

1/24/2019



**RELIABILITY MONITOR REPORT
FOR**

San Antonio S18

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:

MAX15053BEW	MAX15053EWL	MAX16936RATE	MAX16956AUB	MAX16956AUB
MAX17260SETD	MAX17262REW	MAX20021ATIA	MAX20026SATI	MAX20030BAT
MAX25615AUT/ MAX77796EWI+	MAX40100ANT+ MAX8986EWG+	MAX44284HAN	MAX44284HAN	MAX77650CEW

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 149034 QUANTITY: 1003 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 10/1/2018 and 12/31/2018.

Process Information:

Process Description: San Antonio S18

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1734	MAX15053BEWL+G7	135°C	1000 HRS	80	0	TBDO2A039A#
HIGH TEMP OP LIFE	1739	MAX20030BATMA/V+	125°C	1000 HRS	50	0	TBSH7A016EA
HIGH TEMP OP LIFE	1739	MAX16956AUBA/V+	135°C	1000 HRS	78	0	TAQJ2A075CA
HIGH TEMP OP LIFE	1740	MAX40100ANT+	135°C	1000 HRS	79	0	TBHH4Q003AC
HIGH TEMP OP LIFE	1741	MAX40100ANT+	135°C	1000 HRS	80	0	TBHH4Q001E#
HIGH TEMP OP LIFE	1746	MAX44284HANT+	135°C	1000 HRS	80	0	TBEO9A044DC
HIGH TEMP OP LIFE	1807	MAX44284HANT+TG7	125°C	1000 HRS	80	0	TBEO9A057AB
HIGH TEMP OP LIFE	1808	MAX16956AUBC/V+	135°C	1000 HRS	77	0	TAQJ2A111EA
HIGH TEMP OP LIFE	1808	MAX17260SETD+	135°C	192 HRS	80	0	TBUQ7Q001NQ
HIGH TEMP OP LIFE	1810	MAX44284HANT+TG7	135°C	500 HRS	80	0	TBEO9A053AC
HIGH TEMP OP LIFE	1824	MAX20021ATIA/V+	125°C	1000 HRS	79	0	TAKR5A125AX
HIGH TEMP OP LIFE	1830	MAX25615AUT/V+T	125°C	192 HRS	80	0	TCTJ3Q001FB
HIGH TEMP OP LIFE	1842	MAX20026SATIE/V+	125°C	192 HRS	80	0	TCUN8A007EQ
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1652	MAX77650CEWV+T	150°C	1000 HRS	79	0	TBOZ9A005JA
STORAGE LIFE	1734	MAX15053BEWL+G7	150°C	1000 HRS	80	0	TBDO2A039A#
STORAGE LIFE	1738	MAX8986EWG+T	150°C	1000 HRS	80	0	TAEZ0A143KA

STORAGE LIFE	1738	MAX8986EWG+T	150°C	1000	HRS	77	0	TAEZ0A144L
STORAGE LIFE	1738	MAX8986EWG+T	150°C	1000	HRS	80	0	TAEZ0A144L
STORAGE LIFE	1739	MAX16956AUBA/V+	150°C	1000	HRS	80	0	TAQJ2A075CA
STORAGE LIFE	1740	MAX40100ANT+	150°C	1000	HRS	80	0	TBHH4Q003AC
STORAGE LIFE	1741	MAX40100ANT+	150°C	1000	HRS	80	0	TBHH4Q001E#
STORAGE LIFE	1746	MAX44284HANT+	150°C	1000	HRS	80	0	TBEO9A044DC
STORAGE LIFE	1807	MAX44284HANT+TG7	150°C	500	HRS	80	0	TBEO9A057AB
STORAGE LIFE	1808	MAX16956AUBC/V+	150°C	1000	HRS	80	0	TAQJ2A111EA
STORAGE LIFE	1810	MAX44284HANT+TG7	150°C	1000	HRS	80	0	TBEO9A053AC
STORAGE LIFE	1820	MAX16936RATEA/V+	150°C	1000	HRS	80	0	TAQT1A060CA
STORAGE LIFE	1824	MAX20021ATIA/V+	150°C	500	HRS	80	0	TAKR5A125AX
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE	TEST	CONDITION	READPOINT	QUANTITY	FAILS	LOT	
	CODE	VEHICLE					NO.	
TEMP CYCLE, 15' RAMP, 15' DWELL	1707	MAX77796EWI+T	-40C TO +125C (Condition G)	1000	CYS	40	0	TBIN0A007A
TEMP CYCLE, 15' RAMP, 15' DWELL	1707	MAX77796EWI+T	-40C TO +125C (Condition G)	1000	CYS	35	0	TBIN0A007A
TEMP CYCLE, 15' RAMP, 15' DWELL	1710	MAX77796EWI+T	-40C TO +125C (Condition G)	250	CYS	40	0	TBIN0A007D
TEMP CYCLE, 15' RAMP, 15' DWELL	1710	MAX77796EWI+T	-40C TO +125C (Condition G)	1000	CYS	38	0	TBIN0A007D#
TEMP CYCLE, 5' RAMP, 10' DWELL	1710	MAX77796EWI+T	-65C TO +150C (Condition C)	1000	CYS	50	0	TBIN0A007D
TEMP CYCLE, 15' RAMP, 15' DWELL	1717	MAX15053EWL+T	-40C TO +125C (Condition G)	850	CYS	80	0	TBDO2A031A#
TEMP CYCLE, 15' RAMP, 15' DWELL	1726	MAX40100ANT+	-40C TO +125C (Condition G)	500	CYS	80	0	TBHH4Q002A#
TEMP CYCLE, 15' RAMP, 15' DWELL	1734	MAX17262REWL+	-40C TO +125C (Condition G)	1000	CYS	77	0	TBSW8Q001F#
TEMP CYCLE, 15' RAMP, 15' DWELL	1734	MAX15053BEWL+G7	-40C TO +125C (Condition G)	850	CYS	80	0	TBDO2A039AC
TEMP CYCLE, 15' RAMP, 15' DWELL	1734	MAX15053BEWL+G7	-40C TO +125C (Condition G)	500	CYS	80	0	TBDO2A039A#
TEMP CYCLE, 15' RAMP, 15' DWELL	1738	MAX8986EWG+T	-40C TO +125C (Condition G)	1000	CYS	80	0	TAEZ0A143KA

TEMP CYCLE, 15' RAMP, 15' DWELL	1738	MAX8986EWG+T	-40C TO +125C (Condition G)	CYS	78	0	TAEZ0A144LB
TEMP CYCLE, 15' RAMP, 15' DWELL	1738	MAX8986EWG+T	-40C TO +125C (Condition G)	1000 CYS	80	0	TAEZ0A144LB
TEMP CYCLE, 5' RAMP, 10' DWELL	1739	MAX16956AUBA/V+	-65C TO +150C (Condition C)	1000 CYS	78	0	TAQJ2A075CA
TEMP CYCLE, 15' RAMP, 15' DWELL	1740	MAX40100ANT+	-40C TO +125C (Condition G)	500 CYS	80	0	TBHH4Q003AC
TEMP CYCLE, 15' RAMP, 15' DWELL	1741	MAX40100ANT+	-40C TO +125C (Condition G)	500 CYS	80	0	TBHH4Q001E#
TEMP CYCLE, 15' RAMP, 15' DWELL	1746	MAX44284HANT+	-40C TO +125C (Condition G)	1000 CYS	80	0	TBEO9A044DC
TEMP CYCLE, 5' RAMP, 10' DWELL	1808	MAX16956AUBC/V+	-65C TO +150C (Condition C)	1000 CYS	80	0	TAQJ2A111EA
TEMP CYCLE, 15' RAMP, 15' DWELL	1810	MAX44284HANT+TG7	-40C TO +125C (Condition G)	1000 CYS	80	0	TBEO9A053AC
TEMP CYCLE, 5' RAMP, 10' DWELL	1820	MAX16936RATEA/V+	-65C TO +150C (Condition C)	1000 CYS	80	0	TAQT1A060CA
TEMP CYCLE, 5' RAMP, 10' DWELL	1821	MAX44284HANT+TG7	-65C TO +150C (Condition C)	100 CYS	80	0	TBEO9A061BA
TEMP CYCLE, 5' RAMP, 10' DWELL	1824	MAX20021ATIA/V+	-65C TO +150C (Condition C)	1000 CYS	80	0	TAKR5A125AX
TEMP CYCLE, 15' RAMP, 15' DWELL	1840	MAX44284HANT+TG7	-40C TO +125C (Condition G)	100 CYS	80	0	TBEO9A103AM
Total:						0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
BIASED MOISTURE	1652	MAX77650CEWV+T	85 C/85% R.H.	96 HRS	12	0	TBOZ9A005JA
BIASED MOISTURE	1652	MAX77650CEWV+T	85 C/85% R.H.	96 HRS	60	0	TBOZ9A005JA
BIASED MOISTURE	1720	MAX77650CEWV+T	85 C/85% R.H.	96 HRS	8	0	TBOZ9A005JA
BIASED MOISTURE	1726	MAX40100ANT+	85 C/85% R.H.	96 HRS	80	0	TBHH4Q002A#
BIASED MOISTURE	1734	MAX17262REWL+	85 C/85% R.H.	96 HRS	77	0	TBSW8Q001F#
BIASED MOISTURE	1734	MAX15053BEWL+G7	85 C/85% R.H.	96 HRS	80	0	TBDO2A039A
BIASED MOISTURE	1738	MAX8986EWG+T	110C, 85% R.H.	264 HRS	80	0	TAEZ0A143KA
BIASED MOISTURE	1739	MAX16956AUBA/V+	85 C/85% R.H.	96 HRS	80	0	TAQJ2A075CA
BIASED MOISTURE	1740	MAX40100ANT+	85 C/85% R.H.	96 HRS	80	0	TBHH4Q003AC
BIASED MOISTURE	1748	MAX40100ANT+	85 C/85% R.H.	96 HRS	80	0	TBHH4Q001E#

BIASED MOISTURE	1808	MAX16956AUBC/V+	130C, 85% R.H. 96	HRS	77	0	TAQJ2A111EA
BIASED MOISTURE	1824	MAX20021ATIA/V+	130C, 85% R.H. 96	HRS	80	0	TAKR5A125AX
Total:						0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1734	MAX15053BEWL+G7	130C, 85% R.H. 96	HRS	80	0	TBDO2A039A
MOISTURE SOAK	1738	MAX8986EWG+T	130C, 85% R.H. 96	HRS	80	0	TAEZ0A143KA
MOISTURE SOAK	1740	MAX40100ANT+	130C, 85% R.H. 96	HRS	80	0	TBHH4Q003AC
MOISTURE SOAK	1746	MAX44284HANT+	130C, 85% R.H. 96	HRS	80	0	TBEO9A044DC
MOISTURE SOAK	1810	MAX44284HANT+TG7	130C, 85% R.H. 96	HRS	80	0	TBEO9A053AC
MOISTURE SOAK	1840	MAX44284HANT+TG7	130C, 85% R.H. 96	HRS	80	0	TBEO9A103AM
Total:						0	
FAILURE RATE:	MTTF (YRS): 149034		QUANTITY: 1003	FAILS: 0	FITS: 0.8		