

4/23/2015



**RELIABILITY MONITOR REPORT
FOR**

San Antonio 0.18 μ m Silicon Gate (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:

MAX14562ETA+	MAX14778ETP+	MAX14921ECS+	MAX16936RAT	MAX16936RAT
MAX16956AUB	MAX16990ATC	MAX17491GTA+	MAX34407	MAX98400AET
MAX98400ETX+				

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 106332 QUANTITY: 878 FAILS: 0 FITS: 1.1

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 4/1/2014 and 3/31/2015 .

Process Information:

Process Description: San Antonio 0.18µm Silicon Gate (S18)

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1403	MAX98400ETX+	135°C	500 HRS	80	0	TD7ZF2029A
HIGH TEMP OP LIFE	1415	MAX16936RATEA+CA	135°C	1000 HRS	80	0	TAQT1Q001AA
HIGH TEMP OP LIFE	1419	MAX98400AETX+	135°C	1000 HRS	80	0	TD7ZF2032AA
HIGH TEMP OP LIFE	1424	MAX16990ATCD+	135°C	1000 HRS	80	0	TAQJ4Q001F#
HIGH TEMP OP LIFE	1425	MAX16936RATE+CA	135°C	1000 HRS	79	0	TAQT1Q003BA
HIGH TEMP OP LIFE	1426	MAX14778ETP+	135°C	1000 HRS	80	0	TAMB8Z001B
HIGH TEMP OP LIFE	1426	MAX16936RATEA+CA	135°C	1000 HRS	79	0	TAQT1Q001BA
HIGH TEMP OP LIFE	1427	MAX34407	135C, 3.6V (V6) & 16V (V8)	192 HRS	80	0	ZK411830BB-NPI
HIGH TEMP OP LIFE	1427	MAX14921ECS+	135°C	1000 HRS	80	0	TATS4Z001E#
HIGH TEMP OP LIFE	1436	MAX14778ETP+	135°C	500 HRS	80	0	TAMB8Z003M
HIGH TEMP OP LIFE	1436	MAX14778ETP+	135°C	1000 HRS	80	0	TAMB8Z003M
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1415	MAX16936RATEA+CA	150°C	1000 HRS	77	0	TAQT1Q001AA
STORAGE LIFE	1418	MAX16956AUBB+	150°C	500 HRS	50	0	TAQJ2Q001CB
STORAGE LIFE	1418	MAX16956AUBB+	150°C	1000 HRS	50	0	TAQJ2Q001CB
STORAGE LIFE	1424	MAX16990ATCD+	150°C	1000 HRS	50	0	TAQJ4Q001F#
STORAGE LIFE	1426	MAX14778ETP+	150°C	1000 HRS	80	0	TAMB8Z001B
STORAGE LIFE	1427	MAX14921ECS+	150°C	1000 HRS	80	0	TATS4Z001E#

STORAGE LIFE	1436	MAX14778ETP+	150°C	1000	HRS	80	0	TAMB82003M
							Total:	0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1415	MAX16936RATEA+CA	-65C TO +150C (Condition C)	500	CYS	80	0 TAQT1Q001AA	
TEMP CYCLE, 5' RAMP, 10' DWELL	1418	MAX16956AUBB+	-65C TO +150C (Condition C)	500	CYS	80	0 TAQJ2Q001CB	
TEMP CYCLE, 5' RAMP, 10' DWELL	1424	MAX16990ATCD+	-65C TO +150C (Condition C)	500	CYS	80	0 TAQJ4Q001F#	
TEMP CYCLE, 5' RAMP, 10' DWELL	1425	MAX16936RATE+CA	-65C TO +150C (Condition C)	500	CYS	80	0 TAQT1Q003BA	
TEMP CYCLE, 5' RAMP, 10' DWELL	1426	MAX14778ETP+	-65C TO +150C (Condition C)	500	CYS	80	0 TAMB8Z001B	
TEMP CYCLE, 5' RAMP, 10' DWELL	1426	MAX16936RATEA+CA	-65C TO +150C (Condition C)	500	CYS	80	0 TAQT1Q001BA	
TEMP CYCLE, 5' RAMP, 10' DWELL	1427	MAX14921ECS+	-65C TO +150C (Condition C)	500	CYS	80	0 TATS4Z001E#	
TEMP CYCLE, 5' RAMP, 10' DWELL	1436	MAX14778ETP+	-65C TO +150C (Condition C)	850	CYS	80	0 TAMB82003M	
							Total:	0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1418	MAX16956AUBB+	130C, 85% R.H.	100	HRS	80	0 TAQJ2Q001CB	
BIASED MOISTURE	1425	MAX16936RATE+CA	130C, 85% R.H.	96	HRS	76	0 TAQT1Q003BA	
BIASED MOISTURE	1426	MAX14778ETP+	130C, 85% R.H.	100	HRS	79	0 TAMB8Z001B	
BIASED MOISTURE	1426	MAX16936RATEA+CA	130C, 85% R.H.	96	HRS	76	0 TAQT1Q001BA	
BIASED MOISTURE	1436	MAX14778ETP+	130C, 85% R.H.	100	HRS	79	0 TAMB82003M	
BIASED MOISTURE	1505	MAX16936RATEA+CA	130C, 85% R.H.	100	HRS	76	0 TAQT1Q001G#	
							Total:	0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
MOISTURE SOAK	1327	MAX17491GTA+	130C, 85% R.H.	100	HRS	80	0 TALM4Z001C

MOISTURE SOAK	1331	MAX14562ETA+	130C, 85% R.H.	100	HRS	80	0	TALN4Z003A
MOISTURE SOAK	1415	MAX16936RATEA+CA	130C, 85% R.H.	100	HRS	80	0	TAQT1Q001AA
MOISTURE SOAK	1418	MAX16956AUBB+	130C, 85% R.H.	100	HRS	80	0	TAQJ2Q001CB
MOISTURE SOAK	1424	MAX16990ATCD+	130C, 85% R.H.	100	HRS	80	0	TAQJ4Q001F#
MOISTURE SOAK	1425	MAX16936RATE+CA	130C, 85% R.H.	96	HRS	80	0	TAQT1Q003BA
MOISTURE SOAK	1426	MAX14778ETP+	130C, 85% R.H.	100	HRS	80	0	TAMB8Z001B
MOISTURE SOAK	1426	MAX16936RATEA+CA	130C, 85% R.H.	96	HRS	80	0	TAQT1Q001BA
MOISTURE SOAK	1505	MAX16936RATEA+CA	130C, 85% R.H.	100	HRS	80	0	TAQT1Q001G#

Total: 0

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