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APPLICATION FOR VERIFICATION On Behalf of Recordex USA, Inc.

Interactive Flat Panel Model No.: ST-700

FCC ID: 2ADKE-ST-700B

Prepared for : Recordex USA, Inc.

Address : 10-50 46th Avenue, Long Island City, NY 11101

Prepared by : Accurate Technology Co., Ltd.

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Report No. : ATE20150571

Date of Test : March 26, 2015

Date of Report : April 1, 2015





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Test Report Declaration

Applicant : Recordex USA, Inc.Manufacturer : Recordex USA, Inc.Product : Interactive Flat Panel

(A) Model No.: ST-700

(B) Rating: AC 100-240V; 50/60Hz

(C) Trade Mark: RECORDEX

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.

Date of Test :	March 26, 2015	
Date of Report :	April 1, 2015	
Prepared by :	Bobwarg	
	(Bob.Wang, Engineer)	
Approved & Authorized Signer :	Lemb	
	(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



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2. GENERAL INFORMATION

2.1.Product of Device (EUT)

Product : Interactive Flat Panel

Model No. : ST-700

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

Trade Mark : RECORDEX

Applicant : Recordex USA, Inc.

Address : 10-50 46th Avenue, Long Island City, NY 11101

Manufacturer : Recordex USA, Inc.

Address : 10-50 46th Avenue, Long Island City, NY 11101

Date of sample

received

Date of Test

March 25, 2015

March 26, 2015

2.2. Accessory and Auxiliary Equipment

N/A



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2.3. 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.

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

Rd., Science & Industry Park, Nanshan District, Shenzhen

518057, P.R. China

2.4. Measurement Uncertainty

Conducted emission expanded uncertainty U=2.23dB, k=2Power 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. POWER LINE CONDUCTED MEASUREMENT

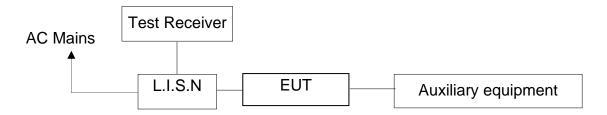
3.1. For Power Line Conducted Emission

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan.10, 2015	1 Year
2.	Test Receiver	Rohde & Schwarz	ESPI	100396/003	Jan.10, 2015	1 Year
3.	Test Receiver	Rohde & Schwarz	ESPI	101526/003	Jan.10, 2015	1 Year
4.	Test Receiver	Rohde & Schwarz	ESR	101817	Jan.10, 2015	1 Year
5.	L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan.10, 2015	1 Year
6.	L.I.S.N.	Rohde & Schwarz	ESH3-Z5	100305	Jan.10, 2015	1 Year
7.	L.I.S.N.	Rohde & Schwarz		100310	Jan.10, 2015	1 Year
8.	L.I.S.N.	Rohde & Schwarz	ESH3-Z6	100132	Jan.10, 2015	1 Year
9.	L.I.S.N.	Rohde & Schwarz	ESH3-Z6	100979	Jan.10, 2015	1 Year
10.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100305	Jan.10, 2015	1 Year
11.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100312	Jan.10, 2015	1 Year
12.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	Jan.10, 2015	1 Year
13.	50Ω Coaxial Switch	Anritsu Corp	MP59B	620028393 6	Jan.10, 2015	1 Year
14.	50Ω Coaxial Switch	Anritsu Corp	MP59B	620028393 3	Jan.10, 2015	1 Year
15.	50Ω Coaxial Switch	Anritsu Corp	MP59B	620050647 4	Jan.10, 2015	1 Year
16.	VOLTAGE PROBE	Schwarzbeck	TK9416	N/A	Jan.10, 2015	1 Year
17.	RF CURRENT PROBE	Rohde & Schwarz	EZ-17	100048	Jan.10, 2015	1 Year
18.	8-Wire Impedance Stabilisation Network	Schwarzbeck	CAT5 8158	8158-0035	Jan.10, 2015	1 Year
19.	RF Coaxial Cable	SUHNER	N-2m	No.2	Jan.10, 2015	1 Year
20.	RF Coaxial Cable	SUHNER	N-2m	No.3	Jan.10, 2015	1 Year
21.	RF Coaxial Cable	SUHNER	N-2m	No.14	Jan.10, 2015	1 Year



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3.2. Block Diagram of Test Setup



(EUT: Interactive Flat Panel)

3.3. Power Line Conducted Emission Measurement Limits (Class B)

Frequency	Limits dB(μV)					
MHz	Quasi-peak Level	Average Level				
0.15—0.50	66—56*	56—46*				
0.50—5.00	56	46				
5.00—30.0	60	50				

Notes: 1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.



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3.4. 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.

3.4.1. Interactive Flat Panel (EUT)

Model Number: ST-700 Serial Number: N/A

Manufacturer: Recordex USA, Inc.

3.5. Operating Condition of EUT

- 3.5.1. Setup the EUT and simulator as shown as Section 3.2.
- 3.5.2. Turn on the power of all equipment.
- 3.5.3.Let the EUT work in test mode (AV, USB, HDMI, VGA, WAN) and measure it.

3.6. 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 500hm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of DC 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.



3.7. Power Line Conducted Emission Measurement Results

PASS.

Test Mode: USB							
MEASUREMENT	RESULT	: "XH26	001 fi	n "			
2015-3-26 8:4							
Frequency	-		Limit dBµV		Detector	Line	PE
0.178000 0.440000 0.702000 0.956000	45.80 45.30	11.4 11.5	57	15.2 11.3 10.7 14.1	QP QP	L1 L1 L1 L1	GND GND GND GND
MEASUREMENT	RESULT	: "XH26	001_fi	.n2"			
2015-3-26 8:4							
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.174000 0.440000 0.612000	39.30 37.40		47 46		AV	L1 L1 L1	GND GND GND
MEASUREMENT I	RESULT	"XH26	002_fi	in"			
2015-3-26 8:48							
Frequency MHz	Level dBµV		Limit dBµV			Line	PE
0.614000 0.700000	44.90	11.5	56	11.1 11.9	QP	N	GND
0.800000			56	13.1	QP QP	N N	GND GND
MEASUREMENT I	RESULT	"XH26	002_fi	in2"			
2015-3-26 8:48							
Frequency MHz	Level dBµV				Detector	Line	PE
0.440000	38.20				AV	N	GND
0.614000 0.700000	36.80 35.40		46 46	9.2 10.6	AV AV	N N	GND GND



st Mode: AV							
MEASUREMENT	RESULT	: "XH26	003_fi	.n"			
2015-3-26 8:5	1						
Frequency MHz	Level dBµV		Limit dBµV	_	Detector	Line	PE
0.700000 0.800000 0.970000		11.5 11.6 11.6	56 56 56	12.8 13.0 13.0	QP QP QP	N N N	GND GND GND
MEASUREMENT	RESULT	: "XH26	003_fi	.n2"			
2015-3-26 8:5							
Frequency MHz	Level dBµV		Limit dBµV		Detector	Line	PE
0.442000 0.530000 0.618000	36.50	11.5	47 46 46	9.5	AV AV AV	N N N	GND GND GND
MEASUREMENT	RESULT	: "XH26	004_fi	.n"			
2015-3-26 8:5	3						
Frequency MHz		Transd dB			Detector	Line	PE
0.808000	43.60	11.6	56	12.4	QP	L1	GND
0.978000 1.932000	43.40 41.70	11.6 11.7	56 56	12.6 14.3	QP QP	L1 L1	GND GND
MEASUREMENT	DECIII	. " VU 26	:004 f i	n2"			
		. AH20	004_11	.112			
2015-3-26 8:5 Frequency	-	Traned	T.imi+	Margir	Detector	Line	PE
		dB			Deceptor	птие	EE
0.440000				8.2		L1	GND
0.528000 0.616000	38.00 37.60	11.5 11.5	46 46	8.0 8.4		L1	GND GND



est Mode: HDMI							
MEASUREMENT	RESULT	: "XH26	005_fi	n"			
2015-3-26 8:5							
Frequency MHz	Level dBµV		Limit dBµV		Detector	Line	PE
0.792000 0.964000	45.20	11.6	56 56	10.8	~	L1	GND
0.964000 4.853000			56 56	11.9 12.0	~	L1	GND GND
					~		
MEASUREMENT	RESULT	: "XH26	005_fi	.n2"			
2015-3-26 8:5					.		
Frequency MHz	Level dBµV		Limit dBµV		Detector	Line	PE
0.442000	38.90	11.4	47	8.1	AV	L1	GND
4.821500	40.60			5.4		L1	GND
5.433500 MEASUREMENT					AV	L1	GND
2015-3-26 8:5			_				
Frequency		Transd	Limit	Margin	Detector	Line	PE
	dΒμV		dΒμV				
0.800000				12.8	QP	N	GND
4.880000	44.80	11.8	56	11.2	~	N	GND
6.626000	46.50	11.8	60	13.5	QP	N	GND
MEASUREMENT	RESULT	: "XH26	006_fi	.n2"			
2015-3-26 8:5							
Frequency MHz	Level dBµV		Limit dBµV		Detector	Line	PE
0.440000	38.20	11.4	47			N	GND
4.988000	38.50	11.8				N	GND
5.897000	40.20	11.8	50	9.8	AV	N	GND



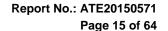
est Mode: VGA							
MEASUREMENT	RESULT	: "XH26	009_fi	n"			
2015-3-26 9:1							
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.610000 4.997000 5.640500	50.50	11.8	56 56 60	5.5	QP QP QP	N N N	GND GND GND
MEASUREMENT	RESULT	: "XH26	009_fi	.n2"			
2015-3-26 9:1	0						
Frequency MHz	Level dBµV		Limit dBµV		Detector	Line	PE
0.612000 4.997000 10.595000	43.10 47.20	11.8 11.9	46 50	2.9 2.8	AV AV AV	N N N	GND
MEASUREMENT	RESULT	: "XH26	010_fi	.n"			
2015-3-26 9:1							
Frequency MHz		Transd dB		_	Detector	Line	PE
0.610000	45.10	11.5	56	10.9	QP	L1	GND
4.979000 10.599500	50.50 51.90	11.8 11.9	56 60	5.5 8.1	QP QP	L1 L1 L1	GND GND
MEASUREMENT		: "XH26	010_fi	.n2"			
2015-3-26 9:1 Frequency		Trangd	Limi+	Margin	Detector	Line	PE
		dB			Detector	ттие	FE
0.612000	37.50	11.5		8.5		L1	
4.979000 10.595000	42.40 47.50	11.8 11.9	46 50		AV AV	L1 L1	GND GND



MEASUREMENT	RESULT	: "XH26	011_fi	n"			
2015-3-26 9:1	.5		_				
Frequency MHz					Detector	Line	PE
0.802000 4.992500 5.267000	43.30 48.50 49.40	11.8		7.5	QP	L1 L1 L1	GND
<i>MEASUREMENT</i>	RESULT	: "XH26	011_fi	.n2"			
2015-3-26 9:1							
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.530000	37.50	11.5	46	8.5	AV	L1	GND
4.992500 5.343500				5.1 8.1		L1 L1	GND GND
MEASUREMENT							
2015-3-26 9:1	8						
Frequency MHz	Level dBµV			_	Detector	Line	PE
0.706000			56	12.1	QP	N	GND
4.853000 5.168000	48.60 49.20	11.8 11.8	56 60	12.1 7.4 10.8	QP OP	N N	GND GND
					2-		
MEASUREMENT	RESULT	: "XH26	012_fi	.n2"			
2015-3-26 9:1	-	_ ,					
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.706000	35.40		46			N	GND
4.943000 5.163500	39.40 41.00	11.8 11.8	46 50	6.6 9.0		N N	GND GND
5.240000	41.90	11.8	50	8.1		N	GND

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

The spectral diagrams are shown in the following pages.





CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex

Operating Condition: USB

Test Site: 2#Shielding Room

Operator: star

Test Specification: L 120V/60Hz

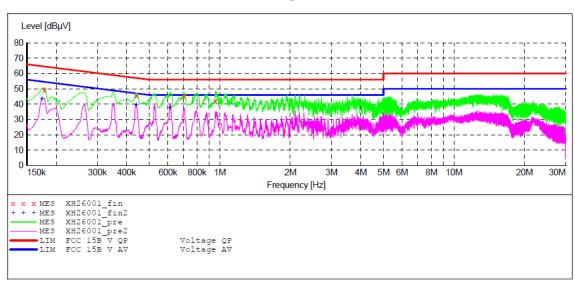
Comment: Report No.:ATE20150571 Start of Test: 2015-3-26 / 8:43:08

SCAN TABLE: "V 150K-30MHz fin"
Short Description: _SUB_S _____SUB_STD_VTERM2 1.70

Detector Meas. IF
Time Bandw. Start Stop Step Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5)

Average



MEASUREMENT RESULT: "XH26001_fin"

20	15-3-26 8:45	5						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.178000	49.40	10.5	65	15.2	QP	L1	GND
	0.440000	45.80	11.4	57	11.3	QP	L1	GND
	0.702000	45.30	11.5	56	10.7	QP	L1	GND
	0.956000	41.90	11.6	56	14.1	QP	L1	GND

MEASUREMENT RESULT: "XH26001 fin2"

20	015-3-26 8:45	5						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dBµV	dB	dΒμV	dB			
	0.174000	43.50	10.5	55	11.3	AV	L1	GND
	0.440000	39.30	11.4	47	7.8	AV	L1	GND
	0.612000	37.40	11.5	46	8.6	AV	L1	GND



CONDUCTED EMISSION STANDARD FCC PART 15B

Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex

Operating Condition: USB

Test Site: 2#Shielding Room

Operator: star

Test Specification: N 120V/60Hz

Report No.:ATE20150571 Comment: Start of Test: 2015-3-26 / 8:46:35

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

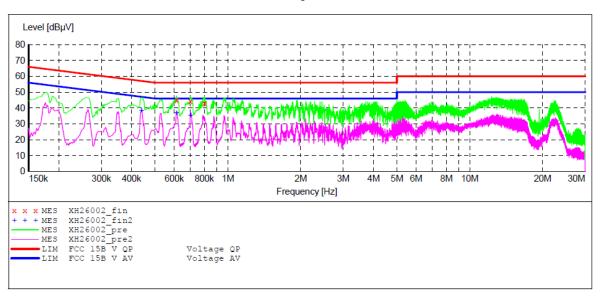
__SUB_STD_VTERM2 1.70 Short Description:

Stop Detector Meas. IF Start Step Transducer

Bandw. Time

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5)

Average

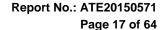


MEASUREMENT RESULT: "XH26002 fin"

2	015-3-26 8:48	3						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.614000	44.90	11.5	56	11.1	QP	N	GND
	0.700000	44.10	11.5	56	11.9	QP	N	GND
	0.800000	42.90	11.6	56	13.1	OP	N	GND

MEASUREMENT RESULT: "XH26002 fin2"

2015-3-26 8:48 Frequency MHz			Limit dBµV	Margin dB	Detector	Line	PE
0.440000	38.20	11.4	47	8.9	AV	N	GND
0.614000	36.80	11.5	46	9.2	AV	N	GND
0.700000	35.40	11.5	46	10.6	ΑV	N	GND





CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex

Operating Condition: AV

Test Site: 2#Shielding Room

Operator: star

Test Specification: N 120V/60Hz

Comment: Report No.:ATE20150571 Start of Test: 2015-3-26 / 8:49:45

SCAN TABLE: "V 150K-30MHz fin" Short Description: _SUB_

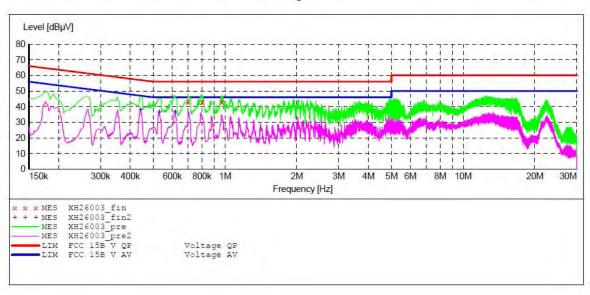
SUB_STD_VTERM2 1.70

UB_STD_vibia.

Detector Meas. IF
Time Bandw. Start Stop Step Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)

Average



MEASUREMENT RESULT: "XH26003 fin"

2	015-3-26 8:5	1						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dBµV	dB	dBµV	dB			
	0.700000	43.20	11.5	56	12.8	QP	N	GND
	0.800000	43.00	11.6	56	13.0	QP	N	GND
	0.970000	43.00	11.6	56	13.0	QP	N	GND

MEASUREMENT RESULT: "XH26003 fin2"

2015-3-26 8:5	1						
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.442000	38.00	11.4	47	9.0	AV	N	GND
0.530000	36.50	11.5	46	9.5	AV	N	GND
0.618000	36.50	11.5	46	9.5	AV	N	GND



CONDUCTED EMISSION STANDARD FCC PART 15B

Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex

Operating Condition: AV

Test Site: 2#Shielding Room

Operator: star

Test Specification: L 120V/60Hz

Report No.:ATE20150571 2015-3-26 / 8:52:03 Comment: Start of Test:

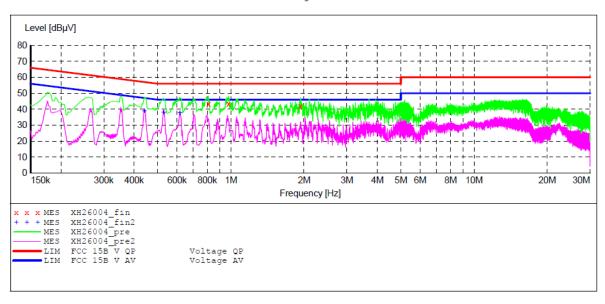
SCAN TABLE: "V 150K-30MHz fin"

_SUB_STD_VTERM2 1.70 Short Description:

Stop Detector Meas. IF
Time Bandw. Step Start Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)

Average



MEASUREMENT RESULT: "XH26004 fin"

2015-3-26 8:53 Frequency MHz	Level	Transd dB	_	Detector	Line	PE
0.808000 0.978000				~	L1 L1	GND GND

1.932000 41.70 11.7 56 14.3 OP L1

MEASUREMENT RESULT: "XH26004 fin2"

2015-3-26 8:53 Frequency MHz			Limit dBµV	Margin dB	Detector	Line	PE
0.440000 0.528000 0.616000	38.90 38.00 37.60	11.4 11.5 11.5	47 46 46		AV	L1 L1 L1	GND GND GND

GND



CONDUCTED EMISSION STANDARD FCC PART 15B

Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex Operating Condition: HDMI

Test Site: 2#Shielding Room

Operator: star

Test Specification: L 120V/60Hz

Comment: Report No.:ATE20150571 2015-3-26 / 8:55:21 Start of Test:

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

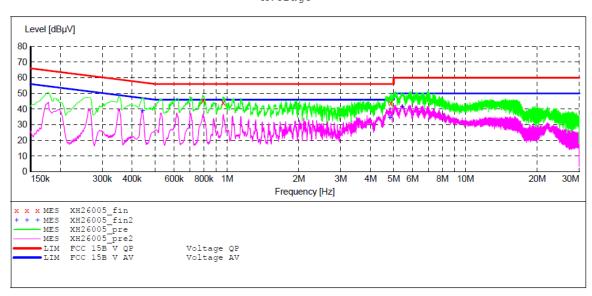
Short Description: _SUB_STD_VTERM2 1.70

Step Start Stop

Detector Meas. IF Transducer Time Bandw.

QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5) Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kH 4.5 kHz

Average



MEASUREMENT RESULT: "XH26005 fin"

2015-3-26	8:57						
Frequen	4				Detector	Line	PΕ
N	MHz dE	BµV di	B dBµV	dB			
0.7920	000 45.	20 11.	6 56	10.8	OP	L1	GND
0.9640				11.9	~	L1	GND
4.8530	000 44.			12.0	QР	L1	GND

MEASUREMENT RESULT: "XH26005 fin2"

2015-3-26 8:57 Frequency MHz		Limit dBµV	Margin dB	Detector	Line	PE
0.442000 4.821500	 11.4 11.8	47 46			L1	GND GND
5.433500					T.1	GND



CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex

Operating Condition: HDMI

Test Site: 2#Shielding Room

Operator: star

Test Specification: N 120V/60Hz

Report No.:ATE20150571 Comment: 2015-3-26 / 8:57:33 Start of Test:

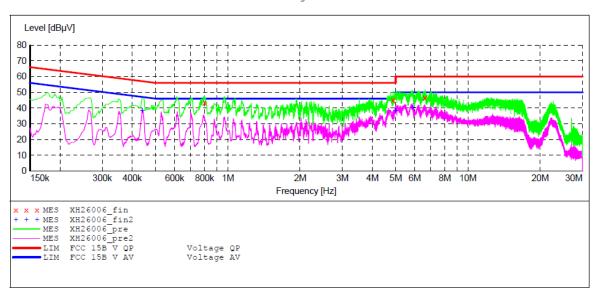
SCAN TABLE: "V 150K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70

Stop Start Step

Detector Meas. IF Transducer
Time Bandw.
QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5) Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz 4.5 kHz

Average



MEASUREMENT RESULT: "XH26006 fin"

2015	5-3-26 8:59							
E	requency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.800000	43.20	11.6	56	12.8	QP	N	GND
	4.880000	44.80	11.8	56	11.2	QP	N	GND
	6.626000	46.50	11.8	60	13.5	QP	N	GND

MEASUREMENT RESULT: "XH26006 fin2"

2015-3-26	8:59							
Freque	ncy	Level	Transd	Limit	Margin	Detector	Line	PΕ
]	MHz	dΒμV	dB	dΒμV	dB			
0.440	000	38.20	11.4	47	8.9	AV	N	GND
4.988	000	38.50	11.8	46	7.5	AV	N	GND
5.897	000	40.20	11.8	50	9.8	AV	N	GND



LISN (ESH3-Z5)



ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15B

Interactive Flat Panel M/N:ST-700 EUT:

Manufacturer: Recordex

Operating Condition: VGA

Test Site: 2#Shielding Room

Operator: star

Test Specification: N 120V/60Hz

Report No.:ATE20150571 Comment: Start of Test: 2015-3-26 / 9:06:26

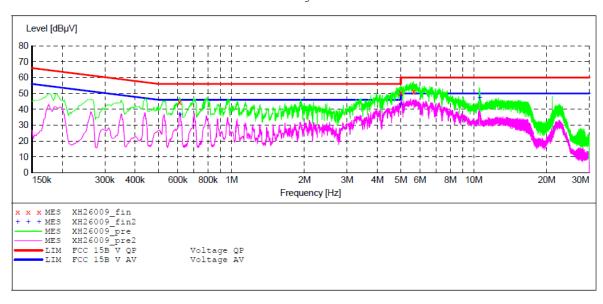
SCAN TABLE: "V 150K-30MHz fin"

_SUB_STD_VTERM2 1.70 Short Description:

UB_STD_vierce____
Detector Meas. IF
Time Bandw. Start Stop Step Transducer

Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz

Average



MEASUREMENT RESULT: "XH26009 fin"

2	015-3-26 9:10	0						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
	MHz	dΒμV	dB	dΒμV	dB			
	0.610000	44.40	11.5	56	11.6	QP	N	GND
	4.997000	50.50	11.8	56	5.5	QP	N	GND
	5.640500	51.20	11.8	60	8.8	QP	N	GND

MEASUREMENT RESULT: "XH26009 fin2"

2015-3-26 9:10 Frequency MHz	Level	Transd dB		Margin dB	Detector	Line	PE
0.612000 4.997000		11.5 11.8		9.4 2.9		N N	GND GND
10.595000	47.20	11.9	50	2.8	ΑV	N	GND



CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex Operating Condition: VGA

Test Site: 2#Shielding Room Operator: star

Test Specification: L 120V/60Hz

Report No.:ATE20150571 Comment: Start of Test: 2015-3-26 / 9:10:51

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

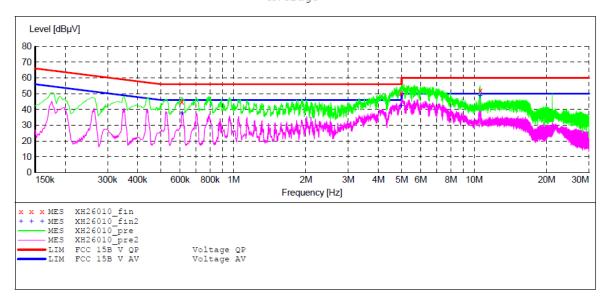
_SUB_STD_VTERM2 1.70 Short Description:

Start Stop Step Detector Meas. IF Transducer

Bandw. Width Time

Frequency Frequency 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz LISN (ESH3-Z5)

Average



MEASUREMENT RESULT: "XH26010 fin"

20	15-3-26 9:13	3						
	Frequency MHz	Level dBuV		Limit dBuV	Margin dB	Detector	Line	PE
	0.610000	45.10	11.5		10.9	QP	L1	GND
	4.979000	50.50	11.8	56	5.5	QP	L1	GND
	10.599500	51.90	11.9	60	8.1	OP	L1	GND

MEASUREMENT RESULT: "XH26010 fin2"

2015-3-26 9:1	.3						
Frequency	Level	Transd	Limit	Margin	Detector	Line	PΕ
MHz	dBµV	dB	dΒμV	dB			
0.612000	37.50	11.5	46	8.5	AV	L1	GND
4.979000	42.40	11.8	46	3.6	AV	L1	GND
10.595000	47.50	11.9	50	2.5	AV	L1	GND



CONDUCTED EMISSION STANDARD FCC PART 15B

EUT: Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex Operating Condition: WAN IN

Test Site: 2#Shielding Room

Operator: star

Test Specification: L 120V/60Hz

Comment: Report No.:ATE20150571 Start of Test: 2015-3-26 / 9:14:01

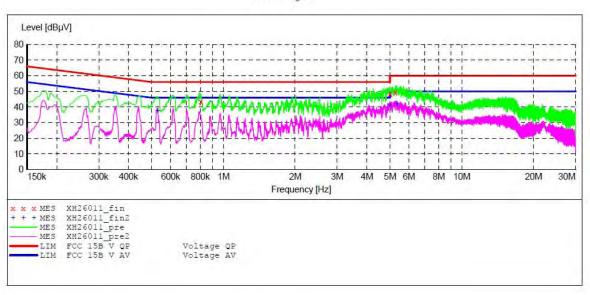
SCAN TABLE: "V 150K-30MHz fin"

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: "XH26011 fin"

2015-3-26 9:1	15						
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.802000	43.30	11.6	56	12.7	QP	L1	GND
4.992500	48.50	11.8	56	7.5	QP	L1	GND
5.267000	49.40	11.8	60	10.6	QP	L1	GND

MEASUREMENT RESULT: "XH26011 fin2"

2015-3-26 9:1	5						
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.530000	37.50	11.5	46	8.5	AV	L1	GND
4.992500	40.90	11.8	46	5.1	AV	L1	GND
5.343500	41.90	11.8	50	8.1	AV	L1	GND



CONDUCTED EMISSION STANDARD FCC PART 15B

Interactive Flat Panel M/N:ST-700

Manufacturer: Recordex Operating Condition: WAN IN

2#Shielding Room Test Site:

Operator: star

Test Specification: N 120V/60Hz

Report No.:ATE20150571 Comment: Comment: Report No.:ATE20150 Start of Test: 2015-3-26 / 9:16:20

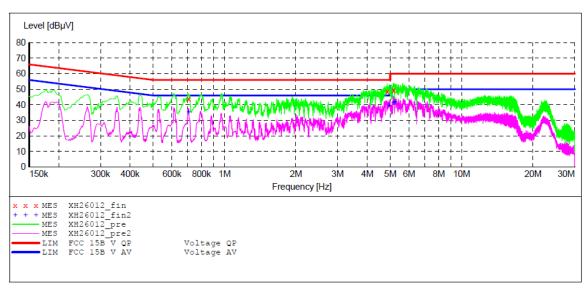
SCAN TABLE: "V 150K-30MHz fin"

_SUB_STD_VTERM2 1.70 Short Description:

Stop Start Step

Detector Meas. IF Transducer
Time Bandw.
QuasiPeak 1.0 s 9 kHz LISN(ESH3-Z5) Frequency Frequency Width 150.0 kHz 30.0 MHz 4.5 kHz

Average

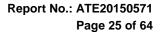


MEASUREMENT RESULT: "XH26012 fin"

2	015-3-26 9:18	3						
	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dΒμV	dB	dΒμV	dB			
	0.706000	43.90	11.5	56	12.1	QP	N	GND
	4.853000	48.60	11.8	56	7.4	QP	N	GND
	5.168000	49.20	11.8	60	10.8	QP	N	GND

MEASUREMENT RESULT: "XH26012 fin2"

20	015-3-26 9:18 Frequency MHz		Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
	0.706000	35.40	11.5	46	10.6	AV	N	GND
	4.943000	39.40	11.8	46	6.6	AV	N	GND
	5.163500	41.00	11.8	50	9.0	AV	N	GND
	5.240000	41.90	11.8	50	8.1	AV	N	GND





4. RADIATED EMISSION MEASUREMENT

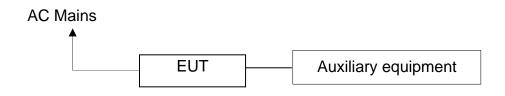
4.1. For Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan 10, 2015	1 Year
2.	<u> </u>	Rohde&Schwarz	FSV40	101495	Jan.10, 2015	1 Year
3.	Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan.10, 2015	1 Year
4.	Test Receiver	Rohde& Schwarz	ESPI	100396/003	Jan.10, 2015	1 Year
5.	Test Receiver	Rohde& Schwarz		101526/003	Jan.10, 2015	1 Year
6.	Test Receiver	Rohde& Schwarz		101817	Jan.10, 2015	1 Year
7.	Bilog Antenna	Schwarzbeck	VULB9163	9163-194	Jan.15, 2015	1 Year
8.	Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan.15, 2015	1 Year
9.	LogPer.Antenna	Schwarzbeck	VUSLP	9111B-074	Jan.15, 2015	1 Year
9.	Logi er.Antenna	Schwarzbeck	9111B	91116-074	Jan. 15, 2015	i i cai
10.	Biconical Broad	Schwarzbeck	VHBB	9124-617	Jan.15, 2015	1 Year
	Band Antenna		9124+BBA			
			9106			
11.	Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan.15, 2015	1 Year
12.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan.15, 2015	1 Year
13.	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Jan.15, 2015	1 Year
14.	Vertical Active	Schwarzbeck	VAMP 9243	9243-370	Jan.15, 2015	1 Year
	Monopole Antenna					
15.	RF Switching	Compliance	RSU-M2	38322	Jan.10, 2015	1 Year
	Unit+PreAMP	Direction				
16.	Pre-Amplifier	Agilent	8447D	294A10619	Jan.10, 2015	1 Year
17.	Pre-Amplifier	Rohde&Schwarz	CBLU11835	3791	Jan.10, 2015	1 Year
			40-01			
18.	50 Coaxial Switch	Anritsu Corp	MP59B	6200237248	Jan.10, 2015	1 Year
19.	50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	Jan.10, 2015	1 Year
20.	RF Coaxial Cable	Schwarzbeck	N-5m	No.1	Jan.10, 2015	1 Year
21.	RF Coaxial Cable	Schwarzbeck	N-1m	No.6	Jan.10, 2015	1 Year
22.	RF Coaxial Cable	Schwarzbeck	N-1m	No.7	Jan.10, 2015	1 Year
23.	RF Coaxial Cable	SUHNER	N-3m	No.8	Jan.10, 2015	1 Year
24.	RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	Jan.10, 2015	1 Year
25.	RF Coaxial Cable	SUHNER	N-6m	No.10	Jan.10, 2015	1 Year
26.	RF Coaxial Cable	RESENBERGER	N-12m	No.11	Jan.10, 2015	1 Year
27.	RF Coaxial Cable	RESENBERGER	N-0.5m	No.12	Jan.10, 2015	1 Year
28.	RF Coaxial Cable	SUHNER	N-2m	No.13	Jan.10, 2015	1 Year
29.	RF Coaxial Cable	SUHNER	N-0.5m	No.15	Jan.10, 2015	1 Year
30.	RF Coaxial Cable	SUHNER	N-2m	No.16	Jan.10, 2015	1 Year
31.	RF Coaxial Cable	RESENBERGER		No.17	Jan.10, 2015	1 Year



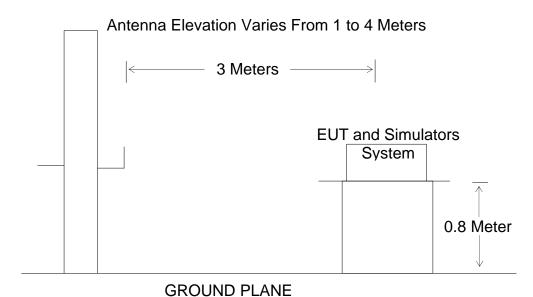
4.2.Block Diagram of Test Setup

4.2.1. Block diagram of connection between the EUT and simulators



(EUT: Interactive Flat Panel)

4.2.2. Anechoic Chamber Test Setup Diagram



(EUT: Interactive Flat Panel)

4.3. Radiated Emission Limit (Class B)

Frequency	Distance	Field Stren	igths Limit
MHz	Meters	μV/m	dB(μV/m)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
960-1000	3	500	54.0

Remark: (1) Emission level dB (μ V) = 20 log Emission level μ 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.



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4.4.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.

4.4.1. Interactive Flat Panel (EUT)

Model Number: ST-700 Serial Number: N/A

Manufacturer: Recordex USA, Inc.

4.5. Operating Condition of EUT

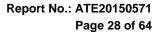
- 4.5.1. Setup the EUT and simulator as shown as Section 4.2.
- 4.5.2. Turn on the power of all equipment.
- 4.5.3.Let the EUT work in test mode (AV, USB, HDMI, VGA, WAN) and measure it.

4.6.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 from 30MHz to 1000MHz.

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





4.7. Radiated Emission Noise Measurement Result

PASS.

Model Nun Test mode		ST-700						
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	72.9762	58.20	-21.51	36.69	40.00	-3.31	QP
	2	371.2678	55.66	-15.85	39.81	46.00	-6.19	QP
	3	452.0013	50.24	-14.64	35.60	46.00	-10.40	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	1	72.4651	58.67	-21.49	37.18	40.00	-2.82	QP
	2	117.6813	62.88	-22.45	40.43	43.50	-3.07	QP
	3	371.2678	57.69	-15.85	41.84	46.00	-4.16	QP
Above 1G								
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1169.790	56.47	-3.76	52.71	74.00	-21.29	peak
Horizontal	2	1169.790	46.30	-3.76	42.54	54.00	-11.46	AVG
	3	1380.797	56.45	-3.08	53.37	74.00	-20.63	peak
	4	1380.797	45.70	-3.08	42.62	54.00	-11.38	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1383.288	58.54	-3.07	55.47	74.00	-18.53	peak
Vertical	2	1383.288	49.30	-3.07	46.23	54.00	-7.77	AVG
	3	2354.252	56.51	0.76	57.27	74.00	-16.73	peak
	4	2354.252	45.22	0.76	45.98	54.00	-8.02	AVG





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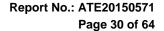
Model	Number:	ST-700
IVIOGCI	INGILIDOI.	$O_1 \cap O_2$

Test mode: AV

	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	72.4652	58.55	-21.49	37.06	40.00	-2.94	QP
	2	294.4259	55.94	-17.96	37.98	46.00	-8.02	QP
	3	584.1611	50.67	-12.03	38.64	46.00	-7.36	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	No.		(dBuV/m)					Detector
Vertical		(MHz)	(dBuV/m) 58.67	(dB)	(dBuV/m)	(dBuV/m)	(dB)	

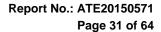
Above 1G

	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
l	1	1167.683	54.61	-3.76	50.85	74.00	-23.15	peak
Horizontal	2	1167.683	43.67	-3.76	39.91	54.00	-14.09	AVG
	3	2320.546	51.03	0.66	51.69	74.00	-22.31	peak
	4	2320.546	41.20	0.66	41.86	54.00	-12.14	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	No.						_	Detector peak
Vertical		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector
Vertical	1	(MHz) 1395.812	(dBuV/m) 60.23	(dB) -3.04	(dBuV/m) 57.19	(dBuV/m) 74.00	(dB) -16.81	peak AVG





Model Nun Test mode											
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
Horizontal	1	70.7047	57.83	-21.39	36.44	40.00	-3.56	QP			
	2	183.2211	57.66	-21.55	36.11	43.50	-7.39	QP			
	3	369.9658	55.24	-15.86	39.38	46.00	-6.62	QP			
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
Vertical	1	75.5858	58.90	-21.60	37.30	40.00	-2.70	QP			
	2	371.2679	57.64	-15.85	41.79	46.00	-4.21	QP			
	3	452.0013	54.37	-14.64	39.73	46.00	-6.27	QP			
Above 1G											
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector			
[1	1098.267	55.32	-3.98	51.34	74.00	-22.66	peak			
Horizontal	2	1098.267	44.79	-3.98	40.81	54.00	-13.19	AVG			
	3	1380.797	54.11	-3.08	51.03	74.00	-22.97	peak			



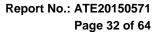


Model Number: ST-700 Test mode: VGA Margin Detector Freq. Factor Result Limit Reading No. (MHz) (dBuV/m) (dB) (dBuV/m) (dBuV/m) (dB) 73.2330 56.97 -21.53 35.44 40.00 -4.56 QΡ Horizontal 2 166.6383 62.53 -22.15 40.38 43.50 -3.12 QP 3 49.99 -12.03 37.96 46.00 -8.04 QP 584.1611

Vertical	No.	Freq. (MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector
	1	73.2330	58.64	-21.53	37.11	40.00	-2.89	QP
	2	166.6384	63.15	-22.15	41.00	43.50	-2.50	QP
	3	741.8155	49.76	-8.79	40.97	46.00	-5.03	QP
	<u> </u>							

Above 1G

	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1329.505	55.90	-3.24	52.66	74.00	-21.34	peak
Horizontal	2	1329.505	44.67	-3.24	41.43	54.00	-12.57	AVG
	3	2354.252	51.97	0.76	52.73	74.00	-21.27	peak
	4	2354.252	40.36	0.76	41.12	54.00	-12.88	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	No.		(dBuV/m)					Detector peak
Vertical		(MHz)	(dBuV/m) 59.86	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Detector
Vertical	1	(MHz) 1261.791	(dBuV/m) 59.86 48.56	(dB) -3.47	(dBuV/m) 56.39	(dBuV/m) 74.00	(dB) -17.61	peak





Model Number: ST-700 Test mode: WAN IN

	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Horizontal	1	74.2696	57.67	-21.58	36.09	40.00	-3.91	QP
	2	295.4623	57.25	-17.94	39.31	46.00	-6.69	QP
	3	878.0931	46.46	-6.47	39.99	46.00	-6.01	QP
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
Vertical	No.		_					Detector QP
Vertical		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	

Above 1G

	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	1	1331.904	56.18	-3.24	52.94	74.00	-21.06	peak
Horizontal	2	1331.904	45.91	-3.24	42.67	54.00	-11.33	AVG
	3	2345.780	49.69	0.74	50.43	74.00	-23.57	peak
	4	2345.780	38.65	0.74	39.39	54.00	-14.61	AVG
	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
	No.	•	_					Detector peak
Vertical		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	peak
Vertical	1	(MHz) 1390.789	(dBuV/m) 57.68	(dB) -3.05	(dBuV/m) 54.63	(dBuV/m) 74.00	(dB) -19.37	peak



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Job No.: star2015 #462

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

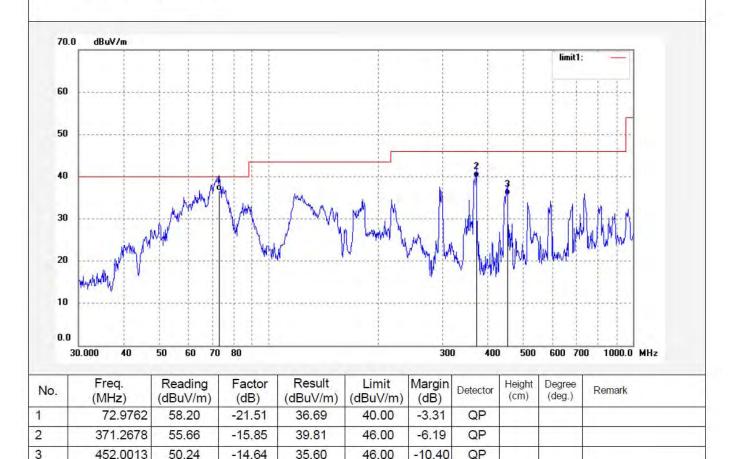
Mode: USB
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/32/53 Engineer Signature: Distance: 3m







F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Page 34 of 64
Site: 1# Chamber

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

Report No.: ATE20150571

Job No.: star2015 #463

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

Mode: USB

Model: ST-700

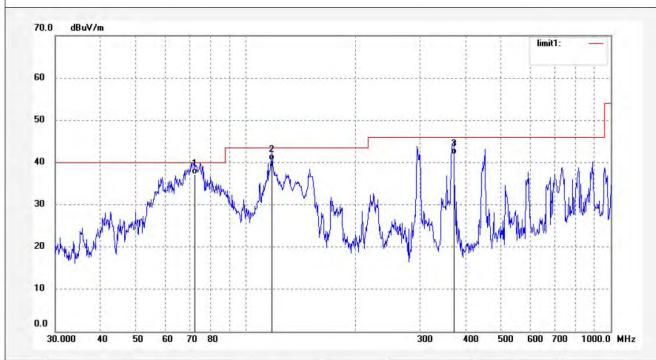
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/33/53 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	72.4651	58.67	-21.49	37.18	40.00	-2.82	QP			
2	117.6813	62.88	-22.45	40.43	43.50	-3.07	QP			
3	371.2678	57.69	-15.85	41.84	46.00	-4.16	QP			



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Report No.: ATE20150571 Page 35 of 64

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

Job No.: star2015 #464

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

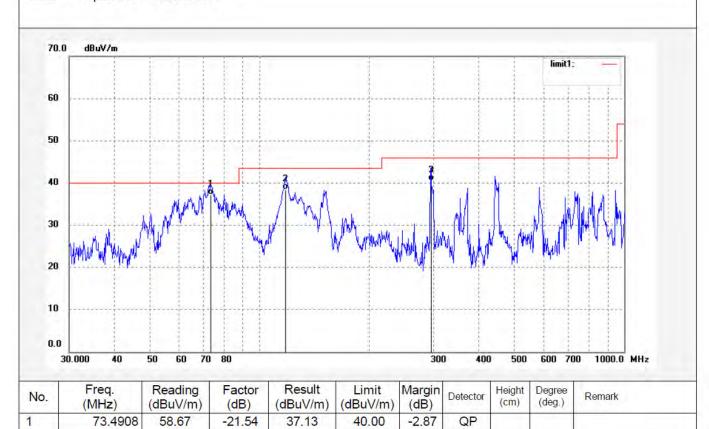
Mode: AV
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/36/46 Engineer Signature: Distance: 3m



43.50

46.00

-22.45

-17.94

38.33

40.59

2

3

117.6814

295.4623

60.78

58.53

QP

QP

-5.17

-5.41



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

Page 36 of 64 Site: 1# Chamber Tel:+86-0755-26503290

Fax:+86-0755-26503396

Report No.: ATE20150571

Job No.: star2015 #465

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

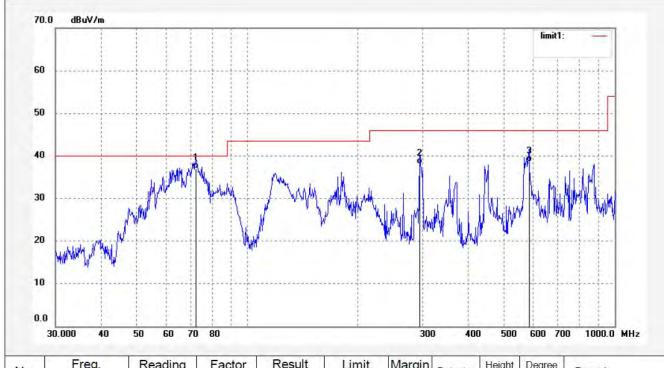
AV Mode: Model: ST-700 Manufacturer: Recordex Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/38/04 Engineer Signature:

Distance: 3m

Note: Report No.:ATE20150571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	72.4652	58.55	-21.49	37.06	40.00	-2.94	QP			
2	294.4259	55.94	-17.96	37.98	46.00	-8.02	QP			
3	584.1611	50.67	-12.03	38.64	46.00	-7.36	QP			



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China Site: 1# Chamber

Report No.: ATE20150571

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

Job No.: star2015 #466

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

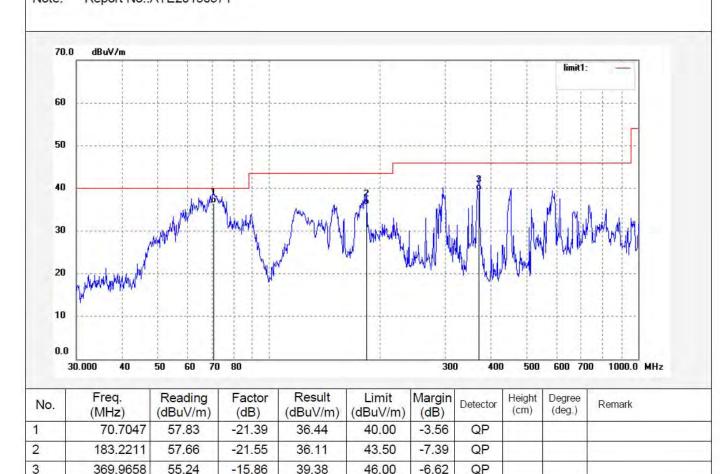
Mode: **HDMI** ST-700 Model: Manufacturer: Recordex

Report No.:ATE20150571 Note:

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/40/24 Engineer Signature: Distance: 3m





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Report No.: ATE20150571

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

Job No.: star2015 #467

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

Mode: HDMI Model: ST-700

Manufacturer: Recordex

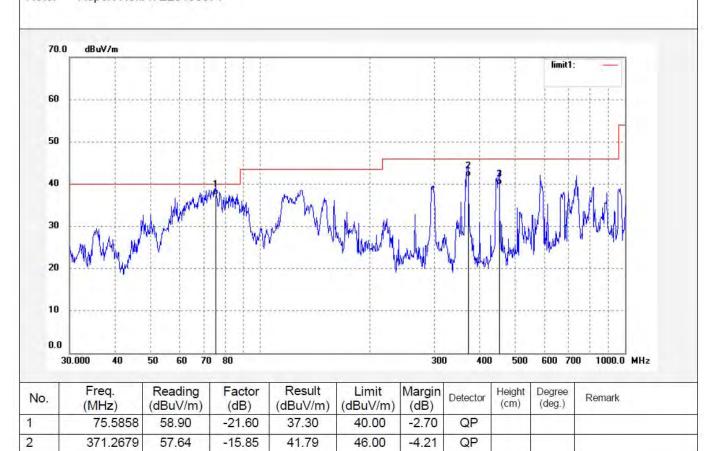
Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/41/05 Engineer Signature:

Distance: 3m



46.00

-6.27

QP

39.73

-14.64

3

452.0013

54.37





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

Job No.: star2015 #468

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

VGA Mode: Model: ST-700 Manufacturer: Recordex

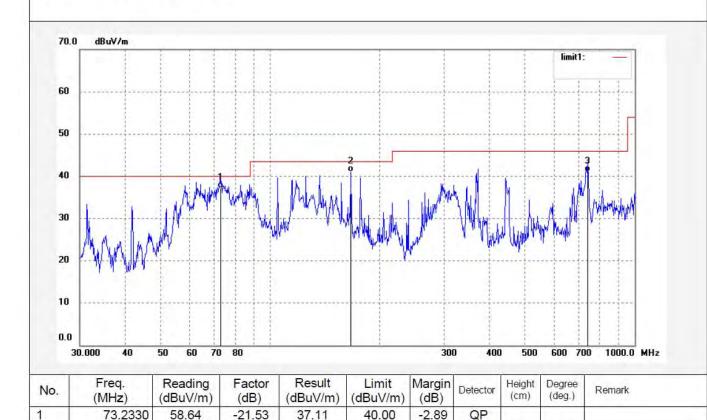
Note: Report No.:ATE20150571

Vertical Polarization:

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/43/50 Engineer Signature:

Distance: 3m



1

2

3

73.2330

166.6384

741.8155

58.64

63.15

49.76

-21.53

-22.15

-8.79

37.11

41.00

40.97

40.00

43.50

46.00

-2.89

-2.50

-5.03

QP

QP





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Page 40 of 64
Site: 1# Chamber

Report No.: ATE20150571

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

Job No.: star2015 #469

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 %
EUT: Interactive Flat Panel

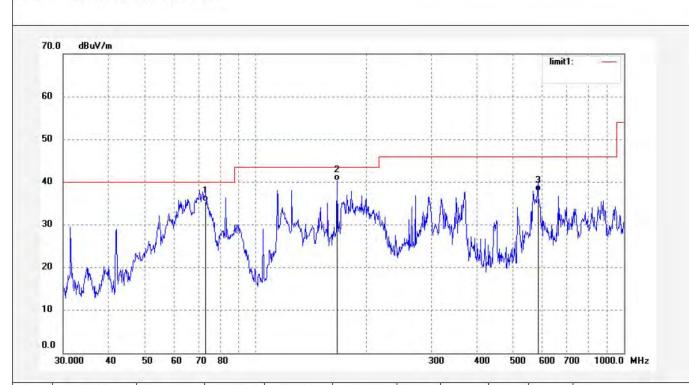
Mode: VGA
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/44/53 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	73.2330	56.97	-21.53	35.44	40.00	-4.56	QP				
2	166.6383	62.53	-22.15	40.38	43.50	-3.12	QP				
3	584.1611	49.99	-12.03	37.96	46.00	-8.04	QP				



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

Job No.: star2015 #470

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

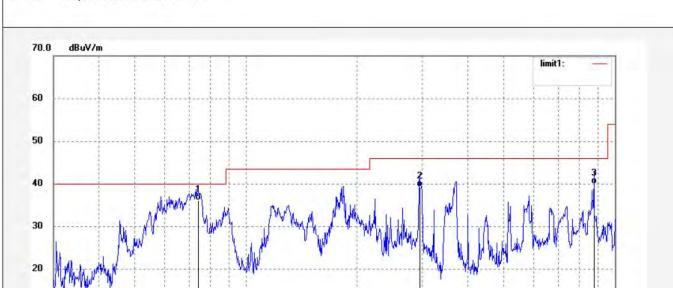
Mode: WAN IN
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/47/50 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	74.2696	57.67	-21.58	36.09	40.00	-3.91	QP				
2	295.4623	57.25	-17.94	39.31	46.00	-6.69	QP				
3	878.0931	46.46	-6.47	39.99	46.00	-6.01	QP				

300

400

500

10

0.0

30.000

40

50

60

70 80

600 700

1000.0 MHz



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

1000.0 MHz



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

Job No.: star2015 #471

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

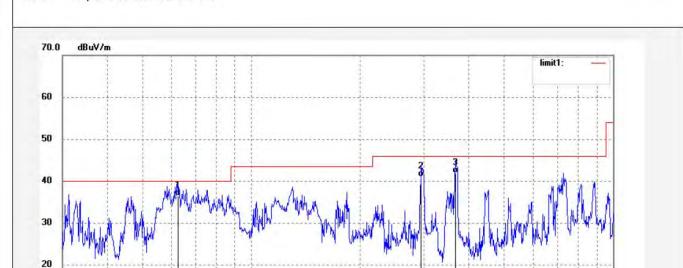
Mode: WAN IN
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/48/39 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	62.5231	57.69	-21.14	36.55	40.00	-3.45	QP				
2	294.4260	59.02	-17.96	41.06	46.00	-4.94	QP				
3	367.3752	57.82	-15.87	41.95	46.00	-4.05	QP				

300

10

30.000





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China Report No.: ATE20150571 Page 43 of 64

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

Job No.: star2015 #472 Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

Mode: **WAN IN** ST-700 Model:

Note:

Manufacturer: Recordex

Power Source: AC 120V/60Hz Date: 15/03/26/

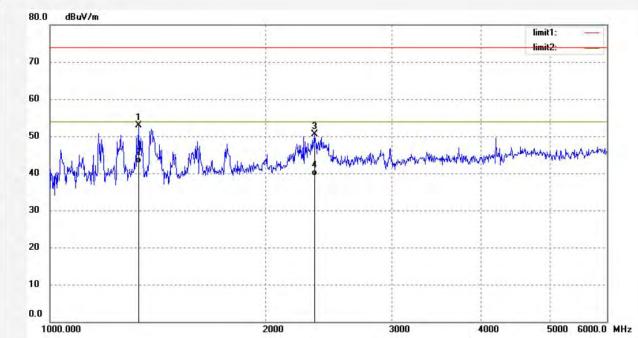
Horizontal

Time: 8/51/30 Engineer Signature: Distance: 3m

Polarization:

80.0 dBuV/m

Report No.:ATE20150571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1331.904	56.18	-3.24	52.94	74.00	-21.06	peak			
2	1331.904	45.91	-3.24	42.67	54.00	-11.33	AVG			
3	2345.780	49.69	0.74	50.43	74.00	-23.57	peak			
4	2345.780	38.65	0.74	39.39	54.00	-14.61	AVG			





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Report No.: ATE20150571 Page 44 of 64

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

Job No.: star2015 #473 Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

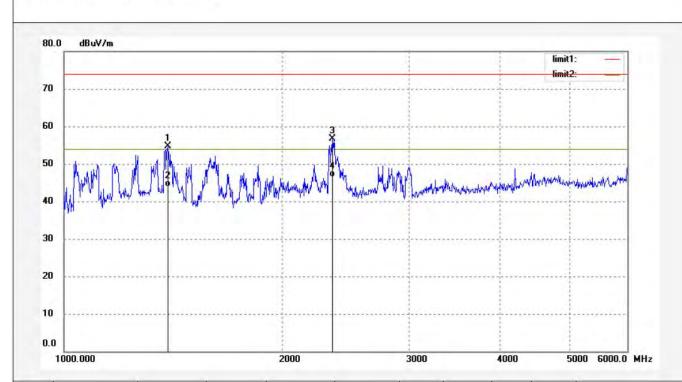
Mode: WAN IN
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/53/29 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	1390.789	57.68	-3.05	54.63	74.00	-19.37	peak				
2	1390.789	46.90	-3.05	43.85	54.00	-10.15	AVG				
3	2350.012	56.05	0.75	56.80	74.00	-17.20	peak				
4	2350.012	45.67	0.75	46.42	54.00	-7.58	AVG				





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

Page 45 of 64 Site: 1# Chamber

Report No.: ATE20150571

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

Job No.: star2015 #474 Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

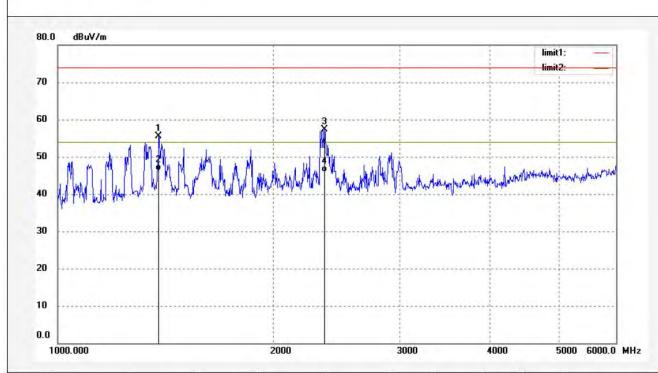
Mode: USB ST-700 Manufacturer: Recordex

Model:

Note: Report No.:ATE20150571 Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 8/56/24 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	1383.288	58.54	-3.07	55.47	74.00	-18.53	peak			
2	1383.288	49.30	-3.07	46.23	54.00	-7.77	AVG			
3	2354.252	56.51	0.76	57.27	74.00	-16.73	peak			
4	2354.252	45.22	0.76	45.98	54.00	-8.02	AVG			





Standard: FCC PK

Job No.: star2015 #475

Test item: Radiation Test

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Polarization: Horizontal

Power Source: AC 120V/60Hz

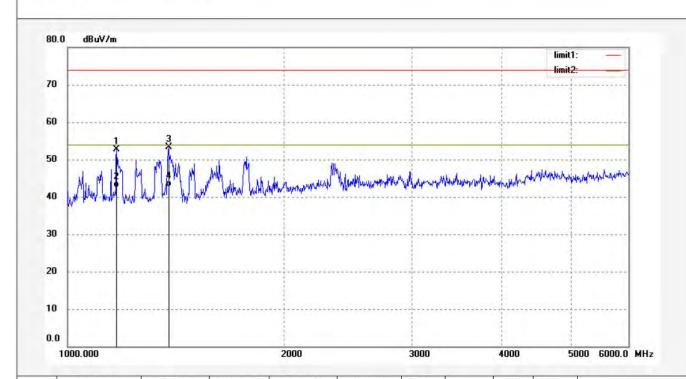
Date: 15/03/26/ Time: 8/57/57 Engineer Signature: Distance: 3m

EUT: Interactive Flat Panel Mode: USB
Model: ST-700

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

Manufacturer: Recordex

Note: Report No.:ATE20150571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1169.790	56.47	-3.76	52.71	74.00	-21.29	peak			
2	1169.790	46.30	-3.76	42.54	54.00	-11.46	AVG			
3	1380.797	56.45	-3.08	53.37	74.00	-20.63	peak			
4	1380.797	45.70	-3.08	42.62	54.00	-11.38	AVG) 1	-	





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Report No.: ATE20150571 Page 47 of 64

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

Job No.: star2015 #476 Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

Mode: HDMI Model: ST-700

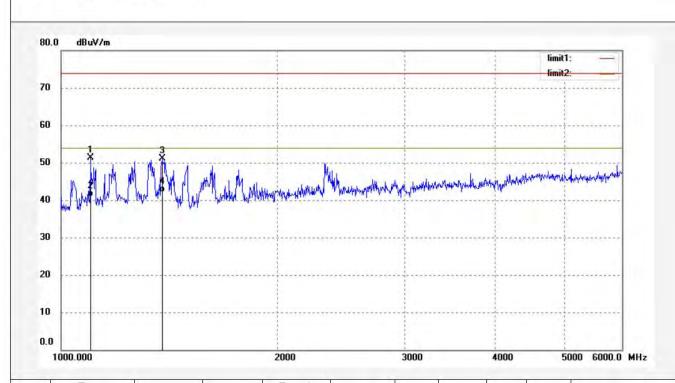
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/
Time: 9/00/10
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	1098.267	55.32	-3.98	51.34	74.00	-22.66	peak				
2	1098.267	44.79	-3.98	40.81	54.00	-13.19	AVG				
3	1380.797	54.11	-3.08	51.03	74.00	-22.97	peak				
4	1380.797	45.25	-3.08	42.17	54.00	-11.83	AVG				



Job No.: star2015 #477

Test item: Radiation Test



Standard: FCC PK

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d, Fax:+86-0755-26503396

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 9/01/26 Engineer Signature: Distance: 3m

Mode: HDMI Model: ST-700

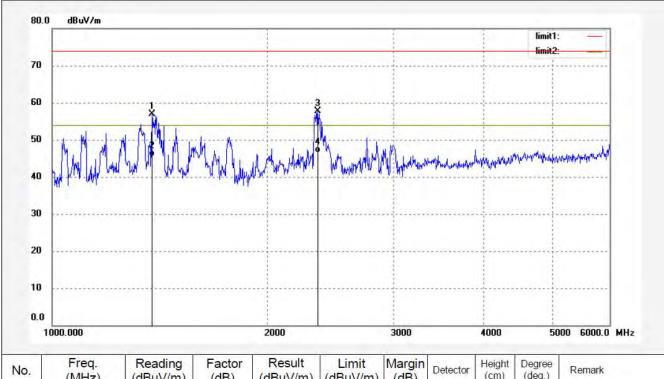
EUT:

Manufacturer: Recordex

Note: Report No.:ATE20150571

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

Interactive Flat Panel



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1378.310	59.91	-3.09	56.82	74.00	-17.18	peak			
2	1378.310	48.67	-3.09	45.58	54.00	-8.42	AVG			
3	2350.012	56.95	0.75	57.70	74.00	-16.30	peak			
4	2350.012	45.78	0.75	46.53	54.00	-7.47	AVG			





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

Job No.: star2015 #478 Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

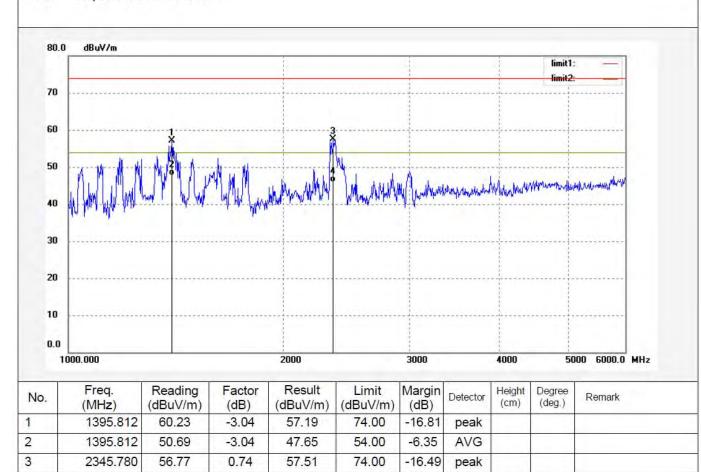
Mode: AV Model: ST-700 Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/
Time: 9/02/54
Engineer Signature:
Distance: 3m



0.74

45.88

54.00

-8.12

AVG

4

2345.780

45.14





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.: ATE20150571

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Polarization: Horizontal

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 9/04/18 Engineer Signature:

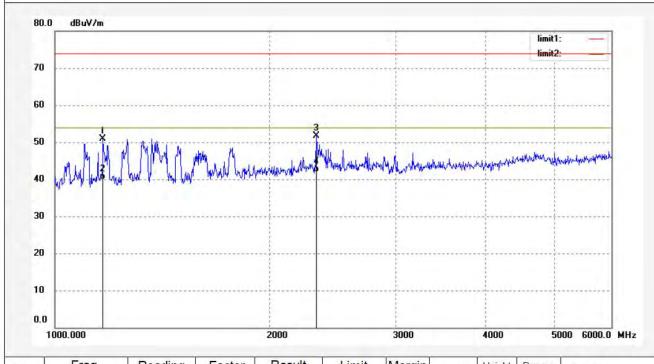
Distance: 3m

Job No.: star2015 #479
Standard: FCC PK
Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

Mode: AV
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	1167.683	54.61	-3.76	50.85	74.00	-23.15	peak			
2	1167.683	43.67	-3.76	39.91	54.00	-14.09	AVG			
3	2320.546	51.03	0.66	51.69	74.00	-22.31	peak			
4	2320.546	41.20	0.66	41.86	54.00	-12.14	AVG			



Job No.: star2015 #480

Test item: Radiation Test

Standard: FCC PK

EUT:



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Report No.: ATE20150571

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Polarization: Horizontal

Power Source: AC 120V/60Hz

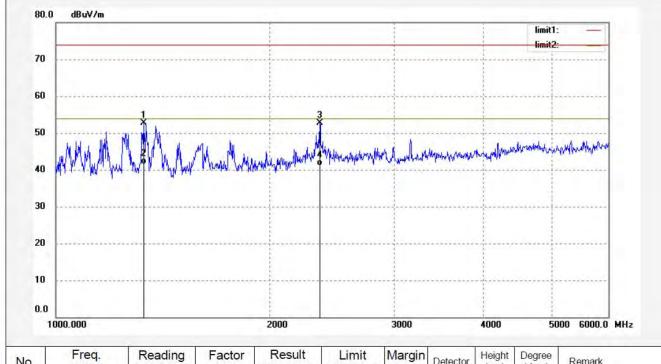
Date: 15/03/26/ Time: 9/07/58 Engineer Signature: Distance: 3m

Mode: VGA
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

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

Interactive Flat Panel



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark	
1	1329.505	55.90	-3.24	52.66	74.00	-21.34	peak				
2	1329.505	44.67	-3.24	41.43	54.00	-12.57	AVG				
3	2354.252	51.97	0.76	52.73	74.00	-21.27	peak				
4	2354.252	40.36	0.76	41.12	54.00	-12.88	AVG				





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Report No.: ATE20150571 Page 52 of 64

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

Job No.: star2015 #481 Standard: FCC PK

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 55 % EUT: Interactive Flat Panel

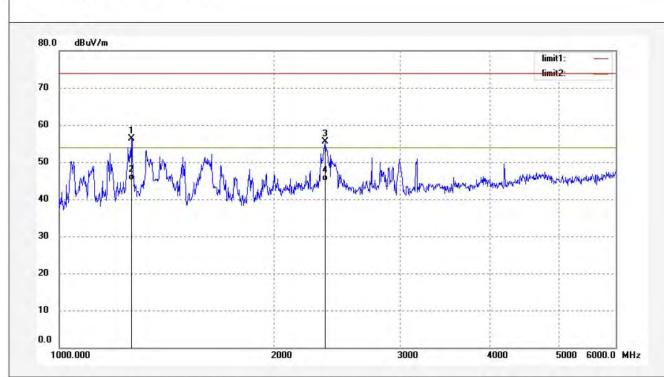
Mode: VGA
Model: ST-700
Manufacturer: Recordex

Note: Report No.:ATE20150571

Polarization: Vertical

Power Source: AC 120V/60Hz

Date: 15/03/26/ Time: 9/09/43 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	1261.791	59.86	-3.47	56.39	74.00	-17.61	peak			
2	1261.791	48.56	-3.47	45.09	54.00	-8.91	AVG			
3	2354.252	54.66	0.76	55.42	74.00	-18.58	peak			
4	2354.252	44.21	0.76	44.97	54.00	-9.03	AVG			



5. PHOTOGRAPHS

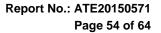
5.1.Photos of Power Line Conducted Measurement



5.2. Photos of Radiated Measurement









Above 1G





5.3.Photo of EUT

























