

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:	PI5LVD512AE
Supplier (Code):	GTK (G)
Pkg Type - Code:	TSSOP-64 (A64)
Outline Drawing:	PD-1503
By Extension Pkg:	A56 A48

Qual Test Date:	Nov-2008
Die Attach Material:	Ablestick 8340
Wire Size & Material:	1.0 mil Gold
Mold Compound:	EME G700LY
Leadframe Material:	Copper
Lead Finish:	Matte Sn

Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Preconditioning	JESD22-A113	MSL1	NA	3	100	300 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	5	15 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	3	50	150 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	3	50	150 / 0
		-65°C to +150°C 500 Cycles	500 cycles	3	50	150 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	2	6 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	15 / 0
Solderability	J-STD-020 JESD22-B102	Pb-Free Solder Dip 245°C	NA	3	2	6 / 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

Date: Nov-2008
 PKG Type & Code: TSSOP-64 (A64)
 Assembler-Code: GTK (G)
 Qual Device: PI5LVD512AE

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

PI3B16209AEX	PI74LPT16245AAEX		
PI3B16232AEX	PI74LPT16245AEX		
PI3B16233AEX	PI74LPT16245CAEX		
PI3B16244AEX	PI74SSTV16857A+AVX		
PI3B16245AEX	PI74SSTV16857AEX		
PI3B16292AEX	PI74SSTVF16857AEX		
PI3DBV40AEX	PI90LVT386AEX		
PI3L301DAE+CHX			
PI3L301DAEX			
PI3USB40AEX			
PI4ULS3V16AEX			
PI5C16210AEX			
PI5C16211AEX			
PI5C16245AEX			
PI5C16861AEX			
PI6C20800BAEX			
PI6C20800BIAEX			
PI6C20800SAEX			
PI6C20800SIAEX			
PI6C21200AEX			
PI6C410BAX			
PI6C49003AEX			
PI6C49004AEX			
PI6CV857AEX			
PI6CVF857AEX			
PI74ALVCHR162245AEX			
PI74ALVTC16244AEX			
PI74ALVTC16245AEX			
PI74AVC+16836AEX			
PI74AVC164245AAEX			
PI74AVC164245AE			
PI74AVC164245LAAEX			
PI74FCT162245ATAEX			
PI74FCT16244ATAEX			
PI74FCT16244TAEX			
PI74FCT16245ATAEX			
PI74FCT16245TAEX			
PI74HSTL1212AEX			
PI74LCX16244AEX			
PI74LCX16245AEX			
PI74LPT16244AEX			
PI74LPT16244CAEX			
PI74SSTV16859AEX			

Date: Oct-2007 updated Dec-2012
 PKG Type & Code: TSSOP (A64 and A56)
 Assembler-Code: OSE (O)
 Qual Vehicle: Generic Die (A64) Generic Die (A56)

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

PI3B16209AE	PI6C49003AE	PI74LPT16245CAE		
PI3B16209AEX	PI6C49003AEX	PI74LPT16245CAEX		
PI3B16232AE	PI6C49004AE	PI74LPT16374CAEX		
PI3B16232AEX	PI6C49004AEX	PI74SSTV16857A+AV		
PI3B16233AE	PI6CV857AE	PI74SSTV16857A+AVX		
PI3B16233AEX	PI6CV857AEX	PI74SSTV16857AE		
PI3B16244AE	PI6CVF857AE	PI74SSTV16857AEX		
PI3B16244AEX	PI6CVF857AEX	PI74SSTVF16857AE		
PI3B16245AE	PI74ALVCHR162245AE	PI74SSTVF16857AEX		
PI3B16245AEX	PI74ALVCHR162245AEX	PI74HSTL1212AE		
PI3B16292AE	PI74ALVTC16244AE	PI74HSTL1212AEX		
PI3B16292AEX	PI74ALVTC16244AEX	PI90LVT386AE		
PI3DBV40AE	PI74ALVTC16245AE	PI90LVT386AEX		
PI3DBV40AE+CH	PI74ALVTC16245AEX			
PI3DBV40AE+CHX	PI74AVC+16836AE			
PI3DBV40AEX	PI74AVC+16836AEX			
PI3L301DAE	PI74AVC164245AAE			
PI3L301DAE+CH	PI74AVC164245AAEX			
PI3L301DAE+CHX	PI74AVC164245AE			
PI3L301DAEX	PI74AVC164245AEX			
PI3USB40AE	PI74AVC164245LAAE			
PI3USB40AEX	PI74AVC164245LAAEX			
PI4ULS3V16AE	PI74FCT162245ATAE			
PI4ULS3V16AEX	PI74FCT162245ATAEX			
PI5C16210AE	PI74FCT16244ATAE			
PI5C16210AEX	PI74FCT16244ATAEX			
PI5C16211AE	PI74FCT16244TAE			
PI5C16211AEX	PI74FCT16244TAEX			
PI5C16245AE	PI74FCT16245ATAE			
PI5C16245AEX	PI74FCT16245ATAEX			
PI5C16861AE	PI74FCT16245TAE			
PI5C16861AEX	PI74FCT16245TAEX			
PI6C20800BAE	PI74LCX16244AE			
PI6C20800BAEX	PI74LCX16244AEX			
PI6C20800BIAE	PI74LCX16245AE			
PI6C20800BIAEX	PI74LCX16245AEX			
PI6C20800SAE	PI74LPT16244AE			
PI6C20800SAEX	PI74LPT16244AEX			
PI6C20800SIAE	PI74LPT16244CAE			
PI6C20800SIAEX	PI74LPT16244CAEX			
PI6C21200AE	PI74LPT16245AAE			
PI6C21200AEX	PI74LPT16245AAEX			
PI6C410BAE	PI74LPT16245AE			
PI6C410BAEX	PI74LPT16245AEX			

Package Qualification Report

Reliability By Design

Qualification Description:

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Lot Background Information:

Qual Part Number:	Internal Generic PN (A64) PI5C16211A (A56)
Supplier (Code):	SPEL (X)
Pkg Type - Code:	TSSOP (A64) and (A56)
Outline Drawing:	PD-1503 and PD-1502
By Extension Pkg:	A48

Qual Test Date:	Mar-2005 update Dec-2012
Die Attach Material:	CRM 1076NS
Wire Size & Material:	1.0 mil Gold
Mold Compound:	G600
Leadframe Material:	Copper
Lead Finish:	100% Matte Sn

Pericom's Qualification Test Results:

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Precondition-Generic PN (A64) Precondition-PI5C16211A (A56)	JESD22-A113	MSL1	NA	1 3	275 175	275 / 0 175 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	4	11	11 / 0
Autoclave - Generic PN (A64) Autoclave - PI6C16211A (A56)	JESD22-A1	121°C, RH 100%, 29.7psig, 0V	168 hrs	1 3	77	77 / 0
PreCon Temp Cycle (A64 & A56)	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	4	77	77 / 0
		-65°C to +150°C 500 Cycles	500 cycles	4	77	77 / 0
HTSL - no PreCon (A64 & A56)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	4	77	77 / 0
		1000hrs, 0V, 150°C	1000 hrs	4	77	77 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	2	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	2	5	5 / 0
Terminal Strength	JESD22-B105	90° Bends, 2 bend min.	NA	2	3	3 / 0
Solderability	J-STD-020 JESD22-B102	Pb-Free Solder Dip 245°C	NA	2	5	5 / 0

Qualification by Extension Information:

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customerquestion@pericom.com

Date: Mar-2005 update Dec-2012
 PKG Type & Code: TSSOP (A64) and (A56)
 Assembler-Code: SPEL (X)
 Qual Device: Internal Generic PN, PI6C21200AE

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

PI3B16209AE	PI6C49003AE	PI74LPT16245CAE	
PI3B16209AEX	PI6C49003AEX	PI74LPT16245CAEX	
PI3B16232AE	PI6C49004AE	PI74LPT16374CAEX	
PI3B16232AEX	PI6C49004AEX	PI74SSTV16857A+AV	
PI3B16233AE	PI6CV857AE	PI74SSTV16857A+AVX	
PI3B16233AEX	PI6CV857AEX	PI74SSTV16857AE	
PI3B16244AE	PI6CVF857AE	PI74SSTV16857AEX	
PI3B16244AEX	PI6CVF857AEX	PI74SSTVF16857AE	
PI3B16245AE	PI74ALVCHR162245AE	PI74SSTVF16857AEX	
PI3B16245AEX	PI74ALVCHR162245AEX	PI74HSTL1212AE	
PI3B16292AE	PI74ALVTC16244AE	PI74HSTL1212AEX	
PI3B16292AEX	PI74ALVTC16244AEX	PI90LVT386AE	
PI3DBV40AE	PI74ALVTC16245AE	PI90LVT386AEX	
PI3DBV40AE+CH	PI74ALVTC16245AEX		
PI3DBV40AE+CHX	PI74AVC+16836AE		
PI3DBV40AEX	PI74AVC+16836AEX		
PI3L301DAE	PI74AVC164245AAE		
PI3L301DAE+CH	PI74AVC164245AAEX		
PI3L301DAE+CHX	PI74AVC164245AE		
PI3L301DAEX	PI74AVC164245AEX		
PI3USB40AE	PI74AVC164245LAAE		
PI3USB40AEX	PI74AVC164245LAAEX		
PI4ULS3V16AE	PI74FCT162245ATAE		
PI4ULS3V16AEX	PI74FCT162245ATAEX		
PI5C16210AE	PI74FCT16244ATAE		
PI5C16210AEX	PI74FCT16244ATAEX		
PI5C16211AE	PI74FCT16244TAE		
PI5C16211AEX	PI74FCT16244TAEX		
PI5C16245AE	PI74FCT16245ATAE		
PI5C16245AEX	PI74FCT16245ATAEX		
PI5C16861AE	PI74FCT16245TAE		
PI5C16861AEX	PI74FCT16245TAEX		
PI6C20800BAE	PI74LCX16244AE		
PI6C20800BAEX	PI74LCX16244AEX		
PI6C20800BIAE	PI74LCX16245AE		
PI6C20800BIAEX	PI74LCX16245AEX		
PI6C20800SAE	PI74LPT16244AE		
PI6C20800SAEX	PI74LPT16244AEX		
PI6C20800SIAE	PI74LPT16244CAE		
PI6C20800SIAEX	PI74LPT16244CAEX		
PI6C21200AE	PI74LPT16245AAE		
PI6C21200AEX	PI74LPT16245AAEX		
PI6C410BAE	PI74LPT16245AE		
PI6C410BAEX	PI74LPT16245AEX		