



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 Vehicle:	PI7C9X440SLBFDE
Supplier (Code):	GTK (G)
Pkg Type - Code:	LQFP-128 (FDE128)
Outline Drawing:	PD-2193 updated Jul-2015
By Extension Pkg:	FA48 FA32 FD128 FCE80 FAE32 FA100

Qual Test Date:	Dec-2011 updated May-2016
Die Attach Material:	1076DJ-G
Wire Size & Material:	0.8/0.7 mil PdCu
Mold Compound:	G700HA
Leadframe Material:	C7025 Copper
Lead Finish:	100% Matte Sn

Date Codes: Y1135GI Y1136GI Y1137GI

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	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	77	231 / 0
		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	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:

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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Date: **Dec-2011 updated May-2016**

PKG Type & Code: **LQFP-128 (FDE128)** QBE: FA48 FA32 FD128 FCE80 FAE32 FA100

Assembler-Code: **GTK (G)**

Qual Vehicle: **PI7C9X440SLBFDE**

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

FDE128 with e-pad	FD128 (no e-pad)		FA32 (no e-pad)	
PI7C9X111SLBFDE	PI7C9X119SLFDE		PI6C4911510-05FAIE	
PI7C9X111SLBFDEX	PI7C9X119SLFDEX		PI6C4911510-05FAIEX	
PI7C9X112SLFDE	PI7C9X20303SLCFDE		PI6C4911510FAIE	
PI7C9X112SLFDEX	PI7C9X20303SLCFDEX		PI6C4911510FAIEX	
PI7C9X113SLFDE	PI7C9X20404SLCFDE		PI6C49S1506FAIE	
PI7C9X113SLFDEX	PI7C9X20404SLCFDEX		PI6C49S1506FAIEX	
PI7C9X118SLFDE	PI7C9X7952AFDE			
PI7C9X118SLFDEX	PI7C9X7952AFDEX			
PI7C9X2G304SLAFDE	PI7C9X7954AFDE			
PI7C9X2G304SLAFDEX	PI7C9X7954AFDEX			
PI7C9X2G304SLBFDE	PI7VD9004AAHFDE		FA48 (no e-pad)	
PI7C9X2G304SLBFDEX	PI7VD9004AAHFDEX		PI6C485352FAE+C	
PI7C9X2G404SLAFDE	PI7VD9004AAHFDE		PI6C485352FAE+CX	
PI7C9X2G404SLAFDEX	PI7VD9004AAHFDE		PI7C9X752FAE	
PI7C9X2G404SLBFDE	PI7VD9004ABHFDE		PI7C9X752FAEX	
PI7C9X2G404SLBFDEX	PI7VD9004ABHFDEX			
PI7C9X440SLAFDE	PI7VD9004ABHFDE			
PI7C9X440SLAFDEX	PI7VD9004ABHFDE			
PI7C9X440SLBFDE	PI7VD9004FDE			
PI7C9X440SLBFDEX	PI7VD9004FDE		FCE80 with e-pad	
PI7C9X441SLFDE	PI7VD9004HFDE		PI3HDX414FCEE	
PI7C9X442SLAFDE	PI7VD9004HFDEX		PI3HDX414FCEEX	
PI7C9X442SLAFDEX	PI7VD9008ABHFDE			
PI7C9X442SLBFDE	PI7VD9008ABHFDEX			
PI7C9X442SLBFDEX	PI7VD9008ABHFDE			
PI7VD9204FDE	PI7VD9008ABHFDE			
PI7VD9204FDEX	PI7VD9008FDE		FAE32 with e-pad	
PI7VD9204FDIE	PI7VD9008FDEX		PI6C4911510FAEIE	
PI7VD9204FDIEX	PI7VD9008HFDE		PI6C4911510FAEIE	
PI7VD9208FDE	PI7VD9008HFDEX			
PI7VD9208FDEX				
PI7VD9208FDIE				
PI7VD9208FDIEX				
PI7VD9401FDE			FA100 (no e-pad)	
PI7VD9401FDEX			PI7C8952FAE	
PI7VD9401FDIE			PI7C8952FAEEX	
PI7VD9401FDIEX			PI7C8952FAE	
			PI7C8952FAEX	

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