

6/25/2020



**RELIABILITY MONITOR REPORT
FOR**

Epson MB3

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:

MAX16833CAU	MAX2136AETJ/	MAX2172ETL/V	MAX2172ETL+	MAX40026ATA/
MAX40027ATC/	MAX40027ATC/	MAX40661ATB/	MAX40662ATE/	

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 93818 QUANTITY: 765 FAILS: 0 FITS: 1.2

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 1/1/2020 and 3/31/2020 .

Process Information:

Process Description: Epson MB3

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1846	MAX2172ETL/V+	125°C	1000 HRS	80	0	EAKE6A344BA
HIGH TEMP OP LIFE	1903	MAX40026ATA/VY+	125°C	72 HRS	78	0	ECTP8Q001IQ
HIGH TEMP OP LIFE	1907	MAX2136AETJ/V+	125°C	1000 HRS	48	0	EAKK3A013F
HIGH TEMP OP LIFE	1907	MAX2136AETJ/V+	125°C	1000 HRS	80	0	EAKK3A013F
HIGH TEMP OP LIFE	1912	MAX40661ATB/VY+T	125°C	192 HRS	79	0	JCTQ5A004MA
HIGH TEMP OP LIFE	1912	MAX40661ATB/VY+T	125°C	500 HRS	80	0	ECUR5Q001JB
HIGH TEMP OP LIFE	1912	MAX40661ATB/VY+T	125°C	500 HRS	80	0	ECUR5Q001JC
HIGH TEMP OP LIFE	1921	MAX2172ETL/V+	125°C	1000 HRS	80	0	EAKE6A362H
HIGH TEMP OP LIFE	1937	MAX40662ATE/VY+	125°C	192 HRS	80	0	ECBT7Q001IQ
HIGH TEMP OP LIFE	1945	MAX2172ETL+	125°C	1000 HRS	80	0	EAKE6A378EX
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
STORAGE LIFE	1905	MAX16833CAUE/V+QA	150°C	1000 HRS	80	0	EBQS7A065CX
STORAGE LIFE	1907	MAX2136AETJ/V+	150°C	1000 HRS	80	0	EAKK3A013F
STORAGE LIFE	1912	MAX40661ATB/VY+T	150°C	500 HRS	80	0	ECUR5Q001JA
STORAGE LIFE	1912	MAX40661ATB/VY+T	150°C	500 HRS	80	0	ECUR5Q001JB
STORAGE LIFE	1912	MAX40661ATB/VY+T	150°C	500 HRS	80	0	ECUR5Q001JC
STORAGE LIFE	1921	MAX2172ETL/V+	150°C	1000 HRS	80	0	EAKE6A362H
STORAGE LIFE	1932	MAX40027ATC/VY+	150°C	1000 HRS	80	0	NCCI4AAB

STORAGE LIFE	1932	MAX40027ATC/VY+	150°C	1000	HRS	80	0	NCCI4AAC
STORAGE LIFE	1932	MAX40027ATC/VY+	150°C	1000	HRS	80	0	NCCI4AAD
STORAGE LIFE	1933	MAX40661ATB/VY+T	150°C	500	HRS	80	0	ECUR4Q001JB
STORAGE LIFE	1933	MAX40661ATB/VY+T	150°C	500	HRS	80	0	ECUR4Q001JC
STORAGE LIFE	1933	MAX40661ATB/VY+T	150°C	1000	HRS	80	0	ECUR4Q001JD
STORAGE LIFE	1945	MAX2172ETL+	150°C	1000	HRS	80	0	EAKE6A378EX
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1905	MAX16833CAUE/V+QA	-65C TO +150C (Condition C)	1000	CYS	80	0	EBQS7A065CX
TEMP CYCLE, 5' RAMP, 10' DWELL	1907	MAX2136AETJ/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	EAKK3A013F
TEMP CYCLE, 5' RAMP, 10' DWELL	1912	MAX40661ATB/VY+T	-65C TO +150C (Condition C)	1000	CYS	80	0	ECUR5Q001JA
TEMP CYCLE, 5' RAMP, 10' DWELL	1912	MAX40661ATB/VY+T	-65C TO +150C (Condition C)	1000	CYS	79	0	ECUR5Q001JB
TEMP CYCLE, 5' RAMP, 10' DWELL	1912	MAX40661ATB/VY+T	-65C TO +150C (Condition C)	1000	CYS	80	0	ECUR5Q001JC
TEMP CYCLE, 5' RAMP, 10' DWELL	1921	MAX2172ETL/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	EAKE6A362H
TEMP CYCLE, 5' RAMP, 10' DWELL	1945	MAX2172ETL+	-65C TO +150C (Condition C)	1000	CYS	80	0	EAKE6A378EX
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1846	MAX2172ETL/V+	130C, 85% R.H.	96	HRS	80	0	EAKE6A344BA
BIASED MOISTURE	1912	MAX40661ATB/VY+T	130C, 85% R.H.	96	HRS	80	0	ECUR5Q001JA
BIASED MOISTURE	1912	MAX40661ATB/VY+T	130C, 85% R.H.	96	HRS	79	0	ECUR5Q001JB
BIASED MOISTURE	1912	MAX40661ATB/VY+T	130C, 85% R.H.	96	HRS	80	0	ECUR5Q001JC
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1846	MAX2172ETL/V+	130C, 85% R.H.	96	HRS	80	0	EAKE6A344BA
MOISTURE SOAK	1907	MAX2136AETJ/V+	130C, 85% R.H.	96	HRS	80	0	EAKK3A013F
MOISTURE SOAK	1912	MAX40661ATB/VY+T	130C, 85% R.H.	96	HRS	80	0	JCTQ5A004MA
MOISTURE SOAK	1912	MAX40661ATB/VY+T	130C, 85% R.H.	96	HRS	80	0	JCTQ5A004MB

MOISTURE SOAK	1912	MAX40661ATB/VY+T	130C, 85% R.H.	96	HRS	80	0	EBNP3A012JC
MOISTURE SOAK	1921	MAX2172ETL/V+	130C, 85% R.H.	96	HRS	80	0	EAKE6A362H
MOISTURE SOAK	1945	MAX2172ETL+	130C, 85% R.H.	96	HRS	80	0	EAKE6A378EX
					Total:		0	
FAILURE RATE:	MTTF (YRS):	93818	QUANTITY:	765	FAILS:	0	FITS:	1.2