

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 Vehicle:	PI3V712-AZLE
Supplier (Code):	GTK (G)
Pkg Type - Code:	TQFN-32 (ZL32)
Outline Drawing:	PD-2044
By Extension Pkg:	ZD20 ZE10

Qual Test Date:	Jan-2015
Die Attach Material:	1076DJ-G
Wire Size & Material:	0.8mil PdCu
Mold Compound:	G700HA
Leadframe Material:	A194 Copper
Lead Finish:	NiPdAu (PPF)

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	154	462 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	22	66 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	3	77	231 / 0
PreCon BHAST	JESD22-A110	130°C, RH 85%, 33.3 psia, 1.2V	96 hrs	3	15	45 / 0
	using PI2EQX5984ZLE (2014)	130°C, RH 85%, 33.3 psia, 1.2V	192 hrs	3	15	45 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	3	77	231 / 0
		-65°C to +150°C 500 Cycles	500 cycles	3	77	231 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Physical Dimension	JESD22-B100	NA	NA	3	10	30 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	15 / 0
Solderability	J-STD-020	Pb-Free Solder Dip 245°C	NA	1	3	3 / 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. Refer to Appendix A for a list of devices qualified by extension.

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

customerquestion@pericom.com

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Date: Jan-2015
 PKG Type & Code: TQFN-32 (ZL32) QBE: ZD20 ZE10
 Assembler-Code: GTK (G)
 Qual Vehicle: PI3V712-AZLE

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

ZL32 Part Numbers	ZD20 Part Numbers	ZE10 Part Numbers		
PI3HDMI511AZLE	PI2EQX4951SLZDE	PI3EQX7745AIZEE		
PI3HDMI511AZLEX	PI2EQX4951SLZDEX	PI3EQX7745AIZEEEX		
PI3HDMI511ZLE	PI2EQX6741SLZDE	PI3EQX7745AZEE		
PI3HDMI511ZLEX	PI2EQX6741SLZDEX	PI3PD22919ZEE		
PI3HDMI611ZLE	PI2EQX6811ZDE	PI3PD22920ZEE		
PI3HDMI611ZLEX	PI2EQX6811ZDEX	PI3PD22924CZEE		
PI3USB3102ZLE	PI3EQX4951STZDE	PI3PD22925CZEE		
PI3USB3102ZLEX	PI3EQX4951STZDEX	PI3USB221ZEE		
PI3V713-AZLE	PI3EQX5701ZDE	PI3USB221ZEEEX		
PI3V713-AZLEX	PI3EQX5701ZDEX	PI3VST01ZEE		
PI3V724ZLE	PI3EQX5801ZDE	PI3VST01ZEEEX		
PI3V724ZLEX	PI3EQX5801ZDEX	PI5USB14550-AZEE		
PI3VDP3212ZLE	PI3EQX6741STZDE	PI5USB14550-AZEEEX		
PI3VDP3212ZLEX	PI3EQX6741STZDEX	PI5USB14550ZEE		
PI3VEDP212ZLE	PI3EQX6801ZDE			
PI3VEDP212ZLEX	PI3EQX6801ZDEX			
PI4ULS3V08MZLE	PI3EQX6852BZDE			
PI4ULS3V08MZLEX	PI3EQX6852BZDEX			
PI4ULS3V08MZLE	PI3EQX7711ZDE			
PI4ULS3V08MZLEX	PI3EQX7711ZDEX			
	PI3EQX7741AIZDE			
	PI3EQX7741AIZDEX			
	PI3EQX7841ZDE			
	PI3EQX7841ZDEX			
	PI6PCIEB24ZDE			
	PI6PCIEB24ZDEX			

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Lot Background Information:

Qual Vehicle:	PI2LVD412ZHE
Supplier (Code):	ASEN (L)
Pkg Type - Code:	TQFN-42 (ZH42)
Outline Drawing:	PD-2035
By Extension Pkg:	ZD20

Qual Test Date:	Nov-2011 updated Jan-2013
Die Attach Material:	QMI519
Wire Size & Material:	1.0 mil PdCu
Mold Compound:	G770HCD
Leadframe Material:	Copper
Lead Finish:	PPF

Date Codes: 1125

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	154	462 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	22	66 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	3	77	231 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	3	77	231 / 0
		-65°C to +150°C 500 Cycles	500 cycles	3	77	231 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Wire Strength, IMG		After 1000 hours HTSL	NA	3	2	6 / 0
Splash, Cratering		After Wire bonding	NA	3	3	9 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	15 / 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	5	15 / 0

Qualification 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-2011 updated Jan-2013
 PKG Type & Code: TQFN-42 (ZH42) QBE: ZD20
 Assembler-Code: ASEN (L)
 Qual Vehicle: PI2LVD412ZHE

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

PI2DBS412ZHE	PI3VDP612-AZHE	PI2EQX4951SLAZDE	
PI2DBS412ZHEX	PI3VDP612-AZHEX	PI2EQX4951SLZDE	
PI2LVD412ZHE	PI3VDP612ZHE	PI2EQX6741SLZDE	
PI2LVD412ZHEX	PI3VDP612ZHEX	PI2EQX6811ZDE	
PI2PCIE2412ZHE		PI3EQX4951BZDE	
PI2PCIE2412ZHEX		PI3EQX4951STAZDE	
PI2PCIE2422ZHE		PI3EQX4951STZDE	
PI2PCIE2422ZHEX		PI3EQX5701ZDE	
PI2PCIE412-CZHE		PI3EQX5801ZDE	
PI2PCIE412-CZHEX		PI3EQX6701CYZDE	
PI2PCIE412-DZHE		PI3EQX6701CYZDEX	
PI2PCIE412-DZHEX		PI3EQX6701CZDE	
PI3EQX7742IZHE		PI3EQX6701CZZDE	
PI3EQX7742IZHE		PI3EQX6701CZZDEX	
PI3EQX7742IZHEX		PI3EQX6701DZDE	
PI3EQX7742IZHEX		PI3EQX6701DZZDE	
PI3HDMI101-BZHE		PI3EQX6701DZZDEX	
PI3HDMI101-BZHEX		PI3EQX6701EZDE	
PI3HDMI101ZHE		PI3EQX6701EZZDE	
PI3HDMI101ZHEX		PI3EQX6701EZZDEX	
PI3HDMI412FT-AZHE		PI3EQX6701ZDE	
PI3HDMI412FT-AZHEX		PI3EQX6701ZZDE	
PI3HDMI412FT-BZHE		PI3EQX6701ZZDEX	
PI3HDMI412FT-BZHEX		PI3EQX6741STZDE	
PI3HDMI412FTZHE		PI3EQX6741STZDEX	
PI3HDMI412FTZHEX		PI3EQX6801ZDE	
PI3HDMI412ZHE		PI3EQX6801ZDEX	
PI3HDMI412ZHEX		PI3EQX6852BZDE	
PI3LVD412ZHE		PI3EQX6852BZDEX	
PI3LVD412ZHEX		PI3EQX7711ZDE	
PI3LVD512ZHE		PI3EQX7741AIZDE	
PI3LVD512ZHEX		PI3EQX7741AIZDEX	
PI3PCIE2415-AZHE		PI3EQX7741IZDE	
PI3PCIE2415-AZHEX		PI3EQX7741IZDEX	
PI3PCIE2415ZHE		PI3EQX7741STAZDE	
PI3PCIE2415ZHEX		PI3EQX7741STAZDEX	
PI3PCIE3412ZHE		PI3EQX7741STZDE	
PI3PCIE3412ZHEX		PI3EQX7741STZDEX	
PI3PCIE3415ZHE		PI3EQX7841ZDE	
PI3PCIE3415ZHEX		PI3EQX7841ZDEX	
PI3PCIE3422ZHE		PI6PCIEB24ZDE	
PI3PCIE3422ZHEX			
PI3VDP101LSZHE			
PI3VDP101LSZHEX			

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Lot Background Information:

Qual Vehicle:	PI5PD2561ZEE, PI5PD2561AZEE, PI5PD2560AZEE	Qual Test Date:	Aug 2014
Supplier (Code):	JCET (J) formerly CJE	Die Attach Material:	8290
Pkg Type - Code:	TDFN3X3-10L (ZE10)	Wire Size & Material:	2.0mil Cu wire
Outline Drawing:	PD-2092	Mold Compound:	G770HCD
By Extension Pkg:	ZC08, ZE08	Leadframe Material:	Copper
		Lead Finish:	100% matte tin
		Date Codes:	Z1351JG, Z1352JG

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	253	759 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	22	66 / 0
PreCon Autoclave	JESD22-A102	121°C, RH 100%, 29.7 psia	96 hrs	3	77	231 / 0
PreCon BHAST	JESD22-A110	121°C, RH 100%, 29.7 psia, Vmax	96 hrs	3	77	231 / 0
PreCon Temp Cycle	JESD22-A104	-55°C to +150°C	500 cycles	3	77	231 / 0
		-55°C to +150°C	1000 cycles	3	77	231 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	3	77	231 / 0
		1000hrs, 0V, 150°C	1000 hrs	3	77	231 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	15 / 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	5	15 / 0

Qualificaton by Extension Information:

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Date: Aug 2014
 Subject: Pericom Package Qualification Report
 Qual Vehicle: PI5PD2561ZEE, PI5PD2561AZEE,PI5PD2560AZEE

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

PI5PD2560ZEE					
PI5PD2560AZEE					
PI5PD2561ZEE					
PI5PD2561AZEE					
PI5PD2556ZCE					
PI5PD2557ZCE					
PT7C4311ZEE					
PT7C4337ZEE					
PT8A2803ZEE					
PI6ULS5V9306ZEE					
PI6ULS5V9517AZEE					
PT7C4337ZEE					
PT7C4311ZEE					
PI6ULS5V9617AZEE					
PI6ULS5V9515AZEE					
PI5A221BZEE					