



5/9/2009

RELIABILITY MONITOR REPORT  
FOR

**TO Package**

**MAXIM Integrated Products**

120 San Gabriel Dr.  
Sunnyvale, CA 94086

This Report was prepared by  
Maxim Reliability Engineering

**Summary:**

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

ASSY SITE	PINS	PACKAGE		
Cirtek	3	TO92	Cirtek	3 TO92 (Pb-Free)
Hana AYUTHAYA	3	PR35 (Pb-Free)		

The calculated failure rate for this assembly is:

**FAILURE RATE: MTTF (YRS): 63687 FITS: 1.8**

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

**Cf: 60% Ea: 0.7 Tu: 25 °C**

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 1/1/2008 and 12/31/2008.

**Assembly Information:**

Package Type: PR35 (Pb-Free)

Date Code Range: 0742 to 0742

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0742	DS2434	125C, 6.4 VOLTS	1000 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
HIGH TEMP OP LIFE	0742	DS2434	125C, 6.4 VOLTS	1000 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
HIGH TEMP OP LIFE	0742	DS2434	125C, 6.4 VOLTS	1000 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0742	DS2434	150C	1000 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
STORAGE LIFE	0742	DS2434	150C	1000 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
STORAGE LIFE	0742	DS2434	150C	1000 HRS	77	0	
<b>Total:</b>						<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	DS2434	-55C TO 125C	1000 CYS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	

TEMP CYCLE, 5' RAMP, 10' DWELL	0742	DS2434	-55C TO 125C	1000 CYS	77	0
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0
TEMP CYCLE, 5' RAMP, 10' DWELL	0742	DS2434	-55C TO 125C	1000 CYS	77	0
<b>Total:</b>						<b>0</b>

### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0742	DS2434	130C, 85%R.H.,5.5V	96 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
HAST	0742	DS2434	130C, 85%R.H.,5.5V	96 HRS	77	0	
VISUAL INSPECTION	0742	DS2434	WHISKERS < 50uM		77	0	
HAST	0742	DS2434	130C, 85%R.H.,5.5V	96 HRS	77	0	
<b>Total:</b>						<b>0</b>	

### Assembly Information:

Package Type: TO92  
Date Code Range: 0752 to 0752

### OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0752	DS2401	125C, 6.0 VOLTS	1000 HRS	80	0	
<b>Total:</b>						<b>0</b>	

### STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0752	DS2401	150C	1000 HRS	77	0	
<b>Total:</b>						<b>0</b>	

### TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0752	DS2401	-55C TO 125C	1000 CYS	77	0	
<b>Total:</b>						<b>0</b>	

### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0752	DS2401	130C, 85%R.H.,5.5V	96 HRS	77	0	
<b>Total:</b>						<b>0</b>	

### Assembly Information:

Package Type: TO92 (Pb-Free)  
Date Code Range: 0832 to 0838

### DATA RETENTION

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE	0832	DS2505	150C	1000 HRS	77	0	

STORAGE LIFE	0837	DS2505	150C	1000 HRS	77	0
STORAGE LIFE	0838	DS2505	150C	1000 HRS	77	0
<b>Total:</b>						<b>0</b>

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE	0832	DS2505	125C, 6.0 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0837	DS2505	125C, 6.0 VOLTS	1000 HRS	77	0	
HIGH TEMP OP LIFE	0838	DS2505	125C, 6.0 VOLTS	1000 HRS	77	0	
<b>Total:</b>						<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL	0832	DS2505	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0837	DS2505	-55C TO 125C	1000 CYS	77	0	
TEMP CYCLE, 5' RAMP, 10' DWELL	0838	DS2505	-55C TO 125C	1000 CYS	77	0	
<b>Total:</b>						<b>0</b>	

**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HAST	0832	DS2505	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0837	DS2505	130C, 85%R.H.,5.5V	96 HRS	77	0	
HAST	0838	DS2505	130C, 85%R.H.,5.5V	96 HRS	77	0	
<b>Total:</b>						<b>0</b>	

**FAILURE RATE: MTTF (YRS): 63687 FITS: 1.8**