

ARES430

Thermal Image Analysis Report

Summary	<p><input type="checkbox"/> Pass</p> <p><input type="checkbox"/> Fail</p> <p>Note : There is/are ___ defect(s) not list in the report, please check it in the DTS Website.</p> <p><input checked="" type="checkbox"/> Pass with Deviation</p> <p style="text-align: center;">Comment: <u>There are 8 temperature point marginal passed, the function is normal, hope to get improvement for the next generation.</u></p>
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Issue date	Approval	Test Engineer
2015 / 02 / 09	KJ Wang	Ben Sun

Sample Configuration & Quantity Under Test

- **Model name : ARES430 A0.3**
- **CPU : Intel J1900 / 1.99GHz**
- **Memory : DSL DDR3L-1600 4GB**
- **2.5" SATA HDD : WD5000LPVX 500GB**
- **BIOS : AR43BM0K**
- **Test Software : Windows 7 / Run PassMark Burn In Test 8.0**
- **Power : FSP FSP060-DBAE1**
- **Heat Sink :**



Thermal Image Analysis

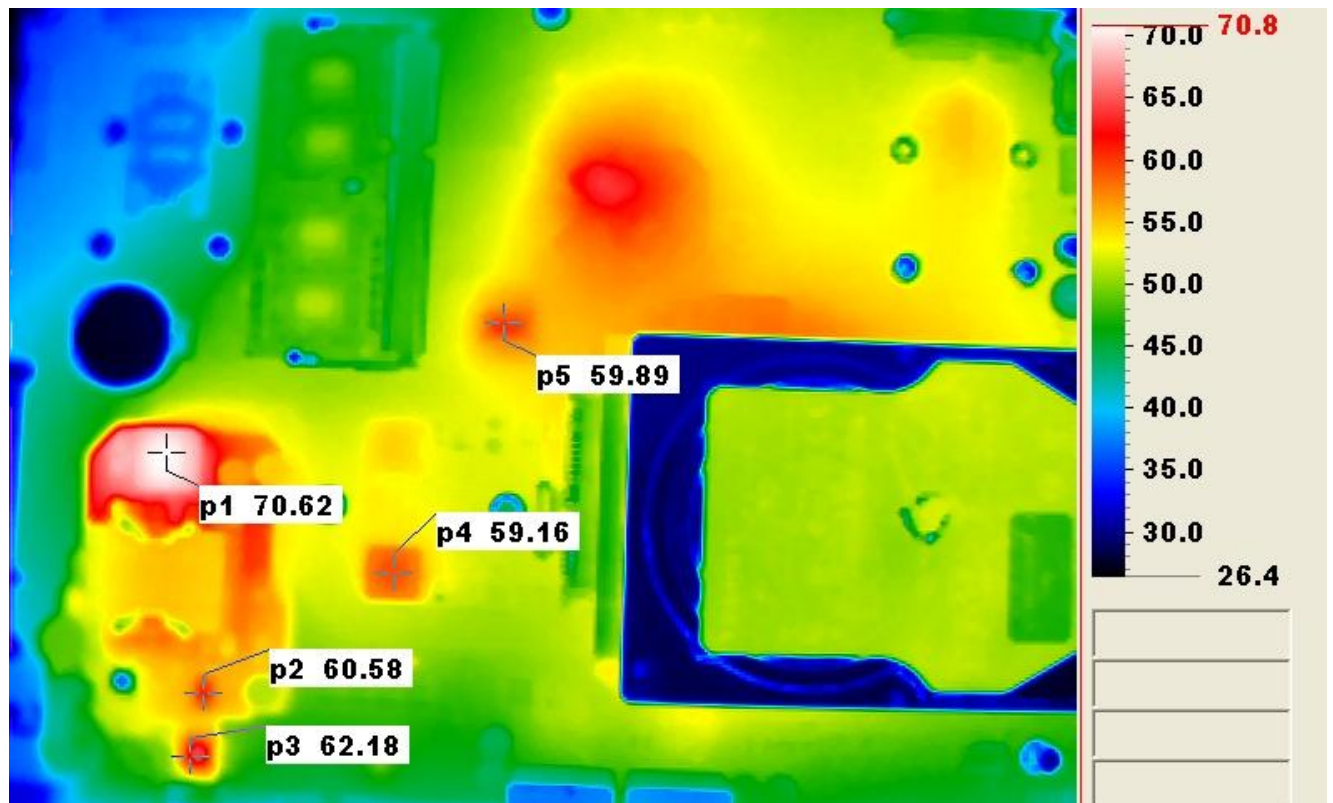
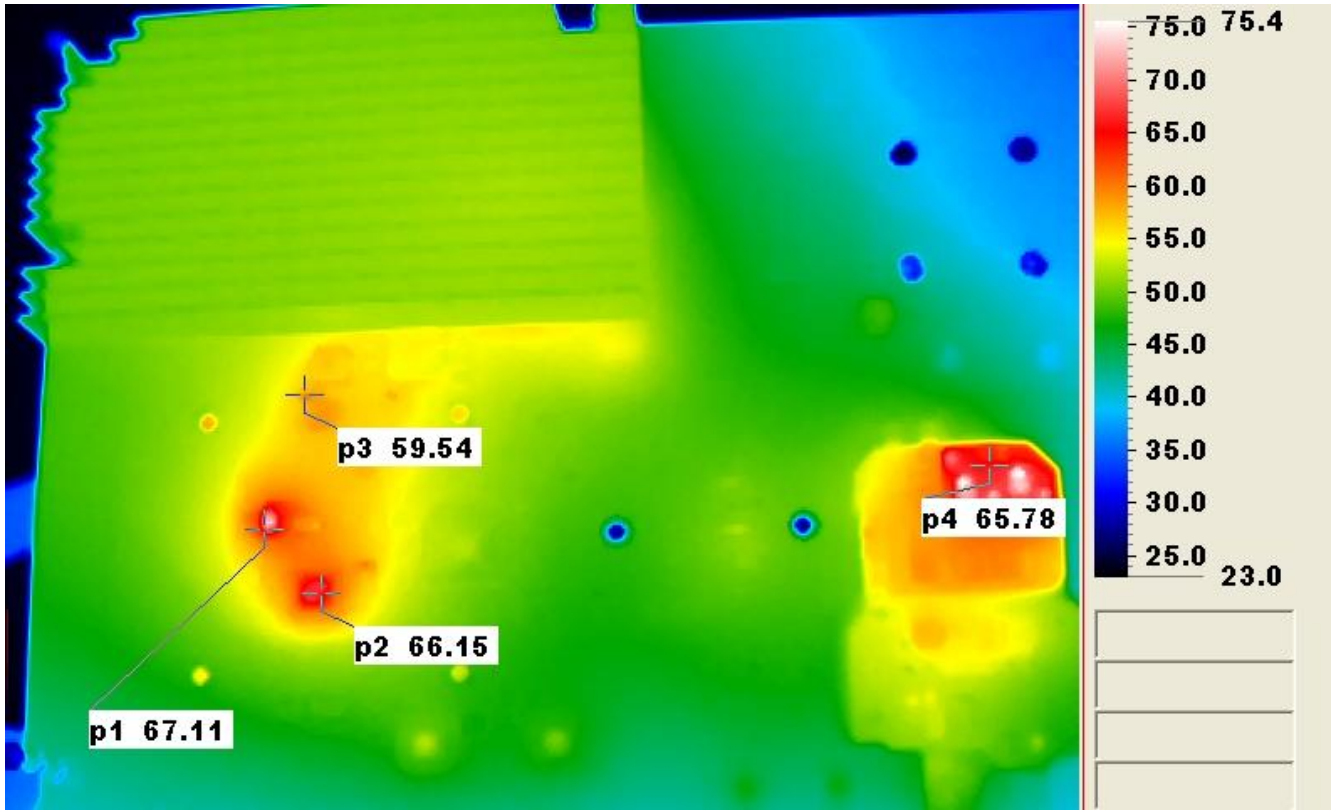
1. Test Date: 2015-02-06
2. Test Product: ARES430 A0.3
3. Test Site: AAEON QE Dept.
4. Temperature Measurement:
 - 4.1. 40 Channel Thermal Recorder:
 - 4.1.1 YOKOGAWA Inc,
 - 4.2.2 Model: DA100-13-1D
Date of Calibration: 2014/09/11
Serial Number: 12A323190
 - 4.2. IR Scanner: Infrared Camera
 - 4.2.1 NEC Avio Infrared Technologies Co., Ltd.
 - 4.2.2 Model: Thermo GEAR G100W2-D
Date of Calibration: 2014/12/19
Serial Number: 1051444
5. Test Condition:

Test by DA-100: 25.2°C with Heat Sink
6. Take Picture Time:

After power on 2 hours

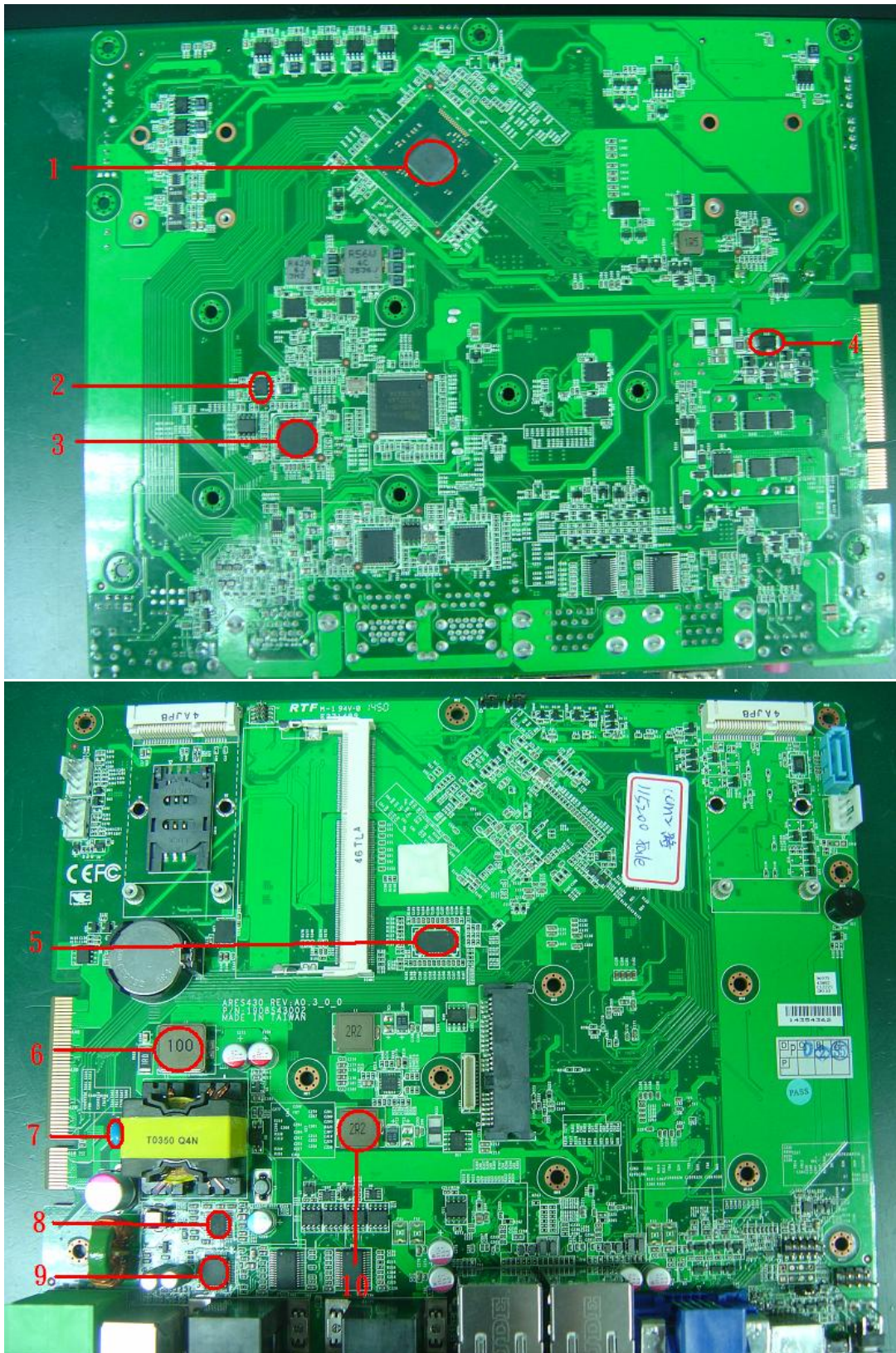
Temperature Profile Test:

Component Side:



Terminal Recorder:

Measuring Thermal Couple Position :



Using YOKOGAWA / DARWIN DA100-100-13-1D test

Point	Position	Describe	Tc (*1) (°C)	Tm (*2) Measured Under		Note
				23.0°C	60°C	
1	U52	(TF)INTEL Bay Trail-D J1900 2GHz.FCBGA1170 FH8065301615010 SR1UT	105	58.1	95.1	NOTE3
2	U60	(TF)IC.3A.Ultra Low Dropout LDO.SOP-8.SMD YOBON YB1283PSP8	100	63.8	100.8	NOTE3
3	U63	(TF)IC.USB 3.0 HUB Controller.QFN 88L.SMD ASMEDIA ASM1074	100	66.4	103.4	NOTE3
4	D10	(TF)Diode 200V.2A.SURFACE MOUNT RECTIFIER.SMB DO-214AA PANJIT.ER2D	125	65.2	102.2	
5	U3	(TF)IC.SMD.VQFN 24P.DUAL SYNCHRONOUS STEP-DOWN CON TI TPS51123RGER	100	62.0	99.0	NOTE3
6	L2	(TF)COIL.10uH.20%.SMD.13.5x12.8x5.0mm.DCR=21.4mΩ.I dc=9A.Zenithtek.ZPWM-1250M-100	125	67.5	104.5	
7	C597	(TF)CC.1000pF.X1:400Vac/Y2:250Vac.10%.9*5mm.Y5P.DIP. PSA.YP0AC102K080BAMD0H	100	42.9	79.9	
8	U18	(TF)IC.Advanced Current-Mode.Active Clamp PWM Controller.TSSOP 20P.SMD.TI.UCC2897APW	125	56.7	93.7	
9	U39	(TF)IC.7.1+2 Channel High Definition.LQFP 48P.Audio Codec.SMD.REALTEK.ALC886	85	45.3	82.3	NOTE3
10	L3	(TF)COIL.2.2uH.20%.SMD.11.5x10.5x4.0mm.DCR=5.5m ohm.Idc=14Amp.ZenithTek.ZPWM-1040M-2R2M	100	58.3	95.3	NOTE3
11		RAM	85	45.7	82.7	NOTE3
12		RTC Battery	75	37.8	74.8	NOTE3

Note(*):

- "Tc" indicates the component's case maximum temperature value specified in its datasheet.
- "Tm" indicates the measured Tc value under working environmental temperature within product specification.
- Judgment Criteria:**
 - **Fail** : Tm > Tc+5°C; The measured value is over specification plus margin.
 - **Margin** : Tc+5°C > Tm > Tc-10°C; The measured value is within specification with margin.For FANLESS system application, it is strongly recommended to add thermal dissipation design for better reliability.
 - **Pass**: Tm < Tc-10°C; The measured value is with safety margin.
- Defect NO. [I140611QED12](#)**