

Date: March 21, 2005 (Update January 28, 2005 Report)

Subject: CSMC-HJ CMOS 0.5 μ m Wafer Fab Reliability Report

CSMC-HJ's (<http://www.csmc-hj.com.cn/csmc/english/index.asp>) CMOS, 5-volt, 0.5-micron process was recently verified for acceptability to Pericom's standard die level process qualification requirements. This facility has previously been qualified on their 0.8-micron CMOS process in 2004.

A total of 160 units have now successfully completed 3000 hours of Dynamic High Temperature Operating Life (DHTOL) test at 150°C and 5.5 volts applied bias with no failures. The PI5C3257 product was used as the qualification vehicle, and therefore all products using this same process technology and design rules will meet Pericom's Wafer Fab Process Qualification requirements. This can include these bus switches: PI5C3125, 3126, 3251, 3253, 33X257; PI5L100; PI5V330, 331, 332, as well as device types in other product families. The device also passed High Temp Storage Life (HTSL), Unbiased HAST (UHAST), and Temperature Cycle (TMCL) testing as shown below.

Based on 3000 hours of accelerated life test temperature and voltage operating conditions, the equivalent long-term life test FIT rate is 18.9, with a calculated MTBF of 480,000 hours. This data is applicable to any Pericom device using the same process and design rules at this facility. The FIT calculation was made using the Arrhenius equation; with an Activation energy of 0.5 eV, an assumed system operating temperature of 55 °C, and a Confidence factor of 60%.

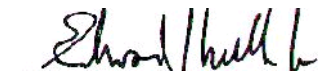
Pericom's Qualification Test results:

| Rel Lot # | Device Type | Pkg. Type | Date Code | Stress Test | Stress Condition | Stress Duration | Sample Units | Results Pass/Fail |
|-----------|-------------|-----------|-----------|-------------|------------------|-----------------|--------------|-------------------|
| Q04010-3A | PI5C3257 | W16 | Z0441OW | DHTOL | 150°C, 5.5 v | 168 hrs | 160 | 160/0 |
| Q04010-3A | PI5C3257 | W16 | Z0441OW | DHTOL | 150°C, 5.5 v | 500 hrs | 160 | 160/0 |
| Q04010-3A | PI5C3257 | W16 | Z0441OW | DHTOL | 150°C, 5.5 v | 1000 hrs | 160 | 160/0 |
| Q04010-3A | PI5C3257 | W16 | Z0441OW | DHTOL | 150°C, 5.5 v | 2000 hrs | 160 | 160/0 |
| Q04010-3A | PI5C3257 | W16 | Z0441OW | DHTOL | 150°C, 5.5 v | 3000 hrs | 160 | 160/0 |
| Q04010-3B | PI5C3257 | W16 | Z0441OW | HTSL | 150°C | 168 hrs | 100 | 100/0 |
| Q04010-3B | PI5C3257 | W16 | Z0441OW | HTSL | 150°C | 500 hrs | 100 | 100/0 |
| Q04010-3B | PI5C3257 | W16 | Z0441OW | HTSL | 150°C | 1000 hrs | 100 | *99/0 |
| Q04010-3C | PI5C3257 | W16 | Z0441OW | UHAST | 130°C | 96 hrs | 100 | 100/0 |
| Q04010-3D | PI5C3257 | W16 | Z0441OW | TMCL | -65, +150 °C | 500 cycles | 76 | 76/0 |

*One unit damaged in ATE handler, not testable.

If there are any questions about this device qualification, please let me know.

Regards,



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