEC 61000-4-3: 2010	A	PASS
Electrical fast transient (EFT)	IEC 61000-4-4: 2007	B	N/A
Surge	IEC 61000-4-5: 2009	B	N/A
Radio-frequency, Continuous conducted disturbance	IEC 61000-4-6: 2008	A	N/A
Power frequency magnetic field	IEC 61000-4-8: 2009	A	PASS
Voltage dips and interruptions	IEC 61000-4-11: 2010	B&C	N/A
N/A is an abbreviation for Not Applicable.			

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## 5 TEST CONDITIONS AND RESULTS

### 5.1 Radiated disturbance (magnetic field)

For test instruments and accessories used see section 6 part 6.2.

#### 5.1.2 Description of the test location

Test location : Shielded room

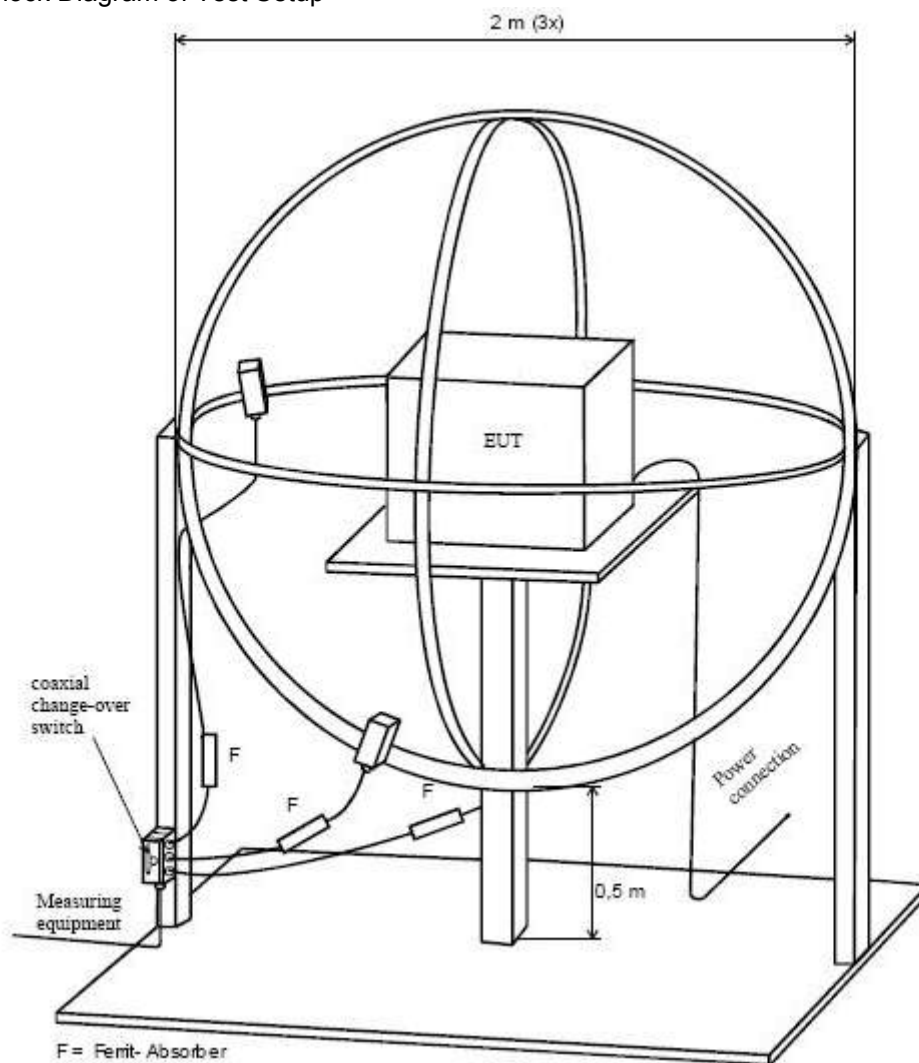
Test disturbance: 2 Meter

#### 5.1.2 Description of the test set-up

##### 5.1.2.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded

##### 5.1.2.2 Block Diagram of Test Setup



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**5.1.3 Limits of disturbance**

Frequency	Limits for loop diameter (dB $\mu$ A)	
	2m	
9kHz ~ 70kHz	88	
70kHz ~ 150kHz	88 ~ 58*	
150kHz ~ 3.0MHz	58 ~ 22*	
3.0MHz ~ 30MHz	22	

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

**5.1.4 Test result**

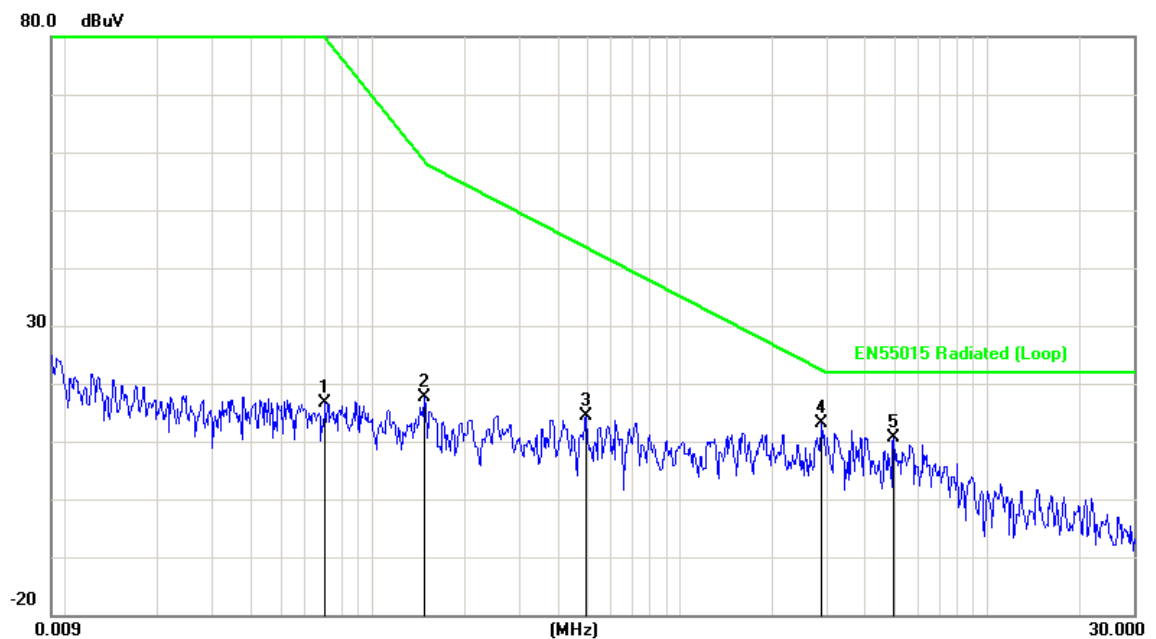
The requirements are	<b>Fulfilled</b>
Band width	9kHz
Frequency range	9kHz – 30 MHz
Min. Limit margin MHz	>9.31 dB at 9kHz- 30MHz

**Remarks:** The limits are kept. For detailed results, please see the following page(s).

## 5.1.5 Test protocol

Test point:	X	Result:	■ – passed
Operation mode	Normal		□ – not passed
Remarks:			

EUT	HORN FOR VEHICLE
Operating Condition	Battery 1.5V*2
Test Condition	Ambient Temperature: 24°C Humidity: 56%
Operator	Duke
MODEL NO.	JY-325(60822/60660)



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	0.0701	56.51	-39.85	16.66	87.94	-71.28	peak
2	0.1466	56.26	-38.74	17.52	58.90	-41.38	peak
3	0.4949	55.91	-41.62	14.29	43.65	-29.36	peak
4	2.8775	53.76	-40.57	13.19	22.50	-9.31	peak
5	4.9550	51.75	-41.01	10.74	22.00	-11.26	peak

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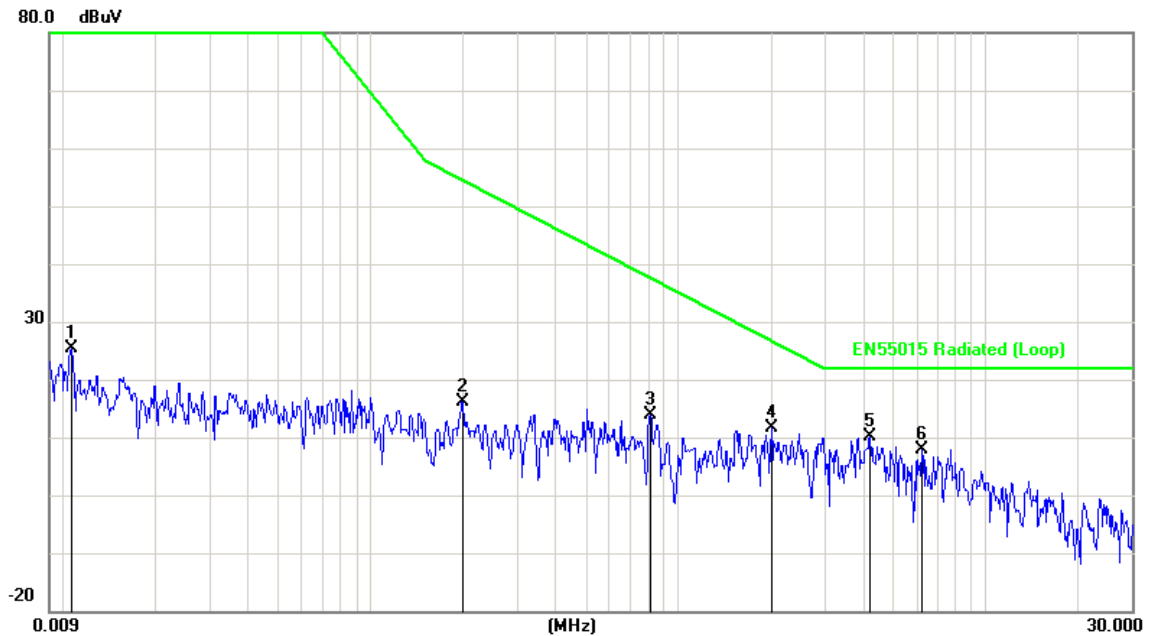
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Test point:	Y	Result:	■ – passed
Operation mode	Normal		□ – not passed
Remarks:			



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	0.0106	55.09	-29.76	25.33	88.00	-62.67	peak
2	0.1995	56.10	-39.85	16.25	54.57	-38.32	peak
3	0.8118	55.10	-41.22	13.88	37.71	-23.83	peak
4	2.0137	53.50	-41.94	11.56	26.79	-15.23	peak
5	4.2129	52.57	-42.50	10.07	22.00	-11.93	peak
6	6.2185	50.21	-42.34	7.87	22.00	-14.13	peak

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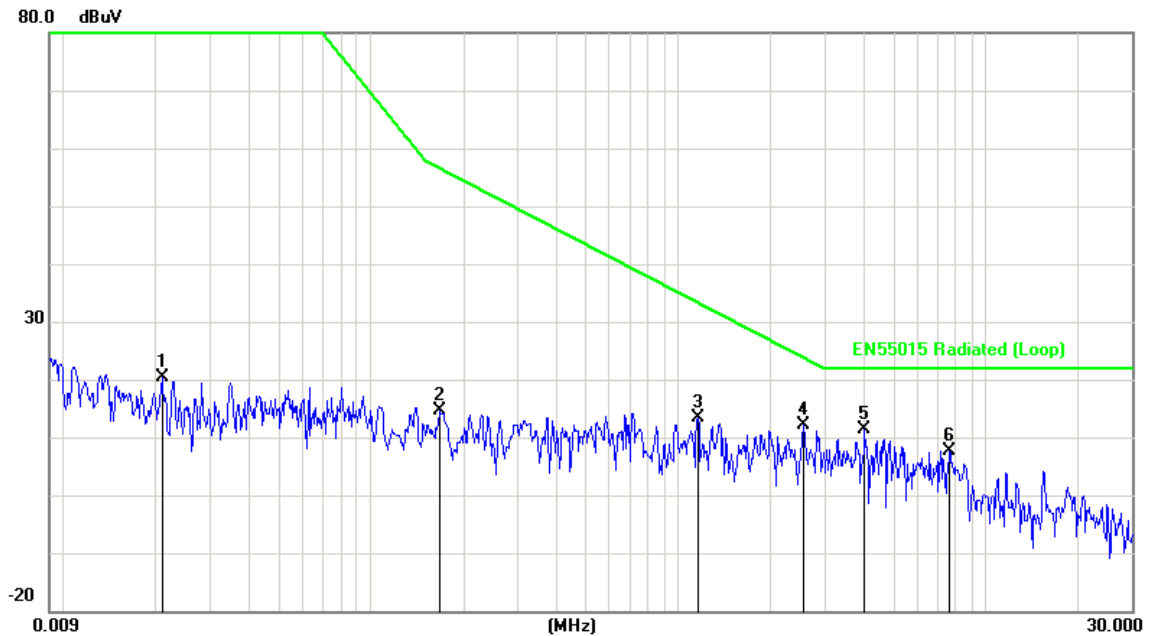
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Test point:	Z	Result:	■ – passed
Operation mode	Normal		□ – not passed
Remarks:			



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	0.0209	55.57	-35.17	20.40	88.00	-67.60	peak
2	0.1683	56.20	-41.66	14.54	56.62	-42.08	peak
3	1.1600	53.75	-40.41	13.34	33.42	-20.08	peak
4	2.5478	53.66	-41.61	12.05	23.96	-11.91	peak
5	4.0455	52.75	-41.28	11.47	22.00	-10.53	peak
6	7.6165	48.74	-41.10	7.64	22.00	-14.36	peak

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## 5.2 Radiated disturbance (Electric field)

For test instruments and accessories used see section 6 part 6.3.

### 5.2.1 Description of the test location

Test location : Semi-Anechoic chamber

Test disturbance: 3 Meter

### 5.2.2 Description of the test set-up

#### 5.2.2.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded

#### 5.2.2.2 Block Diagram of Test Setup



### 5.2.3 Limits of disturbance

Frequency (MHz)	Distance (Meters)	Field Strengths Limits (dB $\mu$ V/m)
30 ~ 230	3	40
230 ~ 300	3	47

Note: (1) The tighter limit shall apply at the edge between two frequency bands.

(2) Distance refers to the distance in meters between the test instrument antenna and the closest point of any part of the E.U.T.

**5.2.4 Test result**

The requirements are	<b>Fulfilled</b>
Band width	120kHz
Frequency range	30 MHz – 300 MHz
Min. limit margin	>21.15 dB at 30 – 300 MHz

**Remarks:** The limits are kept. For detailed results, please see the following page(s).

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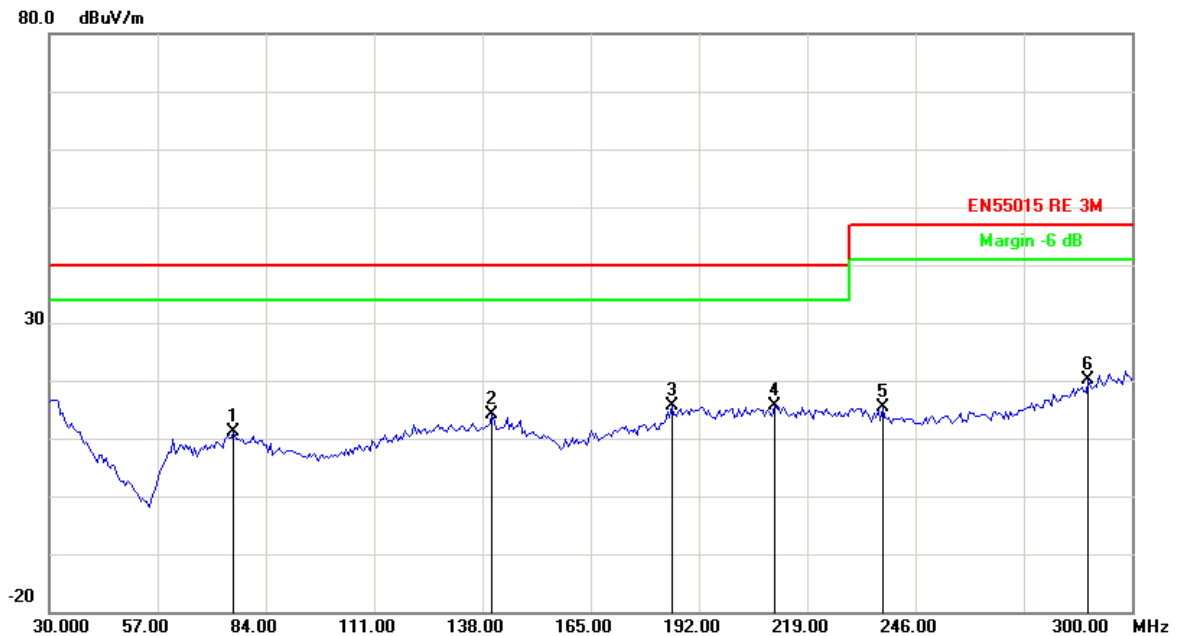
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## 5.2.5 Test protocol

Test point:	Horizontal	Result:	■ – passed
Operation mode	Normal		□ – not passed
Remarks:			

EUT	HORN FOR VEHICLE
Operating Condition	Battery 1.5V*2
Test Condition	Ambient Temperature: 24°C Humidity: 56%
Operator	Duke
MODEL NO.	JY-325(60822/60660)



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	75.9920	-38.29	49.43	11.14	40.00	-28.86	QP
2	140.3808	-34.76	48.90	14.14	40.00	-25.86	QP
3	185.2906	-32.82	48.41	15.59	40.00	-24.41	QP
4	210.7214	-31.32	46.97	15.65	40.00	-24.35	QP
5	237.7756	-32.35	47.69	15.34	47.00	-31.66	QP
6	289.1784	-27.02	47.08	20.06	47.00	-26.94	QP

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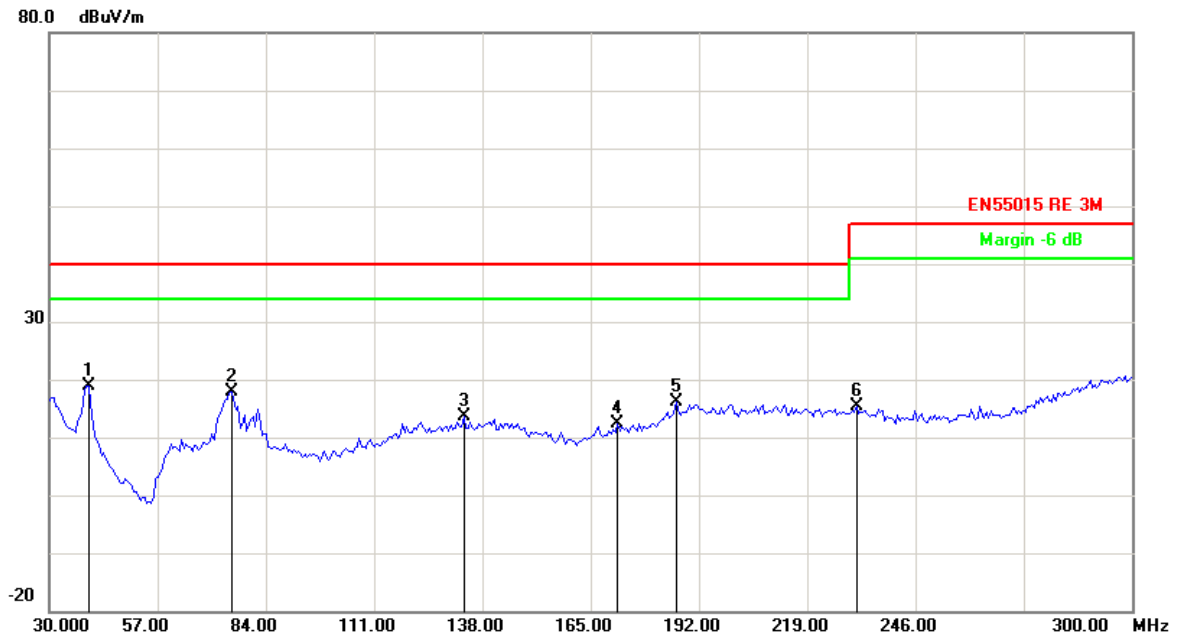
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Test point:	Vertical	Result:	■ – passed
Operation mode	Normal		□ – not passed
Remarks:			



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	39.7395	-41.30	60.15	18.85	40.00	-21.15	QP
2	75.4509	-38.28	56.22	17.94	40.00	-22.06	QP
3	133.3467	-35.03	48.56	13.53	40.00	-26.47	QP
4	171.7635	-35.46	47.78	12.32	40.00	-27.68	QP
5	186.3727	-32.46	48.63	16.17	40.00	-23.83	QP
6	231.2826	-31.75	47.15	15.40	47.00	-31.60	QP

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## 5.3 Electrostatic discharge

For test instruments and accessories used see section 6 part 6.6.

### 5.3.1 Description of the test location

Test location :	Test location no. 2
Power supply:	Battery 1.5V*2
Test condition:	Ambient Temperature: 24℃, Humidity:56%
Date of test :	15 July 2012
Operator :	Duke

### 5.3.2 Severity of levels electrostatic discharge

5.3.2.1 Severity level: Contact discharge at  $\pm 4\text{KV}$  air discharge at  $\pm 8\text{KV}$

Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)
1	2	2
2	4	4
3	6	8
4	8	15
X	Special	Special

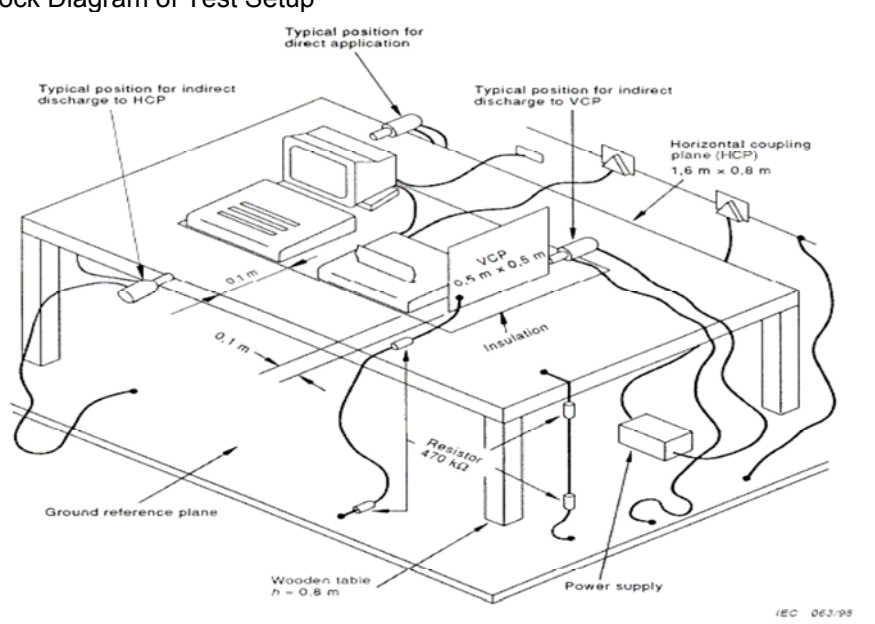
5.3.2.2 Performance criterion: B

### 5.3.3 Description of the test set-up

#### 5.3.3.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded

#### 5.3.3.2 Block Diagram of Test Setup



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**5.3.4 Test specification:**

Contact discharge voltage:	<input checked="" type="checkbox"/> 2 kV	<input checked="" type="checkbox"/> 4 kV
Air discharge voltage:	<input checked="" type="checkbox"/> 2 kV	<input checked="" type="checkbox"/> 4 kV <input checked="" type="checkbox"/> 8 kV
Discharge impedance:	<input checked="" type="checkbox"/> 330 $\Omega$ / 150 pF	
Discharge factor:	<input checked="" type="checkbox"/> $\geq 1$ sec.	
Number of discharges:	<input checked="" type="checkbox"/> $\geq 10$	
Type of discharge:	Direct discharge	<input checked="" type="checkbox"/> Air discharge
		<input checked="" type="checkbox"/> Contact discharge
	Indirect discharge	<input checked="" type="checkbox"/> Contact discharge
Polarity:	<input checked="" type="checkbox"/> Positive	<input checked="" type="checkbox"/> Negative
Discharge location:	<input checked="" type="checkbox"/> see photo documentation of the test set-up	
	<input checked="" type="checkbox"/> all external locations accessible by hand	
	<input checked="" type="checkbox"/> horizontal plate (HCP)	
	<input checked="" type="checkbox"/> vertical coupling plate (VCP)	

**5.3.5 Test result**The requirements are **Fulfilled**Performance Criterion: **B****Remarks:** During the test no deviation was detected to the selected operation mode(s).

## 5.4 Radiated, radio-frequency, electromagnetic field

For test instruments and accessories used see section 6 part 6.7.

### 5.4.1 Description of the test location

Test location :	GTEM chamber
Power supply:	Battery 1.5V*2
Test condition:	Ambient Temperature: 24℃, Humidity:56%
Date of test :	15 July 2012
Operator :	Duke

### 5.4.2 Severity levels of radiated, Radio-frequency, electromagnetic field

#### 5.4.2.1 Severity level: 3V/m

Level	Field strength(V/m)
1	1
2	3
3	10
X	Special

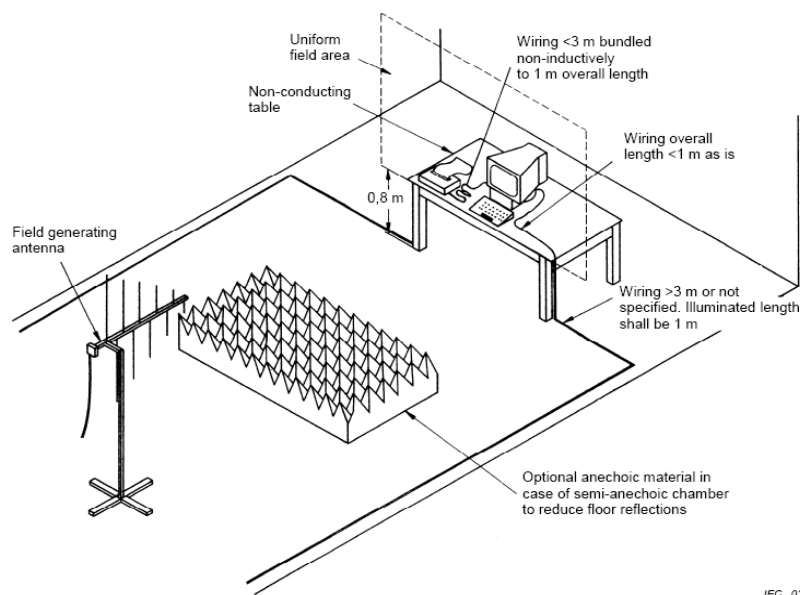
#### 5.4.2.2 Performance criterion: A

### 5.4.3 Description of the test set-up

#### 5.4.3.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded

#### 5.4.3.2 Block Diagram of Test Setup



IEC 034/06

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**5.4.4 Test specification:**

Frequency range:	■ 80 MHz to 1000 MHz
Field strength:	■ 3 V/m
EUT – antenna separation:	■ 3 m
Modulation:	■ AM: 80 % ■ sinusoidal 1000Hz
Frequency step:	■ 1 % with 3 s dwell time
Antenna polarisation:	■ horizontal      ■ vertical

**5.4.5 Test result**The requirements are **Fulfilled**Performance Criterion: **A****Remarks:** During the test no deviation was detected to the selected operation mode(s).

## 5.5 Power frequency magnetic field

For test instruments and accessories used see section 6 part 6.11.

### 5.5.1 Description of the test location

Test location :	Test location no. 2
Power supply:	Battery 1.5V*2
Test condition:	Ambient Temperature: 24℃, Humidity:56%
Date of test :	15 July 2012
Operator :	Duke

### 5.5.2 Severity levels of magnetic field immunity

#### 5.5.2.1 Severity Level: 3A/m

Level	Magnetic Field Strength (A/m)
1	1
2	3
3	10
4	30
5	100
X	Special

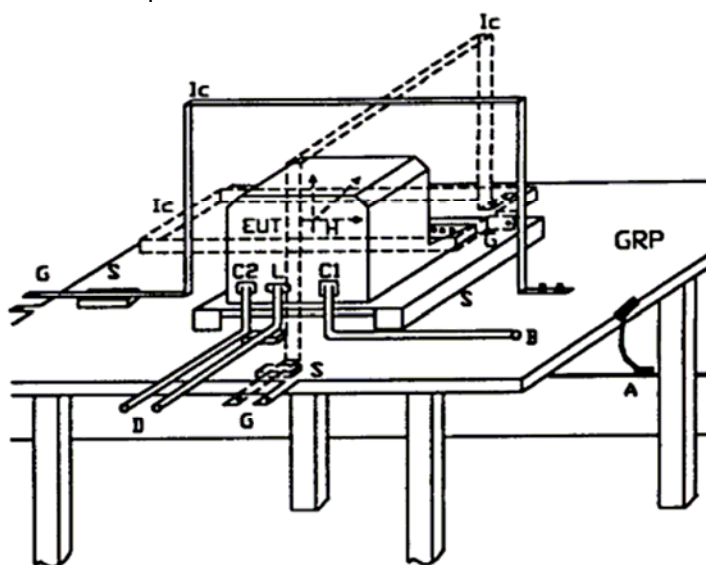
#### 5.5.2.2 Performance Criterion: A

### 5.5.3 Description of the test set-up

#### 5.5.3.1 Operating Condition

The EUT is engraving during the test, and the results of the maximum emanation are recorded

#### 5.5.3.2 Block Diagram of Test Setup



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**5.5.4 Test specification:**

Test frequency:	■ 50 Hz		
Continuous field:	■ 3 A/m		
Duration (Continuous field):	■ 60 s each Axis		
Short duration (1-3s):	■ 3s		
Axis:	■ x-axis	■ y-axis	■ z-axis

**5.5.5 Test result**The requirements are **Fulfilled**Performance Criterion: **A****Remarks:** During the test no deviation was detected to the selected operation mode(s).



## 6 USED TEST EQUIPMENT

### 6.1

Conducted Disturbance					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2011/12
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2011/12
3	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2011/12
4	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2011/12

### 6.2

Radiated Disturbance (Magnetic field)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESHS10	842884/012	2011/12
2	Artificial Mains	ROHDE & SCHWARZ	ESH3-Z5	832479/025	2011/12
3	Triple-loop antenna	ROHDE & SCHWARZ	HM020	100015	2011/12
4	Pulse Limiter	ROHDE & SCHWARZ	ESHSZ2	100301	2011/12
5	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2011/12

### 6.3

Radiated Emission(Electric field)					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100868	2011/12
2	Biconical Antenna	ROHDE & SCHWARZ	HK116	100221	2011/12
3	Log per Antenna	ROHDE & SCHWARZ	HL223	100226	2011/12
4	Log per Antenna	ROHDE & SCHWARZ	HL050	100186	2011/12
5	EMI Test Software	ROHDE & SCHWARZ	ESK1	N/A	2011/12

### 6.4

Harmonic Current					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Harmonic And Flicker Analyzer	EMC Partner	HAR1H01B	HAR1000-48	2011/12

### 6.5

Voltage fluctuation and Flicker					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Harmonic And Flicker Analyzer	EMC Partner	HAR1H01B	HAR1000-48	2011/12

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## 6.6

Electrostatic Discharge					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ESD Simulator	Schlöder	SESD 200	302016	2011/12

## 6.7

RF Field Strength Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	SIGNAL GENERATOR	ROHDE & SCHWARZ	SMY 01	843215/014	2011/12
2	AMPLIFIER	KALMUS	713FC	Jan-85	2011/12
3	EMS Test Software	ROHDE & SCHWARZ	ESK1	N/A	2011/12

## 6.8

Electrical Fast Transient/Burst					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMC test system Transient-1000	EMC Partner	TRA1H01B	HAR1000-78	2011/12
2	Coupling Clamp	EMC Partner	SFT 410	302015	2011/12

## 6.9

Surge					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMC test system Transient-1000	EMC Partner	TRA1H01B	HAR1000-78	2011/12

## 6.10

Conducted Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	RF generator / amplifier	Schlöder	CDG 6000	HU906007	2011/12
2	CDN	Schlöder	CDN M3	A3003008	2011/12
3	CDN	Schlöder	CDN T2	A3010005	2011/12
4	EM injection clamp	Liithi	EM101	35670	2011/12
5	EMS Test Software	ROHDE & SCHWARZ	ESK1	N/A	2011/12

## 6.11

Power Frequency Magnetic Field Susceptibility					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Power frequency mag-field generator System	EM TEST	EMS61000-8K	409001	2011/12

## 6.12

Voltage Dips					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMC test system Transient-1000	EMC Partner	TRA1H01B	HAR1000-78	2011/12

## 6.13

Voltage Short Interruptions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMC test system Transient-1000	EMC Partner	TRA1H01B	HAR1000-78	2011/12

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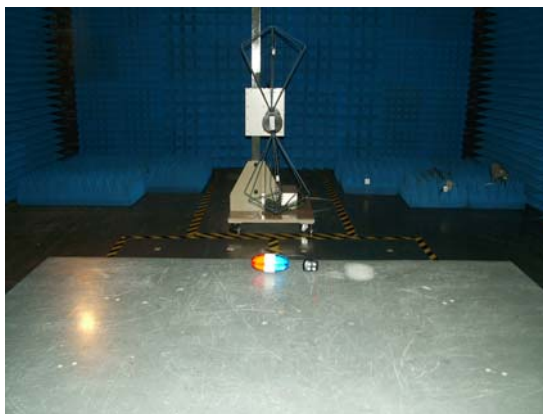
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## 7 TEST PHOTOGRAPHS

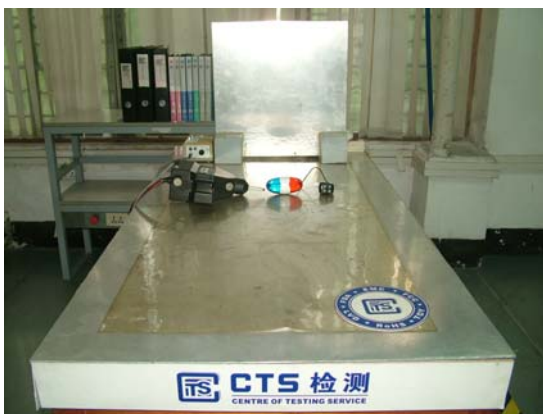
### 7.1. Photos of radiated emission measurement (Magnetic field)



### 7.2. Photos of radiated emission measurement (Electric field)



### 7.3. Photo of electrostatic discharge Immunity measurement



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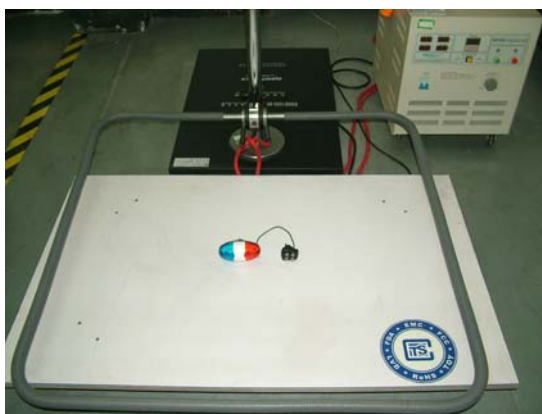
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## 7.4. Photo of RF field strength Immunity measurement



## 7.5. Photo of PFM field immunity measurement



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## 8 EXTERNAL AND INTERNAL PHOTOS OF THE EUT



External view 1



External view 2



External view 3

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PCB side 1



PCB side 2

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## 9 Manufacturer/ Approval holder Declaration

The following identical model(s):

N/A

Belong to the tested device:

Product description: **HORN FOR VEHICLE**  
Model name: **JY-325(60822/60660)**

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