

**Qualification Description:**

The information contained herein represents proof of Reliability and Performance of the baseline process technology listed below in accordance with the Qualification Plan and test methods referenced in Section 8.0, after exposure to a variety of environments (electrical, thermal, humidity, etc) and mechanical events that may 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 of referenced process technology. The Pericom product data presented in this report qualifies all products manufactured using the exact semiconductor materials and processing techniques used in the baseline process and its off-shoot processes. The report describes the qualification test program, procedures used, criteria enforced (at the time of product validation), and the resulting test data obtained during the Qualification Test. The materials and processing techniques used in the baseline process are incorporated into the off-shoot processes, so the quality/integrity of the baseline and off-shoots (i.e.: 2PxM, 1PxM) processes will be equivalent.

**Lot Background Information:**

Qual Test Date:	March-2007 updated: Nov-2012	By Ext. Process:	0.5um 1PxM
Process Technology:	0.50um 1P2M		
Foundry & Code:	MGN (G)		
Qual Test Number:	Q03009	Qual Vehicle(s):	PI5C3257SE; PI5A4213GAE; PI5C3257ESE

**Pericom's Qualification Test Results:**

Stress Test	Test Procedure	Test Conditions	Duration	# of Lots	Samples per Lot	Results Pass/Fail
Dynamic High Temp	JESD22-A108	3000 hrs 5.5V 150°C	168 hrs	1	130	130 / 0
Operating Life (DHTOL)		3000 hrs 5.5V 150°C	500 hrs	1	130	130 / 0
		3000 hrs 5.5V 150°C	1000 hrs	1	130	130 / 0
PI5C3257SE		3000 hrs 5.5V 150°C	3000 hrs	1	130	130 / 0
Dynamic High Temp	JESD22-A108	3000 hrs 5.5V 150°C	168 hrs	1	126	126 / 0
Operating Life (DHTOL)		3000 hrs 5.5V 150°C	500 hrs	1	126	126 / 0
		3000 hrs 5.5V 150°C	1000 hrs	1	126	126 / 0
PI5A4213GAE		3000 hrs 5.5V 150°C	3000 hrs	1	126	126 / 0
Dynamic High Temp	JESD22-A108	3000 hrs 5.5V 150°C	168 hrs	1	135	135 / 0
Operating Life (DHTOL)		3000 hrs 5.5V 150°C	500 hrs	1	135	135 / 0
		3000 hrs 5.5V 150°C	1000 hrs	1	135	135 / 0
PI5C3257ESE		3000 hrs 5.5V 150°C	3000 hrs	1	135	135 / 0
	ELFR based on 391 units after 168hrs of DHTOL	ELFR (55C,0.5eV, 5.0V, 60% CL)		139.2		
	FIT based on 391 units after 3000 hrs of DHTOL	FIT Rate (55C, 0.5eV, 5.0V, 60%)		7.8		
		Calculated MTBF (hours)		128,325,506		
Unbiased HAST **	JESD22-A118	130C, 85%RH, 33.3psig, 0V	96 hrs	2	23	23 / 0
Temp Cycle Test	JESD22-A104	-65°C to 150°C, 500cyc	100 cycles	3	76	76 / 0
		-65°C to 150°C, 500cyc	500 cycles	3	76	76 / 0
High Temp Storage (HTS)	JESD22-A103	1000hrs, 0V, 150°C	168 hrs	1	100	100 / 0
		1000hrs, 0V, 150°C	500 hrs	1	100	100 / 0
		1000hrs, 0V, 150°C	1000 hrs	1	100	100 / 0
Latch Up Test	EIA JESD78	Report available by Device				
ESD-HBM Test	JESD22-A114	Report available by Device				

\*\* Part number used as Package Qual Vehicle for the indicated tests was PI5A4213GAE

**Qualification by Extension Information:**

It is valid to use the reliability data of a particular process technology and apply to all products within this process technology family. All parts within the same family are designed to the same rules (layout & electrical), and manufacturing is controlled by SPC. Within a product family, a device can only be fabricated on one process technology option.

If there are any questions about this qualification, please contact Quality Support at: [customerquestion@pericom.com](mailto:customerquestion@pericom.com)

Date: March-2007 updated: Nov-2012  
 Subject: Pericom Process Qualification Report  
 Mfg-Fab-Process: MGN (G) 0.50um 1P2M  
 Qual Vehicle(s): PI5C3257SE; PI5A4213GAE; PI5C3257ESE

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

PI3C3125LE	PI3USB10MZEEX		
PI3C3125LEX	PI3USB10MZKEX		
PI3C3125QE	PI3USB10ZEEX		
PI3C3125QEX	PI3USB14LEX		
PI3C3125WE	PI3USB14QEX		
PI3C3125WEX	PI3USB14ZHEX		
PI3C3126LE	PI3USB20LEX		
PI3C3126LEX	PI3USB40AEX		
PI3C3126QE	PI3V312LEX		
PI3C3126QEX	PI3V312QEX		
PI3C3245LE	PI3V512QEX		
PI3C3245LEX	PI3V514BEX		
PI3C3245QE	PI49FCT38053CHEX		
PI3C3245QEX	PI5A123ZRE+CNX		
PI3C32X384BE	PI5A123ZREX		
PI3C32X384BEX	PI5A123ZREX		
PI3C3861-AQE	PI5C16210AEX		
PI3C3861-AQEX	PI5C16211AEX		
PI3CH1000LEX	PI5C16245AEX		
PI3CH200LEX	PI5C16861AEX		
PI3CH281LEX	PI5C3245LEX		
PI3CH281QEX	PI5C3245QEX		
PI3CH281ZHEX	PI5C3251QEX		
PI3CH401ZHEX	PI5C3257QEX		
PI3CH480LEX	PI5C32X245BEX		
PI3CH480QEX	PI5C32X384BEX		
PI3CH800LEX	PI5C3384CQEX		
PI3CH800QEX	PI5C3384LEX		
PI3DBV10ZEEX	PI5C3384QEX		
PI3DBV40AEX	PI5C3390QEX		
PI3G512ZKEX	PI5C34X2245BEX		
PI3G512ZKEX	PI5C34X245BEX		
PI3HDMI1210-ABEX	PI5C3861QEX		
PI3HDMI1212-ABEX	PI5V330QEX		
PI3HDMI1212BEX	PI5V330SQEX		
PI3HDMI412-BAEX	PI5V330SQEX		
PI3L110LEX	PI5V330SWEX		
PI3L110QEX	PI5V330WEX		
PI3L301DAEX	PI5V512QEX		
PI3L301DKEX	PI6C18551WEX		
PI3L500ZFEX	PI74LVC3245ALEX		
PI3L510ZFEX			
PI3L720ZFEX			
PI3L720ZHEX			