

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

Note: Due to the nature of the construction on this assembly, there is no operating life data collected

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 04/01/2005 and 03/31/2006 .

**Assembly Information:**

Package Type: PBGA 450  
 Flammability: UL 94-V0  
 Moisture Sensitivity (JEDEC J-STD20A) Level 4  
 Date Code Range: 0437 to 0437

**MOISTURE SENSITIVITY LEVEL 3**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
ULTRASOUND	0437	DS32KHZ	J-STD-020		8	0	
STORAGE LIFE			125C	48 HRS	8		
MOISTURE SOAK			30C/60% R.H.	192 HRS	8		
CONVECTION REFLOW			220C +5/-0C	2 PASS	8	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		8	0	
PRECONDITION U/S			J-STD-020		8	0	
<b>Total:</b>						<b>0</b>	

**PACKAGE TESTS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
X-RAY	0437	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	
<b>Total:</b>						<b>0</b>	

**PRECONDITIONING LEVEL 3**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0437	DS32KHZ	125C	48 HRS	231		
MOISTURE SOAK			30C/60% R.H.	192 HRS	231		
CONVECTION REFLOW			220C +5/-0C	2 PASS	231	0	
EXTERNAL VISUAL			J-STD-020, 6.1a		231	0	
PRECONDITION U/S			J-STD-020		231	0	
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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STORAGE LIFE	0437	DS32KHZ	125C	1000 HRS	77	0	
				<b>Total:</b>		<b>0</b>	

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**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0437	DS32KHZ	-40 TO 85C	1000 CYS	77	0	
				<b>Total:</b>		<b>0</b>	

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**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	0437	DS32KHZ	85 C/85% R.H.	1000 HRS	77	0	
				<b>Total:</b>		<b>0</b>	