

RELIABILITY MONITOR REPORT
FOR

PBGA Package

Dallas Semiconductor

4401 South Beltwood Parkway
Dallas, TX 75244-3292

This Report was prepared by
Dallas Semiconductor Reliability Engineering

Summary:

The data in the tables that follow was generated as the result of an on-going Package Reliability Monitor. The assemblies covered by this package monitor are:

ASSY SITE	PINS	PACKAGE	
ASAT	24	PBGA w/WIRE BOND and CRYST	ASAT 36 PBGA w/WIRE BOND and CRYST
Carsem	36	PBGA w/WIRE BOND and CRYST	Dallas 36 PBGA w/SOIC and CRYSTAL

The calculated failure rate for this assembly is:

The parameters used to calculate this failure rate are as follows:

Cf: 60% Ea: 0.7 B: 0 Tu: 25 °C Vu: 5.5 Volts

The reliability data follows. At the start of this data is a description of the assembly vehicle used to generate this reliability data. The next section is the detailed reliability data for each stress. The reliability data section includes the latest data available. This report covers data between 07/01/2003 and 06/30/2004.

Assembly Information:

Package Type: PBGA 11.43 mm
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 4
 Date Code Range: 0335 to 0335

MOISTURE SENSITIVITY LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
EXTERNAL VISUAL	0335	DS32KHZ	J-STD-020, 6.1a		8	0	
ULTRASOUND			J-STD-020		8	0	
STORAGE LIFE			125C	48 HRS	8		
MOISTURE SOAK			30C/60% R.H.	192 HRS	8		
CONVECTION REFLOW			220C	2 PASS	8	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		8	0	
PRECONDITION U/S			J-STD-020		8	0	
Total:						0	

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
X-RAY	0335	DS32KHZ	MIL-STD-883-2012 : TOP & SIDE VIEW		6	0	
PHYSICAL DIMENSIONS			JESD22-B100		6	0	
MARK PERMANENCY			JESD22-B107		6	0	
BALL SHEAR			JESD22-B117		6	0	
Total:						0	

PRECONDITIONING LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0335	DS32KHZ	125C	48 HRS	324		
MOISTURE SOAK			30C/60% R.H.	192 HRS	324		
CONVECTION REFLOW			220C	2 PASS	324	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		324	0	
PRECONDITION U/S			J-STD-020		324	0	

Total: 0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0335	DS32KHZ	125C	1000 HRS	76	0	
STORAGE LIFE	0335	DS32KHZ	85 C	1000 HRS	76	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0335	DS32KHZ	-40 TO 85C	1000 CYS	76	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		76	0	
PRECONDITION U/S			J-STD-020		76	0	
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	0335	DS32KHZ	85 C/85% R.H.	1000 HRS	76	0	
Total:						0	