XG41

Acoustic Test Report

Design Phase Version: B phase

Date: 2011/03/11

Shuttle- Thermal Department

Approved by:	*Checked by:*	*Prepared by:*
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Shuttle®	Acoustic test report	Model name	XG41
		B phase	Design issue
浩鑫股份有限公司		Release Date:	2011/03/11

1. Samples Configuration:

Configuration:	Brand/Frequency/Capacity/Description
P/N	B phase sample
Main Board Version	XG41VB0
BIOS/EC Version	A.00
CPU	Intel® Core2 Duo E8500 3.14GHz (TDP65W)
Memory	1 Pcs of Transcend 1GB DDR3(PC1333)
VGA	N/A
VRAM	N/A
HDD	WD 2.5” SATA 320G x2
W-LAN	N/A
ADAPTER	(90 W)

2. Test Equipment:

2-1 Semi-Anechoic Chamber: Acoustic testing for system sound quality shall be testing in a qualified Semi-anechoic chamber meeting the requirements of Is0-3744.

2-2 Microphone: Follow ISO-3744

2-3 Fan power is provided by motherboard power supply.

3. Test Condition

3-1 Environment Temperature: 23+-2degC
3-2 System condition (Horizontal)&(vertical)

4. Test Standard Reference

4-1 Sound pressure standard: follow ISO7779-chapter 8.6.3-C
4-2 It is 50cm away from test machine for four edges.
4-3 Show as below picture.

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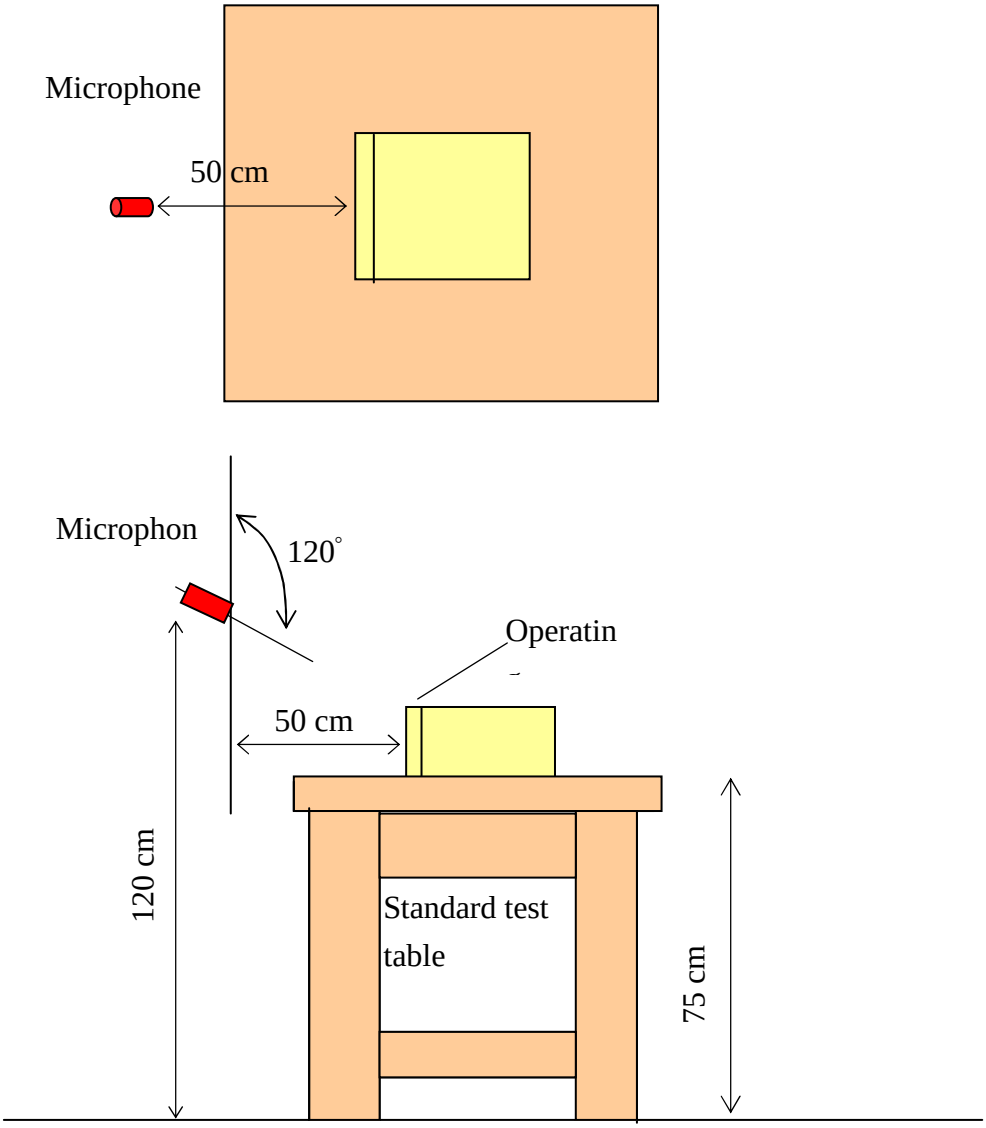

4-4.For A&B phase test, we determine the fan RPM to meet Shuttle acoustic SPEC in front side sound pressure (Idle&3DMark200x<=28 dBA).

5. Acoustic test report

a. Sound pressure (System 50cm)

Horizontal orientation

Semi-Anechoic Chamber		AVC				
		Front (dBA)	Right (dBA)	Rear (dBA)	Left (dBA)	Fan RPM
Bi-sonic	Background	16.1	15.9	15.6	15.5	N/A
	3DMark06	27.6	28..8	27.9	29.4	1739
	Idle	22.3	26.4	22.2	25.7	1252
	UL	18.0	24.5	17.7	26.2	866
	Low	31.9	32.8	32.0	33.2	2170
	Mid	43.5	44.4	43.2	43.9	3214
	Full	54.6	54.0	52.0	53.3	5000

b. Sound pressure (System 50cm)

Vertical orientation

Semi-Anechoic Chamber		AVC				
		Front (dBA)	Right (dBA)	Rear (dBA)	Left (dBA)	Fan RPM
Bi-sonic	Background	16.1	15.9	15.6	15.5	N/A
	3DMark06	26.2	29.3	27.4	28.6	1654
	Idle	23.1	25.6	23.9	24.7	1021
	UL	18.8	25.6	18.2	25.3	920
	Low	31.5	33.7	31.1	32.7	2200
	Mid	42.8	45.1	41.2	43.6	3122
	Full	52.3	54.4	50.5	52.8	4890

6. Conclusion:

1. For system horizontal orientation sound pressure:

System Idle @ 22.3<=28 dBA(spec).

3DMark200x @ 27.6<=28 dBA(spec).

2. For system vertical orientation sound pressure:

System Idle @23.1<=28 dBA(spec).

3DMark200x @ 26.2<=28 dBA(spec).

3.XG41 base on test result with horizontal and vertical type, all of front side Mic data meet Shuttle acoustic spec.