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	**03/03/05**
Job Title or Number	**398601A**			

SUMMARY OF OBJECTIVES

Objective Statement:

-- State the objective of the test

asdfafasdfasdfew

Plan:

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

MATERIALS UNDER TEST

Component	Present/Not Present	Model #	Part #	Type
Chassis		**YY-35XX**	**Y3510**	**microATX**
Power Supply Unit			**ATX12V**	**ATX12V**
System Fan 1	**Yes**		**DF8025BM**	**80mm**
System Fan 2	**No**			
System Fan 3	**No**			

SUMMARY OF RESULTS/CONCLUSIONS

Conclusion:

-- State a brief summary of the conclusion reached

Solution meets the Mechanical Fit Criteria with recommendation concerning Keep Out Zone A. (Fan interference), and also meets Ambient Thermal Performance Criteria @ 35.9 Degrees C.

Third Party Test House Intel® Pentium®4 Processor on 90 nm process in the 775-land package with PRB = 1 ATX Thermally Advantage Chassis - 398601A
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	Y3510	
Model number	YY-35XX	
Form Factor	microATX	
Chassis Duct Type	Meets Chasssis 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	DYNAEON IINDUSTRIAL CO.,LTD.	
Part Number	DF8025BM	
Size	80mm	
Location	Back Panel	
Number of Wires	3	
Pin Out or Color Code	BLACK,RED,WHITE	
Voltage	12	
Current	.22A	
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		Intel-Provided
Part Number	C63987-203	
Manufacturer	Nidec Corporation	
Technology	Radial Fin	
Clip	Integrated with heatsink	Intel-Provided
Thermal Interface Material		Intel-Provided
Manufacturer	Honeywell*	
Part Number	PCM45F	
Type	Phase change pad	
Retention Mechanism Assembly		Intel-Provided
Manufacturer	Nidec Corporation	
Part Number	N/A	
Technology	Plastic Push Fasteners	

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Calibration

Technician
L.BATA
Date Test Completed
03/03/05

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	Y3510	1	GPS-350CN-100A	1	DF8025BM	1	Back Panel						
2	Y3510	2	GPS-350CN-100A	2	DF8025BM	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 MT16HTF	AG-53EB2 or MT16HTF	atts PCI Express Load	Not Populated	5.5 Watts	569
2	C63987-203	N/A	PCM45F	D915GUXL	AG-53EB2 or MT16HTF	AG-53EB2 or MT16HTF	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)	Tc (°C)	Thermal Control Circuitry Activate?	Reported Frequency (MHz)	Tinlet (°C)	
1	110.00	35.616	35.529	36.071	35.379	35.64875	73.706	No	3600	34.920	
2	110.00	36.004	35.895	36.970	35.739	36.152	70.386	No	3600	35.087	

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	Y3510	1	GPS-350CN-100A	1	DF8025BM	1	Back Panel	DF8025BM		

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		
ATX Chassis			
Mounting Holes	Board holes are supported and other standoffs are	Pass	
microATX			
Cable Length	Checks for adequate length cables for subsystem		
	USB	Pass	
	Audio	Pass	
	Power	Pass	
Note: Physically interfere = cannot be installed in any order			

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

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

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?
35.90	39.00	Meets Ambient Thermal Performance Criteria

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Supplier:

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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
2005/3/1	**YEONG YANG**	L.BATA
DATE COMPLETED	SPECIMEN DESCRIPTION	TECHNICIAN
2005/3/3	**CHASSIS**	L.BATA
TEMPERATURE	TYPE OF TEST	ENGINEER
72 (°F)	**VISUAL EXAMINATION**	**L.BATA**
HUMIDITY	SUPPLIER	JOB NUMBER
45 (% RH)	**YEONG YANG**	398601A

TEST SPECIFICATION

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

SPECIMEN NUMBER	REMARKS
1	
2	

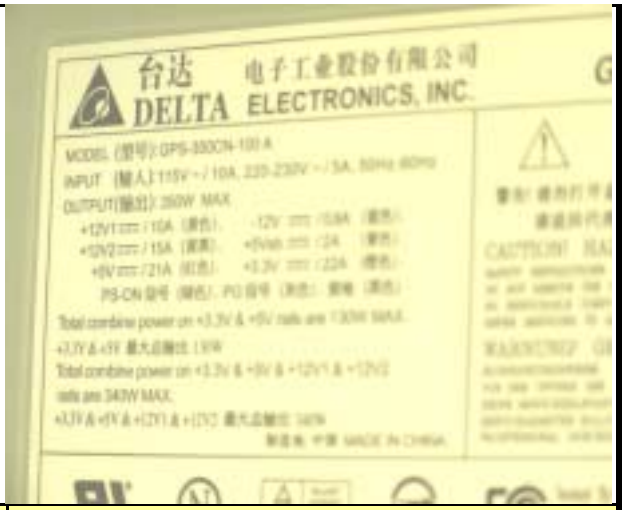
Chassis Front with Cover On

Chassis Rear with Cover On

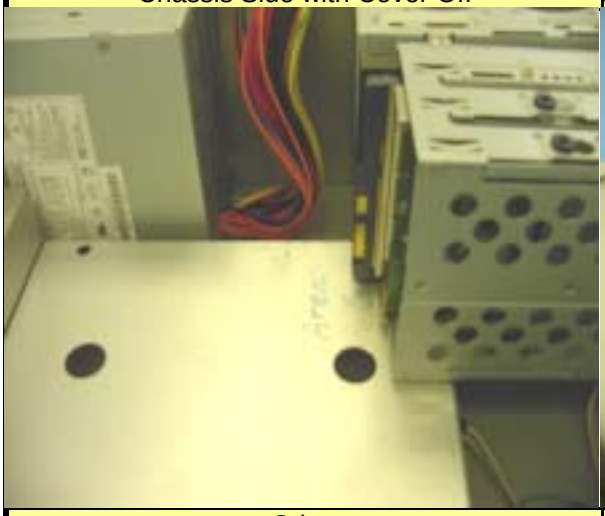
Chassis Isometric - Front with Cover Off

Chassis Isometric - Rear with Cover Off

Chassis Side with Cover Off



hit (Include Manufacturer's Information Typically Lo



Other

Duct, If Present