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# FCC TEST REPORT for ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

### MODEM

Model No.: TD-5612DCII, TD-56000III, TD-5624DCII, TD-5648DCII, TD-5014N, TD-5024N, TD-5044B, TD-5524BV, TD-5544BV

FCC ID: 2AD53-TD5612DCII

Prepared for : ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

Address : 5/F., Section A, Academy Of Aerospace Technology, Keji

Nan 10th Road, ShenZhen, P.R.C

Prepared by : Accurate Technology Co., Ltd.

Address : F1, Bldg. A&D, Changyuan New Material Port, Keyuan Rd.,

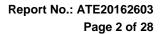
Science & Industry Park, Nanshan District Shenzhen

518057, P.R. China

Tel: +86-755-26503290 Fax: +86-755-26503396

Report No. : ATE20162603

Date of Test : January 13-16, 2017 Date of Report : January 17, 2017





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# Test Report

Applicant : ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

Manufacturer : ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

**EUT Description**: MODEM

Model No. : TD-5612DCII, TD-56000III, TD-5624DCII, TD-5648DCII,

TD-5014N, TD-5024N, TD-5044B, TD-5524BV, TD-5544BV

Trade Name : ETEK

Data of Toot

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart B Class B ANSI C63.4: 2014

The device described above is tested by Accurate Technology Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B Class B limits both radiated and conducted emissions. The measurement results are contained in this test report and Accurate Technology Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Accurate Technology Co., Ltd.

January 12 16 2017

Date of Test.	January 13-16, 2017	
Date of Report:	January 17, 2017	
Prepared by :	(Bob Wang, Engineer)	
Approved & Authorized Signer :	Lemil	
	(Sean Liu, Manager)	



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# 1. TEST RESULTS SUMMARY

Test Items	Test Standard	Test Results
Power Line Conducted Emission	FCC Part 15 Subpart B	Pass
Radiated Emission	FCC Part 15 Subpart B	Pass

Remark: "N/A" Means not applicable



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### 2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Product : MODEM

Model No. : TD-5612DCII, TD-56000III, TD-5624DCII,

TD-5648DCII, TD-5014N, TD-5024N, TD-5044B,

TD-5524BV, TD-5544BV

(Note: We hereby state that these models are identical in interior structure, electrical circuits and components, and just model names are different for the marketing requirement. Therefore only model TD-5612DCII is tested for EMC

tests.)

Rating : DC 12V (Powered by Adapter)

Adapter : Model: KSAS012100100HU

Input: AC 100-240V; 50/60Hz

Output: DC 12V; 1.0A

Trade Name : ETEK

Remark(s) : The EUT highest operating frequency provided by

Manufacturer is 28.224 MHz, the radiated emission

measurement shall be made up to 1 GHz.

Applicant : ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

Address : 5/F., Section A, Academy Of Aerospace Technology,

Keji Nan 10th Road, ShenZhen, P.R.C

Manufacturer : ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

Address : 5/F., Section A, Academy Of Aerospace Technology,

Keji Nan 10th Road, ShenZhen, P.R.C

Date of sample receiver: January 10, 2017
Date of Test: January 13-16, 2017



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# 2.2. Accessory and Auxiliary Equipment

PC: Manufacturer: DELL

M/N: DMC S/N: HZXLM1

LCD Monitor : Manufacturer: DELL

M/N: 1704FPTt

S/N: 434

Keyboard : Manufacturer: DELL

M/N: SK-8110 S/N: LR86682

Mouse : Manufacturer: DELL

M/N: M071KC S/N: 410042355

Desktop phone 1: Manufacturer: TCL

M/N: HCD868(37)TSD

S/N: A000100

Desktop phone 2 : Manufacturer: bossini

M/N: HCD133TSDL S/N: 201007-614534



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# 2.3. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC

The Registration Number is 253065

Listed by FCC

The Registration Number is 752051

Listed by Industry Canada

The Registration Number is 5077A-1

Listed by Industry Canada

The Registration Number is 5077A-2

Accredited by China National Accreditation Committee for

Laboratories

The Certificate Registration Number is L3193

Name of Firm : Accurate Technology Co., Ltd.

Site Location : F1, Bldg. A&D, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan District, Shenzhen

518057, P.R. China

# 2.4. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Power Disturbance Expanded Uncertainty = 2.92 dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2

(9kHz-30MHz)

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)





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# 3. MEASURING DEVICE AND TEST EQUIPMENT

# 3.1. For Radiated Emission Measurement

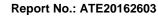
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.
Item	Lquipinent	Iviariulaciulei	Model No.	Seriai No.	Lasi Cai.	Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan.07, 2017	1 Year
2.	Spectrum Analyzer		FSV40	101495	Jan.07, 2017	1 Year
3.	Test Receiver		ESCS30	100307	Jan.07, 2017	1 Year
4.	Test Receiver	Rohde& Schwarz		100396/003	Jan.07, 2017	1 Year
5.	Test Receiver	Rohde& Schwarz		101526/003	Jan.07, 2017	1 Year
6.	Test Receiver	Rohde& Schwarz		101817	Jan.07, 2017	1 Year
7.	Bilog Antenna	Schwarzbeck	VULB9163	9163-194	Jan.13, 2017	1 Year
8.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan.13, 2017	1 Year
9.	LogPer.Antenna	Schwarzbeck	VUSLP	9111B-074	Jan.13, 2017	1 Year
] 5.	Log. 1 Cr.7 (Intermite	Ochwarzbeck	9111B	31116 074	0411.10, 2017	l i cai
10.	Biconical Broad	Schwarzbeck	VHBB	9124-617	Jan.13, 2017	1 Year
	Band Antenna		9124+BBA			
1.4			9106	4540404	10.0017	4.)/
11.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan.13, 2017	1 Year
12.	Horn Antenna	Schwarzbeck	BBHA9120D		Jan.13, 2017	1 Year
13.	Horn Antenna	Schwarzbeck	BBHA9120D		Jan.13, 2017	1 Year
14.	Vertical Active Monopole Antenna	Schwarzbeck	VAMP 9243	9243-370	Jan.13, 2017	1 Year
15.	RF Switching	Compliance	RSU-M2	38322	Jan.07, 2017	1 Year
	Unit+PreAMP	Direction				
16.	Pre-Amplifier	Agilent	8447D	294A10619	Jan.07, 2017	1 Year
17.	Pre-Amplifier	Rohde&Schwarz	CBLU11835 40-01	3791	Jan.07, 2017	1 Year
18.	50 Coaxial Switch	Anritsu Corp	MP59B	6200237248	Jan.07, 2017	1 Year
19.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan.07, 2017	1 Year
20.	RF Coaxial Cable	Schwarzbeck	N-5m	No.1	Jan.07, 2017	1 Year
21.	RF Coaxial Cable	Schwarzbeck	N-1m	No.6	Jan.07, 2017	1 Year
22.	RF Coaxial Cable	Schwarzbeck	N-1m	No.7	Jan.07, 2017	1 Year
23.	RF Coaxial Cable	SUHNER	N-3m	No.8	Jan.07, 2017	1 Year
24.	RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	Jan.07, 2017	1 Year
25.	RF Coaxial Cable	SUHNER	N-6m	No.10	Jan.07, 2017	1 Year
26.	RF Coaxial Cable	RESENBERGER	N-12m	No.11	Jan.07, 2017	1 Year
27.	RF Coaxial Cable	RESENBERGER	N-0.5m	No.12	Jan.07, 2017	1 Year
28.	RF Coaxial Cable	SUHNER	N-2m	No.13	Jan.07, 2017	1 Year
29.	RF Coaxial Cable	SUHNER	N-0.5m	No.15	Jan.07, 2017	1 Year
30.	RF Coaxial Cable	SUHNER	N-2m	No.16	Jan.07, 2017	1 Year
31.	RF Coaxial Cable	RESENBERGER	N-6m	No.17	Jan.07, 2017	1 Year
_		· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	



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# 3.2. The Equipment Used to Measure Conducted Disturbance (L.I.S.N)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.
ItCIII	Lquipinent	Mariaracturer	Wiodel IVO.	ocharito.	Last Gai.	Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan.07, 2017	1 Year
2.	Test Receiver	Rohde & Schwarz		100396/003	Jan.07, 2017	1 Year
3.	Test Receiver	Rohde & Schwarz		101526/003	Jan.07, 2017	1 Year
4.	L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan.07, 2017	1 Year
5.	L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100305	Jan.07, 2017	1 Year
6.	L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100310	Jan.07, 2017	1 Year
7.	L.I.S.N.	Rohde & Schwarz	ESH3-Z6	100132	Jan.07, 2017	1 Year
8.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100305	Jan.07, 2017	1 Year
9.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100312	Jan.07, 2017	1 Year
10.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	Jan.07, 2017	1 Year
11.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283936	Jan.07, 2017	1 Year
12.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	Jan.07, 2017	1 Year
13.	50Ω Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan.07, 2017	1 Year
14.	VOLTAGE PROBE	Schwarzbeck	TK9416	N/A	Jan.07, 2017	1 Year
15.	RF CURRENT PROBE	Rohde & Schwarz	EZ-17	100048	Jan.07, 2017	1 Year
16.	8-Wire Impedance Stabilisation Network	Schwarzbeck	CAT5 8158	8158-0035	Jan.07, 2017	1 Year
17.	RF Coaxial Cable	SUHNER	N-2m	No.2	Jan.07, 2017	1 Year
18.	RF Coaxial Cable	SUHNER	N-2m	No.3	Jan.07, 2017	1 Year
19.	RF Coaxial Cable	SUHNER	N-2m	No.14	Jan.07, 2017	1 Year
Expa	nded Uncertainty:	U= 2.23dB, k=2				

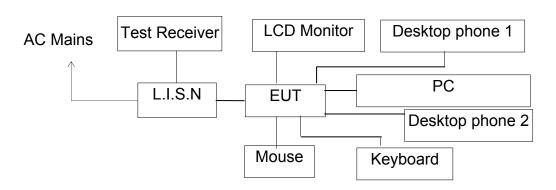


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4. POWER LINE CONDUCTED MEASUREMENT

# 4.1.Block Diagram of Test Setup



(EUT: MODEM)

# 4.2. Test mode description

Test mode: On

### 4.3. Power Line Conducted Emission Measurement Limits

Frequency	Limit d	B(μV)
(MHz)	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

NOTE1: The lower limit shall apply at the transition frequencies.

NOTE2: The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

# 4.4. Configuration of EUT on Measurement

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

# 4.5. Operating Condition of EUT

- 4.5.1. Setup the EUT and simulator as shown as Section 4.1.
- 4.5.2. Turn on the power of all equipment.
- 4.5.3.Let the EUT work in test mode and measure it.



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### 4.6.Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2014 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

### 4.7. Power Line Conducted Emission Measurement Results

### PASS.

The frequency range from 150kHz to 30MHz is checked.

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.



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ACCURATE TECHNOLOGY CO., LTD

### CONDUCTED EMISSION STANDARD FCC PART 15B

MODEM M/N:TD5612DCII

Manufacturer: ETEK Operating Condition: ON

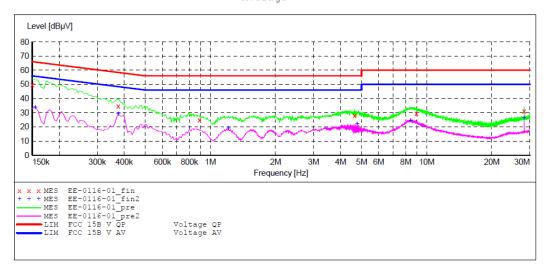
Test Site: 1#Shielding Room Operator: DING

Test Specification: L 120V/60Hz

Comment: Report NO.:ATE20162603 Start of Test: 1/16/2017 / 8:43:32AM

SCAN TABLE: "V 9K-30MHz fin"
Short Description: \_SUM
Start Stop Step \_SUB\_STD\_VTERM2 1.70 Start Stop Step Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 Hz Detector Meas. IF Transducer Bandw. Time QuasiPeak 1.0 s 200 Hz NSLK8126 2008 Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



### MEASUREMENT RESULT: "EE-0116-01 fin"

1	/16/2017 8:4 Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.150000	49.80	10.5	66	16.2	QP	L1	GND
	0.375000	34.70	10.7	58	23.7	QP	L1	GND
	0.890000	24.80	10.8	56	31.2	QP	L1	GND
	4.640000	28.00	11.1	56	28.0	QP	L1	GND
	8.950000	29.30	11.3	60	30.7	QP	L1	GND
	28,225000	31.00	11.5	60	29.0	OP	L1	GND

### MEASUREMENT RESULT: "EE-0116-01 fin2"

1/16/2017 Frequenc MH	y Level	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.15500	0 33.60	10.5	56	22.1	AV	L1	GND
0.37500	0 29.20	10.7	48	19.2	AV	L1	GND
1.21000	0 19.10	10.9	46	26.9	AV	L1	GND
4.77000	0 21.90	11.1	46	24.1	AV	L1	GND
8.42000	0 24.40	11.3	50	25.6	AV	L1	GND
28.22500	0 26.50	11.5	50	23.5	AV	L1	GND



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ACCURATE TECHNOLOGY CO., LTD

### CONDUCTED EMISSION STANDARD FCC PART 15B

MODEM M/N:TD5612DCII EUT:

Manufacturer: ETEK Operating Condition: ON

Test Site: 1#Shielding Room

Operator: DING

Test Specification: N 120V/60Hz

Comment: Report NO.:ATE20162603 Start of Test: 1/16/2017 / 8:47:31AM

### SCAN TABLE: "V 9K-30MHz fin"

\_SUB\_STD\_VTERM2 1.70

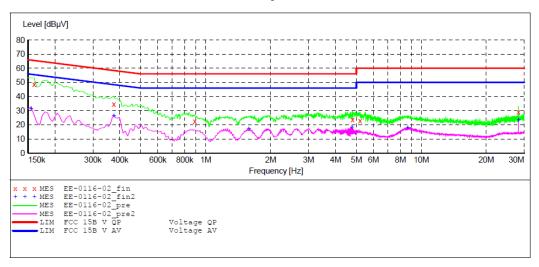
CAN TABLE: v ... Short Description: Start Stop Step Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 Hz Detector Meas. IF Transducer Time Bandw.

QuasiPeak 1.0 s 200 Hz NSLK8126 2008

Average

150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Average



### MEASUREMENT RESULT: "EE-0116-02 fin"

1/16/2017 8:5							
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.160000	48.60	10.5	66	16.9	OP	N	GND
0.375000	34.70	10.7	58	23.7	QΡ	N	GND
0.890000	22.50	10.8	56	33.5	QP	N	GND
4.800000	23.50	11.1	56	32.5	QP	N	GND
5.200000	22.80	11.2	60	37.2	QP	N	GND
28.225000	29.10	11.5	60	30.9	OP	N	GND

### MEASUREMENT RESULT: "EE-0116-02 fin2"

-	8:52AM cy Level Hz dBµV		Limit dBµV	Margin dB	Detector	Line	PE
0.1550	00 31.30	10.5	56	24.4	AV	N	GND
0.3750	00 26.50	10.7	48	21.9	AV	N	GND
1.5850	00 17.20	10.9	46	28.8	AV	N	GND
4.7700	00 18.10	11.1	46	27.9	AV	N	GND
8.6500	00 17.60	11.3	50	32.4	AV	N	GND
28.2250	00 23.40	11.5	50	26.6	AV	N	GND



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ACCURATE TECHNOLOGY CO., LTD

### CONDUCTED EMISSION STANDARD FCC PART 15B

MODEM M/N:TD5612DCII EUT:

Manufacturer: ETEK

Operating Condition: ON

Test Site: 1#Shielding Room

Operator: DING

Test Specification: N 240V/60Hz

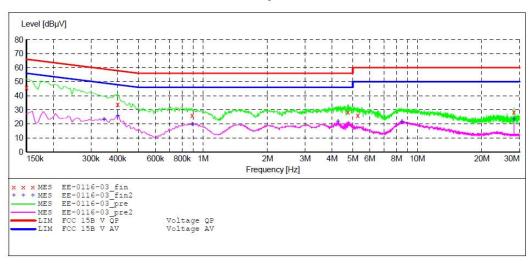
Comment: Report NO.:ATE20162603 Start of Test: 1/16/2017 / 8:54:18AM

SCAN TABLE: "V 9K-30MHz fin"
Short Description: \_SU \_\_SUB\_STD\_VTERM2 1.70

Step Start Stop Detector Meas. IF Transducer Frequency Frequency Width Time Bandw. 9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s 200 Hz NSLK8126 2008 Bandw.

Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008

Ãverage



### MEASUREMENT RESULT: "EE-0116-03 fin"

1/16/2017 8:5	8AM						
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	45.90	10.5	66	20.1	QP	N	GND
0.400000	33.90	10.7	58	24.0	QP	N	GND
0.890000	26.10	10.8	56	29.9	QP	N	GND
4.740000	28.20	11.1	56	27.8	QP	N	GND
5.270000	26.10	11.2	60	33.9	QP	N	GND
28.225000	28.30	11.5	60	31.7	QP	N	GND

### MEASUREMENT RESULT: "EE-0116-03 fin2"

1/16/2017 8:5	8AM						
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.345000	22.70	10.6	49	26.4	AV	N	GND
0.400000	25.50	10.7	48	22.4	AV	N	GND
0.890000	19.80	10.8	46	26.2	AV	N	GND
4.260000	21.50	11.1	46	24.5	AV	N	GND
8.470000	21.60	11.3	50	28.4	AV	N	GND
28.225000	23.20	11.5	50	26.8	AV	N	GND



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ACCURATE TECHNOLOGY CO., LTD

### CONDUCTED EMISSION STANDARD FCC PART 15B

MODEM M/N:TD5612DCII EUT:

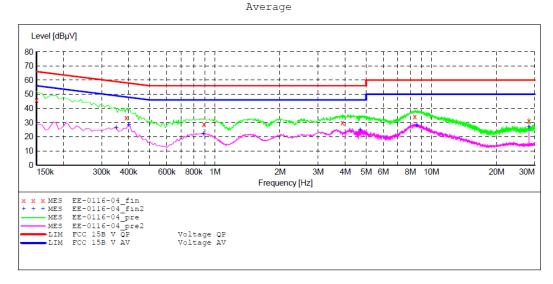
Manufacturer: ETEK Operating Condition: ON

Test Site: 1#Shielding Room

DING Operator:

Test Specification: L 240V/60Hz
Comment: Report NO.:ATE20162603
Start of Test: 1/16/2017 / 8:59:32AM

SCAN TABLE: "V 9K-30MHz fin"
Short Description: \_SU
Start Stop Step \_SUB\_STD\_VTERM2 1.70 Detector Meas. TF Transducer Frequency Frequency Width 9.0 kHz 150.0 kHz 100.0 Hz Bandw. Time 200 Hz NSLK8126 2008 QuasiPeak 1.0 s Average 150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008



### MEASUREMENT RESULT: "EE-0116-04 fin"

1	/16/2017 9:0 Frequency MHz	)3AM Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.150000	45.90	10.5	66	20.1	QP	L1	GND
	0.390000	33.20	10.7	58	24.9	QP	L1	GND
	0.890000	28.70	10.8	56	27.3	QP	L1	GND
	3.880000	30.00	11.1	56	26.0	QP	L1	GND
	8.380000	34.30	11.3	60	25.7	QP	L1	GND
	28,225000	31.00	11.5	60	29.0	OP	L1	GND

### MEASUREMENT RESULT: "EE-0116-04 fin2"

1	/16/2017 9:0 Frequency MHz	JAM Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.350000	26.30	10.6	49	22.7	AV	L1	GND
	0.400000	28.40	10.7	48	19.5	AV	L1	GND
	0.885000	21.90	10.8	46	24.1	AV	L1	GND
	4.690000	24.80	11.1	46	21.2	AV	L1	GND
	8.570000	28.10	11.3	50	21.9	AV	L1	GND
	28.225000	26.60	11.5	50	23.4	AV	L1	GND

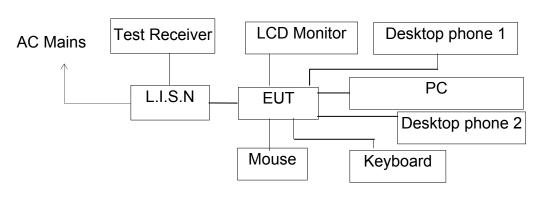


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# 5. RADIATED EMISSION MEASUREMENT

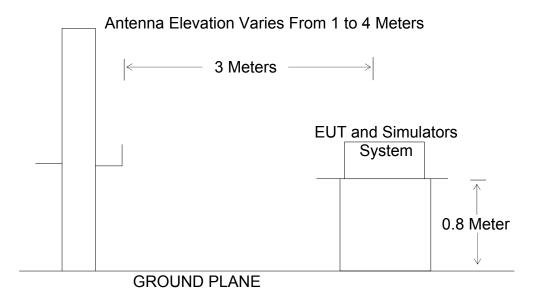
# 5.1.Block Diagram of Test

5.1.1.Block diagram of connection between the EUT and simulators



(EUT: MODEM)

# 5.1.2.Block diagram of test setup (In chamber)



# 5.2. Test mode description

Test mode: On



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## 5.3.Radiated Emission Limit (Class B)

All emanations from a class B device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified below:

Frequency	Distance	Field Strengths 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		
Above 960	3	500	54.0		

### 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.

### 5.4.Manufacturer

The following equipments are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

### 5.4.1.MODEM (EUT)

Model Number: TD-5612DCII

Manufacturer: ETEK TECHNOLOGY(SHENZHEN) CO., LTD.

# 5.5. Operating Condition of EUT

- 5.5.1. Setup the EUT and simulator as shown as Section 5.1
- 5.5.2. Turn on the power of all equipment.
- 5.5.3.Let the EUT work in test mode and measure it.





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### 5.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 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 polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2014 on radiated emission measurement.

The bandwidth of the EMI test receiver (R&S ESCS30) is set at 120kHz.

The EUT highest operating frequency provided by Manufacturer is 28.224 MHz, The frequency range from 30MHz to 1000MHz is checked.

Highest frequency generated or used in the device or on which the device operates or	Upper frequency of measure- ment range (MHz)
tunes (MHz)	<b>O</b> , ,
Below 1.705	30. 1000. 2000. 5000. 5th harmonic of the highest frequency or 40 GHz, whichever is lower.





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# 5.7. Radiated Emission Noise Measurement Result

### PASS.

The frequency range from 30MHz to 1000MHz is investigated.

Emissions attenuated more than 20 dB below the permissible value are not reported.

The spectral diagrams are attached as below.





# ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Report No.: ATE20162603

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Job No.: DING1 #207 Polarization: Horizontal

Standard: FCC Class B 3M Radiated Power Source: AC 120V/60Hz

 Test item:
 Radiation Test
 Date: 17/01/13/

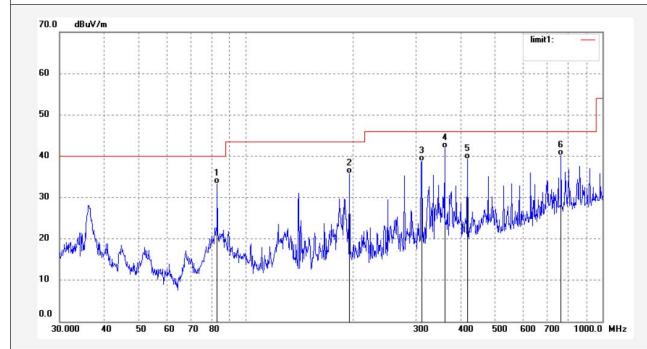
 Temp.(
 C)/Hum.(%)
 25
 C / 55 %
 Time: 11/16/15

EUT: MODEM Engineer Signature: DING

Mode: ON Distance: 3m Model: TD-5612DCII

Note: Report NO:ATE20162603

Manufacturer: ETEK



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	83.1076	55.36	-21.98	33.38	40.00	-6.62	QP			
2	195.1830	54.64	-18.92	35.72	43.50	-7.78	QP			
3	311.4519	54.13	-15.42	38.71	46.00	-7.29	QP			
4	360.9775	55.36	-13.44	41.92	46.00	-4.08	QP			
5	418.3783	52.02	-12.69	39.33	46.00	-6.67	QP			
6	765.6482	44.93	-4.80	40.13	46.00	-5.87	QP			





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Site: 1# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

# ACCURATE TECHNOLOGY CO., LTD.

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

Job No.: DING1 #208

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.( C)/Hum.(%) 25 C / 55 %

EUT: MODEM

Mode: ON

Model: TD-5612DCII
Manufacturer: ETEK

Polarization: Vertical

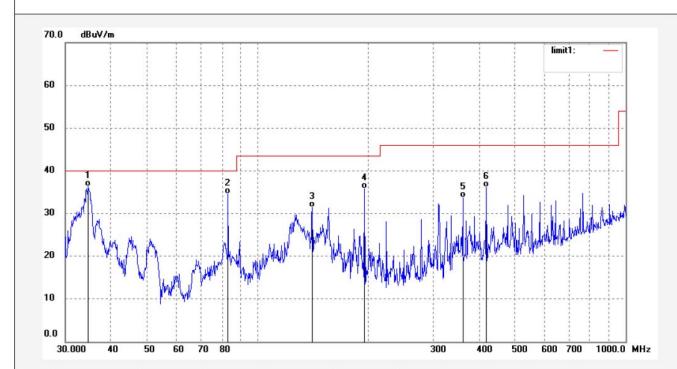
Power Source: AC 120V/60Hz

Date: 17/01/13/ Time: 11/16/56

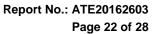
Engineer Signature: DING

Distance: 3m

Note: Report NO:ATE20162603



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	34.6485	52.13	-15.86	36.27	40.00	-3.73	QP			
2	83.1076	56.56	-21.98	34.58	40.00	-5.42	QP	Î		
3	140.7767	53.70	-22.32	31.38	43.50	-12.12	QP			
4	195.1831	54.79	-18.92	35.87	43.50	-7.63	QP			
5	360.9775	47.07	-13.44	33.63	46.00	-12.37	QP			
6	418.3783	48.86	-12.69	36.17	46.00	-9.83	QP			





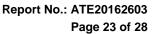
# 6. PHOTOGRAPHS

# 6.1.Photos of Radiated Emission Measurement



# 6.2. Photo of Conducted Emission Measurement







6.3.Photo of EUT





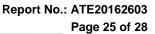


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