

RELIABILITY MONITOR

| PRODUCT | MONITOR DATE | DATE CODE | ASSEMBLY FACILITY | ASSEMBLY LOT NO | PROCESS TYPE | PACKAGE TYPE |
|----------|--------------|-----------|-------------------|-----------------|--------------|--------------|
| DS21S07A | Nov-97 | 9732 B2 | CARSEM | DM717607ABA | 0.8μ NITRIDE | 20 TSSOP |

STRESS/JOB NO.

READPOINT

(Sample Size/No. of Fails)

| | | | |
|---------------------------------------|-------------|-------------------|--------------|
| Preconditioning (P/C): | <u>0 Hr</u> | <u>Electrical</u> | <u>Cum %</u> |
| Bake, 125°C, 24 Hr | 249/0 | 236/0 | 0.0% |
| Moisture Soak, 85°C/85% RH, 168 Hr | | | |
| Vapor Phase Reflow, 3 Passes, P-20676 | | | |

| | |
|----------|-------------------------|
| Sonoscan | <u>Post Vapor Phase</u> |
| P-20969 | |

| | | | | |
|----------------------------|--------------|---------------|--------------|----------------------|
| Infant / High Voltage Life | <u>48 Hr</u> | <u>336 Hr</u> | <u>1K Hr</u> | <u>*Failure Rate</u> |
| 125°C, 7.0 V. | 232/0 | 77/0 | | |
| P-20970, P-21024 | | | | |

*Chi Squared Method, 60% C. L., 55°C & 5.5V; Temperature Derating: Ea = 0.7 eV; Voltage Derating B = 1.0

| | | | |
|-----------------|--------------|-------------|--------------|
| Temp Cycle | <u>300 ~</u> | <u>1K ~</u> | <u>Cum %</u> |
| -55°C to +125°C | 40/0 | | |
| P-21025 | | | |

| | | | |
|---------------------|---------------|---------------|--------------|
| Biased Moisture | <u>274 Hr</u> | <u>959 Hr</u> | <u>Cum %</u> |
| 85°C/85% RH, 5.5 V. | 75/0 | | |
| P-21026 | | | |

| | | |
|------------------------|--------------|--------------|
| Autoclave | <u>96 Hr</u> | <u>Cum %</u> |
| 121°C/100% RH, 2 Atmos | 38/0 | 0.0% |
| P-21027 | | |

Failure Mode

Failure Analysis