

19 December 1990

To: Rex Debolt
Linda Scott
Ron Berkman
Drew White

Re: LM-193 Dual Comparator IC

It appears that the "LM193J/883" device specified for the ST-8000A is not presently deliverable - and may never be. Therefore, I authorize the following alternative Manufacturers, MFG P/N's, and HAL part numbers:

1. HAL P/N 631-00193:

- a. Delete all references to "MIL-STD-883"
- b. List the following acceptable MFGR's & P/N's:

| | |
|----------------|----------|
| National Semi: | TI: |
| LM193J | LM193JG |
| LM393AJ | LM193JGB |
| LM393J | |

Signetics:

LM193FE
LM193AF (E?)
LM393FE
LM393AFE

- c. Note that all of the above have Ceramic packages. Lacking the "/883" rating, the reliability driver is the package, not "193" or "393".
- d. A five times failure rate multiplier is the reliability penalty for use of a ceramic but non-883 part. The ST-8000A uses only one type LM193 device.

2. HAL P/N 630-00393: (New P/N)

- a. This is only a "last resort" part for the ST-8000A.
- b. List the following acceptable MFGR's & P/N's:

| | |
|----------------|--------|
| National Semi: | TI: |
| LM393N/A+ | LM393P |
| LM393N | |

Motorola: Signetics:

LM393AN LM393AN
LM393N LM393N

- c. These parts all have a plastic package.
- d. The F.R. multiplier penalty is 10 times over the "/883" part and 2 times over a ceramic package part.

G. W. Henry
Configuration Manager