

4/17/2013



**RELIABILITY MONITOR REPORT  
FOR**

**X3 0.4 $\mu$ m Silicon Gate CMOS (S4)**

**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:

MAX4740EVE+	MAX5971BETI+	MAX9635EDT+	MAX9635EDT+	MAX9924UAUB
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The calculated failure rate for devices using this process is:

**FAILURE RATE: MTTF (YRS): 47988      QUANTITY: 284      FAILS: 0      FITS: 2.4**

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 4/1/2012 and 3/31/2013 .

**Process Information:**

Process Description: X3 0.4µm Silicon Gate CMOS (S4)

**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1029	MAX5971BETI+	135°C	192 HRS	45	0	SYZYCQ002CQ
HIGH TEMP OP LIFE	1210	MAX9635EDT+T	135°C	1000 HRS	80	0	SF0VAA018Q1
HIGH TEMP OP LIFE	1210	MAX9635EDT+	135°C	1000 HRS	80	0	SF0VAA018Q2
HIGH TEMP OP LIFE	1210	MAX9635EDT+T	135°C	1000 HRS	79	0	SF0VAA018Q3
<b>Total:</b>						<b>0</b>	

**STORAGE LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1210	MAX9635EDT+T	150°C	1000 HRS	80	0	SF0VAA018Q1
STORAGE LIFE	1210	MAX9635EDT+T	150°C	1000 HRS	80	0	SF0VAA018Q2
STORAGE LIFE	1210	MAX9635EDT+T	150°C	1000 HRS	80	0	SF0VAA018Q3
<b>Total:</b>						<b>0</b>	

**TEMPERATURE CYCLE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
TEMP CYCLE, 15' RAMP, 15' DWELL	1210	MAX9635EDT+T	-40C TO +125C	1000 CYS	80	0	SF0VAA018Q1
TEMP CYCLE, 15' RAMP, 15' DWELL	1210	MAX9635EDT+T	-40C TO +125C	1000 CYS	80	0	SF0VAA018Q2
TEMP CYCLE, 15' RAMP, 15' DWELL	1210	MAX9635EDT+T	-40C TO +125C	1000 CYS	80	0	SF0VAA018Q3
<b>Total:</b>						<b>0</b>	

**TEMPERATURE HUMIDITY BIAS**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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BIASED MOISTURE	1228	MAX9924UAUB/V+	130C, 85% R.H.	96	HRS	80	0	SIDZCQ003EC
BIASED MOISTURE	1228	MAX9924UAUB/V+	130C, 85% R.H.	96	HRS	80	0	SIDZCQ003ED
BIASED MOISTURE	1228	MAX9924UAUB/V+	130C, 85% R.H.	96	HRS	80	0	SIDZCQ003EF
<b>Total:</b>							<b>0</b>	

**UNBIASED MOISTURE RESISTANCE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1210	MAX9635EDT+T	85 C/85% R.H.	1000	HRS	44	0	SF0VAA018Q2
MOISTURE SOAK	1210	MAX9635EDT+T	85 C/85% R.H.	1000	HRS	80	1	SF0VAA018Q3
MOISTURE SOAK	1250	MAX4740EVE+	130C, 85% R.H.	100	HRS	80	0	SQ60BQ003E
<b>Total:</b>							<b>1</b>	

**FAILURE RATE:      MTTF (YRS): 47988      QUANTITY: 284      FAILS: 0      FITS: 2.4**