

**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:	PI2PCIE2412ZHE
Supplier (Code):	GTK (G)
Pkg Type - Code:	TQFN-42 (ZH42)
Outline Drawing:	PD-2035
By Extension Pkg:	ZH32

Qual Test Date:	Nov-2010
Die Attach Material:	CRM 1076DJ-G
Wire Size & Material:	0.8 mil Gold
Mold Compound:	Sumitomo G770HJ
Leadframe Material:	Copper (A194)
Lead Finish:	PPF (NiPdAu)

Date Codes: 1034GG

**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	154 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	22	22 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	3	77	77 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	3	77	77 / 0
		-65°C to +150°C 500 Cycles	500 cycles	3	77	77 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	5 / 0
Solderability	J-STD-020	Pb-Free Solder Dip 245°C	NA	3	5	5 / 0
	JESD22-B102					

**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](mailto:customerquestion@pericom.com)

Date: Nov-2010

PKG Type & Code: TQFN-42 (ZH42)

Assembler-Code: GTK (G)

Qual Device: PI2PCIE2412ZHE

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

PI2DBS412ZHEX			
PI2EQX5801CZHEX			
PI2LVD412ZHEX			
PI2PCIE2214ZHEX			
PI2PCIE2412ZHEX			
PI2PCIE2422ZHEX			
PI2PCIE2442ZHEX			
PI2PCIE2452ZHEX			
PI2PCIE412-CZHEX			
PI2PCIE412-DZHEX			
PI2PCIE412ZHEX			
PI2VDP412ZHEX			
PI3EQX7702ZHEX			
PI3HDMI101-AZHEX			
PI3HDMI101-BZHEX			
PI3HDMI101SZHEX			
PI3HDMI101ZHEX			
PI3HDMI213-AZHEX			
PI3HDMI214-AZHEX			
PI3HDMI412-AZHEX			
PI3HDMI412FT-AZHEX			
PI3HDMI412FT-BZHEX			
PI3HDMI412FT-CZHEX			
PI3HDMI412FTZHEX			
PI3HDMI412ZHEX			
PI3L720ZHEX			
PI3LVD412ZHEX			
PI3LVD4889ZHEX			
PI3PCIE2415-AZHEX			
PI3PCIE2415ZHEX			
PI3PCIE3412ZHEX			
PI3PCIE3415ZHEX			
PI3PCIE3442ZHEX			
PI3PCIE3462ZHEX			
PI3VDP101LSZHEX			
PI3VDP411LSTZHEX			
PI3VDP411LSZHEX			
PI3VDP412ZHEX			
PI3VDP611LSZHEX			
PI3VDP612-AZHEX			
PI3VDP612ZHEX			

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**Lot Background Information:**

Qual Part Number:	PI3PCIE2612-AZFE
Supplier (Code):	SPEL (X)
Pkg Type - Code:	TQFN-56 (ZF56)
Outline Drawing:	PD-2024
By Extension Pkg:	ZF36, ZH42, ZH32

Qual Test Date:	Dec-2008 update Apr-2011
Die Attach Material:	AbleBond 8006NS
Wire Size & Material:	1.0 mil Gold
Mold Compound:	CEL9220ZHF10L
Leadframe Material:	Copper
Lead Finish:	PPF

Date Codes: 0811XG, 0818XG, 0819XG

**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	180	180 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	5	5 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	3	77	77 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	3	77	77 / 0
		-65°C to +150°C 500 Cycles	500 cycles	3	77	77 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	3	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	5 / 0
Solderability	J-STD-020	Pb-Free Solder Dip 245°C	NA	3	5	5 / 0
	JESD22-B102					

**Qualification by Extension Information:**

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**Lot Background Information:**

Qual Part Number:	PI3HDMI412ZHE PI3HDMI412-AZHE	Qual Test Date:	Jul-2007 updated Aug-2011
Supplier (Code):	UTL (Z)	Die Attach Material:	8200T
Pkg Type - Code:	TQFN-42 (ZH42)	Wire Size & Material:	1.0 mil Gold
Outline Drawing:	PD-2035	Mold Compound:	EME G770HCD
By Extension Pkg:	ZH32	Leadframe Material:	Copper
		Lead Finish:	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	2	154	154 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	2	22	22 / 0
Autoclave	JESD22-A1	121°C, RH 100%, 29.7psig, 0V	168 hrs	1	76	76 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	2	76	76 / 0
		-65°C to +150°C 500 Cycles	500 cycles	2	76	76 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	500 hrs	1	76	76 / 0
		1000hrs, 0V, 150°C	1000 hrs	1	76	76 / 0
Physical Dimension	JESD22-B100	Per Datasheet	NA	2	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	2	5	5 / 0

**Qualification by Extension Information:**

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Date: Jul-2007 updated Aug-2011

PKG Type & Code: TQFN-42 (ZH42)

Assembler-Code: UTL (Z)

Qual Device: PI3HDMI412ZHE PI3HDMI412-AZHE

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

PI2DBS412ZHE	PI3LVD512ZHE		
PI2DBS412ZHEX	PI3LVD512ZHEX		
PI2EQX3431ZHE	PI3PCIE2415-AZHE		
PI2EQX3431ZHEX	PI3PCIE2415-AZHEX		
PI2LVD412ZHE	PI3PCIE2415ZHE		
PI2LVD412ZHEX	PI3PCIE2415ZHEX		
PI2PCIE2214ZHE	PI3PCIE3412ZHE		
PI2PCIE2214ZHEX	PI3PCIE3412ZHEX		
PI2PCIE2412ZHE	PI3PCIE3415ZHE		
PI2PCIE2412ZHEX	PI3PCIE3415ZHEX		
PI2PCIE2422ZHE	PI3USB14-AZHE		
PI2PCIE2422ZHEX	PI3USB14-AZHEX		
PI2PCIE2442ZHE	PI3VDP101LSZHE		
PI2PCIE2442ZHEX	PI3VDP101LSZHEX		
PI2PCIE2452ZHE	PI3VDP612-AZHE		
PI2PCIE2452ZHEX	PI3VDP612-AZHEX		
PI2PCIE412-CZHE	PI3VDP612ZHE		
PI2PCIE412-CZHEX	PI3VDP612ZHEX		
PI2PCIE412-DZHE	PI5USB2058ZHE		
PI2PCIE412-DZHEX	PI5USB2058ZHEX		
PI3CH401ZHE	PI6LC4830ZHE		
PI3CH401ZHEX	PI6LC4830ZHEX		
PI3EQX7702ZHE	PI6LC4840ZHE		
PI3EQX7702ZHEX	PI6LC4840ZHEX		
PI3HDMI101-BZHE			
PI3HDMI101-BZHEX			
PI3HDMI101ZHE			
PI3HDMI101ZHEX			
PI3HDMI412FT-AZHE			
PI3HDMI412FT-AZHEX			
PI3HDMI412FT-BZHE			
PI3HDMI412FT-BZHEX			
PI3HDMI412FTZHE			
PI3HDMI412FTZHEX			
PI3HDMI412ZHE			
PI3HDMI412ZHEX			
PI3L720ZHE			
PI3L720ZHEX			
PI3LVD412ZHE			
PI3LVD412ZHEX			