FCC TEST REPORT On Behalf of

GJD Manufacturing Ltd.

Outdoor Dual PIR Detector

Model No.: DDI602

Prepared for : GJD Manufacturing Ltd.

Address : Unit 2, Birch Industrial Estate, Whittle Lane Heywood,

OL10 2SX, United Kingdom

Prepared by : SHENZHEN LCS CERTIFICATION SERVICES INC.

Address : Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District,

Shenzhen, Guangdong, China

Report Number : LCS1103160095F

Date of Test : March 16, 2011 - April 07, 2011, 2011

Date of Report : April 07, 2011

Gavin Liang / Manager

BoBo Li

BoBo Lee/ File administrators

	TEST REPORT For FCC ID 47 CFR PART 15, 2010		
Report Reference No	LCS1103160095F		
Date of issue:	April 07, 2011		
Testing Laboratory Name	SHENZHEN LCS CERTIFICATION SERVIC	ES INC.	
Address	Xingyuan Industrial Park, Tongda Road, Bao Shenzhen, Guangdong, China	o'an Blvd., Bao'an District,	
Testing location/ procedure:	Full application of Harmonised standards ■		
	Partial application of Harmonised standards		
	Other standard testing method \square		
Applicant's name	GJD Manufacturing Ltd.		
Address:	Unit 2, Birch Industrial Estate, Whittle Lane FOL10 2SX, United Kingdom	Heywood,	
Test specification			
Standard:	47 CFR PART 15, 2010 , ANSI C63.4-2009		
Test Report Form No	CTSEMC-1.0		
TRF Originator:	SHENZHEN LCS CERTIFICATION SERVIC	ES INC.	
Master TRF	Dated 2011-03		
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Test item description:	Outdoor Dual PIR Detector		
Trade Mark	/		
Manufacturer	GJD Manufacturing Ltd.		
Model/Type reference	DDI602		
Ratings:	DC 12V		
Operating Frequency	10.525GHz		
Result	Positive		
Compiled by:	Supervised by:	Approved by:	

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Vito/ Technique principal

FCCID-TEST REPORT

Test Report No.: LCS1103160095F April 07, 2011 Date of issue

Type / Model	DDI602
EUT	Outdoor Dual PIR Detector
Applicant	GJD Manufacturing Ltd.
Address	Unit 2, Birch Industrial Estate, Whittle Lane Heywood, OL10 2SX, United Kingdom
Telephone	+44 (0) 1706 363998
Fax	+44 (0) 1706 363991
Contact	Mark Tibbenham
Manufacturer	GJD Manufacturing Ltd.
Address	Unit 2, Birch Industrial Estate, Whittle Lane Heywood, OL10 2SX, United Kingdom
Telephone	+44 (0) 1706 363998
Fax	+44 (0) 1706 363991
Contact	Mark Tibbenham
Factory	GJD Manufacturing Ltd.
Address	Unit 2, Birch Industrial Estate, Whittle Lane Heywood, OL10 2SX, United Kingdom
Telephone	+44 (0) 1706 363998
Fax	+44 (0) 1706 363991
Contact	Mark Tibbenham

Test Result according to the standards on page 3: Positive

The test report merely corresponds to the test sample.

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1.TEST STANDARDS

The tests were performed according to following standards:

- 47 CFR PART 15, 2010
- ANSI C63.4-2009

2.SUMMARY

2.2 FINAL ASSESSMENT

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

- fulfilled.
- □ **not** fulfilled.

The equipment under test

- fulfils the FCC requirements cited on page 3.
- does not fulfil the FCC requirements cited on page 3.

3.EQUIPMENT UNDER TEST

3.1 Power supply system utilised

Power supply voltage : ■ DC 12V

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:

■ - Test program (customer specific)

Freq. Range :	30MHz-10000MHz	10000MHz-26500MHz	26500MHz-40000MHz	50000MHz-53000MHz	
Test Distance:	3m	1m	0.5m	0.05m	
EUT Position:	Tabletop				
Operation Mode:	Transmitting				

Note: X position of EUT is the worst case, so only these test results be recorded in the test report.

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3.4 EUT configuration

3.4.1. Description of configuration (EUT)

Description	:	Outdoor Dual PIR Detector
Model Number	:	DDI602
Operation frequency	:	10.525GHz
Modulation Technology	:	Pulse modulation
Mode of operation		Simplex
Antenna	:	Patch antenna, met requirement of FCC 15.203
Antenna Assembly Gain	:	13dBi (maximum)
Temperation of operation		-30 deg.C to 55 deg.C

3.4.2. Tested Supporting System Details

N/A

4.TEST ENVIRONMENT

4.1 Address of the test laboratory

Xingyuan Industrial Park, Tongda Road, Bao'an Blvd., Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755-85291330 Fax: +86-755-85291330

4.2 Test facility

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

CNAS-Lab Code: L4595

SHENZHEN LCS CERTIFICATION SERVICES INC. 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.

FCC-Registration No.: 752021

Anbotek Compliance Laboratory Limited, 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. August 20, 2010.

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 LCS 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.

4.6 Measurement Uncertainty

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

^{(1).} This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5. Summary of standards and results

5.1. Description of Standards and Results

EMISSION			
Description of Test Item	Standard	Results	
Radiated Emission Test	FCC Part 15 C: 15.245(b), 15.205, 15.209 ANSI C63.4-2009	PASSED	
20 dB Bandwidth Test	FCC Part 15 C: 15.215(C) ANSI C63.4-2009	PASSED	
Occupied Bandwidth (99% BW) Test	RSS-210 Issue 8 ANSI C63.4-2009	PASSED	

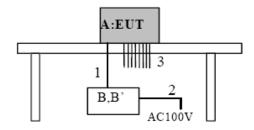
6. Radiated disturbance (electric field)

6.1. Main Test Equipments Used

Item	Test Equipment	Manufacturer	Model No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	2010/10
2	Log per Antenna	ROHDE & SCHWARZ	HL050	2010/10
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	2010/10
4	Spectrum analyzer	ADAVANTEST	R3273	2010/10
5	Horna Antenna	SCHWARBECK	BBHA91220D	2010/10
6	Horna Antenna	EMCO	3160-09	2010/10
7	Horna Antenna	EMCO	3160-10	2010/10
8	Spectrum Analyzer	Agilent	E4448A(External mixers to 325 GHz)	2010/10
9	Pre Amplifier	Agilent	8449B	2010/10
10	Microwave Cable	Suhner	Sucoflex10	2010/10
11	DC Power Supply	Agilent	6642A	2010/10
12	Pre Amplifier	Agilent	8447D	2010/10
13	Microwave system power Amplifier	Agilent	83050A	2010/10
14	Horna Antenna	A-INFO	JXTXLB-19-20	2010/12

6.2.Block Diagram of Test Setup

6.2.1 Block Diagram of connection between EUT and simulators

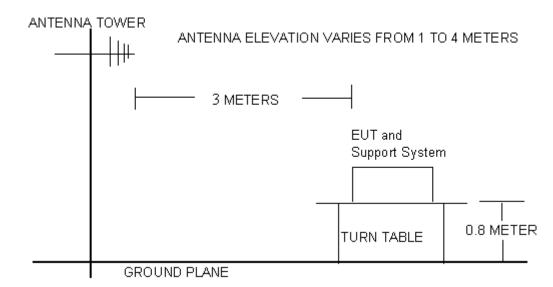


* Test data was taken under worse case conditions.

(EUT: Outdoor Dual PIR Detector)

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6.2.2 Anechoic Chamber Setup Diagram



6.3.Radiated Emission Limit Standard: FCC 15.245(b)&15. 205&15.209

FR	EQUEN	CY	DISTANCE	FIELD STREN	GTHS LIMIT
	MHz		Meters	μV/m	dB(μV)/m
30	~	88	3	100	40.0
88	~	216	3	150	43.5
216	~	960	3	200	46.0
960	~	1000	3	500	54.0
А	bove 10	000	3	Other:74.0 dB(μ 54.0 dB(μV)/n	

- Remark: (1) Emission level $dB\mu V = 20 \log Emission level \mu V/m$
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

6.4. Test Procedure

The EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2009on radiated emission Test.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 120kHz RBW below 1GHz and a Peak and Average detector with 1MHz RBW above 1GHz,

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All measurements for radiated emissions within the restricted bands were performed using a Quasi-Peak detector with 300kHz VBW below 1GHz and a Peak detector with 1MHz VBW above 1GHz, A average detector with 10Hz VBW above 1GHz

Pretest x, y, z position of EUT, final, select the worst case x position test and record the test results in the report.

The test modes (TX Mode) is tested in Anechoic Chamber and all the scanning waveforms are reported on section 6.5

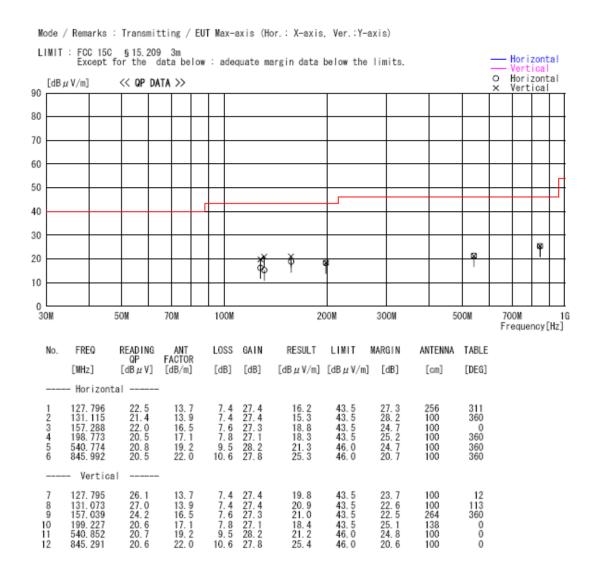
6.5. Radiated Emission Test Results

PASSED.

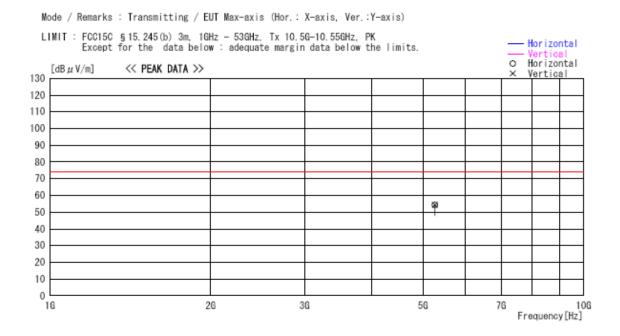
The frequency range from 30MHz to 230MHz, 230MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

Channel:	TX Mode	Result:	■ - passed
Test point:	Horizontal/ Vertical		□ - not passed
Frequency range:	30-1000MHz		

EUT:	Outdoor Dual PIR Detector
M/N:	DDI602
Firm Name:	GJD Manufacturing Ltd.
Power supply:	DC 12V
Test Condition:	Ambient Temperature: 25°C Humidity: 56%
Test standard:	FCC PART 15C: 15.245(b), 15.205, 15.209
Test mode:	Transmitting
Test Frequency:	10.525GHz
Test Date:	March 16, 2011 - April 07, 2011
Test By:	Keke

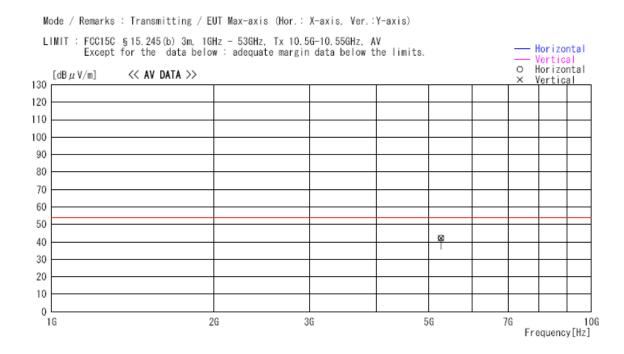


Channel:	TX Mode	Result:	■ - passed
Test point:	Horizontal/ Vertical		□ - not passed
Frequency range:	1GHz-10GHz		



Frequency	Result		Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
5262.500	54.2	PK	100	Hori.	73.9	19.7	
5262.500	54.2	PK	100	Vert.	73.9	19.7	

1000MHz-Horn



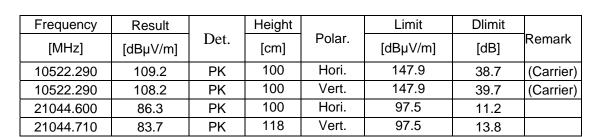
Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
5262.500	54.2	AV	100	Hori.	42.1	11.8	
5262.500	54.2	AV	100	Vert.	42.1	11.8	

1000MHz-Horn

26. 5G

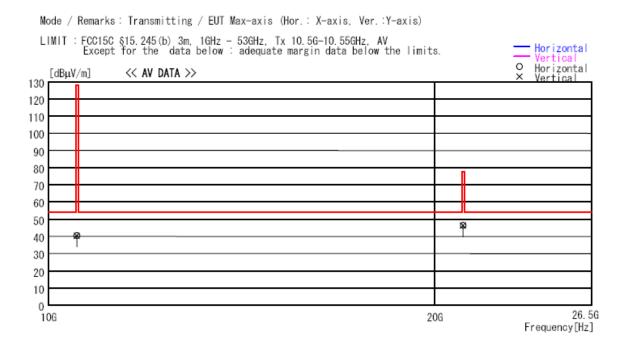
Frequency[Hz]

Channel: Test point: Frequency range:	TX Mode Horizontal/ Vertical 1GHz-26.5GHz	Result:	■ - passed □ - not passed
LIMIT : FCC15C §15.2 Except for t	nsmitting / EUT Max-axis (Hor.: X-a) 45(b) 3m, 1GHz - 53GHz, Tx 10.5G-10 the data below : adequate margin da PEAK DATA >>		Horizontal Vertical O Horizontal X Vertical



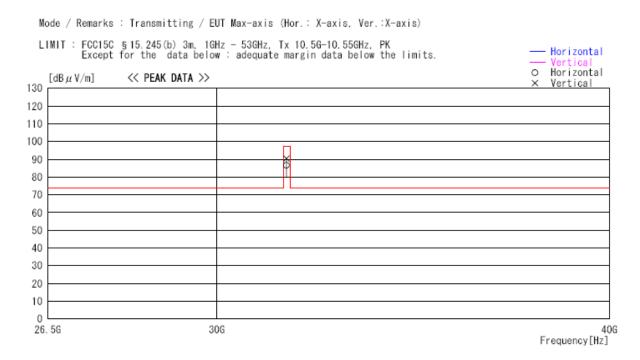
20G

Remark: With Factor ANT. Type:-30MHz Loop. 30-300MHz Biconical. 300-1000MHz Logperiodic. 1000MHz-Horn

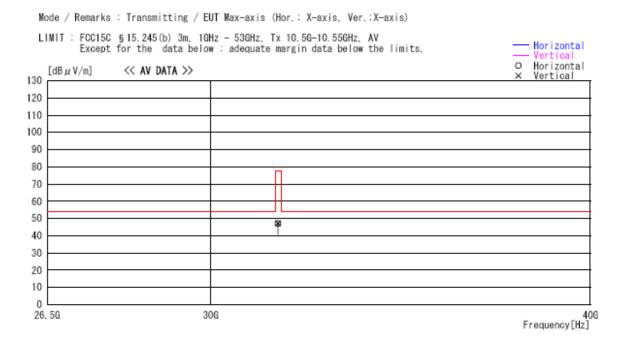


Frequency	Result	_	Height	_	Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
10522.290	40.5	AV	100	Hori.	127.9	38.7	(Carrier)
10522.290	40.5	AV	100	Vert.	127.9	39.7	(Carrier)
21044.600	46.5	AV	100	Hori.	77.5	11.2	
21044.710	46.3	AV	118	Vert.	77.5	13.8	

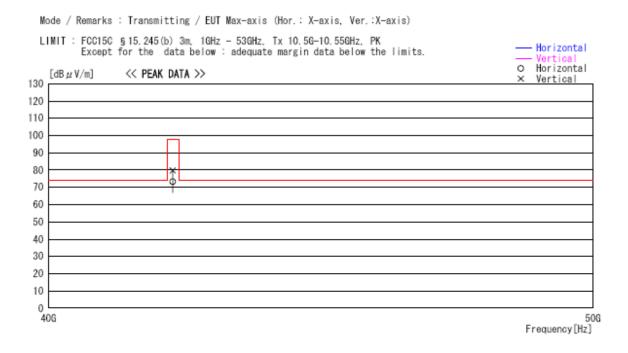
1000MHz-Horn



Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
31564.720	86.6	PK	100	Hori.	97.5	10.9	
31564.620	90.4	PK	100	Vert.	97.5	7.1	

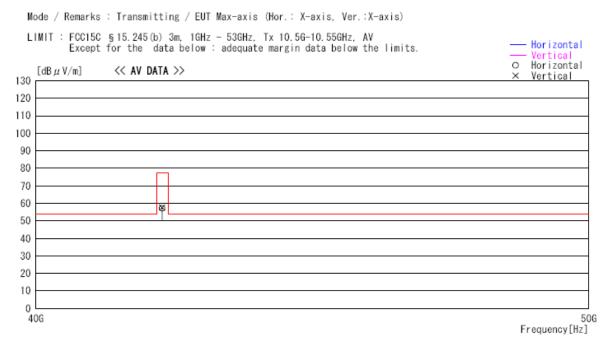


Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
31564.720	47.1	AV	100	Hori.	77.5	30.4	
31564.620	47.2	AV	100	Vert.	77.5	30.3	



Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
42087.290	73.3	PK	100	Hori.	97.5	24.2	
42087.330	79.7	PK	100	Vert.	97.5	17.8	

1000MHz-Horn

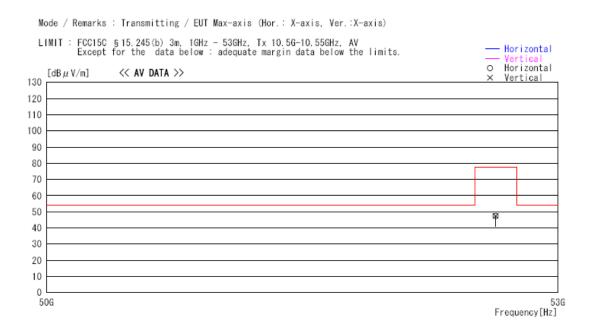


Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
42087.290	57.1	AV	100	Hori.	77.5	20.4	
42087.330	57.5	AV	100	Vert.	77.5	20.0	



Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
52625.00	60.2	PK	100	Hori.	97.5	37.3	
52625.00	60.6	PK	100	Vert.	97.5	36.9	

1000MHz-Horn



Frequency	Result	_	Height		Limit	Dlimit	
[MHz]	[dBµV/m]	Det.	[cm]	Polar.	[dBµV/m]	[dB]	Remark
52625.00	47.4	AV	100	Hori.	97.5	30.1	
52625.00	47.4	AV	100	Vert.	97.5	30.1	

7.20 dB Bandwidth test

7.1. Test Equipment

Item	Test Equipment	Manufacturer	Model No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	2010/10
2	Log per Antenna	ROHDE & SCHWARZ	HL050	2010/10
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	2010/10
4	Spectrum analyzer	ADAVANTEST	R3273	2010/10
5	Horna Antenna	SCHWARBECK	BBHA91220D	2010/10
6	Horna Antenna	EMCO	3160-09	2010/10
7	Horna Antenna	EMCO	3160-10	2010/10

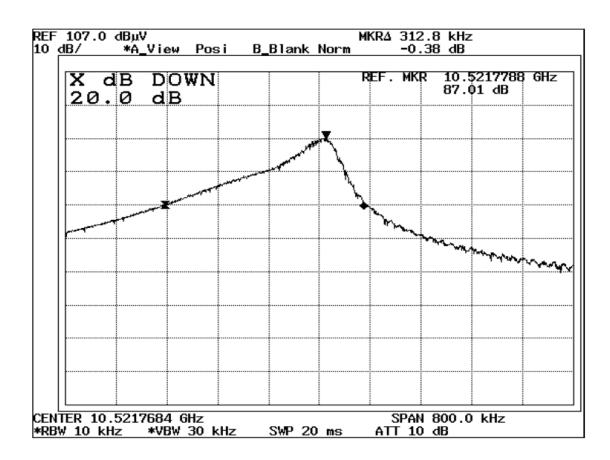
7.2. Test Information

EUT:	Outdoor Dual PIR Detector	
M/N:	DDI602	
Firm Name:	GJD Manufacturing Ltd.	
Power supply:	DC 12V	
Test Condition:	Ambient Temperature: 25°C Humidity: 56%	
Test standard:	FCC PART 15C: 15.215(C)	
Test mode:	Transmitting	
Test Frequency:	10.525GHz	
Test Date:	March 16, 2011 - April 07, 2011	
Test By:	Keke	

7.3. Test Results

PASSED.

The testing data was attached in the next pages.



Test Frequency (MHz)	-20dB Bandwith(kHz)
10521.8	312.80

8. Occupied Bandwidth (99% BW) Test

8.1. Test Equipment

Item	Test Equipment	Manufacturer	Model No.	Last Cal.
1	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	2010/10
2	Log per Antenna	ROHDE & SCHWARZ	HL050	2010/10
3	Signal analyzer	ROHDE & SCHWARZ	FSIQ26	2010/10
4	Spectrum analyzer	ADAVANTEST	R3273	2010/10
5	Horna Antenna	SCHWARBECK	BBHA91220D	2010/10
6	Horna Antenna	EMCO	3160-09	2010/10
7	Horna Antenna	EMCO	3160-10	2010/10

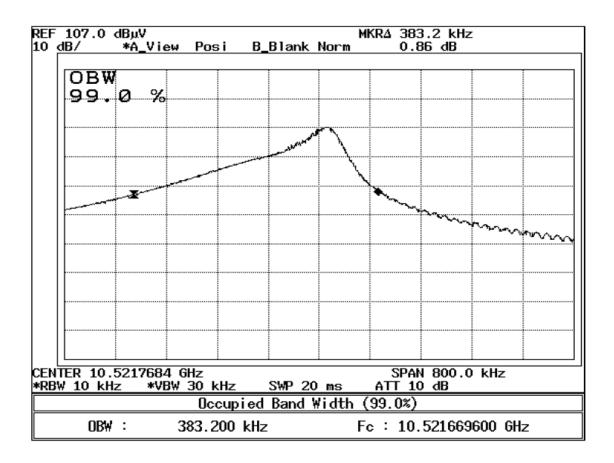
8.2. Test Information

EUT:	Outdoor Dual PIR Detector	
M/N:	DDI602	
Firm Name:	GJD Manufacturing Ltd.	
Power supply:	DC 12V	
Test Condition:	Ambient Temperature: 25°C Humidity: 56%	
Test standard:	RSS-210 Issue 8	
Test mode:	Transmitting	
Test Frequency:	10.525GHz	
Test Date:	March 16, 2011 - April 07, 2011	
Test By:	Keke	

8.3. Test Results

PASSED.

The testing data was attached in the next pages.



Test Frequency (MHz)	99% Occupied Bandwith(kHz)
10521.8	383.20

9. Deviation to test specifications

[NONE]

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