

RELIABILITY MONITOR

DS1232L JAN '00 Monitor

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1232 | C2-L | 9948 | DK933191AAJ | 8 | SOIC | 150 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25022 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 2 |
| 25023 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 73 | 1000 | HOUR | 0 |
| | | TOTAL: | 107 | DEVICE HRS: 2.92E+07 | | 2 |
| 25019 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25020 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25021 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25024 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 38 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25025 | HAST | 130C, 85%R.H.,5.5V | 77 | 100 | HOUR | 1 |
| | | TOTAL: | | | | 1 |
| 25026 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 38 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 14005

RELIABILITY MONITOR

DS1232L JAN '00 Monitor

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|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1232 | C2-L | 9948 | DK933191AAJ | 8 | SOIC | 150 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 0.8 μ m Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | |
|--|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β : <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|------------------------|--------------------------|--------------------------|-----------|-------|-------------|
| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION | | | |
| 25022 | 1-ICC ACTIVE; 1-RST IO | IN PROCESS | | | | NA |
| 25025 | IOL | IN PROCESS | | | | NA |

RELIABILITY MONITOR

DS1232L APR '00 Monitor

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1232 | C2-L | 0011 | DE952427AAD | 8 | SOIC | 150 | OSEP |
| PROCESS Single Poly, Single Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|--|-------|-------------|
| 25421 | INFANT LIFE | 125C, 7.0 VOLTS | 233 | 48 | HOUR | 0 |
| 25422 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 30 | FAIL RATE (Fits): DEVICE HRS: 3.08E+07 | | 0 |
| 25418 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25419 | STORAGE LIFE | 125C | 238 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | 0 |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25423 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25424 | HAST | 130C, 85%R.H.,5.5V | 76 | 100 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25425 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 14006

RELIABILITY MONITOR

DS1232L JUL '00 Monitor

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|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1232 | C2-L | 0024 | DE014522ADB 8 | SOIC | 150 | OSEP | |
| PROCESS Single Poly, Single Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|--|-------|-------------|
| 25787 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| 25788 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 30 | FAIL RATE (Fits): DEVICE HRS: 3.08E+07 | | 0 |
| 25784 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25785 | STORAGE LIFE | 125C | 238 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | 0 |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25786 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25789 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25790 | HAST | 130C, 85%R.H.,5.5V | 76 | 100 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25791 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 39 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16198

RELIABILITY MONITOR

DS1232L JUL '00 Monitor

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1232 | C2-L | 0024 | DE014522ADB | 8 | SOIC | 150 | OSEP |
| PROCESS Single Poly, Single Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|----------|-----------|----------|-----------|-------|-------------|
|--------|----------|-----------|----------|-----------|-------|-------------|

RELIABILITY MONITOR

DS1232L OCT '00 Monitor

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1232 | C2-L | 0039 | DE028679ADB 8 | 8 | SOIC | 150 | OSEP |
| PROCESS Single Poly, Single Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|-------------------|-------------|-------------|
| 26089 | INFANT LIFE | 125C, 7.0 VOLTS | 232 | 48 | HOUR | 0 |
| | | TOTAL: | 236 | FAIL RATE (Fits): | | 0 |
| | | | | 3.89E+06 | DEVICE HRS: | |
| 26086 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 26087 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 26088 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 26093 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 39 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16486

RELIABILITY MONITOR

DS1267-100 FEB '00 MONITOR

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|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1267 | A2 | 9930 | DK904472ADF | 20 | TSSOP | 173 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 1.2 μm Implanted Poly 1 | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25175 | INFANT LIFE | 125C, 6.0 V, -4.0V | 226 | 48 | HOUR | 0 |
| 25176 | HIGH VOLTAGE LIFE | 125C, 6.0 V, -4.0V | 77 | 336 | HOUR | 0 |
| TOTAL: | | | 194 | DEVICE HRS: 4.72E+06 | | 0 |
| 25172 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| TOTAL: | | | | | | 0 |
| 25173 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| TOTAL: | | | | | | 0 |
| 25174 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| TOTAL: | | | | | | 0 |
| 25177 | TEMP CYCLE | -55C TO 125C | 36 | 300 | CYCL | 0 |
| | | | 36 | 1000 | CYCL | |
| TOTAL: | | | | | | 0 |
| 25178 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| TOTAL: | | | | | | 0 |
| 25179 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 36 | 96 | HOUR | 0 |
| TOTAL: | | | | | | 0 |

PROJECT NO: 14260

RELIABILITY MONITOR

DS1302 MAR '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1302 | A3 | 0006 | DH945115AAB | 8 | PDIP | 300 | CPS (ChipPac, China) |
| PROCESS Single Poly, Double Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

Cf: Tuse:
Ea: Vuse:
β:

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25211 | INFANT LIFE | 125C, 6.0 VOLTS | 234 | 48 | HOUR | 1 |
| 25212 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 76 | 1000 | HOUR | 0 |
| | | TOTAL: | 181 | DEVISE HRS: 1.12E+07 | | 1 |
| 25213 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25214 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| | | | 77 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25215 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 39 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION |
|--------|--------------|---------------------|--|
| 25211 | ICC STANDBY | PROBABLE GATE OXIDE | SEVERAL EVALUATIONS ARE IN PROCESS TO IMPROVE GATE OXIDE PERFORMANCE |

PROJECT NO: 14276

RELIABILITY MONITOR

DS1302 JUN '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1302 | A3 | 0018 | DH008331AAA | 8 | PDIP | 300 | CPS (ChipPac, China) |
| PROCESS Single Poly, Double Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

Cf: Tuse:
 Ea: Vuse:
 β:

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|---------------------|-----------------------------|--------------------------|----------------------|-------|-------------|
| 25535 | INFANT LIFE | 125C, 6.0 VOLTS | 234 | 48 | HOUR | 0 |
| 25536 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 77 | 1000 | HOUR | 0 |
| TOTAL: | | | 81 | DEVICE HRS: 1.13E+07 | | 0 |
| 25537 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 39 | 1000 | CYCL | 0 |
| TOTAL: | | | | | | 0 |
| 25538 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| | | | 77 | 959 | HOUR | 1 |
| TOTAL: | | | | | | 1 |
| 25539 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40 | 96 | HOUR | 0 |
| TOTAL: | | | | | | 0 |
| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION | | | |
| 25538 | ICC ACTIVE | VERIFIED - NO FA | NONE | | | |

PROJECT NO: 14277

RELIABILITY MONITOR

DS1302 AUG '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS1302 | A3 | 0032 | DH020619AAA | 8 | PDIP | 300 | CPS (ChipPac, China) |
| PROCESS Single Poly, Double Metal 0.8 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25931 | INFANT LIFE | 125C, 6.0 VOLTS | 234 | 48 | HOUR | 0 |
| 25932 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| TOTAL: | | | 194 | DEVICE HRS: 4.71E+06 | | 0 |
| 25933 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| TOTAL: | | | | | | 0 |
| 25934 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| TOTAL: | | | | | | 0 |
| 25935 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 38 | 96 | HOUR | 0 |
| TOTAL: | | | | | | 0 |

PROJECT NO: 16360

RELIABILITY MONITOR

DS1621 MAR '00 MONITOR

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|--|----------|---------|-------------|------|---------|-------|---------------|
| DS1621 | A7 | 9950 | DE940040AAC | 8 | SOIC | 150 | OSEP |
| PROCESS Single Poly, Single Metal 0.8 μm E2PROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|------------------|----------|--|-------|-------------|
| 25220 | INFANT LIFE | 125C, 7.0 VOLTS | 237 | 48 | HOUR | 0 |
| 25221 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 30 | FAIL RATE (Fits): DEVICE HRS: 3.09E+07 | | 0 |
| 25217 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25218 | STORAGE LIFE | 125C | 241 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 85C/85% R.H. | 241 | 168 | HOUR | 0 |
| | CONVECTION REFLOW | 235C | 241 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25219 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25222 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25223 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 70 | 274 | HOUR | 0 |
| | | | 69 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25224 | WRITE CYCLE STRESS | 85 C, 7.0 VOLTS | 50 | 50 | KCYC | 0 |

PROJECT NO: 13948

RELIABILITY MONITOR

DS1621 MAR '00 MONITOR

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|--|----------|---------|-------------|------|---------|-------|---------------|
| DS1621 | A7 | 9950 | DE940040AAC | 8 | SOIC | 150 | OSEP |
| PROCESS Single Poly, Single Metal 0.8 μm E2PROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------|-----------|----------|-----------|-------|-------------|
| | | TOTAL: | | | | 0 |
| 25225 | STORAGE LIFE | 150C | 50 | 336 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 13948

RELIABILITY MONITOR

DS2108 MAY '00 MONITOR, D.P.

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|---|----------|---------|-------------|------|---------|-------|----------------|
| DS2108 | B7 | 0019 | DK007198AAF | 24 | SOIC | 300 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 5.0 µm Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25525 | INFANT LIFE | 125C, 6.0 VOLTS | 231 | 48 | HOUR | 0 |
| 25526 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 82 | DEVICE HRS: 1.12E+07 | | 0 |
| 25522 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25523 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 238 | 144 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 3 |
| | | TOTAL: | | | | 3 |
| 25524 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25527 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25528 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 1 |
| | | | 76 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 1 |
| 25529 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 37 | 96 | HOUR | 0 |

PROJECT NO: 14171

RELIABILITY MONITOR

DS2108 MAY '00 MONITOR, D.P.

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2108 | B7 | 0019 | DK007198AAF | 24 | SOIC | 300 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 5.0 μ m Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----------|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β : | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|--------------|-------------------|-------------------|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |
| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION | | | |
| 25523 | R BOT 1 | IN PROCESS | NA | | | |
| 25528 | R BOT 3 | IN PROCESS | NA | | | |

PROJECT NO: 14171

RELIABILITY MONITOR

DS2108 AUG '00 MONITOR, D.P.

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|---|----------|---------|-------------|------|---------|-------|----------------|
| DS2108 | B7 | 0029 | DK016058AAG | 24 | SOIC | 300 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 5.0 μm Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25857 | INFANT LIFE | 125C, 6.0 VOLTS | 231 | 48 | HOUR | 0 |
| 25858 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 76 | 1000 | HOUR | 0 |
| | | TOTAL: | 83 | DEVICE HRS: 1.11E+07 | | 0 |
| 25854 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25855 | STORAGE LIFE | 125C | 238 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 30C/60% R.H. | 238 | 144 | HOUR | 0 |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25856 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25859 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25860 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 3 |
| | | | 74 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 3 |
| 25861 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 33 | 96 | HOUR | 0 |

PROJECT NO: 16238

RELIABILITY MONITOR

DS2108 AUG '00 MONITOR, D.P.

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2108 | B7 | 0029 | DK016058AAG | 24 | SOIC | 300 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 5.0 μm Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|--------------|-------------------|-------------------|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |
| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION | | | |
| 25860 | FAUSE | IN PROCESS | NA | | | |

PROJECT NO: 16238

RELIABILITY MONITOR

DS2118M SEP '00 MONITOR, D.P.

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|---|----------|---------|-------------|------|---------|-------|---------------|
| DS2118M | B1 | 0033 | DN020718AAD | 36 | SSOP | 300 | ATK (Anam, K) |
| PROCESS Single Poly, Single Metal 0.6 μm Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|--|-------|-------------|
| 25943 | INFANT LIFE | 125C, 6.0 VOLTS | 231 | 48 | HOUR | 0 |
| 25944 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 76 | 1000 | HOUR | 0 |
| | | TOTAL: | 82 | FAIL RATE (Fits): DEVICE HRS: 1.12E+07 | | 0 |
| 25941 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 238 | 240 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25945 | TEMP CYCLE | -55C TO 125C | 77 | 300 | CYCL | 0 |
| | | | 77 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25946 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 77 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16261

RELIABILITY MONITOR

DS2154 JUN '00 MONITOR, D.P.

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2154 | A2 | 0022 | DN012234ABA | 100 | LQFP | 14x14x | ATK (Anam, K) |
| PROCESS Double Poly, Double Met 0.8 μm Capacitor | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|--------------------|----------|----------------------|----------------------|-------------|
| 25620 | INFANT LIFE | 125C, 7.0 VOLTS | 233 | 48 | HOUR | 0 |
| 25621 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 75 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 74 | 1000 | HOUR | 0 |
| | | TOTAL: | | FAIL RATE (Fits): 31 | DEVICE HRS: 2.98E+07 | 0 |
| 25617 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25618 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 238 | 240 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 1 |
| | | TOTAL: | | | | 1 |
| 25619 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25622 | TEMP CYCLE | -55C TO 125C | 73 | 300 | CYCL | 0 |
| | | | 73 | 1000 | CYCL | 1 |
| | | TOTAL: | | | | 1 |
| 25623 | HAST, NO BIAS | 130C, 85%R.H.,5.5V | 73 | 100 | HOUR | 3 |
| | | TOTAL: | | | | 3 |

| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION |
|--------|--------------|-------------------|-------------------|
| 25618 | LIAISB 1V | IN PROCESS | NA |

PROJECT NO: 15200

RELIABILITY MONITOR

DS2154 JUN '00 MONITOR, D.P.

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2154 | A2 | 0022 | DN012234ABA | 100 | LQFP | 14x14x | ATK (Anam, K) |
| PROCESS Double Poly, Double Met 0.8 μm Capacitor | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|----------|------------|----------|-----------|-------|-------------|
| 25622 | LIAIS 1V | IN PROCESS | | | | |
| 25623 | LIAIS 1V | IN PROCESS | | | | |
| 25623 | JIT TOL | IN PROCESS | | | | |
| 25623 | LBOO 1V | IN PROCESS | | | | |

PROJECT NO: 15200

RELIABILITY MONITOR

DS2154 SEP '00 MONITOR, D.P.

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2154 | A2 | 0034 | DK022283AAA | 100 | LQFP | 14x14x | ATP (Anam, PI) |
| PROCESS Double Poly, Double Met 0.8 µm Capacitor | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------|----------|--|-------|-------------|
| 25958 | INFANT LIFE | 125C, 7.0 VOLTS | 191 | 48 | HOUR | 0 |
| 25959 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 60 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 60 | 1000 | HOUR | 0 |
| | | TOTAL: | 38 | FAIL RATE (Fits): DEVICE HRS: 2.39E+07 | | 0 |
| 25956 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 238 | 240 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25960 | TEMP CYCLE | -55C TO 125C | 63 | 300 | CYCL | 0 |
| | | | 63 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25961 | HAST, NO BIAS | 130C, 85% R.H. | 64 | 200 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16371

RELIABILITY MONITOR

DS2175 OCT '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2175 | D1 | 0042 | DK031506AAC | 16 | SOIC | 300 | ATP (Anam, PI) |
| PROCESS Single Poly, Single Metal 2.0 µm Pfield | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------|----------|----------------------|-------|-------------|
| 26108 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| | | TOTAL: | 234 | FAIL RATE (Fits): | | 0 |
| | | | | DEVICE HRS: 3.92E+06 | | |
| 26106 | TEMP CYCLE | -55C TO 125C | 238 | 10 | CYCL | |
| | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 26107 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16495

RELIABILITY MONITOR

DS2181A JUL '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2181A | A2 | 0016 | DE004552ABD | 44 | PLCC | 650 | OSEP |
| PROCESS Single Poly, Single Metal 2.0 µm Pfield | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|------------------|-----------------|----------|-----------|----------------------|-------------|
| 25818 | INFANT LIFE | 125C, 7.0 VOLTS | 237 | 48 | HOUR | 0 |
| | | TOTAL: | 231 | | FAIL RATE (Fits): | 0 |
| | | | | | DEVICE HRS: 3.97E+06 | |
| 25815 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25816 | TEMP CYCLE | -55C TO 125C | 241 | 10 | CYCL | |
| | STORAGE LIFE | 125C | 241 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 241 | 144 | HOUR | |
| | SOLDER HEAT | HTC VAPOR PHASE | 241 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25817 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 14022

RELIABILITY MONITOR

DS21Q43A JUN '00 MONITOR, D.P.

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS21Q43 | A3-A | 0014 | DN004571AAB | 128 | LQFP | 14x20x | ATK (Anam, K) |
| PROCESS Single Poly, Single Metal 0.6 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|------------------|----------|--|-------|-------------|
| 25504 | INFANT LIFE | 125C, 6.0 VOLTS | 224 | 48 | HOUR | 0 |
| 25505 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| TOTAL: | | | 199 | FAIL RATE (Fits): DEVICE HRS: 4.61E+06 | | 0 |
| 25501 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| TOTAL: | | | | | | 0 |
| 25502 | STORAGE LIFE | 125C | 239 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 239 | 240 | HOUR | |
| | CONVECTION REFLOW | 235C | 239 | 3 | PASS | 0 |
| TOTAL: | | | | | | 0 |
| 25503 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| TOTAL: | | | | | | 0 |
| 25506 | TEMP CYCLE | -55C TO 125C | 70 | 300 | CYCL | 0 |
| TOTAL: | | | | | | 0 |
| 25507 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 39 | 274 | HOUR | 0 |
| TOTAL: | | | | | | 0 |
| 25508 | HAST, NO BIAS | 130C, 85% R.H. | 38 | 100 | HOUR | 0 |
| TOTAL: | | | | | | 0 |

PROJECT NO: 14281

RELIABILITY MONITOR

DS21Q43A SEP '00 MONITOR, D.P.

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS21Q43 | A3-A | 0031 | DC022318AAD | 128 | LQFP | 14x20x | Stats |
| PROCESS Single Poly, Single Metal 0.6 µm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------|----------------------|-------------------|-------|-------------|
| 25950 | INFANT LIFE | 125C, 6.0 VOLTS | 231 | 48 | HOUR | 0 |
| TOTAL: | | | 649 | FAIL RATE (Fits): | | 0 |
| | | | DEVICE HRS: 1.41E+06 | | | |
| 25948 | STORAGE LIFE | 125C | 239 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 239 | 240 | HOUR | |
| | CONVECTION REFLOW | 235C | 239 | 3 | PASS | 0 |
| TOTAL: | | | | | | 0 |

PROJECT NO: 16370

RELIABILITY MONITOR

DS21S07 MAY '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS21S07 | C1-A | 0013 | DM002285AAF | 20 | TSSOP | 173 | Carsem S |
| PROCESS Single Poly, Single Metal 0.8 μm Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|--|-------|-------------|
| 25446 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| 25447 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 30 | FAIL RATE (Fits): DEVICE HRS: 3.08E+07 | | 0 |
| 25443 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25444 | STORAGE LIFE | 125C | 238 | 24 | HOUR | |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25445 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25448 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25449 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| | | | 77 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25450 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40 | 96 | HOUR | 0 |

PROJECT NO: 14264

RELIABILITY MONITOR

DS21S07 MAY '00 MONITOR

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|--|----------|---------|-------------|------|---------|-------|---------------|
| DS21S07 | C1-A | 0013 | DM002285AAF | 20 | TSSOP | 173 | Carsem S |
| PROCESS Single Poly, Single Metal 0.8 μ m Negative zero tempco poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----------|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β : | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|----------|-----------|----------|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |

RELIABILITY MONITOR

DS2401 SEP '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2401 | C2 | 0034 | DA005635AKA | 3 | TO92 | 150 | Fastech |
| PROCESS Single Poly, Single Metal 0.6 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25965 | INFANT LIFE | 125C, 6.0 VOLTS | 234 | 48 | HOUR | 0 |
| 25966 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 81 | DEVICE HRS: 1.13E+07 | | 0 |
| | | FAIL RATE (Fits): | | | | |
| 25967 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25968 | HAST | 130C, 85%R.H.,5.5V | 77 | 100 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25969 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 39 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16373

RELIABILITY MONITOR

DS2401 DEC '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2401 | C2 | 0035 | DM014457ADA | 3 | TO92 | 150 | Fastech |
| PROCESS Single Poly, Single Metal 0.6 μm Standard Process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|-------------|-----------------|------------|--------------------------|-----------------------------|-------------|
| 26337 | INFANT LIFE | 125C, 6.0 VOLTS | 234 | 48 | HOUR | 0 |
| TOTAL: | | | 635 | FAIL RATE (Fits): | DEVICE HRS: 1.44E+06 | 0 |

RELIABILITY MONITOR

DS2434 AUG '99 MONITOR - CARSEM

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|--|----------|---------|-------------|------|--------------|-------|---------------|
| DS2434 | D1 | 9837 | DM811482AAA | 3 | TO226 (PR35) | 150 | Carsem |
| PROCESS Single Poly, Single Metal 0.8 μm E2PROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|-------------------|----------------------|-------|-------------|
| 24391 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| 24392 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 30 | DEVICE HRS: 3.08E+07 | | 0 |
| 24393 | TEMP CYCLE | -55C TO 125C | 50 | 300 | CYCL | 0 |
| | | | 50 | 1000 | CYCL | 1 |
| | | TOTAL: | | | | 1 |
| 24394 | HAST | 130C, 85%R.H.,5.5V | 69 | 100 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 24395 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 37 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION | | | |
| 24393 | MEMORY LO | VERIFIED - NO FA | NONE | | | |

PROJECT NO: 13807

RELIABILITY MONITOR

DS2502 MAR '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2502 | C3 | 0005 | DM941226AAB | 8 | SOIC | 150 | Carsem S |
| PROCESS Double Poly, Single Metal 0.6 μm EPROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|------------------|----------|--|-------|-------------|
| 25253 | INFANT LIFE | 125C, 6.0 VOLTS | 232 | 48 | HOUR | 0 |
| 25254 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 81 | FAIL RATE (Fits): DEVICE HRS: 1.13E+07 | | 0 |
| 25250 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25251 | STORAGE LIFE | 125C | 238 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | 0 |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25252 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25255 | TEMP CYCLE | -55C TO 125C | 39 | 300 | CYCL | 0 |
| | | | 38 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25256 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25257 | STORAGE LIFE | 150C | 39 | 336 | HOUR | 0 |
| | | | 39 | 1000 | HOUR | 0 |

PROJECT NO: 13990

RELIABILITY MONITOR

DS2502 MAR '00 MONITOR

| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
|---|----------|---------|-------------|------|---------|-------|---------------|
| DS2502 | C3 | 0005 | DM941226AAB | 8 | SOIC | 150 | Carsem S |
| PROCESS Double Poly, Single Metal 0.6 μm EPROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|----------|-----------|----------|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |

RELIABILITY MONITOR

DS2502 JUN '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2502 | C3 | 0011 | DM941230AGB 8 | SOIC | 150 | Carsem S | |
| PROCESS Double Poly, Single Metal 0.6 μm EPROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|------------------|----------|--|-------|-------------|
| 25568 | INFANT LIFE | 125C, 6.0 VOLTS | 231 | 48 | HOUR | 0 |
| 25569 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 81 | FAIL RATE (Fits): DEVICE HRS: 1.13E+07 | | 0 |
| 25565 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25566 | STORAGE LIFE | 125C | 238 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 85C/85% R.H. | 238 | 168 | HOUR | 0 |
| | CONVECTION REFLOW | 235C | 238 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25567 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25570 | TEMP CYCLE | -55C TO 125C | 34 | 300 | CYCL | 0 |
| | | | 34 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25571 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25572 | STORAGE LIFE | 150C | 34 | 336 | HOUR | 0 |
| | | | 34 | 1000 | HOUR | 0 |

PROJECT NO: 15310

RELIABILITY MONITOR

DS2502 JUN '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS2502 | C3 | 0011 | DM941230AGB 8 | SOIC | 150 | Carsem S | |
| PROCESS Double Poly, Single Metal 0.6 μm EPROM process | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|----------|-----------|----------|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |

RELIABILITY MONITOR

DS5002 APR '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS5002 | C4 | 0004 | DM925587AAF | 80 | MQFP | 14x20 | Carsem |
| PROCESS Single Poly, Single Metal 0.6 μm Buried contacts w/silicided poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|-----------------------------|----------|--|-------|-------------|
| 25430 | INFANT LIFE | 125C, 6.0 VOLTS | 199 | 48 | HOUR | 0 |
| 25431 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 6.0 VOLTS | 76 | 1000 | HOUR | 0 |
| | | TOTAL: | 84 | FAIL RATE (Fits): DEVICE HRS: 1.09E+07 | | 0 |
| 25427 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25428 | STORAGE LIFE | 125C | 203 | 24 | HOUR | 0 |
| | MOISTURE SOAK | 30C/60% R.H. | 203 | 144 | HOUR | 0 |
| | VAPOR PHASE REFLOW | 217C | 203 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |
| 25429 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25432 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25433 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 40 | 274 | HOUR | 0 |
| | | | 40 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25434 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 39 | 96 | HOUR | 0 |

PROJECT NO: 14157

RELIABILITY MONITOR

DS5002 APR '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS5002 | C4 | 0004 | DM925587AAF | 80 | MQFP | 14x20 | Carsem |
| PROCESS Single Poly, Single Metal 0.6 μ m Buried contacts w/silicided poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----------|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β : | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|----------|-----------|----------|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |

RELIABILITY MONITOR

DS5002 JUL '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS5002 | C5 | 0027 | DN012259AAL | 80 | MQFP | 14x20 | ATK (Anam, K) |
| PROCESS Single Poly, Single Metal 0.6 μm Buried contacts w/silicided poly | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|-----------------------------|----------|--|-------|-------------|
| 25826 | INFANT LIFE | 125C, 6.0 VOLTS | 198 | 48 | HOUR | 0 |
| 25827 | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS | 77 | 336 | HOUR | 0 |
| TOTAL: | | | 203 | FAIL RATE (Fits): DEVICE HRS: 4.52E+06 | | 0 |
| 25824 | STORAGE LIFE | 125C | 203 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 203 | 144 | HOUR | |
| | VAPOR PHASE REFLOW | 220C | 203 | 3 | PASS | 0 |
| TOTAL: | | | | | | 0 |
| 25828 | TEMP CYCLE | -55C TO 125C | 37 | 300 | CYCL | 0 |
| TOTAL: | | | | | | 0 |
| 25830 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 37 | 96 | HOUR | 0 |
| TOTAL: | | | | | | 0 |

PROJECT NO: 16260

RELIABILITY MONITOR

DS80C320 JAN '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS80C320 | C5 | 0001 | DH928322BAA | 40 | PDIP | 600 | CPS (ChipPac, China) |
| PROCESS Single Poly, Single Metal 0.6 μm PolySilicide | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

Cf: Tuse:
 Ea: Vuse:
 β:

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 25014 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| 25015 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| | | 125C, 7.0 VOLTS | 77 | 1000 | HOUR | 0 |
| | | TOTAL: | 30 | DEVICE HRS: 3.08E+07 | | 0 |
| 25016 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 40 | 1000 | CYCL | 0 |
| | | TOTAL: | | | | 0 |
| 25017 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| | | | 77 | 959 | HOUR | 0 |
| | | TOTAL: | | | | 0 |
| 25018 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40 | 96 | HOUR | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 14148

RELIABILITY MONITOR

DS80C320 OCT '00 MONITOR

| | | | | | | | |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS80C320 | C5 | 0038 | DH026369ABA | 40 | PDIP | 600 | CPS (ChipPac, China) |
| PROCESS Single Poly, Single Metal 0.6 μm PolySilicide | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

Cf: Tuse:
 Ea: Vuse:
 β:

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 26064 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| 26065 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 0 |
| TOTAL: | | | 71 | DEVICE HRS: 1.30E+07 | | 0 |
| 26066 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| TOTAL: | | | | | | 0 |
| 26067 | BIASED MOISTURE | 85/85, 5.5 VOLTS | 77 | 274 | HOUR | 0 |
| TOTAL: | | | | | | 0 |
| 26068 | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 37 | 96 | HOUR | 0 |
| TOTAL: | | | | | | 0 |

PROJECT NO: 16483

RELIABILITY MONITOR

DS87C520 FEB '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS87C520 | A14 | 0004 | DK935356AAB | 44 | PLCC | 650 | ATP (Anam, PI) |
| PROCESS Double Poly, Single Metal 0.8 μm EPROM w/silicided poly(s) | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
Stress Ambient Temperature and Voltage to
Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|--------------------|----------|--|-------|-------------|
| 25120 | INFANT LIFE | 125C, 7.0 VOLTS | 228 | 48 | HOUR | 1 |
| 25121 | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS | 77 | 336 | HOUR | 1 |
| | | 125C, 7.0 VOLTS | 75 | 1000 | HOUR | 1 |
| TOTAL: | | | 141 | FAIL RATE (Fits): DEVICE HRS: 2.95E+07 | | 3 |
| 25117 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| TOTAL: | | | | | | 0 |
| 25118 | STORAGE LIFE | 125C | 234 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 234 | 240 | HOUR | |
| | VAPOR PHASE REFLOW | 217C | 233 | 3 | PASS | 0 |
| TOTAL: | | | | | | 0 |
| 25119 | PRECONDITION U/S | J-STD-020 | 4 | | | 0 |
| TOTAL: | | | | | | 0 |
| 25122 | TEMP CYCLE | -55C TO 125C | 40 | 300 | CYCL | 0 |
| | | | 39 | 1000 | CYCL | 0 |
| TOTAL: | | | | | | 0 |
| 25123 | HAST | 130C, 85%R.H.,5.5V | 58 | 100 | HOUR | 0 |
| TOTAL: | | | | | | 0 |
| 25124 | STORAGE LIFE | 150C | 50 | 336 | HOUR | 0 |
| | | | 50 | 1000 | HOUR | 0 |

PROJECT NO: 14177

RELIABILITY MONITOR

DS87C520 FEB '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS87C520 | A14 | 0004 | DK935356AAB | 44 | PLCC | 650 | ATP (Anam, PI) |
| PROCESS Double Poly, Single Metal 0.8 μm EPROM w/silicided poly(s) | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | |
|--------------------------------------|--|
| Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="55 °C"/> |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="1"/> | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|--------------|--|--|-----------|-------|-------------|
| TOTAL: | | | | | | 0 |
| JOB NO | FAILURE MODE | FAILURE MECHANISM | CORRECTIVE ACTION | | | |
| 25120 | ICCSP DALLAS | VERIFIED - PROBABLE GATE OXIDE FAILURE | SEVERAL EVALUATIONS ARE IN PROCESS TO IMPROVE GATE OXIDE PERFORMANCE | | | |
| 25121 | ICCSP | VERIFIED - GATE OXIDE FAILURE | SEVERAL EVALUATIONS ARE IN PROCESS TO IMPROVE GATE OXIDE PERFORMANCE | | | |
| 25121 | ICCSP DALLAS | VERIFIED - GATE OXIDE FAILURE | SEVERAL EVALUATIONS ARE IN PROCESS TO IMPROVE GATE OXIDE PERFORMANCE | | | |

PROJECT NO: 14177

RELIABILITY MONITOR

DS87C520 AUG '00 MONITOR

| | | | | | | | |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| DEVICE | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE |
| DS87C520 | A15 | 0027 | DE013425AAD | 44 | PLCC | 650 | OSEP |
| PROCESS Double Poly, Single Metal 0.8 μm EPROM w/silicided poly(s) | | | | | | | |

Summary Data with Chi-Square Distribution Assumed.
 Stress Ambient Temperature and Voltage to
 Field Ambient Temperature And Voltage

| | | | |
|-----|----------------------------------|-------|--|
| Cf: | <input type="text" value="60%"/> | Tuse: | <input type="text" value="55 °C"/> |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β: | <input type="text" value="1"/> | | |

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|-----------------|----------|-----------|----------------------|-------------|
| 25866 | INFANT LIFE | 125C, 7.0 VOLTS | 234 | 48 | HOUR | 0 |
| | | TOTAL: | 234 | | FAIL RATE (Fits): | 0 |
| | | | | | DEVICE HRS: 3.92E+06 | |
| 25863 | ULTRASOUND | J-STD-020 | 4 | | | 0 |
| | | TOTAL: | | | | 0 |
| 25864 | STORAGE LIFE | 125C | 239 | 24 | HOUR | |
| | MOISTURE SOAK | 30C/60% R.H. | 239 | 240 | HOUR | |
| | VAPOR PHASE REFLOW | 220C | 239 | 3 | PASS | 0 |
| | | TOTAL: | | | | 0 |

PROJECT NO: 16259