

November, 2011

Apple Service Diagnostics Test Results Guide for ASD 3S149

NOTE, This Guide is for informational purposes only and is not intended to be used as an official Apple repair guide. For repair you should consult the unit's specific Apple repair manual.

For the following Macintosh (Intel) CPUs:

Mac Pro (Mid 2010) Only

Mass Storage-Hard Drive

- Reseat drive cables and retest.
- Replace the drive.

Mass Storage-Optical

- Reseat drive cables and retest.
- Replace the drive.

Memory

Replace memory module or replace logic board if memory is soldered to logic board.

Processor

Rerun tests. Replace logic board if appropriate.

FireWire

Disconnect any FireWire cable connected to the unit under test and retest.

For FireWire server tests be sure that the server-.FireWire setup is correct and working properly.

If error persists, replace the Logic Board.

USB

Disconnect any USB cable connected to the unit under test and retest.

If error persists, replace the Logic Board.

Bluetooth

Check servers for proper configuration and connectivity then retest.

If error persists, replace the Logic Board.

AirPort

Check servers for proper configuration and connectivity then retest.

If error persists, replace the AirPort device or Logic Board if AirPort is on Logic Board.

Video

Replace the Logic Board (MacBook, MacBook Air, MacBook Pro)

Ethernet Controller

Disconnect any network/crossover cable connected to the unit under test and retest.

If error persists, replace the Logic Board.

Fans/Motors

Check fan electrical connection, if applicable.

Replace fan module or fan sensor.

Sensors

Check that sensor is connected, where appropriate.

Replace or repair sensor connector. If sensor is on Logic Board replace Logic Board.

SENSOR DESCRIPTIONS

Notes:

- This table is based on the best information available at time of release. If you find errors, please notify the responsible Apple engineer for correction.
- Updates for newer products will only happen if there are significant differences with earlier products.
- For a given sensor, the table on the next two pages lists the sensor and on which subassembly the sensor is located. Related components that may be contributing to the failure are listed in the small table on this page.
- Most sensors are located on the MLB and failures of those sensors will require an MLB replacement.
- Sensors located off of the MLB should have connections checked first, then the subassembly on which the sensor is located. Although rare, even these sensors may require MLB replacement.
- Not all of the listed sensors will be on a specific product.
- The upper and lower sensor limits can be found in the applications Hardware Profile menu.
- Sensor descriptions may vary from product to product.

Mac Pro (Mid 2010)

ICAC	Current	CPU A, Core Low Side (Vcore) Current
ICBC	Current	CPU B, Core Low Side (Vcore) Current
Ie1S	Current	PCIe Slot 1, 12V Current
Ie2S	Current	PCIe Slot 2, 12V Current
Ie3S	Current	PCIe Slot 3, 12V Current

Ie4S	Current	PCIe Slot 4, 12V Current
IeAS	Current	PCIe BoostA, 12V Current
IeBS	Current	PCIe BoostB, 12V Current
IH1Z	Current	HDD1, 12V Current
IH2Z	Current	HDD2, 12V Current
IH3Z	Current	HDD3, 12V Current
IH4Z	Current	HDD4, 12V Current
IO0Z	Current	ODD, 12V Current
IH5Z	Current	HDD+ODD, 5V Current
IMAS	Current	DIMM, PP1V5_S3_MEMA Current
IMBS	Current	DIMM, PP1V5_S3_MEMB Current
IN0C	Current	IOH Core, PP1V1_S0_IOH Northbridge Current
Ip0C	Current	PSU, 12V Current (PSM1)
ICAB	Current	PVTT, CPUA Current
ICBB	Current	PVTT, CPUB Current
IS1C	Current	PP1V05_S0_SB Current
IS2C	Current	PP1V5_S0_SB Current
Ip1M	Current	PP12V_S0 CPUA 240VA Main Current
Ip2M	Current	PP12V_S0 CPUB 240VA Main Current
Ip3M	Current	PP12V_S0 MEMA 240VA Main Current
Ip4M	Current	PP12V_S0 MEMB 240VA Main Current
Ip5M	Current	PP12V_S0 MLB1 240VA Main Current
Ip6M	Current	PP12V_S0 MLB2 240VA Main Current
Ip7M	Current	PP12V_S0 PCIE1 240VA Main Current
Ip8M	Current	PP12V_S0 PCIE2 240VA Main Current
TA0P	Temperature	System Ambient Temperature
TCAC	Temperature	CPU A, Core 0 Relative Temperature to ProcHot (PECI)
TCAD	Temperature	Temperature, CPU A Tdiode
TCBC	Temperature	CPU B, Core 0 Relative Temperature to ProcHot (PECI)
TCBD	Temperature	CPU B Tdiode
TCAH	Temperature	CPU A, HeatSink
TCBH	Temperature	CPU B, HeatSink
Te1S	Temperature	PCIE slot 1
Te2S	Temperature	PCIE slot 2
Te3S	Temperature	PCIE slot 3
Te4S	Temperature	PCIE slot 4
Te5S	Temperature	PCIE RAID card
TH1P	Temperature	Drive Bay 1, HDD (On Drive Carrier)
TH2P	Temperature	Drive Bay 2, HDD (On Drive Carrier)
TH3P	Temperature	Drive Bay 3, HDD (On Drive Carrier)
TH4P	Temperature	Drive Bay 4, HDD (On Drive Carrier)
TM1P	Temperature	DIMM Proximity 1 (On Riser)
TM2P	Temperature	DIMM Proximity 2 (On Riser)
TM3P	Temperature	DIMM Proximity 3 (On Riser)
TM4P	Temperature	DIMM Proximity 4 (On Riser)
TM5P	Temperature	DIMM Proximity 5 (On Riser)
TM6P	Temperature	DIMM Proximity 6 (On Riser)
TM7P	Temperature	DIMM Proximity 7 (On Riser)
TM8P	Temperature	DIMM Proximity 8 (On Riser)
TMA1	Temperature	DIMM, CPUA, SLOT1, CHA - SPD Temperature
TMA2	Temperature	DIMM, CPUA, SLOT2, CHB - SPD Temperature
TMA3	Temperature	DIMM, CPUA, SLOT3, CHC - SPD Temperature
TMA4	Temperature	DIMM, CPUA, SLOT4, CHC - SPD Temperature
TMB1	Temperature	DIMM, CPUB, SLOT5, CHA - SPD Temperature
TMB2	Temperature	DIMM, CPUB, SLOT6, CHB - SPD Temperature
TMB3	Temperature	DIMM, CPUB, SLOT7, CHC - SPD Temperature
TMB4	Temperature	DIMM, CPUB, SLOT8, CHC - SPD Temperature
TN0D	Temperature	IOH Tdiode
TN0H	Temperature	IOH, HeatSink
Tp0C	Temperature	PS, AC/DC Supply 1
Tp1C	Temperature	PS, AC/DC Supply 2
VCAC	Voltage	CPU A, Core Voltage
VCBC	Voltage	CPU B, Core Voltage
Ve1S	Voltage	PCIe Slot 1, 12V Voltage
Ve2S	Voltage	PCIe Slot 2, 12V Voltage
Ve3S	Voltage	PCIe Slot 3, 12V Voltage
Ve4S	Voltage	PCIe Slot 4, 12V Voltage
VeAS	Voltage	PCIe BoostA, 12V Voltage
VeBS	Voltage	PCIe BoostB, 12V Voltage
VH1Z	Voltage	HDD1, 12V Voltage
VH2Z	Voltage	HDD2, 12V Voltage
VH3Z	Voltage	HDD3, 12V Voltage
VH4Z	Voltage	HDD4, 12V Voltage
VO0Z	Voltage	ODD, 12V Voltage
VH5Z	Voltage	HDD+ODD, 5V Voltage
VM1S	Voltage	PP1V5_S3_MEMA Voltage
VM2S	Voltage	PP1V5_S3_MEMB Voltage
VN0C	Voltage	PP1V1_S0_IOH Northbridge Voltage
Vp0C	Voltage	PSU, 12V Voltage
VCAB	Voltage	PPVTT_S0_CPUA Voltage
VCBB	Voltage	PPVTT_S0_CPUB Voltage

VS1C	Voltage	PP1V05_S0_SB Voltage
VS2C	Voltage	PP1V5_S0_SB Voltage
VS8C	Voltage	PP3V3_S5 Voltage