



Certificate of Compliance

Certificate: 70043486

Master Contract: 162874

Project: 70043486

Date Issued: 2015-09-18

Issued to: Fujitsu Technology Solutions GmbH
Product Compliance Center
Buergermeister-Ulrich-Str. 100
86199 Augsburg
GERMANY
Attention: Mr. Erfried Rösner

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only



Issued by: Andreas Vaith
Andreas Vaith

PRODUCTS

CLASS 3862 13 – INFORMATION TECHNOLOGY EQUIPMENT – (CSA 60950-1-07, 2nd Ed)
CLASS 3862 93 – INFORMATION TECHNOLOGY EQUIPMENT – (UL 60950-1, 2nd Ed) – Certified to US Standards

Component, System board (motherboard), Model D3402 and D3417, Class III equipment.
The model designation may be followed by additional letters and numbers or blanks denoting differences in SELV secondary circuits or minor mechanical differences.

The D3402 is a μ ATX board powered by $\pm 12V$, $+5V$, $+3.3V$ and $+5V_{aux}$ with PS2, Audio, USB, DVI, Display Port, COM and LAN ports.

The D3417 is a μ ATX board powered by $\pm 12V$, $+5V$, $+3.3V$ and $+5V_{aux}$ with PS2, Audio, USB, DVI, Display Port, COM and LAN ports.

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.



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APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60950-1-07,
Amendment 2: 2014 (MOD)

Information Technology Equipment – Safety – Part 1: General Requirements.

ANSI/UL Std No. 60950-1-2014

Information Technology Equipment – Safety – Part 1: General Requirements.

CONDITIONS OF ACCEPTABILITY

1. Limitation of energy source to 240VA is subject to evaluation in the end product.
2. The input current and temperature tests are to be performed in the end system.
3. The equipment must be supplied by a power supply with SELV secondary output voltages.
4. Maximum ambient temperature +50°C.
- 5.

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Marking Method: (For Minimum Markings)

- CSA/UL Approval adhesive nameplate (suitable for surface to which it is applied)
- Silk-screened: (e.g. on Printed Circuit Board).
- Non-metallic Self-adhesive Nameplate, not CSA Accepted nor UL Recognized Type:
(for components ONLY)
- Component Cards – System boards and For Sale to OEM's Only:
The markings may appear on a self-adhesive type paper label.



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Required Information: (For Minimum Markings)

- [X] The submitter's name and/or CSA Contract Number "162874"
- [X] Model or identifying designation
- [Optional] The complete electrical ratings in input volts and amperes.
- [X] Date of manufacture, serial number or date code traceable to month and year of manufacture;
- [X] The component CSA Monogram and an appropriate indicator as applicable

- [X] For Use in Canada and the USA: CSA Monogram, "NRTL/C" or "C-US" indicator and the optional indicators "CSA 60950-1-07" and "ANSI/UL 60950-1-2007".

Note: Bilingual Markings for products with CSA Mark or CSA Mark and the NRTL/C indicator. Jurisdiction in Canada may require these markings to be also in French. It is the responsibility of the Customer to provide bilingual markings, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the Customer to determine this requirements and have bilingual wording added to the "Markings",

- [X] Additional Markings and Documentation: (Due mainly to safety issues)

1. Battery (Replaceable Type, lithium and other types):

Battery, if placed in operator access area, have the following markings (or the equivalent), either provided next to the batteries or in both operator and service manual. If the batteries are placed elsewhere, then the markings are either provided next to the batteries or in service manual.

CAUTION

**RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS**

ATTENTION

**IL Y A RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACÉE PAR UNE
BATTERIE DE TYPE INCORRECT.
METTRE AU REBUT LES BATTERIES USAGÉES CONFORMÉMENT AUX
INSTRUCTIONS**



Supplement to Certificate of Compliance

Certificate: 70043486

Master Contract: 162874

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
70043486	2015-09-18	Original cCSAus Certification of Systemboard D3402 and D3417 in normal office and home environments.



Descriptive Report and Test Results

MASTER CONTRACT: 162874

REPORT: 70043486

PROJECT: 70043486

Edition 1: September 15, 2015; Project 70043486 – Strasskirchen
Issued by Andreas Vaith

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Supplement to Certificate of Compliance - Page 1
Description and Tests - Pages 1 to 8
Att1 Photos - 1 to 12
Att2 Schematics - 1 to 4
Evaluation document for CSA Engineering only:
Appendix A: Original Test Report – CER+1SB-14020-PR01-S01a

PRODUCTS

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Component, System board (motherboard), Model D3402 and D3417, Class III equipment.
The model designation may be followed by additional letters and numbers or blanks denoting differences in SELV secondary circuits or minor mechanical differences.

The D3402 is a μ ATX board powered by $\pm 12V$, $+5V$, $+3.3V$ and $+5V_{aux}$ with PS2, Audio, USB, DVI, Display Port, COM and LAN ports.

<u>Source</u>	<u>Voltage</u>	<u>Min PS load</u>	<u>Max. Voltage tolerance</u>	<u>Max. Mainboard Current</u>
Main power	+12V	0.05A	$\pm 5\%$	8A / 12A
Supply	-12V	0A	$\pm 10\%$	0.3A
	+5V	0.2A	$\pm 5\%$	6.0A
	+3.3V	0A	$\pm 5\%$	0.5A
Aux. Power Supply	+5V _{aux}	0A	+5% / -3%	2.5A

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The D3417 is a μ ATX board powered by $\pm 12V$, $+5V$, $+3.3V$ and $+5V_{aux}$ with PS2, Audio, USB, DVI, Display Port, COM and LAN ports.

<u>Source</u>	<u>Voltage</u>	<u>Min PS load</u>	<u>Max. Voltage tolerance</u>	<u>Max. Mainboard Current</u>
Main power	+12V	0.05A	$\pm 5\%$	10A / 15A
Supply	-12V	0A	$\pm 10\%$	0.3A
	+5V	0.2A	$\pm 5\%$	6.0A
	+3.3V	0A	$\pm 5\%$	0.5A
Aux. Power Supply	+5V _{aux}	0A	+5% / -3%	2.5A

Notes:

1. The subject system board is certified only as component of other Certified equipment where the suitability of each combination is to be determined by CSA.

CONDITIONS OF ACCEPTABILITY

1. Limitation of energy source to 240VA is subject to evaluation in the end product.
2. The input current and temperature tests are to be performed in the end system.
3. The equipment must be supplied by a power supply with SELV secondary output voltages.
4. Maximum ambient temperature $+50^{\circ}C$.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60950-1-07,
Amendment 2: 2014 (MOD)

Information Technology Equipment – Safety – Part 1: General Requirements.

ANSI/UL Std No. 60950-1-2014

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MARKINGS

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- [X] The component CSA Monogram and an appropriate indicator as applicable

- [X] For Use in Canada and the USA: CSA Monogram, "NRTL/C" or "C-US" indicator and the optional indicators "CSA 60950-1-07" and "ANSI/UL 60950-1-2007".

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[X] Additional Markings and Documentation: (Due mainly to safety issues)

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Battery, if placed in operator access area, have the following markings (or the equivalent), either provided next to the batteries or in both operator and service manual. If the batteries are placed elsewhere, then the markings are either provided next to the batteries or in service manual.

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Nameplate adhesive label material approval information:

The nameplate may be printed in the factory using 3M Scotchmark 3690-906E or CSA accepted printing system.

ALTERATIONS

Same as markings above

FACTORY TESTS

Not Applicable. No Factory test required.

SPECIAL INSTRUCTIONS FOR FIELD SERVICES

1. Component descriptions marked with either the "(INT)" or "(INT*)" identifiers may be substituted with other components providing the requirements specified under the notes in the "Description" are complied with.

COMPONENT SPECIAL PICKUP

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing.

DESCRIPTION

Notes:

1. Component Substitution
 - a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT*" are not eligible for substitution without evaluation and report updating
 - b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component may be replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
 - c) The Term "INT*" means a "Recognized" and/or "Accepted" component may be replaced by one "Recognized" and/or "Accepted" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application, providing the applicable country identifiers are included, the component is **also** CSA Certified, the requirements in item "d" below are complied with and any "conditions of suitability" for the component (as recorded in this descriptive report) are complied with.
 - d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
 - e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.

Model: D3402 and D3417

The subject equipment is a system board intended to operate in normal office and home environments.

- a) Type of Equipment: Component, system board
- b) Class of Equipment: Class III
- c) Operating conditions: Continuous
- d) Connection to Supply: Not directly connected to the mains.
- e) Type of Power System: SELV
- f) Mobility: for building in
- g) Access Location: Operator accessible
- h) Dimensions (mm) approx: 213mm x 244mm
- i) Pollution Degree: 2
- j) Maximum Rated Ambient Temperature: 50 Deg C
- k) Accessory: Not applicable
- l) Installation: May be installed by the user in accordance with the installation instructions provided with the equipment.

Approvals Codes

C	=	CSA Certified and suitable for the application
C*, Labelled*	=	CSA Certified with the CSA Monogram on the component and suitable for the application.
cUS	=	CSA Certified to CSA/US requirements and suitable for the application
(NRTL/C)		
US	=	CSA Certified to US requirements and suitable to the application
(NRTL)		
UL	=	UL Listed equipment/sub-system and suitable for the application
UR	=	UL Recognized component/sub-system and suitable for the application. (“R” in “UR” is printed in reverse on actual label).
cUL	=	UL Listed equipment/sub-system to CSA requirements and suitable for the application.
cUR	=	UL Recognized component/sub-system to CSA requirements and suitable for the application. (“R” in “UR” is printed in reverse on actual label).
B	=	BSI Certified and suitable for the application.
D	=	DEMKO Certified and suitable to the application
FI	=	Finland Certified and suitable for the application.
N	=	NEMKO Certified and suitable for the application.
S	=	SEMKO Certified and suitable for the application.
SEV	=	SEV Certified and suitable for the application.
T	=	TUV Certified and suitable for the application.
V	=	VDE Certified and suitable for the application.

List of Critical Components: (Components identical for all models covered in this report)					
object/part No.	manufacturer/ trademark	type/model	technical data	standard	mark(s) of conformity ¹⁾
Printed circuit board (INT) alternate	Chuan Yi Computer Co Ltd	CM-4	94V-0, 130°C	UL94	UR (E162264)
	ISU Petasys Hunan Limited	ISU-3	94V-0, 130°C	UL94	UR (E326167)
Lithium battery alternate	KTS (VIC- DAWN)	CR2032	210mAh / 10mA 2)	UL1642	UR (MH20550)
	FDK Energy	CR2032	220mAh / 10mA 2)	UL1642	UR (MH13421)
Battery protection circuit	Various	Various components on systemboard: diode (430V51) resis. (430R50) resis. (472R70) FET: (760V60) resis. (760R60)	One diode and resistor: 1kΩ 1kΩ FET transistor and resistor: FET 1kΩ	-	Tested in the equipment
Protective device for secondary (SELV) outputs					
PTC	Tyco (Raychem)	miniSMDC200	2.0A / 4.0A 3), 8V	IEC60730-1 UL 1434	UR (E74889)
alternate	Bourns	MF-MSMF200	2.0A / 4.0A 3), 8V	IEC60730-1 UL 1434	UR (E174545)
alternate	Tyco (Raychem)	nanoSMDC075F	0.75A / 1.5A 3), 6V	IEC60730-1 UL 1434	UR (E74889)
alternate	Bourns	MF-NSMF075	0.75A / 1.5A 3), 6V	IEC60730-1 UL 1434	UR (E174545)
alternate	Tyco (Raychem)	MF-MSMF110	1.1A / 1.2A 3), 6V	IEC60730-1 UL 1434	UR (E74889)
alternate	Tyco (Raychem)	miniSMDC110F/16	1.1A / 1.2A 3), 16V	IEC60730-1 UL 1434	UR (E74889)
Internal Plastics	Various	Various	Min V-2, HF-2 or VTM-2, except small parts	UL94	UR
Supplementary Information:					
1) an asterisk indicates are mark which assures the agreed level of surveillance					
2) Nominal discharge current (from data sheet) / max. abnormal charging current (from UL database)					
3) I_{hold}/I_{trip}					

TEST HISTORY

Edition 1: Project 70043486

The following applicable tests were conducted with satisfactory results at Fujitsu Technology Solutions, Augsburg, Germany under CSA Category Program on August 2015.

Detailed test results are in Appendix A: Original Test Report – CER+1SB-14020-PR01-S01a stored at CSA under Master Contract 162874, Project 70043486 in documentum.

LIST OF TESTS CONDUCTED

Tests Conducted (marked with a "C")	Clause	Description
C	2.5	Limited Power Sources
C	4.3.8	Lithium Battery (Reverse/Charging Current Measurement)

---End of Report---

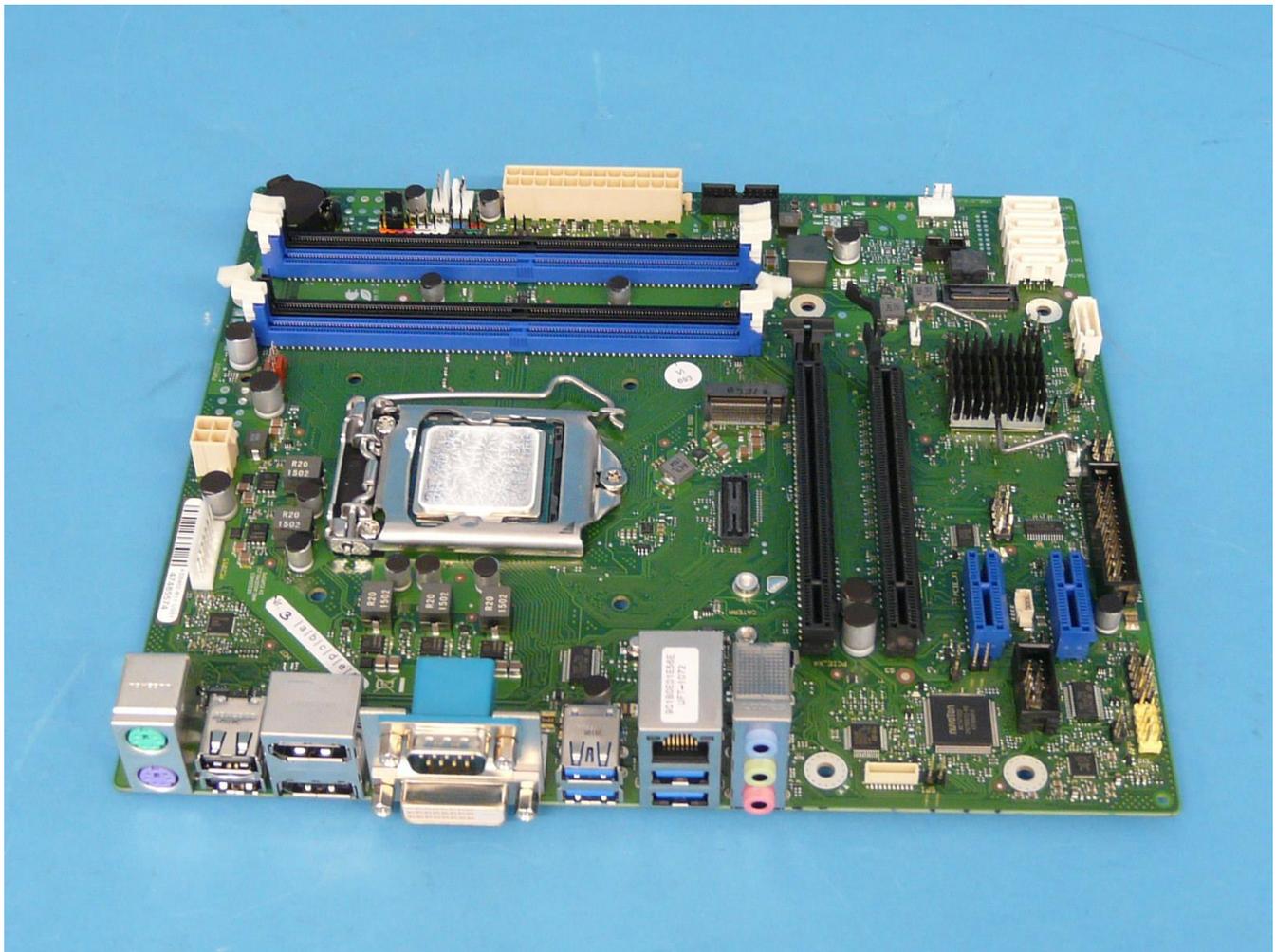
MASTER CONTRACT: 162874

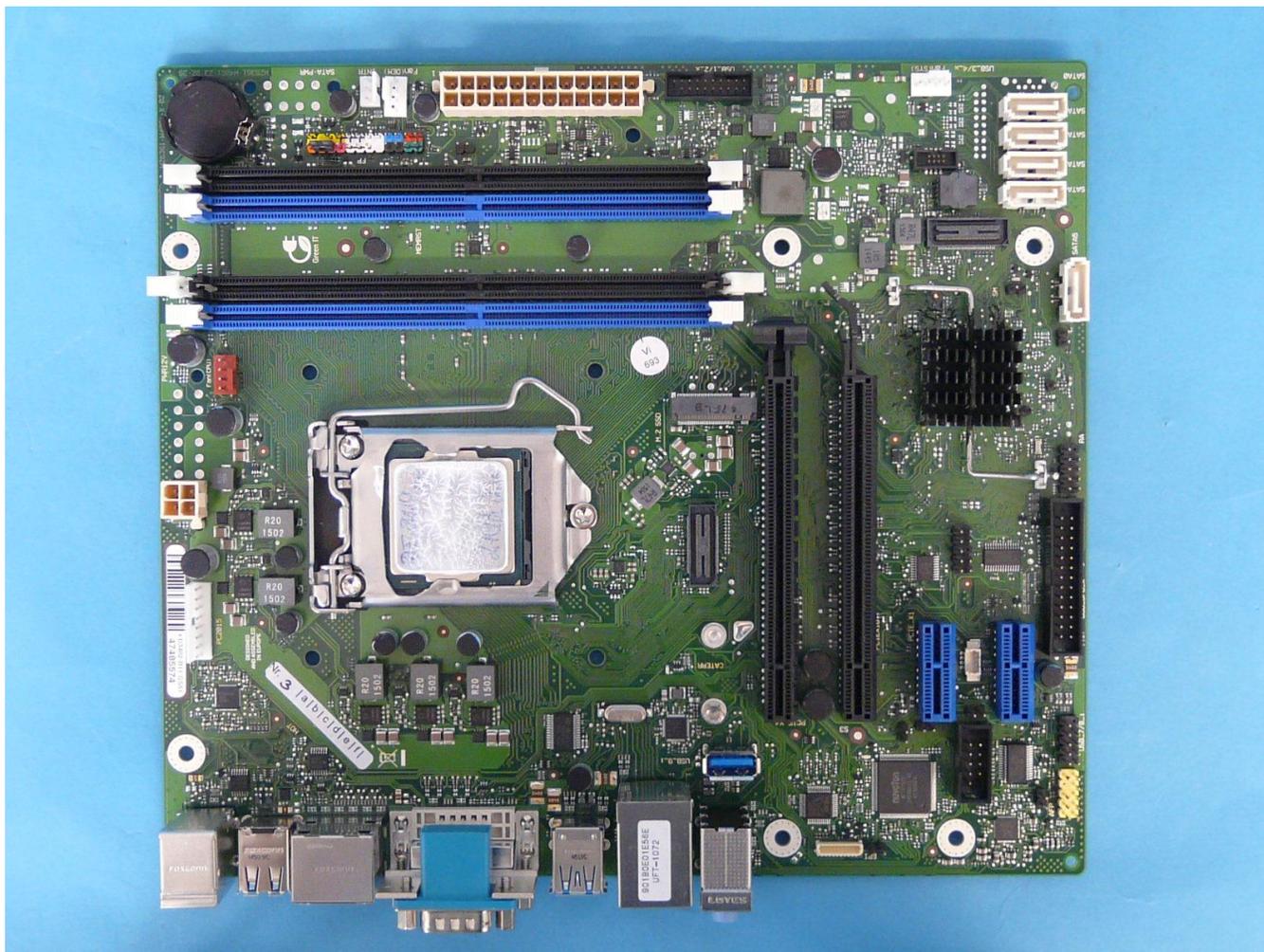
REPORT: 70043486

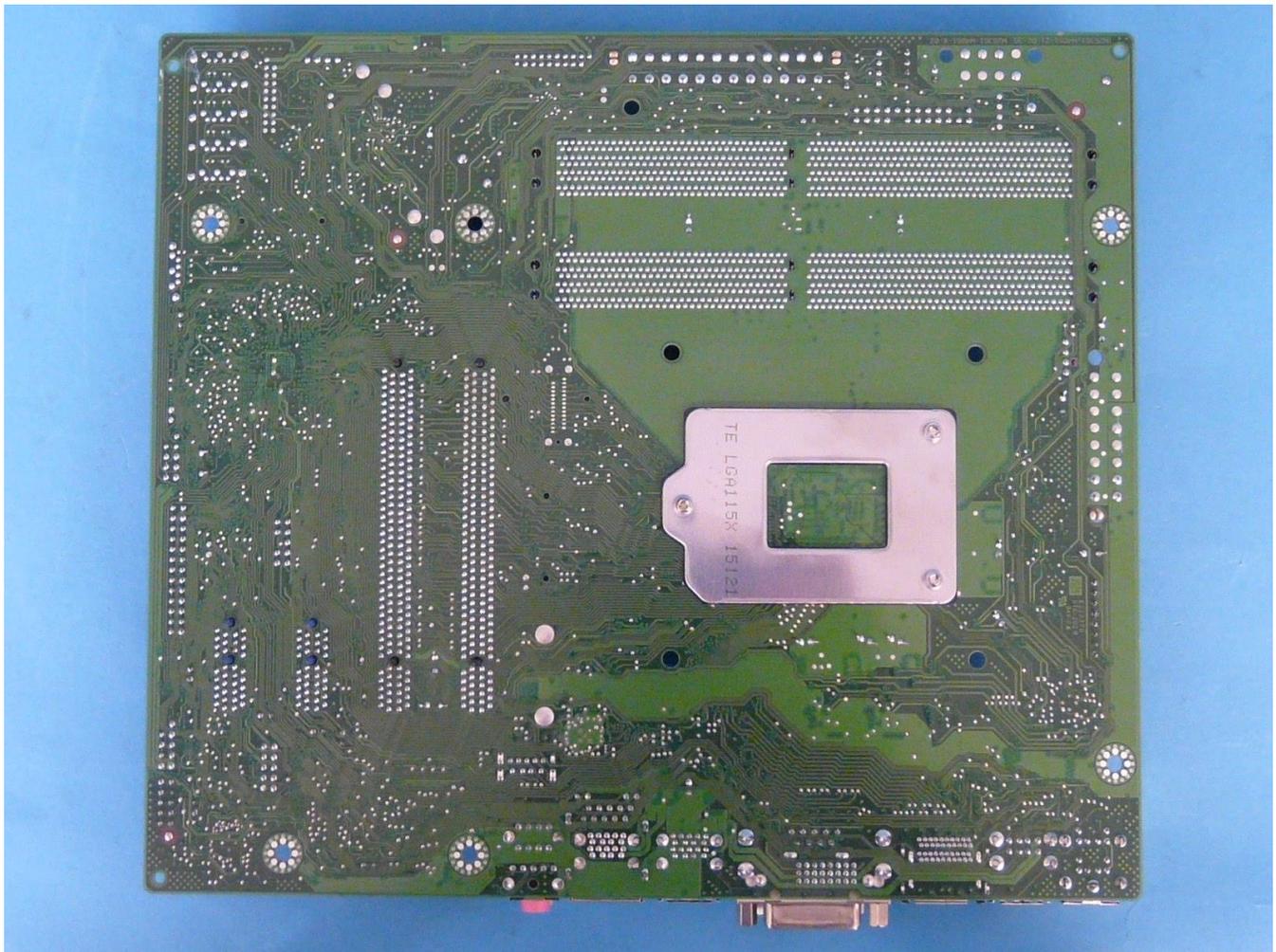
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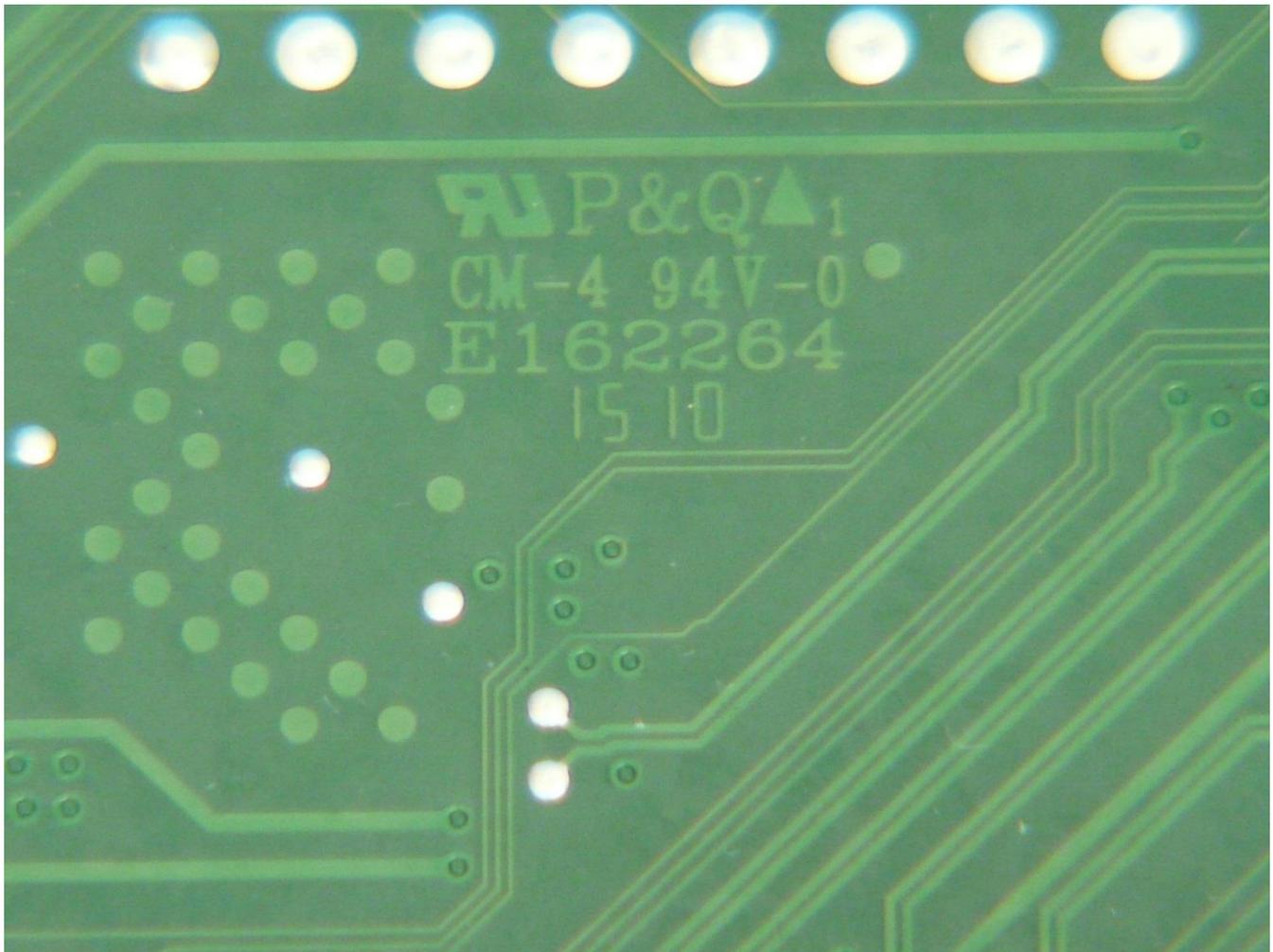
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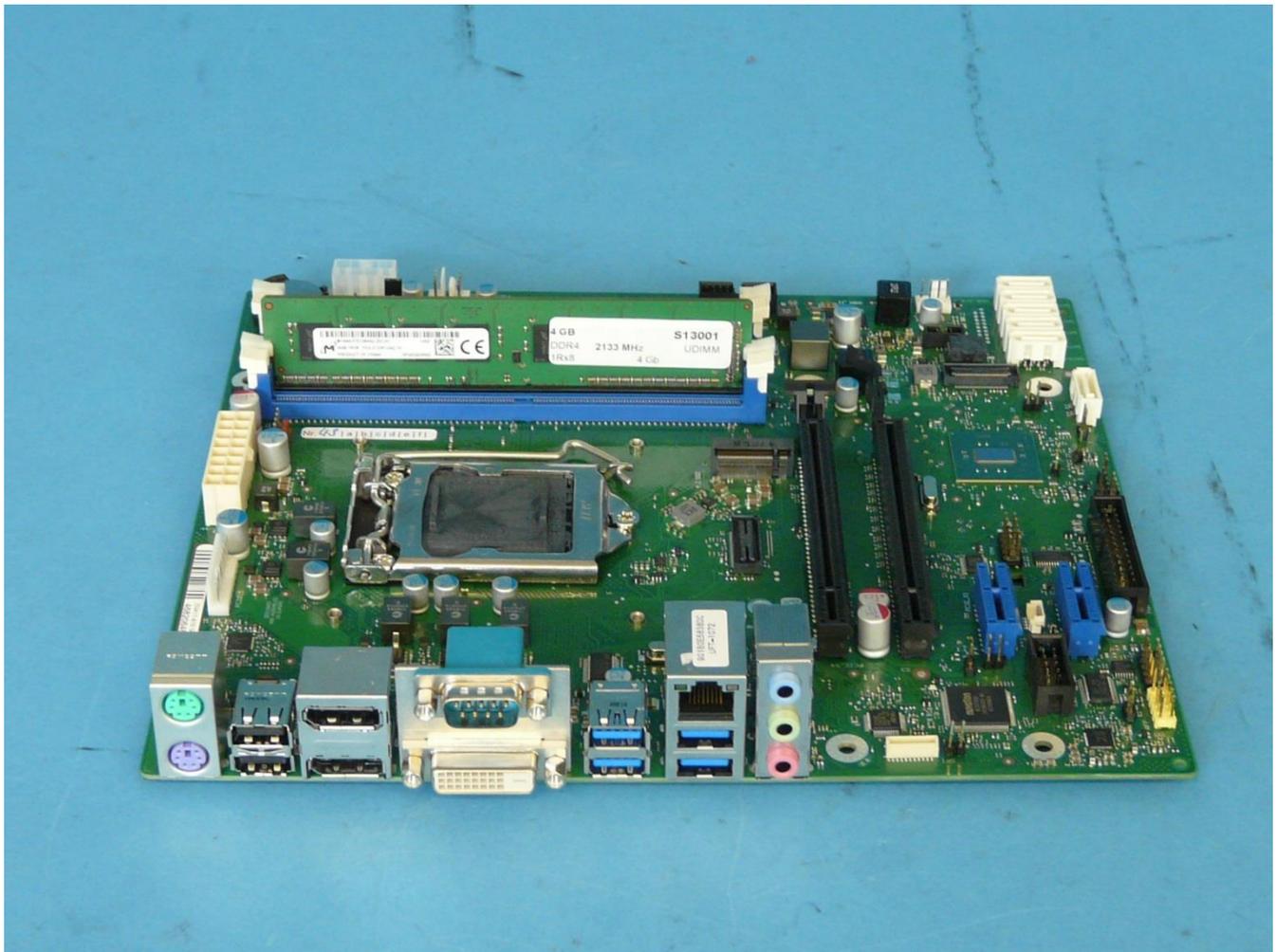
<u>Page Number</u>	<u>Description</u>
Page 1	Cover page
Page 2 to 5	Photographs of D3402
Page 6 to 8	Photographs of D3417
Page 9 to 12	Detail Photographs

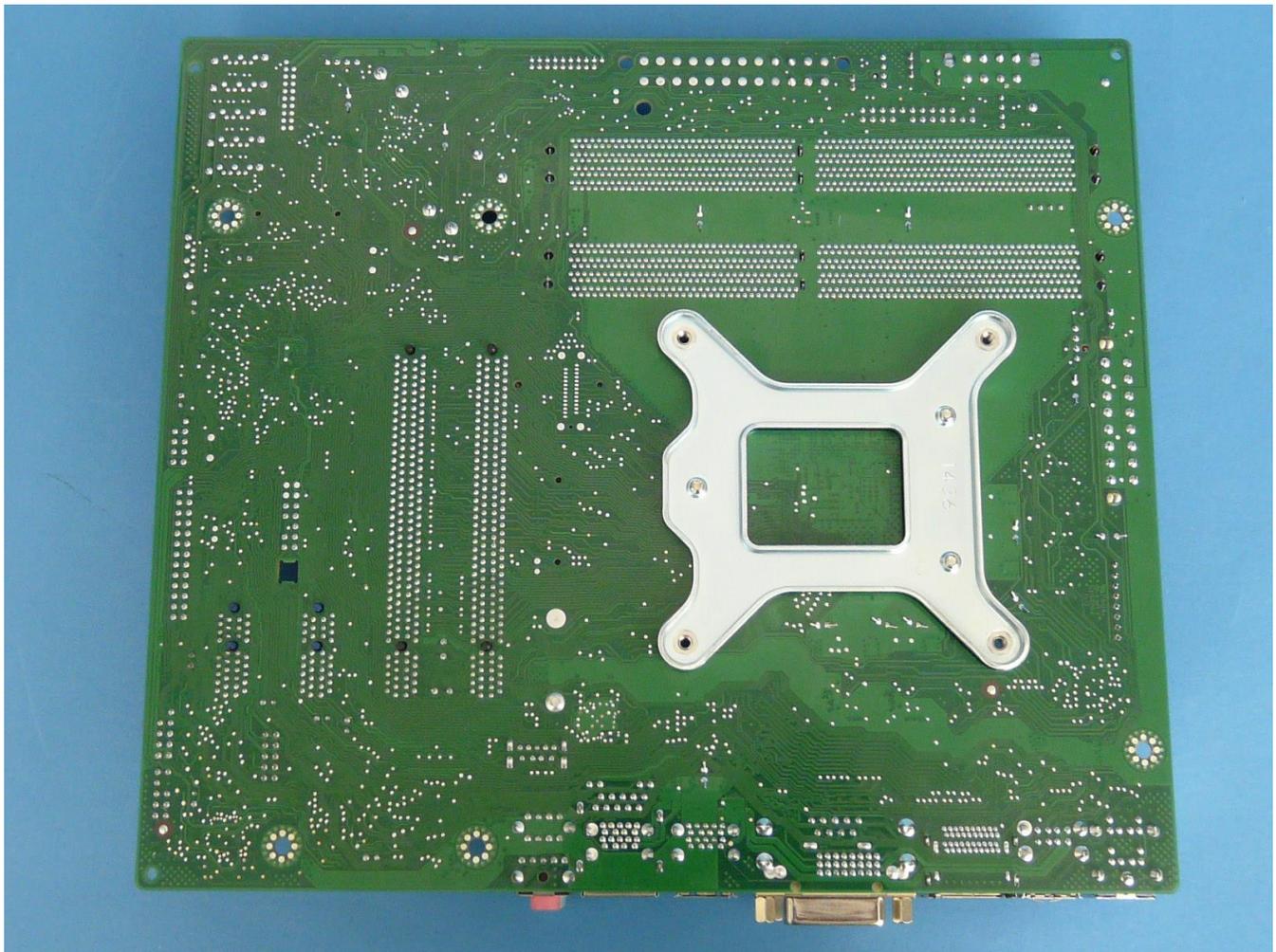


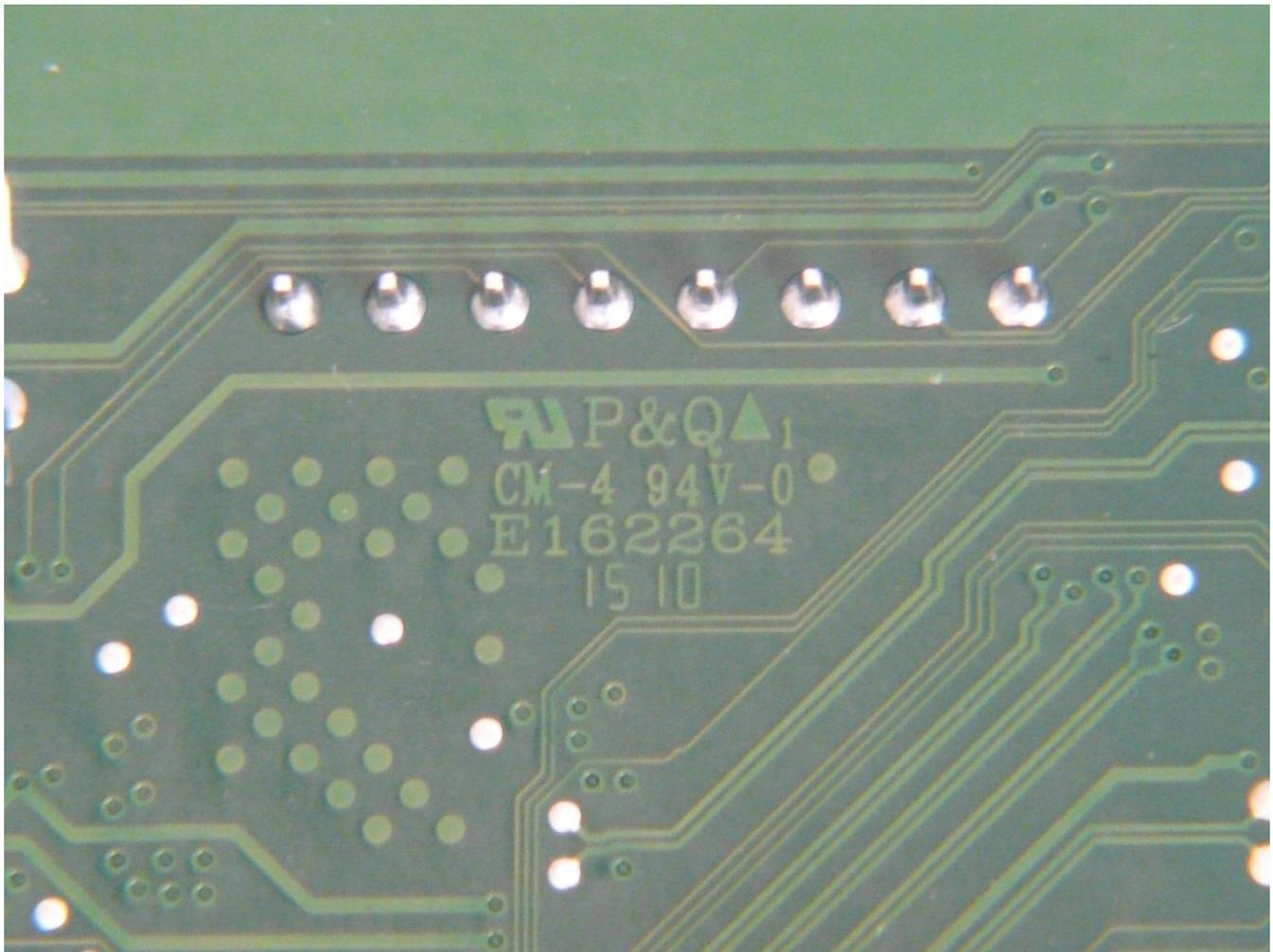






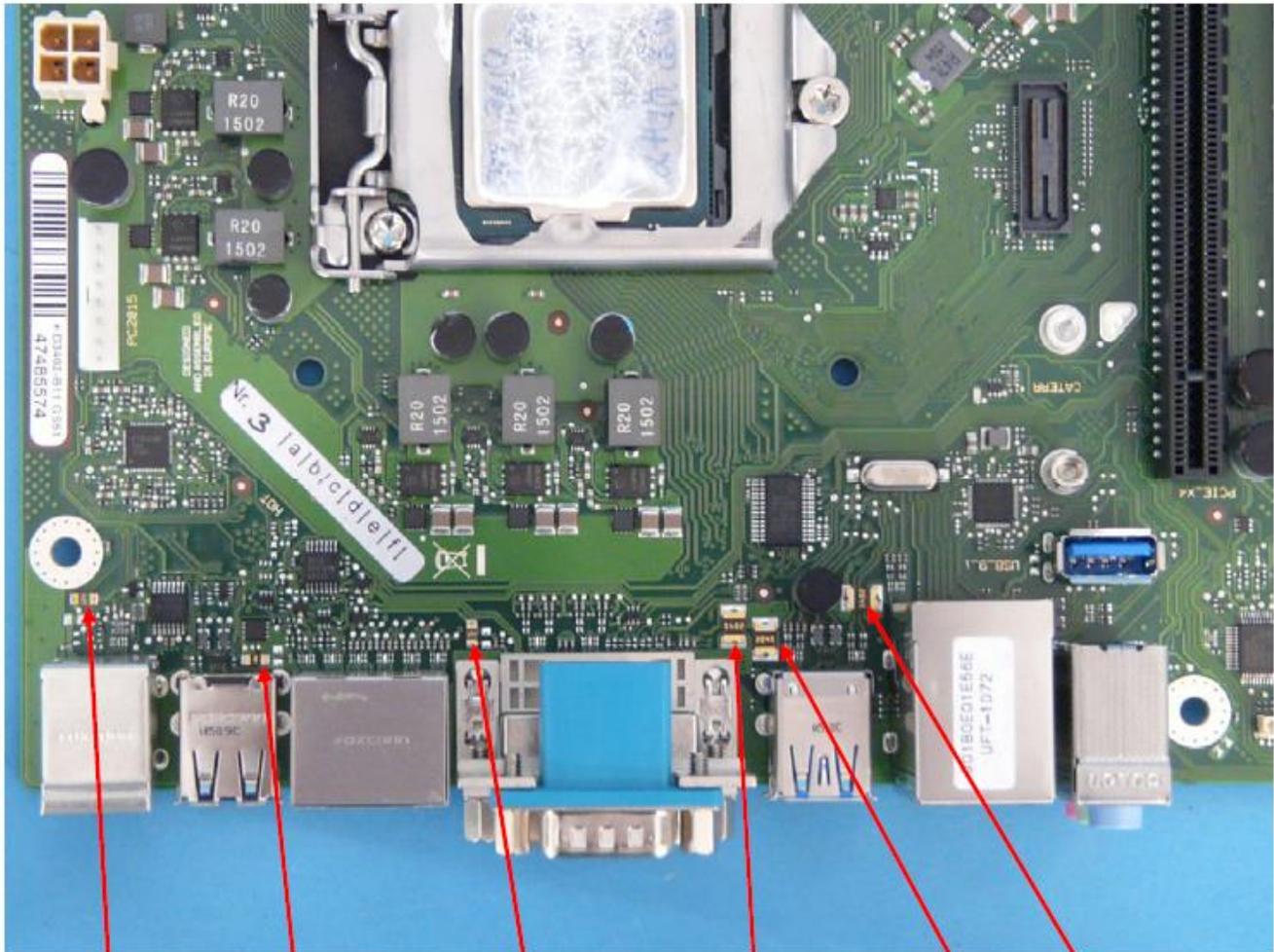






D3402, D3417

Location of components of USB, DVI, Displayport and Keyboard/Mouse port protection (LPS)



847R50, PTC
Displayport

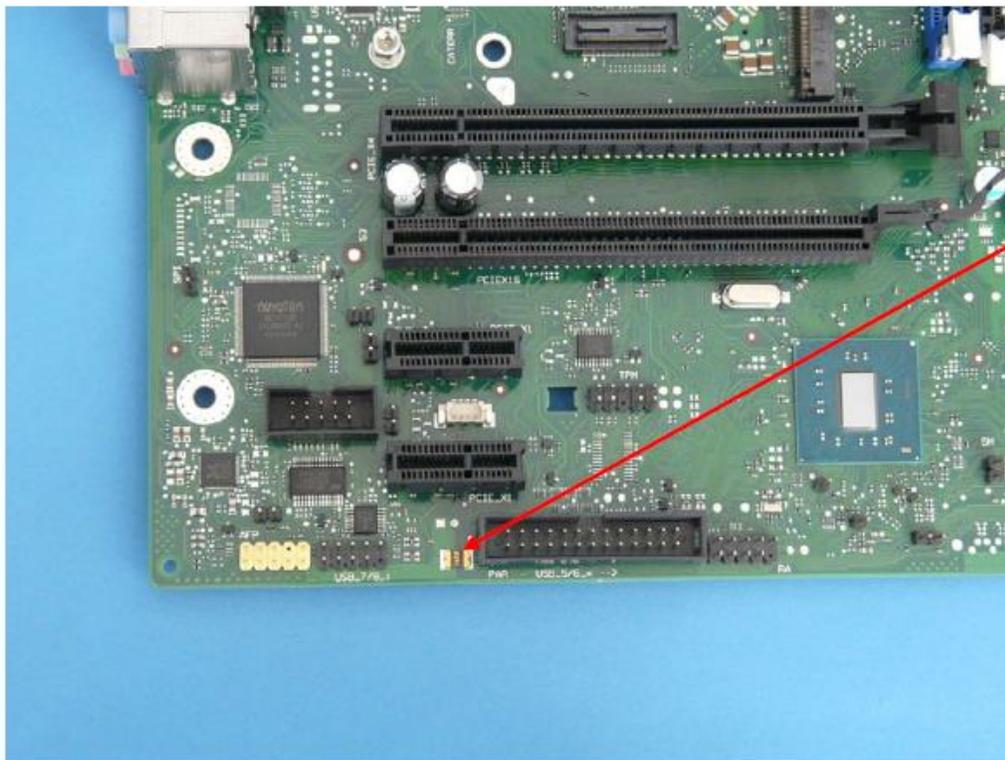
845R60, PTC
DVI

580R00, PTC
USB P06, P07

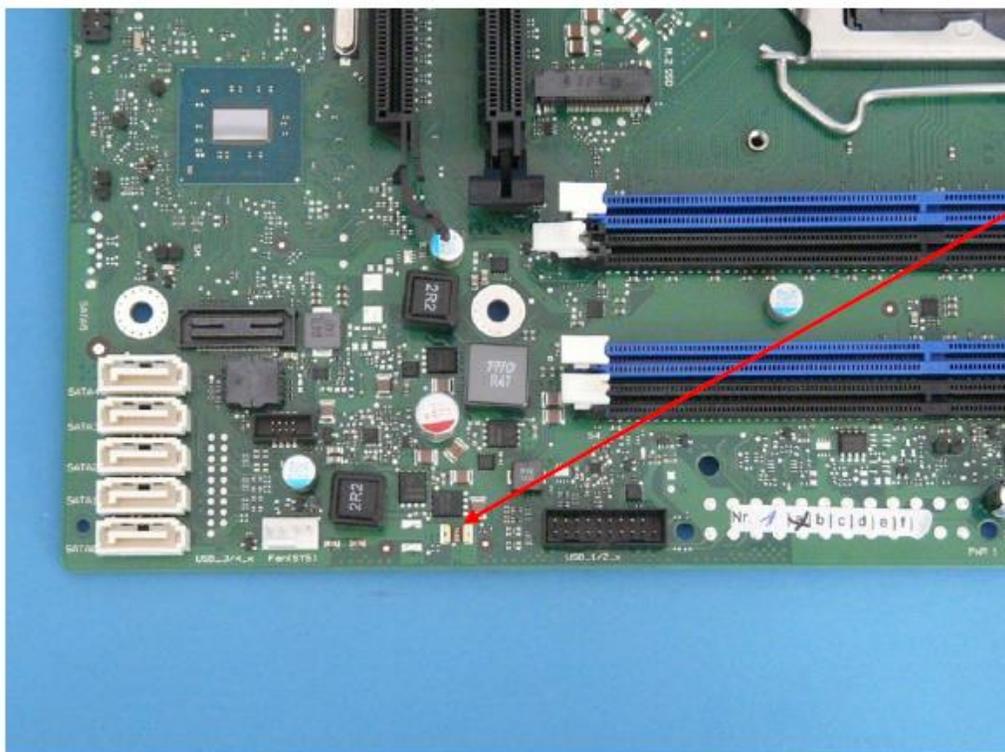
580R20, PTC
USB P04, P05

535R01, PTC
Keyboard, Mouse

580R50, PTC
USB P00, P01

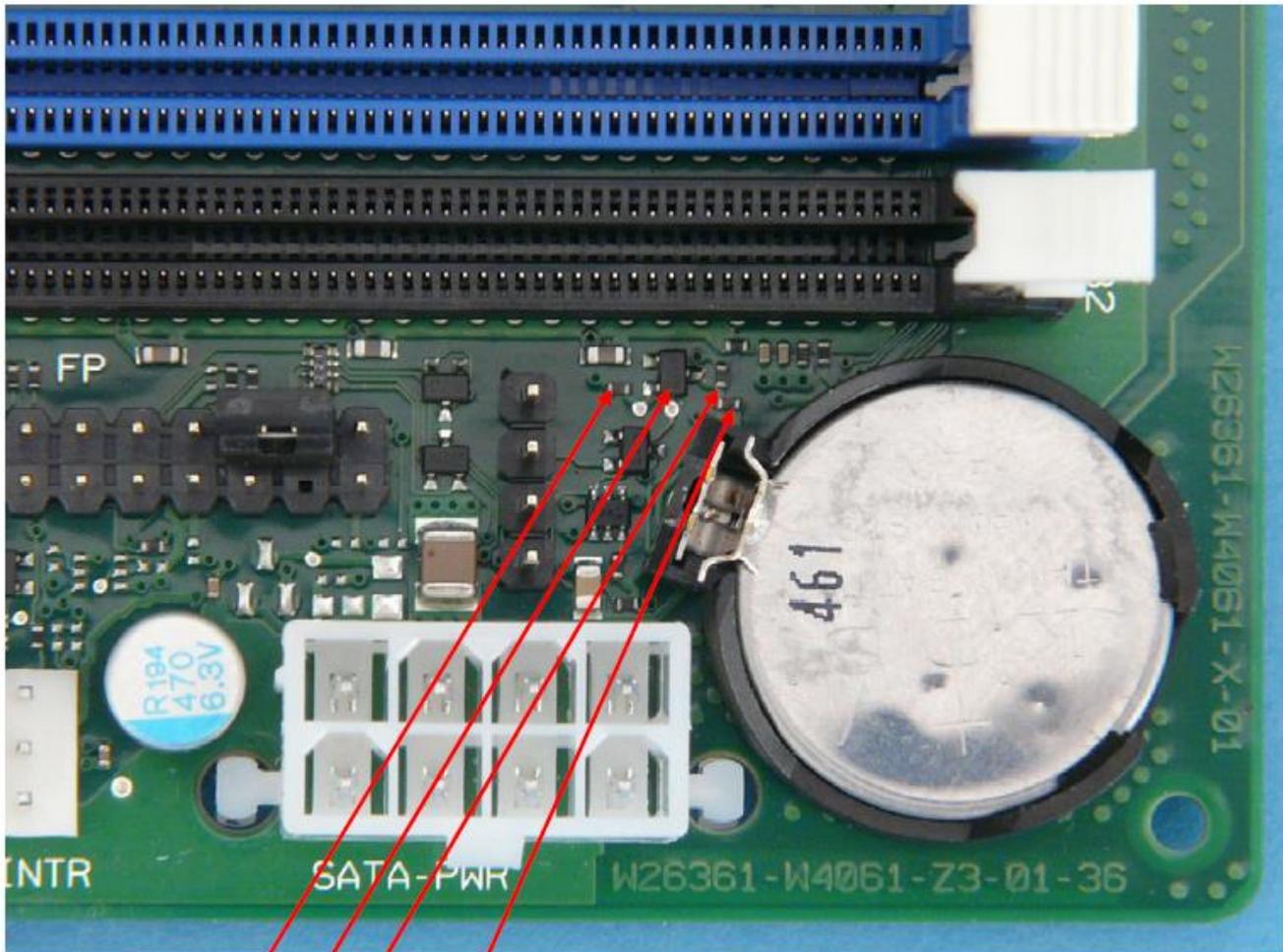


580R60, PTC
USB intern 5/6/7/8



580R10, PTC
USB intern 1/2

Location of components for battery protection

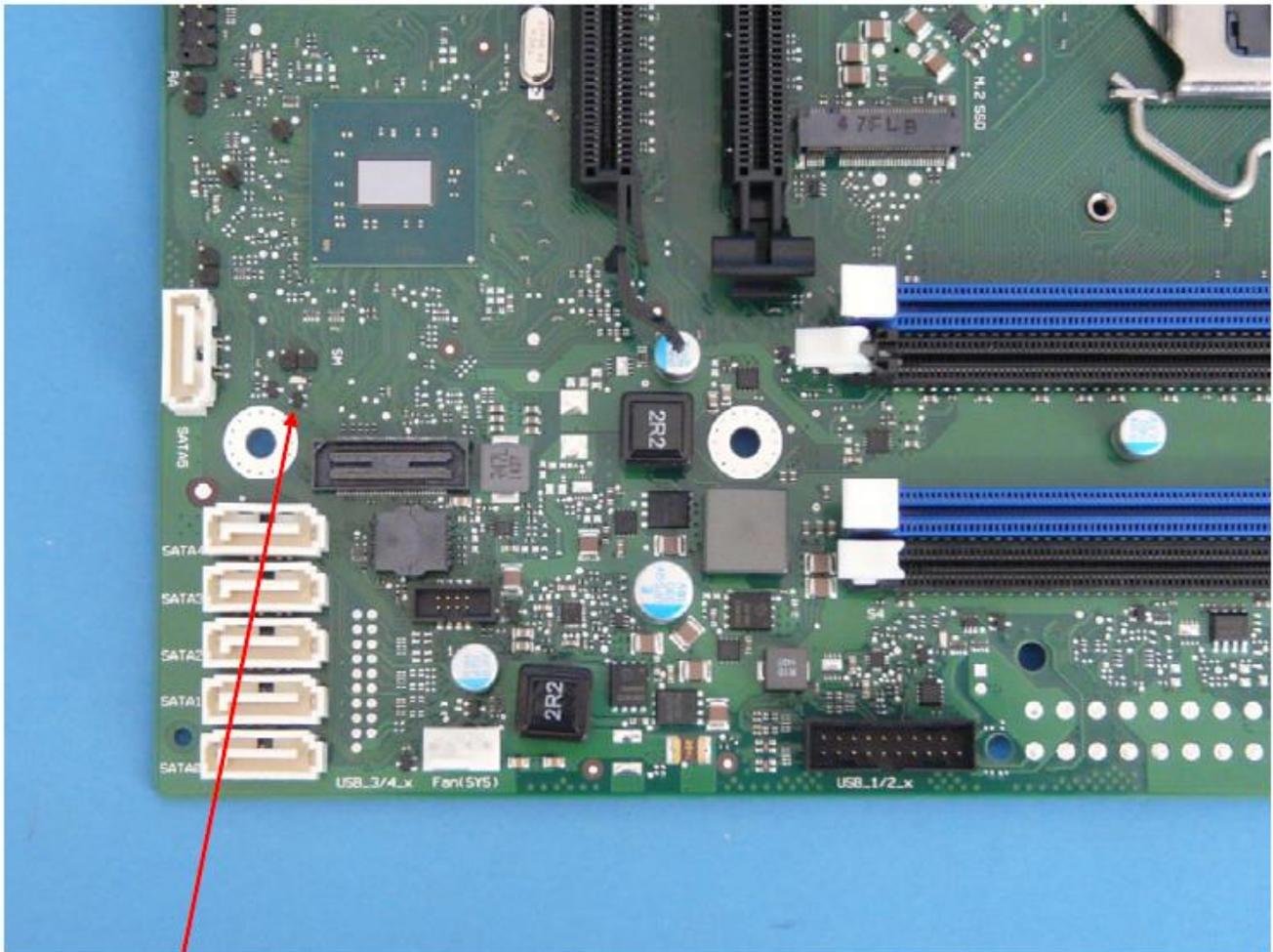


760R60

760V60

472R70

430R50



430V51



Att2 Schematics

MASTER CONTRACT: 162874

REPORT: 70043486

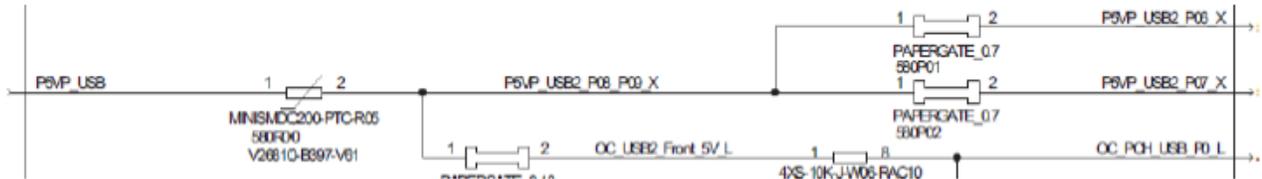
PROJECT: 70043486

<u>Page Number</u>	<u>Description</u>
Page 1	Cover page
Page 2 to 3	Excerpt of PTC protection circuits
Page 4	Excerpt of Battery protection circuits

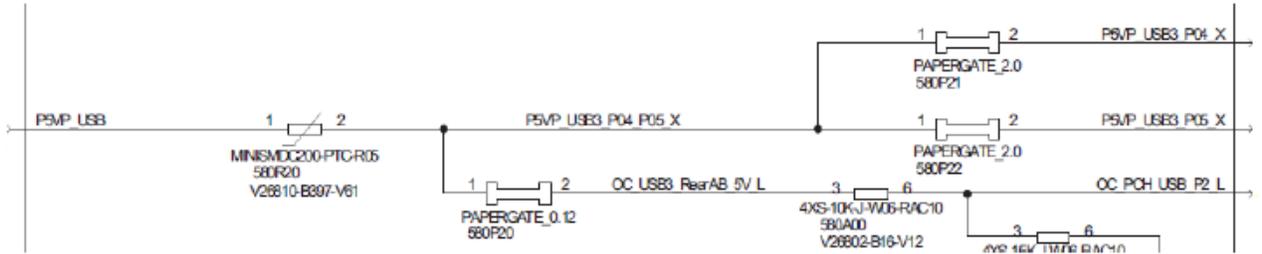
DVI



USB rear P06, P07



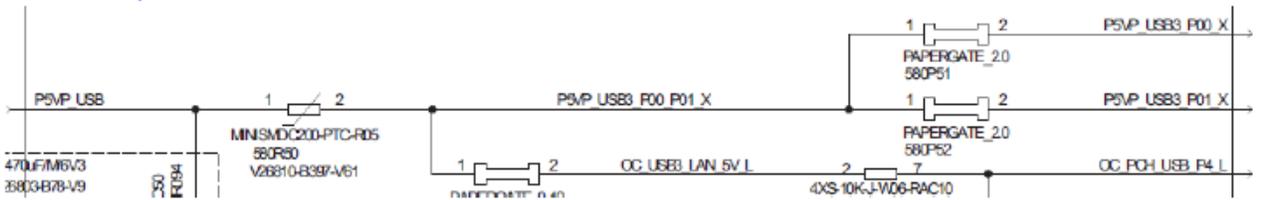
USB rear P04, P05



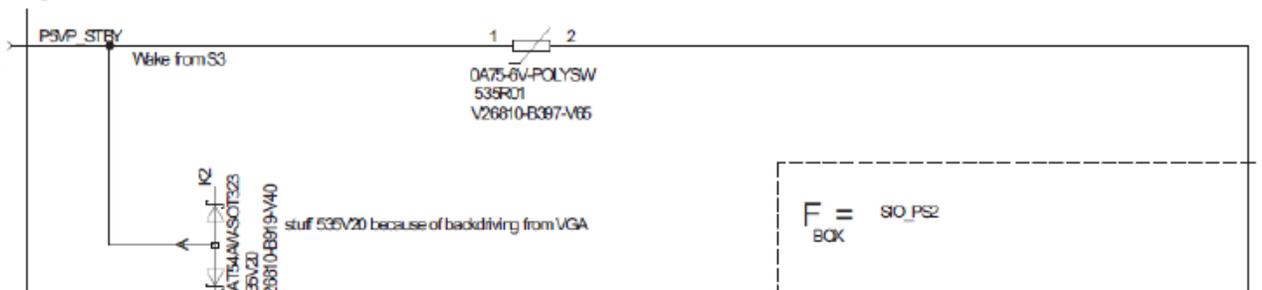
Display port



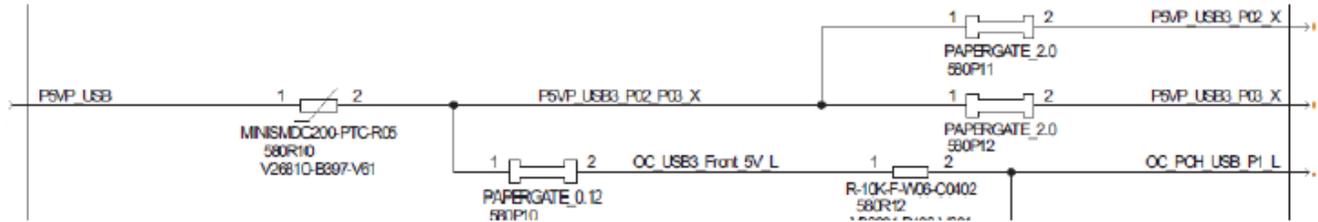
USB rear P00, P01



Keyboard, Mouse

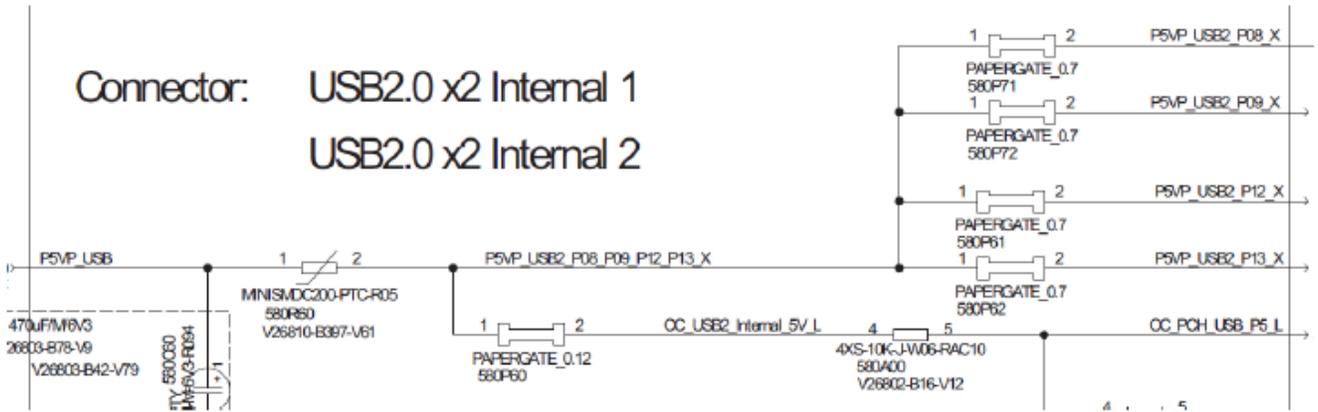


USB intern 1/2



USB intern 5/6/7/8

Connector: USB2.0 x2 Internal 1
USB2.0 x2 Internal 2



4.3.8	TABLE: Batteries	P
Battery category.....	Lithium	
Manufacturer.....	KTS / FDK	
Type / model.....	CR2032	
Voltage.....	3V	
Capacity.....	approx. 210mAh	
Tested and Certified by (incl. Ref. No.).....	UL1642 (MH20550 / MH13421)	

Circuit protection diagram:

