

**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 1/1/04 and 12/31/04 .

Assembly Information:

Package Type: PBGA 11.43 mm
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) Level 4
 Date Code Range: 0408 to 0408

MOISTURE SENSITIVITY LEVEL 3

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
EXTERNAL VISUAL	0408	DS32KHZ	J-STD-020, 6.1a		8	0	
ULTRASOUND			J-STD-020		8	0	
STORAGE LIFE			125C	48 HRS	8	0	
MOISTURE SOAK			30C/60% R.H.	192 HRS	8	0	
CONVECTION REFLOW			220C +5/-0C	2 PASS	8	0	
Total:						0	

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
X-RAY	0408	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	0408	DS32KHZ	125C	48 HRS	231	0	
MOISTURE SOAK			30C/60% R.H.	192 HRS	231	0	
CONVECTION REFLOW			220C +5/-0C	2 PASS	231	0	
Total:						0	