

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	398604A		

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

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

Component	Present/Not Present	Model #	Part #	Type
Chassis		YY-55xx	Y5510	ATX
Power Supply Unit			ATX12V	ATX12V
System Fan 1	Yes		JF0925B1MS	90mm
System Fan 2	No			
System Fan 3	No			

SUMMARY OF RESULTS/CONCLUSIONS

Conclusion:
-- State a brief summary of the conclusion reached
Solution meets Mechanical Fit Criteria and Ambient Thermal Performance Criteria @ 36.5 Degrees C.

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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	Y5510	
Model number	YY-55xx	
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	JF0925B1MS	
Size	90mm	
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?	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	

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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

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?
36.50	39.00	Meets Ambient Thermal Performance Criteria

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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	Y5510	1	GPS-350CN-100A	1	JF0925B1MS	1	Back Panel						
2	Y5510	2	GPS-350CN-100A	2	JF0925B1MS	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	6atts PCI Express Load	Not Populated	5.5 Watts	569	
2	C63987-203	N/A	PCM45F	D915GUXL	AG-53EB2 or MT16HTF6	AG-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	37.550	36.528	37.280	35.560	36.7295	73.371	No	3600	
2	110.00	36.659	35.618	37.252	35.531	36.265	71.973	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	Y5510	1	GPS-350CN-100A	1	JF0925B1MS	1	Back Panel	JF0925B1MS		

Test Results			
Component	Description	Results	Comments
KOZ A	Keep Out Zone A 0.3" Clearance	Pass	
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		
Cable Length	Checks for adequate length cables for subsystem		
	USB	Pass	
	Audio	Pass	
	Power	Pass	

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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	34970A	6-54083			2005/4/14	1Yr.	

TEST DATA

DATE STARTED	CUSTOMER	TECHNICIAN
2005/2/15	Yeong Yang	L. Bata
DATE COMPLETED	SPECIMEN DESCRIPTION	TECHNICIAN
2005/2/18	Chassis	L.Bata
TEMPERATURE	TYPE OF TEST	ENGINEER
72 (°F)	VISUAL EXAMINATION	L.Bata
HUMIDITY	SUPPLIER	JOB NUMBER
46 (% RH)	Yeong Yang	398604A

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



Power Supply Unit (Include Manufacturer's Information Typically Located on the Back of the Unit)



Duct, If Present



Other