

Linguistic street as a little

Prüfbericht-Nr.: 17048790 001 Auftrags-Nr.: 164033906 Seite 1 von 65 Test Report No.: Order No.: Page 1 of 65 Kunden-Referenz-Nr.: Auftragsdatum: 13.04.2015 Client Reference No.: Order date: Auftraggeber: Ringly Client: 39 W 14th St # 202, New York, NY 10011 USA Prüfgegenstand: Ring!y Test item: Bezeichnung / Typ-Nr.: Identification / Type No.: Auftrags-Inhalt: Class II permissive change Order content: Prüfarundlage: FCC CFR47 Part 15: Subpart B Section 15.107 Test specification: FCC CFR47 Part 15: Subpart B Section 15.109 FCC CFR47 Part 15: Subpart C Section 15.207 FCC CFR47 Part 15: Subpart C Section 15.209 FCC CFR47 Part 15: Subpart C Section 15.247 FCC KDB publication 447498 D01 v05r02

Wareneingangsdatum: 23.04.2015
Date of receipt:

Prüfmuster-Nr.: A000190040 002
Test sample No.:

Prüfzeitraum: 23.04.2014 - 30.04.2015
Testing period:

Ort der Prüfung: Accurate Technology Co., Ltd.

Prüflaboratorium: TÜV Rheinland (Shenzhen)
Testing laboratory: Co., Ltd.

Prüfergebnis*:
Test result*:

Pass



Sonstiges *I Other*: This test report made Class II permissive change to FCC ID 2AB9V-J12. PCB manufacturer wad changed and three passive components (capacitor and inductance) were replaced in the new design, and also there are some minor modifications of the PCB layout. The RF module, RF parameters and product functions remain the same with the certified design.All test radio spectrum and EMC test requirment were carried out in current test report.

	I des Prüfgegen n of the test item		•	lständig und unbesc olete and undamage	
* Legende:	1 = sehr gut P(ass) = entspricht o.g	2 = gut g. Prüfgrundlage(n)	3 = befriedigend F(ail) = entspricht nicht o.g. Prüfgrundlage(n	4 = ausreichend) N/A = nicht anwendbar	5 = mangelhaft N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m.	2 = good test specification(s)	3 = satisfactory F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

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TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 PEAK OUTPUT POWER

RESULT: Pass

5.1.3 POWER DENSITY

RESULT: Pass

5.1.4 6DB BANDWIDTH

RESULT: Pass

5.1.5 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100kHz BANDWIDTH

RESULT: Pass

5.1.6 RADIATED SPURIOUS EMISSIONS

RESULT: Pass

5.1.7 CONDUCTED EMISSIONS

RESULT: Pass

5.1.8 RADIATED EMISSIONS

RESULT: Pass

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Pass



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1. General Remarks

1.1 Complementary Materials

None.

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District,

Shenzhen 518057, P.R. China FCC Registration No.: 752051 IC OATS Registration No.: 5077A-2

The tests at the test site have been conducted under the supervision of a TÜV engineer.



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2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment Manufacturer		Туре	S/N	Calibrated until				
Spurious emission and Radiated emission								
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	2016-01-10				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2016-01-10				
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2016-01-10				
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2016-01-10				
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2016-01-10				
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2016-01-10				
Pre-Amplifier	Rohde & Schwarz	CBLU1183540-	3791	2016-01-10				
		01						
Radio Test Suite								
Receiver	Rohde & Schwarz	FSV40	101495	2016-01-10				
Conducted Emission	1							
Test Receiver	Rohde & Schwarz	ESCS30	100307	2016-01-10				
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2016-01-10				
L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100310	2016-01-10				
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2016-01-10				
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2016-01-10				
RF Coaxial Cable	SUHNER	N-2m	No.3	2016-01-10				



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2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are $\pm 3 dB$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were included in this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Accurate Technology Co., Ltd located at F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China, is listed on the US Federal Communications Commission list of facilities and Industry Canada OATS list approved to perform measurements.



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3. General Product Information

3.1 Product Function and Intended Use

The EUT is a ring with a charging box. The EUT can communicate with mobile phone by using Bluetooth 4.0. For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Specification of EUT

Technical Specification	Value
FCC ID	2AB9V-J12
Operating Frequency	2402-2480MHz
Operating Voltage	DC 3.7V for ring via internal rechargeble battery DC 5.0V for charging box via USB port
Modulation	GFSK
Number of channel	40
Chanel spacing	2MHz
Bluetooth version	Bluetooth 4.0 (single mode)
Antenna type and Gain	PCB Antenna, 1 dBi

3.3 Independent Operation Modes

- A. Ring On, Transmitting
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. Charging docking via computer
- C. Charging ring via docking
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Block Diagram - Bill of Material

- Circuit Diagram

- Instruction Manual



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- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

Table 3: RF channel and frequency of EUT

RF Chan	RF Channel of Bluetooth Low Energy (LE)							
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	
0	2402.00	10	2422.00	20	2442.00	30	2462.00	
1	2404.00	11	2424.00	21	2444.00	31	2464.00	
2	2406.00	12	2426.00	22	2446.00	32	2466.00	
3	2408.00	13	2428.00	23	2448.00	33	2468.00	
4	2410.00	14	2430.00	24	2450.00	34	2470.00	
5	2412.00	15	2432.00	25	2452.00	35	2472.00	
6	2414.00	16	2434.00	26	2454.00	36	2474.00	
7	2416.00	17	2436.00	27	2456.00	37	2476.00	
8	2418.00	18	2438.00	28	2458.00	38	2478.00	
9	2420.00	19	2440.00	29	2460.00	39	2480.00	



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4.3 Countermeasures to Achieve ERM Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF). No additional measures were employed to achieve compliance.

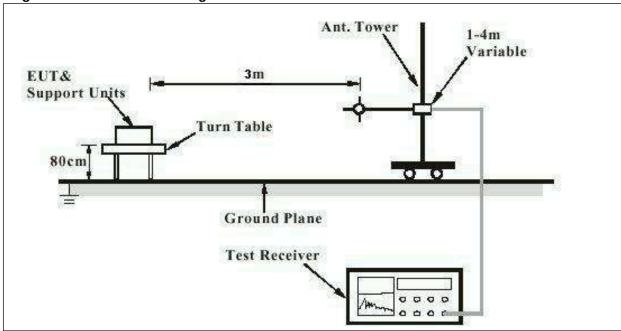
4.4 Special Accessories and Auxiliary Equipment

Auxiliary equipment:

Description	Manufacturer	Model	S/N
PC	Lenovo	4290-RT8	R9-FW93G
Printer	HP	HP laserjet 1015	

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test





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Diagram of Measurement Equipment Configuration for Conduction Measurement

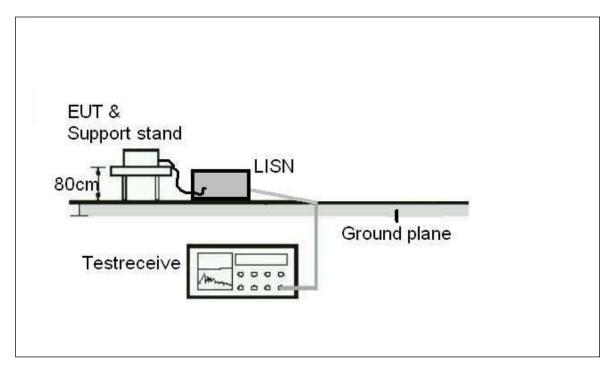
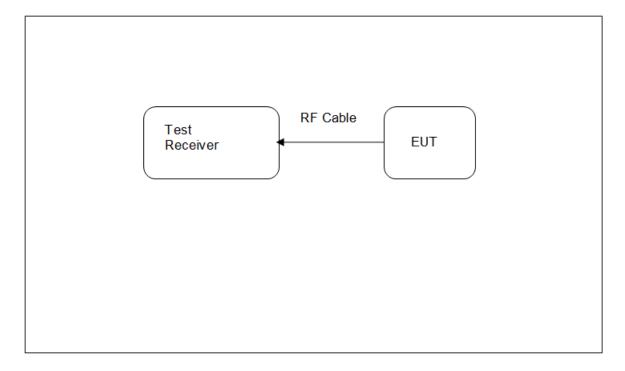


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement





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5. Test Results

5.1 Test Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: Pass

Test standard : FCC Part 15.247(b)(4) and Part 15.203

RSS-Gen 7.1.4

Limit : the use of antennas with directional gains that do not

exceed 6 dBi

According to the manufacturer declared, the EUT has an internal PCB antenna, the directional gain of antenna is 1dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photos for details.



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5.1.2 Peak Output Power

RESULT: Pass

Test standard FCC Part 15.247(b)(1)&(b)(3)

RSS-210 A8.4 (2)&(4)

Basic standard ANSI C63.10: 2009

Limit 1 Watt

Shielded room Kind of test site

Test setup

Test Channel Low/ Middle/ High

Operation Mode Α Ambient temperature 23°C Relative humidity 48% Atmospheric pressure 101 kPa

Table 4: Test result of Peak Output Power

Channel	Channel Frequency	Peak Out	Limit	
	(MHz)	(dBm)	(mW)	(W)
Low Channel	2402	-15.85	0.026	1
Middle Channel	2440	-15.75	0.027	1
High Channel	2480	-15.56	0.028	1



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5.1.3 Power Density

RESULT: Pass

Test standard : FCC Part 15.247(e)

RSS-210 A8.2 (b)

Basic standard : ANSI C63.10: 2009

Limits : 8dBm/3kHz
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High

Operation mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 5: Test result of power density

Channel	Channel Frequency (MHz)	Peak Power Density (dBm/3kHz)	Limit (dBm/3kHz)	Result
Low Channel	2402	-30.29	8	Pass
Mid Channel	2440	-29.95	8	Pass
High Channel	2480	-28.45	8	Pass

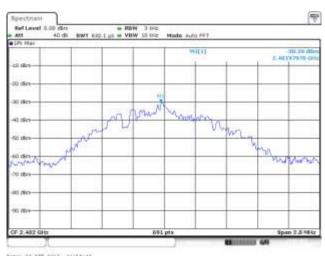
For details refer to the following test plots.

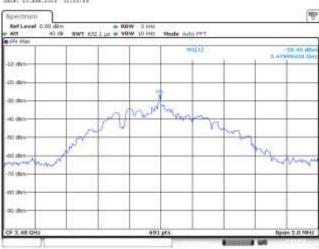


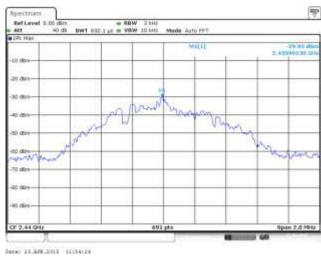
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Test plots of Power Density







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5.1.4 6dB Bandwidth

RESULT: Pass

Test standard : FCC Part 15.247(a)(2)

RSS-210 A8.2 (a)

Basic standard : ANSI C63.10: 2009 Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High

Operation Mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

Table 6: Test result of 6dB Bandwidth

Channel	Channel Frequency (MHz)	6dB Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	716	>500	Pass
Mid Channel	2440	712	>500	Pass
High Channel	2480	716	>500	Pass

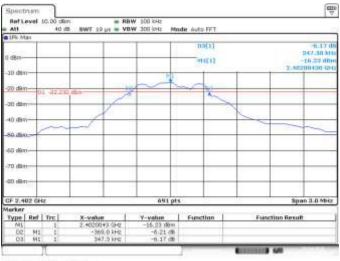
For details refer to the following test plots.



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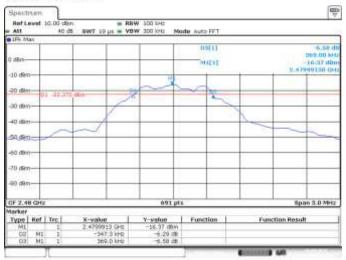
Test plots of 6dB bandwidth



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Sate: 25.APW.2016 10:07:11



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5.1.5 Conducted Spurious Emissions Measured in 100kHz Bandwidth

RESULT: Pass

Test standard : FCC Part 15.247(d)

RSS-210 A8.5

Basic standard : ANSI C63.10: 2009

Limit : 20dB (below that in the 100kHz bandwidth within the

band that contains the highest level of the desired

power);

In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits

specified in 15.209(a)

Kind of test site : Shield room

Test setup

Test Channel : Low/Middle/ High

Operation mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For details refer to following test plots.

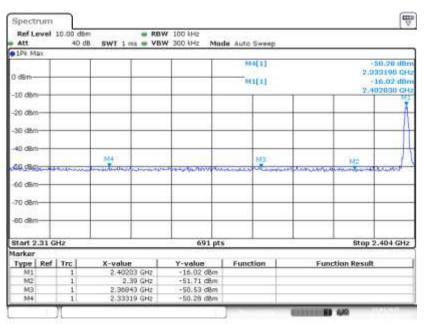


Prüfbericht - Nr.: 17048790 001 Seite 19 von 65 Page 19 of 65 Test Report No. **Test Plots of Conducted Spurious Emission** ■ RBW 100 IH2 BWT 265 Hs ⊕ VBW 202 IH2 **Function Result** Date: 23.A99.2016 11:59:08 MILIT Type | Ref | Tro Date: 20.259.2016 11:19:56 MI(1) Function Result Sate: 25-APA-2016 12:00:60

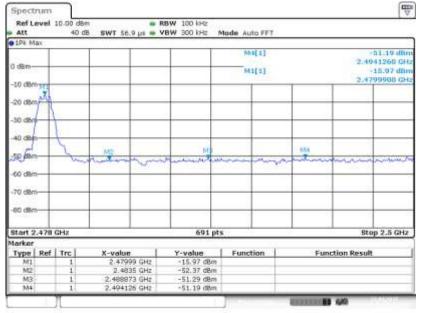


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Date: 23,AFR.2015 11:57:37



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5.1.6 Radiated Spurious Emissions

RESULT: Pass

Test standard : FCC Part 15.247(d),FCC 15.205

RSS-210 Clause 2.2 ANSI C63.10: 2009

Basic standard : ANSI C63.10: 2009

Limit : Radiated emissions which fall in the restricted bands, as

defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see

§15.205(c)).

Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/ Middle/ High

Operation mode : A
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For details refer to the following test plots.



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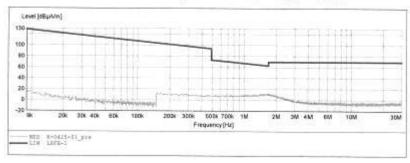
Test Plots of Radiated Spurious Emission 9K-1GHz

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

Ring M/N:Ringly EVT: Ring M/N:R:
Manufacturer: Ringly
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: LAN
Test Specification: DC 3.7V
Comment: X Connent: Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Fin"
Short Description: SUB_STD_VIERM2 1.70
Start Stop Step Detector Meas.
Frequency Frequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s Transducer Bandw. 200 Hz 9 kHz





Test Report No.

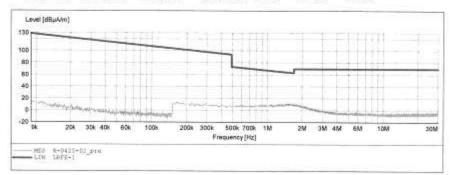
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ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

EUT: Manufacturer: Ring M/N: Ringly Manufacturer: Ringly
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: LAN
Test Specification: DC 3.7V Comment: Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Fin"
Short Description:
Start Stop Step SUB_STD_VTERM2 1.70 Detector Meas. Time z QuasiPeak 1.0 s IF Transducer Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 Hz 150.0 kHz 30.0 MHz 5.0 kHz Bandw. 200 Hz 9 kHz 1516M



Products



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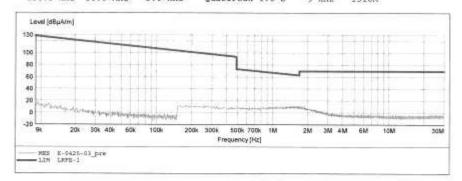
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ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

Ring M/N:Ringly Manufacturer: Manufacturer: Ringly
Operating Condition: TX 2402MHz
Test Site: 2# Chamber
Operator: LAN Test Site: 2# Chamber
Operator: LAN
Test Specification: DC 3.7V
Comment: 2
Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Fin"
Short Description: _Start Stop Step
Frequency Frequency Width
9.0 kHz 150.0 kHz 100.0 Hz
150.0 kHz 30.0 MHz 5.0 kHz _SUB_STD_VTERM2 1.70 Detector Meas. Time Z QuasiPeak 1.0 s QuasiPeak 1.0 s Transducer Bandw. 200 Hz 1516M 9 kHz 1516M





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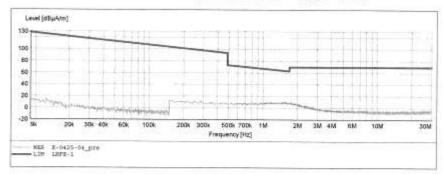
Test Report No.

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

SUT: Ring M/N:Ringly
Manufacturer: Ringly
Operating Condition: TX 2440MHz
Test Site: 2# Chamber
Operator: LAN
Test Spacification: DC 3.7V
Comment: Comment: Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Pin"
Short Description:
Start Stop Step Detector Meas.
Frequency Prequency Width
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 g Transducer Bandw. 200 Hz 9 kHz 1516M





Test Report No.

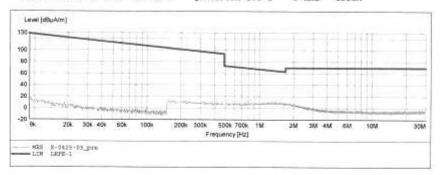
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ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

Ring M/N:Ringly Manufacturer: Ringly
Operating Condition: TX 2440MHz
Test Site: 2% Chember
Operator: LAN
Test Specification: DC 3.7V
Comment: Y Comment: Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Fin"
Short Description: SUB STD_VTERM2 1.70
Start Stop Step Detector Meas.
Frequency Frequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s IF Bandw. Transducer 200 Hz 1516M 9 kHz 1516M





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ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

Ring M/N:Ringly Manufacturer: Ringly
Operating Condition: TX 2440MHz
Test Site: 2# Chamber
Operator: LAN Test Specification: DC 3.7V Comment: 2 Start of Test: 2015-4-25 /

 SCAN TABLE: "LFRE Fin"

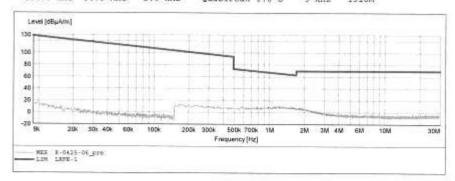
 Short Description:
 SUB_STD_VTERM2 1.7

 Start
 Stop
 Detector Meas:

 Frequency
 Width
 Time

 9.0 kHz
 150.0 kHz
 100.0 Hz
 QuasiPeak 1.0 s

 150.0 kHz
 30.0 MHz
 5.0 kHz
 QuasiPeak 1.0 s
 _SUB_STD_VTERM2 1.70 Detector Meas. Time IF Bandw. Transducer 200 Hz 1516M 9 kHz 1516M





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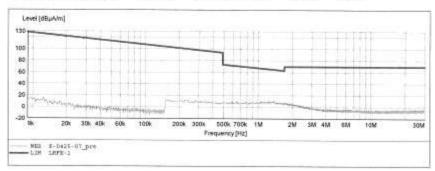
ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

EUT: Ring M/N:Ringly Ranufacturer: Ringly Coperating Condition: TX 2480MHz Test Site: 2# Chamber LAN Test Specification: DC 3.7V Comment: X Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Fin"

Short Desc	ription:	SUB STD VTERM2 1.70				
Start	Stop	Step	Detector	Meas.	IP	Transducer
Frequency	Frequency	Width		Time	Bendw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M





Test Report No.

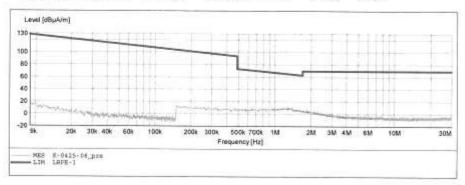
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ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

Ring M/N:Ringly manufacturer: Ringly
Operating Condition: TX 2460MHz
Test Site: 2# Chamber
Operator: LAN Test Specification: DC 3.7V Comment: Start of Test: 2015-4-25 /

SCAN TABLE: "LFRE Fin"
Short Description:
Start Stop Step _SUB_STD_VTERM2 1.70 Start Stop Step Detector Meas.
Prequency Prequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s IF Bandw. Detector Meas. Transducer 200 Hz 1516M 9 kHz 1516M





Test Report No.

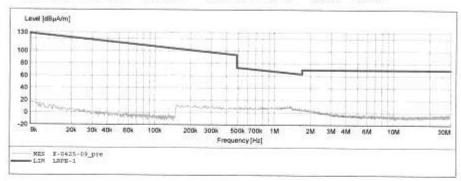
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ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

Ring M/N:Ringly Operating Condition: TX 2480MHz
Test Site: 2# Chamber
Operator: LAN Operator: LAN
Test Specification: DC 3.7V Comment: Z Start of Test: Z015-4-25 /

SCAN TABLE: "LPRE Fin"
Short Description:
Start Stop Step
Frequency Frequency Width
9.0 kHz 150.0 kHz 100.0 Hz
150.0 kHz 30.0 MHz 5.0 kHs _SUB_STD_VTERM2 1.70 IF Bandw. Detector Meas. Transducer Time QuasiPeak 1.0 s 200 Hz 1516M QuasiPeak 1.0 s 9 kHz





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Job No.: LAN2015 #1045 Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

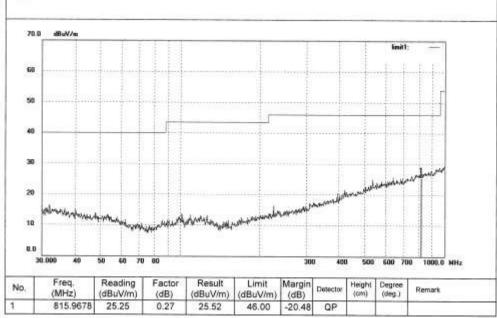
EUT: Ring
Mode: TX 2402MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Horizontal Power Source DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m





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ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Standard: FCC Class B 3M Radiated Test item: Radiation Test Temp.(C)/Hum.(%) 23 C / 48 %

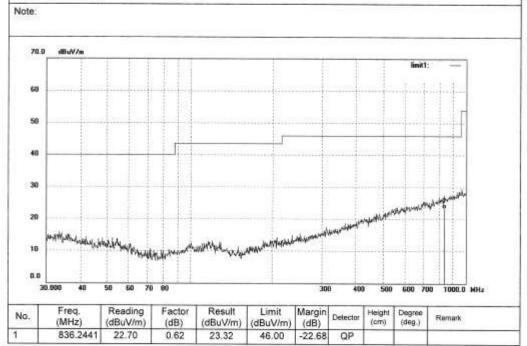
EUT: Ring Mode: TX 2402MHz Model Ringly

Manufacturer: Ringly

Polarization: Vertical Power Source: DC 3.7V Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m





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ACCURATE TECHNOLOGY CO., LTD.

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P,R,China

LAN2015 #1048 Standard: FCC Class B 3M Radiated

Test item: Radiation Test Temp.(C)/Hum.(%) 23 C / 48 %

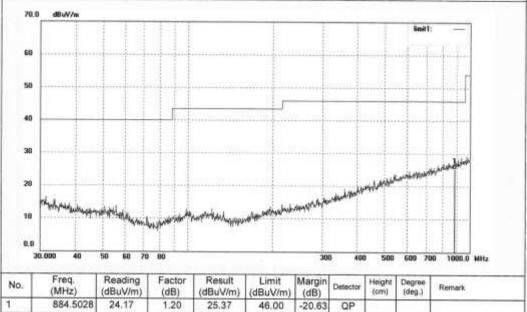
EUT: Ring Mode: TX 2440MHz Model: Ringly Manufacturer: Ringly

Polarization: Power Source: DC 3.7V Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m







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ACCURATE TECHNOLOGY CO., LTD.

d. <u>T</u>

Polarization: Horizontal

Power Source: DC 3.7V

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Job No.: LAN2015 #1049

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

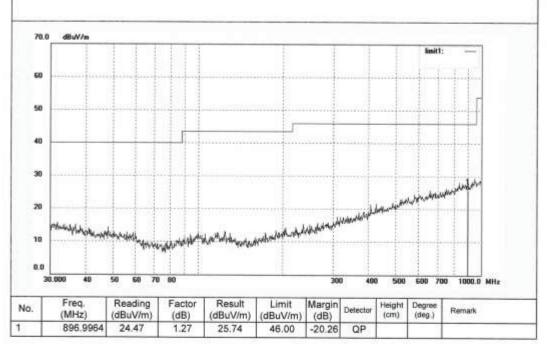
Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring Mode: TX 2440MHz

Model: Ringly Manufacturer: Ringly Date: 15/04/25/ Time:

Engineer Signature:

Distance: 3m





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Job No.: LAN2015 #1050

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

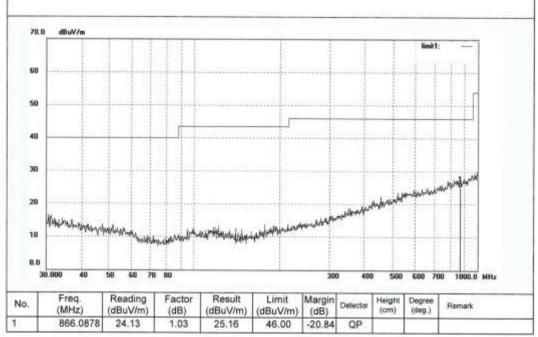
EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer Ringly

Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m





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ACCURATE TECHNOLOGY CO., LTD.

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Job No.: LAN2015 #1051

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer Ringly

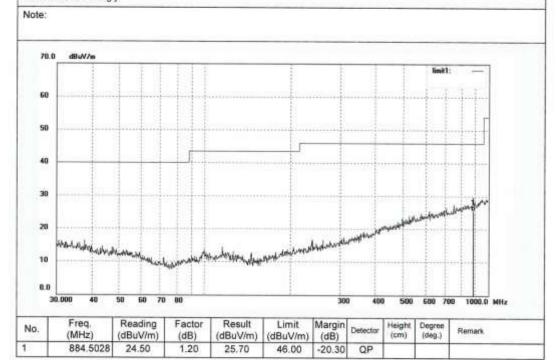
Polarization: Vertical Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m





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1G-25GHz (FCC)



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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

LAN2015 #989

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Mode:

Ring TX 2402MHz

Model: Ringly

Manufacturer: Ringly

Polarization: Vertical

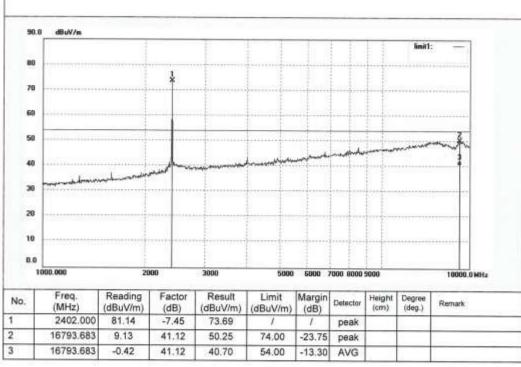
Power Source: DC 3.7V Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m







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ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

LAN2015 #990 Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

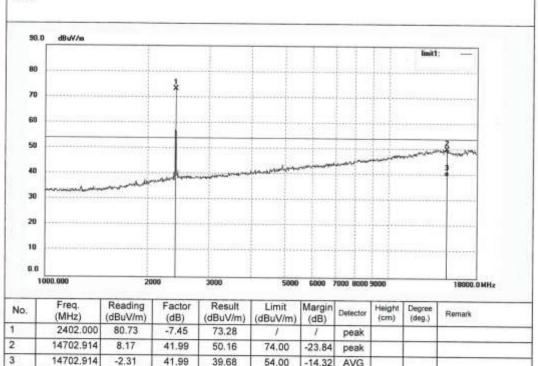
EUT: Ring Mode TX 2402MHz Model: Ringly Manufacturer: Ringly

Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Engineer Signature: Distance: 3m

Note:



54.00

-14.32

AVG

39.68



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Job No.: LAN2015 #993

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

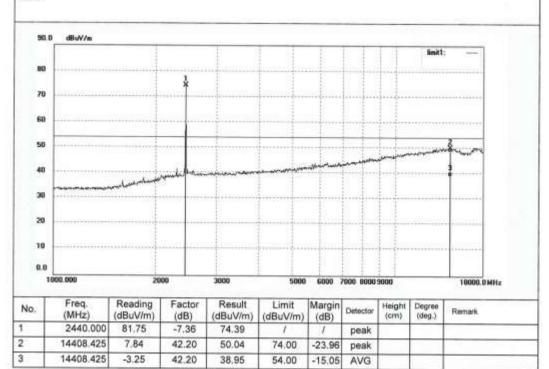
EUT: Ring
Mode: TX 2440MHz
Model: Ringly
Manufacturer Ringly

Polarization: Vertical Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m





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Test Report No.

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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

LAN2015 #994 Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

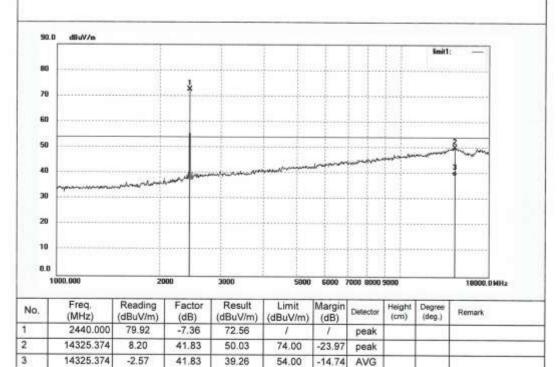
EUT: Ring Mode: TX 2440MHz Model: Ringly Manufacturer Ringly

Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m





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Job No.: LAN2015 #995

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer: Ringly

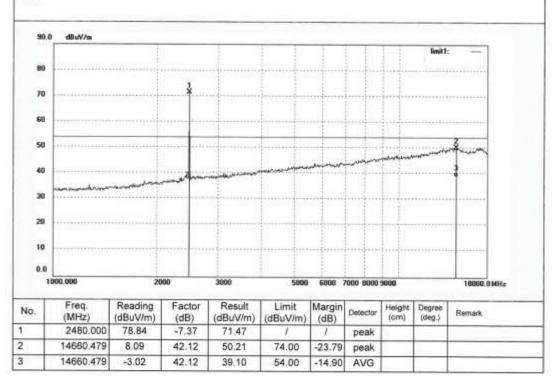
Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m





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Job No.: LAN2015 #996

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Vertical Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m

Note:

2

3

14618.166

14618.166

7.70

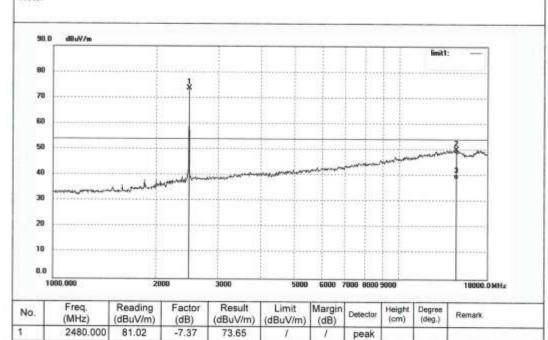
-3.50

42.25

42.25

49.95

38.75



74.00

54.00

-24.05

-15.25

peak

AVG



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ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

LAN2015 #1021

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring Mode: TX 2402MHz Model: Ringly Manufacturer: Ringly

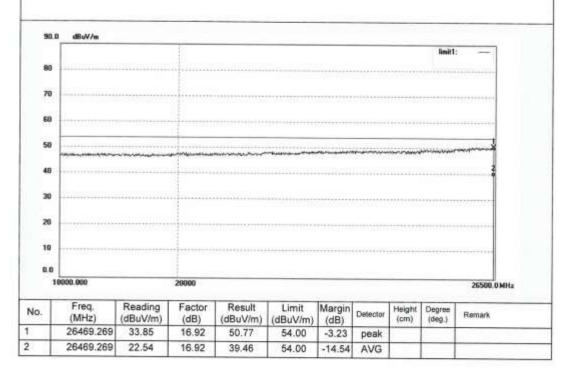
Polarization: Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m





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F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China

Date: 15/04/25/

Distance: 3m

Engineer Signature:

Time:

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

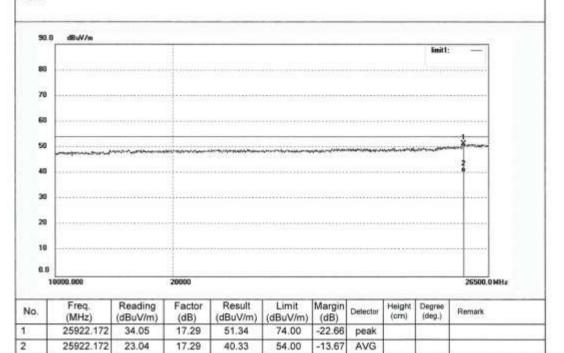
Job No.: LAN2015 #1022 Polarization: Horizontal Standard: FCC Class B 3M Radiated Power Source: DC 3.7V

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring Mode: TX 2402MHz

Model: Ringly Manufacturer: Ringly





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Job No.: LAN2015 #1023

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring
Mode: TX 2440MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m

Note:

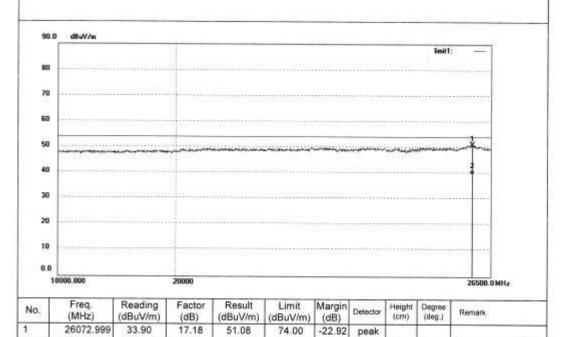
2

26072.999

22.47

17.18

39.65



54.00

-14.35

AVG



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ATC

ACCURATE TECHNOLOGY CO., LTD.

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Job No.: LAN2015 #1024 Standard: FCC Class B 3M Radiated

Test item: Radiation Test Temp.(C)/Hum.(%) 23 C / 48 %

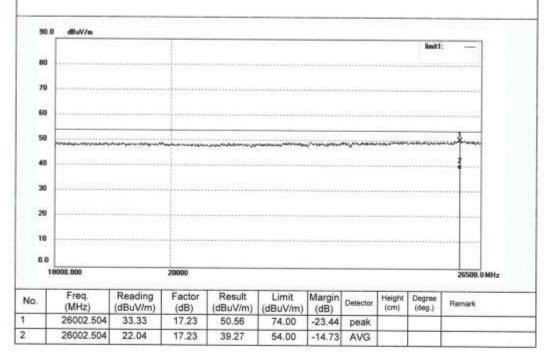
EUT: Ring Mode: TX 2440MHz Model: Ringly

Manufacturer. Ringly

Polarization: Vertical Power Source: DC 3.7V Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m





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ACCURATE TECHNOLOGY CO., LTD.

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Job No.: LAN2015 #1025

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer: Ringly

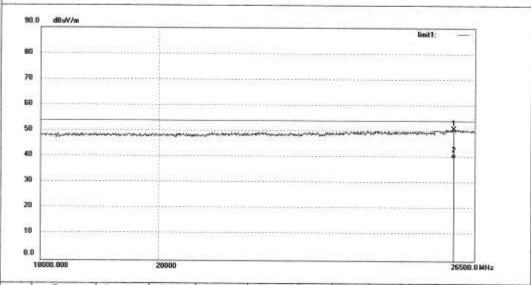
Polarization: Vertical Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature:

Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	26012.563	33.67	17.22	50.89	74.00	-23.11	peak				
2	26012.563	22.53	17.22	39.75	54.00	-14.25	AVG				



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ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Horizontal

Power Source: DC 3.7V

Date: 15/04/25/

Distance: 3m

Engineer Signature:

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

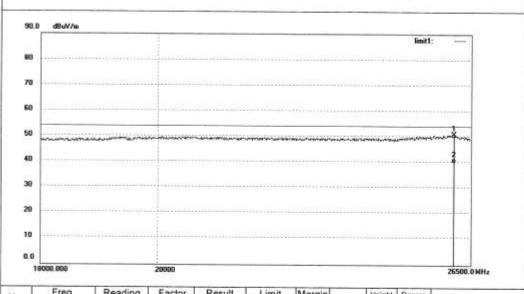
Temp.(C)/Hum.(%) 23 C / 48 %

EUT:

Ring

TX 2480MHz Mode: Model: Ringly

Manufacturer: Ringly



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	26103.270	33.71	17.16	50.87	74.00	-23.13	peak				
2	26103.270	22.75	17.16	39.91	54.00	-14.09	AVG		-		



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Job No.: LAN2015 #991 Standard: FCC (Band Edge) Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

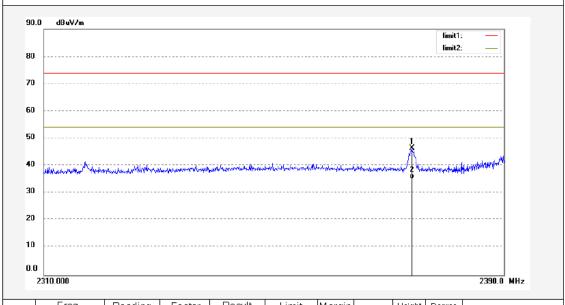
EUT: Ring
Mode: TX 2402MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	2373.840	54.08	-7.63	46.45	74.00	-27.55	peak				
2	2373.840	42.79	-7.63	35.16	54.00	-18.84	AVG				



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ACCURATE TECHNOLOGY CO., LTD.

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Job No.: LAN 2015 #992 Standard: FCC (Band Edge) Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

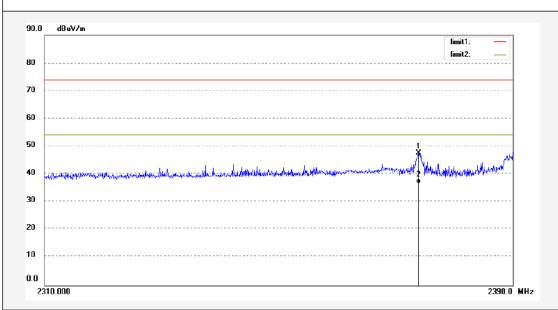
EUT: Ring
Mode: TX 2402MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Vertical Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2373.760	55.16	-7.63	47.53	74.00	-26.47	peak			
2	2373.760	44.22	-7.63	36.59	54.00	-17.41	AVG			



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ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LAN 2015 #997 Standard: FCC (Band Edge) Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

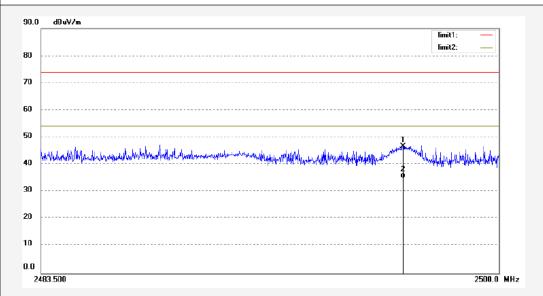
EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Vertical Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2496.552	54.20	-7.40	46.80	74.00	-27.20	peak			
2	2496.552	42.37	-7.40	34.97	54.00	-19.03	AVG			



Site: 2# Chamber

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Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN2015 #998
Standard: FCC (Band Edge)
Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

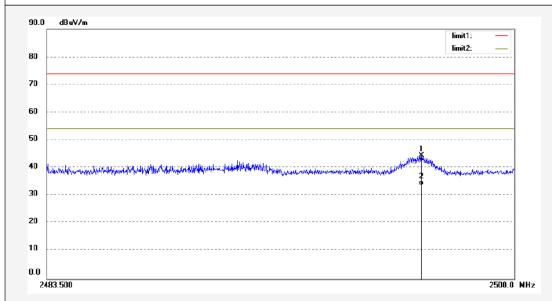
EUT: Ring
Mode: TX 2480MHz
Model: Ringly
Manufacturer: Ringly

Polarization: Horizontal Power Source: DC 3.7V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2496.733	51.76	-7.40	44.36	74.00	-29.64	peak			
2	2496.733	40.95	-7.40	33.55	54.00	-20.45	AVG			



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5.1.7 Conducted Emissions

RESULT: Pass

Test standard : FCC Part 15.107(a)

FCC Part 15.207(a)

ICES-003 Issue 5 February 2012 clause 6.1 RSS-Gen issue 4 November 2014 clause 8.8

Basic standard : ANSI C63.10: 2009

Limit : FCC Part 15.107 (a) & 15.207(a)

ICES-003 Issue 5 February 2012 clause 6.1 RSS-Gen issue 4 November 2014 clause 8.8

Kind of test site : Shield room

Test setup

Operation mode : A+B+C
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101 kPa

For detail refer to the following test plots.



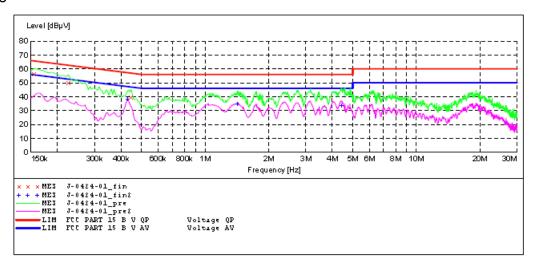
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Test Plots of Conducted Emission

Live line



MEASUREMENT RESULT: "J-0424-01_fin"

4/24/2015 Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.155000	56.40	10.5	66	9.3	QP	N	GND
0.225000	50.00	10.6	63	12.6	QP	N	GND
0.445000	39.90	10.7	57	17.1	QP	N	GND

MEASUREMENT RESULT: "J-0424-01 fin2"

4/24/2015 Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.430000	38.10	10.7	47	9.2	AV	N	GND
1.420000	34.70	10.9	46	11.3	AV	N	GND
4.440000	33.50	11.1	46	12.5	0.77	M	GMD

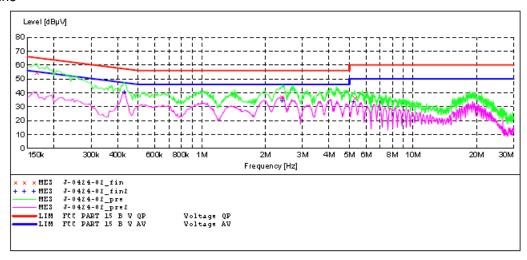


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Neutral line



MEASUREMENT RESULT: "J-0424-02_fin"

4/24/2015 Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.165000	54.70	10.5	65	10.5	QP	L1	GND
2.400000	37.10	11.0	56	18.9	QP	L1	GND
5.290000	36.50	11.2	60	23.5	OP	L1	GND

MEASUREMENT RESULT: "J-0424-02_fin2"

4/24/2015 Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
MHz	dBµV	dB	dΒμV	dB			
0.430000	40.40	10.7	47	6.9	AV	L1	GND
2.400000	34.10	11.0	46	11.9	AV	L1	GND
5.260000	33.60	11.2	50	16.4	AV	L1	GND

Produkte

Products



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5.1.8 Radiated Emissions

RESULT: Pass

Date of testing 2014-10-15

Test standard FCC Part 15.109(a)

ICES-003 Issue 5 February 2012

Basic standard ANSI C63.10: 2009 Limit

FCC Part 15.109 (a)

ICES-003 Issue 5 February 2012

Kind of test site Shield room

Test setup

Operation mode B+C Ambient temperature 23°C Relative humidity 48% Atmospheric pressure 101 kPa

For detail refer to the following test plots.



Site: 2# Chamber

Tel:+86-0755-26503290

Fax: +86-0755-26503396

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Test Plots of Radiated Spurious Emissions



Job No.: LAN 2015 #983

ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization: Horizontal Power Source: DC 5V

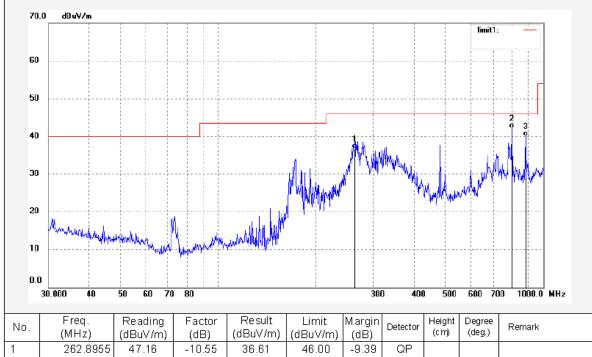
Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m

Standard: FCC Class B 3M Radiated Test item: Radiation Test Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring Mode: Charging Model: Ringly Manufacturer: Ringly



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	262.8955	47.16	-10.55	36.61	46.00	-9.39	QP				
2	798.9796	42.14	0.02	42.16	46.00	-3.84	QP				
3	881.4067	38.80	1.16	39.96	46.00	-6.04	QP				



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ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LAN 2015 #984

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

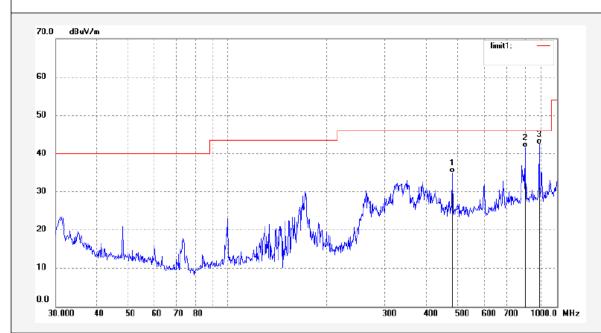
EUT: Ring
Mode: Charging
Model: Ringly
Manufacturer: Ringly

Polarization: Vertical Power Source: DC 5V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	480.5276	40.31	-5.34	34.97	46.00	-11.03	QP			
2	798.9796	41.48	0.02	41.50	46.00	-4.50	QP			
3	881.4067	41.29	1.16	42.45	46.00	-3.55	QP			



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ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LAN 2015 #985

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

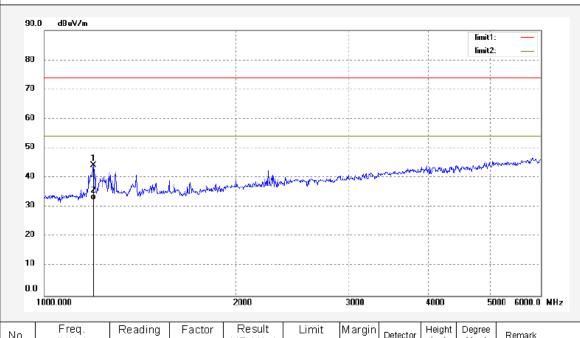
EUT: Ring
Mode: Charging
Model: Ringly
Manufacturer: Ringly

Polarization: Horizontal Power Source: DC 5V

Date: 15/04/25/

Time:

Engineer Signature: Distance: 3m



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1194.090	56.65	-12.50	44.15	74.00	-29.85	peak			
2	1194.090	45.08	-12.50	32.58	54.00	-21.42	AVG			



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ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber Tel:+86-0755-26503290 Fax: +86-0755-26503396

Job No.: LAN 2015 #986

Standard: FCC Class B 3M Radiated

Radiation Test

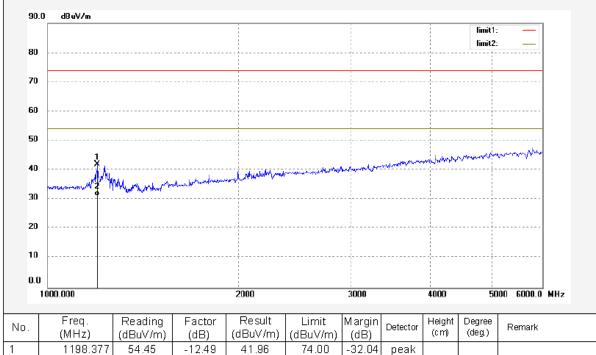
Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Ring Charging Mode: Model: Ringly Manufacturer: Ringly Polarization: Vertical Power Source: DC 5V

Time:

Engineer Signature: Distance: 3m

Date: 15/04/25/



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1198.377	54.45	-12.49	41.96	74.00	-32.04	peak			
2	1198.377	43.74	-12.49	31.25	54.00	-22.75	AVG			



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6. Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: Pass

Test standard : FCC KDB Publication 447498

The minimum distance for the EUT is 5mm, since measured maximum peak output power of the transmitter is 0.028mW, which is far below the SAR exclusion threshold level 10 mW (Appendix A, SAR Test Exclusion Thresholds for 100 MHz − 6 GHz and ≤50 mm), hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure. Guidance v05.



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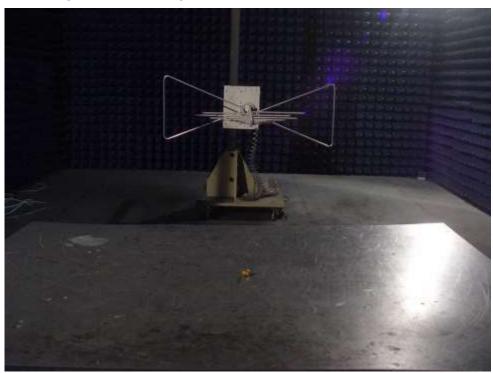
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7. Photographs of the Test Set-Up

Photograph 1: Set-up for Radiated Spurious Emissions, 9KHz-30MHz



Photograph 2: Set-up for Radiated Spurious Emissions, 30MHz-1GHz



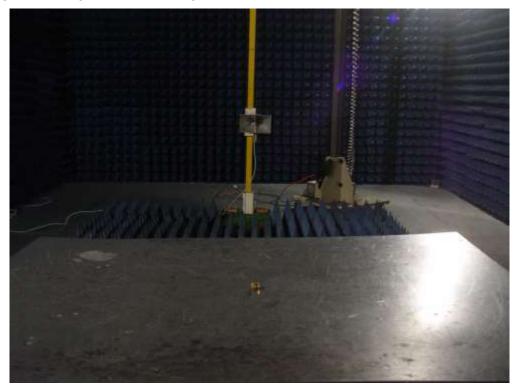


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Photograph 3: Set-up for Radiated Spurious Emissions, 1GHz-18GHz



Photograph 4: Set-up for Radiated Spurious Emissions, 18GHz-25GHz





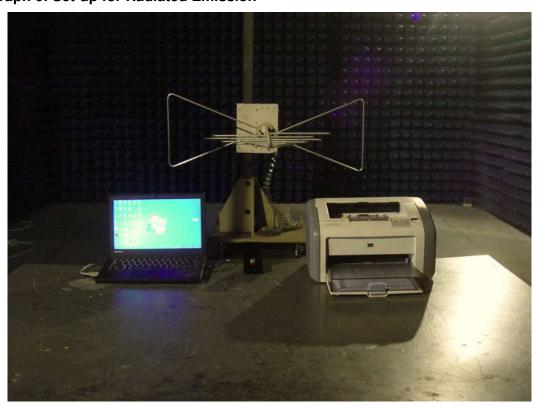
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Photograph 5: Set-up for Conducted Emission



Photograph 6: Set-up for Radiated Emission





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