

CHASSIS
Thermal and Mechanical Fit Test Report
Customer Confidential

HELP

Program	Third Party Test House Intel® Pentium®4 Processor on 90 nm process in the 775-land package with PRB = 1 ATX Thermally Advantage Chassis		
Supplier	YEONG YANG		Responsible Engr L.BATA
Chassis Test Methodology Revision (Date)	Rev: 2.04 (1/5/05)		Responsible Tech L.BATA
Chassis Test Report Template Revision (Date)	Rev: 2.10 (1/5/05)		Date Test Completed 03/24/05
Job Title or Number	398602A		

SUMMARY OF OBJECTIVES	MATERIALS UNDER TEST
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Objective Statement:
-- State the objective of the test
asdfafasdfsdfew

Plan:
-- State the plan for conducting the test including what data is to be gathered

Component	Present/Not Present	Model #	Part #	Type
Chassis		YY-56XX	Y5603	ATX
Power Supply Unit			ATX12V	ATX12V
System Fan 1	Yes		KF1225B1MS	120mm
System Fan 2	No			
System Fan 3	No			

SUMMARY OF RESULTS/CONCLUSIONS

Conclusion:
-- State a brief summary of the conclusion reached
Solution meets the Ambient Thermal Performance Criteria@ 36.4Degrees C. Solution also meets the Mechanical Fit Criteria, with a recommendation concerning the Keep Out Zone A. (Fan Interference)

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 Chassis Test Report Template Rev: 2.10 (1/5/05)
 Chassis Test Methodology Rev: 2.04 (1/5/05)

Hardware Under Test / Procedure

Materials Under Test (MUT)

Component	Information	Comments
Chassis		
Part Number	Y5603	
Model number	YY-56XX	
Form Factor	ATX	
Chassis Duct Type	Meets Chassis Air guide version 1.1	
Power Supply Unit		
Manufacturer	DELTA	
Part Number	GPS-350CN-100A	
Form Factor	ATX12V	
Maximum Rated Wattage	350W	
Compliant to Design Guide Version	2.01	
5V current rating (Amps)	21A	
12V current rating (Amps)	10A+15A	
3.3V current rating (Amps)	22A	
24 Pin main power connector	Yes	
Number of Serial ATA connectors		
System Fan 1		
Is System Fan1 Present?	Yes	
Manufacturer	KAIIMEI ELECTRONIC CORP	
Part Number	KF1225B1MS	
Size	120mm	
Location	Back Panel	
Number of Wires	3	
Pin Out or Color Code	RED,BLACK,WHITE	
Voltage	12V	
Current	20A	
System Fan 2		
Is System Fan 2 Present?	No	
Manufacturer		
Part Number		
Size		
Location		
Number of Wires		
Pin Out or Color Code		
Voltage		
Current		
System Fan 3		
Is System Fan 3 Present?	No	
Manufacturer		
Part Number		
Size		
Location		
Number of Wires		
Pin Out or Color Code		
Voltage		
Current		

Support Hardware

Component	Information	Comments
Heatsink		
Part Number	C63987-203	Intel-Provided
Manufacturer	Nidec Corporation	
Technology	Radial Fin	
Clip	Integrated with heatsink	Intel-Provided
Thermal Interface Material		
Manufacturer	Honeywell*	Intel-Provided
Part Number	PCM45F	
Type	Phase change pad	
Retention Mechanism Assembly		
Manufacturer	Nidec Corporation	Intel-Provided
Part Number	N/A	
Technology	Plastic Push Fasteners	
Processor	Intel® Pentium® 4 processor at 3.6Ghz (LGA)	Intel-Provided
Motherboard		
Part Number	Intel Desktop Board	Intel-Provided
Manufacturer	D915GUXL	No
Form Factor	Intel	No
Memory	microATX	Intel-Provided
Memory		
Manufacturer	Samsung	
Part Number	MT16HTF6464AG-53EB2 or MT16HTF6464AY-53EB2	
Type	DDR2 533	
Size	512MB	
Location	DIMM 0 and DIMM 1	
PCI Thermal Load Card #1	Not Populated	Intel-Provided
PCI Thermal Load Card #2	5.5 Watts	Intel-Provided
Discrete Graphics Load Card		
Manufacturer	Intel	Intel-Provided
Model Number	70 Watts PCI Express Load Card	
Hard Disk Drive		
Manufacturer	Seagate	Intel-Provided
Model Number	ST380023AS	

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Calibration

Technician								
L.BATA								
Date Test Completed								
03/24/05								
Equipment Used	Manufacturer	Model	Asset #	Range	Accuracy	Cal Date	Cal Period	Comments
Hydra Logger	Agilent	34970A	6-54083			2005/4/14	1YR.	

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Data

Thermal

Test #	Configuration (MUT)												
	Chassis		PSU		System Fan1			System Fan2			System Fan3		
	P/N	Sample #	P/N	Sample #	P/N	Sample #	Location	P/N	Sample #	Location	P/N	Sample #	Location
1	Y5603	1	GPS-350CN-100A	1	KF1225B1MS	1	Back Panel						
2	Y5603	2	GPS-350CN-100A	2	KF1225B1MS	2	Back Panel						

Test #	Configuration (Supporting Hardware)									
	Thermal Mechanical Solution Assembly				Assembly Hardware					
	Heatsink P/N	RM / Clip P/N	TIM P/N	Motherboard #	Memory # (Bank 0)	Memory # (Bank 1)	PCI-E Card #	PCI Load Card # (Bank 1)	PCI Load Card # (Bank 2)	CPU #
1	C63987-203	N/A	PCM45F	D915GUXL	AG-53EB2 or MT16HTF6	AG-53EB2 or MT16HTF6	atts PCI Express Load	Not Populated	5.5 Watts	569
2	C63987-203	N/A	PCM45F	D915GUXL	AG-53EB2 or MT16HTF6	AG-53EB2 or MT16HTF6	atts PCI Express Load	Not Populated	5.5 Watts	569

Test #	Thermal Data										Comments
	P (at 85% MaxPower) (W)	T _{A1} (°C)	T _{A2} (°C)	T _{A3} (°C)	T _{A4} (°C)	T _A (°C)	T _c (°C)	Thermal Control Circuitry Activate?	Reported Frequency (MHz)	Tinlet (°C)	
	1	110.00	35.71	38.58	35.74	36.21	36.56	70.91	No	3600	
2	110.00	35.87	37.50	35.78	35.80	36.24	70.62	No	3600	35.17	

Mechanical Fit

Test #	Configuration (MUT)									
	Chassis		PSU		System Fan			System Fan		
	P/N	Sample #	P/N	Sample #	P/N	Sample #	Location	P/N	Sample #	Location
1	Y5603	1	GPS-350CN-100A	1	KF1225B1MS	1	Back Panel	KF1225B1MS		

Test Results			
Component	Description	Results	Comments
KOZ A	Keep Out Zone A 0.3" Clearance	Improvement Recommended	Had to remove fan to perform Fit Test.
KOZ B	Keep Out Zone B Clearance	Pass	
All KOZ	Examination of common interferences among all Keep Out Zones	Pass	
I/O Zones	Back Panel Input/Output Keep Out Zone Clearance	Pass	
Mounting Holes	Board holes are supported and other standoffs are removable	Pass	
ATX Chassis			
Mounting Holes microATX	Board holes are supported and other standoffs are removable		
Cable Length	Checks for adequate length cables for subsystem		
	USB	Pass	
	Audio	Pass	
	Power	Pass	

Note: Physically interfere = cannot be installed in any order

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Chassis Test Methodology Rev: 2.04 (1/5/05)

Analysis

Criteria

Thermal Performance Criteria

T_A (°C) = 38C + 1C (error margin) 38C + 1C

Note: If the thermal control circuitry activates during testing for any sustained period this will result in an automatic test failure

Pass / Fail

Average	Target	
T_A (°C)	T_A (°C)	Meets Thermal Performance Criteria?
36.40	39.00	Meets Ambient Thermal Performance Criteria

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Revision Table

Third Party Test House Chassis Test Report Template		
Rev	Date	Comment
1.00	4/18/03	Initial Revision
2.00	9/27/04	Update for 915/925 platform
2.00	12/7/04	Corrected Average Formula
2.10	1/5/05	Added TCC check, part # and Tinlet fields

Third Party Test House Chassis Test Methodology		
Rev	Date	Comment
1.00	4/11/03	Initial Revision
2.00	9/27/04	Update for 915 platform
2.04	1/5/05	Clarifying TCC activation and resulting outcome

TEST DATA

DATE STARTED	CUSTOMER	TECHNICIAN
2005/3/20	Yeong Yang	L.BATA
DATE COMPLETED	SPECIMEN DESCRIPTION	TECHNICIAN
2005/3/20	CHASSIS	L.BATA
TEMPERATURE	TYPE OF TEST	ENGINEER
73 (°F)	VISUAL EXAMINATION	L.BATA
HUMIDITY	SUPPLIER	JOB NUMBER
43 (% RH)	YEONG YANG	398602A

TEST SPECIFICATION
Chassis Test Methodology Rev: 2.04 (1/5/05)

SPECIMEN NUMBER	REMARKS
1	
2	



Chassis Front with Cover On



Chassis Rear with Cover On



Chassis Side with Cover Off



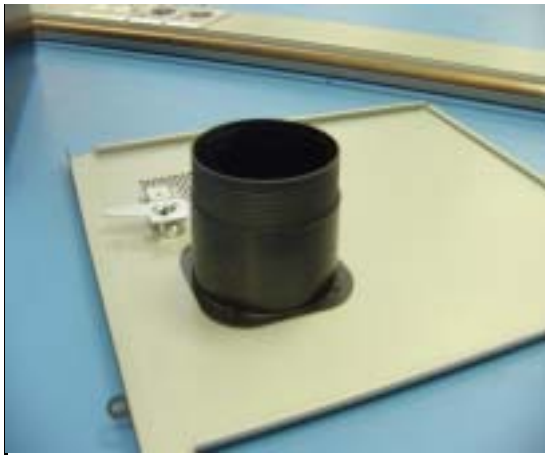
Chassis Isometric - Front with Cover Off



Chassis Isometric - Rear with Cover Off



Label (Include Manufacturer's Information Typically Located on the Inside of the Chassis)



Duct, If Present



Other