

# **Package Qualification Report**

Reliability By Design

### **Qualification Description:**

The information contained herein represents proof of Reliability and Performance of the Package Series listed below in accordance with the Qualification Plan and test methods referenced in Section 7.0, after exposure to a variety of environments and mechanical events that occur during installation and operational lifetime of the product. Upon conclusion of the testing the product continued to operate within specification limits, demonstrating its capability of reliable operation throughout its lifetime.

The purpose of this report is to present Qualification Test results of the referenced Package Series. The Pericom product data presented in this report qualifies the products manufactured in this package configuration, using the same bill of materials and assembled by the identified subcontractor location. The report describes the qualification test program, procedures utilized, criteria enforced (at the time of product validation), and specific result data obtained during the testing of three lots of semiconductors. The three lots consist of an equal number of units from different date codes, from the same production line and SubContractor to ensure manufacturing repeatability.

### Lot Background Information:

Qual Part Number:	PI2EQX5804CNJE
Supplier (Code):	ASEM (B)
Pkg Type - Code:	LBGA-100 (NJ100)
Outline Drawing:	PD-2055
By Extension Pkg:	none

Qual Test Date: Die Attach Material: Wire Size & Material: Mold Compound: Leadframe Material: Lead Finish:

Aug-2010 updated Dec-2011		
Abelbond 2100A		
0.8 mil Gold		
mold compound		
BT Substrate		
Sn/Ag/Cu Balls (96.5/3.0/0.5)		

## Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Preconditioning	JESD22-A113	MSL3	NA	1 1	100 40	100 / 0 40 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	1 1	20 20	20 / 0 20 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	1	10	10 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	1	10	10 / 0
		-65°C to +150°C 500 Cycles	500 cycles	1	10	10 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	1	10	10 / 0
		1000hrs, 0V, 150°C	1000 hrs	1	10	10 / 0
Physical Dimension	JESD22-B100	Per Datasheeet	NA	3	5	5/0
External Visual Insp	JESD22-B101	NA	NA	3	5	5/0

### **Qualificaton by Extension Information:**

Where a product of interest is not sampled during this period, it is valid to use the reliability data of the particular process technology or package type family to which the part belongs. All parts within the same family are designed to the same rules, and manufacturing is controlled by SPC. Within a product family, a device can only be fabricated on one process technology/ option, and only assembled on one package type process.

If there are any questions about this qualification, please contact Quality Support at:

customerquestion@pericom.com

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DKC Type & Code: I BCA 100 (N 1100)	Date:
PKG Type & Code: LBGA-100 (NJ100)	PKG Type & Code:
Assembler-Code: ASEM (B)	Assembler-Code:
Qual Device: PI2EQX5804CNJE	Qual Device:

By extension: Pericom active devices using the Fab/Process at the time of the Qualification:

		-	
PI2EQX5804CNJE	PI2EQX5904NJE		
PI2EQX5804CNJE	PI2EQX5904NJEX		
PI2EQX5804CNJEX	PI2EQX6804-ANJE		
PI2EQX5804CNJEX	PI2EQX6804-ANJE		
PI2EQX5804DNJE	PI2EQX6804-ANJEX		
PI2EQX5804DNJEX	PI2EQX6804-ANJEX		
PI2EQX5904NJE	PI2EQX6814NJE		
PI2EQX5904NJEX	PI2EQX6814NJEX		
PI2EQX6804-ANJE			
PI2EQX6804-ANJE			
PI2EQX6804-ANJEX			
PI2EQX6804-ANJEX			
PI2EQX6814NJE			
PI2EQX6814NJEX			
PI2EQX5804CNJE			
PI2EQX5804CNJE			
PI2EQX5804CNJEX			
PI2EQX5804CNJEX			
PI2EQX5804DNJE			
PI2EQX5804DNJEX			
PI2EQX5904NJE			
PI2EQX5904NJEX			
PI2EQX6804-ANJE			
PI2EQX6804-ANJE			
PI2EQX6804-ANJEX			
PI2EQX6804-ANJEX			
PI2EQX6814NJE			
PI2EQX6814NJEX			
PI2EQX5804CNJE			
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