

# Reliability Testing Summary

## 0.22 $\mu$ m

**Technology:** Si Gate CMOS  
**Device Type:** XCVXXX  
**Package Type:** Various  
**Assumed Activation Energy:** 0.70 ev @ C.L. = 60%

	Life Test	Hast	Temp. Cycle
	145C	100 Hrs 130C/85%	1,000Cycs. -65C/+150C
<b>Combined Lot:</b>	21	1	1
<b>Failures:</b>	6	0	0
<b>Device on test:</b>	1,025	23	34
<b>Actual device hours:</b>	1,117,744	2,300	34,000
<b>Mean:</b>	1,090	100	1,000
<b>Equivalent device hours @ Tj=125C:</b>	2,967,035		
<b>Equivalent device hours @ Tj=70C:</b>	230,903,313		
<b>Equivalent device hours @ Tj=25C:</b>	2.79E+09		
<b>Failure Rate in FITS @ Tj=70C:</b>	32		
<b>Failure Rate in FITS @ Tj=25C:</b>	3		

\*The data collected from process qualification & Reliability monitor program

# Reliability Testing Summary

## 0.18 $\mu\text{m}$

**Technology:** Si Gate CMOS  
**Device Type:** XCVXXXE  
**Package Type:** Various  
**Assumed Activation Energy:** 0.70 ev @ C.L. = 60%

	Life Test	Hast	Temp. Cycle
	145C	100Hrs 130C/85%	1,000Cycs. -65C/+150C
<b>Combined Lot:</b>	13	1	1
<b>Failures:</b>	2	0	0
<b>Device on test:</b>	500	76	68
<b>Actual device hours:</b>	318,156	7,600	68,000
<b>Mean:</b>	636	100	1,000
<b>Equivalent device hours @ Tj=125C:</b>	844,540		
<b>Equivalent device hours @ Tj=70C:</b>	65,724,597		
<b>Equivalent device hours @ Tj=25C:</b>	7.95E+08		
<b>Failure Rate in FITS @ Tj=70C:</b>	47		
<b>Failure Rate in FITS @ Tj=25C:</b>	4		

\*The data collected from process qualification & Reliability monitor program