July 23rd, 1999

Dear Valued Customer:

UTMC Microelectronic Systems Inc. (UTMC) appreciates your interest and use of our products, specifically the RadHard SμMMIT™ Family of products. The purpose of this letter is to inform you that UTMC's migration of the RadHard SμMMIT protocol handler design to a new wafer fabrication facility is on schedule and first silicon has been received. The migration affects the RadHard SμMMIT (SMD 5962*92118) and RadHard SμMMIT LXE/DXE (SMD 5962*94663). The migrated versions of the RadHard SμMMIT and RadHard SμMMIT LXE/DXE protocol handlers are expected to be a direct package replacement to the existing protocol handlers currently in production. At this point in the migration UTMC does not report any AC or DC differences. In the event of and electrical performance changes, a notification letter will be issued by UTMC. Pre-production beta devices, for system evaluation, are scheduled to become available in 3Q99. Table 1 is a summary of the radiation performance difference between the old and new wafer foundries.

Table 1. Radiation Hardness Changes

Parameter	Old	New
Total Dose	1M rad(Si)	100K and 300K rad(Si)
Single Event Latchup	Immune (128MeV-cm^2/mg)	Immune (128MeV-cm^2/mg)
Single Event Upset LET	77MeV-cm^2/mg	25MeV-cm^2/mg
Single Event Cross Section	2.0E-6cm^2/bit	7.3E-7cm^2/bit
Single Event Upset Rate[1]	7.0E-6 errors/device-day	1.0E-4 errors/device-day

Note

1. These errors are for the Adam's 90% Geosynchronous Orbit. Since this component is essentially immune to proton upsets the upset rate will improve significantly for lower Earth orbits.

For the RadHard SμMMIT LXE (15-volt transceiver) and RadHard SμMMIT DXE (5-volt transceiver) the internal bus transceivers are not affected by the migration. ~~However,~~ The MCMs form, fit, and function will remain identical to the existing product offerings.

A note for die customers - ***Due to a change in the substrate starting material, the migrated RadHard SμMMIT die is not electrically backward compatible for multi-chip module or hybrid applications. Additionally, die pad locations, with respect to the edge of the die, may change slightly.***

Based on current run rates, UTMC projects the current production RadHard SμMMIT die inventory to last through calendar year 1999. Production shipments from the new wafer foundry are scheduled to begin in late 1999 or early 2000. The limited inventory of the

existing RadHard SμMMIT is being offered to customers on a “first-come-basis” until the replacement product is qualified. UTMC plans to cease shipping the older device revision once qualification of the migrated version is complete. The purpose of this letter is to afford you an opportunity to secure additional units of the current production revision and does not constitute a last time buy notification; UTMC plans to supply RadHard SμMMIT Family for the foreseeable future. Due to the lack of demand for through-hole packaging options, UTMC will offer the RadHard SμMMIT and RadHard SμMMIT LXE/DXE in surface mount package only. The RadHard SμMMIT will be offered in an 84-lead flatpack, the RadHard SμMMIT LXE/DXE will be offered in the 100-lead flatpack.

This letter is the second of four correspondences you will receive from UTMC regarding the RadHard SμMMIT migration. A third letter will outline any product differences and will occur after completion of characterization. A final letter will notify you that UTMC has completed qualification. These letters will also be posted on UTMC’s website (www.utmc.com – under SμMMIT products). If you have any questions please contact me at (719) 594-8252.

Regards,

Anthony F. Jordan
Standard Product Line Manager
Business Development and Engineering