

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 02/18/05
Job Title or Number	398603A		

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-54xx	Y5410	ATX
Power Supply Unit			ATX12V	ATX12V
System Fan 1	Yes		KF1225B1MS	120mm
System Fan 2	Not Present			
System Fan 3	Not Present			

SUMMARY OF RESULTS/CONCLUSIONS

Conclusion:
-- State a brief summary of the conclusion reached
Solution meets the Ambient Thermal Performance Criteria @ 36.3 Degrees C. Solution also meets the Mechanical Fit Criteria, with a recommendation concerning Keep Out Zone A. (Fan interference)

Supplier: Yeong Yang

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	Y5410	
Model number	YY-54xx	
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	1	
System Fan 1		
Is System Fan1 Present?	Yes	
Manufacturer	KAIMEI ELECTRONIC CORP.	
Part Number	KF1225B1MS	
Size	120mm	
Location	Back Panel	
Number of Wires	3	
Pin Out or Color Code	BLACK,RED,WHITE	
Voltage	12V	
Current	.20A	
System Fan 2		
Is System Fan 2 Present?	Not Present	
Manufacturer		
Part Number		
Size		
Location		
Number of Wires		
Pin Out or Color Code		
Voltage		
Current		
System Fan 3		
Is System Fan 3 Present?	Not Present	
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	
Part Number	N/A	
Technology	Plastic Push Fasteners	

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Calibration

Technician								
L.BATA								
Date Test Completed								
02/18/05								
Equipment Used	Manufacturer	Model	Asset #	Range	Accuracy	Cal Date	Cal Period	Comments
Hydra Logger	Agilent		6-54083			2005/4/14	1Yr.	

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Supplier:**

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

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

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Analysis

Criteria

Thermal Performance Criteria

T_A (°C) = 38C + 1C (error margin)	38C + 1C
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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?
36.30	39.00	Meets Ambient Thermal Performance Criteria

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

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

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	Y5410	1	GPS-350CN-100A	1	KF1225B1MS	1	Back Panel						
2	Y5410	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	4AG-53EB2 or MT16HTF6	6atts PCI Express Load	Not Populated	5.5 Watts	569
2	C63987-203	N/A	PCM45F	D915GUXL	AG-53EB2 or MT16HTF6	4AG-53EB2 or MT16HTF6	6atts 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	36.038	37.355	36.429	35.534	36.339	69.943	No	3600	35.077	
2	110.00	35.646	37.165	36.044	36.172	36.25675	70.035	No	3600	35.045	

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	Y5410	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	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	Board holes are supported and other standoffs are		
microATX			
Cable Length	Checks for adequate length cables for subsystem		
	USB	Pass	
	Audio	Pass	
	Power	Pass	

TEST DATA

DATE STARTED 2005/2/15	CUSTOMER Yeong Yang	TECHNICIAN L.Bata
DATE COMPLETED 2005/2/18	SPECIMEN DESCRIPTION Chassis	TECHNICIAN L.Bata
TEMPERATURE 72 (°C)	TYPE OF TEST VISUAL EXAMINATION	ENGINEER L.Bata
HUMIDITY 45 (% RH)	SUPPLIER Yeong Yang	JOB NUMBER 398603A

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 Isometric - Front with Cover Off



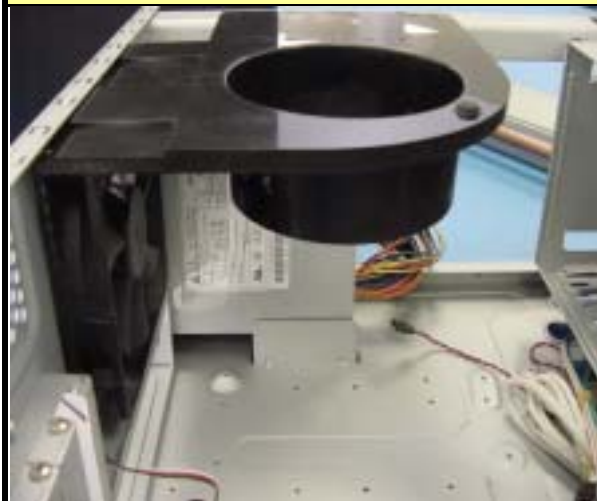
Chassis Isometric - Rear with Cover Off



Chassis Side with Cover Off



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



Duct, If Present



Other