

APPLICATION FOR VERIFICATION

On Behalf of
TQL TRADING INC

SPEAKER

Model No.: TQ-KY21501, TQ-KY21003, TQ-KY41001, TQ-KY21002, TQ-KY21201,
TQ-KY21202, TQ-KY31201, TQ-KY60801, TQ-KY31202, TQ-KY21008

FCC ID: 2AKNJTQ-KY21501

Prepared for : TQL TRADING INC.
Address : 334 S LOS ANGELES ST #9002, LOS ANGELES,
CALIFORNIA, 90013, United States
Prepared by : Accurate Technology Co., Ltd.
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Report No. : ATE20161345
Date of Test : July 01--Dec. 28, 2016
Date of Report : Dec. 29, 2016

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Test Report Declaration

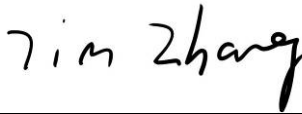
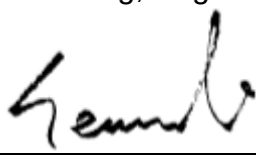
Applicant : TQL TRADING INC.
Manufacturer : TQL TRADING INC.
Product : SPEAKER
Model No. : TQ-KY21501, TQ-KY21003, TQ-KY41001, TQ-KY21002,
TQ-KY21201, TQ-KY21202, TQ-KY31201, TQ-KY60801,
TQ-KY31202, TQ-KY21008
(Note: they are identical in interior structure, electrical circuits and components, and
Product model is different because of different Color of product appearance. So we
prepare the TQ-KY21501 for test.)
Trade name : H&A

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart 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.

Date of Test :	July 01--Dec. 28, 2016
Date of Report :	Dec. 29, 2016
Prepared by :	 (Tim.zhang, Engineer)
Approved & Authorized Signer :	 (Sean Liu, Manager)

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

2. GENERAL INFORMATION

2.1.Product of Device (EUT)

EUT : SPEAKER

Model Number : TQ-KY21501, TQ-KY21003, TQ-KY41001, TQ-KY21002, TQ-KY21201, TQ-KY21202, TQ-KY31201, TQ-KY60801, TQ-KY31202, TQ-KY21008

Power Supply : AC 100V-240V 50/60Hz

Trade Name : H&A

Remark(s) : The EUT highest operating frequency provided by Manufacturer is 210.3MHz, the radiated emission measurement shall be made up to 3 GHz.

Modulation: : FM

Receiver Frequency : 210.3MHz RX

Applicant : TQL TRADING INC.
Address : 334 S LOS ANGELES ST #9002, LOS ANGELES, CALIFORNIA, 90013, United States

Manufacturer : TQL TRADING INC.
Address : 334 S LOS ANGELES ST #9002, LOS ANGELES, CALIFORNIA, 90013, United States

Date of sample received : July 01, 2016

Date of Test : July 01--Dec. 28, 2016

2.2.Test mode of EUT

Test mode 1: SD card PLAYING
Test mode 2: Audio IN
Test mode 3: USB PLAYING
Test mode 4: 210.3MHz RX
Test mode 5: GUITAR IN
Test mode 6: MIC IN
Test mode 7: FM RX

2.3. Accessory and Auxiliary Equipment

FM Generator	:	Manufacturer: Rohde & Schwarz M/N: SML01 S/N: 101161
Audio Generator	:	Manufacturer: NEW AOKO M/N: GAG-810 S/N: D913311
USB Memory Disk	:	Manufacturer: Smartocean M/N: 3611 S/N: 101200005
GUITAR	:	Manufacturer: GIBSON M/N: PR-4E
MIC	:	Manufacturer: TAKSTAR M/N: PC-K600
SD CARD	:	Manufacturer: SONY M/N: SR-8UY
Wireless MIC	:	Manufacturer: TQL TRADING INC M/N: TQ-KY21501

2.4. Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen, May 10, 2004

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

2.5. Measurement Uncertainty

Conducted emission expanded uncertainty : U=2.23dB, k=2

Power disturbance expanded uncertainty : U=2.92dB, k=2

Radiated emission expanded uncertainty : U=3.08dB, k=2
(9kHz-30MHz)

Radiated emission expanded uncertainty : U=4.42dB, k=2
(30MHz-1000MHz)

Radiated emission expanded uncertainty : U=4.06dB, k=2
(Above 1GHz)

3. MEASURING DEVICE AND TEST EQUIPMENT

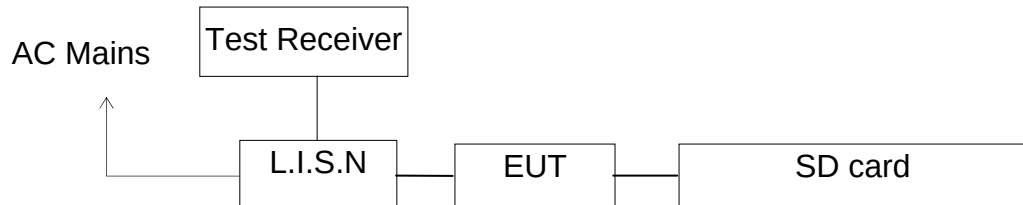
Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated dates	Cal. Interval
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 09, 2016	One Year
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 09, 2016	One Year
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 09, 2016	One Year
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 09, 2016	One Year
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 14, 2016	One Year
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 14, 2016	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 14, 2016	One Year
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Jan. 14, 2016	One Year
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 09, 2016	One Year
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 09, 2016	One Year
Highpass Filter	Wainwright Instruments	WHKX3.6/18 G-10SS	N/A	Jan. 09, 2016	One Year
Band Reject Filter	Wainwright Instruments	WRCG2400/2 485-2375/251 0-60/11SS	N/A	Jan. 09, 2016	One Year

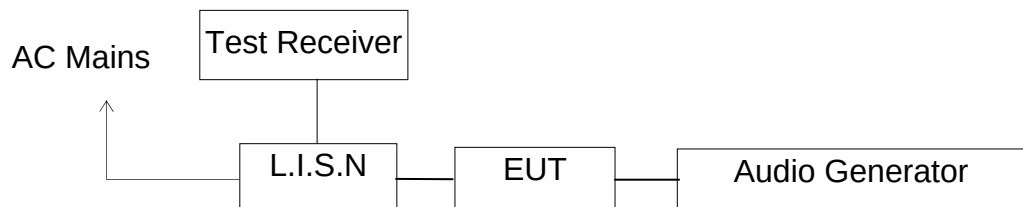
4. POWER LINE CONDUCTED MEASUREMENT

4.1. Block Diagram of Test Setup and Test mode description

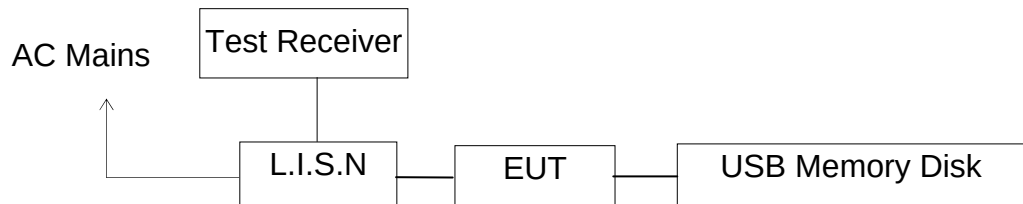
Test mode 1: SD card PLAYING



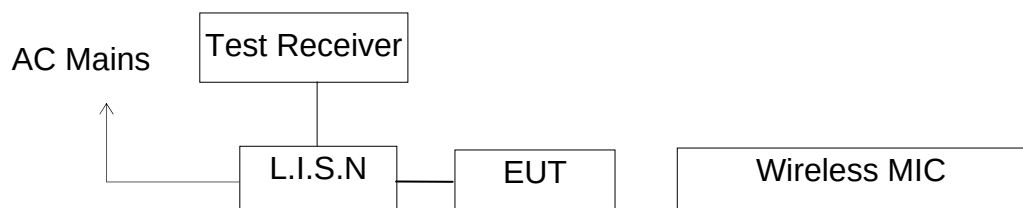
Test mode 2: Audio IN



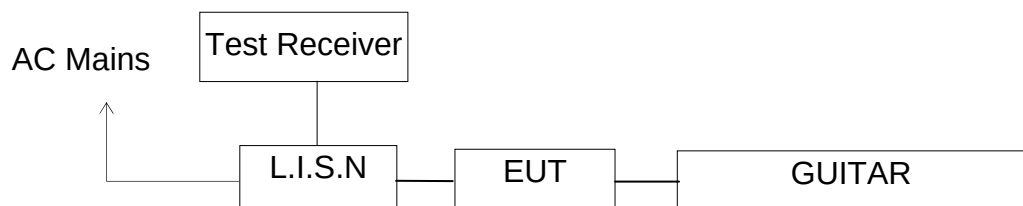
Test mode 3: USB PLAYING



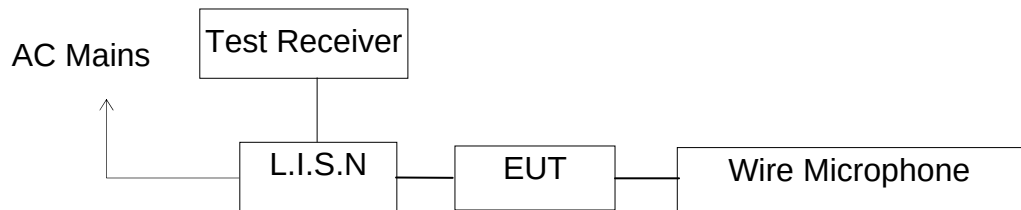
Test mode 4: 210.3MHz RX



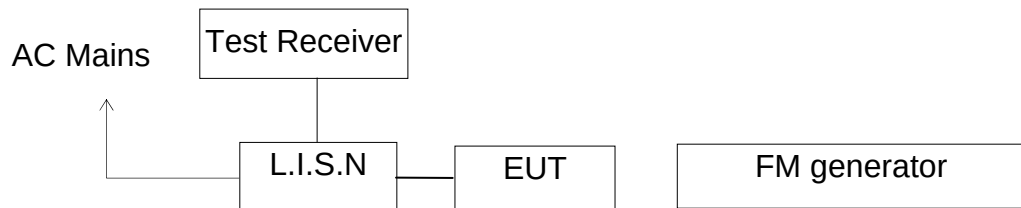
Test mode 5: GUITAR IN



Test mode 6: MIC IN



Test mode 7: FM



4.2. The Emission Limit

4.2.1. Conducted Emission Measurement Limits According to Section 15.107(a)

Frequency (MHz)	Limit dB(μV)	
	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

* Decreases with the logarithm of the frequency.

4.3. 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.

4.3.1. SPEAKER (EUT)

Model Number : TQ-KY21501
 Serial Number : N/A
 Manufacturer : TQL TRADING INC.

4.4. Operating Condition of EUT

4.4.1. Setup the EUT and simulator as shown as Section 4.1

4.4.2. Turn on the power of all equipment.

4.4.3. Let the EUT work in test mode and measure it.

4.5. Test Procedure

The EUT is put on the plane 0.1m 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.

4.6. Power Line Conducted Emission Measurement Results

PASS.

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

The spectral diagrams are shown in the following pages.

Test mode 1

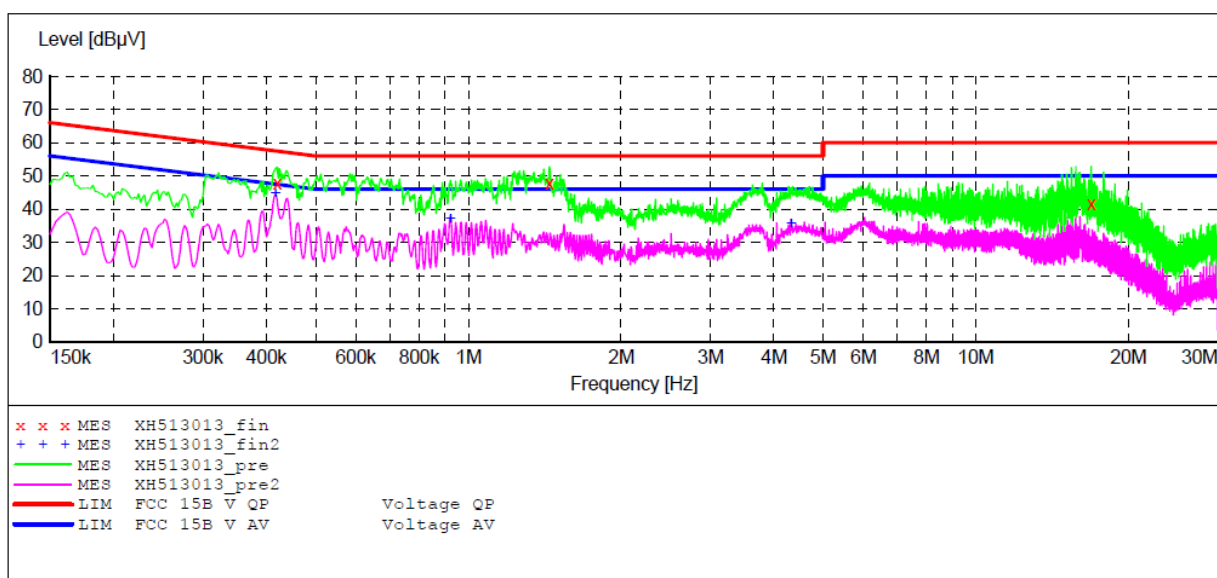
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: SD card Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:30:33

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513013_fin"

2016-7-8 17:32

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.420000	47.80	11.3	57.4	9.6	QP	N	GND
1.444000	47.70	11.6	56	8.3	QP	N	GND
16.886000	41.50	11.9	60	18.5	QP	N	GND

MEASUREMENT RESULT: "XH513013_fin2"

2016-7-8 17:32

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	44.70	11.3	47.5	2.8	AV	N	GND
0.922000	37.30	11.6	46	8.7	AV	N	GND
4.322000	35.70	11.8	46	10.3	AV	N	GND

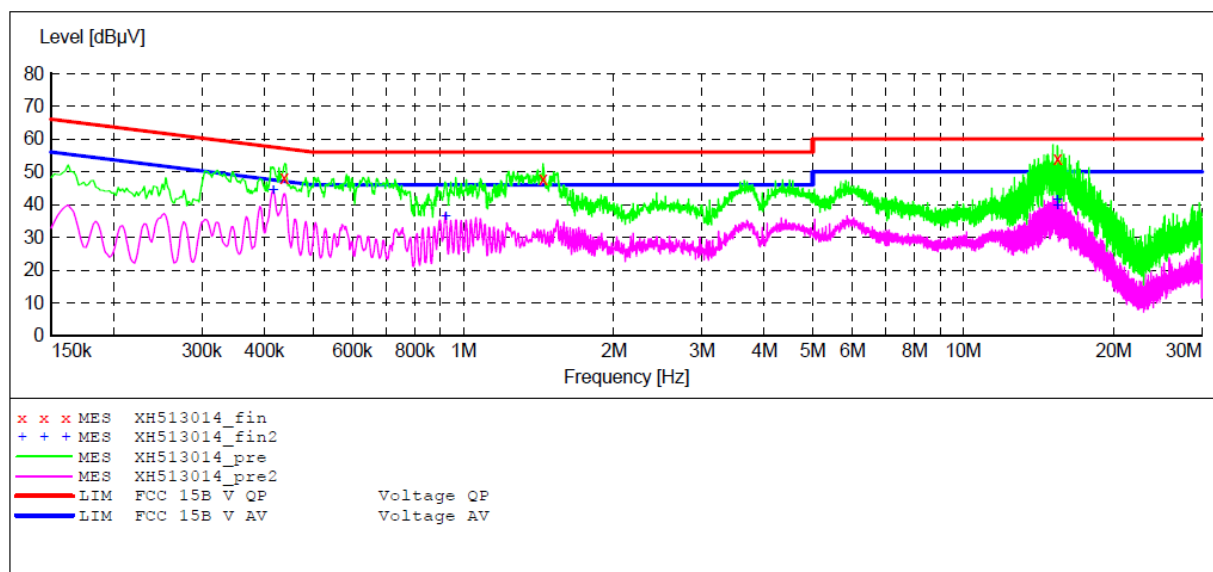
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: SD card Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:32:46

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513014_fin"

2016-7-8 17:34

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.438000	48.00	11.4	57.1	9.1	QP	L1	GND
1.444000	47.60	11.6	56	8.4	QP	L1	GND
15.419000	54.10	11.9	60	5.9	QP	L1	GND

MEASUREMENT RESULT: "XH513014_fin2"

2016-7-8 17:34

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	44.50	11.3	47.5	3.0	AV	L1	GND
0.922000	36.40	11.6	46	9.6	AV	L1	GND
15.410000	39.60	11.9	50	10.4	AV	L1	GND
15.419000	41.70	11.9	50	8.3	AV	L1	GND

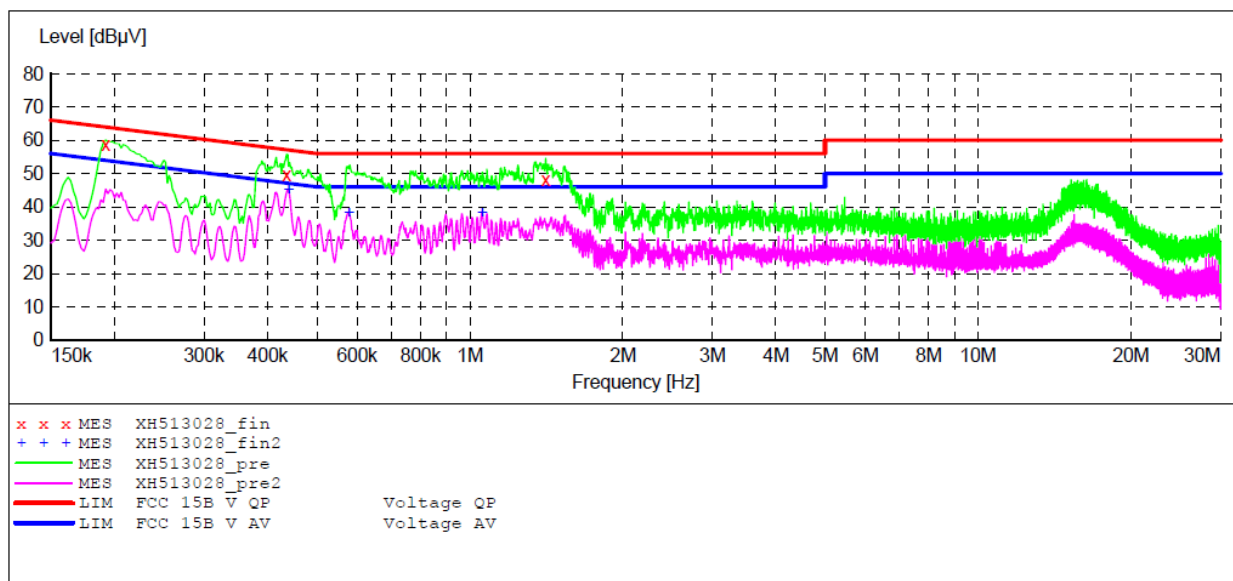
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: SD card Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 18:08:19

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513028_fin"

2016-7-8 18:09

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.192000	58.80	10.6	63.9	5.1	QP	N	GND
0.436000	49.70	11.4	57.1	7.4	QP	N	GND
1.410000	48.30	11.6	56	7.7	QP	N	GND

MEASUREMENT RESULT: "XH513028_fin2"

2016-7-8 18:09

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.440000	45.00	11.4	47.1	2.1	AV	N	GND
0.578000	38.20	11.5	46	7.8	AV	N	GND
1.056000	38.10	11.6	46	7.9	AV	N	GND

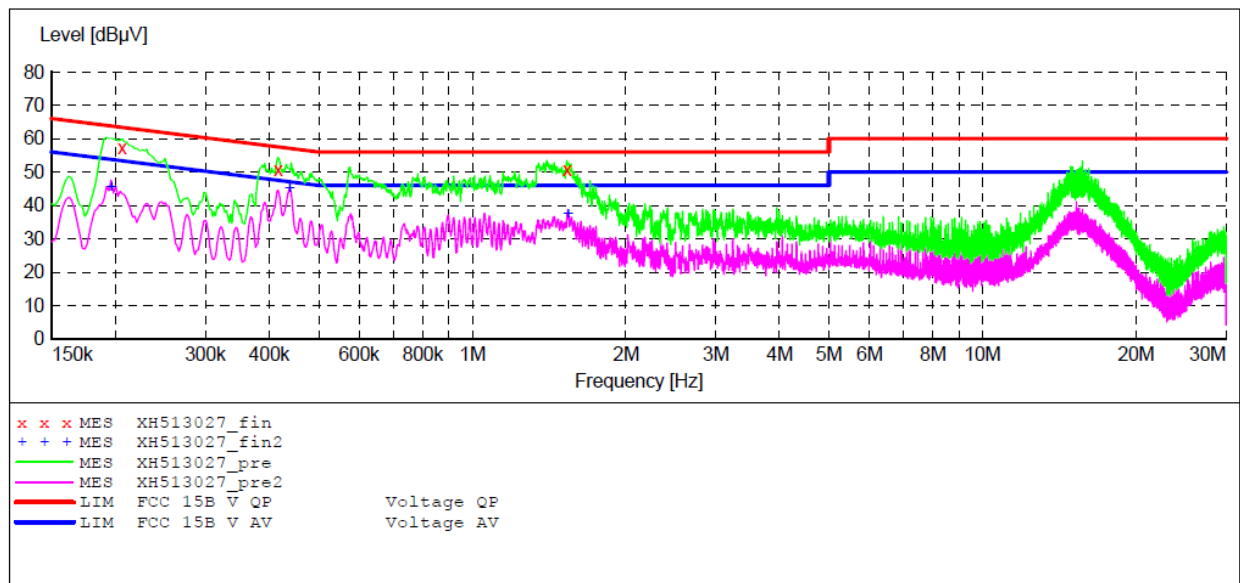
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: SD card Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 18:06:07

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513027_fin"

2016-7-8 18:07

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.206000	57.30	10.6	63.4	6.1	QP	L1	GND
0.416000	50.60	11.3	57.5	6.9	QP	L1	GND
1.532000	50.60	11.6	56	5.4	QP	L1	GND

MEASUREMENT RESULT: "XH513027_fin2"

2016-7-8 18:07

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.196000	45.70	10.6	53.8	8.1	AV	L1	GND
0.438000	45.10	11.4	47.1	2.0	AV	L1	GND
1.540000	37.60	11.6	46	8.4	AV	L1	GND

Test mode 2

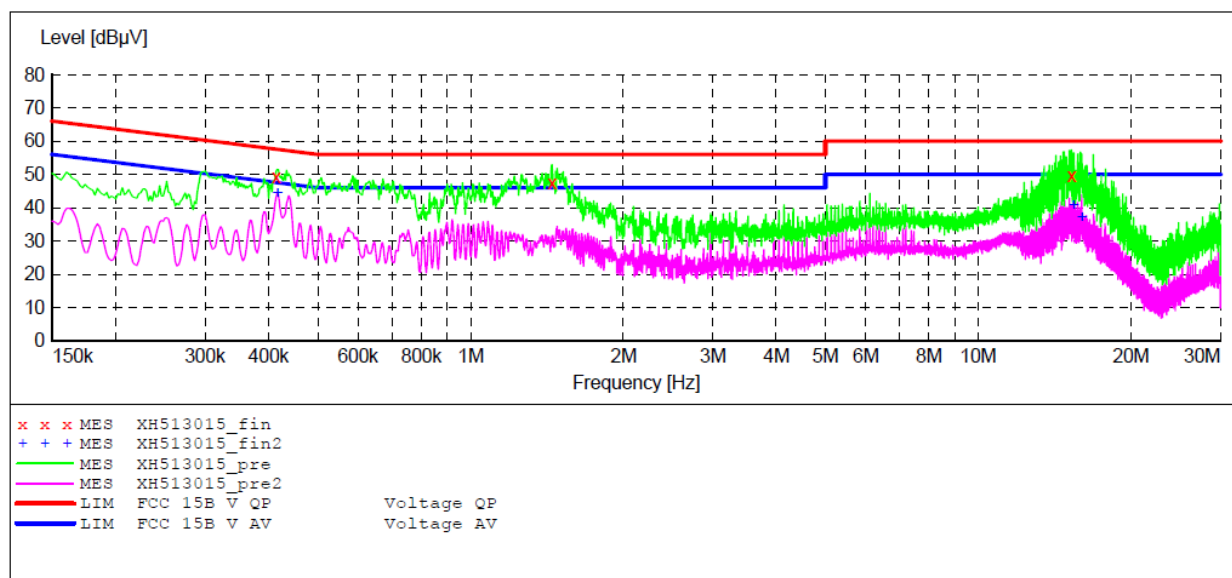
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: Audio in
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:36:09

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513015_fin"

2016-7-8 17:37

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.414000	49.20	11.3	57.6	8.4	QP	L1	GND
1.446000	47.30	11.6	56	8.7	QP	L1	GND
15.261500	49.40	11.9	60	10.6	QP	L1	GND

MEASUREMENT RESULT: "XH513015_fin2"

2016-7-8 17:37

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	44.30	11.3	47.5	3.2	AV	L1	GND
15.401000	40.90	11.9	50	9.1	AV	L1	GND
15.990500	37.20	11.9	50	12.8	AV	L1	GND

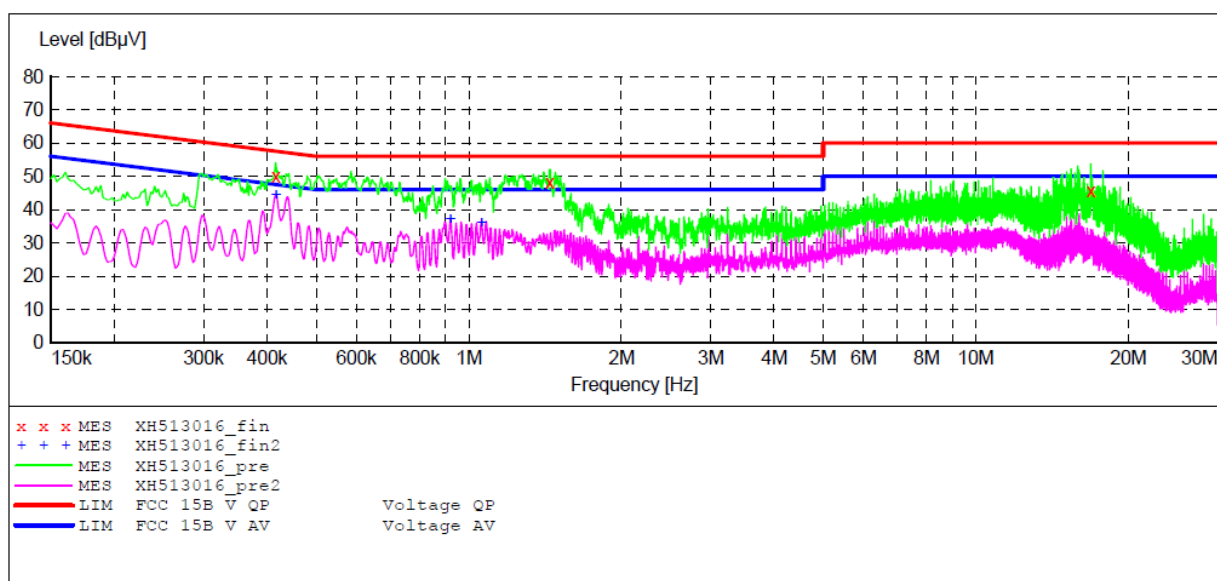
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: Audio in
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:38:29

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513016_fin"

2016-7-8 17:40

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	50.00	11.3	57.5	7.5	QP	N	GND
1.444000	48.00	11.6	56	8.0	QP	N	GND
16.859000	45.60	11.9	60	14.4	QP	N	GND

MEASUREMENT RESULT: "XH513016_fin2"

2016-7-8 17:40

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	44.30	11.3	47.5	3.2	AV	N	GND
0.920000	37.10	11.6	46	8.9	AV	N	GND
1.060000	36.10	11.6	46	9.9	AV	N	GND

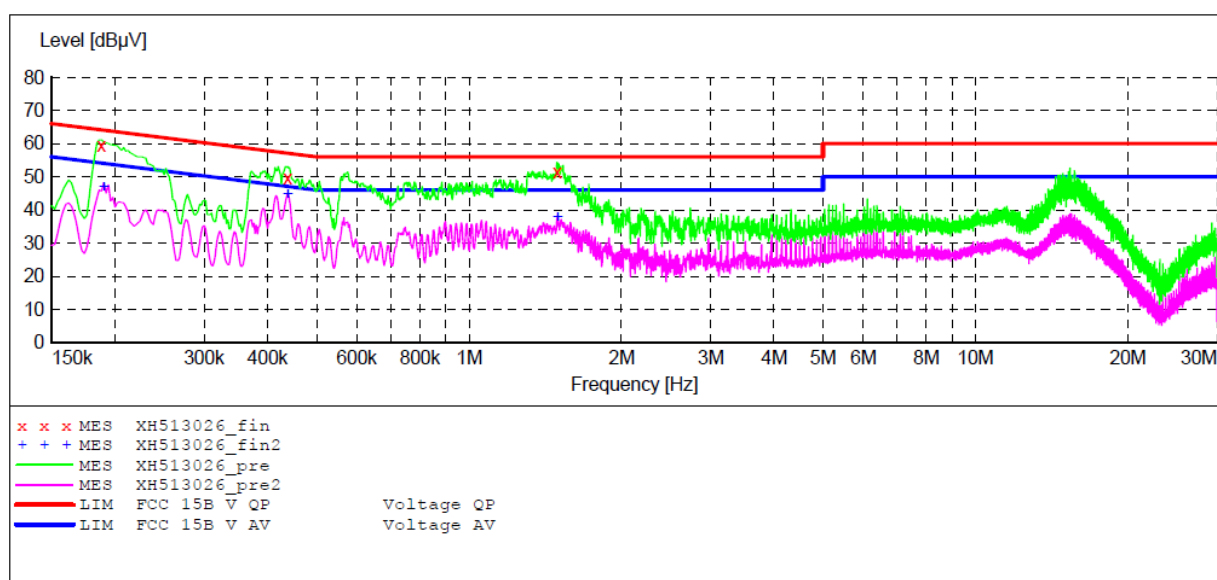
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: Audio in
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 18:03:23

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513026_fin"

2016-7-8 18:04

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.188000	59.50	10.6	64.1	4.6	QP	L1	GND
0.438000	49.70	11.4	57.1	7.4	QP	L1	GND
1.492000	51.30	11.6	56	4.7	QP	L1	GND

MEASUREMENT RESULT: "XH513026_fin2"

2016-7-8 18:04

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	47.00	10.6	54	7.0	AV	L1	GND
0.438000	45.00	11.4	47.1	2.1	AV	L1	GND
1.494000	37.80	11.6	46	8.2	AV	L1	GND

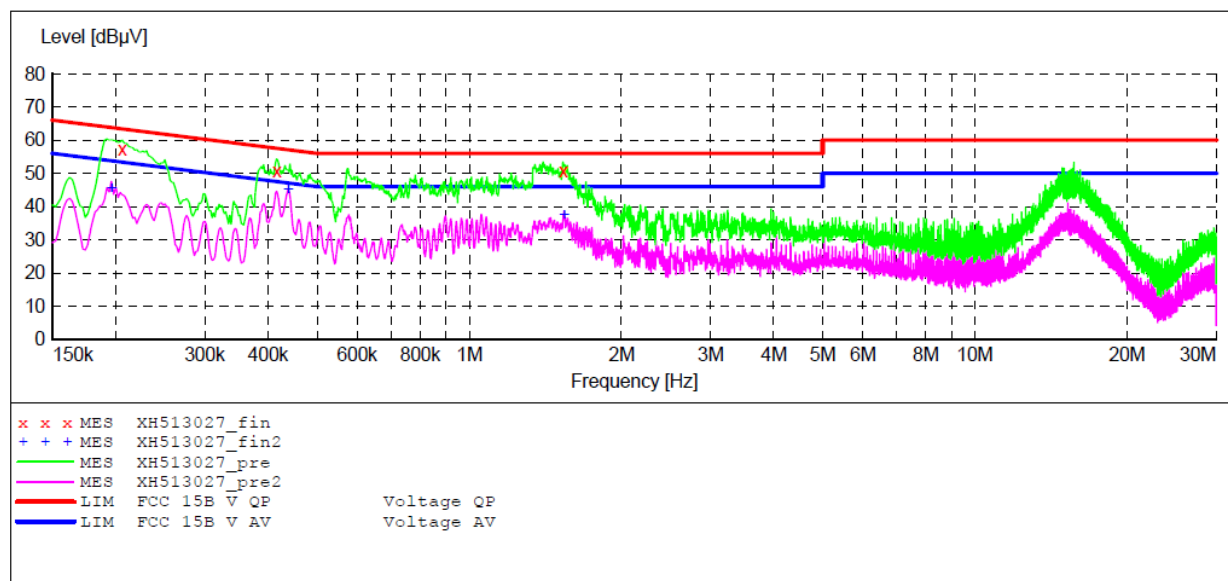
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: SD card Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 18:06:07

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513027_fin"

2016-7-8 18:07

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.206000	57.30	10.6	63.4	6.1	QP	L1	GND
0.416000	50.60	11.3	57.5	6.9	QP	L1	GND
1.532000	50.60	11.6	56	5.4	QP	L1	GND

MEASUREMENT RESULT: "XH513027_fin2"

2016-7-8 18:07

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.196000	45.70	10.6	53.8	8.1	AV	L1	GND
0.438000	45.10	11.4	47.1	2.0	AV	L1	GND
1.540000	37.60	11.6	46	8.4	AV	L1	GND

Test mode 3

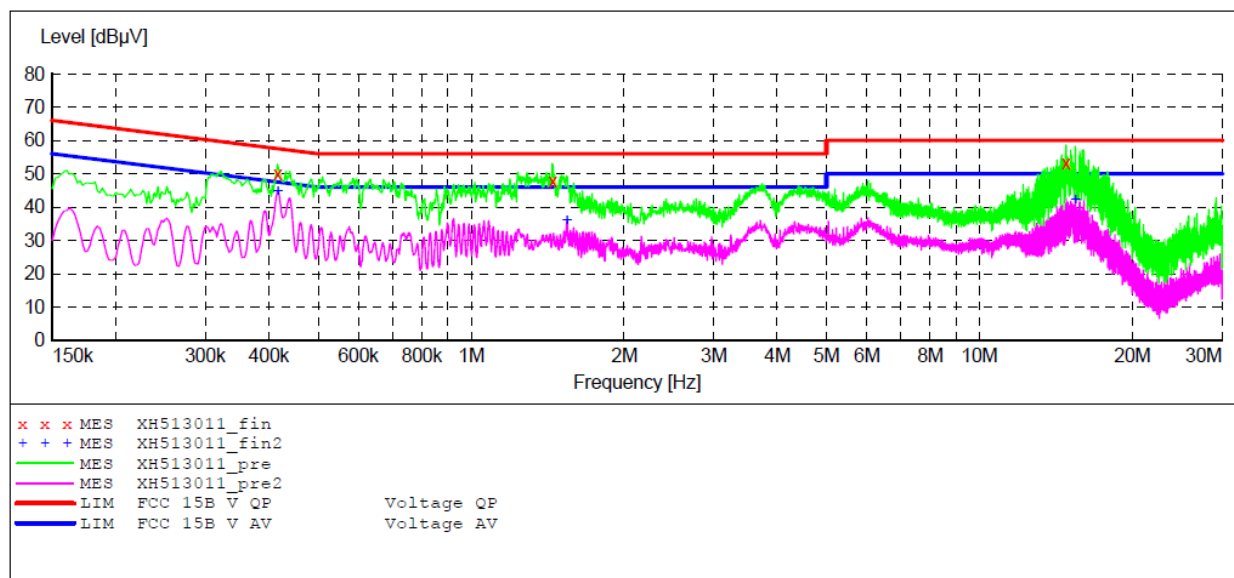
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: USB Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:25:43

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513011_fin"

2016-7-8 17:27

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	49.90	11.3	57.5	7.6	QP	L1	GND
1.446000	47.80	11.6	56	8.2	QP	L1	GND
14.807000	53.40	11.9	60	6.6	QP	L1	GND

MEASUREMENT RESULT: "XH513011_fin2"

2016-7-8 17:27

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	44.70	11.3	47.5	2.8	AV	L1	GND
1.542000	35.90	11.6	46	10.1	AV	L1	GND
15.432500	42.40	11.9	50	7.6	AV	L1	GND

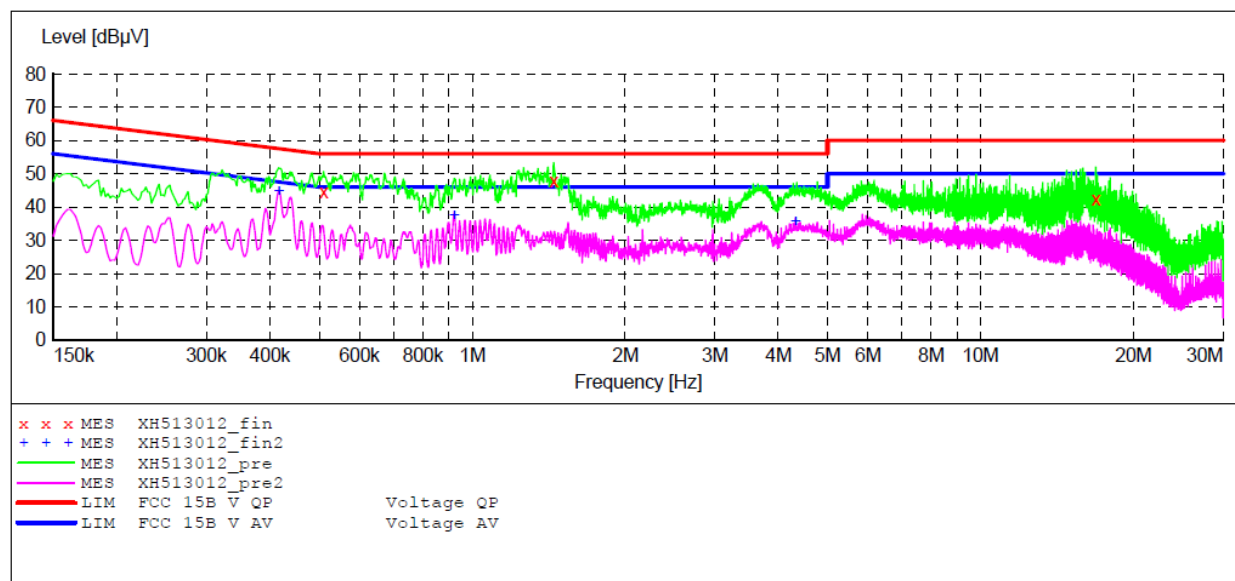
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: USB Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:28:31

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513012_fin"

2016-7-8 17:30

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.510000	44.60	11.5	56	11.4	QP	N	GND
1.446000	47.70	11.6	56	8.3	QP	N	GND
16.863500	42.20	11.9	60	17.8	QP	N	GND

MEASUREMENT RESULT: "XH513012_fin2"

2016-7-8 17:30

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.416000	44.80	11.3	47.5	2.7	AV	N	GND
0.922000	37.70	11.6	46	8.3	AV	N	GND
4.322000	35.70	11.8	46	10.3	AV	N	GND

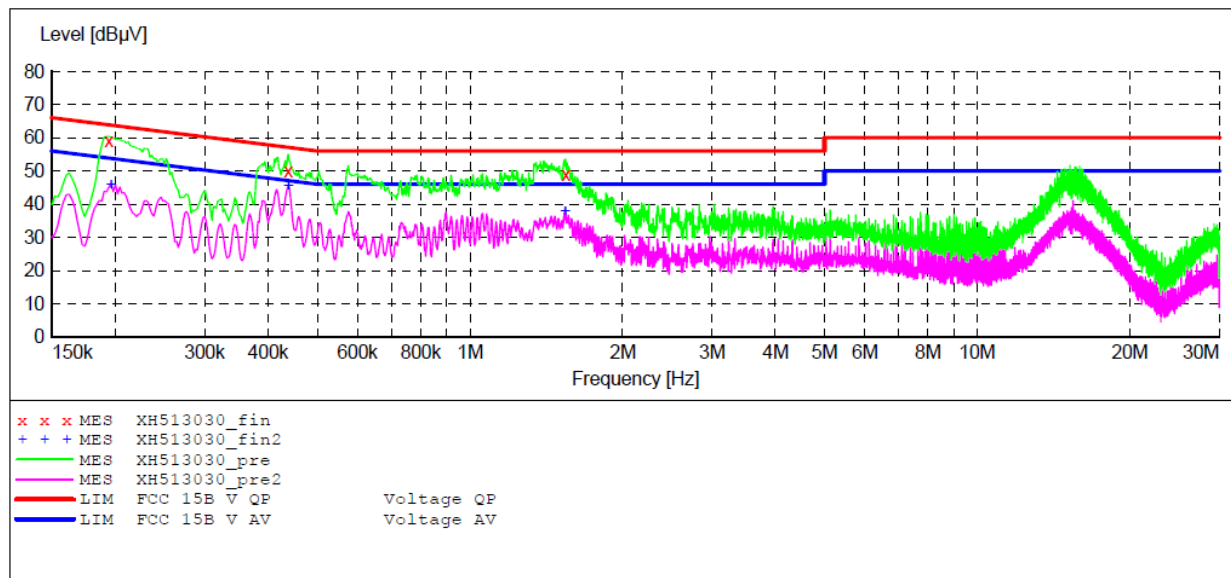
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: USB Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 18:12:51

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513030_fin"

2016-7-8 18:14

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.194000	59.10	10.6	63.9	4.8	QP	L1	GND
0.438000	49.90	11.4	57.1	7.2	QP	L1	GND
1.544000	48.80	11.6	56	7.2	QP	L1	GND

MEASUREMENT RESULT: "XH513030_fin2"

2016-7-8 18:14

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.196000	46.10	10.6	53.8	7.7	AV	L1	GND
0.438000	44.50	11.4	47.1	2.6	AV	L1	GND
1.540000	37.80	11.6	46	8.2	AV	L1	GND

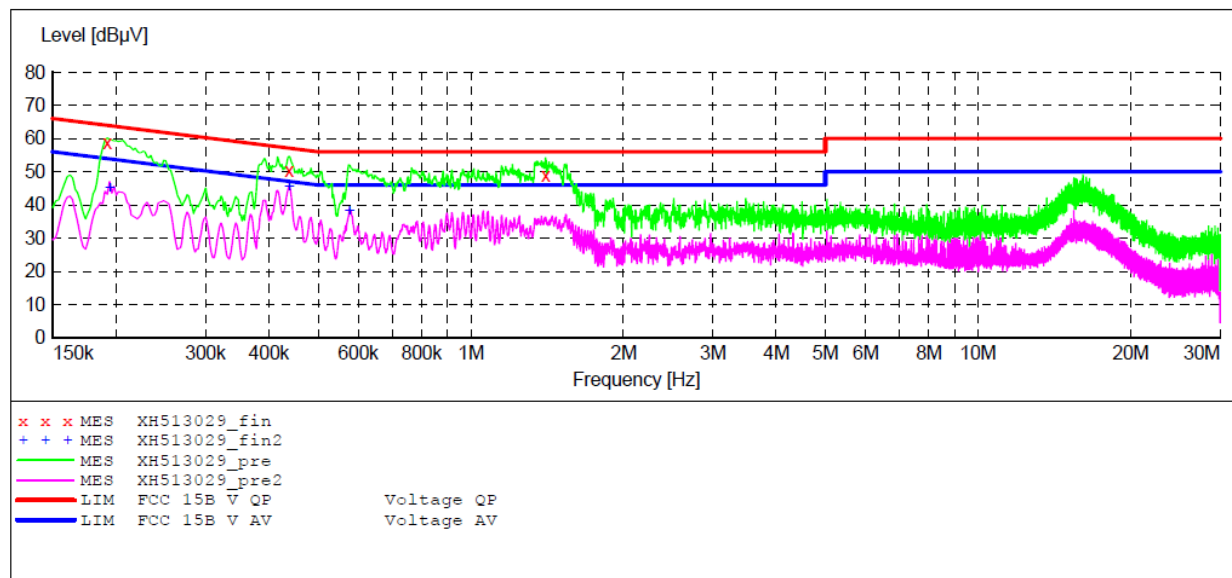
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: USB Play
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 18:10:24

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513029_fin"

2016-7-8 18:12

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.192000	58.70	10.6	63.9	5.2	QP	N	GND
0.438000	50.30	11.4	57.1	6.8	QP	N	GND
1.404000	49.00	11.6	56	7.0	QP	N	GND

MEASUREMENT RESULT: "XH513029_fin2"

2016-7-8 18:12

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.194000	45.30	10.6	53.9	8.6	AV	N	GND
0.438000	45.00	11.4	47.1	2.1	AV	N	GND
0.576000	38.20	11.5	46	7.8	AV	N	GND

Test mode 4

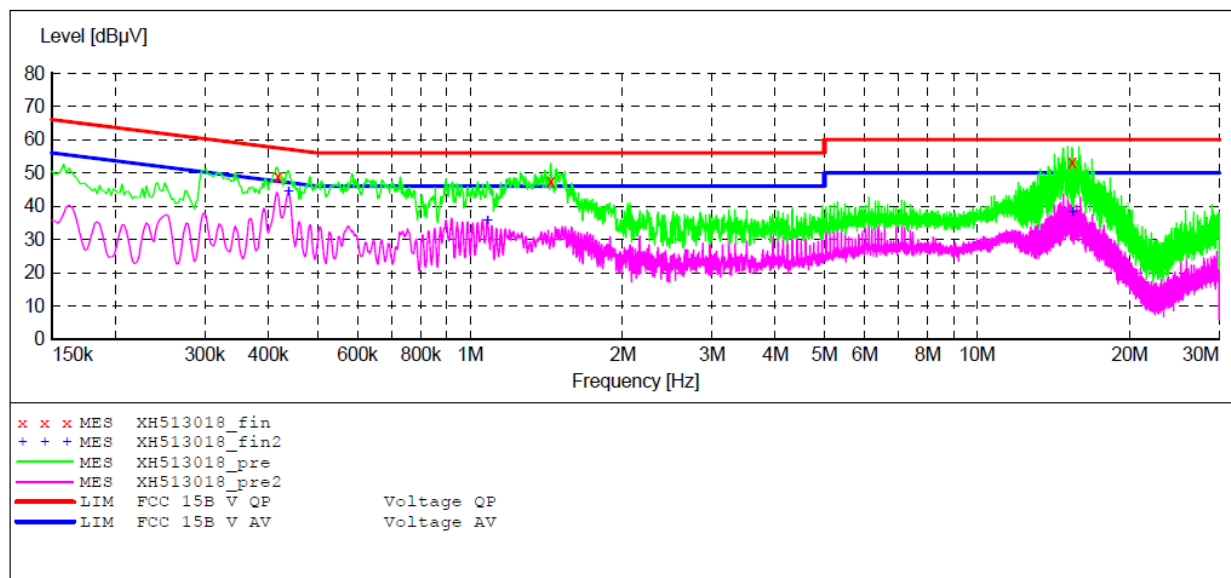
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: 210.3MHz RX
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:42:59

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513018_fin"

2016-7-8 17:45

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.418000	49.00	11.3	57.5	8.5	QP	L1	GND
1.442000	47.30	11.6	56	8.7	QP	L1	GND
15.396500	53.40	11.9	60	6.6	QP	L1	GND

MEASUREMENT RESULT: "XH513018_fin2"

2016-7-8 17:45

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.438000	44.30	11.4	47.1	2.8	AV	L1	GND
1.082000	35.80	11.6	46	10.2	AV	L1	GND
15.396500	38.40	11.9	50	11.6	AV	L1	GND

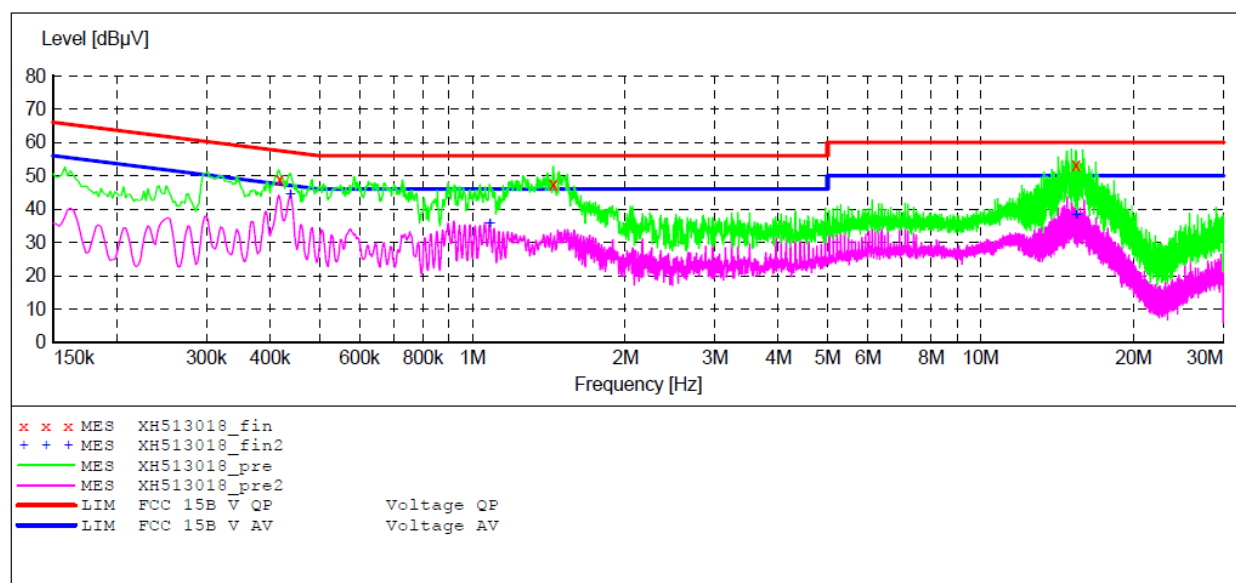
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: 210.3MHz RX
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:42:59

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513018_fin"

2016-7-8 17:45

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.418000	49.00	11.3	57.5	8.5	QP	L1	GND
1.442000	47.30	11.6	56	8.7	QP	L1	GND
15.396500	53.40	11.9	60	6.6	QP	L1	GND

MEASUREMENT RESULT: "XH513018_fin2"

2016-7-8 17:45

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.438000	44.30	11.4	47.1	2.8	AV	L1	GND
1.082000	35.80	11.6	46	10.2	AV	L1	GND
15.396500	38.40	11.9	50	11.6	AV	L1	GND

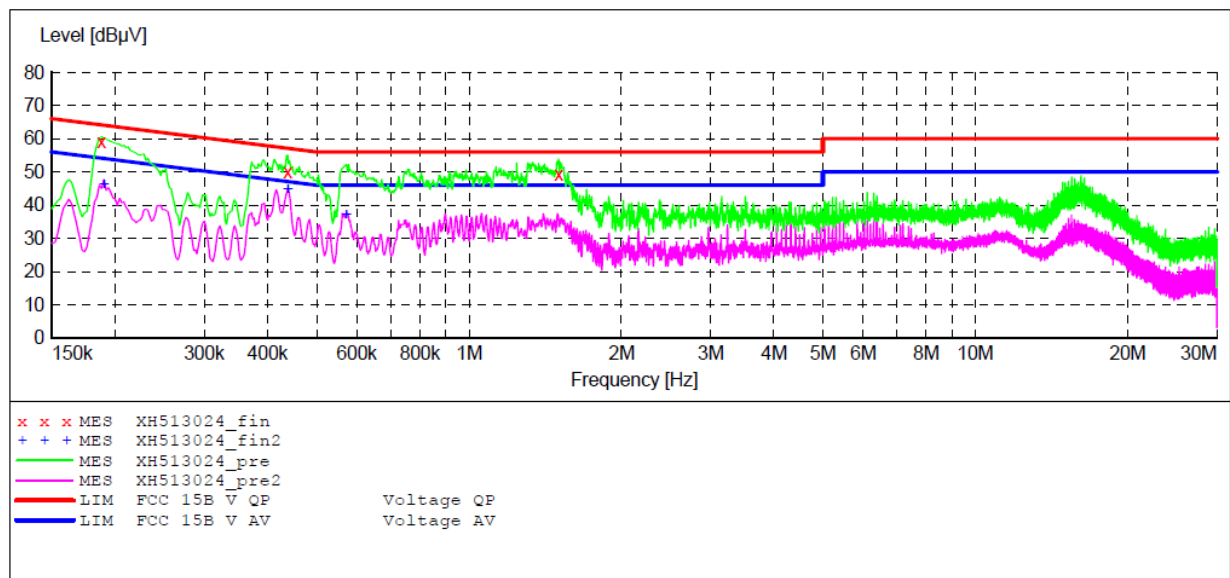
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: 210.3MHz RX
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:58:32

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513024_fin"

2016-7-8 18:00

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.188000	58.90	10.6	64.1	5.2	QP	N	GND
0.438000	50.10	11.4	57.1	7.0	QP	N	GND
1.502000	49.30	11.6	56	6.7	QP	N	GND

MEASUREMENT RESULT: "XH513024_fin2"

2016-7-8 18:00

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.190000	46.40	10.6	54	7.6	AV	N	GND
0.438000	44.80	11.4	47.1	2.3	AV	N	GND
0.572000	37.20	11.5	46	8.8	AV	N	GND

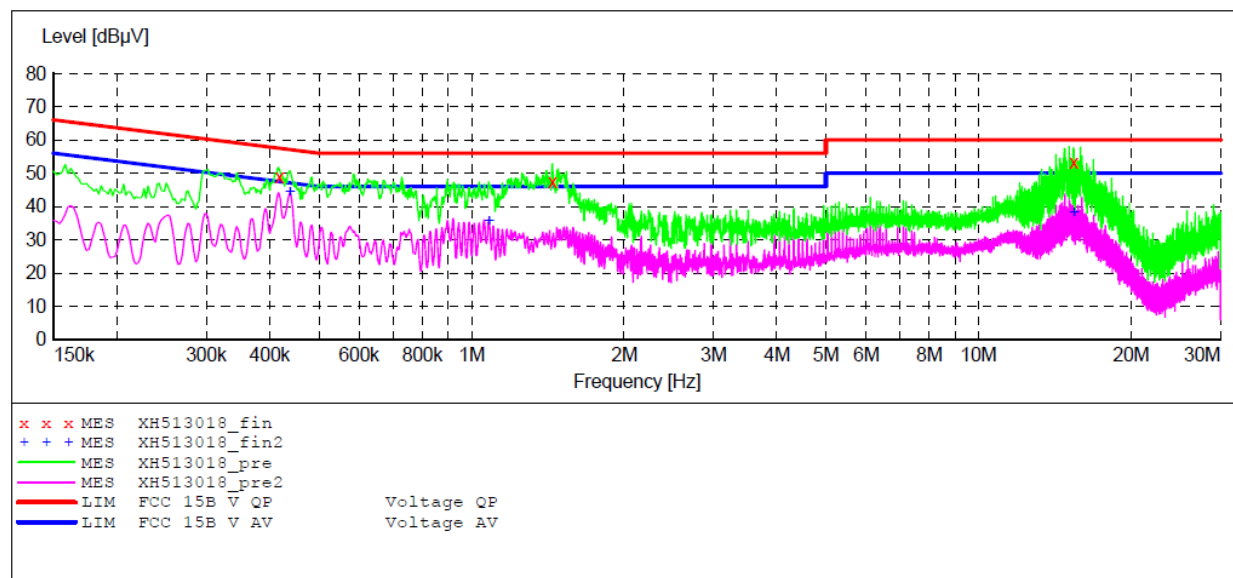
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART15 B

EUT: SPEAKER M/N:TQ-KY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: 210.3MHz RX
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-8 / 17:42:59

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "XH513018_fin"

2016-7-8 17:45

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.418000	49.00	11.3	57.5	8.5	QP	L1	GND
1.442000	47.30	11.6	56	8.7	QP	L1	GND
15.396500	53.40	11.9	60	6.6	QP	L1	GND

MEASUREMENT RESULT: "XH513018_fin2"

2016-7-8 17:45

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.438000	44.30	11.4	47.1	2.8	AV	L1	GND
1.082000	35.80	11.6	46	10.2	AV	L1	GND
15.396500	38.40	11.9	50	11.6	AV	L1	GND

Test mode 5

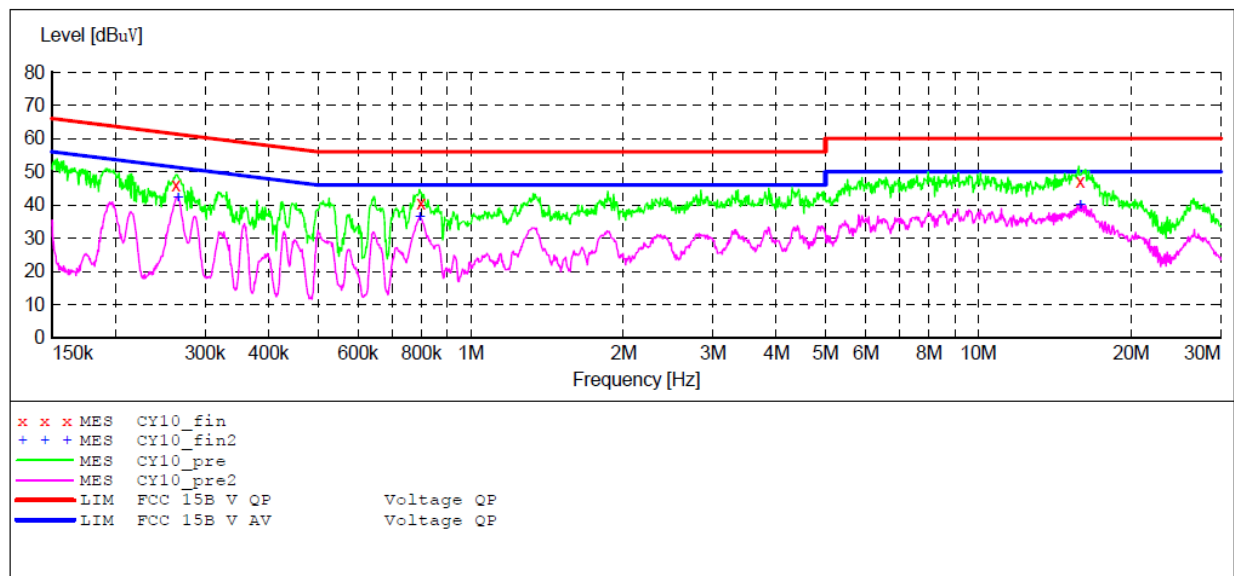
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: GUITAR IN
 Test Site: 2#Shielding Room
 Operator: Star
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:35:17

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.4 % QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "CY10_fin"

2016-7-7 15:36

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.262643	46.00	11.9	61.3	15.3	QP	N	GND
0.798017	40.60	11.9	56	15.4	QP	N	GND
15.861456	47.10	12.0	60	12.9	QP	N	GND

MEASUREMENT RESULT: "CY10_fin2"

2016-7-7 15:36

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.265014	42.40	11.9	51.3	8.9	AV	N	GND
0.793250	36.40	11.9	46	9.6	AV	N	GND
15.861456	40.20	12.0	50	9.8	AV	N	GND

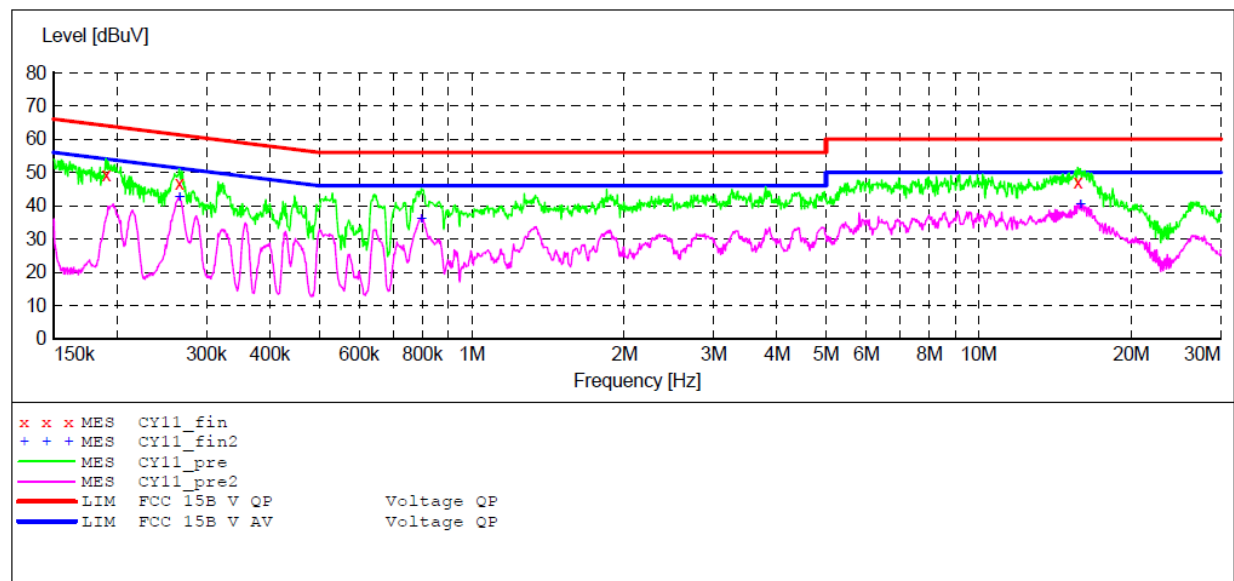
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: GUITAR IN
 Test Site: 2#Shielding Room
 Operator: Star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:37:13

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.4 % QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "CY11_fin"

2016-7-7 15:38

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.190049	49.10	11.9	64	14.9	QP	L1	GND
0.265014	46.70	11.9	61.3	14.6	QP	L1	GND
15.672537	47.10	12.0	60	12.9	QP	L1	GND

MEASUREMENT RESULT: "CY11_fin2"

2016-7-7 15:38

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.265014	42.60	11.9	51.3	8.7	AV	L1	GND
0.795630	36.20	11.9	46	9.8	AV	L1	GND
15.861456	40.40	12.0	50	9.6	AV	L1	GND

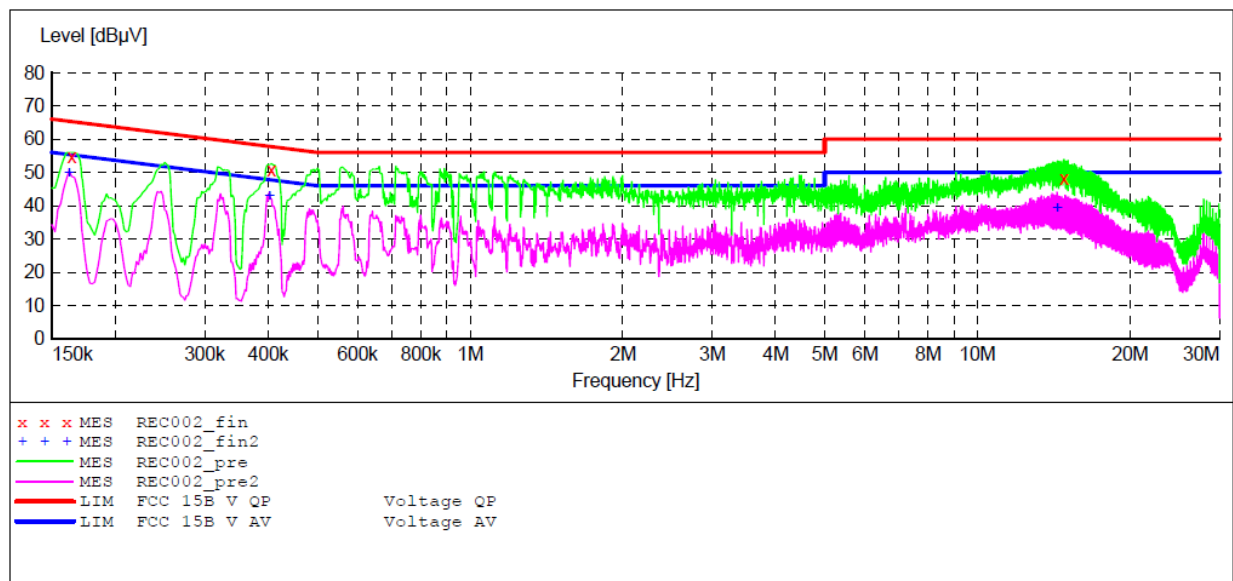
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: GUITAR IN
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 14:53:39

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "REC002_fin"

2016-7-7 14:55

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.164000	54.80	10.4	65.3	10.5	QP	N	GND
0.406000	50.80	11.3	57.7	6.9	QP	N	GND
14.811500	48.20	11.9	60	11.8	QP	N	GND

MEASUREMENT RESULT: "REC002_fin2"

2016-7-7 14:55

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.162000	49.90	10.4	55.4	5.5	AV	N	GND
0.402000	42.90	11.3	47.8	4.9	AV	N	GND
14.348000	39.20	11.9	50	10.8	AV	N	GND

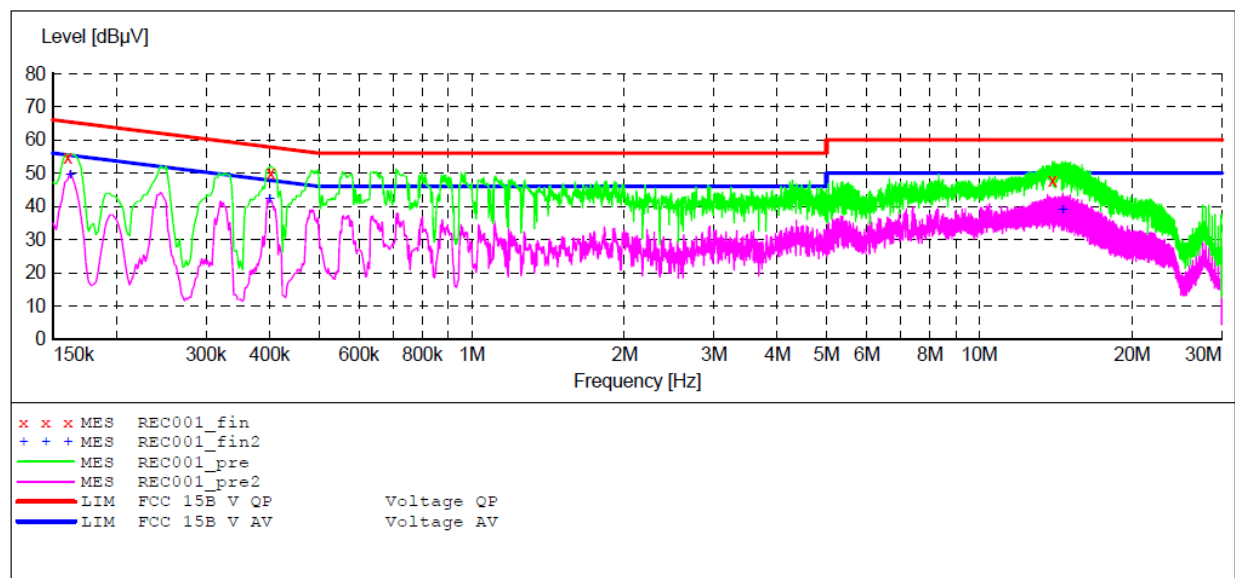
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: GUITAR IN
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 14:50:56

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "REC001_fin"

2016-7-7 14:52

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.160000	54.80	10.4	65.5	10.7	QP	L1	GND
0.402000	50.10	11.3	57.8	7.7	QP	L1	GND
13.929500	47.90	11.9	60	12.1	QP	L1	GND

MEASUREMENT RESULT: "REC001_fin2"

2016-7-7 14:52

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.162000	49.50	10.4	55.4	5.9	AV	L1	GND
0.400000	42.30	11.3	47.9	5.6	AV	L1	GND
14.591000	39.10	11.9	50	10.9	AV	L1	GND

Test mode 6

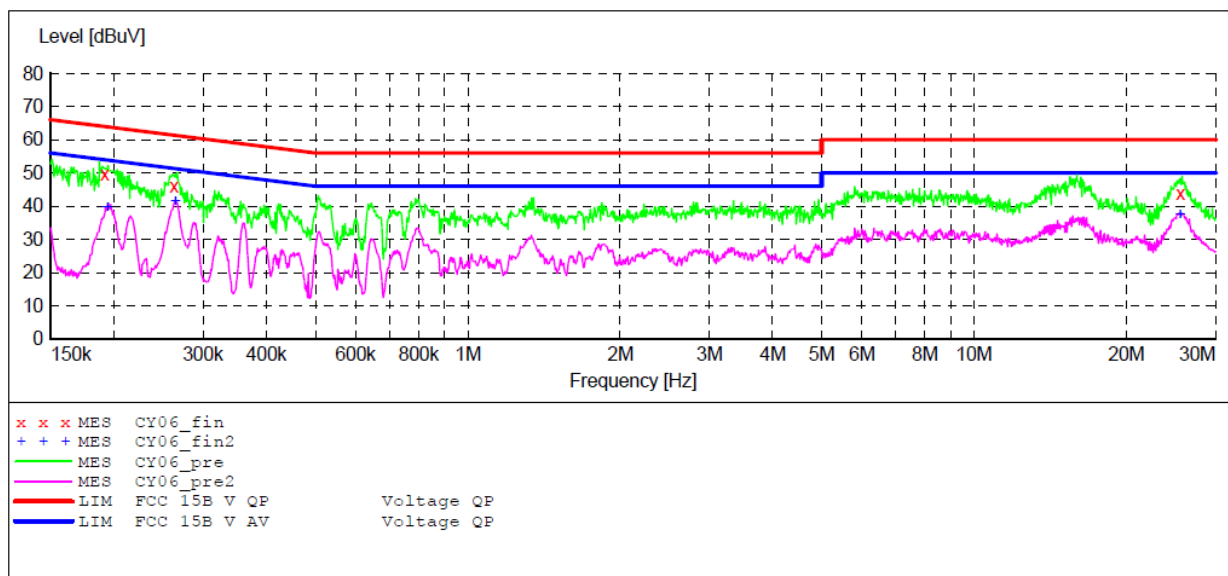
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: MIC IN
 Test Site: 2#Shielding Room
 Operator: Star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:25:40

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.4 % QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "CY06_fin"

2016-7-7 15:26

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.191764	49.50	11.9	64	14.5	QP	L1	GND
0.262643	46.10	11.9	61.3	15.2	QP	L1	GND
25.538265	43.60	12.0	60	16.4	QP	L1	GND

MEASUREMENT RESULT: "CY06_fin2"

2016-7-7 15:26

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.194076	39.70	11.9	53.9	14.2	AV	L1	GND
0.264221	41.50	11.9	51.3	9.8	AV	L1	GND
25.538265	37.70	12.0	50	12.3	AV	L1	GND

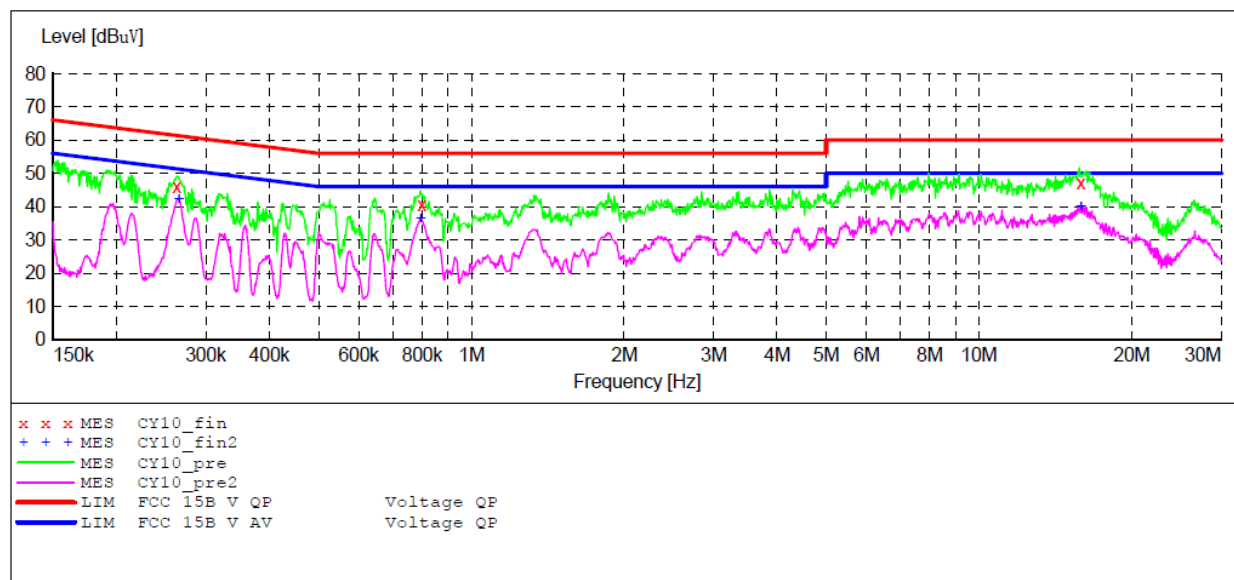
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: GUITAR IN
 Test Site: 2#Shielding Room
 Operator: Star
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:35:17

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.4 % QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "CY10_fin"

2016-7-7 15:36

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.262643	46.00	11.9	61.3	15.3	QP	N	GND
0.798017	40.60	11.9	56	15.4	QP	N	GND
15.861456	47.10	12.0	60	12.9	QP	N	GND

MEASUREMENT RESULT: "CY10_fin2"

2016-7-7 15:36

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.265014	42.40	11.9	51.3	8.9	AV	N	GND
0.793250	36.40	11.9	46	9.6	AV	N	GND
15.861456	40.20	12.0	50	9.8	AV	N	GND

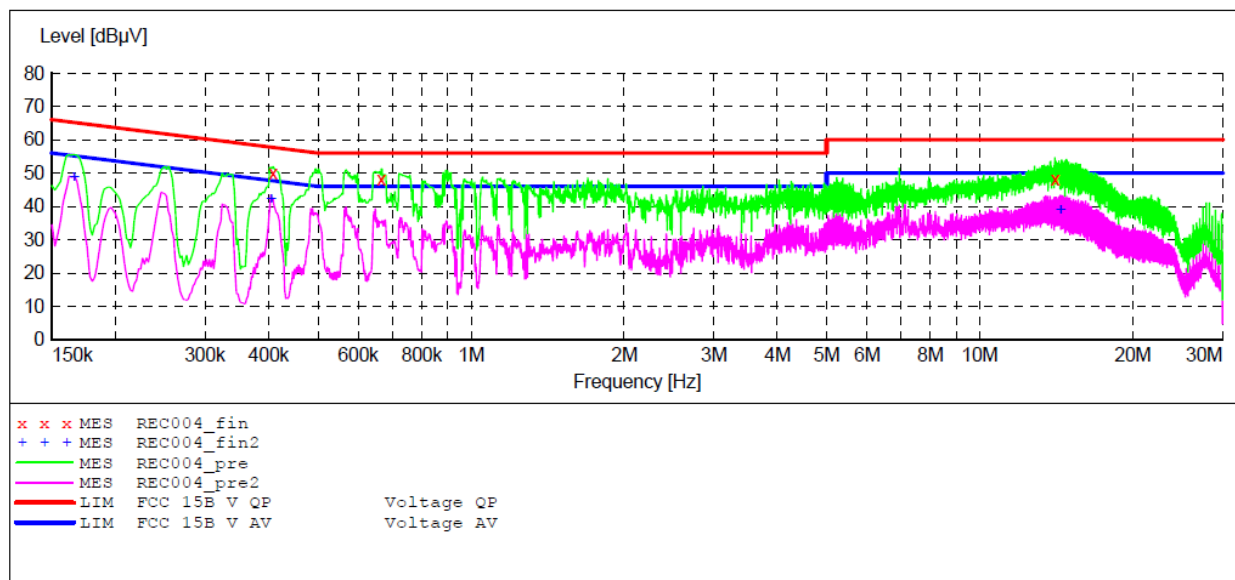
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: MIC IN
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:00:38

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "REC004_fin"

2016-7-7 15:02

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.408000	50.00	11.3	57.7	7.7	QP	L1	GND
0.666000	48.00	11.5	56	8.0	QP	L1	GND
14.046500	48.10	11.9	60	11.9	QP	L1	GND

MEASUREMENT RESULT: "REC004_fin2"

2016-7-7 15:02

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.166000	48.90	10.4	55.2	6.3	AV	L1	GND
0.404000	42.10	11.3	47.8	5.7	AV	L1	GND
14.406500	39.10	11.9	50	10.9	AV	L1	GND

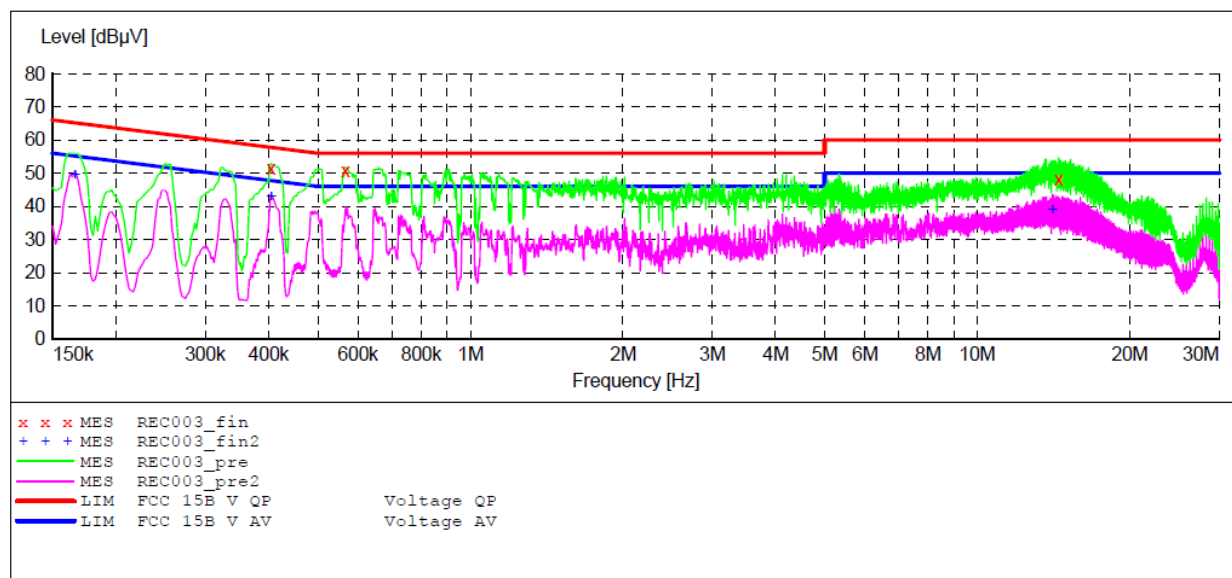
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: MIC IN
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 14:58:22

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "REC003_fin"

2016-7-7 15:00

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.404000	51.30	11.3	58	6.5	QP	N	GND
0.566000	50.60	11.5	56	5.4	QP	N	GND
14.487500	48.30	11.9	60	11.7	QP	N	GND

MEASUREMENT RESULT: "REC003_fin2"

2016-7-7 15:00

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.166000	49.50	10.4	55	5.7	AV	N	GND
0.404000	42.90	11.3	48	4.9	AV	N	GND
14.073500	39.00	11.9	50	11.0	AV	N	GND

Test mode 7

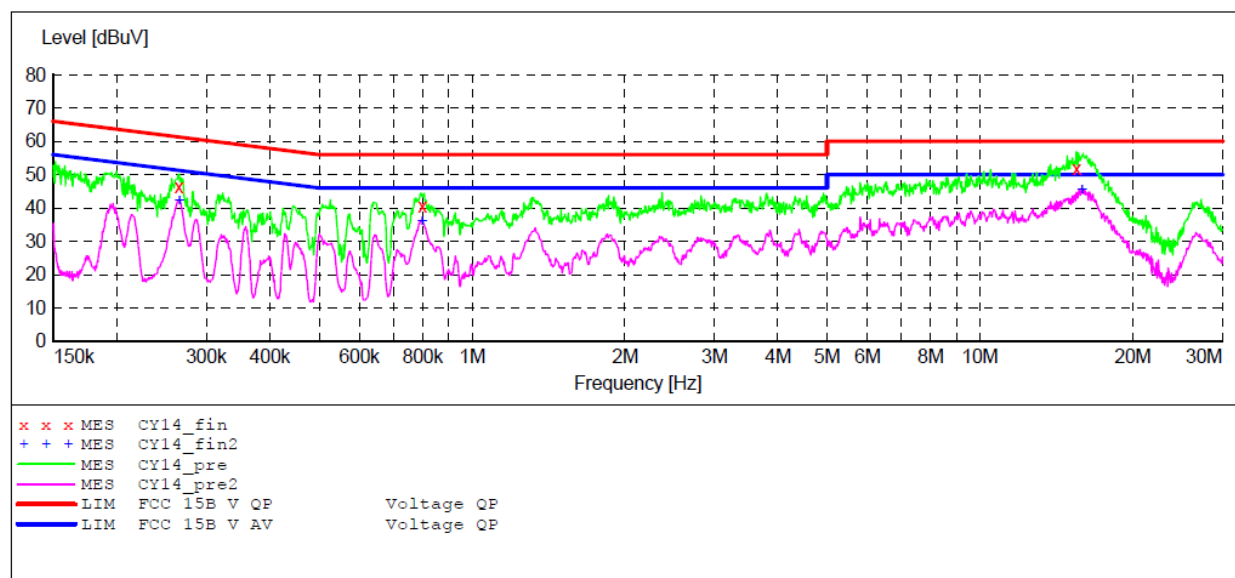
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: FM RX
 Test Site: 2#Shielding Room
 Operator: Star
 Test Specification: N 240V/60Hz
 Comment: Report No.:ATE20161345

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.4 % QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "CY14_fin"

2016-7-7 15:47

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.264221	46.30	11.9	61.3	15.0	QP	N	GND
0.798017	40.60	11.9	56	15.4	QP	N	GND
15.485869	51.60	12.0	60	8.4	QP	N	GND

MEASUREMENT RESULT: "CY14_fin2"

2016-7-7 15:47

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.265014	42.40	11.9	51.3	8.9	AV	N	GND
0.798017	35.90	11.9	46	10.1	AV	N	GND
15.861456	45.50	12.0	50	4.5	AV	N	GND

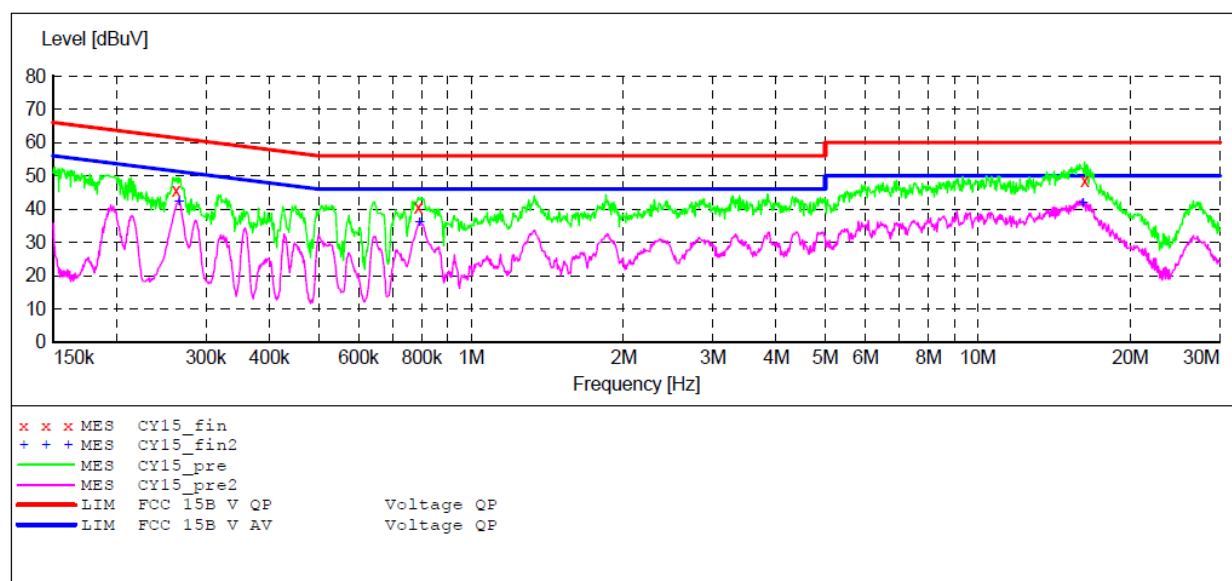
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: FM RX
 Test Site: 2#Shielding Room
 Operator: Star
 Test Specification: L 240V/60Hz
 Comment: Report No.:ATE20161345

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 0.4 % QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "CY15_fin"

2016-7-7 15:49

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.261857	45.50	11.9	61.4	15.9	QP	L1	GND
0.786153	40.30	11.9	56	15.7	QP	L1	GND
16.246152	48.60	12.0	60	11.4	QP	L1	GND

MEASUREMENT RESULT: "CY15_fin2"

2016-7-7 15:49

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Detector	Line	PE
0.265014	42.30	11.9	51.3	9.0	AV	L1	GND
0.790877	36.20	11.9	46	9.8	AV	L1	GND
16.100809	41.80	12.0	50	8.2	AV	L1	GND

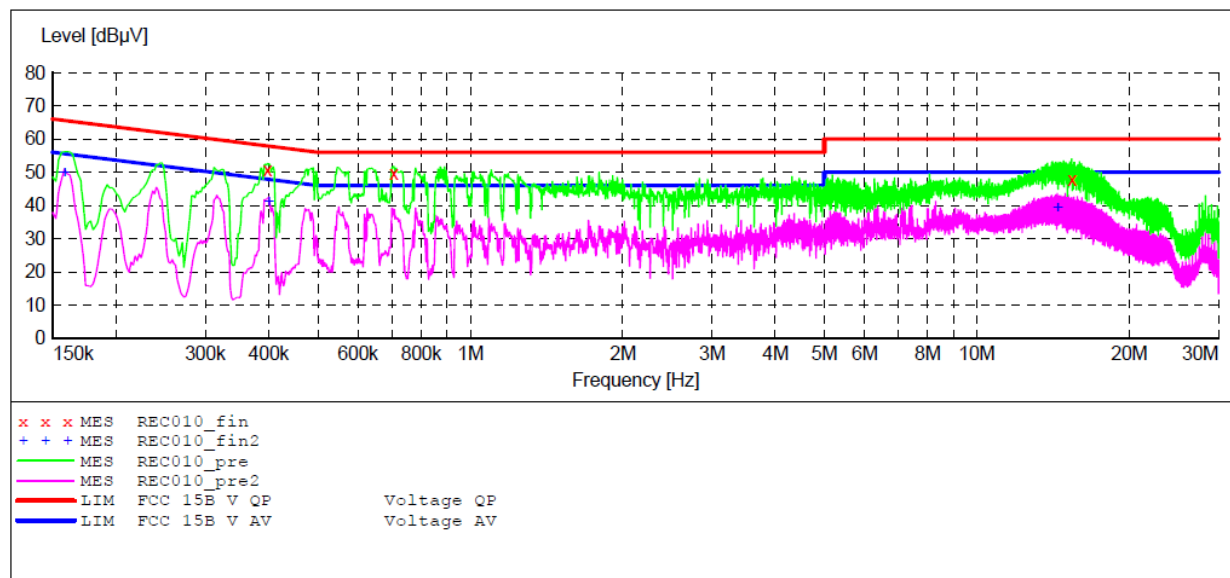
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: FM RX
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: N 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:13:28

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "REC010_fin"

2016-7-7 15:15

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.398000	50.60	11.3	57.9	7.3	QP	N	GND
0.706000	49.50	11.5	56	6.5	QP	N	GND
15.392000	47.80	11.9	60	12.2	QP	N	GND

MEASUREMENT RESULT: "REC010_fin2"

2016-7-7 15:15

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.158000	49.80	10.4	55.6	5.8	AV	N	GND
0.400000	41.30	11.3	47.9	6.6	AV	N	GND
14.415500	39.20	11.9	50	10.8	AV	N	GND

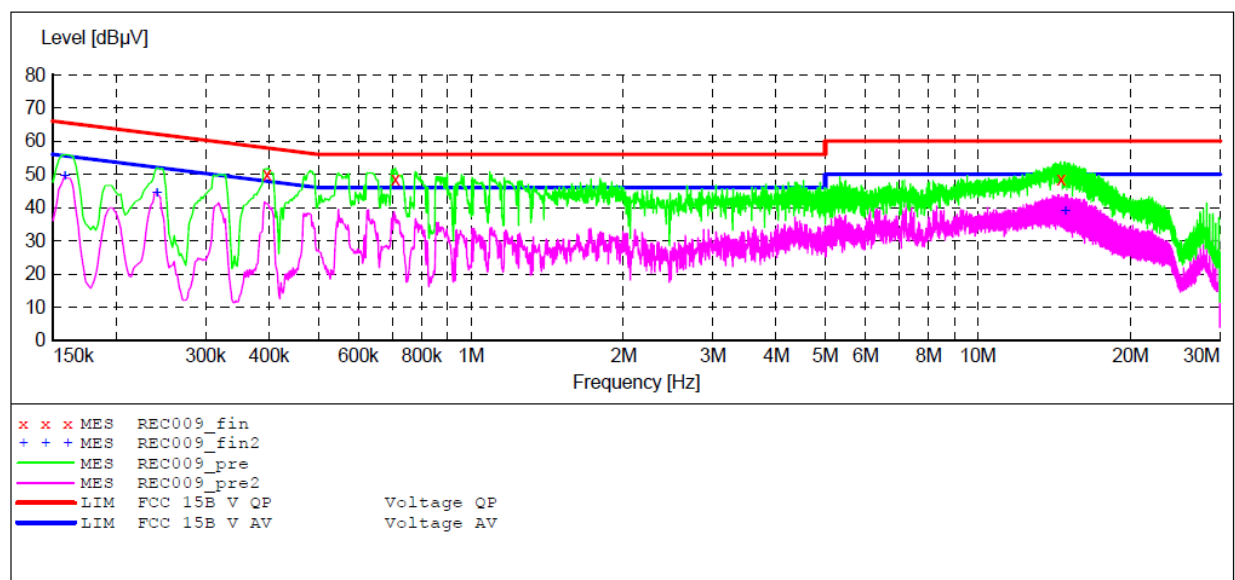
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: SPEAKER M/N:TQ-LTKY21501
 Manufacturer: TQL TRADING INC
 Operating Condition: FM RX
 Test Site: 2#Shielding Room
 Operator: star
 Test Specification: L 120V/60Hz
 Comment: Report No.:ATE20161345
 Start of Test: 2016-7-7 / 15:11:14

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)
 Average



MEASUREMENT RESULT: "REC009_fin"

2016-7-7 15:13

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.396000	49.90	11.3	57.9	8.0	QP	L1	GND
0.710000	48.60	11.5	56	7.4	QP	L1	GND
14.564000	48.60	11.9	60	11.4	QP	L1	GND

MEASUREMENT RESULT: "REC009_fin2"

2016-7-7 15:13

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.158000	49.40	10.4	55.6	6.2	AV	L1	GND
0.240000	44.30	10.8	52.1	7.8	AV	L1	GND
14.870000	39.10	11.9	50	10.9	AV	L1	GND

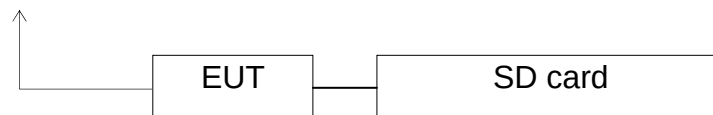
5. RADIATED EMISSION MEASUREMENT

5.1. Block Diagram of Test Setup

5.1.1. Block diagram of connection between the EUT and simulators

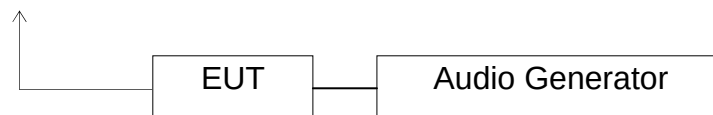
Test mode 1: SD card PLAYING

AC Mains



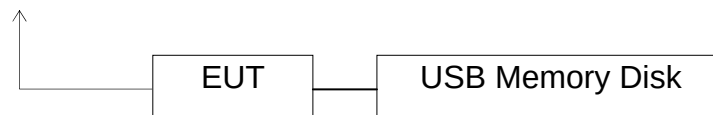
Test mode 2: Audio IN

AC Mains



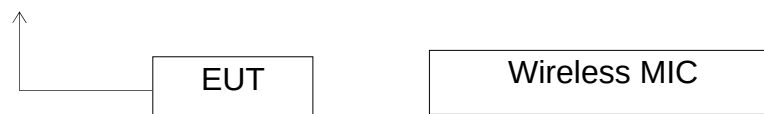
Test mode 3: USB PLAYING

AC Mains



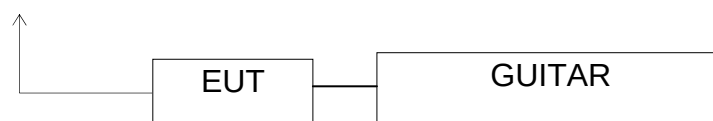
Test mode 4: 210.3MHz RX

AC Mains



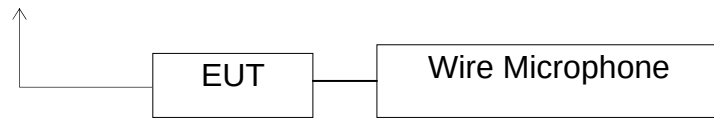
Test mode 5: GUITAR IN

AC Mains



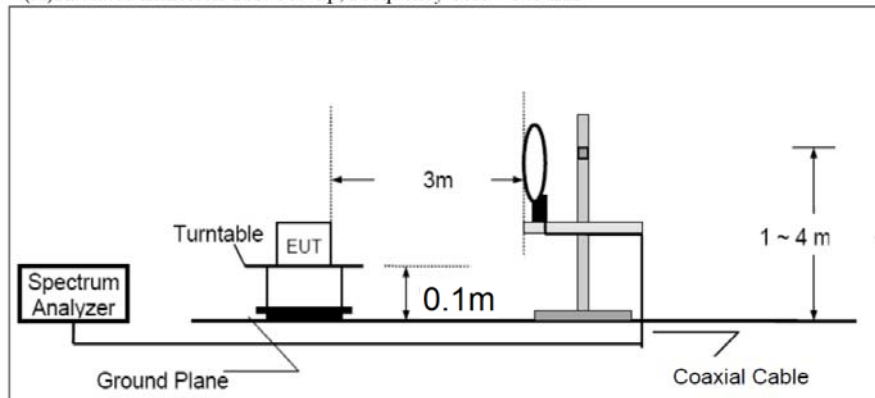
Test mode 6: MIC IN

AC Mains

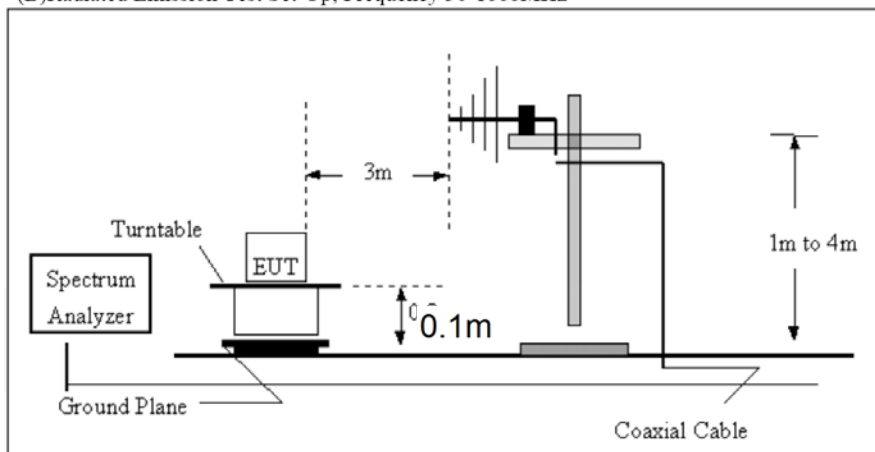


5.1.2. Block diagram of test setup (In chamber)

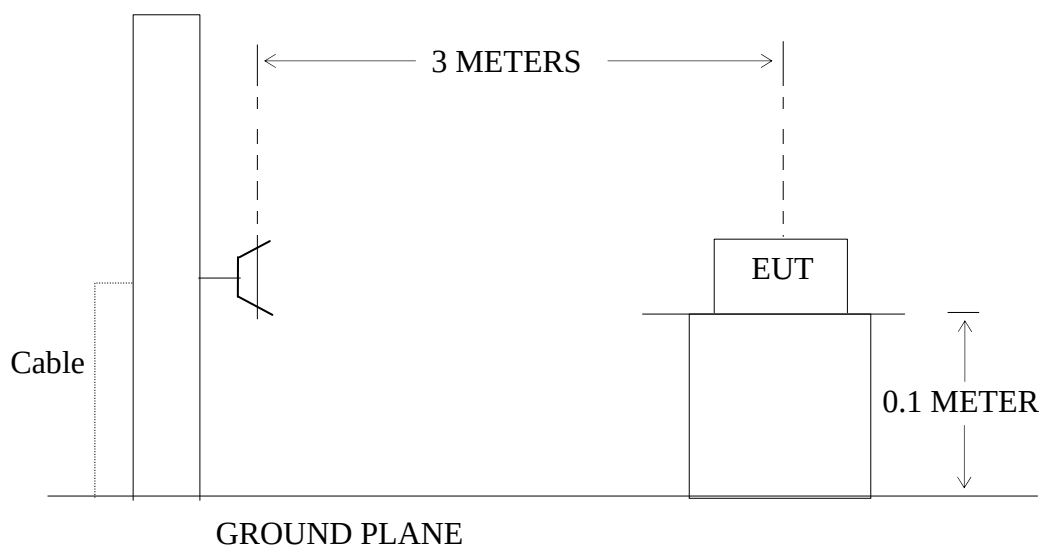
(A) Radiated Emission Test Set-Up, Frequency below 30MHz



(B) Radiated Emission Test Set-Up, Frequency 30-1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1GHz



5.2.The Emission Limit For Section 15.109 (a)

5.2.1.Radiation Emission Measurement Limits According to Section 15.109 (a).

Frequency MHz	Distance Meters	Field Strengths Limit	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V/m})$
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
960-1000	3	500	54.0
Remark: (1) Emission level $\text{dB}(\mu\text{V}) = 20 \log$ Emission level $\mu\text{V/m}$. (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.			

5.3.EUT Configuration on Measurement

The following equipment is 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.

5.3.1.SPEAKER

Model Number: TQ-KY21501

Serial Number: N/A

Manufacturer: TQL TRADING INC.

5.4.Operating Condition of EUT

5.4.1.Setup the EUT and simulator as shown as Section 5.1.

5.4.2.Turn on the power of all equipment.

5.4.3.Let the EUT work in test mode and measure it.

5.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.1 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 REMOTE CONTROL (R&S ESCS30) is set at 120kHz from 30MHz to 1000MHz.

The frequency range from 30MHz to 3000MHz is checked.

5.6. Radiated Emission Noise Measurement Result

PASS.

Note:

The EUT highest operating frequency provided by Manufacturer is 210.3MHz, the radiated emission measurement shall be made up to 3 GHz. The frequency range from 30MHz to 3000MHz is investigated.

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

The spectral diagrams are attached as below.

Test mode 1

Below 1GHz



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Site: 1# Chamber

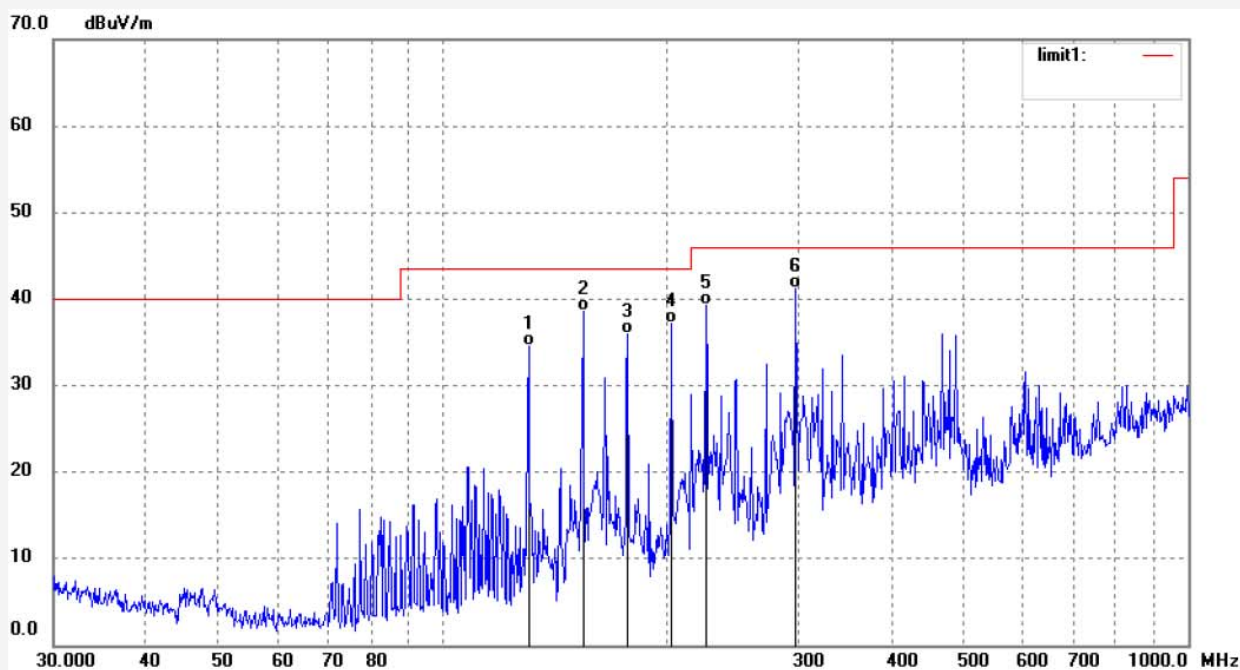
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR2016 #1409
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: SPEAKER
Mode: SD card Play
Model: TQ-KY21501
Manufacturer: TQL TRADING INC

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2016/07/05
Time: 16:51:29
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161345

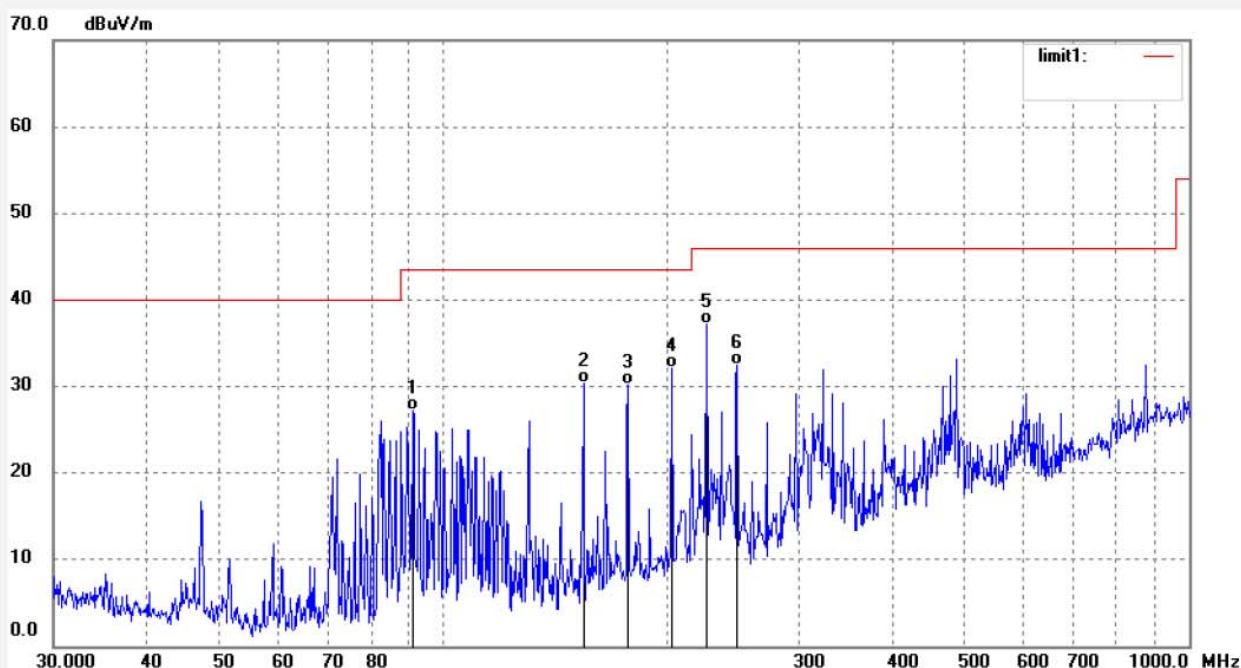


No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	130.3048	56.37	-21.74	34.63	43.50	-8.87	QP			
2	154.2427	60.61	-21.95	38.66	43.50	-4.84	QP			
3	176.8951	56.61	-20.62	35.99	43.50	-7.51	QP			
4	202.1630	55.79	-18.63	37.16	43.50	-6.34	QP			
5	225.4267	57.72	-18.35	39.37	46.00	-6.63	QP			
6	297.5459	57.48	-16.33	41.15	46.00	-4.85	QP			

Job No.: STAR2016 #1408
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: SPEAKER
Mode: SD card Play
Model: TQ-KY21501
Manufacturer: TQL TRADING INC

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 2016/07/05
Time: 16:47:17
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161345



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	91.0574	49.13	-21.84	27.29	43.50	-16.21	QP			
2	154.2427	52.24	-21.95	30.29	43.50	-13.21	QP			
3	176.8951	50.81	-20.62	30.19	43.50	-13.31	QP			
4	202.1630	50.80	-18.63	32.17	43.50	-11.33	QP			
5	225.4267	55.51	-18.35	37.16	46.00	-8.84	QP			
6	247.8593	50.63	-18.19	32.44	46.00	-13.56	QP			

Above 1GHz



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Site: 1# Chamber

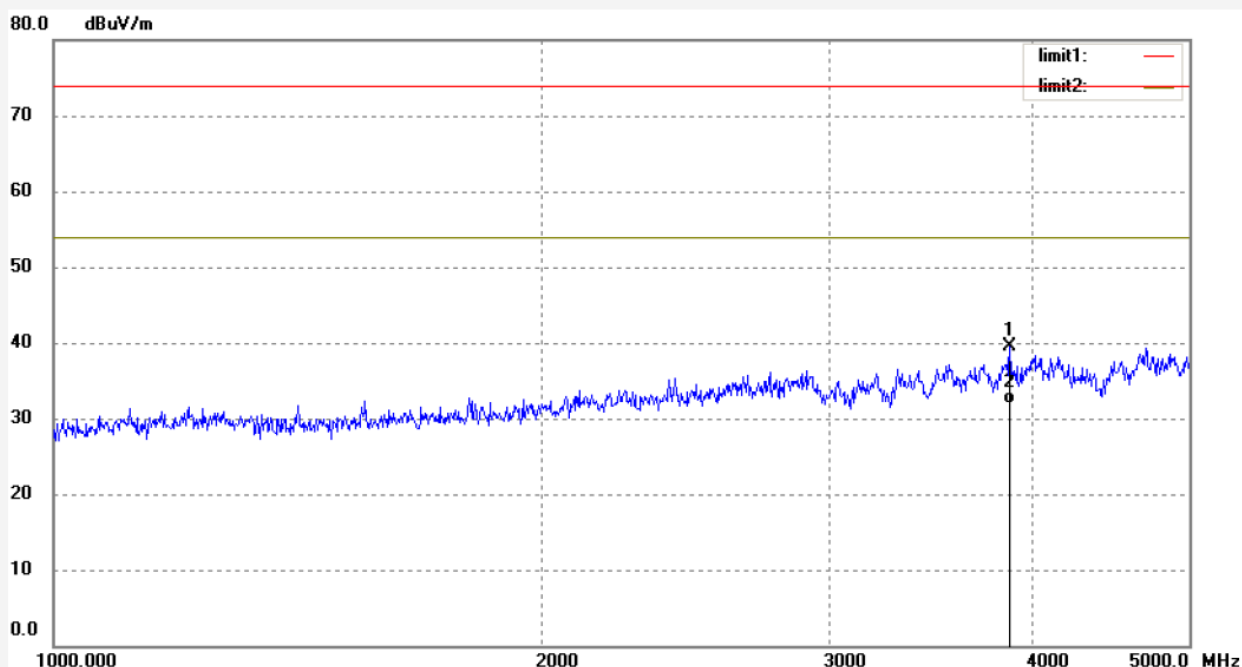
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: star2016 #1426
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: SPEAKER
Mode: SD card Play
Model: TQ-KY21501
Manufacturer: TQL TRADING INC

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2016/07/05
Time: 18:00:28
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161345



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3877.656	42.31	-2.81	39.50	74.00	-34.50	peak			
2	3877.656	34.62	-2.81	31.81	54.00	-22.19	AVG			

Job No.: star2016 #1425

Standard: FCC PK

Test item: Radiation Test

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

EUT: SPEAKER

Mode: SD card Play

Model: TQ-KY21501

Manufacturer: TQL TRADING INC

Polarization: Vertical

Power Source: AC 120V/60Hz

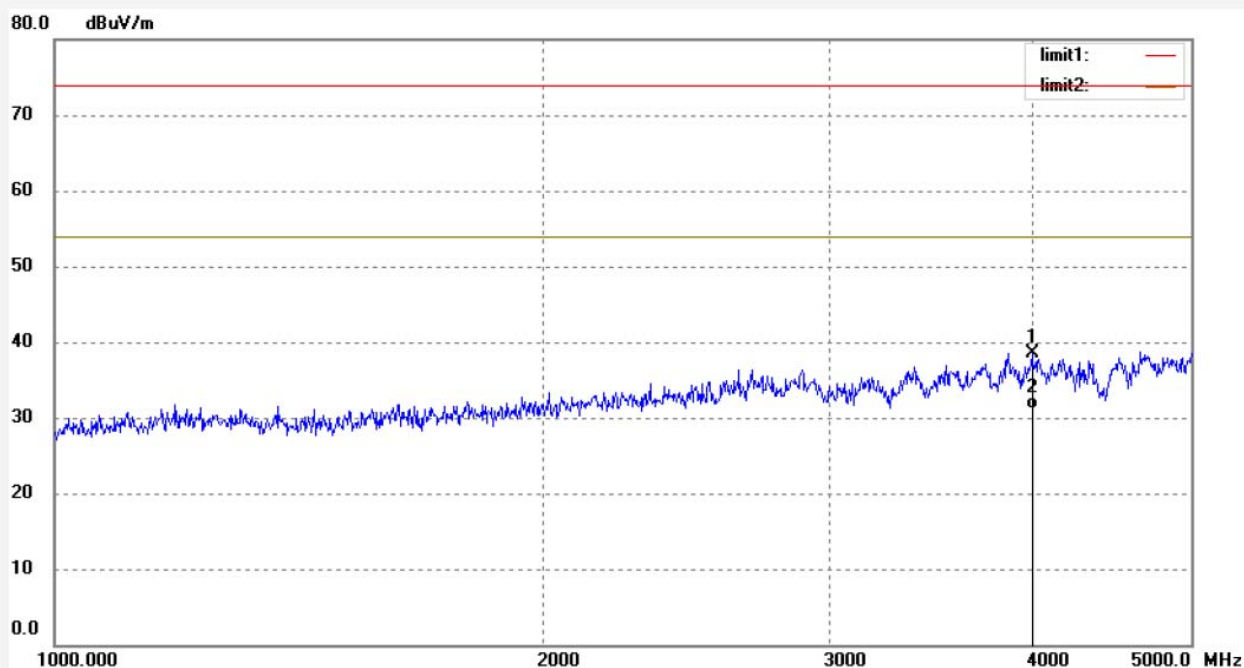
Date: 2016/07/05

Time: 17:56:48

Engineer Signature: star

Distance: 3m

Note: Report No.:ATE20161345



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3992.333	41.02	-2.51	38.51	74.00	-35.49	peak			
2	3992.333	33.67	-2.51	31.16	54.00	-22.84	AVG			

Test mode 2

Below 1GHz



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Site: 1# Chamber

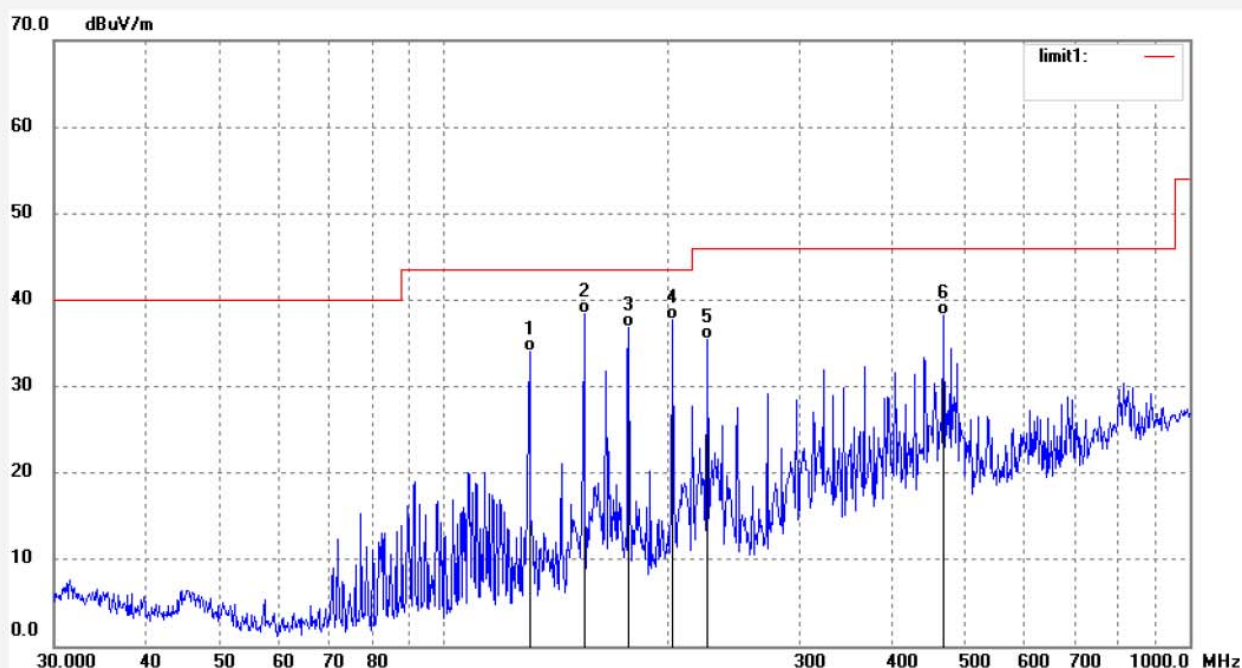
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR2016 #1410
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: SPEAKER
Mode: Audio in
Model: TQ-KY21501
Manufacturer: TQL TRADING INC

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2016/07/05
Time: 16:54:26
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161345



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	130.3048	55.78	-21.74	34.04	43.50	-9.46	QP			
2	154.2428	60.43	-21.95	38.48	43.50	-5.02	QP			
3	176.8953	57.52	-20.62	36.90	43.50	-6.60	QP			
4	202.8745	56.28	-18.60	37.68	43.50	-5.82	QP			
5	225.4267	53.77	-18.35	35.42	46.00	-10.58	QP			
6	468.1650	50.82	-12.60	38.22	46.00	-7.78	QP			



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Report No.: ATE20161345

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Site: 1# Chamber

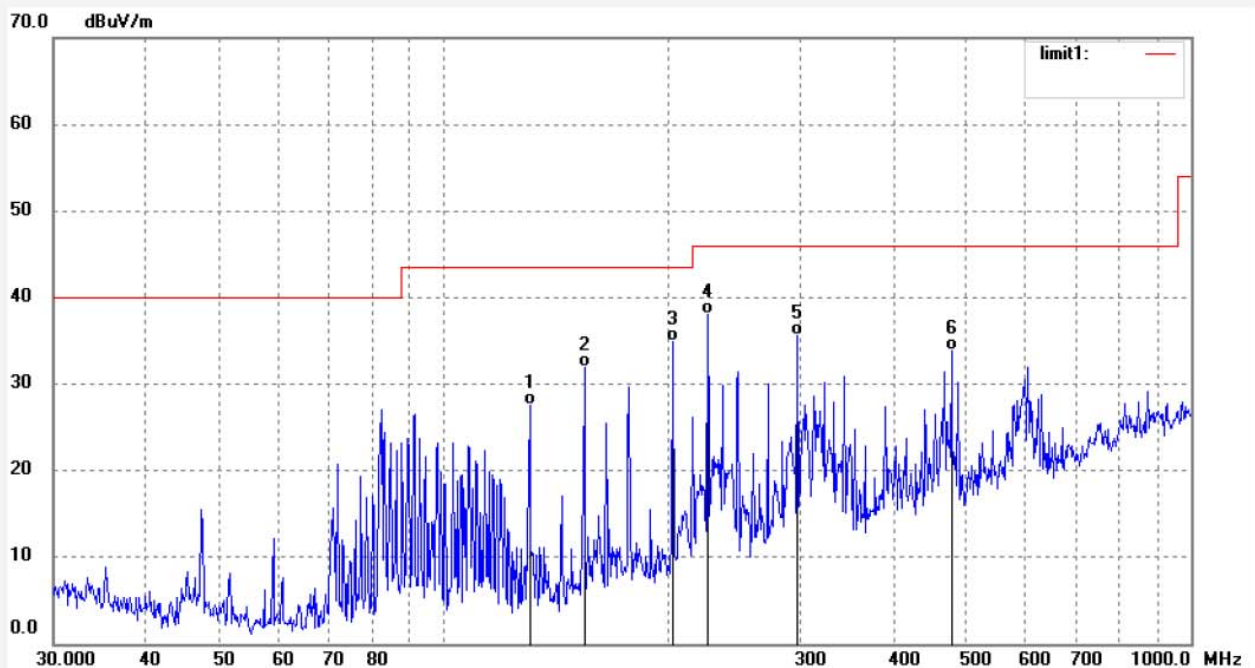
Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: STAR2016 #1411
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: SPEAKER
Mode: Audio in
Model: TQ-KY21501
Manufacturer: TQL TRADING INC

Polarization: Vertical
Power Source: AC 120V/60Hz
Date: 2016/07/05
Time: 16:58:17
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161345



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	130.3048	49.37	-21.74	27.63	43.50	-15.87	QP			
2	154.2427	53.91	-21.95	31.96	43.50	-11.54	QP			
3	202.8745	53.51	-18.60	34.91	43.50	-8.59	QP			
4	225.4267	56.45	-18.35	38.10	46.00	-7.90	QP			
5	297.5459	51.97	-16.33	35.64	46.00	-10.36	QP			
6	478.1394	46.32	-12.49	33.83	46.00	-12.17	QP			

Above 1GHz



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Site: 1# Chamber

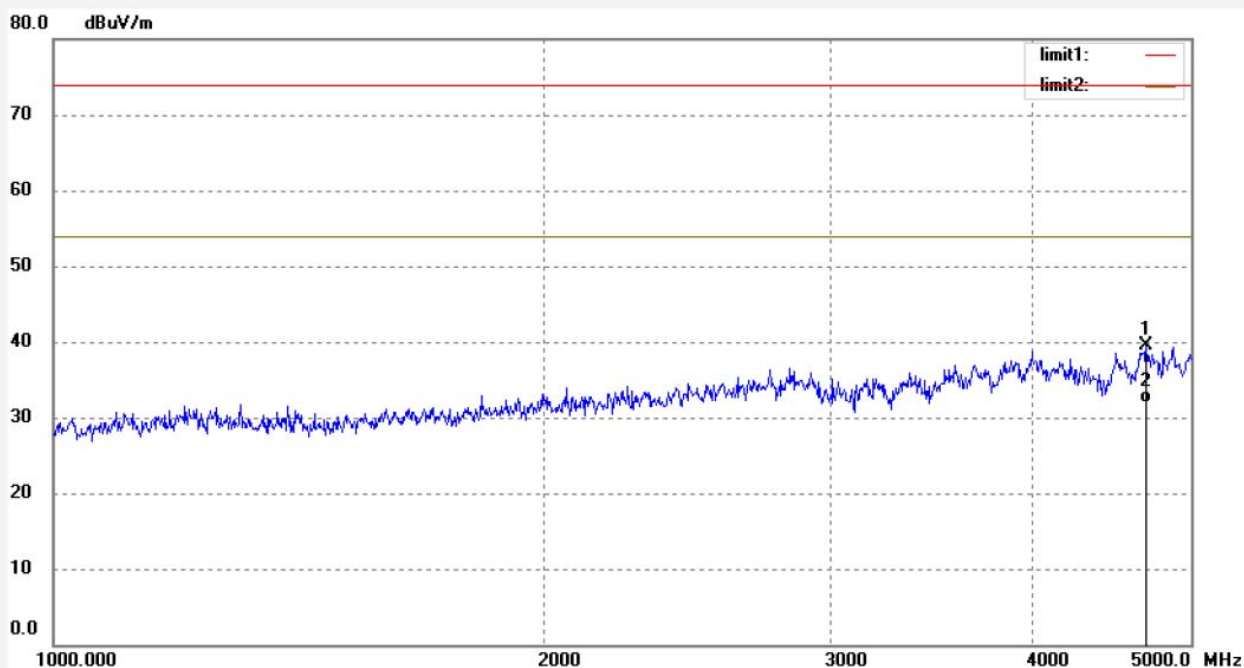
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Job No.: star2016 #1429
Standard: FCC PK
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 55 %
EUT: SPEAKER
Mode: Audio in
Model: TQ-KY21501
Manufacturer: TQL TRADING INC

Polarization: Horizontal
Power Source: AC 120V/60Hz
Date: 2016/07/05
Time: 18:10:05
Engineer Signature: star
Distance: 3m

Note: Report No.:ATE20161345



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4694.028	41.38	-1.90	39.48	74.00	-34.52	peak			
2	4694.028	33.85	-1.90	31.95	54.00	-22.05	AVG			