Product Line Features and Benefits

Technology and Product Features
- Complete oxide isolation of all transistors
- Vtn/Vtp adjustments ensure operation to 300 °C
- TiW barrier layer on all metals and contacts
- Variable width oxide trench
- Twin well technology
- CrSi thin film resistors available
- N+ poly to N+ silicon linear capacitor
- 0.8 micron 5 volt digital capability
- Designed for 50,000 hours of 225 °C operation
- Final test at 225 °C
- Burn-in at minimum of 250 °C

High Temperature Benefits
- 100X reduction in leakage current
- Latchup immune
- Independent control of transistor body
- Lowered parasitic capacitance provides 20% faster switching speed
- Reduced cross talk on adjacent devices
- Low device leakage and operation to >300 °C
- Eliminates metal spiking in the junctions
- Increased tolerance to electromigration
- Reduces metal to substrate capacitance <2X
- Independent control of Vtp/Vtn
- Thin Film Resistors
  - Low TCR (0-180 PPM/ °C)
  - Low VCR
  - Good ratio matching to 0.01%
  - Laser trimmable
- Low leakage at high temperature
- Linearity of +0.5% over 10 volt range
- Good ratio matching of 0.1%
- 10 volt linear products
- 5 volt high performance digital products
- Reliable and predictable yields, costs, performance, and low failure rates
- Products meet data sheet specs @ 225 °C
- Infant mortality eliminated

Applications
The HTMOS(TM) Product Line has been developed for high temperature operation in instrumentation and distributed control applications such as:

- Gas Turbine Engines (Aircraft Propulsion and Power Generation)
- Down Hole Petroleum and Geothermal Exploration and Production
- Diesel Engine (Propulsion and Power Generation)
- Industrial Petrochemical Processing
- Automotive
For assistance, please contact our Customer Service Department at (800) 323-8295.

Solid State Electronics Center 12001 State Highway 55, Plymouth, MN 55441