

1/17/2017



**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+	MAX12931BAS	MAX14001AAP+	MAX14930FAEE
MAX14932EAA	MAX24025IMP+	MAX24101ELU+	MAX8686ETL+	

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 149711 QUANTITY: 915 FAILS: 0 FITS: 0.8

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 10/1/2016 and 12/31/2016.

Process Information:

Process Description: Hybrid

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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	KBEO0AAAQ
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	1618	MAX14930FAEE+	135°C	1000 HRS	80	0	NBAN8AM
HIGH TEMP OP LIFE	1618	MAX14930FAEE+	135°C	1000 HRS	79	0	NBAN8AN
HIGH TEMP OP LIFE	1636	MAX12931BASA+	135°C	192 HRS	80	0	BBMW4ABF
Total:						0	

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	NBJH7ACD#
STORAGE LIFE	1606	MAX14001AAP+	150°C	1000 HRS	80	0	NBJH7ACD#

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
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
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	NBJH7ACD#
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	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	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	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
Total:							0	

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
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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
MOISTURE SOAK	1622	MAX24025IMP+	130C, 85% R.H.	96	HRS	50	0 DBVN7BKD#
Total:							0

FAILURE RATE: MTTF (YRS): 149711 QUANTITY: 915 FAILS: 0 FITS: 0.8