0Rev.	Modified Chapters	Modification Description	Issued Dept.	Issued by	Revised Date
1.00		First release	GRMA	Jory_yuan	Jun.6.2013
1.01		Add new PCBA(YV04H0-A12)	GRMA	Jory_yuan	July.10.2013
1.02		Add new P/N(YV04H1-A02)	GRMA	Jory_yuan	July.10.2013
1.03		Add new P/N(YV04H1-A13)	GRMA	Jory_yuan	July.25.2013
1.04		Add new PCBA(YV04H0-A23)	GRMA	Jory_yuan	Sep.22.2013
1.05		Add new PCBA(YV04H0-A33)	GRMA	Jory_yuan	Sep.22.2013
1.06		Add new PCBA(YV04H1-A23)	GRMA	Jory_yuan	Oct.9.2013
1.07		Add new PCBA(YV04H1-A33)	GRMA	Jory_yuan	Oct.9.2013
1.08		Add new P/N(YV05A0-A01)	GRMA	Jory_yuan	Nov.27.2013
1.09		Add new P/N(YV04H2-A01)	GRMA	Jory_yuan	Dec.4.2013
1.10		Add new PCBA(YV04H3-A01)	GRMA	Jory_yuan	Dec.18.2013
1.11		Add new P/N(YV05G0-B04)	GRMA	Jory_yuan	Feb.20.2014
1.12		Add new P/N(YV05G1-B04)	GRMA	Jory_yuan	Feb.20.2014
1.13		Add new PCBA(YV04H2-A11)	GRMA	Jory_yuan	Mar.12.2014
1.14		Add new PCBA(YV04H3-A11)	GRMA	Jory_yuan	Mar.26.2014
1.15		Add new PCBA(YV05A1-A06)	GRMA	Jory_yuan	Apr.2.2014
1.16		Add new P/N(YV04H4-A02)	GRMA	Jory_yuan	Apr.23.2014
1.17		Add new PCBA(YV04H0-A45)	GRMA	Jory_yuan	May.7.2014
1.18		Add new P/N(YV04H5-A01)	GRMA	Jory_yuan	May.14.2014
1.19		Add new PCBA(YV05A0-A18)	GRMA	Jory_yuan	Jun.11.2014
1.20		Add new PCBA(YV05A1-A17)	GRMA	Jory_yuan	Jun.18.2014
1.21		Add new PCBA(YV05G0-B16)	GRMA	Jory_yuan	Jul.24.2014
1.22		Add new PCBA(YV05G1-B16)	GRMA	Jory_yuan	Jul.24.2014
1.23		Add new PCBA(YV04H1-A44)	GRMA	Jory_yuan	Aug.13.2014

Authorize by		**Review by**		**Originator By**	Jory

1.Objectives

       Create test procedure.

2.Scope

    Model: GTX780

   PN:YV04H0(A01&A12&A23&A33&A45)YV04H1(A02&A13&A23&A33&A44)
YV05A0(A01&A18)YV04H2(A01&A11)YV04H3(A01&A11)YV04H4(A02)YV05G0(B
04&B16) YV05G1(B04&B16)YV05A1(A06&A17)YV04H5(A01)

3.Test Item

       3.1 Diagnostic test in Tiny Linux

       3.2 3DMark11(contain HDMI test)

       3.3 Temperature test

4.Relevant Document

       None.

5.Definition : 1. If the model name contains P, please test HDCP function.

      Ex: EAH***/HTDP/512M/A

     2. If you test HDMI already, it's unnecessary to test HDCP. The HDMI
     contains HDCP function.

6. Operation Procedures:

6.1 Attention

6.1.1 To avoid damaging devices or M/B, please turn off A/C power then unplug VGA card.

6.1.2 While unplugging the card, do it in upright direction to avoid damaging slot & golden finger.

6.1.3 If any problem happens, please inform test supervisor. Base on ATX power specification, +5V standby voltage is existed while AC power is connecting. For safety reason, please turn off main power during break time or idling test.

6.1.4 Some test items should be tested under Windows environment. (Please install windows 7 test environment by yourself).

6.2 Fixture connect

6.2.1 Install Intel P7 CPU & CPU Fan.

6.2.2 Install DDR3 Memory to DIMM1~4..

6.2.3 Plug USB Mouse and PS/2 Keyboard into MB.
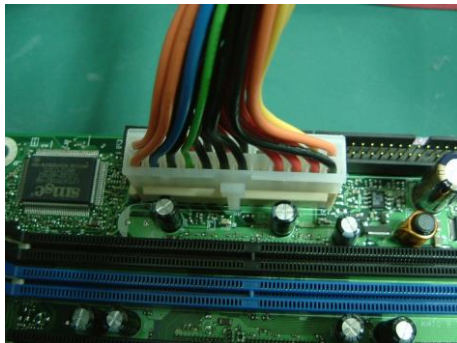
6.2.4 Plug VGA Card GTX780 into PCIEX16.

6.2.5 Connect power con of VGA card & Power supply via bundled power cable.

6.2.6 Connect SATA HDD with SATA CON.

SATA1

6.2.7 Plug 4PIN 12V (1200W) power cable into CON12V.

6.2.8 Plug ATX Power (1200W) on Power Connector.
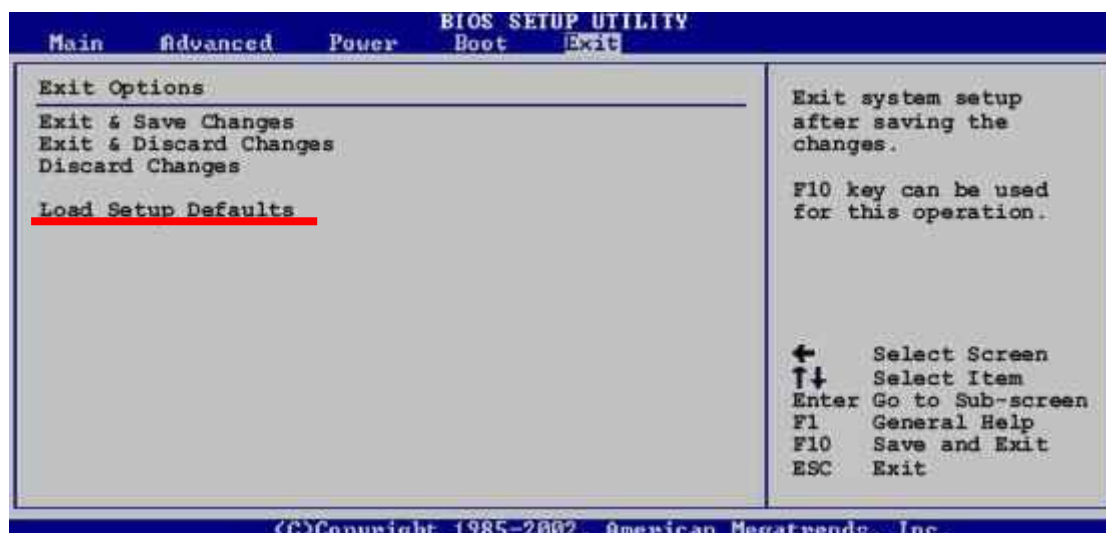
6.3 Diagnostic test in Tiny Linux.

6.3.1 Please connect LCD monitor & card's first DVI CON via a DVI cable.

Dual link DVI cable

6.3.2 Press Power Switch then turn on power button.

6.3.3 Press "Del" to enter CMOS setup menu while boot screen is displaying.

EXIT -> Load Setup Defaults.

6.3.4 System will reboot, select Linux to run test program.

Path:GTX780\yv04h0a0.sh

Path:GTX7801\yv04h0a1.sh

Path:GTX7802\yv04h1a1.sh

Path:GTX7803\yv04h1a0.sh

Path:GTX7804\yv04h0a2.sh or yv04h0a3.sh or yv04h2a0.sh or yv04h2a1.sh or yv04h0a4.sh

Path:GTX7805\yv04h1a2.sh or yv04h1a3.sh or yv04h3a0.sh or yv04h3a1.sh or yv04h1a4.sh

Path:GTX7806\yv05a0a0.sh or yv05g0b0.sh or yv05g1b0.sh or yv05a1a0.sh or yv05a0a1.sh or yv05a1a1.sh or yv05g0b1.sh or yv05g1b1.sh

Path:GTX7807\yv04h4a0.sh or yv04h5a0.sh

Run the test program refer to the prompt.

6.3.5 Memory test

If you want to test memory, please run ./mats -e xx or ./mats –c xx

Where,-c xx------- only xx% of frame buffer is detected.

Path:GTX780\
Path:GTX7801\
Path:GTX7802\
Path:GTX7803\
Path:GTX7804\
Path:GTX7805\
Path:GTX7806\
Path:GTX7807\

6.3.7 BIOS flash

Please use the following command to flash bios and notice the size of character.
Command:nvflash xxx.rom -4 -5 -6 -A -y
Notice:
If you can not flash bios because of the bios locked, please use nvflash.exe /r or nvflash.exe –r to unlock bios. And then, please use nvflash.exe /w or nvflash.exe –w to lock bios after updating latest bios.

6.3.8 Please connect LCD monitor & card's the other DVI CON via a DVI cable.
(Please refer to step 6.3.2&6.3.4)

Dual link DVI cable

6.3.9 After finish DOS testing, please enter Windows environment to test 3DMark.

6.4 3DMark test(contain HDMI test)

6.4.1 Please install 3DMark program by yourself.
6.4.2 Please connect VGA card to LCD via HDMI –MINI HDMI Cable.
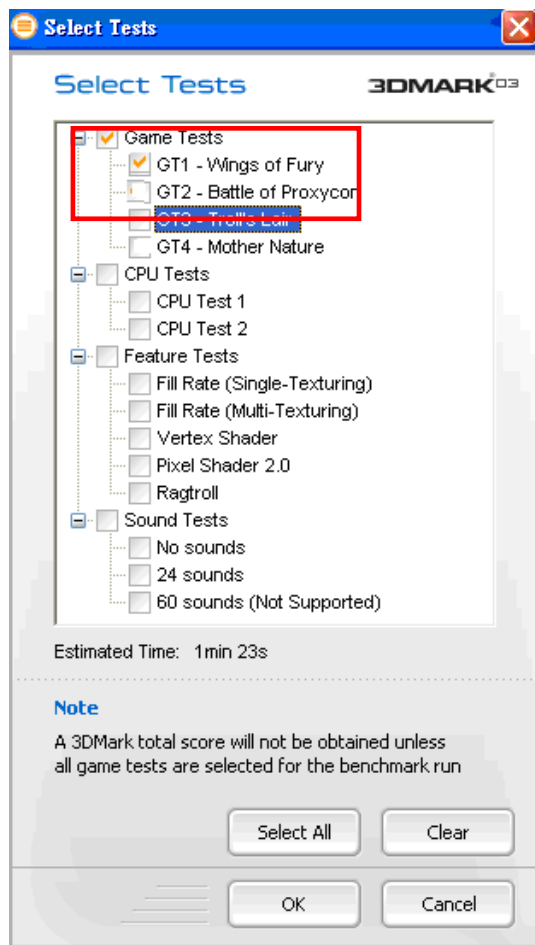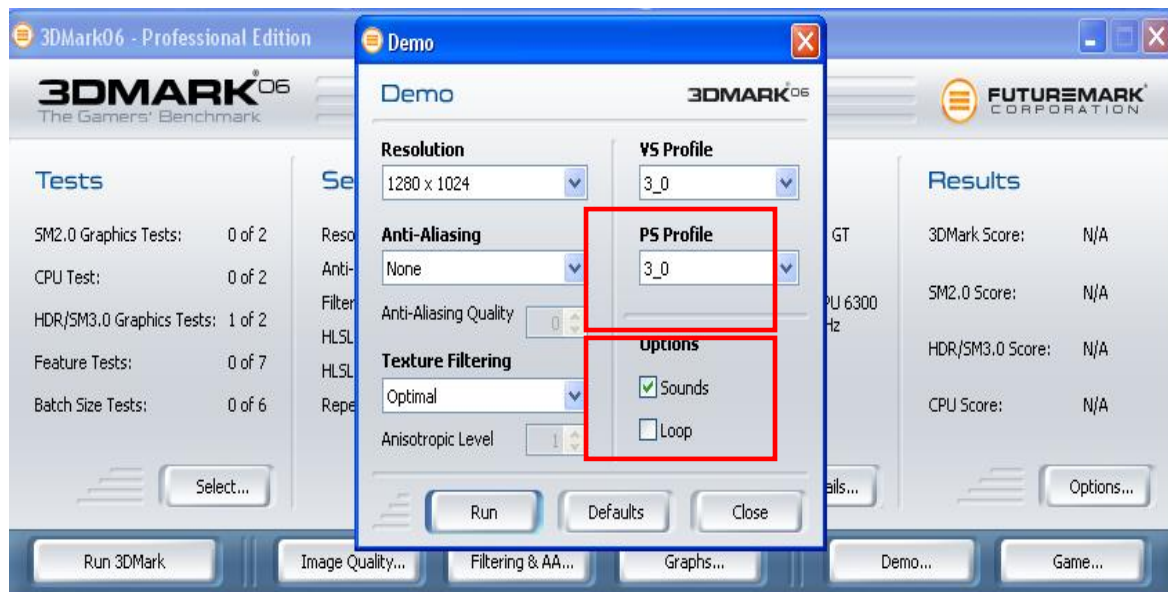

HDMI –MINI HDMI Cable

MINI-HDMI CON

6.4.3 Please install VGA card driver in Windows(You must use individual driver of this card).
6.4.4 Please run 3DMark11 base on this card (please test 1 cycle).
6.4.5 Press "Select" to enter Select test menu. You can choose "HDR1" for default setting.

6.4.6 Press "Demo" to enter Demo menu. You can choose "Sounds" for default setting(for HDMI function).

6.4.7 Please pay attention to check if there is flickering, discolor, crash and so on. If there's no problem, it can be judged OK!

6.4.8 Please listen to voice carefully to check whether it outputs sounds. If not, HDMI test fail(for HDMI function).

6.4.9 Press "Run 3DMark" to enter 3DMark , Please pay attention to check if there is flickering, discolor, crash and so on. f there's no problem, it can be judged OK!
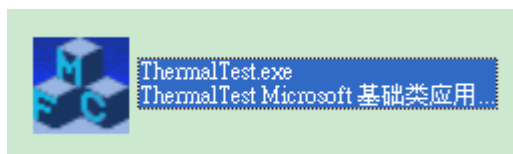
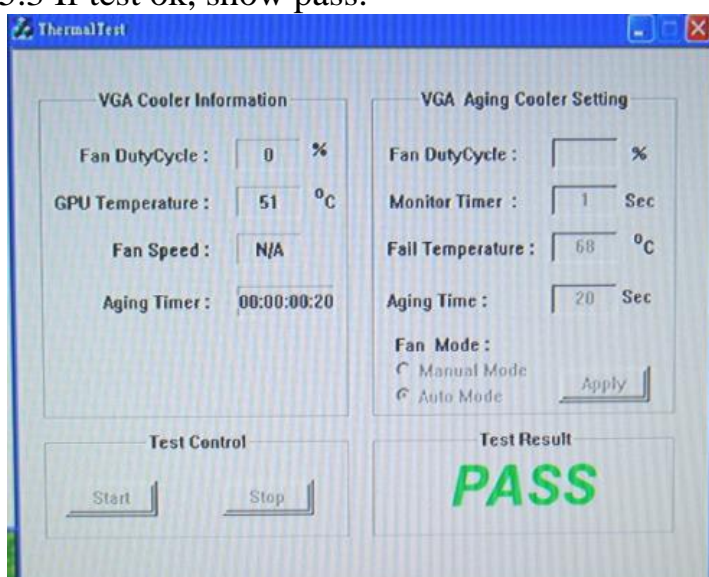6. 4.11 If test OK, please test **Temperature test**

6.5 Temperature test

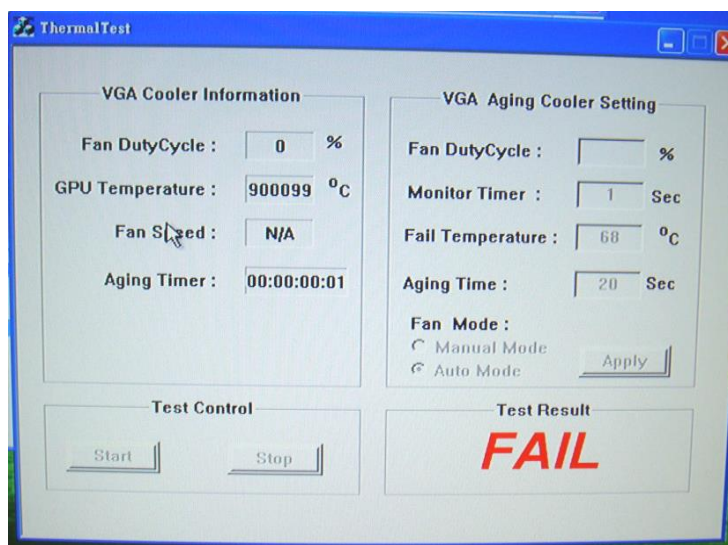6.5.1 Please copy Thermaltool(1.0.05) to Windows by yourself.

6.5.2 Please run ThermalTest.exe.

6.5.3 If test ok, show pass.

6.5.4 If test fail, show fail.

6.5.5 If test OK, NTF test.

7 Appendix

NO#	Equipment Description	ASUS Part#	Supplier	Quantity	Remarks
1	**SAMSUNG 2232MW**			**1**	
2	**USB MOUSE**			**1**	
3	**PS/2 KEYBOARD**			**1**	
4	**ATX POWER SUPPLY(a minimum power of 500W)**			**1**	
5	**Intel CPU Intel(R) Core(TM)2 CPU**		**local**	**1**	
6	**Heat sink + FAN**	**22-240000160**		**1**	
7	**DDR3 1333 2G**	**20-TT2605618**	**local**	**4**	
8	**TEST HDD**			**1**	
9	**SATA HDD Cable**	**14-000107070**	**ASUS**	**1**	
10	**PCIEX16 VGA CARD**			**1**	
11	**Dual link DVI cable (Buying a local DVI cable by yourself)**			**1**	
13	**P7H55-M/USB3 MB**	**80- MIBBKA-***		**1**	