

# RELIABILITY MONITOR

## DS1100Z-25 OCT '01 MONITOR

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE   |
|--|----------|---------|-------------|------|---------|---------|-----------------|
| DS1100   | A3       | 0126    | DK114601ADC | 8    | SOIC    | 150x1.4 | ATP (Amkor, PI) |
| <b>PROCESS</b> 1P, 2M, 0.6um,E2,NZTC P1R,DSD w/LV Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |         |                 |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT          | CONDITION                   | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|-------------------|-----------------------------|----------|-----------|----------------------|----------------------|
| 28535  | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS             | 77       | 336       | HOUR                 | 0                    |
|        |                   | 125C, 6.0 VOLTS             | 77       | 1000      | HOUR                 | 0                    |
|        |                   | TOTAL:                      |          |           | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 |
| 28532  | ULTRASOUND        | J-STD-020                   | 4        |           |                      | 0                    |
|        |                   | TOTAL:                      |          |           |                      | 0                    |
| 28533  | STORAGE LIFE      | 125C                        | 238      | 24        | HOUR                 | 0                    |
|        | MOISTURE SOAK     | 85 C/85% R.H.               | 238      | 168       | HOUR                 | 0                    |
|        | CONVECTION REFLOW | 235C                        | 238      | 3         | PASS                 | 0                    |
|        | TOTAL:            |                             |          |           |                      | 0                    |
| 28534  | PRECONDITION U/S  | J-STD-020                   | 4        |           |                      | 0                    |
|        |                   | TOTAL:                      |          |           |                      | 0                    |
| 28536  | TEMP CYCLE        | -55C TO 125C                | 40       | 300       | CYCL                 | 0                    |
|        |                   |                             | 40       | 1000      | CYCL                 | 0                    |
|        |                   | TOTAL:                      |          |           |                      | 0                    |
| 28538  | AUTOCLAVE         | 121C, 2 ATM STEAM, UNBIASED | 40       | 168       | HOUR                 | 0                    |
|        |                   | TOTAL:                      |          |           |                      | 0                    |

PROJECT NO: 19605

# RELIABILITY MONITOR

## DS1100Z-25 JAN '02 MONITOR

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE   |
|--|----------|---------|-------------|------|---------|---------|-----------------|
| DS1100   | A3       | 0132    | DK115002AKC | 8    | SOIC    | 150x1.4 | ATP (Amkor, PI) |
| <b>PROCESS</b> 1P, 2M, 0.6um,E2,NZTC P1R,DSD w/LV Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |         |                 |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT   | CONDITION                   | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|--|-----------------------------|----------|-----------|----------------------|----------------------|
| 28614  | HIGH VOLTAGE LIFE                                  | 125C, 6.0 VOLTS             | 77       | 336       | HOUR                 | 0                    |
|        |  | 125C, 6.0 VOLTS             | 77       | 1000      | HOUR                 | 0                    |
|        |  | TOTAL:                      |          |           | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 |
| 28611  | ULTRASOUND   | J-STD-020                   | 4        |           |                      | 0                    |
|        |  | TOTAL:                      |          |           |                      | 0                    |
| 28612  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                        | 238      | 24        | HOUR                 |                      |
|        |  | 85 C/85% R.H.               | 238      | 168       | HOUR                 |                      |
|        |  | 235C                        | 238      | 3         | PASS                 | 0                    |
|        |  | TOTAL:                      |          |           |                      | 0                    |
| 28613  | PRECONDITION U/S                                   | J-STD-020                   | 4        |           |                      | 0                    |
|        |  | TOTAL:                      |          |           |                      | 0                    |
| 28615  | TEMP CYCLE   | -55C TO 125C                | 40       | 300       | CYCL                 | 0                    |
|        |  |                             | 40       | 1000      | CYCL                 | 0                    |
|        |  | TOTAL:                      |          |           |                      | 0                    |
| 28617  | AUTOCLAVE  | 121C, 2 ATM STEAM, UNBIASED | 39       | 168       | HOUR                 | 0                    |
|        |  | TOTAL:                      |          |           |                      | 0                    |

PROJECT NO: 20890

# RELIABILITY MONITOR

## DS1233Z-10 APR '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE |
|---|----------|---------|------------|------|---------|---------|---------------|
| DS1233  | A5-500   | 0101    | DA048537AF | 3    | SOT223  | 140x1.7 | Fastech       |
| <b>PROCESS</b> 1P, 1M, 1.2um, ZTC P1, Ndepletion ,L Passivation w/Nitride |          |         |            |      |         |         |               |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO              | DESCRIPT          | CONDITION                   | QUANTITY         | READPOINT                | UNITS                | NO OF FAILS          |
|---------------------|-------------------|-----------------------------|------------------|--------------------------|----------------------|----------------------|
| 26871               | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS             | 77               | 336                      | HOUR                 | 0                    |
|                     |                   | 125C, 7.0 VOLTS             | 77               | 1000                     | HOUR                 | 0                    |
|                     |                   | TOTAL:                      |                  |                          | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 |
| 26868               | ULTRASOUND        | J-STD-020                   | 4                |                          |                      | 0                    |
|                     |                   | TOTAL:                      |                  |                          |                      | 0                    |
| 26869               | STORAGE LIFE      | 125C                        | 238              | 24                       | HOUR                 |                      |
|                     | MOISTURE SOAK     | 85 C/85% R.H.               | 238              | 168                      | HOUR                 |                      |
|                     | CONVECTION REFLOW | 235C                        | 238              | 3                        | PASS                 | 0                    |
|                     | TOTAL:            |                             |                  |                          |                      | 0                    |
| 26872               | TEMP CYCLE        | -55C TO 125C                | 40               | 700                      | CYCL                 | 10                   |
|                     |                   |                             | 29               | 1000                     | CYCL                 | 0                    |
|                     |                   | TOTAL:                      |                  |                          |                      | 10                   |
| <b>FAILURE MODE</b> |                   | <b>VERIFICATION</b>         | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |                      |                      |
| ICC STANDBY         |                   | #1 MIXED; #2-11 ICC STANDBY |                  |                          |                      |                      |
| 26873               | HAST              | 130C, 85%R.H.,5.5V          | 77               | 100                      | HOUR                 | 0                    |
|                     |                   | TOTAL:                      |                  |                          |                      | 0                    |
| 26874               | AUTOCLAVE         | 121C, 2 ATM STEAM, UNBIASED | 40               | 96                       | HOUR                 | 0                    |
|                     |                   | TOTAL:                      |                  |                          |                      | 0                    |

**PROJECT NO:** 17982

# RELIABILITY MONITOR

**DS1233Z-10 APR '01 MONITOR**

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1233  | A5-500          | 0101           | DA048537AF        | 3           | SOT223         | 140x1.7      | Fastech              |
| <b>PROCESS</b> 1P, 1M, 1.2um, ZTC P1, Ndepletion ,L Passivation w/Nitride |                 |                |                   |             |                |              |                      |

|  |     |     |       |           |
|--|-----|-----|-------|-----------|
| Summary Data with Chi-Square Distribution Assumed. | Cf: | 60% | Tuse: | 25 °C     |
| Stress Ambient Temperature and Voltage to          | Ea: | 0.7 | Vuse: | 5.5 Volts |
| Field Ambient Temperature And Voltage              | β:  | 0   |       |           |

**NO OF  
FAILS**

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

PROJECT NO: 17982

# RELIABILITY MONITOR

## DS1233Z-10 JUL '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1233  | A5-500          | 0110           | DM048543AA        | 3           | SOT223         | 140x1.7      | Carsem               |
| <b>PROCESS</b> 1P, 1M, 1.2um, ZTC P1, Ndepletion ,L Passivation w/Nitride |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO | DESCRIPT   | CONDITION                   | QUANTITY | READPOINT            | UNITS                | NO OF FAILS |
|--------|--|-----------------------------|----------|----------------------|----------------------|-------------|
| 27352  | HIGH VOLTAGE LIFE                                  | 125C, 7.0 VOLTS             | 68       | 336                  | HOUR                 | 0           |
|        |  | 125C, 7.0 VOLTS             | 68       | 1000                 | HOUR                 | 0           |
|        |  | TOTAL:                      |          | FAIL RATE (Fits): 14 | DEVICE HRS: 6.41E+07 |             |
| 27349  | ULTRASOUND   | J-STD-020                   | 4        |                      |                      | 0           |
|        |  | TOTAL:                      |          |                      |                      | 0           |
| 27350  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                        | 241      | 24                   | HOUR                 |             |
|        |  | 85 C/85% R.H.               | 241      | 168                  | HOUR                 |             |
|        |  | 235C                        | 241      | 3                    | PASS                 | 0           |
|        |  | TOTAL:                      |          |                      |                      | 0           |
| 27351  | PRECONDITION U/S                                   | J-STD-020                   | 4        |                      |                      | 0           |
|        |  | TOTAL:                      |          |                      |                      | 0           |
| 27353  | TEMP CYCLE   | -55C TO 125C                | 40       | 700                  | CYCL                 | 0           |
|        |  |                             | 26       | 1000                 | CYCL                 | 0           |
|        |  | TOTAL:                      |          |                      |                      | 0           |
| 27354  | HAST   | 130C, 85%R.H.,5.5V          | 77       | 100                  | HOUR                 | 0           |
|        |  | TOTAL:                      |          |                      |                      | 0           |
| 27355  | AUTOCLAVE  | 121C, 2 ATM STEAM, UNBIASED | 40       | 96                   | HOUR                 | 0           |

**PROJECT NO:** 18777

# RELIABILITY MONITOR

## DS1233Z-10 JUL '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1233  | A5-500          | 0110           | DM048543AA        | 3           | SOT223         | 140x1.7      | Carsem               |
| <b>PROCESS</b> 1P, 1M, 1.2um, ZTC P1, Ndepletion ,L Passivation w/Nitride |                 |                |                   |             |                |              |                      |

|  |     |     |       |           |
|--|-----|-----|-------|-----------|
| Summary Data with Chi-Square Distribution Assumed. | Cf: | 60% | Tuse: | 25 °C     |
| Stress Ambient Temperature and Voltage to          | Ea: | 0.7 | Vuse: | 5.5 Volts |
| Field Ambient Temperature And Voltage              | β:  | 0   |       |           |

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

# RELIABILITY MONITOR

## DS1233Z-10 OCT '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1233  | A5-500          | 0128           | DA102602AC        | 3           | SOT223         | 140x1.7      | Fastech              |
| <b>PROCESS</b> 1P, 1M, 1.2um, ZTC P1, Ndepletion ,L Passivation w/Nitride |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO              | DESCRIPT          | CONDITION           | QUANTITY         | READPOINT            | UNITS                    | NO OF FAILS |
|---------------------|-------------------|---------------------|------------------|----------------------|--------------------------|-------------|
| 28006               | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS     | 68               | 336                  | HOUR                     | 0           |
|                     |                   | 125C, 7.0 VOLTS     | 68               | 1000                 | HOUR                     | 1           |
| TOTAL:              |                   |                     | 32               | DEVICE HRS: 6.41E+07 |                          | 1           |
| <b>FAILURE MODE</b> |                   | <b>VERIFICATION</b> | <b>FA NUMBER</b> |                      | <b>FAILURE MECHANISM</b> |             |
| CONTINUITY          |                   | CONTINUITY          |                  |                      |                          |             |
| 28003               | ULTRASOUND        | J-STD-020           | 4                |                      |                          | 0           |
| TOTAL:              |                   |                     |                  |                      |                          | 0           |
| 28004               | STORAGE LIFE      | 125C                | 241              | 24                   | HOUR                     |             |
|                     | MOISTURE SOAK     | 85 C/85% R.H.       | 241              | 168                  | HOUR                     |             |
|                     | CONVECTION REFLOW | 235C                | 241              | 3                    | PASS                     | 1           |
| TOTAL:              |                   |                     |                  |                      |                          | 1           |
| <b>FAILURE MODE</b> |                   | <b>VERIFICATION</b> | <b>FA NUMBER</b> |                      | <b>FAILURE MECHANISM</b> |             |
| CONTINUITY          |                   | #1 CONTINUITY       |                  |                      |                          |             |
| 28005               | PRECONDITION U/S  | J-STD-020           | 4                |                      |                          | 0           |
| TOTAL:              |                   |                     |                  |                      |                          | 0           |
| 28007               | TEMP CYCLE        | -55C TO 125C        | 40               | 700                  | CYCL                     | 0           |
|                     |                   |                     | 40               | 1000                 | CYCL                     | 0           |
| TOTAL:              |                   |                     |                  |                      |                          | 0           |
| 28008               | HAST              | 130C, 85%R.H.,5.5V  | 77               | 100                  | HOUR                     | 0           |

**PROJECT NO:** 19603

# RELIABILITY MONITOR

## DS1233Z-10 OCT '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1233  | A5-500          | 0128           | DA102602AC        | 3           | SOT223         | 140x1.7      | Fastech              |
| <b>PROCESS</b> 1P, 1M, 1.2um, ZTC P1, Ndepletion ,L Passivation w/Nitride |                 |                |                   |             |                |              |                      |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF  
FAILS**

| JOB NO | DESCRIPT  | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-----------|-----------------------------|----------|-----------|-------|-------------|
| TOTAL: |           |                             |          |           |       | 0           |
| 28009  | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40       | 96        | HOUR  | 0           |
| TOTAL: |           |                             |          |           |       | 0           |

PROJECT NO: 19603

# RELIABILITY MONITOR

## DS1302 SEP '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE   |
|---|----------|---------|------------|------|---------|-------|-----------------|
| DS1302  | A4       | 0133    | DK101008AD | 8    | PDIP    | 300   | ATP (Amkor, PI) |
| <b>PROCESS</b> 1P, 2M, 0.8um, ESD Pdepletion,HP Vts, Passivation w/Nov TEOS Oxide-Nitride |          |         |            |      |         |       |                 |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO              | DESCRIPT          | CONDITION                   | QUANTITY         | READPOINT | UNITS                    | NO OF FAILS          |
|---------------------|-------------------|-----------------------------|------------------|-----------|--------------------------|----------------------|
| 27794               | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS             | 80               | 336       | HOUR                     | 0                    |
|                     |                   | 125C, 6.0 VOLTS             | 80               | 1000      | HOUR                     | 0                    |
|                     |                   | TOTAL:                      |                  |           | FAIL RATE (Fits): 12     | DEVICE HRS: 7.55E+07 |
| 27795               | TEMP CYCLE        | -55C TO 125C                | 40               | 300       | CYCL                     | 0                    |
|                     |                   |                             | 40               | 1000      | CYCL                     | 0                    |
|                     |                   | TOTAL:                      |                  |           |                          |                      |
| 27796               | BIASED MOISTURE   | 85/85, 5.5 VOLTS            | 77               | 274       | HOUR                     | 1                    |
|                     |                   |                             | 76               | 959       | HOUR                     | 0                    |
|                     |                   | TOTAL:                      |                  |           |                          |                      |
| <b>FAILURE MODE</b> |                   | <b>VERIFICATION</b>         | <b>FA NUMBER</b> |           | <b>FAILURE MECHANISM</b> |                      |
| ICC STANDBY (VCCI)  |                   | ICC STANDBY                 |                  |           |                          |                      |
| 27797               | AUTOCLAVE         | 121C, 2 ATM STEAM, UNBIASED | 40               | 96        | HOUR                     | 0                    |
|                     |                   | TOTAL:                      |                  |           |                          | 0                    |

PROJECT NO: 19199

## RELIABILITY MONITOR

### DS1302 MAR '02 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH | ASSEMBLY SITE       |
|---|----------|---------|------------|------|---------|-------|---------------------|
| DS1302  | A4       | 0204    | DE214012AA | 8    | PDIP    | 300   | CPS (ChipPac, China |
| <b>PROCESS</b> 1P, 2M, 0.8um, ESD Pdepletion,HP Vts, Passivation w/Nov TEOS Oxide-Nitride |          |         |            |      |         |       |                     |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF FAILS**

| JOB NO | DESCRIPT          | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS                 |
|--------|-------------------|-----------------------------|----------|-----------|-------|-----------------------------|
| 28812  | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS             | 80       | 336       | HOUR  | 0                           |
|        |                   | 125C, 6.0 VOLTS             | 80       | 1000      | HOUR  | 0                           |
|        |                   | <b>TOTAL:</b>               |          |           |       | <b>FAIL RATE (Fits):</b> 12 |
| 28813  | TEMP CYCLE        | -55C TO 125C                | 45       | 300       | CYCL  | 0                           |
|        |                   |                             | 45       | 1000      | CYCL  | 0                           |
|        |                   | <b>TOTAL:</b>               |          |           |       |                             |
| 28814  | BIASED MOISTURE   | 85/85, 5.5 VOLTS            | 77       | 274       | HOUR  | 0                           |
|        |                   |                             | 77       | 959       | HOUR  | 0                           |
|        |                   | <b>TOTAL:</b>               |          |           |       |                             |
| 28815  | AUTOCLAVE         | 121C, 2 ATM STEAM, UNBIASED | 45       | 168       | HOUR  | 0                           |
|        |                   | <b>TOTAL:</b>               |          |           |       | 0                           |

**PROJECT NO:** 21345

# RELIABILITY MONITOR

## DS1620 SEP '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1620  | D1              | 0111           | DJ051232AAI       | 8           | SOIC           | 208x1.9      | NSEB                 |
| <b>PROCESS</b> 1P, 1M, 0.8um, E2PROM, DSD w/LV Wel Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO | DESCRIPT   | CONDITION        | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|--|------------------|----------|-----------|----------------------|----------------------|
| 27859  | HIGH VOLTAGE LIFE                                  | 125C, 7.0 VOLTS  | 80       | 336       | HOUR                 | 0                    |
|        |  | 125C, 7.0 VOLTS  | 80       | 1000      | HOUR                 | 0                    |
|        |  | TOTAL:           |          |           | FAIL RATE (Fits): 12 | DEVICE HRS: 7.55E+07 |
| 27856  | ULTRASOUND   | J-STD-020        | 4        |           |                      | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27857  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C             | 244      | 24        | HOUR                 |                      |
|        |  | 85 C/85% R.H.    | 244      | 168       | HOUR                 |                      |
|        |  | 235C             | 244      | 3         | PASS                 | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27858  | PRECONDITION U/S                                   | J-STD-020        | 4        |           |                      | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27860  | TEMP CYCLE   | -55C TO 125C     | 40       | 300       | CYCL                 | 0                    |
|        |  |                  | 40       | 1000      | CYCL                 | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27861  | BIASED MOISTURE                                    | 85/85, 5.5 VOLTS | 70       | 274       | HOUR                 | 0                    |
|        |  |                  | 70       | 959       | HOUR                 | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |

PROJECT NO: 19202

# RELIABILITY MONITOR

## DS1620 SEP '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1620  | D1              | 0111           | DJ051232AAI       | 8           | SOIC           | 208x1.9      | NSEB                 |
| <b>PROCESS</b> 1P, 1M, 0.8um, E2PROM, DSD w/LV Wel Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO | DESCRIPT           | CONDITION       | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|-----------------|----------|-----------|-------|-------------|
| 27862  | WRITE CYCLE STRESS | 85 C, 7.0 VOLTS | 50       | 50        | KCYC  | 0           |
| TOTAL: |                    |                 |          |           |       | 0           |
| 27863  | STORAGE LIFE       | 150C            | 50       | 336       | HOUR  | 0           |
| TOTAL: |                    |                 |          |           |       | 0           |

PROJECT NO: 19202

# RELIABILITY MONITOR

## DS1620 DEC '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE       |
|---|----------|---------|-------------|------|---------|---------|---------------------|
| DS1620  | D1       | 0112    | DH052443AAD | 8    | SOIC    | 208x1.9 | CPS (ChipPac, China |
| <b>PROCESS</b> 1P, 1M, 0.8um, E2PROM, DSD w/LV Wel Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |         |                     |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO | DESCRIPT          | CONDITION        | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|-------------------|------------------|----------|-----------|----------------------|----------------------|
| 28593  | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS  | 80       | 336       | HOUR                 | 0                    |
|        |                   | 125C, 7.0 VOLTS  | 80       | 1000      | HOUR                 | 0                    |
|        |                   | TOTAL:           |          |           | FAIL RATE (Fits): 12 | DEVICE HRS: 7.55E+07 |
| 28590  | ULTRASOUND        | J-STD-020        | 4        |           |                      | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 28591  | STORAGE LIFE      | 125C             | 244      | 24        | HOUR                 |                      |
|        | MOISTURE SOAK     | 85 C/85% R.H.    | 244      | 168       | HOUR                 |                      |
|        | CONVECTION REFLOW | 235C             | 244      | 3         | PASS                 | 0                    |
|        | TOTAL:            |                  |          |           |                      | 0                    |
| 28592  | PRECONDITION U/S  | J-STD-020        | 4        |           |                      | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 28594  | TEMP CYCLE        | -55C TO 125C     | 40       | 300       | CYCL                 | 0                    |
|        |                   |                  | 40       | 1000      | CYCL                 | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 28595  | BIASED MOISTURE   | 85/85, 5.5 VOLTS | 70       | 274       | HOUR                 | 0                    |
|        |                   |                  | 70       | 959       | HOUR                 | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |

PROJECT NO: 20886

# RELIABILITY MONITOR

## DS1620 DEC '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1620  | D1              | 0112           | DH052443AAD       | 8           | SOIC           | 208x1.9      | CPS (ChipPac, China  |
| <b>PROCESS</b> 1P, 1M, 0.8um, E2PROM, DSD w/LV Wel Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF**

| JOB NO | DESCRIPT           | CONDITION       | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|--------------------|-----------------|----------|-----------|-------|-------------|
| 28596  | WRITE CYCLE STRESS | 85 C, 7.0 VOLTS | 50       | 50        | KCYC  | 0           |
| TOTAL: |                    |                 |          |           |       | 0           |
| 28597  | STORAGE LIFE       | 150C            | 50       | 336       | HOUR  | 0           |
| TOTAL: |                    |                 |          |           |       | 0           |

PROJECT NO: 20886

# RELIABILITY MONITOR

## DS1803-010 FEB '01 MONITOR

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1803   | A2              | 0105           | DE047362AAB       | 16          | SOIC           | 150x1.4      | OSEP                 |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, WJ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT          | CONDITION        | QUANTITY | READPOINT            | UNITS | NO OF FAILS |
|--------|-------------------|------------------|----------|----------------------|-------|-------------|
| 26609  | INFANT LIFE       | 125C, 7.0 VOLTS  | 232      | 48                   | HOUR  | 0           |
| 26610  | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS  | 77       | 336                  | HOUR  | 0           |
|        |                   | 125C, 7.0 VOLTS  | 77       | 1000                 | HOUR  | 0           |
| TOTAL: |                   |                  | 11       | FAIL RATE (Fits):    |       | 0           |
|        |                   |                  |          | DEVICE HRS: 8.31E+07 |       |             |
| 26606  | ULTRASOUND        | J-STD-020        | 4        |                      |       | 0           |
| TOTAL: |                   |                  |          |                      |       | 0           |
| 26607  | STORAGE LIFE      | 125C             | 238      | 24                   | HOUR  |             |
|        | MOISTURE SOAK     | 85 C/85% R.H.    | 238      | 168                  | HOUR  |             |
|        | CONVECTION REFLOW | 235C             | 238      | 3                    | PASS  | 0           |
| TOTAL: |                   |                  |          |                      |       | 0           |
| 26608  | PRECONDITION U/S  | J-STD-020        | 4        |                      |       | 0           |
| TOTAL: |                   |                  |          |                      |       | 0           |
| 26611  | TEMP CYCLE        | -55C TO 125C     | 40       | 300                  | CYCL  | 0           |
|        |                   |                  | 34       | 1000                 | CYCL  | 0           |
| TOTAL: |                   |                  |          |                      |       | 0           |
| 26612  | BIASED MOISTURE   | 85/85, 5.5 VOLTS | 77       | 274                  | HOUR  | 0           |
|        |                   |                  | 66       | 959                  | HOUR  | 0           |

**PROJECT NO:** 17281

# RELIABILITY MONITOR

## DS1803-010 FEB '01 MONITOR

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1803   | A2              | 0105           | DE047362AAB       | 16          | SOIC           | 150x1.4      | OSEP                 |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, WJ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF**

| JOB NO | DESCRIPT  | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-----------|-----------------------------|----------|-----------|-------|-------------|
|        |           | TOTAL:                      |          |           |       | 0           |
| 26613  | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 30       | 96        | HOUR  | 0           |
|        |           | TOTAL:                      |          |           |       | 0           |

PROJECT NO: 17281

# RELIABILITY MONITOR

## DS1803-010 MAY '01 MONITOR

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE |
|--|----------|---------|-------------|------|---------|---------|---------------|
| DS1803   | A2       | 0115    | DM052456ACB | 16   | SOIC    | 150x1.4 | Carsem        |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, WJ Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |         |               |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO              | DESCRIPT   | CONDITION                   | QUANTITY             | READPOINT                | UNITS                | NO OF FAILS |
|---------------------|--|-----------------------------|----------------------|--------------------------|----------------------|-------------|
| 26993               | HIGH VOLTAGE LIFE                                  | 125C, 7.0 VOLTS             | 77                   | 336                      | HOUR                 | 0           |
|                     |  | 125C, 7.0 VOLTS             | 76                   | 1000                     | HOUR                 | 0           |
|                     |  | TOTAL:                      | FAIL RATE (Fits): 13 |                          | DEVICE HRS: 7.20E+07 | 0           |
| 26990               | ULTRASOUND   | J-STD-020                   | 4                    |                          |                      | 0           |
|                     |  | TOTAL:                      |                      |                          |                      | 0           |
| 26991               | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                        | 238                  | 24                       | HOUR                 |             |
|                     |  | 85 C/85% R.H.               | 238                  | 168                      | HOUR                 |             |
|                     |  | 235C                        | 238                  | 3                        | PASS                 | 0           |
|                     |  | TOTAL:                      |                      |                          |                      | 0           |
| 26992               | PRECONDITION U/S                                   | J-STD-020                   | 4                    |                          |                      | 3           |
|                     |  | TOTAL:                      |                      |                          |                      | 3           |
| <b>FAILURE MODE</b> |  | <b>VERIFICATION</b>         | <b>FA NUMBER</b>     | <b>FAILURE MECHANISM</b> |                      |             |
| US                  |  | DELAMINATION ON DIE SURFACE |                      |                          |                      |             |
| 26994               | TEMP CYCLE   | -55C TO 125C                | 40                   | 300                      | CYCL                 | 0           |
|                     |  |                             | 31                   | 1000                     | CYCL                 | 0           |
|                     |  | TOTAL:                      |                      |                          |                      | 0           |
| 26995               | BIASED MOISTURE                                    | 85/85, 5.5 VOLTS            | 77                   | 274                      | HOUR                 | 0           |
|                     |  |                             | 77                   | 959                      | HOUR                 | 0           |

**PROJECT NO:** 18204

# RELIABILITY MONITOR

## DS1803-010 MAY '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1803  | A2              | 0115           | DM052456ACB       | 16          | SOIC           | 150x1.4      | Carsem               |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode , WJ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF**

| JOB NO | DESCRIPT  | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-----------|-----------------------------|----------|-----------|-------|-------------|
| TOTAL: |           |                             |          |           |       | 0           |
| 26996  | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 37       | 96        | HOUR  | 0           |
| TOTAL: |           |                             |          |           |       | 0           |

PROJECT NO: 18204

# RELIABILITY MONITOR

## DS1803-010 AUG '01 MONITOR

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1803   | A2              | 0119           | DE105519ACA       | 16          | SOIC           | 150x1.4      | OSEP                 |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, WJ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

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="25 °C"/>     |
| Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| β: <input type="text" value="0"/>    |  |

| JOB NO | DESCRIPT   | CONDITION                   | QUANTITY         | READPOINT                | UNITS                | NO OF FAILS |
|--------|--|-----------------------------|------------------|--------------------------|----------------------|-------------|
| 27563  | HIGH VOLTAGE LIFE                                  | 125C, 7.0 VOLTS             | 80               | 336                      | HOUR                 | 0           |
|        |  | 125C, 7.0 VOLTS             | 80               | 1000                     | HOUR                 | 0           |
|        |  | TOTAL:                      |                  | FAIL RATE (Fits): 12     | DEVICE HRS: 7.55E+07 |             |
| 27560  | ULTRASOUND   | J-STD-020                   | 4                |                          |                      | 0           |
|        |  | TOTAL:                      |                  |                          |                      | 0           |
| 27561  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                        | 241              | 24                       | HOUR                 |             |
|        |  | 85 C/85% R.H.               | 241              | 168                      | HOUR                 |             |
|        |  | 235C                        | 241              | 3                        | PASS                 | 0           |
|        |  | TOTAL:                      |                  |                          |                      | 0           |
| 27562  | PRECONDITION U/S                                   | J-STD-020                   | 4                |                          |                      | 1           |
|        |  | TOTAL:                      |                  |                          |                      | 1           |
|        | <b>FAILURE MODE</b>                                | <b>VERIFICATION</b>         | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |                      |             |
|        | US   | DELAMINATION ON DIE SURFACE |                  |                          |                      |             |
| 27564  | TEMP CYCLE   | -55C TO 125C                | 40               | 300                      | CYCL                 | 0           |
|        |  |                             | 40               | 1000                     | CYCL                 | 0           |
|        |  | TOTAL:                      |                  |                          |                      | 0           |
| 27565  | BIASED MOISTURE                                    | 85/85, 5.5 VOLTS            | 77               | 274                      | HOUR                 | 0           |
|        |  |                             | 77               | 959                      | HOUR                 | 0           |

**PROJECT NO:** 18889

# RELIABILITY MONITOR

## DS1803-010 AUG '01 MONITOR

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE |
|--|----------|---------|-------------|------|---------|---------|---------------|
| DS1803   | A2       | 0119    | DE105519ACA | 16   | SOIC    | 150x1.4 | OSEP          |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, Ti/TiN M1+M2 Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |         |               |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

$\beta$ :

**NO OF  
FAILS**

| JOB NO | DESCRIPT  | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-----------|-----------------------------|----------|-----------|-------|-------------|
|        |           | TOTAL:                      |          |           |       | 0           |
| 27566  | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40       | 96        | HOUR  | 0           |
|        |           | TOTAL:                      |          |           |       | 0           |

PROJECT NO: 18889

# RELIABILITY MONITOR

## DS1803-010 NOV '01 MONITOR

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE   |
|--|----------|---------|-------------|------|---------|---------|-----------------|
| DS1803   | A2       | 0143    | DK122629AAB | 16   | SOIC    | 150x1.4 | ATP (Amkor, PI) |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, WJ Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |         |                 |

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="25 °C"/>     |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β:  | <input type="text" value="0"/>   |       |  |

| JOB NO | DESCRIPT          | CONDITION                   | QUANTITY | READPOINT         | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|-------------------|-------|-------------|
| 28558  | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS             | 80       | 336               | HOUR  | 0           |
| TOTAL: |                   |                             | 36       | FAIL RATE (Fits): |       | 0           |
|        |                   |                             |          | 2.54E+07          |       |             |
| 28555  | ULTRASOUND        | J-STD-020                   | 4        |                   |       | 0           |
| TOTAL: |                   |                             |          |                   |       | 0           |
| 28556  | STORAGE LIFE      | 125C                        | 241      | 24                | HOUR  |             |
|        | MOISTURE SOAK     | 85 C/85% R.H.               | 241      | 168               | HOUR  |             |
|        | CONVECTION REFLOW | 235C                        | 241      | 3                 | PASS  | 0           |
| TOTAL: |                   |                             |          |                   |       | 0           |
| 28557  | PRECONDITION U/S  | J-STD-020                   | 4        |                   |       | 0           |
| TOTAL: |                   |                             |          |                   |       | 0           |
| 28559  | TEMP CYCLE        | -55C TO 125C                | 40       | 300               | CYCL  | 0           |
|        |                   |                             | 40       | 1000              | CYCL  | 0           |
| TOTAL: |                   |                             |          |                   |       | 0           |
| 28560  | BIASED MOISTURE   | 85/85, 5.5 VOLTS            | 77       | 274               | HOUR  | 0           |
|        |                   |                             | 77       | 959               | HOUR  | 0           |
| TOTAL: |                   |                             |          |                   |       | 0           |
| 28561  | AUTOCLAVE         | 121C, 2 ATM STEAM, UNBIASED | 37       | 168               | HOUR  | 0           |

**PROJECT NO:** 20883

# RELIABILITY MONITOR

**DS1803-010 NOV '01 MONITOR**

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS1803   | A2              | 0143           | DK122629AAB       | 16          | SOIC           | 150x1.4      | ATP (Amkor, PI)      |
| <b>PROCESS</b> 1P, 2M, 0.8um, PdplDiode, WJ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

|  |   |   |
|--|---|---|
| Summary Data with Chi-Square Distribution Assumed. | Cf: <input style="width: 50px;" type="text" value="60%"/> | Tuse: <input style="width: 50px;" type="text" value="25 °C"/>     |
| Stress Ambient Temperature and Voltage to          | Ea: <input style="width: 50px;" type="text" value="0.7"/> | Vuse: <input style="width: 50px;" type="text" value="5.5 Volts"/> |
| Field Ambient Temperature And Voltage              | β: <input style="width: 50px;" type="text" value="0"/>    |   |

| <b>JOB NO</b> | <b>DESCRIPT</b> | <b>CONDITION</b> | <b>QUANTITY</b> | <b>READPOINT</b> | <b>UNITS</b> | <b>NO OF FAILS</b> |
|---------------|-----------------|------------------|-----------------|------------------|--------------|--------------------|
| <b>TOTAL:</b> |                 |                  |                 |                  |              | <b>0</b>           |

# RELIABILITY MONITOR

**DS2108 MAY '01 MONITOR, D.P.**

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS2108   | B7              | 0111           | DK101048AAC       | 24          | SOIC           | 300x2.3      | ATP (Amkor, PI)      |
| <b>PROCESS</b> 1P,1M,5.0um,NegZTC P1R,30VNF&PF,U Laser/Nit - Pass/Nit - General LaserPrb |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:  °C  
 Vuse:  Volts

| JOB NO | DESCRIPT   | CONDITION           | QUANTITY         | READPOINT                | UNITS                | NO OF FAILS          |
|--------|--|---------------------|------------------|--------------------------|----------------------|----------------------|
| 26986  | HIGH VOLTAGE LIFE                                  | 125C, 6.0 VOLTS     | 77               | 336                      | HOUR                 | 0                    |
|        |  | 125C, 6.0 VOLTS     | 77               | 1000                     | HOUR                 | 0                    |
|        |  | TOTAL:              |                  |                          | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 |
| 26983  | ULTRASOUND   | J-STD-020           | 4                |                          |                      | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 26984  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                | 238              | 24                       | HOUR                 |                      |
|        |  | 30C/60% R.H.        | 238              | 144                      | HOUR                 |                      |
|        |  | 235C                | 238              | 3                        | PASS                 | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 26985  | PRECONDITION U/S                                   | J-STD-020           | 4                |                          |                      | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 26987  | TEMP CYCLE   | -55C TO 125C        | 40               | 300                      | CYCL                 | 1                    |
|        |  |                     | 39               | 1000                     | CYCL                 | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 1                    |
|        | <b>FAILURE MODE</b>                                | <b>VERIFICATION</b> | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |                      |                      |
|        | RBOT 1   | RBOT 1              |                  |                          |                      |                      |
| 26988  | BIASED MOISTURE                                    | 85/85, 5.5 VOLTS    | 77               | 274                      | HOUR                 | 0                    |
|        |  |                     | 76               | 959                      | HOUR                 | 0                    |

**PROJECT NO: 18203**

# RELIABILITY MONITOR

**DS2108 MAY '01 MONITOR, D.P.**

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS2108   | B7              | 0111           | DK101048AAC       | 24          | SOIC           | 300x2.3      | ATP (Amkor, PI)      |
| <b>PROCESS</b> 1P,1M,5.0um,NegZTC P1R,30VNF&PF,U Laser/Nit - Pass/Nit - General LaserPrb |                 |                |                   |             |                |              |                      |

|  |                                      |  |
|--|--------------------------------------|--|
| Summary Data with Chi-Square Distribution Assumed. | Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="25 °C"/>     |
| Stress Ambient Temperature and Voltage to          | Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| Field Ambient Temperature And Voltage              | β: <input type="text" value="0"/>    |  |

| JOB NO | DESCRIPT  | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-----------|-----------------------------|----------|-----------|-------|-------------|
| TOTAL: |           |                             |          |           |       | 0           |
| 26989  | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40       | 96        | HOUR  | 1           |
| TOTAL: |           |                             |          |           |       | 1           |

|                     |                        |                  |                          |
|---------------------|------------------------|------------------|--------------------------|
| <b>FAILURE MODE</b> | <b>VERIFICATION</b>    | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |
| IIL R1_8            | INPUT LEAKAGE ON PIN 3 |                  |                          |

**PROJECT NO: 18203**

# RELIABILITY MONITOR

**DS2118M MAR '02 MONITOR, D.P.**

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS2118M   | C1              | 0143           | DN120700ABB       | 36          | SSOP           | 7.5x2.4      | ATK (Amkor, K)       |
| <b>PROCESS</b> D6S-1P1M,HPVt,N+ESD,TCN3 ALOCO Laser/Nit - Pass/Nit - General LaserPrb |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO  | DESCRIPT   | CONDITION                   | QUANTITY                 | READPOINT | UNITS | NO OF FAILS          |                      |                     |                  |                          |     |                        |  |  |
|---|--|-----------------------------|--------------------------|-----------|-------|----------------------|----------------------|---------------------|------------------|--------------------------|-----|------------------------|--|--|
| 28819   | HIGH VOLTAGE LIFE                                  | 125C, 6.0 VOLTS             | 77                       | 336       | HOUR  | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | 125C, 6.0 VOLTS             | 77                       | 1000      | HOUR  | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | TOTAL:                      |                          |           |       | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 | 0                   |                  |                          |     |                        |  |  |
| 28816   | ULTRASOUND   | J-STD-020                   | 4                        |           |       | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | TOTAL:                      |                          |           |       |                      | 0                    |                     |                  |                          |     |                        |  |  |
| 28817   | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                        | 238                      | 48        | HOUR  |                      |                      |                     |                  |                          |     |                        |  |  |
|   |  | 85 C/85% R.H.               | 238                      | 168       | HOUR  |                      |                      |                     |                  |                          |     |                        |  |  |
|   |  | 235C                        | 238                      | 3         | PASS  | 4                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | TOTAL:                      |                          |           |       |                      | 4                    |                     |                  |                          |     |                        |  |  |
| <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;"><b>FAILURE MODE</b></td> <td style="width: 25%;"><b>VERIFICATION</b></td> <td style="width: 15%;"><b>FA NUMBER</b></td> <td style="width: 45%;"><b>FAILURE MECHANISM</b></td> </tr> <tr> <td>IIH</td> <td>INPUT LEAKAGE HIGH (4)</td> <td></td> <td></td> </tr> </table> |  |                             |                          |           |       |                      | <b>FAILURE MODE</b>  | <b>VERIFICATION</b> | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> | IIH | INPUT LEAKAGE HIGH (4) |  |  |
| <b>FAILURE MODE</b>   | <b>VERIFICATION</b>                                | <b>FA NUMBER</b>            | <b>FAILURE MECHANISM</b> |           |       |                      |                      |                     |                  |                          |     |                        |  |  |
| IIH   | INPUT LEAKAGE HIGH (4)                             |                             |                          |           |       |                      |                      |                     |                  |                          |     |                        |  |  |
| 28818   | PRECONDITION U/S                                   | J-STD-020                   | 4                        |           |       | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | TOTAL:                      |                          |           |       | 0                    |                      |                     |                  |                          |     |                        |  |  |
| 28820   | TEMP CYCLE   | -55C TO 125C                | 80                       | 300       | CYCL  | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  |                             | 80                       | 1000      | CYCL  | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | TOTAL:                      |                          |           |       | 0                    |                      |                     |                  |                          |     |                        |  |  |
| 28821   | AUTOCLAVE  | 121C, 2 ATM STEAM, UNBIASED | 73                       | 168       | HOUR  | 0                    |                      |                     |                  |                          |     |                        |  |  |
|   |  | TOTAL:                      |                          |           |       | 0                    |                      |                     |                  |                          |     |                        |  |  |

**PROJECT NO: 21344**

# RELIABILITY MONITOR

**DS2118M MAR '02 MONITOR, D.P.**

| DEVICE  | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH   | ASSEMBLY SITE  |
|---|----------|---------|-------------|------|---------|---------|----------------|
| DS2118M   | C1       | 0143    | DN120700ABB | 36   | SSOP    | 7.5x2.4 | ATK (Amkor, K) |
| <b>PROCESS</b> D6S-1P1M,HPVt,N+ESD,TCN3 ALOCO Laser/Nit - Pass/Nit - General LaserPrb |          |         |             |      |         |         |                |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF  
FAILS**

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

**PROJECT NO: 21344**

# RELIABILITY MONITOR

**DS2154 DEC '01 MONITOR, D.P.**

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE   |
|--|----------|---------|-------------|------|---------|--------|-----------------|
| DS2154   | A2       | 0126    | DK119150AAA | 100  | LQFP    | 14x14x | ATP (Amkor, PI) |
| <b>PROCESS</b> D8R-2P2M,HPVt,NDROM,N+ESD,Laser Laser/TEOS Ox - Pass/Nit - Gen.LaserPrb |          |         |             |      |         |        |                 |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT   | CONDITION           | QUANTITY         | READPOINT                | UNITS                | NO OF FAILS          |
|--------|--|---------------------|------------------|--------------------------|----------------------|----------------------|
| 28583  | HIGH VOLTAGE LIFE                                  | 125C, 6.0 VOLTS     | 80               | 336                      | HOUR                 | 0                    |
|        |  | 125C, 6.0 VOLTS     | 80               | 1000                     | HOUR                 | 0                    |
|        |  | TOTAL:              |                  |                          | FAIL RATE (Fits): 12 | DEVICE HRS: 7.55E+07 |
| 28580  | ULTRASOUND   | J-STD-020           | 4                |                          |                      | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 28581  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                | 238              | 24                       | HOUR                 |                      |
|        |  | 30C/60% R.H.        | 238              | 192                      | HOUR                 |                      |
|        |  | 235C                | 238              | 3                        | PASS                 | 1                    |
|        |  | TOTAL:              |                  |                          |                      | 1                    |
|        | <b>FAILURE MODE</b>                                | <b>VERIFICATION</b> | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |                      |                      |
|        | CONTINUITY   | CONTINUITY          |                  |                          |                      |                      |
| 28582  | PRECONDITION U/S                                   | J-STD-020           | 4                |                          |                      | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 28584  | TEMP CYCLE   | -55C TO 125C        | 72               | 300                      | CYCL                 | 0                    |
|        |  |                     | 72               | 1000                     | CYCL                 | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 28585  | HAST, NO BIAS                                      | 130C, 85% R.H.      | 72               | 200                      | HOUR                 | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |

**PROJECT NO: 20885**

# RELIABILITY MONITOR

**DS2154 DEC '01 MONITOR, D.P.**

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE   |
|--|----------|---------|-------------|------|---------|--------|-----------------|
| DS2154   | A2       | 0126    | DK119150AAA | 100  | LQFP    | 14x14x | ATP (Amkor, PI) |
| <b>PROCESS</b> D8R-2P2M,HPVt,NDR0M,N+ESD,Laser Laser/TEOS Ox - Pass/Nit - Gen.LaserPrb |          |         |             |      |         |        |                 |

|  |   |   |
|--|---|---|
| Summary Data with Chi-Square Distribution Assumed. | Cf: <input style="width: 50px;" type="text" value="60%"/> | Tuse: <input style="width: 50px;" type="text" value="25 °C"/>     |
| Stress Ambient Temperature and Voltage to          | Ea: <input style="width: 50px;" type="text" value="0.7"/> | Vuse: <input style="width: 50px;" type="text" value="5.5 Volts"/> |
| Field Ambient Temperature And Voltage              | β: <input style="width: 50px;" type="text" value="0"/>    |   |

**NO OF  
FAILS**

| JOB NO | DESCRIPT | CONDITION | QUANTITY | READPOINT | UNITS | NO OF<br>FAILS |
|--------|----------|-----------|----------|-----------|-------|----------------|
|--------|----------|-----------|----------|-----------|-------|----------------|

**PROJECT NO: 20885**

# RELIABILITY MONITOR

## DS2175 APR '01 MONITOR

| DEVICE         | REVISION | DATE CD               | LOT NUMBER  | PINS                          | PACKAGE | WIDTH   | ASSEMBLY SITE   |
|----------------|----------|-----------------------|-------------|-------------------------------|---------|---------|-----------------|
| DS2175         | D1       | 0050                  | DK036683ABD | 16                            | SOIC    | 300x2.3 | ATP (Amkor, PI) |
| <b>PROCESS</b> |          | 1P, 1M, 2.0um, Pfield |             | , WJ BP Passivation w/Nitride |         |         |                 |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT          | CONDITION        | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|-------------------|------------------|----------|-----------|----------------------|----------------------|
| 26883  | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS  | 77       | 336       | HOUR                 | 0                    |
|        |                   | 125C, 7.0 VOLTS  | 77       | 1000      | HOUR                 | 0                    |
|        |                   | TOTAL:           |          |           | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 |
| 26880  | ULTRASOUND        | J-STD-020        | 4        |           |                      | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 26881  | TEMP CYCLE        | -55C TO 125C     | 238      | 10        | CYCL                 |                      |
|        | STORAGE LIFE      | 125C             | 238      | 24        | HOUR                 |                      |
|        | MOISTURE SOAK     | 85 C/85% R.H.    | 238      | 168       | HOUR                 |                      |
|        | CONVECTION REFLOW | 235C             | 238      | 3         | PASS                 | 0                    |
| TOTAL: |                   |                  |          |           | 0                    |                      |
| 26882  | PRECONDITION U/S  | J-STD-020        | 4        |           |                      |                      |
|        |                   | TOTAL:           |          |           |                      |                      |
| 26884  | TEMP CYCLE        | -55C TO 125C     | 40       | 300       | CYCL                 | 0                    |
|        |                   |                  | 40       | 1000      | CYCL                 | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 26885  | BIASED MOISTURE   | 85/85, 5.5 VOLTS | 77       | 274       | HOUR                 | 0                    |
|        |                   |                  | 77       | 959       | HOUR                 | 0                    |

PROJECT NO: 18002

# RELIABILITY MONITOR

|                               |  |                |                   |             |                |                            |
|-------------------------------|--|----------------|-------------------|-------------|----------------|----------------------------|
| <b>DS2175 APR '01 MONITOR</b> |  |                |                   |             |                |                            |
| <b>DEVICE</b>                 | <b>REVISION</b>                                    | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH ASSEMBLY SITE</b> |
| DS2175                        | D1   | 0050           | DK036683ABD       | 16          | SOIC           | 300x2.3 ATP (Amkor, PI)    |
| <b>PROCESS</b>                | 1P, 1M, 2.0um, Pfield, WJ BP Passivation w/Nitride |                |                   |             |                |                            |

|  |     |     |       |           |
|--|-----|-----|-------|-----------|
| Summary Data with Chi-Square Distribution Assumed. | Cf: | 60% | Tuse: | 25 °C     |
| Stress Ambient Temperature and Voltage to          | Ea: | 0.7 | Vuse: | 5.5 Volts |
| Field Ambient Temperature And Voltage              | β:  | 0   |       |           |

| JOB NO | DESCRIPT  | CONDITION                   | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|-----------|-----------------------------|----------|-----------|-------|-------------|
|        |           | TOTAL:                      |          |           |       | 0           |
| 26886  | AUTOCLAVE | 121C, 2 ATM STEAM, UNBIASED | 40       | 96        | HOUR  | 0           |
|        |           | TOTAL:                      |          |           |       | 0           |

PROJECT NO: 18002

# RELIABILITY MONITOR

**DS21Q43A SEP '01 MONITOR, D.P.**

| DEVICE   | REVISION | DATE CD | LOT NUMBER  | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE |
|--|----------|---------|-------------|------|---------|--------|---------------|
| DS21Q43  | A3-A     | 0047    | DC036714AAD | 128  | LQFP    | 14x20x | Stats         |
| <b>PROCESS</b> 1P, 1M, 0.6um, Pdepletion, Low Vts , Passivation w/Nov TEOS Oxide-Nitride |          |         |             |      |         |        |               |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT          | CONDITION        | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|-------------------|------------------|----------|-----------|----------------------|----------------------|
| 27880  | HIGH VOLTAGE LIFE | 125C, 6.0 VOLTS  | 70       | 336       | HOUR                 | 0                    |
|        |                   | 125C, 6.0 VOLTS  | 70       | 1000      | HOUR                 | 0                    |
|        |                   | TOTAL:           |          |           | FAIL RATE (Fits): 14 | DEVICE HRS: 6.60E+07 |
| 27877  | ULTRASOUND        | J-STD-020        | 4        |           |                      | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 27878  | STORAGE LIFE      | 125C             | 241      | 24        | HOUR                 |                      |
|        | MOISTURE SOAK     | 60C/60% R.H.     | 241      | 40        | HOUR                 |                      |
|        | CONVECTION REFLOW | 235C             | 241      | 3         | PASS                 | 0                    |
|        | TOTAL:            |                  |          |           |                      | 0                    |
| 27879  | PRECONDITION U/S  | J-STD-020        | 4        |           |                      | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 27881  | TEMP CYCLE        | -55C TO 125C     | 77       | 300       | CYCL                 | 0                    |
|        |                   |                  | 76       | 1000      | CYCL                 | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |
| 27882  | BIASED MOISTURE   | 85/85, 5.5 VOLTS | 32       | 274       | HOUR                 | 0                    |
|        |                   |                  | 32       | 959       | HOUR                 | 0                    |
|        |                   | TOTAL:           |          |           |                      | 0                    |

**PROJECT NO: 19205**

# RELIABILITY MONITOR

**DS21Q43A SEP '01 MONITOR, D.P.**

|  |                 |                |                   |                     |                            |
|--|-----------------|----------------|-------------------|---------------------|----------------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS PACKAGE</b> | <b>WIDTH ASSEMBLY SITE</b> |
| DS21Q43  | A3-A            | 0047           | DC036714AAD       | 128 LQFP            | 14x20x Stats               |
| <b>PROCESS</b> 1P, 1M, 0.6um, Pdepletion, Low Vts , Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |                     |                            |

|  |                                      |  |
|--|--------------------------------------|--|
| Summary Data with Chi-Square Distribution Assumed. | Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="25 °C"/>     |
| Stress Ambient Temperature and Voltage to          | Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| Field Ambient Temperature And Voltage              | β: <input type="text" value="0"/>    |  |

| JOB NO        | DESCRIPT      | CONDITION      | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|---------------|----------------|----------|-----------|-------|-------------|
| 27883         | HAST, NO BIAS | 130C, 85% R.H. | 40       | 100       | HOUR  | 0           |
| <b>TOTAL:</b> |               |                |          |           |       | <b>0</b>    |

**PROJECT NO: 19205**

# RELIABILITY MONITOR

## DS21S07 FEB '02 MONITOR

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS21S07  | C1-A            | 0112           | DM048483ACB       | 20          | TSSOP          | 4.4x0.9      | Carsem               |
| <b>PROCESS</b> 1P, 1M, 0.8um,Neg ZTC P1R,PdpID,Low Laser/Nit - Pass/Nit - General LaserPrb |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT          | CONDITION                   | QUANTITY | READPOINT            | UNITS | NO OF FAILS |
|--------|-------------------|-----------------------------|----------|----------------------|-------|-------------|
| 28808  | HIGH VOLTAGE LIFE | 125C, 7.0 VOLTS             | 77       | 336                  | HOUR  | 0           |
| TOTAL: |                   |                             | 38       | DEVICE HRS: 2.44E+07 |       | 0           |
| 28805  | ULTRASOUND        | J-STD-020                   | 4        |                      |       | 0           |
| TOTAL: |                   |                             |          |                      |       | 0           |
| 28806  | STORAGE LIFE      | 125C                        | 243      | 48                   | HOUR  |             |
|        | MOISTURE SOAK     | 85 C/85% R.H.               | 243      | 168                  | HOUR  |             |
|        | CONVECTION REFLOW | 235C                        | 243      | 3                    | PASS  | 0           |
| TOTAL: |                   |                             |          |                      |       | 0           |
| 28807  | PRECONDITION U/S  | J-STD-020                   | 4        |                      |       | 0           |
| TOTAL: |                   |                             |          |                      |       | 0           |
| 28809  | TEMP CYCLE        | -55C TO 125C                | 45       | 300                  | CYCL  | 0           |
|        |                   |                             | 45       | 1000                 | CYCL  |             |
| TOTAL: |                   |                             |          |                      |       | 0           |
| 28810  | BIASED MOISTURE   | 85/85, 5.5 VOLTS            | 77       | 274                  | HOUR  | 0           |
| TOTAL: |                   |                             |          |                      |       | 0           |
| 28811  | AUTOCLAVE         | 121C, 2 ATM STEAM, UNBIASED | 34       | 168                  | HOUR  | 0           |
| TOTAL: |                   |                             |          |                      |       | 0           |

PROJECT NO: 21346

# RELIABILITY MONITOR

## DS21S07 FEB '02 MONITOR

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS21S07  | C1-A            | 0112           | DM048483ACB       | 20          | TSSOP          | 4.4x0.9      | Carsem               |
| <b>PROCESS</b> 1P, 1M, 0.8um,Neg ZTC P1R,PdpID,Low Laser/Nit - Pass/Nit - General LaserPrb |                 |                |                   |             |                |              |                      |

|  |     |     |       |           |
|--|-----|-----|-------|-----------|
| Summary Data with Chi-Square Distribution Assumed. | Cf: | 60% | Tuse: | 25 °C     |
| Stress Ambient Temperature and Voltage to          | Ea: | 0.7 | Vuse: | 5.5 Volts |
| Field Ambient Temperature And Voltage              | β:  | 0   |       |           |

**NO OF  
FAILS**

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

# RELIABILITY MONITOR

## DS2401 MAR '02 MONITOR

| DEVICE   | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE |
|--|----------|---------|------------|------|---------|--------|---------------|
| DS2401   | C2       | 0208    | DM218006AA | 3    | SOT23   | 50x0.9 | Carsem        |
| <b>PROCESS</b> 1P, 1M, 0.6um, Pd, Ti/TiN M1 , WJ Laser/TEOS Ox - Pass/Nit - Gen.LaserPrb |          |         |            |      |         |        |               |

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="25 °C"/>     |
| Ea: | <input type="text" value="0.7"/> | Vuse: | <input type="text" value="5.5 Volts"/> |
| β:  | <input type="text" value="0"/>   |       |  |

| JOB NO              | DESCRIPT            | CONDITION                   | QUANTITY         | READPOINT                | UNITS | NO OF FAILS |
|---------------------|---------------------|-----------------------------|------------------|--------------------------|-------|-------------|
| 28835               | HIGH VOLTAGE LIFE   | 125C, 6.0 VOLTS             | 80               | 336                      | HOUR  | 2           |
|                     |                     | 125C, 6.0 VOLTS             | 78               | 1000                     | HOUR  | 1           |
| TOTAL:              |                     |                             | 56               | DEVICE HRS: 7.42E+07     |       | 3           |
| <b>FAILURE MODE</b> | <b>VERIFICATION</b> |                             | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |       |             |
| PREFUNCTIONAL       | PREFUNCTIONAL       |                             |                  |                          |       |             |
| IN LOAD CURRENT     | INPUT LOAD CURRENT  |                             |                  |                          |       |             |
| TYPE ID             | TYPE ID             |                             |                  |                          |       |             |
| 28836               | TEMP CYCLE          | -55C TO 125C                | 45               | 300                      | CYCL  | 1           |
|                     |                     |                             | 44               | 1000                     | CYCL  | 0           |
| TOTAL:              |                     |                             |                  |                          |       | 1           |
| <b>FAILURE MODE</b> | <b>VERIFICATION</b> |                             | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |       |             |
| IN LOAD CURRENT     | INPUT LOAD CURRENT  |                             |                  |                          |       |             |
| 28837               | HAST                | 130C, 85%R.H.,5.5V          | 77               | 96                       | HOUR  | 0           |
| TOTAL:              |                     |                             |                  |                          |       | 0           |
| 28838               | AUTOCLAVE           | 121C, 2 ATM STEAM, UNBIASED | 45               | 168                      | HOUR  | 0           |
| TOTAL:              |                     |                             |                  |                          |       | 0           |

PROJECT NO: 21341

# RELIABILITY MONITOR

## DS80CH11 JUN '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE  |
|---|----------|---------|------------|------|---------|--------|----------------|
| DS80CH11  | A4       | 0108    | DN034351AA | 128  | LQFP    | 14x20x | ATK (Amkor, K) |
| <b>PROCESS</b> 1P, 2M, 0.6um,SilP1,NdA,PD,Ti/TiN M1+ Passivation w/Nov TEOS Oxide-Nitride |          |         |            |      |         |        |                |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO              | DESCRIPT            | CONDITION        | QUANTITY | READPOINT                  | UNITS | NO OF FAILS |
|---------------------|---------------------|------------------|----------|----------------------------|-------|-------------|
| 27107               | HIGH VOLTAGE LIFE   | 125C, 6.0 VOLTS  | 77       | 336                        | HOUR  | 2           |
|                     |                     | 125C, 6.0 VOLTS  | 75       | 1000                       | HOUR  | 0           |
| TOTAL:              |                     |                  | 44       | FAIL RATE (Fits): 7.07E+07 |       | 2           |
| <b>FAILURE MODE</b> | <b>VERIFICATION</b> | <b>FA NUMBER</b> |          | <b>FAILURE MECHANISM</b>   |       |             |
| INTEL_STOP_M        | STOP MODE           |                  |          |                            |       |             |
| 27104               | ULTRASOUND          | J-STD-020        | 4        |                            |       | 0           |
| TOTAL:              |                     |                  | 0        |                            |       |             |
| 27105               | STORAGE LIFE        | 125C             | 239      | 24                         | HOUR  |             |
|                     | MOISTURE SOAK       | 60C/60% R.H.     | 239      | 40                         | HOUR  |             |
|                     | CONVECTION REFLOW   | 235C             | 239      | 3                          | PASS  | 0           |
| TOTAL:              |                     |                  | 0        |                            |       |             |
| 27106               | PRECONDITION U/S    | J-STD-020        | 4        |                            |       | 0           |
|                     |                     | TOTAL:           |          |                            | 0     |             |
| 27108               | TEMP CYCLE          | -55C TO 125C     | 70       | 300                        | CYCL  | 0           |
|                     |                     |                  | 70       | 1000                       | CYCL  | 0           |
| TOTAL:              |                     |                  | 0        |                            |       |             |
| 27109               | BIASED MOISTURE     | 85/85, 5.5 VOLTS | 46       | 274                        | HOUR  | 1           |
|                     |                     |                  | 32       | 959                        | HOUR  | 0           |

**PROJECT NO:** 18662

# RELIABILITY MONITOR

## DS80CH11 JUN '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS80CH11  | A4              | 0108           | DN034351AA        | 128         | LQFP           | 14x20x       | ATK (Amkor, K)       |
| <b>PROCESS</b> 1P, 2M, 0.6um,SilP1,NdA,PD,Ti/TiN M1+ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

**NO OF**

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

|        |  |  |  |  |  |   |
|--------|--|--|--|--|--|---|
| TOTAL: |  |  |  |  |  | 1 |
|--------|--|--|--|--|--|---|

| FAILURE MODE | VERIFICATION |
|--------------|--------------|
| CONTINUITY   | RESET TRIP   |

| FA NUMBER | FAILURE MECHANISM |
|-----------|-------------------|
|-----------|-------------------|

|       |               |                |    |     |      |   |
|-------|---------------|----------------|----|-----|------|---|
| 27110 | HAST, NO BIAS | 130C, 85% R.H. | 40 | 100 | HOUR | 1 |
|-------|---------------|----------------|----|-----|------|---|

|        |  |  |  |  |  |   |
|--------|--|--|--|--|--|---|
| TOTAL: |  |  |  |  |  | 1 |
|--------|--|--|--|--|--|---|

| FAILURE MODE | VERIFICATION |
|--------------|--------------|
| INTEL_STOP_M | STOP MODE    |

| FA NUMBER | FAILURE MECHANISM |
|-----------|-------------------|
|-----------|-------------------|

# RELIABILITY MONITOR

## DS80CH11 SEP '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE |
|---|----------|---------|------------|------|---------|--------|---------------|
| DS80CH11  | A4       | 0110    | DC037148AA | 128  | LQFP    | 14x20x | Stats         |
| <b>PROCESS</b> 1P, 2M, 0.6um, SiIP1, NdA, PD, Ti/TiN M1+ Passivation w/Nov TEOS Oxide-Nitride |          |         |            |      |         |        |               |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT   | CONDITION        | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|--|------------------|----------|-----------|----------------------|----------------------|
| 27867  | HIGH VOLTAGE LIFE                                  | 125C, 6.0 VOLTS  | 80       | 336       | HOUR                 | 0                    |
|        |  | 125C, 6.0 VOLTS  | 80       | 1000      | HOUR                 | 0                    |
|        |  | TOTAL:           |          |           | FAIL RATE (Fits): 12 | DEVICE HRS: 7.55E+07 |
| 27864  | ULTRASOUND   | J-STD-020        | 4        |           |                      | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27865  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C             | 242      | 24        | HOUR                 |                      |
|        |  | 60C/60% R.H.     | 242      | 40        | HOUR                 |                      |
|        |  | 235C             | 242      | 3         | PASS                 | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27866  | PRECONDITION U/S                                   | J-STD-020        | 4        |           |                      | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27868  | TEMP CYCLE   | -55C TO 125C     | 70       | 300       | CYCL                 | 0                    |
|        |  |                  | 68       | 1000      | CYCL                 | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |
| 27869  | BIASED MOISTURE                                    | 85/85, 5.5 VOLTS | 42       | 274       | HOUR                 | 0                    |
|        |  |                  | 31       | 959       | HOUR                 | 0                    |
|        |  | TOTAL:           |          |           |                      | 0                    |

PROJECT NO: 19203

# RELIABILITY MONITOR

## DS80CH11 SEP '01 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS80CH11  | A4              | 0110           | DC037148AA        | 128         | LQFP           | 14x20x       | Stats                |
| <b>PROCESS</b> 1P, 2M, 0.6um,SilP1,NdA,PD,Ti/TiN M1+ Passivation w/Nov TEOS Oxide-Nitride |                 |                |                   |             |                |              |                      |

|  |                                      |  |
|--|--------------------------------------|--|
| Summary Data with Chi-Square Distribution Assumed. | Cf: <input type="text" value="60%"/> | Tuse: <input type="text" value="25 °C"/>     |
| Stress Ambient Temperature and Voltage to          | Ea: <input type="text" value="0.7"/> | Vuse: <input type="text" value="5.5 Volts"/> |
| Field Ambient Temperature And Voltage              | β: <input type="text" value="0"/>    |  |

| JOB NO        | DESCRIPT      | CONDITION      | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|---------------|----------------|----------|-----------|-------|-------------|
| 27870         | HAST, NO BIAS | 130C, 85% R.H. | 40       | 100       | HOUR  | 0           |
| <b>TOTAL:</b> |               |                |          |           |       | <b>0</b>    |

# RELIABILITY MONITOR

## DS80CH11 DEC '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE  |
|---|----------|---------|------------|------|---------|--------|----------------|
| DS80CH11  | A4       | 0113    | DN036754AA | 128  | LQFP    | 14x20x | ATK (Amkor, K) |
| <b>PROCESS</b> 1P, 2M, 0.6um,SilP1,NdA,PD,Ti/TiN M1+ Passivation w/Nov TEOS Oxide-Nitride |          |         |            |      |         |        |                |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

| JOB NO | DESCRIPT   | CONDITION           | QUANTITY         | READPOINT                | UNITS                | NO OF FAILS          |
|--------|--|---------------------|------------------|--------------------------|----------------------|----------------------|
| 28601  | HIGH VOLTAGE LIFE                                  | 125C, 6.0 VOLTS     | 80               | 336                      | HOUR                 | 0                    |
|        |  | 125C, 6.0 VOLTS     | 80               | 1000                     | HOUR                 | 0                    |
|        |  | TOTAL:              |                  |                          | FAIL RATE (Fits): 12 | DEVICE HRS: 7.55E+07 |
| 28598  | ULTRASOUND   | J-STD-020           | 4                |                          |                      | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 28599  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C                | 244              | 24                       | HOUR                 |                      |
|        |  | 30C/60% R.H.        | 244              | 192                      | HOUR                 |                      |
|        |  | 235C                | 244              | 3                        | PASS                 | 1                    |
|        |  | TOTAL:              |                  |                          |                      | 1                    |
|        | <b>FAILURE MODE</b>                                | <b>VERIFICATION</b> | <b>FA NUMBER</b> | <b>FAILURE MECHANISM</b> |                      |                      |
|        | HI_ADC_4K_RA                                       | OFFSET              |                  |                          |                      |                      |
| 28600  | PRECONDITION U/S                                   | J-STD-020           | 4                |                          |                      | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 28602  | TEMP CYCLE   | -55C TO 125C        | 70               | 300                      | CYCL                 | 0                    |
|        |  |                     | 69               | 1000                     | CYCL                 | 0                    |
|        |  | TOTAL:              |                  |                          |                      | 0                    |
| 28603  | BIASED MOISTURE                                    | 85/85, 5.5 VOLTS    | 31               | 274                      | HOUR                 | 0                    |
|        |  |                     | 31               | 959                      | HOUR                 | 0                    |

**PROJECT NO:** 20887

# RELIABILITY MONITOR

## DS80CH11 DEC '01 MONITOR

| DEVICE  | REVISION | DATE CD | LOT NUMBER | PINS | PACKAGE | WIDTH  | ASSEMBLY SITE  |
|---|----------|---------|------------|------|---------|--------|----------------|
| DS80CH11  | A4       | 0113    | DN036754AA | 128  | LQFP    | 14x20x | ATK (Amkor, K) |
| <b>PROCESS</b> 1P, 2M, 0.6um,SilP1,NdA,PD,Ti/TiN M1+ Passivation w/Nov TEOS Oxide-Nitride |          |         |            |      |         |        |                |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

$\beta$ :

**NO OF  
FAILS**

| JOB NO | DESCRIPT      | CONDITION      | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|--------|---------------|----------------|----------|-----------|-------|-------------|
|        |               | TOTAL:         |          |           |       | 0           |
| 28604  | HAST, NO BIAS | 130C, 85% R.H. | 44       | 100       | HOUR  | 0           |
|        |               | TOTAL:         |          |           |       | 0           |

PROJECT NO: 20887

# RELIABILITY MONITOR

## DS87C520 FEB '02 MONITOR

|   |                 |                |                   |             |                |              |                      |
|---|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>   | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS87C520  | A15-I           | 0206           | DK101111AAA       | 44          | PLCC           | 650x65       | ATP (Amkor, PI)      |
| <b>PROCESS</b> 2P, 1M, 0.8um,ThinEP/Sil,ThinOx NdPd Passivation w/Nov TEOS Oxide-OxyNitride |                 |                |                   |             |                |              |                      |

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

Cf:   
 Ea:   
 β:

Tuse:   
 Vuse:

**NO OF FAILS**

| JOB NO | DESCRIPT   | CONDITION          | QUANTITY | READPOINT | UNITS                | NO OF FAILS          |
|--------|--|--------------------|----------|-----------|----------------------|----------------------|
| 28780  | HIGH VOLTAGE LIFE                                  | 125C, 7.0 VOLTS    | 77       | 336       | HOUR                 | 0                    |
|        |  | 125C, 7.0 VOLTS    | 77       | 1000      | HOUR                 | 0                    |
|        |  | TOTAL:             |          |           | FAIL RATE (Fits): 13 | DEVICE HRS: 7.26E+07 |
| 28777  | ULTRASOUND   | J-STD-020          | 4        |           |                      | 0                    |
|        |  | TOTAL:             |          |           |                      | 0                    |
| 28778  | STORAGE LIFE<br>MOISTURE SOAK<br>CONVECTION REFLOW | 125C               | 239      | 24        | HOUR                 |                      |
|        |  | 30C/60% R.H.       | 239      | 192       | HOUR                 |                      |
|        |  | 220C               | 239      | 3         | PASS                 | 0                    |
|        |  | TOTAL:             |          |           |                      | 0                    |
| 28779  | PRECONDITION U/S                                   | J-STD-020          | 4        |           |                      | 0                    |
|        |  | TOTAL:             |          |           |                      | 0                    |
| 28781  | TEMP CYCLE   | -55C TO 125C       | 50       | 300       | CYCL                 | 0                    |
|        |  |                    | 50       | 1000      | CYCL                 | 0                    |
|        |  | TOTAL:             |          |           |                      | 0                    |
| 28782  | HAST   | 130C, 85%R.H.,5.5V | 58       | 96        | HOUR                 | 1                    |
|        |  | TOTAL:             |          |           |                      | 1                    |

|                     |                     |
|---------------------|---------------------|
| <b>FAILURE MODE</b> | <b>VERIFICATION</b> |
| EPROM               | EPROM               |

**FA NUMBER    FAILURE MECHANISM**

**PROJECT NO:** 21358

# RELIABILITY MONITOR

## DS87C520 FEB '02 MONITOR

|  |                 |                |                   |             |                |              |                      |
|--|-----------------|----------------|-------------------|-------------|----------------|--------------|----------------------|
| <b>DEVICE</b>  | <b>REVISION</b> | <b>DATE CD</b> | <b>LOT NUMBER</b> | <b>PINS</b> | <b>PACKAGE</b> | <b>WIDTH</b> | <b>ASSEMBLY SITE</b> |
| DS87C520   | A15-I           | 0206           | DK101111AAA       | 44          | PLCC           | 650x65       | ATP (Amkor, PI)      |
| <b>PROCESS</b> 2P, 1M, 0.8um, ThinEP/Sil, ThinOx NdPdD Passivation w/Nov TEOS Oxide-OxyNitride |                 |                |                   |             |                |              |                      |

Summary Data with Chi-Square Distribution Assumed.

Cf:

Tuse:

Stress Ambient Temperature and Voltage to

Ea:

Vuse:

Field Ambient Temperature And Voltage

β:

| JOB NO        | DESCRIPT     | CONDITION | QUANTITY | READPOINT | UNITS | NO OF FAILS |
|---------------|--------------|-----------|----------|-----------|-------|-------------|
| 28783         | STORAGE LIFE | 150C      | 50       | 336       | HOUR  | 0           |
|               |              |           | 50       | 1000      | HOUR  | 0           |
| <b>TOTAL:</b> |              |           |          |           |       | <b>0</b>    |