



## XPC750P Rev 'E' RELIABILITY DATA SUMMARY

**TECHNOLOGY: HiP3.5 (0.29 $\mu$ )**  
 (HiP3 backend metalization with HiP5 transistor)

**DYNAMIC LIFETEST (2.25 - 2.35V, 110°C - 125°C)**

168 HRS	504 HRS	1008 HRS	2016 HRS
0 / 674	0 / 368	0 / 265	/

**ESD (HBM)**

1KV	2KV
/	0 / 2

**ESD (MM)**

100V	200V
/	0 / 2

**ESD (CDM)**

500V	1KV
/	/

**LATCHUP**

150 mA	200 mA
0 / 3	/

**SUPPORTING TECHNOLOGY: HiP3**  
 (matches backend metalization of XPC750P, all revisions)

**DYNAMIC LIFETEST (3.1V, 125°C)**

168 HRS	504 HRS	1008 HRS	2016 HRS
7 / 4642	4 / 3211	0 / 1084	/

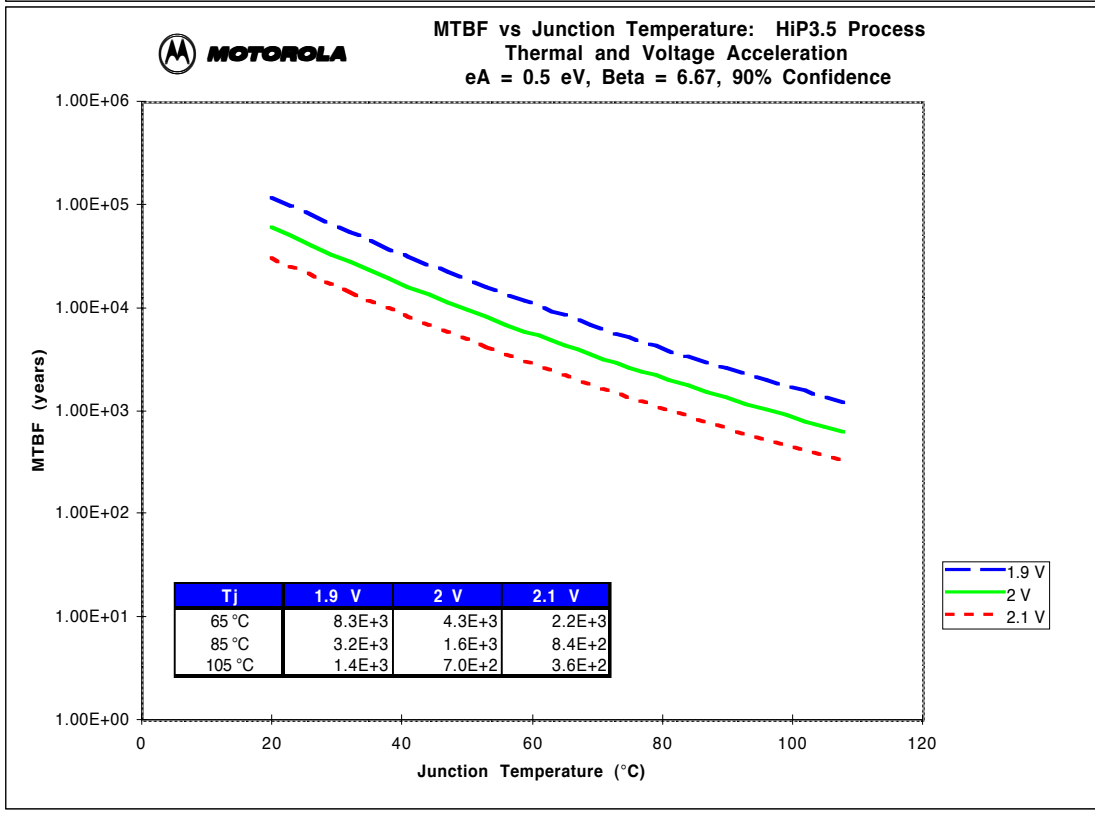
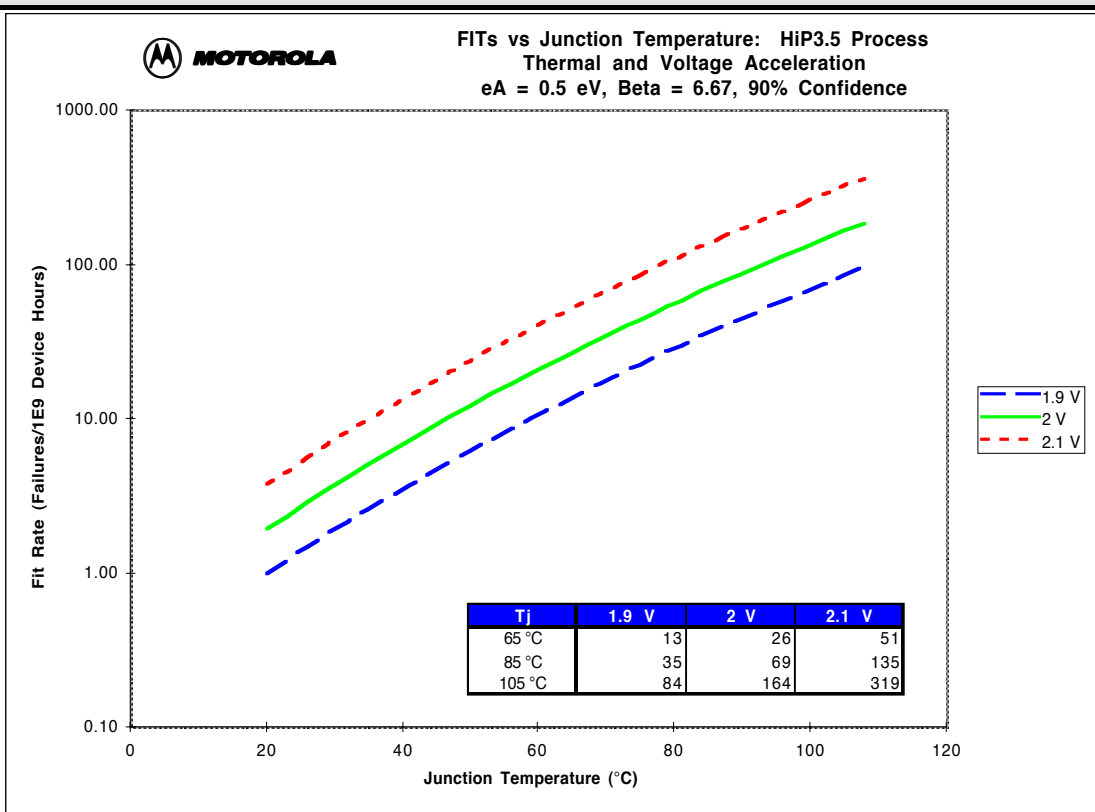
**Failure Summary:**

168 hrs: 2 No defect found, r000218; 4 functional not analyzable, 1 L2TAG not analyzable  
 504 hrs: 1 Mispatterned Gate r000201; 3 functional not analyzable



# XPC750P Rev 'E' RELIABILITY DATA SUMMARY

## TECHNOLOGY FAILURE RATES - HiP3.5





## XPC750P Rev 'B' RELIABILITY DATA SUMMARY

**TECHNOLOGY: HiP3.4 (0.29 $\mu$ )**  
(HiP3 backend metalization with HiP4 transistor)

### DYNAMIC LIFETEST (2.25 - 2.35V, 110°C - 125°C)

168 HRS	504 HRS	1008 HRS	2016 HRS
1 / 451	0 / 255	0 / 255	/

Failure Summary:

168 hrs: 1 ABIST - ISTAT cache only fail, not analyzable

#### ESD (HBM)

1KV	2KV
/	0 / 4

#### ESD (MM)

100V	200V
/	0 / 2

#### ESD (CDM)

500V	1KV
0 / 2	/

#### LATCHUP

150 mA	200 mA
0 / 9	/

**SUPPORTING TECHNOLOGY: HiP3**  
(matches backend metalization of XPC750P)

### DYNAMIC LIFETEST (3.1V, 125°C)

168 HRS	504 HRS	1008 HRS	2016 HRS
7 / 4642	4 / 3211	0 / 1084	/

Failure Summary:

168 hrs: 2 No defect found, r000218; 4 functional not analyzable, 1 L2TAG not analyzable

504 hrs: 1 Mispatterned Gate r000201; 3 functional not analyzable

**SUPPORTING TECHNOLOGY: HiP4**  
(matches frontend transistor of XPC750P Rev 'B')

### DYNAMIC LIFETEST (2.35V, 125°C)

168 HRS	504 HRS	1008 HRS	2016 HRS
3 / 1882	1 / 970	2 / 968	0 / 305

Failure Summary:

168 hrs: 1 No defect found; 1 pkg related tin bridging at substrate, 1 ABIST not analyzed

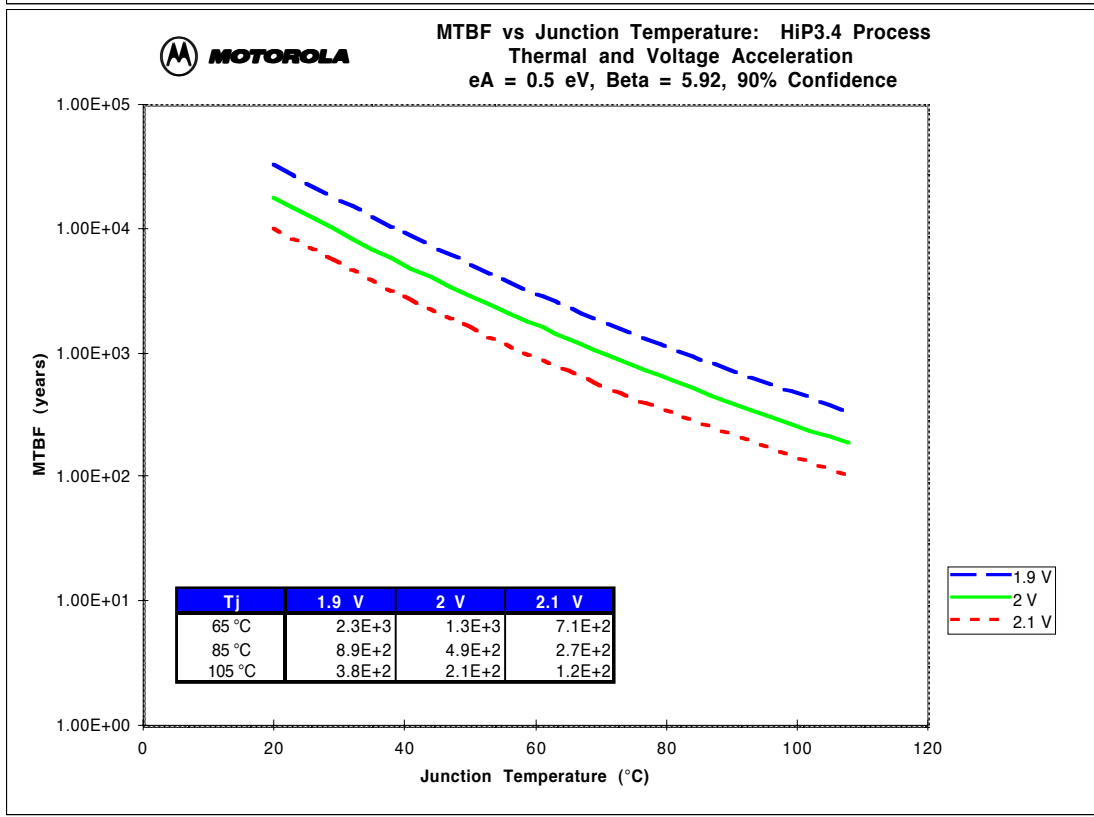
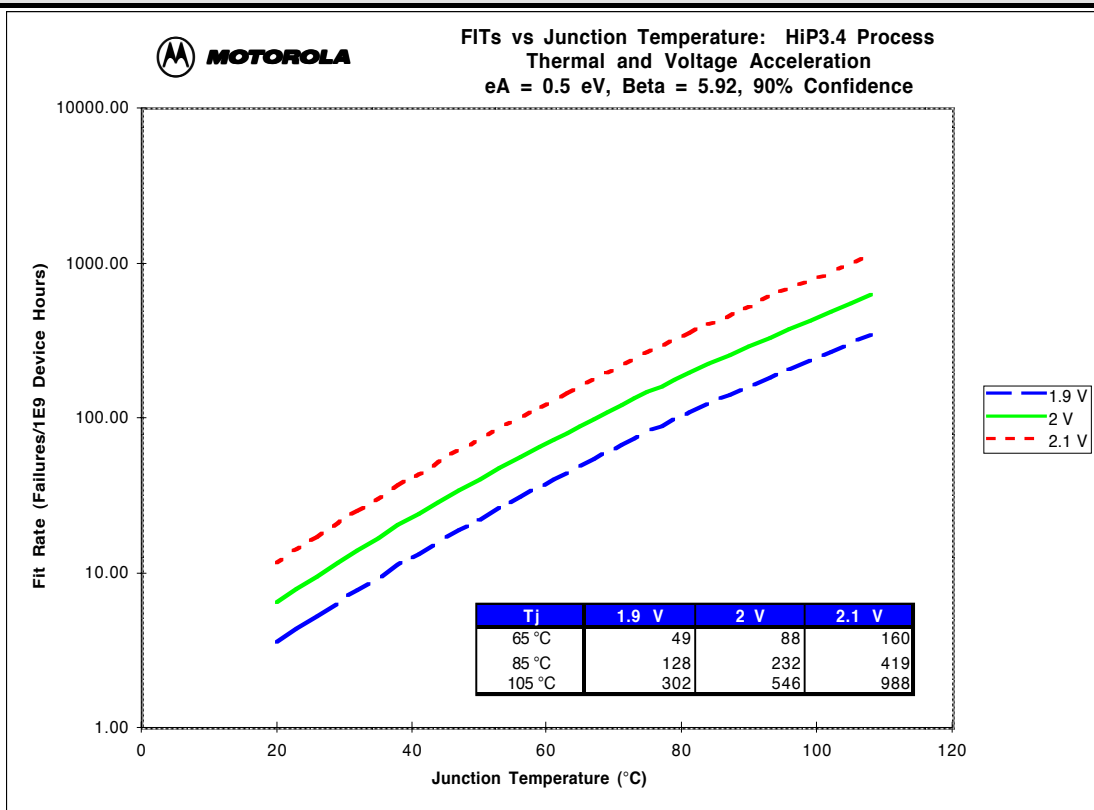
504 hrs: 1 functional not analyzable

1008 hrs: 1 hot temp ABIST fail, 1 open on single pin



# XPC750P Rev 'B' RELIABILITY DATA SUMMARY

## TECHNOLOGY FAILURE RATES - HiP3.4





## XPC750P RELIABILITY DATA SUMMARY

### PACKAGE: 360 Pin, 25 x 25mm CBGA

<b>MOISTURE CZ</b>			
PRECOND MSL1			
0 / 15			
<b>TEMPERATURE CYCLING (-55°C/+125°C)</b>			
PRECOND MSL1	100 CYC	500 CYC	1000 CYC
0 / 201	0 / 201	0 / 201	0 / 66
<b>THERMAL SHOCK (-55°C/+125°C)</b>			
PRECOND MSL1	100 CYC	500 CYC	1000 CYC
0 / 135	0 / 135	0 / 135	0 / 135
<b>AUTOCLAVE (+121°C, 15 PSIG)</b>			
PRECOND MSL1	48 HRS	144 HRS	
0 / 201	0 / 201	0 / 201	
<b>THB (+85°C/85% RH/3.3V)</b>			
PRECOND MSL1	168 HRS	504 HRS	1008 HRS
0 / 45	0 / 45	0 / 45	0 / 45
<b>BAKE (150°C)</b>			
	168 HRS	504 HRS	1008 HRS
	0 / 201	0 / 201	0 / 201
<b>PACKAGE: 1.75 x 2.5" PGA Interposer Module</b>			
<b>TEMPERATURE CYCLING (0°C/+100°C)</b>			
	100 CYC	500 CYC	1000 CYC
	0 / 44	0 / 44	0 / 44