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:	PI5C3990QE	Qual Test Date:	13-Dec-2004
Supplier (Code):	GTK (G)	Die Attach Material:	1076DJ-G
Pkg Type - Code:	QSOP - Q28	Wire Size & Material:	1.0mil Au
Outline Drawing:	PD-1204	Mold Compound:	G700LY
By Extension Pkg:	Q22, Q20, Q16	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
Preconditioning	JESD22-A113	MSL1	NA	3	100	100 / 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	50	50 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	3	50	50 / 0
↓	↓	↓	500 cycles	3	50	50 / 0
Physical Dimension	JESD22-B100	NA	NA	3	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	5 / 0
Lead Integrity	JESD22-B105	Lead Ben - 90°, 2 bends min.	NA	3	5	5 / 0
Solderability	J-STD-020	Pb-Free Solder Dip 245°C	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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Lot Background Information:

Qual Part Number:	28L - QSOP UTL Qual	Qual Test Date:	13-Dec-2004
Supplier (Code):	UTL (Z)	Die Attach Material:	2200D
Pkg Type - Code:	QSOP - Q28	Wire Size & Material:	1.0mil Au
Outline Drawing:	PD-1204	Mold Compound:	G600
By Extension Pkg:	Q24 Q20 Q16	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
Preconditioning	JESD22-A113	MSL1	NA	3	231	231 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	3	45	45 / 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
↓	↓	↓	500 cycles	3	77	77 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	168 hrs	3	77	77 / 0
			500 hrs	3	77	77 / 0
↓	↓	↓	1000 hrs	3	77	77 / 0
Physical Dimension	JESD22-B100	NA	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

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Lot Background Information:

Qual Part Number:	PI5C34X245BE	Qual Test Date:	Aug-1999 updated Jul-2011
Supplier (Code):	SPE (X)	Die Attach Material:	CRM 1076NS
Pkg Type - Code:	BQSOP-80 (B80)	Mold Compound:	EME G600
Outline Drawing:	PD-1211	Leadframe Material:	Copper
By Extension Pkg:	B48, B40, Q28, Q24, Q20, Q16	Lead Finish:	100% Matte Sn

Date Codes: 9930, 9931, 9932, 0503, 1042

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	4 1	150 100	150 / 0 100 / 0
CSAM	J-STD-020	No delamination of Die Top, Wire bond, Down bond areas	NA	4 1	11 22	11 / 0 22 / 0
PreCon UHAST	JESD22-A118	130°C, RH 85%, 33.3 psia, 0V	96 hrs	1	45	45 / 0
Autoclave	JESD22-A1	121°C, RH 100%, 29.7psig, 0V	168 hrs	4	45	45 / 0
PreCon Temp Cycle	JESD22-A104	-65°C to +150°C 500 Cycles	100 cycles	5	45	45 / 0
		-65°C to +150°C 500 Cycles	500 cycles	5	45	45 / 0
HTSL (no PreCon)	JESD22-A103	1000hrs, 0V, 150°C	1000 hrs	4	45	45 / 0
Physical Dimension	JESD22-B100	Per Datasheeet	NA	5	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	4	5	5 / 0
Solderability	J-STD-020 JESD22-B102	Pb-Free Solder Dip 245°C	NA	5	5	5 / 0

Qualificaton by Extension Information:

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Lot Background Information:

Qual Part Number:	PI5V330SQE	Qual Test Date:	Mar-2011 update Jan-2012
Supplier (Code):	CJE (J)	Die Attach Material:	Ablestik 8290
Pkg Type - Code:	QSOP-16 (Q16)	Wire Size & Material:	0.8 mil Gold
Outline Drawing:	PD-1201	Mold Compound:	EME G600FB
By Extension Pkg:	none	Leadframe Material:	Copper
		Lead Finish:	100% Matte Sn
		Date Codes:	AYYJG, AYWJG, AYXJG

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 Datasheeet	NA	3	5	5 / 0
External Visual Insp	JESD22-B101	NA	NA	3	5	5 / 0
Terminal Strength	JESD22-B105	90° Bends, 2 bend min.	NA	3	5	5 / 0
Solderability	J-STD-020 JESD22-B102	Pb-Free Solder Dip 245°C	NA	3	5	5 / 0

Qualificaton by Extension Information:

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Date: **Mar-2011 update Jan-2012**
PKG Type & Code: **QSOP-16 (Q16)**
Assembler-Code: **CJE (J)**
Qual Device: **PI5V330SQE**

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

PI3B3125QE	PI5V330SQEX			
PI3B3125QEX	PI5V331QE			
PI3B3126QE	PI5V331QEX			
PI3B3126QEX				
PI3B3251QE				
PI3B3251QEX				
PI3B3253QE				
PI3B3253QEX				
PI3B3257AQE				
PI3B3257AQEX				
PI3B3257QE				
PI3B3257QEX				
PI3C3126QE				
PI3C3126QEX				
PI3L100QE				
PI3L100QEX				
PI3L110QE				
PI49FCT20802QE				
PI49FCT20802QEX				
PI49FCT32802QE				
PI49FCT32802QEX				
PI49FCT32803QE				
PI49FCT32803QEX				
PI5A100QE				
PI5A100QEX				
PI5C3125QE				
PI5C3125QEX				
PI5C3126QE				
PI5C3126QEX				
PI5C3251QE				
PI5C3251QEX				
PI5C3253QE				
PI5C3253QEX				
PI5C3257QE				
PI5C3257QEX				
PI5L100QE				
PI5L100QEX				
PI5L200QE				
PI5L200QEX				
PI5V330AQE				
PI5V330AQEX				
PI5V330QE				
PI5V330QEX				
PI5V330SQE				

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