

RELIABILITY MONITOR REPORT
FOR

iButton 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		
Dallas		BRICK	Dallas	Dongle/Fob
Dallas		iButton F30 (RoHS)	Dallas	iButton F30 w/Bump
Dallas		iButton F30 w/Bump (RoHS)	Dallas	iButton F50 (Pb-Free)
Dallas		iButton F50 w/Bump	Dallas	iButton F50nw
Dallas		iButton F50w/IC's	Dallas	iButton R30
Dallas		iButton Retainer	Dallas	iButton Socket
Dallas		Puk Can F50 Insert Mold w/Bump	Dallas	Puk Can F50 Insert Mold w/Bump/
Fastech		Dongle/Fob	Fastech	iButton F30 (RoHS)
Fastech		iButton F30 w/Bump	Fastech	iButton F30 w/Bump (RoHS)
Fastech		iButton F30w/IC's	Fastech	iButton F30w/IC's (RoHS)
Fastech		iButton F50 (Pb-Free)	Fastech	iButton F50 w/Bump
Fastech		iButton F50w/IC's	Fastech	iButton F50w/IC's (Pb-Free)
Fastech		Puk Can F50 Insert Mold w/Bump/	Fastech	Puk Can F50 Insert Mold w/Bump/
Hana		iButton F50 (Pb-Free)	ISPL (ATEC, PI)	Dongle/Fob
ISPL (ATEC, PI)		iButton F50 (Pb-Free)	ISPL (ATEC, PI)	iButton Retainer

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 10766 FITS: 10.6

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

Assembly Information:

Package Type: iButton
 Flammability: UL 94-V0
 Moisture Sensitivity NA
 (JEDEC J-STD20A)
 Date Code Range: 0514 to 0543

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0543	DS1955B2	125C, 3.3 VOLTS	1000 HRS	77	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0543	DS1955B2	85 C	1000 HRS	77	0	
Total:						0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
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TEMP CYCLE	0514	DS1922T	0C TO +125C	2500	CYS	77	0
TEMP CYCLE	0543	DS1955B2	-40 TO 85C	1000	CYS	77	0
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	0543	DS1955B2	60C/90% R.H.	1000	HRS	77	0
Total:							0

Assembly Information:

Package Type: iButton (RoHS)
 Flammability: UL 94-V0
 Moisture Sensitivity (JEDEC J-STD20A) NA
 Date Code Range: 0526 to 0529

MECHANICAL LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MECHANICAL SHOCK	0526	DS1955B0	200G, 1/2 SINE, 6 MS	30	CYS	50	0
VIBRATION, VARIABLE FREQUENCY	0526	DS1955B0	10g or 0.06", 5Hz-2KHz, X Y Z axis	9	HRS	50	0
MECHANICAL SHOCK	0529	DS1955B0	200G, 1/2 SINE, 6 MS	30	CYS	50	0
VIBRATION, VARIABLE FREQUENCY	0529	DS1955B0	10g or 0.06", 5Hz-2KHz, X Y Z axis	9	HRS	50	0
MECHANICAL SHOCK	0529	DS1955B0	200G, 1/2 SINE, 6 MS	30	CYS	50	0
VIBRATION, VARIABLE FREQUENCY	0529	DS1955B0	10g or 0.06", 5Hz-2KHz, X Y Z axis	9	HRS	50	0
Total:							0

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0529	DS1955B0	85 C, 5.25 VOLTS	1000	HRS	95	0
HIGH TEMP OP LIFE	0529	DS1955B0	85 C, 5.25 VOLTS	1000	HRS	48	0
Total:							0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0526	DS1955B0	85 C	1000	HRS	77	0
STORAGE LIFE	0529	DS1955B0	85 C	1000	HRS	77	0
STORAGE LIFE	0529	DS1955B0	85 C	1000	HRS	77	0
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE	0526	DS1955B0	-40 TO 85C	1000	CYS	77	0
TEMP CYCLE	0529	DS1955B0	-40 TO 85C	1000	CYS	77	0

TEMP CYCLE	0529	DS1955B0	-40 TO 85C	1000	CYS	77	0
					Total:		0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK	0526	DS1955B0	60C/90% R.H.	1000	HRS	77	0
MOISTURE SOAK	0529	DS1955B0	60C/90% R.H.	1000	HRS	77	0
MOISTURE SOAK	0529	DS1955B0	60C/90% R.H.	1000	HRS	77	0
					Total:		0

FAILURE RATE: **MTTF (YRS): 10766** **FITS: 10.6**