



Exar Quarterly Quality and Reliability Report

November 2009

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Outgoing Quality (PPM) Data

The outgoing quality data are the results of electrical and visual/mechanical inspection on samples of all Exar's products. The results are measured in parts per million (PPM).

Quarterly QC Visual PPM Report

Quarter: July 1, 2009 to September 30, 2009

Devices: Exar Products

Summary: All data is first submission data

| | |
|--|---------|
| Total number of lots inspected: | 1908 |
| Total number of lots accepted: | 1907 |
| Total number of QC samples inspected: | 221,290 |
| Total number fail in QC samples: | 1 |

| | |
|--|----------|
| Process average PPM: $= \Sigma r / \Sigma n \times 10^6$ $= 1 / 221,290 \times 10^6$ r = Total number fail in QC samples n = Total number of QC samples inspected | 4.52 PPM |
|--|----------|

Quarterly QC Electrical PPM Report

Quarter: July 1, 2009 to September 30, 2009

Devices: Exar Products

Summary: All data is first submission data

| | |
|--|---------|
| Total number of lots inspected: | 2,201 |
| Total number of lots accepted: | 2,197 |
| Total number of QC samples inspected: | 600,493 |
| Total number fail in QC samples: | 4 |

| | |
|--|----------|
| Process average PPM: $= \Sigma r / \Sigma n \times 10^6$ $= 4 / 600,493 \times 10^6$ r = Total number fail in QC samples n = Total number of QC samples inspected | 6.66 PPM |
|--|----------|

SPC – Cpk Trends

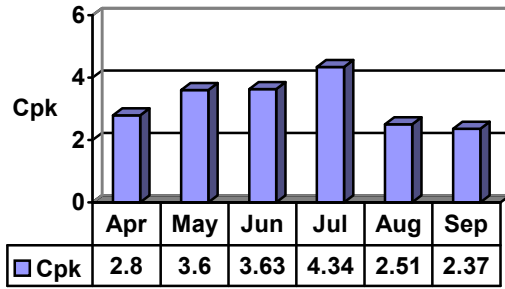
Data on Cpk and Cpk trends for critical processes of Exar's assembly subcontractors and foundry fabs are reported in order to assure our customers that our suppliers have an on-going SPC plan to control and continually improve their critical processes. This also serves as an early warning system which keeps processes from becoming marginal.

SPC – Cpk Trends - Assembly

Unisem, Indonesia SPC Program: 2009

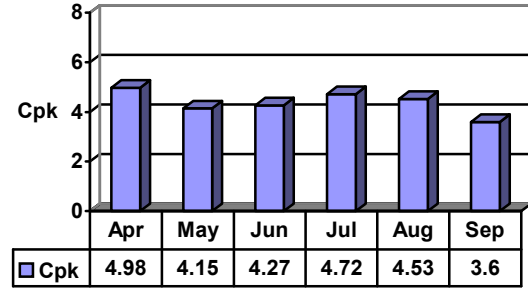
Package Technology: LQFP

Wire Pull



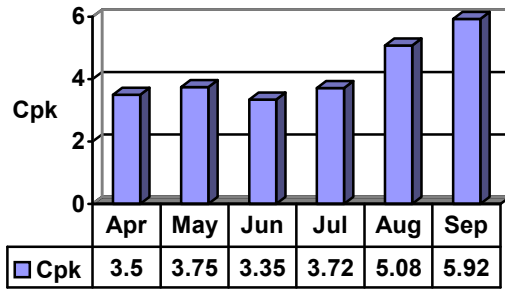
LSL = 6 gms

Ball Shear



LSL = 20 gms

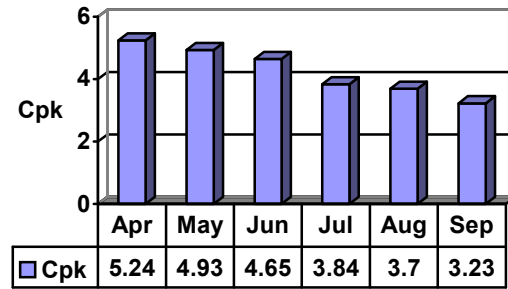
Plating Thickness Pb-Free



LSL = 300µin

USL = 800µin

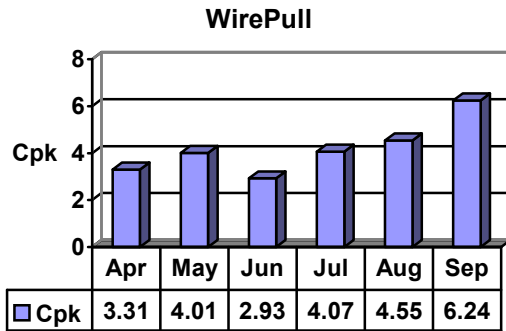
Coplanarity



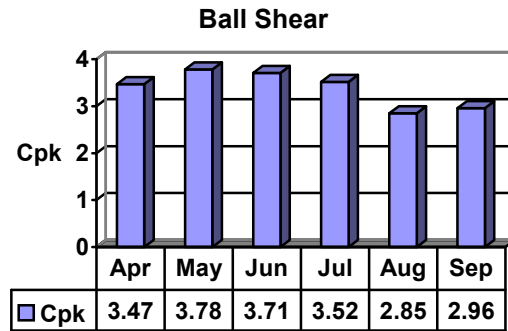
USL = 2.0 mils

Unisem, Indonesia SPC Program: 2009

Package Technology: PDIP



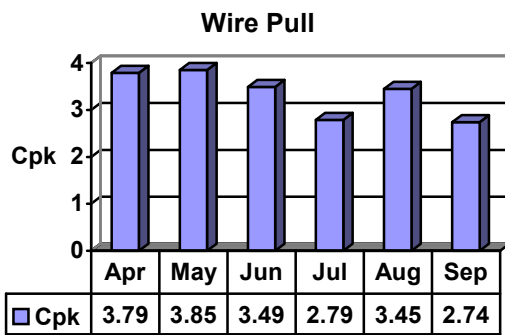
LSL = 6 gms



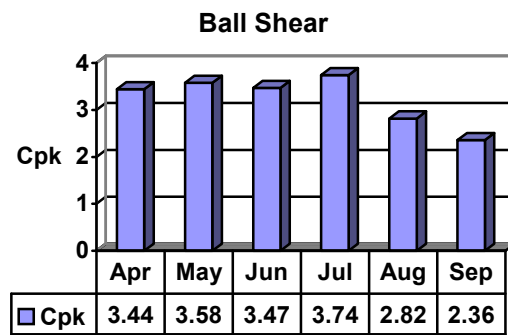
LSL = 20 gms

Unisem, Indonesia SPC Program: 2009

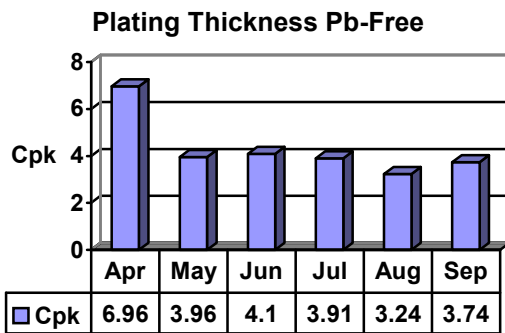
Package Technology: PLCC



LSL = 6 gms

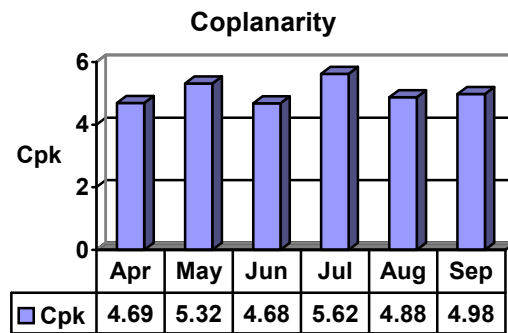


LSL = 20 gms



LSL = 300 μ in

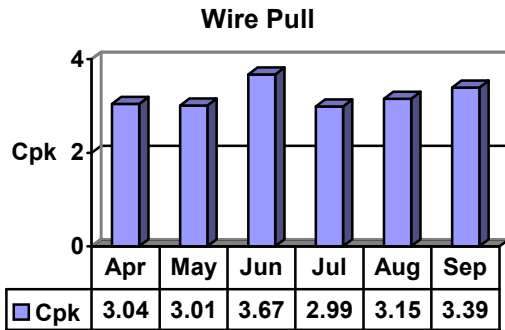
USL = 800 μ in



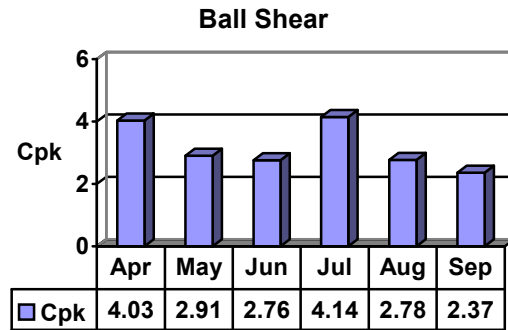
USL = 3.0 mils

Unisem, Indonesia SPC Program: 2009

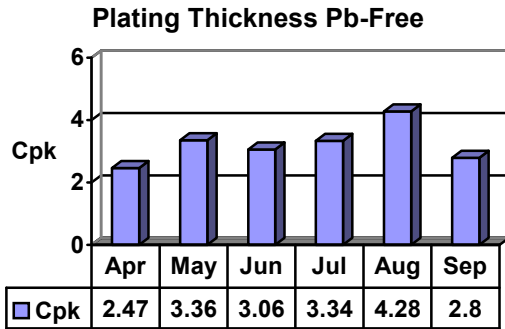
Package Technology: SOIC



LSL = 6 gms



LSL = 20 gms

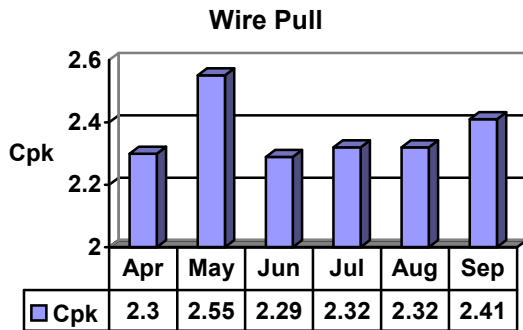


LSL = 300µin

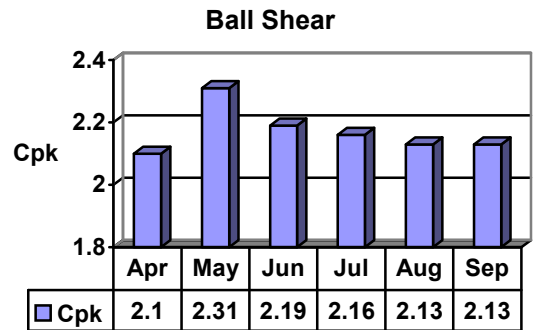
USL = 800µin

Unisem, Ipoh SPC Program: 2009

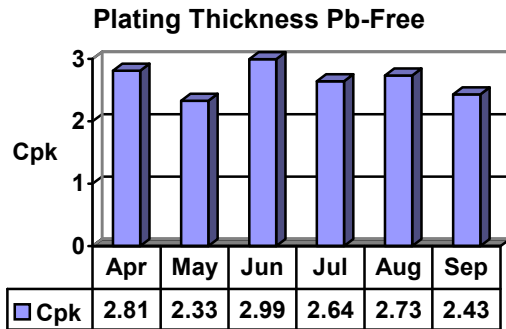
Package Technology: NSOIC



LSL = 6 gms



LSL = 20 gms

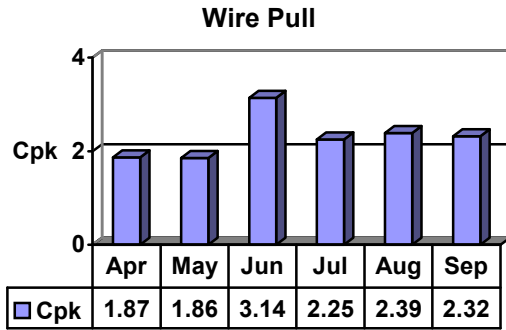


LSL = 300µin

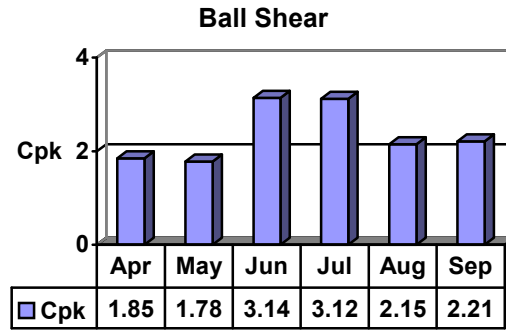
USL = 800µin

Unisem, Ipoh SPC Program: 2009

Package Technology: PDIP



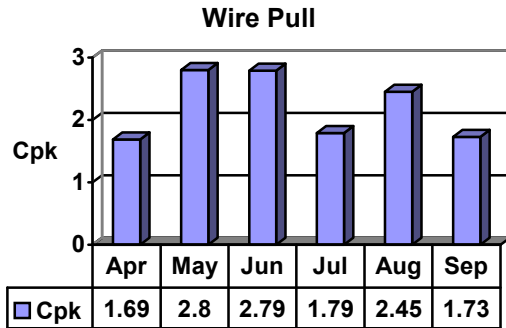
LSL = 6 gms



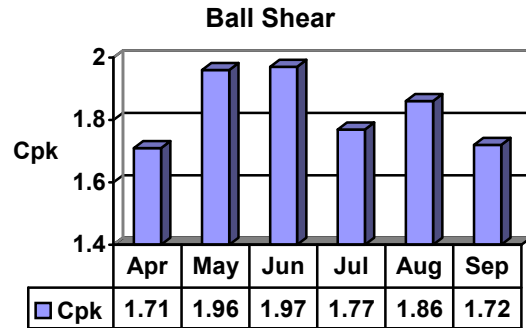
LSL = 20 gms

Unisem, Ipoh SPC Program: 2009

Package Technology: SOT223



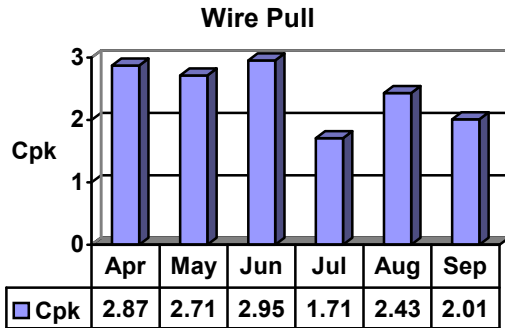
LSL = 6 gms



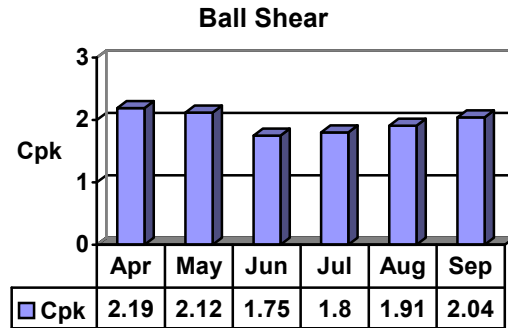
LSL = 20 gms

Unisem, Ipoh SPC Program: 2009

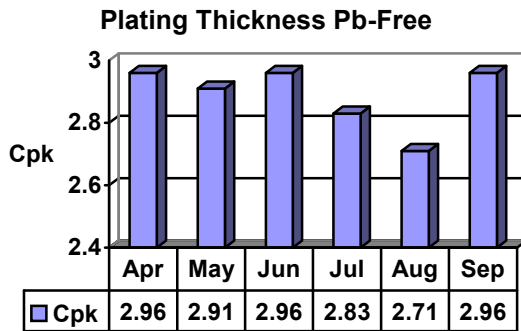
Package Technology: SOT23



LSL = 6 gms



LSL = 20 gms

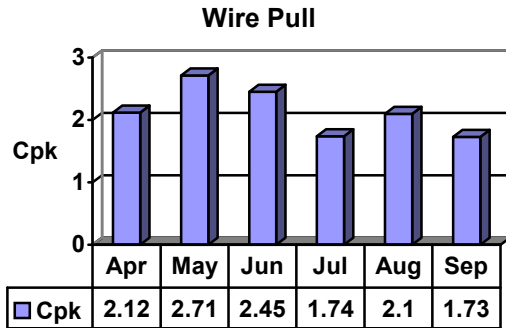


LSL = 300µin

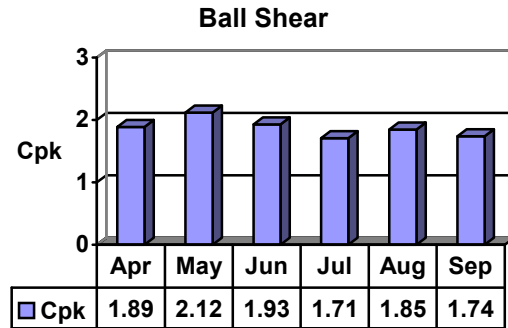
USL = 800µin

Unisem, Ipoh SPC Program: 2009

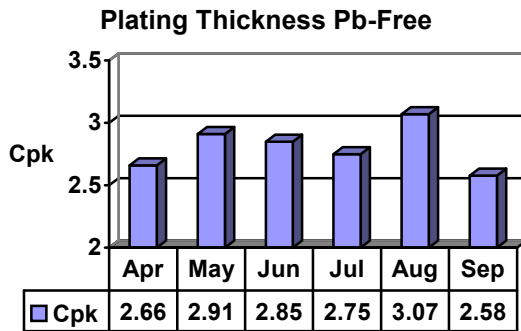
Package Technology: MSOP



LSL = 6 gms



LSL = 20 gms

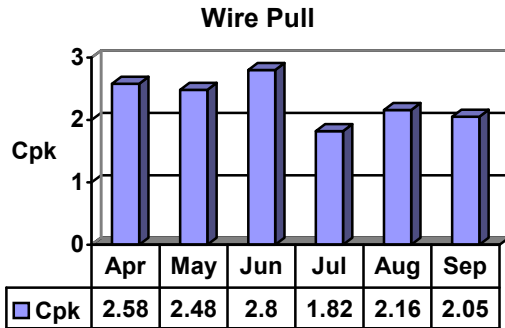


LSL = 300µin

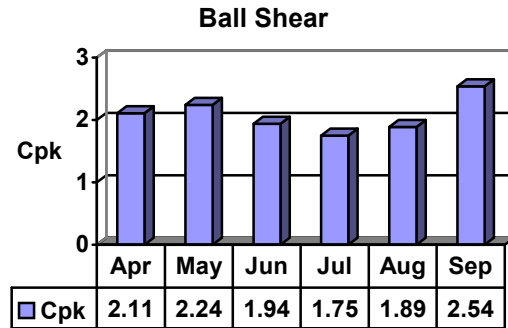
USL = 800µin

Unisem, Ipoh SPC Program: 2009

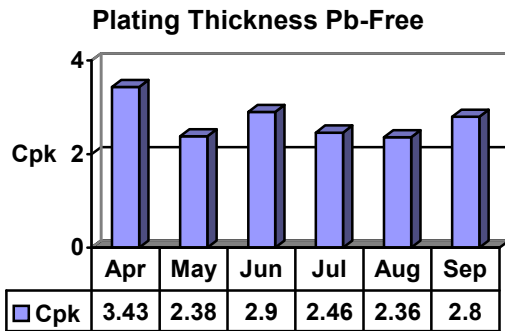
Package Technology: TSSOP



LSL = 6 gms



LSL = 20 gms

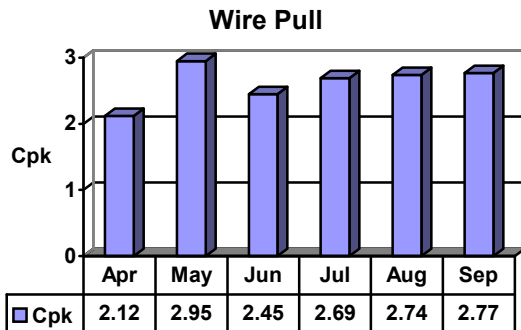


LSL = 300µin

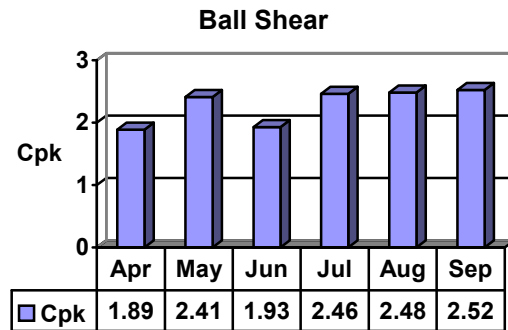
USL = 800µin

Carsem M, Malaysia Program: 2009

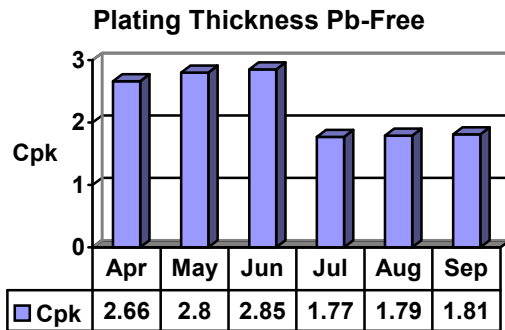
Package Technology: MSOP



LSL = 6 gms

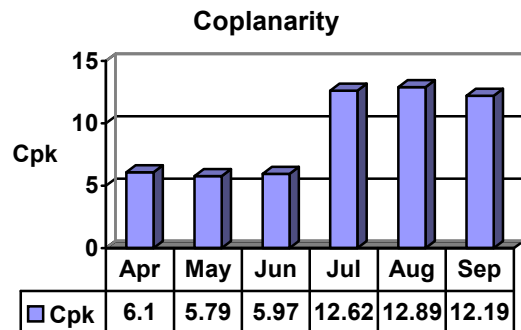


LSL = 20 gms



LSL = 300µin

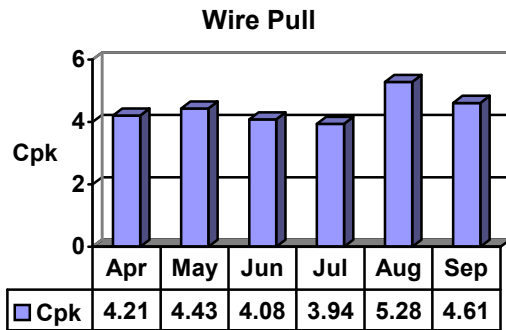
USL = 800µin



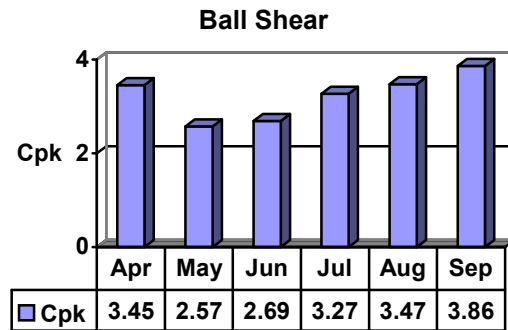
USL = 3.0 mils

Carsem M, Malaysia Program: 2009

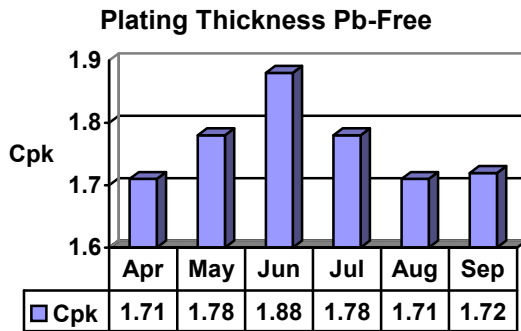
Package Technology: TO220



LSL = 6 gms



LSL = 20 gms

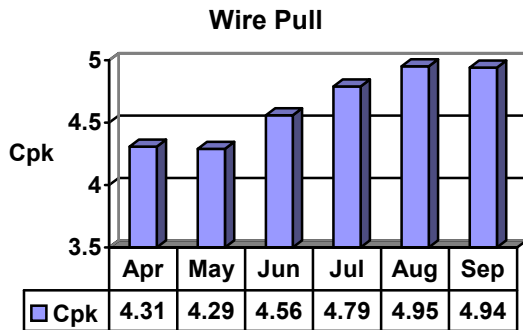


LSL = 300µin

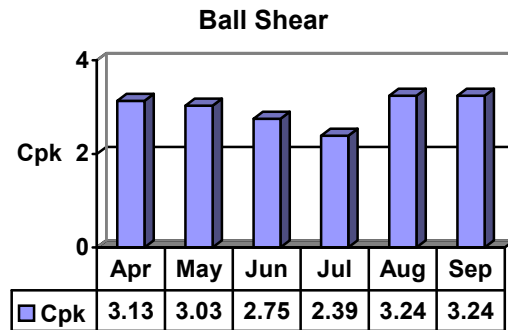
USL = 800µin

Carsem M, Malaysia Program: 2009

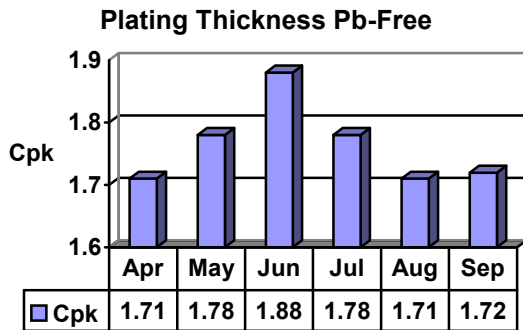
Package Technology: TO263



LSL = 6 gms

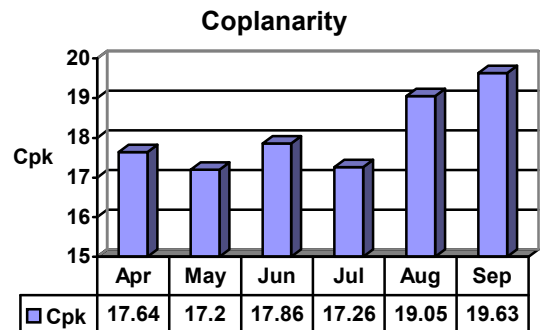


LSL = 20 gms



LSL = 300µin

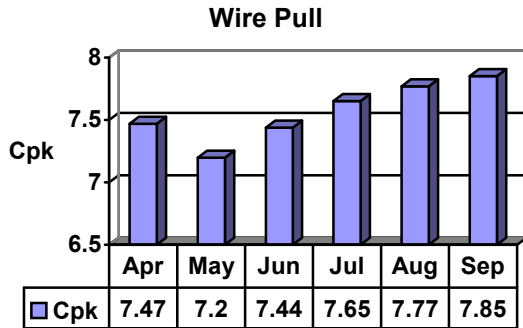
USL = 800µin



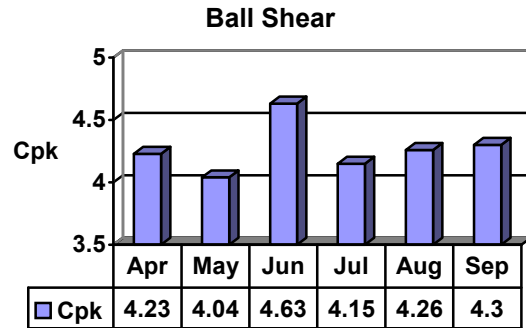
USL = 3.0 mils

Carsem M, Malaysia Program: 2009

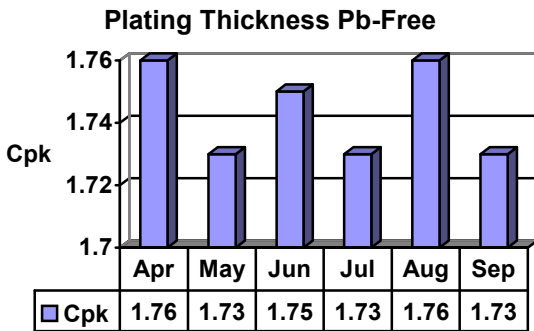
Package Technology: SOT223



LSL = 6 gms



LSL = 20 gms

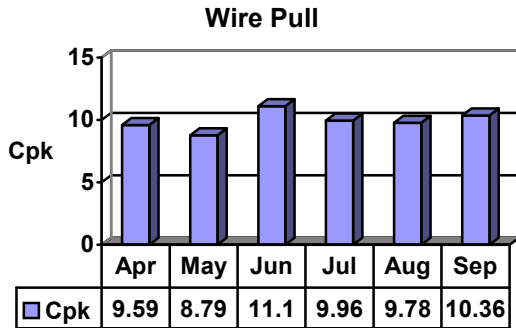


LSL = 300µin

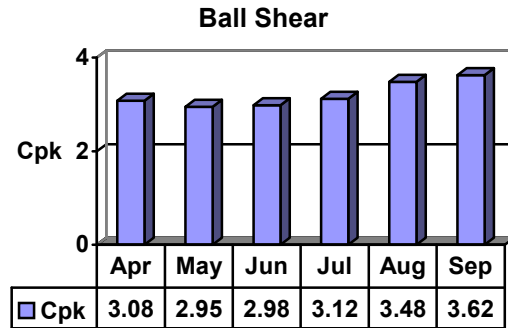
USL = 800µin

Carsem M, Malaysia Program: 2009

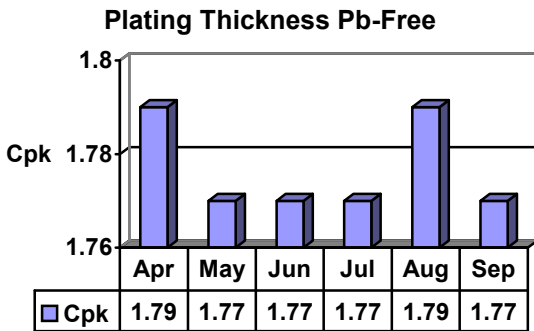
Package Technology: SC70



LSL = 6 gms



LSL = 20 gms

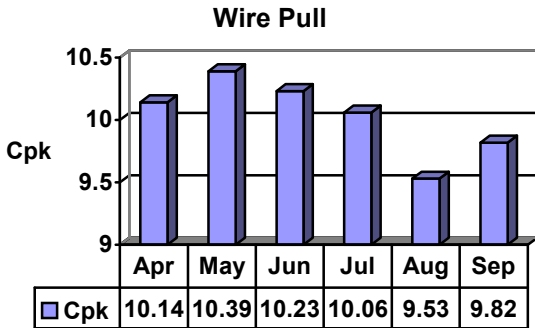


LSL = 300 μ in

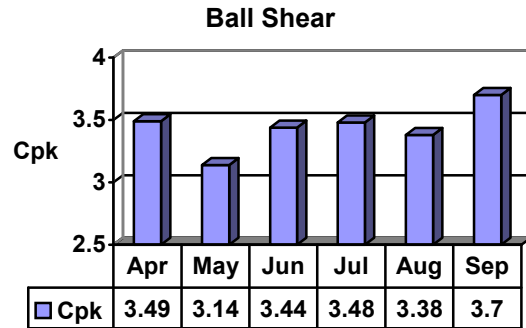
USL = 800 μ in

Carsem M, Malaysia Program: 2009

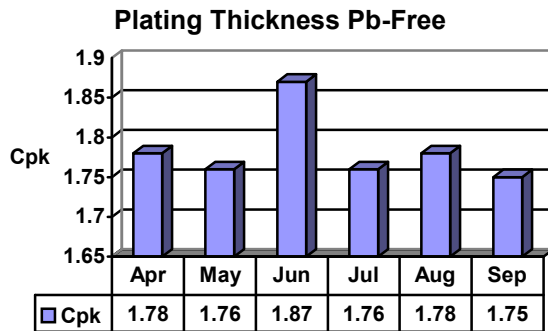
Package Technology: SOT23



LSL = 6 gms



LSL = 20 gms

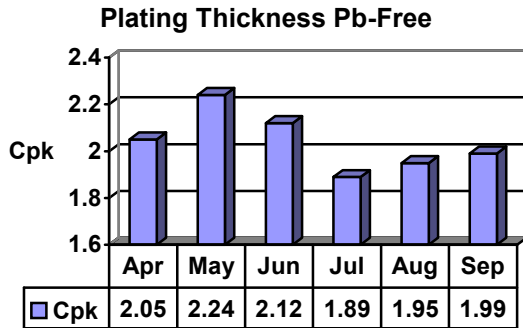


LSL = 300µin

USL = 800µin

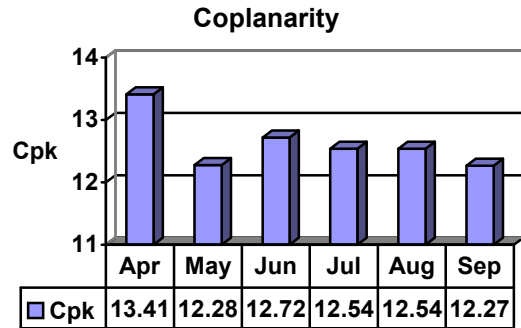
Carsem S, Malaysia Program: 2009

Package Technology: TSSOP



LSL = 300 μ in

USL = 800 μ in

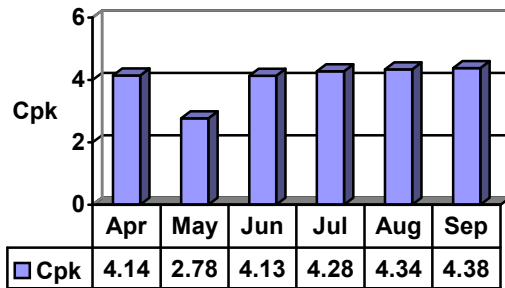


USL = 3.0 mils

Carsem S, Malaysia Program: 2009

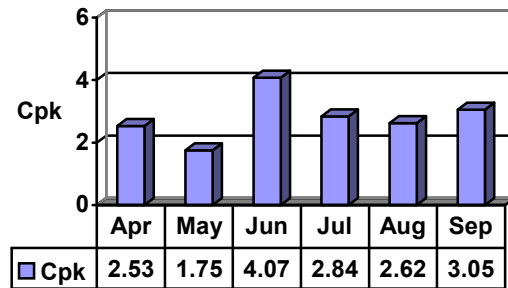
Package Technology: QFP

Wire Pull



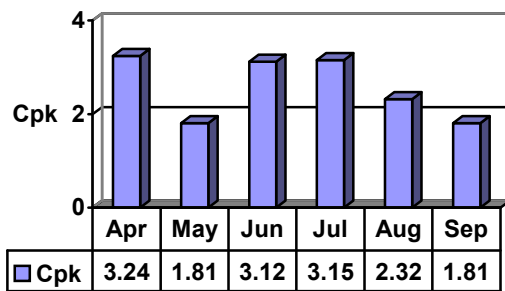
LSL = 6 gms

Ball Shear



LSL = 20 gms

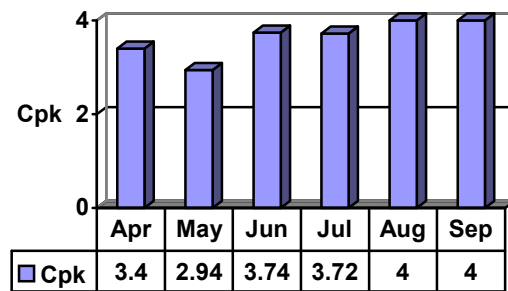
Plating Thickness Pb-Free



LSL = 300µin

USL = 800µin

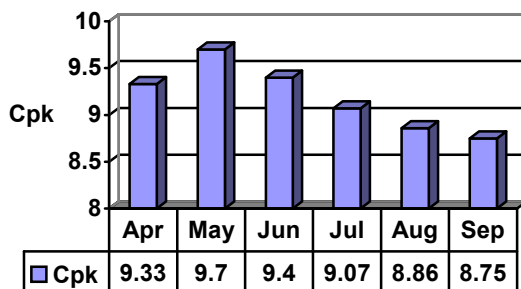
Plating Comp (%Sn)



LSL = 80%

USL = 90%

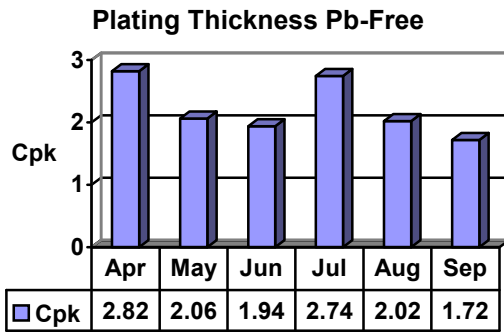
Coplanarity



USL = 3.0 mils

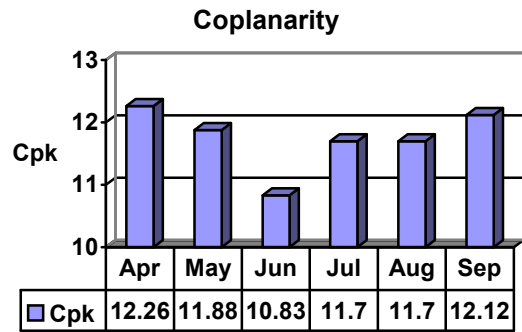
Carsem S, Malaysia Program: 2009

Package Technology: SSOP



LSL = 300 μ in

USL = 800 μ in

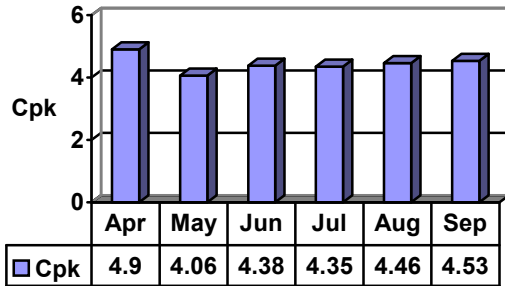


USL = 3.0 mils

Carsem S, Malaysia Program: 2009

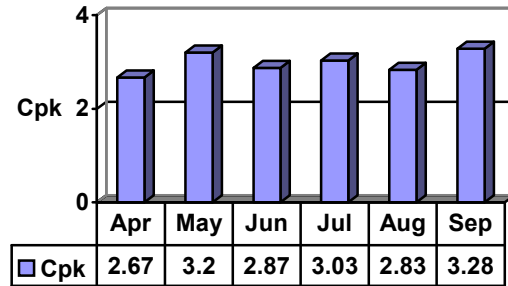
Package Technology: WSOIC

Wire Pull



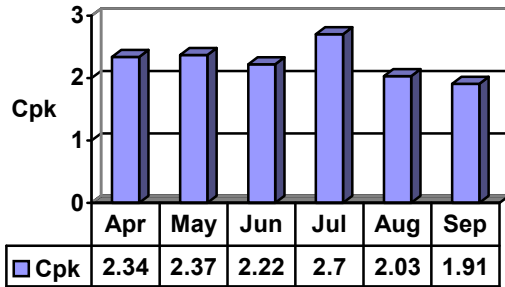
LSL = 6 gms

Ball Shear



LSL = 20 gms

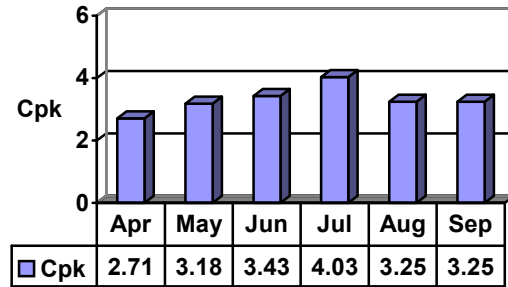
Plating Thickness Pb-Free



LSL = 300µin

USL = 800µin

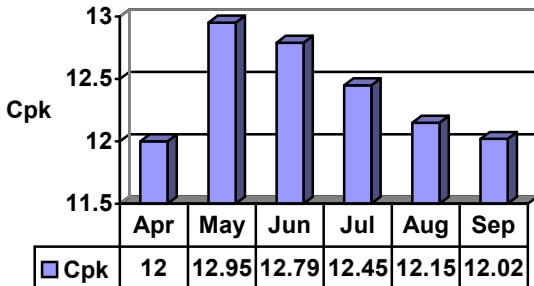
Plating Comp (%Sn)



LSL = 80%

USL = 90%

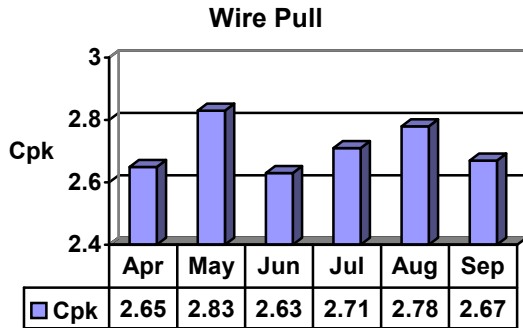
Coplanarity



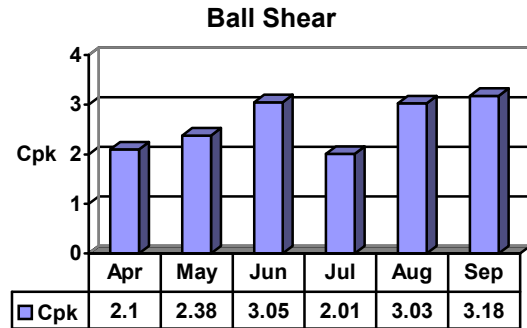
USL = 3.0 mils

Carsem S, Malaysia Program: 2009

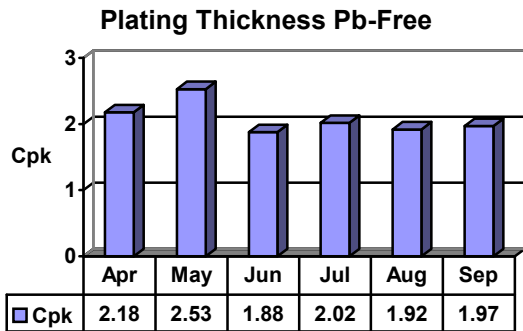
Package Technology: PDIP



LSL = 6 gms



LSL = 20 gms

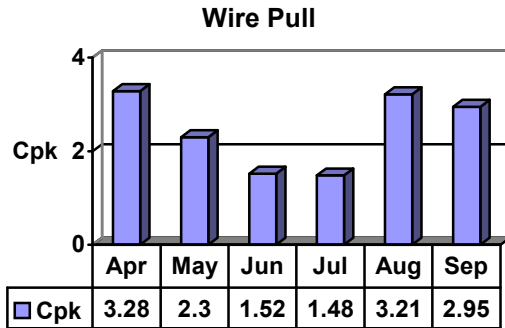


LSL = 300µin

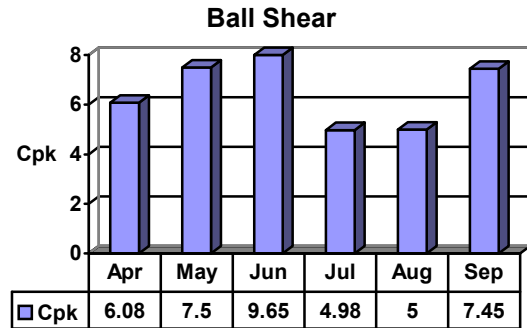
USL = 800µin

ASAT, China Program: 2009

Package Technology: BGA



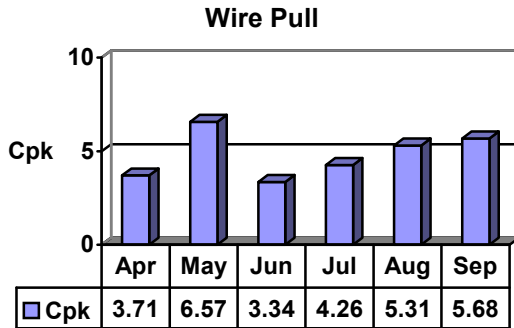
LSL = 6 gms



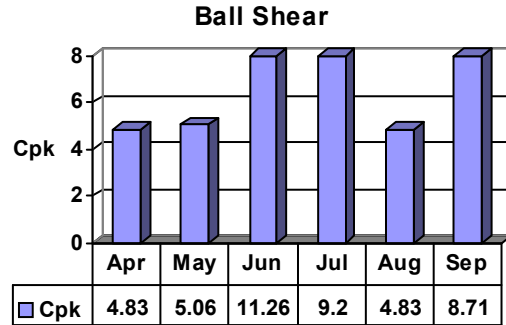
LSL = 20 gms

ASAT China Program: 2009

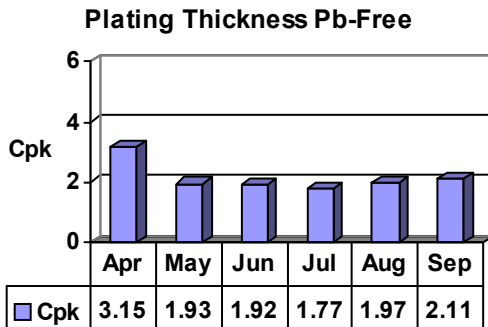
Package Technology: QFP



LSL = 6 gms

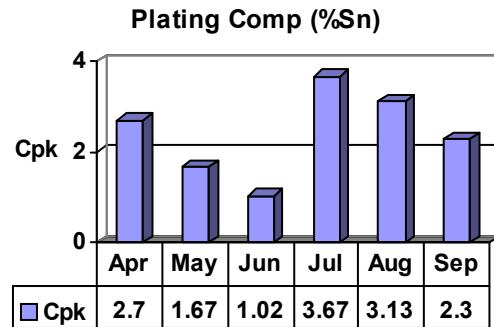


LSL = 20 gms



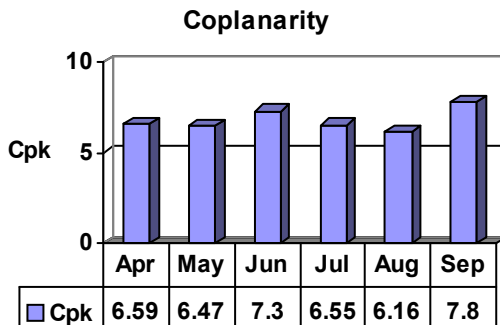
LSL = 300µin

USL = 800µin



LSL = 80%

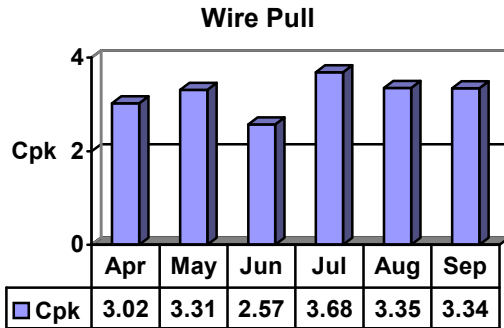
USL = 90%



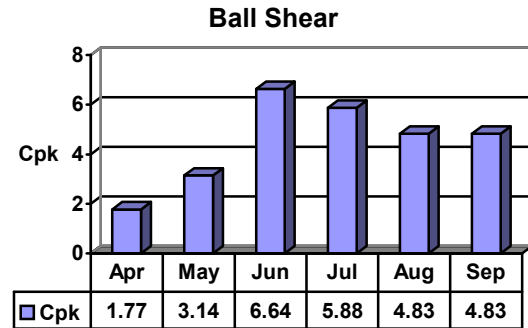
USL = 2.0 mils

ASAT China Program: 2009

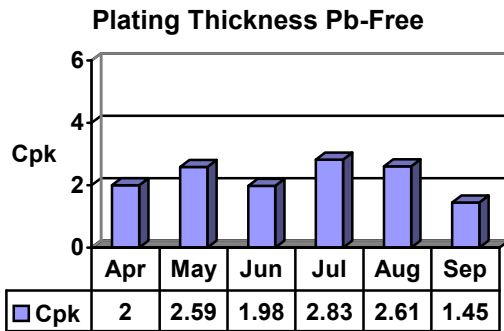
Package Technology: LPCC



LSL = 6 gms



LSL = 20 gms



LSL = 300µin

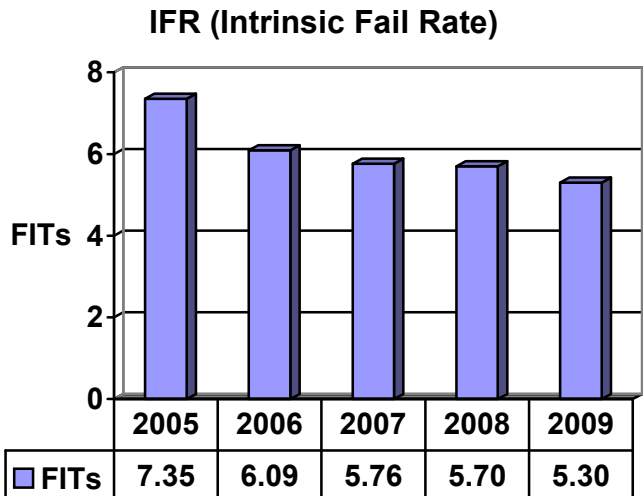
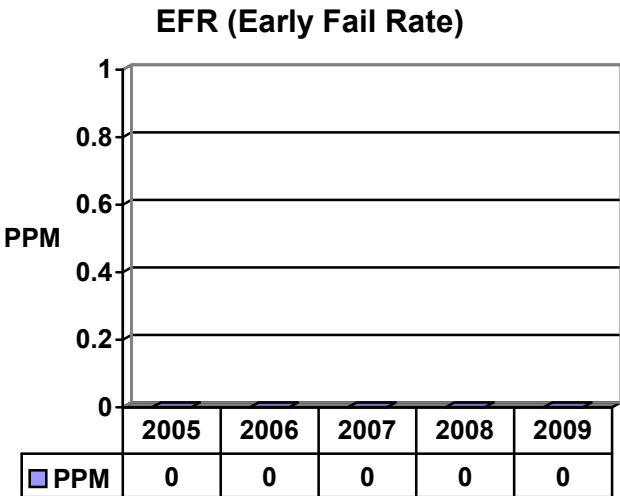
USL = 800µin

Reliability

Reliability data trends of Exar's wafer fab processes and package types are reported in order to assure our customers that our foundry fabs and assembly subcontractors are continuing to improve their reliability performance.

Factory: CSM, Singapore

Process: 0.25u/0.35μ CMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2005 | 311 | 0 | 0 |
| 2006 | 315 | 0 | 0 |
| 2007 | 90 | 0 | 0 |
| 2008 | 20 | 0 | 0 |
| 2009 | 203 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2005 | 215 | 122,120 | 0 |
| 2006 | 270 | 208,080 | 0 |
| 2007 | 90 | 90,000 | 0 |
| 2008 | 20 | 20,000 | 0 |
| 2009 | 203 | 230,000 | 0 |

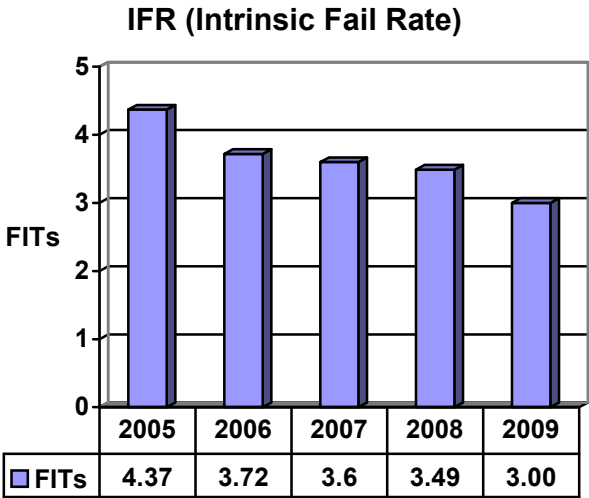
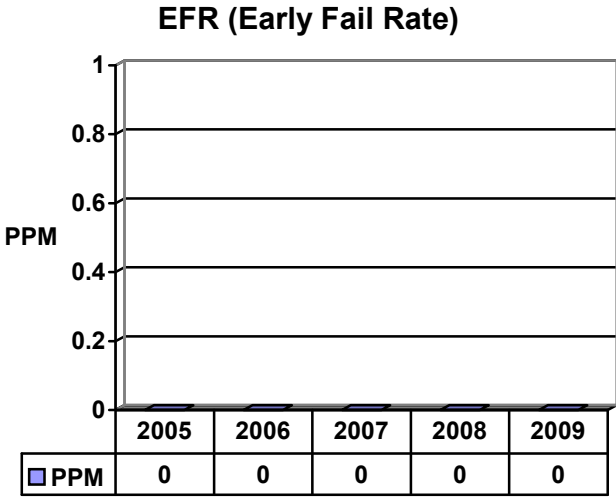
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: CSM Fab 2, Singapore

Process: 0.6 μ CMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2005 | 369 | 0 | 0 |
| 2006 | 498 | 0 | 0 |
| 2007 | 90 | 0 | 0 |
| 2008 | 100 | 0 | 0 |
| 2009 | 180 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2005 | 323 | 323,000 | 0 |
| 2006 | 498 | 498,000 | 0 |
| 2007 | 90 | 90,000 | 0 |
| 2008 | 100 | 100,000 | 0 |
| 2009 | 180 | 180,000 | 0 |

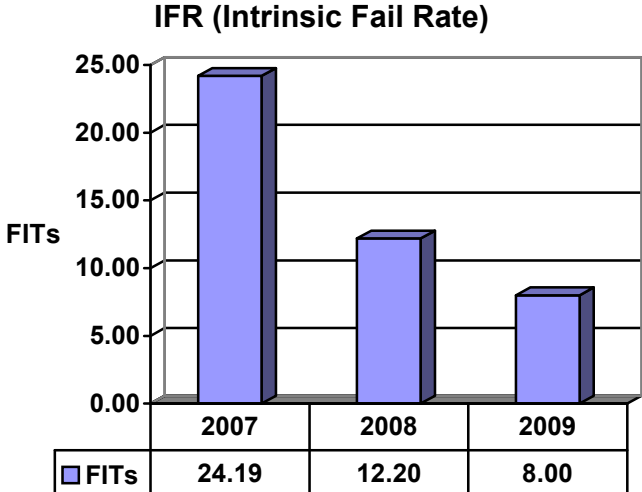
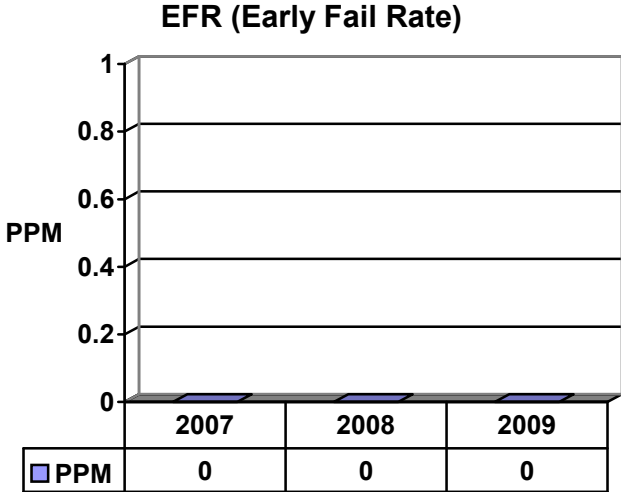
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: Jazz, USA

Process: 0.5μ CMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2007 | 486 | 0 | 0 |
| 2008 | 311 | 0 | 0 |
| 2009 | 667 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2007 | 486 | 486,000 | 0 |
| 2008 | 311 | 311,000 | 0 |
| 2009 | 667 | 667,000 | 0 |

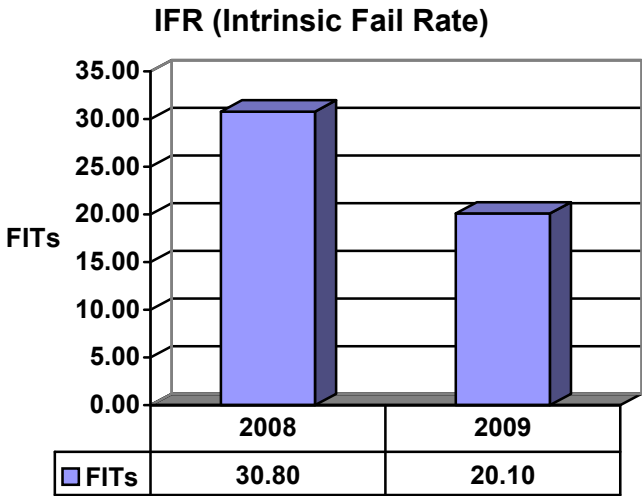
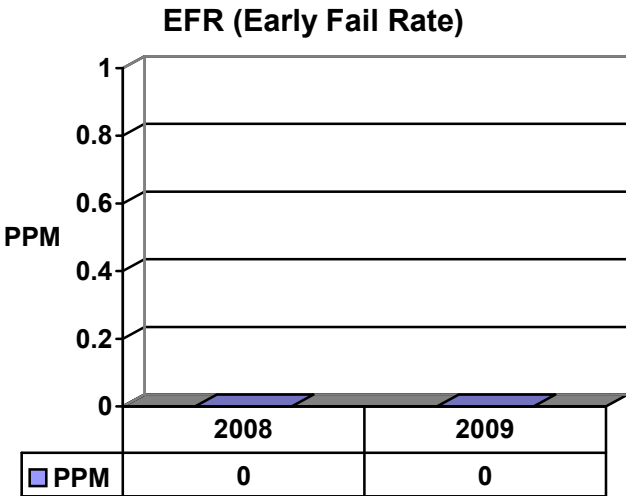
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: Polar, USA

Process: 0.5μ BiCMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2008 | 267 | 0 | 0 |
| 2009 | 200 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2008 | 387 | 387,000 | 0 |
| 2009 | 200 | 200,000 | 0 |

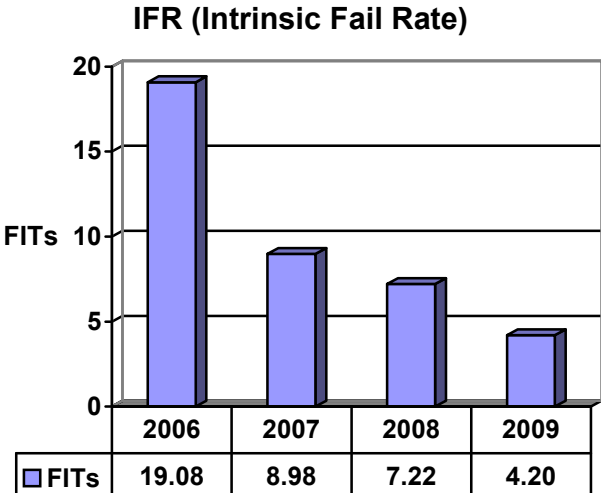
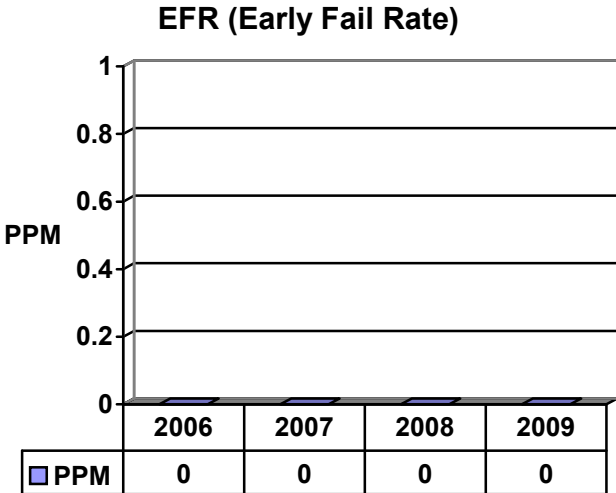
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: Episil, Taiwan

Process: 1.2 μ / 2 μ CMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2006 | 616 | 0 | 0 |
| 2007 | 693 | 0 | 0 |
| 2008 | 319 | 0 | 0 |
| 2009 | 1163 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2006 | 616 | 616,000 | 0 |
| 2007 | 693 | 693,000 | 0 |
| 2008 | 319 | 559,000 | 0 |
| 2009 | 1163 | 1,163,000 | 0 |

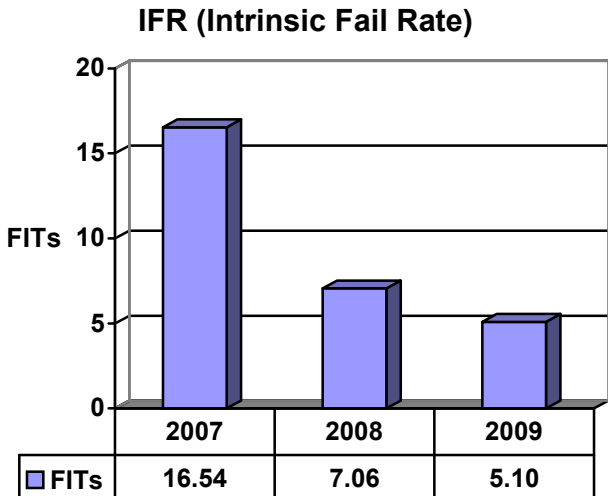
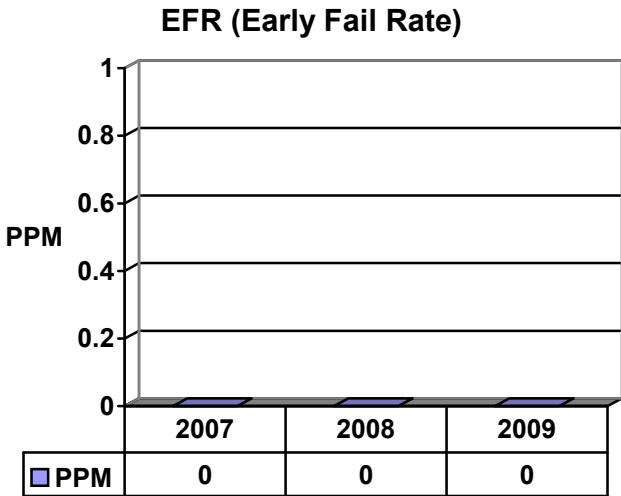
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: Silan, China

Process: 2 μ CMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2007 | 711 | 0 | 0 |
| 2008 | 953 | 0 | 0 |
| 2009 | 626 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2007 | 711 | 711,000 | 0 |
| 2008 | 953 | 953,000 | 0 |
| 2009 | 626 | 626,000 | 0 |

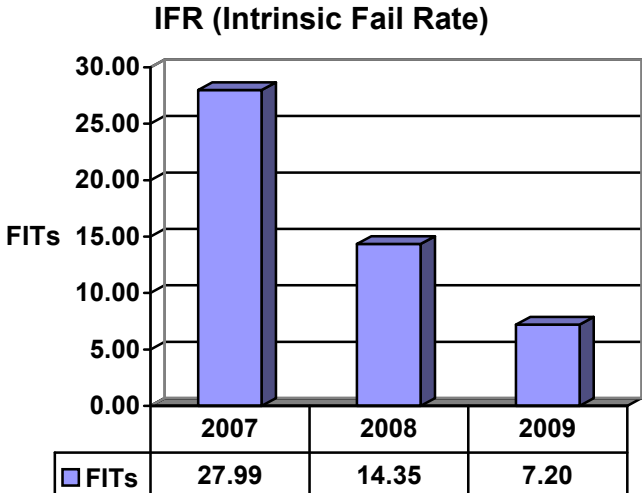
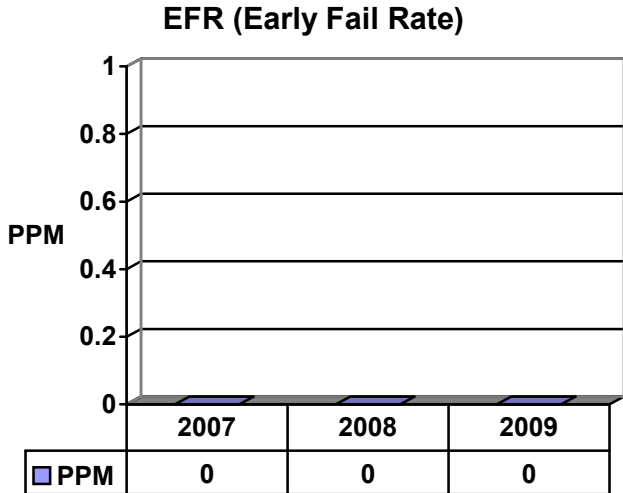
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: Silan, China

Process: 5 μ CMOS



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2007 | 420 | 0 | 0 |
| 2008 | 399 | 0 | 0 |
| 2009 | 813 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2007 | 420 | 420,000 | 0 |
| 2008 | 399 | 399,000 | 0 |
| 2009 | 813 | 813,000 | 0 |

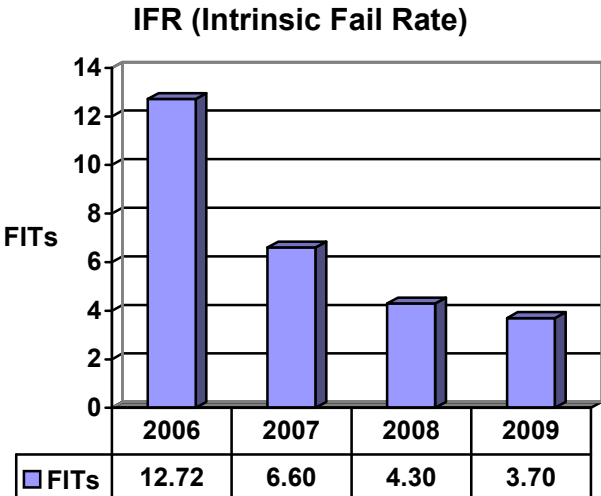
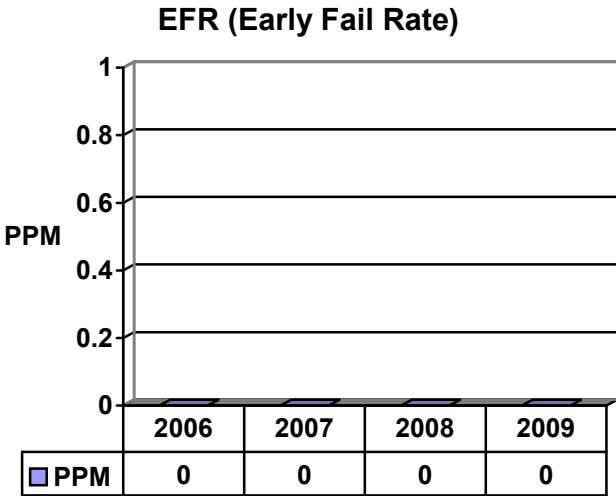
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: Silan, China

Process: Bipolar



| Year | Sample Size | # Fail | PPM |
|------|-------------|--------|-----|
| 2006 | 1,600 | 0 | 0 |
| 2007 | 856 | 0 | 0 |
| 2008 | 721 | 0 | 0 |
| 2009 | 604 | 0 | 0 |

| Year | Sample Size | Device Hours | # Fail |
|------|-------------|--------------|--------|
| 2006 | 924 | 924,000 | 0 |
| 2007 | 858 | 856,000 | 0 |
| 2008 | 721 | 721,000 | 0 |
| 2009 | 604 | 604,000 | 0 |

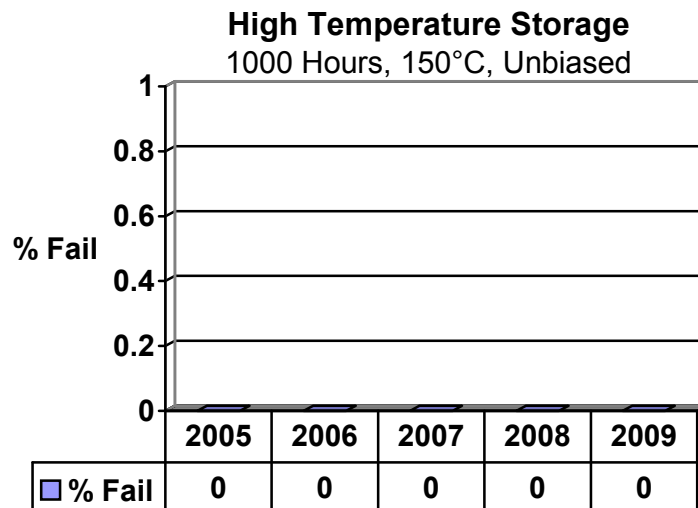
FIT: Failure in Time; 60% CL, 55°C, Ea = .7eV

IFR: Intrinsic Failure Rate > 168 hours @ the test temperature of 125°C or > 72 hours @ 150°C

IFR: Early Failure Rate < 168 hours @ the test temperature of 125°C or < 72 hours @ 150°C

Factory: CSM, Singapore

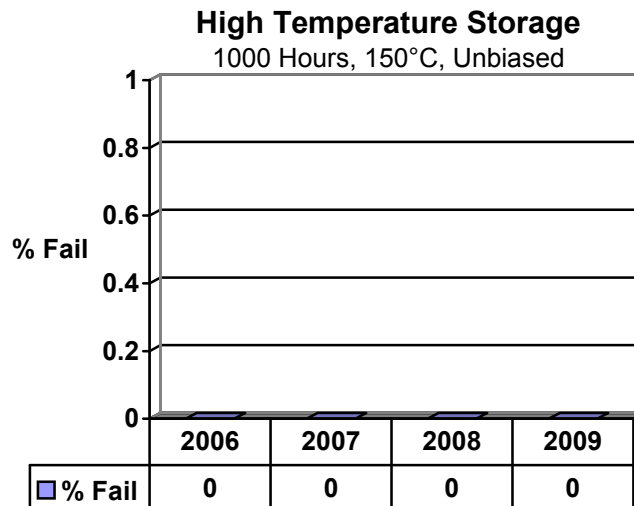
Process: 0.35 μ CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 432 | 0 | 0 |
| 2006 | 322 | 0 | 0 |
| 2007 | 157 | 0 | 0 |
| 2008 | 75 | 0 | 0 |
| 2009 | 125 | 0 | 0 |

Factory: CSM, Singapore

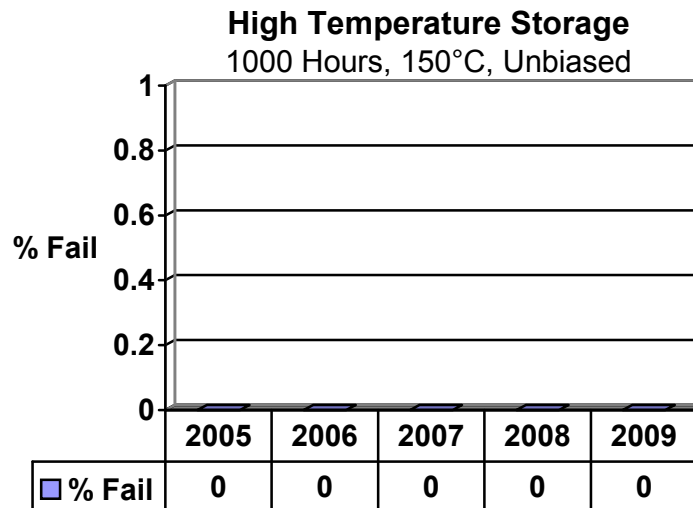
Process: 0.18 μ CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2006 | 75 | 0 | 0 |
| 2007 | 83 | 0 | 0 |
| 2008 | 45 | 0 | 0 |
| 2009 | 65 | 0 | 0 |

Factory: CSM Fab 2, Singapore

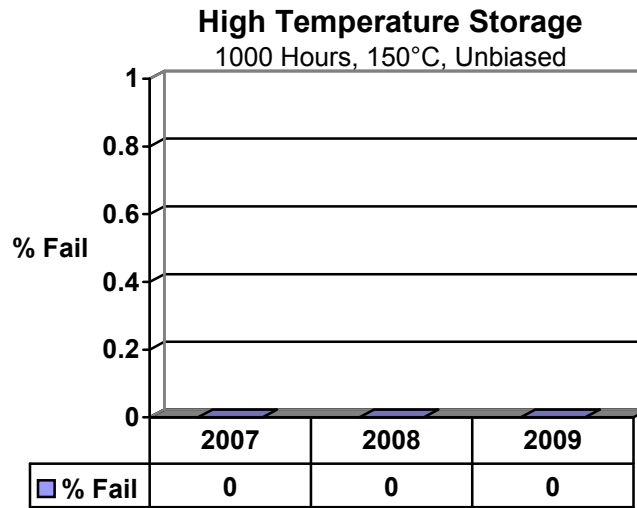
Process: 0.6 μ CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 180 | 0 | 0 |
| 2006 | 579 | 0 | 0 |
| 2007 | 135 | 0 | 0 |
| 2008 | 100 | 0 | 0 |
| 2009 | 180 | 0 | 0 |

Factory: Jazz, CA USA

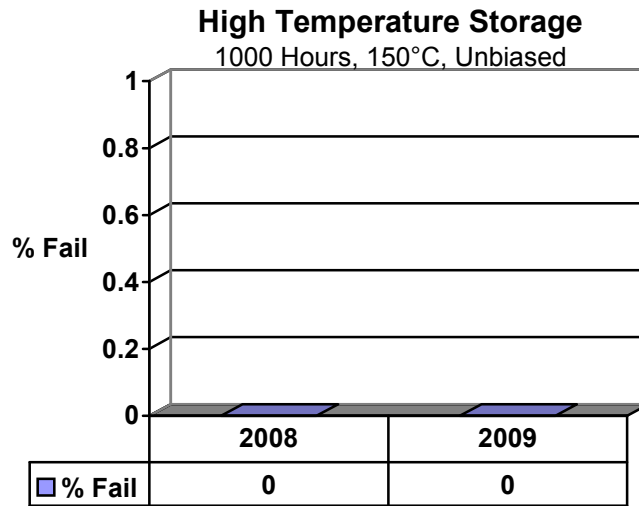
Process: 0.5 μ CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2007 | 231 | 0 | 0 |
| 2008 | 25 | 0 | 0 |
| 2009 | 257 | 0 | 0 |

Factory: Episil, Taiwan

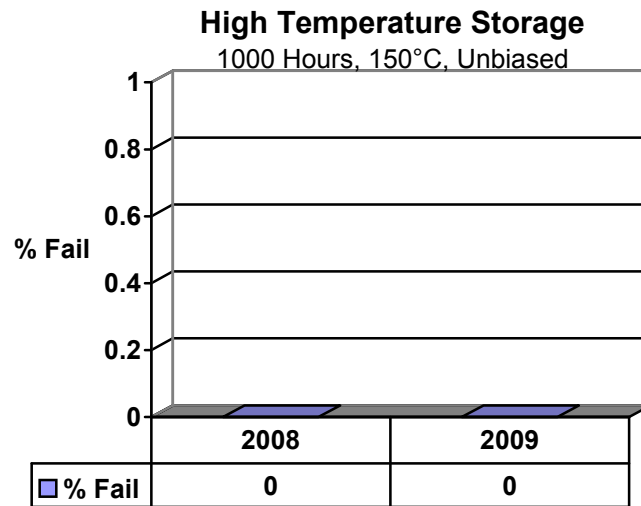
Process: 1.2u CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2008 | 80 | 0 | 0 |
| 2009 | 225 | 0 | 0 |

Factory: Episil, Taiwan

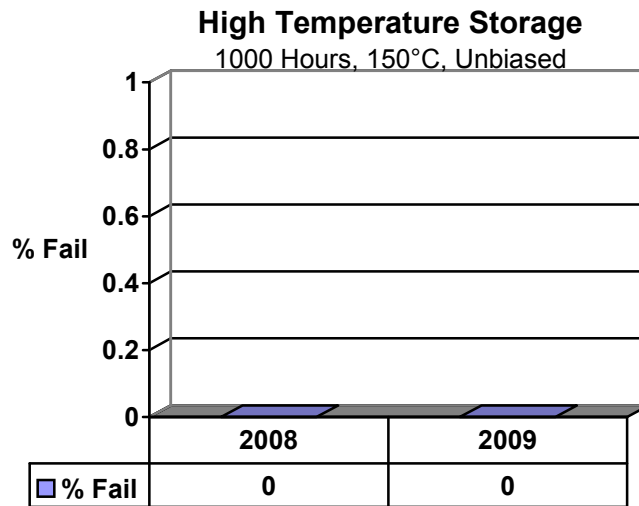
Process: 2u CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2008 | 462 | 0 | 0 |
| 2009 | 137 | 0 | 0 |

Factory: Silan, China

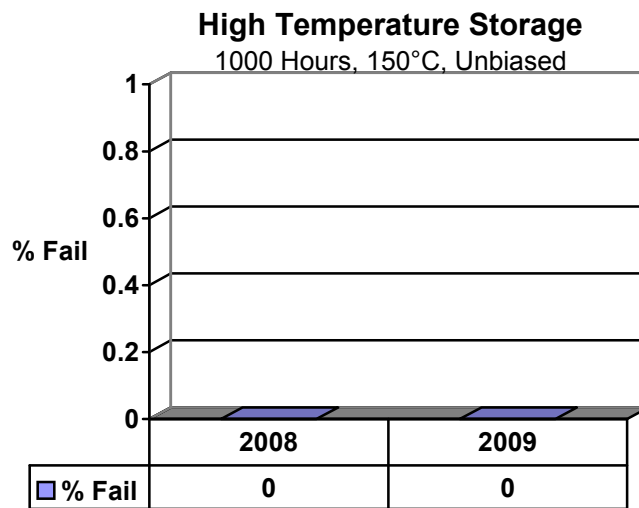
Process: 2u CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2008 | 204 | 0 | 0 |
| 2009 | 205 | 0 | 0 |

Factory: Silan, China

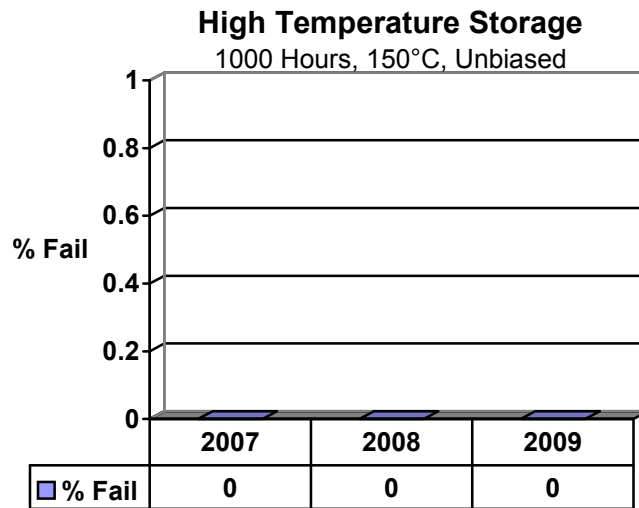
Process: 5u CMOS



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2008 | 77 | 0 | 0 |
| 2009 | 135 | 0 | 0 |

Factory: Silan, China

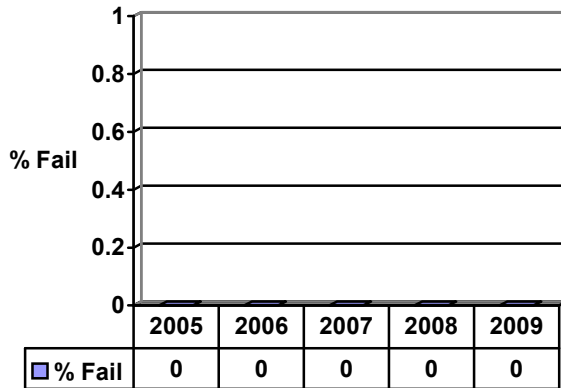
Process: Bipolar



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2007 | 180 | 0 | 0 |
| 2008 | 116 | 0 | 0 |
| 2009 | 116 | 0 | 0 |

Package: BGA Families

Temperature Cycle

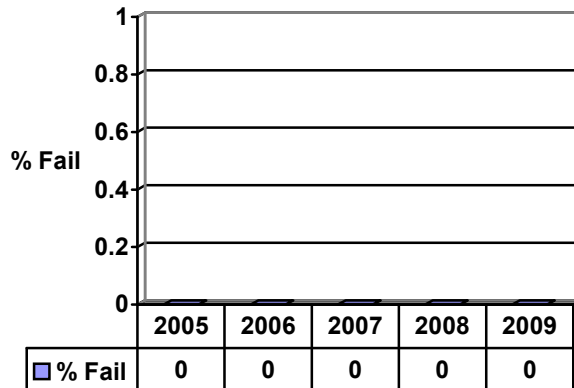


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 268 | 0 | 0 |
| 2006 | 256 | 0 | 0 |
| 2007 | 127 | 0 | 0 |
| 2008 | 47 | 0 | 0 |
| 2009 | 74 | 0 | 0 |

Conditions:

1000 Cycles -55/125°C.

Pressure Pot/UHAST



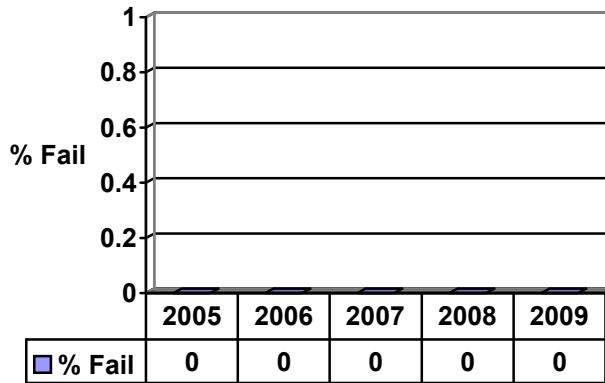
| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 151 | 0 | 0 |
| 2006 | 212 | 0 | 0 |
| 2007 | 97 | 0 | 0 |
| 2008 | 68 | 0 | 0 |
| 2009 | 74 | 0 | 0 |

Conditions:

96 Hours, 130°C, 85% RH

Package: PDIP

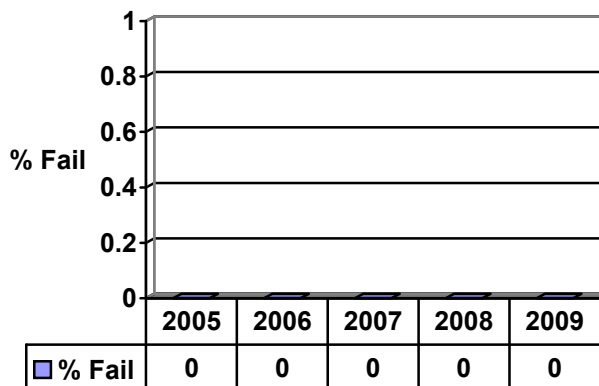
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 275 | 0 | 0 |
| 2006 | 90 | 0 | 0 |
| 2007 | 243 | 0 | 0 |
| 2008 | 135 | 0 | 0 |
| 2009 | 180 | 0 | 0 |

Conditions:
1000 Cycles -65/150°C

Pressure Pot/UHAST

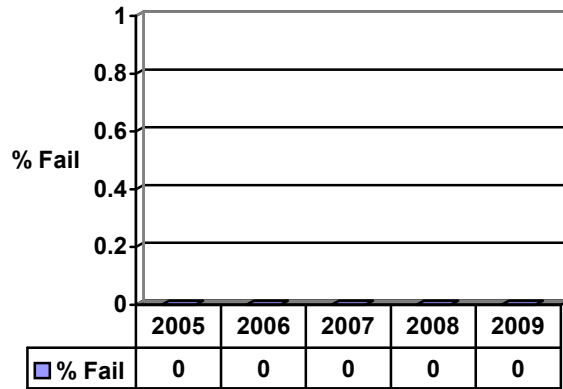


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 540 | 0 | 0 |
| 2006 | 225 | 0 | 0 |
| 2007 | 353 | 0 | 0 |
| 2008 | 135 | 0 | 0 |
| 2009 | 270 | 0 | 0 |

Conditions:
96/168 Hours, 121°C, 100% RH / or 96 Hours,
130°C, 85% RH

Package: PLCC

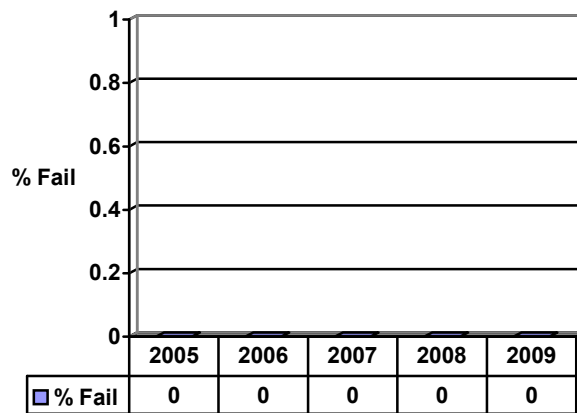
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 280 | 0 | 0 |
| 2006 | 135 | 0 | 0 |
| 2007 | 45 | 0 | 0 |
| 2008 | 90 | 0 | 0 |
| 2009 | 45 | 0 | 0 |

Conditions:
1000 Cycles -65/150°C

Pressure Pot/UHAST

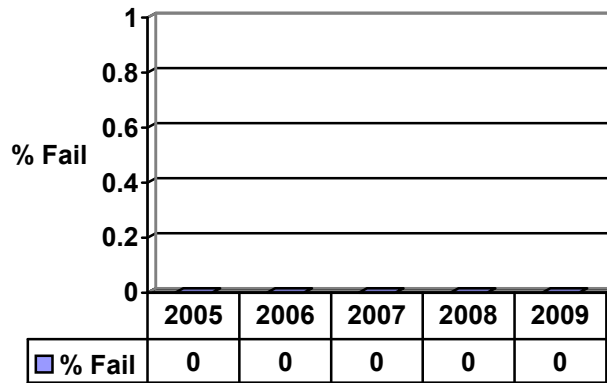


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 360 | 0 | 0 |
| 2006 | 360 | 0 | 0 |
| 2007 | 90 | 0 | 0 |
| 2008 | 180 | 0 | 0 |
| 2009 | 45 | 0 | 0 |

Conditions:
96 Hours, 130°C, 85% RH

Package: T/S/LQFP/N

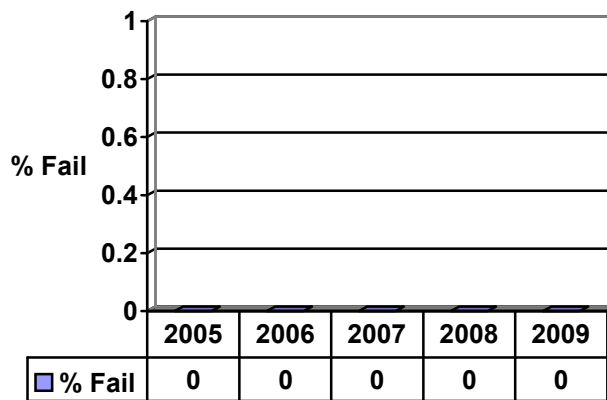
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 536 | 0 | 0 |
| 2006 | 724 | 0 | 0 |
| 2007 | 645 | 0 | 0 |
| 2008 | 180 | 0 | 0 |
| 2009 | 180 | 0 | 0 |

Conditions:
300/1000 Cycles -65/150°C

Pressure Pot/UHAST

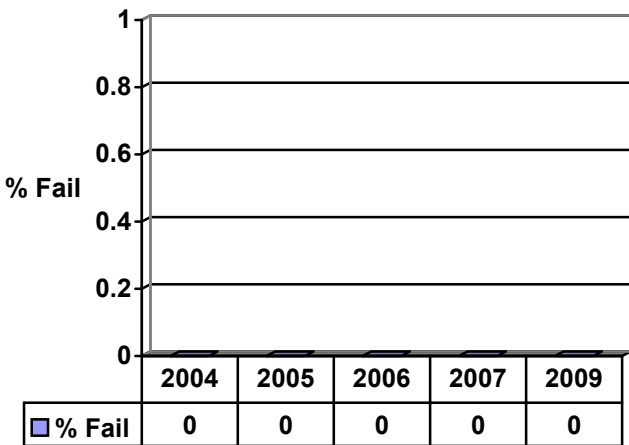


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2005 | 662 | 0 | 0 |
| 2006 | 820 | 0 | 0 |
| 2007 | 460 | 0 | 0 |
| 2008 | 225 | 0 | 0 |
| 2009 | 180 | 0 | 0 |

Conditions:
96 Hours, 130°C, 85% RH

Package: TO

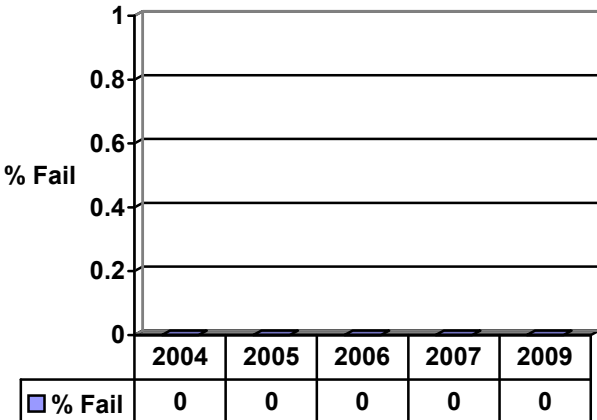
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2004 | 320 | 0 | 0 |
| 2005 | 500 | 0 | 0 |
| 2006 | 180 | 0 | 0 |
| 2007 | 180 | 0 | 0 |
| 2009 | 720 | 0 | 0 |

Conditions:
1000Cycles, -65/150°C

Pressure Pot/UHAST

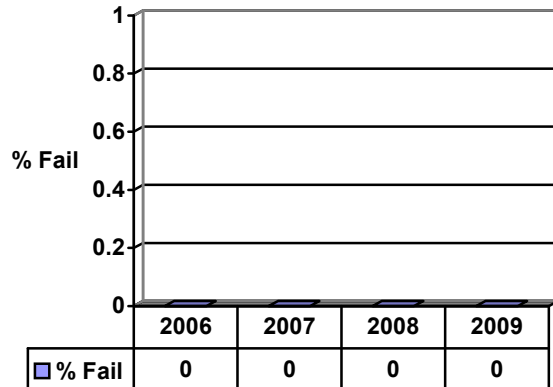


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2004 | 760 | 0 | 0 |
| 2005 | 855 | 0 | 0 |
| 2006 | 310 | 0 | 0 |
| 2007 | 313 | 0 | 0 |
| 2009 | 720 | 0 | 0 |

Conditions:
96 Hours, 130°C, 85% RH

Package: SOT, TSOT, SC-70

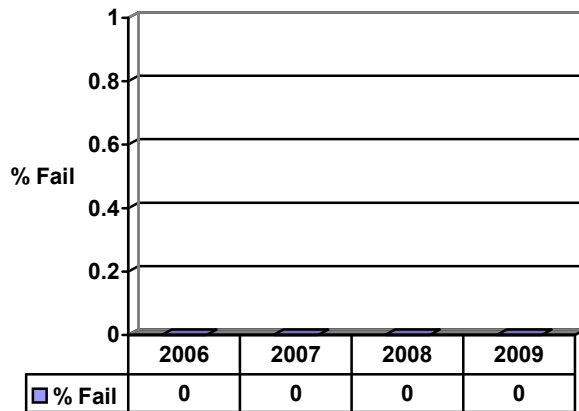
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2006 | 77 | 0 | 0 |
| 2007 | 908 | 0 | 0 |
| 2008 | 1780 | 0 | 0 |
| 2009 | 365 | 0 | 0 |

Conditions:
500/1000 Cycles -65/150°C

Pressure Pot/UHAST

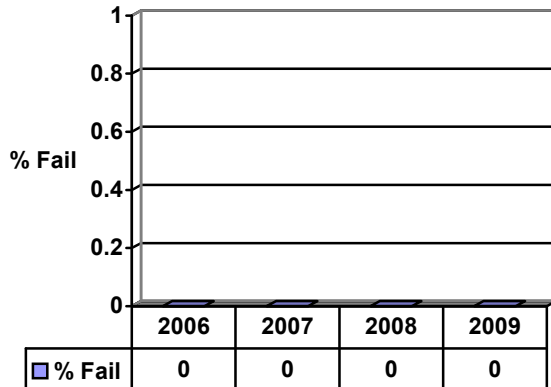


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2006 | 77 | 0 | 0 |
| 2007 | 915 | 0 | 0 |
| 2008 | 836 | 0 | 0 |
| 2009 | 365 | 0 | 0 |

Conditions:
96 Hours, 121°C, 100% RH / or 96 Hours, 130°C, 85% RH

Package: MSOP, TSSOP, SSOP, SOIC

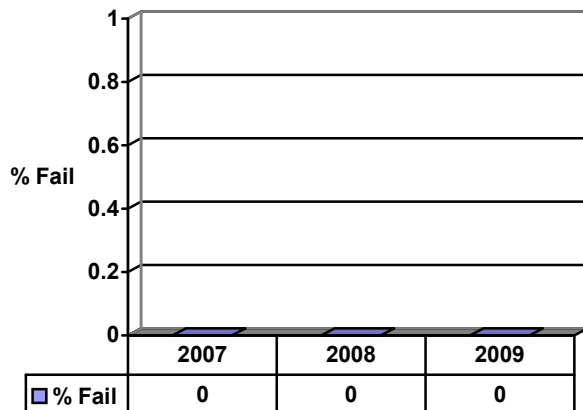
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2006 | 539 | 0 | 0 |
| 2007 | 2731 | 0 | 0 |
| 2008 | 2538 | 0 | 0 |
| 2009 | 1834 | 0 | 0 |

Conditions:
300/1000Cycles, -65/150°C

Pressure Pot/UHAST

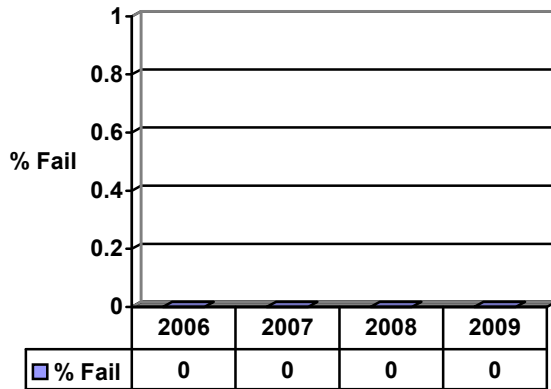


| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2007 | 1131 | 0 | 0 |
| 2008 | 2253 | 0 | 0 |
| 2009 | 1970 | 0 | 0 |

Conditions:
96 Hours, 121°C, 100% RH / or 96 Hours, 130°C, 85% RH

Package: DFN

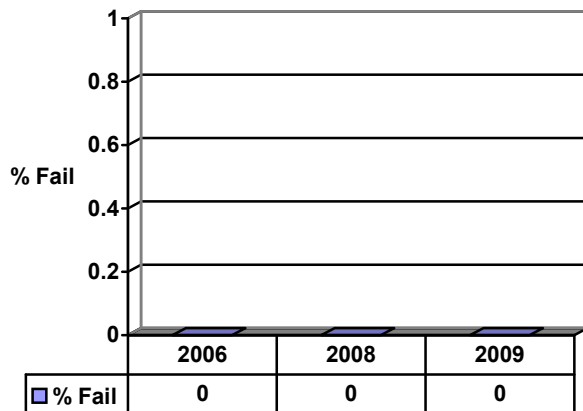
Temperature Cycle



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2006 | 231 | 0 | 0 |
| 2007 | 77 | 0 | 0 |
| 2008 | 45 | 0 | 0 |
| 2009 | 85 | 0 | 0 |

Conditions:
1000 Cycles -65/150°C,

Pressure Pot/UHAST



| Year | Sample Size | # Fail | % Fail |
|------|-------------|--------|--------|
| 2006 | 308 | 0 | 0 |
| 2008 | 25 | 0 | 0 |
| 2009 | 195 | 0 | 0 |

Conditions:
96 Hours, 121°C, 100% RH / or 96 Hours,
130°C, 85% RH