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Quality and Reliability - Frequently Asked Questions

What is the ESD rating of the PCI products and what methods were followed?

Human Body Model (HBM): 2000 volts. The method used was JESD22-A114-B.
Charge Device Model (CDM): 500 volts. The method used was JESD22-C101C.

Is the device package moisture sensitive?

Yes.

What is the moisture sensitivity level (1-6) of the products?

NET2000 series family: MSL3 (except: 2252/ 2890: MSL2; 2270/ 2272/2280 TQFP packages and 2272 BGA Package): MSL4
PCI6000 series family: MSL3
PCI9000 series family: MSL3 (except: PCI9050-1F: MSL4 and PCI9030 BGA package: MSL2)
PEX8000 series family: MSL3
PEX8600 series family (PBGA package: 8604/ 8606/ 8608/ 8609/ 8614/ 8615/ 8618/ 8619): MSL3
PEX8600 series family (FCBGA package: 8612/ 8616/ 8624/ 8632/ 8647/ 8648): MSL4
PEX8600 series family (QFN & aQFN package: 8603/ 8605): MSL3
USB series family (QFN & aQFN package: 2308/ 3380/ 3382): MSL3
PLX Storage and Connectivity products (formerly Oxford Semiconductor) part numbers with the prefix OX, FW, TD: MSL3
PEX87xx series family (HFCBGA & FCBGA package): MSL4
TN20xx series family (HFCBGA package): MSL4
TN80xx series family (HFCBGA package): MSL4

What is the safe exposure time after opening the moisture bag?

1 year for Level 2 moisture sensitivity.
168 hours for Level 3 moisture sensitivity.
72 hours for Level 4 moisture sensitivity.

Does the part have to be baked prior to use?

No. If the part was baked, vacuum sealed and floor time did not exceed specified exposure time.

Does the tray meet the JEDEC standard and is it bakeable?

Yes. The tray meets the JEDEC requirements and is bakeable up to a maximum of 125°C.

How is the thermal resistance calculated?

It can be calculated from the ambient temperature Ta, the thermal resistance (Thetaj-a) of the package, and the power consumption PD.
The chip temperature (Tj) = Ta + (PD x Thetaj-a) (°C) where

- Tj = chip junction temperature
- Ta = ambient temperature
- PD = power consumption
- Thetaj-a = thermal resistance

Are all the parts qualified and are data available?

All parts have been qualified. Either specific data or "generic" data is available upon request.

How is the device qualified?

The product is submitted through various electrical and environmental tests as described in the applicable JEDEC specifications and/or MIL-STD-883.

Is generic or product-specific data available?

Yes. Both types of data are available depending on the product.

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How may I obtain generic or product-specific data?

The data is either available at www.plxtech.com or may be requested of your local PLX Sales Representative or by sending an email to QASurvey@plxtech.com. The data is considered proprietary and has limited distribution for customers who have received approval from the PLX Sales Department.

What is the FIT rate for PLX devices?

Please refer to the Qualification report or request this information via QASurvey@plxtech.com.

How often are products qualified and are there on-going product monitors?

Once the product is qualified there are subsequent monitors on a periodic basis. This monitor will usually have a subset of tests derived from the new product introduction qualification testing. Should at least any of these changes occur, a re-qualification is required:

1. New product release
2. Major process change
3. Relocation of wafer fabrication or assembly plant
4. New equipment
5. Change in wafer size
6. New process

What is the Flammability rating of the devices?

For QFP & BGA packages, the rating is UL94 V-O.

Are PLX parts Industrial temperature qualified?

In general, Yes. Industrial temperature for PLX products are -40°C to +85°C (Ta)

How are QFP leads inspected?

The leads are inspected using either by an optical or laser based lead scanner. The lead scanner inspects the leads for pitch, skew, bent leads, co-planarity and missing leads. Inspection parameters are taken directly from the product data book.

What does the part number coding mean?

field-1	field-2	field-3	field-4	field-5	field-6	field-7
XXX	XXXX	XX	XX	X	X	X or XX

1. Device Class (e.g., **PEX**8548-AA25BI G)
2. Part Number (e.g., PEX**8548**-AA25BI G)
3. Device Revision (e.g., PEX8548-**AA**25BI G)
4. Maximum Operating Frequency (in MHz) (e.g., PEX8548-AA**25**BI G)
5. Packaging Technology (B=BGA, P=PQFP) (e.g., PEX8548-AA25**B**I G)
6. Operational Temperature Range (I=industrial, C=commercial) (e.g., PEX8548-AA25B**I** G)
7. RoHS status: Lead (no suffix)/ Lead-free (suffix LF or F) or Green (suffix G) (e.g., PEX8548-AA25BI **G**: Green part)

What does the marking mean?

Line 1	PLX Logo
Line 2	PLX Part Number
Line 3	Date Codes, ESD Triangle
Line 4	Lot#, Country of Origin