PCI Express 2.0 Part Ordering Information

Application Note

Revision 0.1

January 31, 2018

PEX86XX-AN100

For a comprehensive list of changes to this document, see the Revision History.

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Chapter 1: Product Ordering Information

The Broadcom Ltd.® assembly vendor is moving from a bump printing process to a lead free bump plating process. Moving to the new bump plating process makes replacement devices fully lead free (green). This change from printing to full lead free plating has no risk as no change is being made to die silicon, substrate design, and solder ball metallurgy.

1.1 PEX86xx Parts Affected

The following table contains a listing of affected part numbers and products.

Table 1 Affected Part Numbers

Current Device Number	Replacement Device Number
PEX8636-AA50RBC F	PEX8636-AA50RBC G
PEX8664-AA50RBC F	PEX8664-AA50RBC G
PEX8680-AA50RBC F	PEX8680-AA50RBC G
PEX8612-BB50RBC F	PEX8612-BB50RBC G
PEX8616-BB50RBC F	PEX8616-BB50RBC G
PEX8624-BB50RBC F	PEX8624-BB50RBC G
PEX8624-BB50RBI F	PEX8624-BB50RBI G
PEX8632-BB50RBC F	PEX8632-BB50RBC G
PEX8648-BB50RBC F	PEX8648-BB50RBC G
PEX8648-BB50RBI F	PEX8648-BB50RBI G
PEX8649-AA50RBC F	PEX8649-AA50RBC G
PEX8696-AA50RBC F	PEX8696-AA50RBC G

NOTE Datasheet information for PEX86xx_xxxxRBC F parts also applies to the PEX86xxx_xxxxRBC G parts.

1.2 Reason for Change

This update is driven by changes in environmental laws in many countries, customers' desire to move to full lead-free compliance, and leaded processes going obsolete and being underutilized.

1.3 Effects of Change

Device fit, form, function and quality of the product are not affected by this change. The device specification remains the same, which ensures that the product electrical and functional performance remains the same.

Current data sheets and other collateral apply to new devices as well. Broadcom will not issue a new Data Sheet but this Data Sheet Addendum with new part numbers and ordering information will be used.

Broadcom has favorable reference reliability data of products using the same process. No adverse reliability and performance is expected.

1.4 Effective Dates

Table 2 Effective Ordering Dates

Ordering and Shipments	Revised Dates
Last time order/buy (LTB) with current part #s	January 8, 2018
Current parts (printing process) production stops	April 30, 2018
Last time ship (LTS) for current part #s with printing process	June 30, 2018
New replacement part #s with full lead-free plating process shipment start	June 1, 2018

1.5 Product Ordering Information

An example of PCIe switch product ordering information and chip marking is explained in the following table.

Table 3 Product Ordering Information Description

Part Number	Description
PEX8696-AA50RBC F	PEX8696: 96-lane, 24-port PCI Express, Gen2, multi-root switch (5.0 GT/s). 1156-ball HFCBGA enhanced noise immunity 35x35 mm^2 package; RoHS **NOTE** This part will be obsolete after June 30, 2018.
PEX8696-AA50RBC G where:	PEX8696: 96-lane, 24-port PCI Express, Gen2, multi-root switch (5.0 GT/s). 1156-ball HFCBGA enhanced noise immunity 35x35 mm^2 package; RoHS and Green PEX PCI Express product family 8696 Part number AA Silicon revision 50 Signal rate (5.0 GT/s) R Enhanced Noise immunity B Flip-chip ball grid array C Commercial temperature F Lead-free second level interconnect (2LI) solder bump, first level interconnect (FLI) contains lead per the RoHS exemption for flip-chip parts G Lead-free (RoHS 6/6 and Green compliant)

NOTE Datasheet information for the PEX86xx_xxxxRBC F parts also applies to the PEX86xxx_xxxxRBC G parts.

Appendix A: Revision History

Advance, Revision 0.1, January 24, 2018

Initial document release.

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