

10/14/2016



**RELIABILITY MONITOR REPORT  
FOR**

**Hybrid**

**MAXIM INTEGRATED**

**160 RIO ROBLES  
SAN JOSE, CA 95134**

**This Report was prepared by  
MAXIM INTEGRATED Reliability Engineering**

## Summary:

The data in the tables that follow was generated as the result of an on-going Process Reliability Monitor. The specific products in this process monitor are:

90-W1210+XF6	MAX11284ETL+	MAX14001AAP+	MAX14813EWX	MAX14859GWE
MAX14930FAEE	MAX14932EAA	MAX24101ELU+	MAX8686ETL+	MAX86902EFD+

The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 193725 QUANTITY: 1109 FAILS: 0 FITS: 0.6**

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

**Cf: 60% Ea: 0.7 Tu: 25 °C**

The reliability data follows and in this section is the detailed reliability data by stress. The reliability data section includes the latest data available. This report covers data between 7/1/2016 and 9/30/2016 .

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## Process Information:

Process Description: Hybrid

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### OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1514	MAX86902EFD+	135°C	1000 HRS	78	0	BAZQ1AIA
HIGH TEMP OP LIFE	1514	MAX86902EFD+	135°C	1000 HRS	77	0	BAZQ1AG
HIGH TEMP OP LIFE	1514	MAX86902EFD+	135°C	1000 HRS	80	0	BAZQ1AHA
HIGH TEMP OP LIFE	1537	MAX14932EAAP+	135°C	1000 HRS	77	0	NAWU4AB
HIGH TEMP OP LIFE	1538	MAX14932EAAP+	135°C	1000 HRS	77	0	NAWU4AC
HIGH TEMP OP LIFE	1539	MAX14932EAAP+	135°C	1000 HRS	77	0	NAWU4AD
HIGH TEMP OP LIFE	1548	MAX24101ELU+	135°C	192 HRS	48	0	KBK0AAAQ
HIGH TEMP OP LIFE	1551	MAX11284ETL+	135°C	1000 HRS	80	0	BBCT3AK
HIGH TEMP OP LIFE	1601	MAX11284ETL+	135°C	1000 HRS	80	0	BBCT3AL
HIGH TEMP OP LIFE	1606	MAX14001AAP+	135°C	500 HRS	79	0	NBJH7ACD
HIGH TEMP OP LIFE	1606	MAX14001AAP+	135°C	1000 HRS	78	0	NBJH7ACD#
HIGH TEMP OP LIFE	1609	MAX8686ETL+	135°C	1000 HRS	80	0	BDJTBVS
HIGH TEMP OP LIFE	1614	MAX14813EWX+	135°C	192 HRS	39	0	JBZ33005C#
HIGH TEMP OP LIFE	1618	MAX14930FAEE+	135°C	1000 HRS	80	0	NBAN8AM
HIGH TEMP OP LIFE	1618	MAX14930FAEE+	135°C	1000 HRS	79	0	NBAN8AN
<b>Total:</b>						<b>0</b>	

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### STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1537	MAX14932EAAP+	150°C	1000 HRS	77	0	NAWU4AB
STORAGE LIFE	1538	MAX14932EAAP+	150°C	1000 HRS	77	0	NAWU4AC

STORAGE LIFE	1539	MAX14932EAAP+	150°C	1000	HRS	77	0	NAWU4AD
STORAGE LIFE	1604	MAX11284ETL+	150°C	1000	HRS	80	0	BBCT3AL
STORAGE LIFE	1606	MAX14001AAP+	150°C	500	HRS	80	0	NBHJ7ACD#
STORAGE LIFE	1606	MAX14001AAP+	150°C	1000	HRS	80	0	NBHJ7ACD#
STORAGE LIFE	1618	MAX14930FAEE+	150°C	1000	HRS	77	0	NBAN8AL
STORAGE LIFE	1618	MAX14930FAEE+	150°C	1000	HRS	79	0	NBAN8AM
STORAGE LIFE	1618	MAX14930FAEE+	150°C	1000	HRS	80	0	NBAN8AN
STORAGE LIFE	1619	90-W1210+XF6	150°C	500	HRS	80	0	ZK168746BB-QUAL
STORAGE LIFE	1619	90-W1210+XF6	150°C	500	HRS	80	0	ZK168746BC-QUAL
STORAGE LIFE	1619	90-W1210+XF6	150°C	500	HRS	80	0	ZK168746BD-QUAL
<b>Total:</b>							<b>0</b>	

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### TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1437	MAX14859GWE+	-65C TO +150C (Condition C)	1000	CYS	80	0	BAUB8AE1
TEMP CYCLE, 5' RAMP, 10' DWELL	1537	MAX14932EAAP+	-65C TO +150C (Condition C)	1000	CYS	77	0	NAWU4AB
TEMP CYCLE, 5' RAMP, 10' DWELL	1538	MAX14932EAAP+	-65C TO +150C (Condition C)	1000	CYS	77	0	NAWU4AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1539	MAX14932EAAP+	-65C TO +150C (Condition C)	1000	CYS	77	0	NAWU4AD
TEMP CYCLE, 5' RAMP, 10' DWELL	1606	MAX14001AAP+	-65C TO +150C (Condition C)	1000	CYS	80	0	NBHJ7ACD#
TEMP CYCLE, 5' RAMP, 10' DWELL	1618	MAX14930FAEE+	-65C TO +150C (Condition C)	1000	CYS	100	0	NBAN8AL
TEMP CYCLE, 5' RAMP, 10' DWELL	1618	MAX14930FAEE+	-65C TO +150C (Condition C)	1000	CYS	99	0	NBAN8AM
TEMP CYCLE, 5' RAMP, 10' DWELL	1618	MAX14930FAEE+	-65C TO +150C (Condition C)	1000	CYS	100	0	NBAN8AN
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	90-W1210+XF6	-65C TO +150C (Condition C)	1000	CYS	100	0	ZK168746BB-QUAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	90-W1210+XF6	-65C TO +150C (Condition C)	1000	CYS	100	0	ZK168746BC-QUAL
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	90-W1210+XF6	-65C TO +150C (Condition C)	1000	CYS	100	0	ZK168746BD-QUAL
<b>Total:</b>							<b>0</b>	

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**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1537	MAX14932EAAP+	130C, 85% R.H.	96	HRS	30	0	NAWU4AD
BIASED MOISTURE	1538	MAX14932EAAP+	130C, 85% R.H.	96	HRS	30	0	NAWU4AB
BIASED MOISTURE	1618	MAX14930FAEE+	130C, 85% R.H.	96	HRS	80	0	NBAN8AL
BIASED MOISTURE	1618	MAX14930FAEE+	130C, 85% R.H.	96	HRS	80	0	NBAN8AM
BIASED MOISTURE	1618	MAX14930FAEE+	130C, 85% R.H.	96	HRS	80	0	NBAN8AN
BIASED MOISTURE	1619	90-W1210+XF6	130C, 85% R.H.	96	HRS	33	0	ZK168746BD-QUAL
<b>Total:</b>						<b>0</b>		

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**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1537	MAX14932EAAP+	130C, 85% R.H.	96	HRS	77	0	NAWU4AB
MOISTURE SOAK	1538	MAX14932EAAP+	130C, 85% R.H.	96	HRS	77	0	NAWU4AC
MOISTURE SOAK	1539	MAX14932EAAP+	130C, 85% R.H.	96	HRS	77	0	NAWU4AD
MOISTURE SOAK	1618	MAX14930FAEE+	130C, 85% R.H.	96	HRS	80	0	NBAN8AL
MOISTURE SOAK	1618	MAX14930FAEE+	130C, 85% R.H.	96	HRS	80	0	NBAN8AM
MOISTURE SOAK	1618	MAX14930FAEE+	130C, 85% R.H.	96	HRS	80	0	NBAN8AN
<b>Total:</b>						<b>0</b>		

**FAILURE RATE: MTTF (YRS): 193725 QUANTITY: 1109 FAILS: 0 FITS: 0.6**