

Date: March 4, 2005

Subject: *Pericom Reliability Qualification – CSM-S Fab 2’s CMOS, 0.35 μm 2P2M Process*

Chartered Semiconductor Manufacturing – Singapore Fab 2’s CMOS, 0.35-μm Double Poly/Double Metal process was recently qualified to Pericom’s standard die level process qualification. The PI6CX100-27 device type has successfully completed 3000 hours of Dynamic High Temperature Operating Life (DHTOL) test with no failures. All other Pericom products using the same process technology and design rules will therefore meet Pericom’s Wafer Fab Process Qualification requirements. This device and package also passed High Temp Storage Life (HTSL), Unbiased HAST (UHAST), and Temperature Cycle (TMCL) testing as shown in the table below.

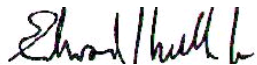
With no failures at the 168-hour timepoint, there is no concern over potential infant mortality issues that would require 100% burn-in for products using this process. This is the same result we have observed for all current Pericom designs and processes. The equivalent long-term life test FIT rate is 72.9 for Pericom devices using the same process and design rules, with a calculated MTBF of 450,000 hours. FIT rates are calculated using the Arrhenius equation, with an Activation Energy of 0.5 eV, an assumed customer system operating temperature of 55 °C, and a Confidence Level factor of 60%.

Pericom’s Qualification Test results:

Rel Lot #	Device Type	Pkg. Type	Date Code	Stress Test	Stress Condition	Stress Duration	Sample Units	Results Pass/Fail
Q04008-1A	PI6CX100-27	W-8	Z0417ZC	DHTOL	125°C, 3.6 v	168 hrs	150	150/0
						500 hrs	150	150/0
						1000 hrs	150	150/0
						2000 hrs	150	150/0
						3000 hrs	150	150/0
Q04008-1B	PI6CX100-27	W-8	Z0417ZC	HTSL	150°C	168 hrs	100	100/0
						500 hrs	100	100/0
						1000 hrs	100	100/0
Q04008-1C	PI6CX100-27	W-8	Z0417ZC	UHAST	130°C	96 hrs	80	80/0
Q04008-1D	PI6CX100-27	W-8	Z0417ZC	TMCL	-65, +150 °C	500 cycles	76	76/0

If there are any questions about this qualification, please contact me.

Regards,



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