

XPC603E RELIABILITY DATA SUMMARY

TECHNOLOGY: HiP1.3 (0.50 μ)

DYNAMIC LIFETEST (2.35V, 125°C)

168 HRS	504 HRS	1008 HRS	2016 HRS
5 / 5515	4 / 1927	1 / 758	/

Failure Summary:

168 hrs: 1 defect at poly spacer, 3 functional not analyzable, 1 scan not analyzed

504 hrs: 3 functional not analyzable, 1 scan not analyzed

1008 hrs: 1 JTAG not analyzed

ESD (HBM)

1KV	2KV
0 / 9	0 / 9

ESD (MM)

100V	200V
0 / 9	0 / 9

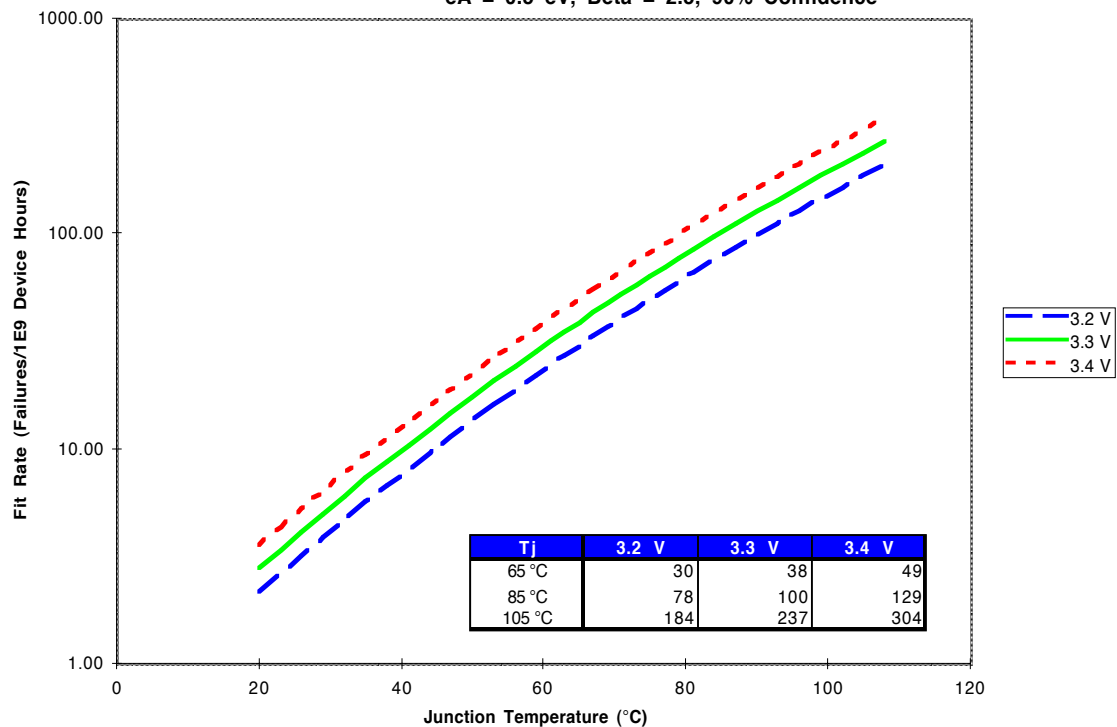
ESD (CDM)

500V	1KV
0 / 9	1 / 5

TECHNOLOGY FAILURE RATES



FITs vs Junction Temperature: MPC603E
Thermal and Voltage Acceleration
eA = 0.5 eV, Beta = 2.5, 90% Confidence



XPC603E RELIABILITY DATA SUMMARY

PACKAGE: 255 Pin 21 x 21mm CBGA

MOISTURE CZ

PRECOND MSL1

0 / 15

TEMPERATURE CYCLING (-55°C/+125°C)

PRECOND MSL1

100 CYC

500 CYC

1000 CYC

0 / 1470

0 / 1470

0 / 1470

0 / 445

TEMPERATURE CYCLING (0°C/+100°C)

PRECOND MSL1

100 CYC

500 CYC

1000 CYC

0 / 816

0 / 816

0 / 695

0 / 165

THERMAL SHOCK (-55°C/+125°C)

PRECOND MSL1

100 CYC

500 CYC

1000 CYC

0 / 1041

1 / 1041

1 / 679

0 / 739

Failure Summary:

100 cyc: 1 functional not analyzable

500 cyc: 1 leakage fail, no analysis performed

AUTOCLAVE (+121°C, 15 PSIG)

PRECOND MSL1

48 HRS

144 HRS

0 / 1313

1 / 1313

0 / 1312

Failure Summary:

48 hrs: 1 ABIST, no analysis performed

THB (+85°C/85% RH/5.0V)

PRECOND MSL1

168 HRS

504 HRS

1008 HRS

0 / 255

0 / 255

0 / 254

0 / 254

BAKE (150°C)

168 HRS

504 HRS

1008 HRS

0 / 201

0 / 201

0 / 201

XPC603E RELIABILITY DATA SUMMARY			
PACKAGE: 240 lead CQFP			
TEMPERATURE CYCLING (-65°C/+150°C)			
	100 CYC	500 CYC	1000 CYC
	0 / 243	0 / 243	0 / 243
THERMAL SHOCK (-65°C/+150°C)			
	100 CYC	500 CYC	1000 CYC
	0 / 230	0 / 230	0 / 230
RESISTANCE TO SOLVENTS			
	0 / 36		
RESISTANCE TO SOLDER HEAT			
	0 / 30		
RESIDUAL GAS ANALYSIS			
	0 / 15		
SOLDERABILITY			
	0 / 15		