

8/1/2019



**RELIABILITY MONITOR REPORT  
FOR**

**San Antonio 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:

MAX16932ATIR/ MAX20021ATIA/	MAX16953AEE/ MAX4906FELB+	MAX16984RATI/ MAX6070BAUT	MAX16984SATI/	MAX17823BGC
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The calculated failure rate for devices using this process is:

**FAILURE RATE:    MTTF (YRS): 88623    QUANTITY: 651    FAILS: 0    FITS: 1.3**

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 4/1/2019 and 8/1/2019 .

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**Process Information:**

Process Description:            San Antonio S4

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**OPERATING LIFE**

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1701	MAX4906FELB+	125°C	192 HRS	80	0	TQKACA017P#
HIGH TEMP OP LIFE	1701	MAX4906FELB+	125°C	1000 HRS	80	0	TQKACA017P#
HIGH TEMP OP LIFE	1811	MAX16953AEE/V+	125°C	500 HRS	44	0	TAPT6A083HA
HIGH TEMP OP LIFE	1811	MAX16953AEE/V+	125°C	500 HRS	44	0	TAPT6A083HA
HIGH TEMP OP LIFE	1811	MAX16953AEE/V+	125°C	1000 HRS	44	0	TAPT6A083HB
HIGH TEMP OP LIFE	1811	MAX16953AEE/V+	125°C	500 HRS	44	0	TAPT6A083HB
HIGH TEMP OP LIFE	1821	MAX16984RATI/V+	125°C	1000 HRS	78	0	TAKS1A478A
HIGH TEMP OP LIFE	1821	MAX16984RATI/V+	125°C	1000 HRS	80	0	TAKS1A477CC
HIGH TEMP OP LIFE	1835	MAX16984RATI/V+	125°C	1000 HRS	79	0	TAKS1Z502A
HIGH TEMP OP LIFE	1908	MAX16984RATI/V+	125°C	192 HRS	78	0	TAKS1A569C
<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	1701	MAX4906FELB+	150°C	1000 HRS	79	0	TQKACA017P#
STORAGE LIFE	1811	MAX16953AEE/V+	150°C	1000 HRS	80	0	TAPT6A083HA
STORAGE LIFE	1811	MAX16953AEE/V+	150°C	1000 HRS	80	0	TAPT6A083HB
STORAGE LIFE	1821	MAX16984RATI/V+	150°C	1000 HRS	80	0	TAKS1A477CC
STORAGE LIFE	1829	MAX16932ATIR/V+	150°C	1000 HRS	73	0	TAKQ9A269A-2
STORAGE LIFE	1829	MAX16932ATIR/V+	150°C	1000 HRS	77	0	TAKQ9A269A-3
STORAGE LIFE	1829	MAX16932ATIR/V+	150°C	1000 HRS	71	0	TAKQ9A269A-4

STORAGE LIFE	1829	MAX16932ATIR/V+	150°C	1000	HRS	73	0	TAKQ9A269A-5
STORAGE LIFE	1829	MAX16932ATIR/V+	150°C	1000	HRS	70	0	TAKQ9A269A-6
STORAGE LIFE	1830	MAX20021ATIA/V+	150°C	1000	HRS	80	0	TBQX8A114DX
STORAGE LIFE	1843	MAX16932ATIR/V+	150°C	2000	HRS	80	0	TAKQ9A269A-1
STORAGE LIFE	1843	MAX16932ATIR/V+	150°C	2000	HRS	80	0	TAKQ9A269A-6
STORAGE LIFE	1910	MAX17823BGCB/V+CV	150°C	1000	CYS	79	0	TASH6A833AA
<b>Total:</b>							<b>0</b>	

### TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX6070BAUT12/V+T	-65C TO +150C (Condition C)	1000	CYS	80	0	TO0ZBA076GA
TEMP CYCLE, 5' RAMP, 10' DWELL	1811	MAX16953AEE/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	TAPT6A083HA
TEMP CYCLE, 5' RAMP, 10' DWELL	1811	MAX16953AEE/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	TAPT6A083HB
TEMP CYCLE, 5' RAMP, 10' DWELL	1821	MAX16984RATI/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	TAKS1A478A
TEMP CYCLE, 5' RAMP, 10' DWELL	1821	MAX16984RATI/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	TAKS1A477CC
TEMP CYCLE, 5' RAMP, 10' DWELL	1829	MAX16932ATIR/V+	-65C TO +150C (Condition C)	1000	CYS	79	0	TAKQ9A269A-4
TEMP CYCLE, 5' RAMP, 10' DWELL	1829	MAX16932ATIR/V+	-65C TO +150C (Condition C)	1000	CYS	79	0	TAKQ9A269A-5
TEMP CYCLE, 5' RAMP, 10' DWELL	1829	MAX16932ATIR/V+	-65C TO +150C (Condition C)	1000	CYS	77	0	TAKQ9A269A-6
TEMP CYCLE, 5' RAMP, 10' DWELL	1830	MAX20021ATIA/V+	-65C TO +150C (Condition C)	1000	CYS	78	0	TBQX8A114DX
TEMP CYCLE, 5' RAMP, 10' DWELL	1910	MAX17823BGCB/V+CV	-65C TO +150C (Condition C)	1000	CYS	80	0	TASH6A833AA
<b>Total:</b>							<b>0</b>	

### TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1701	MAX4906FELB+	130C, 85% R.H.	96	HRS	47	0	TQKACA017P#
BIASED MOISTURE	1701	MAX4906FELB+	130C, 85% R.H.	96	HRS	31	0	TQKACA017P#
BIASED MOISTURE	1827	MAX4906FELB+	130C, 85% R.H.	96	HRS	16	0	TQKACA023AA
BIASED MOISTURE	1827	MAX4906FELB+	130C, 85% R.H.	96	HRS	48	0	TQKACA023AA
BIASED MOISTURE	1827	MAX4906FELB+	130C, 85% R.H.	96	HRS	16	0	TQKACA023AA

BIASED MOISTURE	1827	MAX4906FELB+	130C, 85% R.H. 96	HRS	32	0	TQKACA023C#
BIASED MOISTURE	1827	MAX4906FELB+	130C, 85% R.H. 96	HRS	48	0	TQKACA023C#
BIASED MOISTURE	1829	MAX16932ATIR/V+	130C, 85% R.H. 96	HRS	59	0	TAKQ9A269A-3
BIASED MOISTURE	1829	MAX16932ATIR/V+	130C, 85% R.H. 96	HRS	58	0	TAKQ9A269A-6
BIASED MOISTURE	1829	MAX16932ATIR/V+	130C, 85% R.H. 96	HRS	58	0	TAKQ9A269A-6
BIASED MOISTURE	1830	MAX20021ATIA/V+	130C, 85% R.H. 96	HRS	76	0	TBQX8A114DX
BIASED MOISTURE	1908	MAX16984RATI/V+	130C, 85% R.H. 96	HRS	24	0	TAKS1A569C
BIASED MOISTURE	1910	MAX17823BGCB/V+CV	130C, 85% R.H. 96	CYS	80	0	TASH6A833AA
<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	1701	MAX4906FELB+	130C, 85% R.H. 96	HRS	80	0	TQKACA017P#
MOISTURE SOAK	1821	MAX16984RATI/V+	130C, 85% R.H. 96	HRS	80	0	TAKS1A477CC
MOISTURE SOAK	1827	MAX4906FELB+	130C, 85% R.H. 96	HRS	80	0	TQKACA023AA
MOISTURE SOAK	1827	MAX4906FELB+	130C, 85% R.H. 96	HRS	80	0	TQKACA023C#
<b>Total:</b>						<b>0</b>	

**FAILURE RATE: MTTF (YRS): 88623      QUANTITY: 651      FAILS: 0      FITS: 1.3**