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XPC8245 RELIABILITY DATA SUMMARY

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352 pin TBGA Package Reliability



XPC8245 Product Offerings:

Mask: 0_K78B
 Die Size: 49.2mm sq
 Fab: MOS13, Austin, TX
 Fab Process: HiP4DP
 Assembly Site: KLM/ASAT
 Package: 352 pin TBGA

Package Details:

352 pin TBGA Package

Package size: 35 x 35 mm
 Bump: TBGA
 Assy: KLM/ASAT
 MSL Level: 3, no drypack required

360 pin PBGA Package - Offered for XPC755B, long term package

Package size: 25 x 25 mm
 Bump: C4
 Assy: BAT-1, Austin, TX
 MSL Level: 3

XPC8245: SUPPORTING FAB PROCESS RELIABILITY DATA

SUPPORTING TECHNOLOGY DATA: HIP4S (optimized fab front end for memory, same metalization)

DYNAMIC LIFETEST (2.4V, 140°C ambient)

72 HRS	504 HRS	1008 HRS	2016 HRS
0 / 8587	0 / 1024	0 / 1024	2 / 1024

Failure Summary:
 2016 hrs: Single bits

High Temp Storage (150°C)

168 HRS	504 HRS	1008 HRS	2016 HRS
0 / 260	0 / 260	0 / 260	0 / 260



XPC8245 RELIABILITY DATA

DYNAMIC LIFETEST (2.35V, 90°C ambient, 110° - 120°C ambient)

24 HRS	168 HRS	504 HRS	1008 HRS
/	0 / 93	0 / 93	0 / 93

note: additional data collection in progress

ESD (HBM)

1KV	2KV
	0 / 3

ESD (MM)

100V	200V
	0 / 3

ESD (CDM) - socketed

500V	1KV
	0 / 3

LATCHUP

±150 mA	±200 mA
	0 / 3

XPC755B: SUPPORTING FAB PROCESS RELIABILITY DATA

SUPPORTING TECHNOLOGY DATA: HiP4P (29Å) (XPC755A, identical process/product except gate oxide)

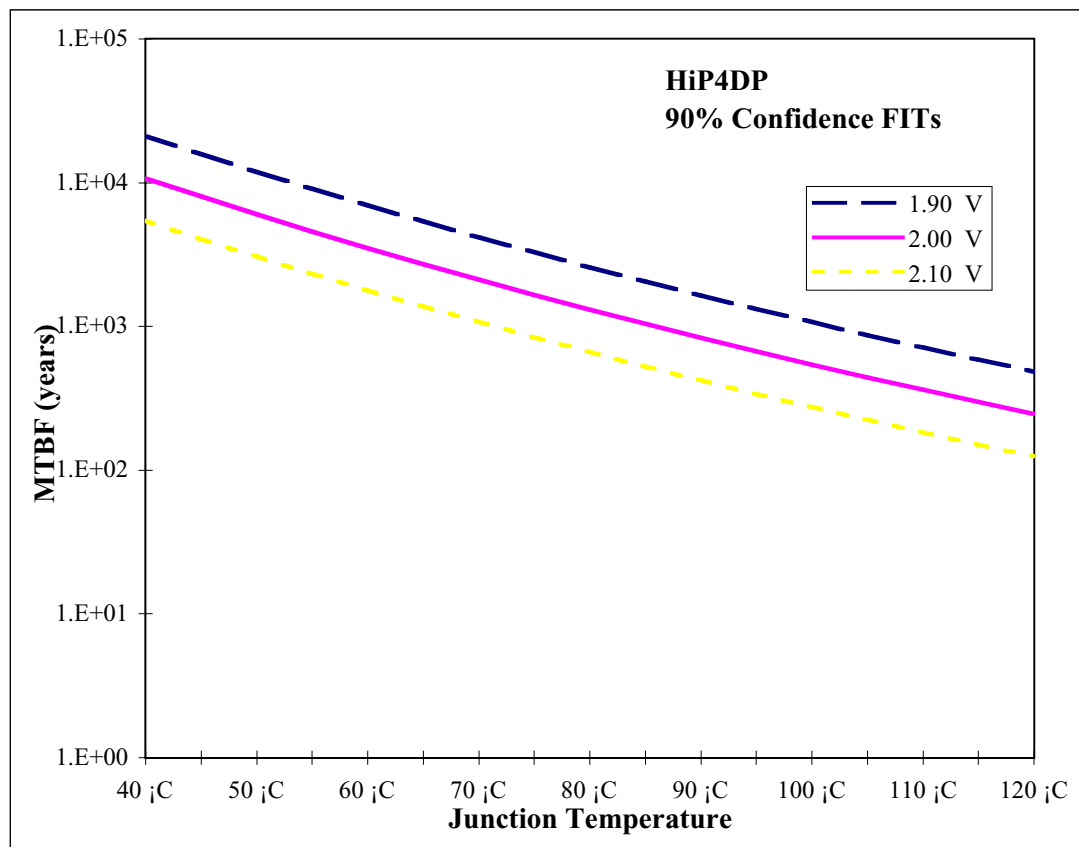
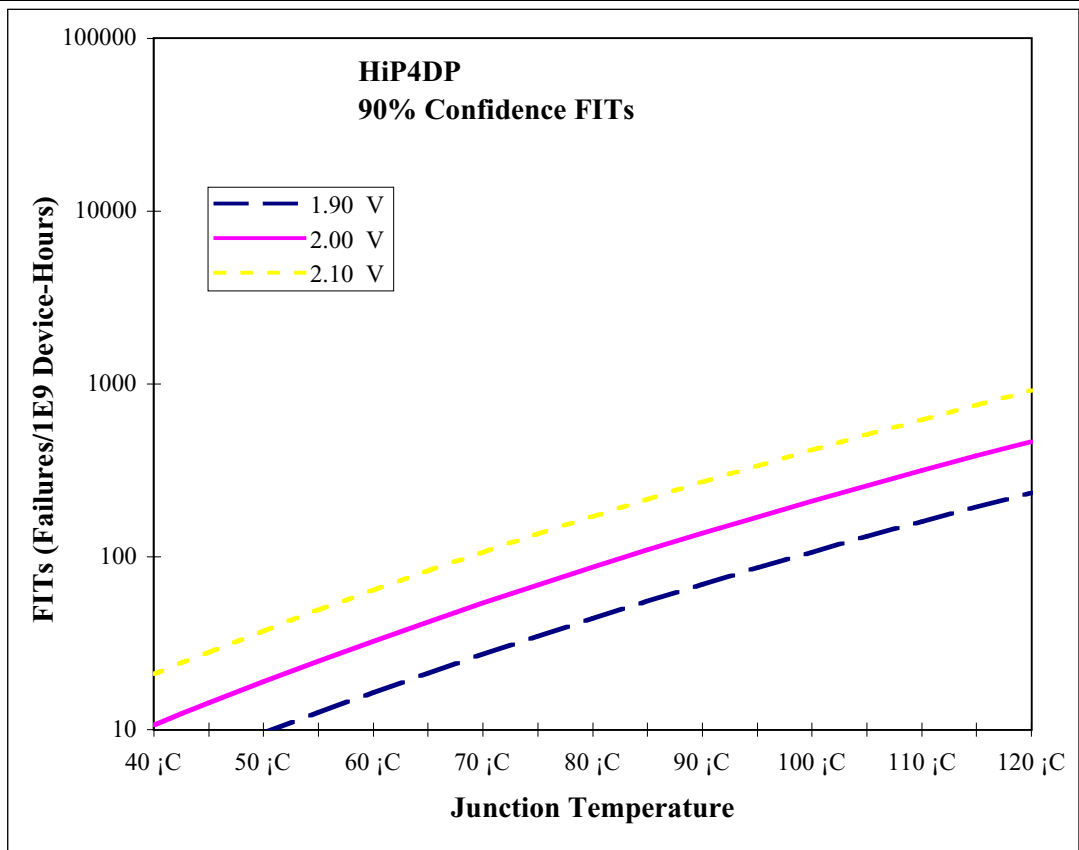
DYNAMIC LIFETEST (2.35V, 90°C ambient, 115°C - 130°C junction)

24 HRS	168 HRS	504 HRS	1008 HRS
/	0 / 521	1 / 520	0 / 518

Failure Summary:

504 hrs: Functional Fail, no analysis capability, unresolved

FAILURE RATES





PACKAGE: 352 Pin, 35 x 35mm TBGA

MOISTURE CZ

PRECOND MSL3

0 / 462

TEMPERATURE CYCLING (-55°C/+125°C)

PRECOND MSL1

100 CYC

500 CYC

1000 CYC

0 / 201

0 / 201

0 / 201

0 / 66

THERMAL SHOCK (-55°C/+125°C)

PRECOND MSL1

100 CYC

500 CYC

1000 CYC

0 / 135

0 / 135

0 / 135

0 / 135

AUTOCLAVE (+121°C, 15 PSIG)

PRECOND MSL1

48 HRS

144 HRS

0 / 201

0 / 201

0 / 201

THB (+85°C/85% RH/3.3V)

PRECOND MSL1

168 HRS

504 HRS

1008 HRS

0 / 45

0 / 45

0 / 45

0 / 45