

7/10/2017



**RELIABILITY MONITOR REPORT
FOR**

Epson C6

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:

MAX1031BCTI+	MAX1031BEEG	MAX11606EUA/	MAX11606EUA	MAX11632EEG+
MAX1168BEEG	MAX1178CCUP	MAX1257BETM	MAX1308ECM+:	MAX6959AAEE

The calculated failure rate for devices using this process is:

FAILURE RATE: MTTF (YRS): 219709 QUANTITY: 1176 FAILS: 0 FITS: 0.5

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 4/1/2017 and 6/30/2017 .

Process Information:

Process Description: Epson C6

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
HIGH TEMP OP LIFE	1607	MAX1308ECM+:1	135°C	1000 HRS	80	0	EHG1HA017H
HIGH TEMP OP LIFE	1607	MAX1308ECM+:1	135°C	1000 HRS	77	0	EHG1HA017I
HIGH TEMP OP LIFE	1607	MAX1308ECM+:1	135°C	1000 HRS	77	0	EHG1HA017K
HIGH TEMP OP LIFE	1619	MAX1168BEEG+	135°C	1000 HRS	80	0	EJ50FA010Q5
HIGH TEMP OP LIFE	1619	MAX1168BEEG+	135°C	1000 HRS	80	0	EJ50FA010Q6
HIGH TEMP OP LIFE	1619	MAX1031BEEG+	135°C	1000 HRS	79	0	EF4ZAA055DC
HIGH TEMP OP LIFE	1619	MAX11606EUA/V+	135°C	1000 HRS	80	0	E2B2GA04C
HIGH TEMP OP LIFE	1628	MAX1031BEEG+	135°C	1000 HRS	80	0	EF4ZAA055DA
HIGH TEMP OP LIFE	1634	MAX6959AAEE+	135°C	1000 HRS	48	0	EBCF7A011DE
HIGH TEMP OP LIFE	1634	MAX6959AAEE+	135°C	1000 HRS	32	0	EBCF7A011DE
HIGH TEMP OP LIFE	1638	MAX1257BETM+	135°C	1000 HRS	48	0	EEQ1KA234CD
HIGH TEMP OP LIFE	1638	MAX1257BETM+	135°C	1000 HRS	32	0	EEQ1KA234CD
HIGH TEMP OP LIFE	1645	MAX11632EEG+	135°C	1000 HRS	88	0	EF4ZAA050Q1
HIGH TEMP OP LIFE	1645	MAX11632EEG+	135°C	1000 HRS	84	0	EF4ZAA050Q2
HIGH TEMP OP LIFE	1645	MAX11632EEG+	135°C	1000 HRS	83	0	EF4ZAA050Q3
HIGH TEMP OP LIFE	1646	MAX6959AAEE+	135°C	1000 HRS	48	0	EBCF7A017HF
HIGH TEMP OP LIFE	1703	MAX11606EUA+	135°C	1000 HRS	80	0	E2B2GA061DG
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.
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STORAGE LIFE	1605	MAX11632EEG+	150°C	1000	HRS	90	0	EF4ZAA047DA
STORAGE LIFE	1606	MAX1178CCUP+	150°C	1000	HRS	20	0	ELQ8CA012Q2
STORAGE LIFE	1607	MAX1308ECM+:1	150°C	1000	HRS	74	0	EHG1HA017H
STORAGE LIFE	1607	MAX1308ECM+:1	150°C	1000	HRS	79	0	EHG1HA017I
STORAGE LIFE	1607	MAX1308ECM+:1	150°C	1000	HRS	80	0	EHG1HA017K
STORAGE LIFE	1619	MAX1168BEEG+	150°C	1000	HRS	79	0	EJ50FA010Q4
STORAGE LIFE	1619	MAX1168BEEG+	150°C	1000	HRS	80	0	EJ50FA010Q5
STORAGE LIFE	1619	MAX1168BEEG+	150°C	1000	HRS	80	0	EJ50FA010Q6
STORAGE LIFE	1619	MAX1031BCTI+	150°C	500	HRS	80	0	EF4ZAA055E
STORAGE LIFE	1619	MAX1031BCTI+	150°C	500	HRS	80	0	EF4ZAA055F
STORAGE LIFE	1619	MAX1031BCTI+	150°C	500	HRS	80	0	EF4ZAA055G
STORAGE LIFE	1619	MAX11606EUA/V+	150°C	1000	HRS	80	0	E2B2GA046C
STORAGE LIFE	1634	MAX6959AAEE+	150°C	1000	HRS	80	0	EBCF7A011DE
STORAGE LIFE	1638	MAX1257BETM+	150°C	1000	HRS	80	0	EEQ1KA234CD
STORAGE LIFE	1645	MAX11632EEG+	150°C	1000	HRS	80	0	EF4ZAA050Q2
STORAGE LIFE	1645	MAX11632EEG+	150°C	1000	HRS	80	0	EF4ZAA050Q3
STORAGE LIFE	1646	MAX6959AAEE+	150°C	1000	HRS	80	0	EBCF7A017HF
STORAGE LIFE	1703	MAX11606EUA+	150°C	1000	HRS	80	0	E2B2GA061DG
Total:							0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
TEMP CYCLE, 5' RAMP, 10' DWELL	1605	MAX11632EEG+	-65C TO +150C (Condition C)	500	CYS	90	0	EF4ZAA047DA
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	MAX1168BEEG+	-65C TO +150C (Condition C)	500	CYS	120	0	EJ50FA010Q4
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	MAX1168BEEG+	-65C TO +150C (Condition C)	500	CYS	120	0	EJ50FA010Q5
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	MAX1168BEEG+	-65C TO +150C (Condition C)	500	CYS	120	0	EJ50FA010Q6
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	MAX1031BCTI+	-65C TO +150C (Condition C)	500	CYS	110	0	EF4ZAA055E
TEMP CYCLE, 5' RAMP, 10' DWELL	1619	MAX11606EUA/V+	-65C TO +150C (Condition C)	1000	CYS	80	0	E2B2GA046C
TEMP CYCLE, 5' RAMP, 10' DWELL	1634	MAX6959AAEE+	-65C TO +150C (Condition C)	1000	CYS	80	0	EBCF7A011DE
TEMP CYCLE, 5' RAMP, 10' DWELL	1635	MAX11632EEG+	-65C TO +150C (Condition C)	500	CYS	80	0	EF4ZA051QA

TEMP CYCLE, 5' RAMP, 10' DWELL	1638	MAX1257BETM+	-65C TO +150C (Condition C)	1000	CYS	80	0	EEQ1KA234CD
TEMP CYCLE, 5' RAMP, 10' DWELL	1645	MAX11632EEG+	-65C TO +150C (Condition C)	500	CYS	100	0	EF4ZAA050Q1
TEMP CYCLE, 5' RAMP, 10' DWELL	1645	MAX11632EEG+	-65C TO +150C (Condition C)	500	CYS	80	0	EF4ZAA050Q2
TEMP CYCLE, 5' RAMP, 10' DWELL	1645	MAX11632EEG+	-65C TO +150C (Condition C)	500	CYS	80	0	EF4ZAA050Q3
TEMP CYCLE, 5' RAMP, 10' DWELL	1646	MAX6959AAEE+	-65C TO +150C (Condition C)	1000	CYS	80	0	EBCF7A017HF
TEMP CYCLE, 5' RAMP, 10' DWELL	1703	MAX11606EUA+	-65C TO +150C (Condition C)	1000	CYS	80	0	E2B2GA061DG
Total:							0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
BIASED MOISTURE	1606	MAX1178CCUP+	130C, 85%	96	HRS	80	0	ELQ8CA012Q2
BIASED MOISTURE	1607	MAX1308ECM+:1	130C, 85%	100	HRS	34	0	EHG1HA017K
BIASED MOISTURE	1619	MAX1168BEEG+	130C, 85%	96	HRS	80	0	EJ50FA010Q4
BIASED MOISTURE	1619	MAX1168BEEG+	130C, 85%	96	HRS	80	0	EJ50FA010Q5
BIASED MOISTURE	1619	MAX1168BEEG+	130C, 85%	96	HRS	80	0	EJ50FA010Q6
BIASED MOISTURE	1619	MAX11606EUA/V+	130C, 85%	100	HRS	80	0	E2B2GA046C
BIASED MOISTURE	1634	MAX6959AAEE+	130C, 85%	96	HRS	79	0	EBCF7A011DE
BIASED MOISTURE	1638	MAX1257BETM+	130C, 85%	96	HRS	80	0	EEQ1KA234CD
BIASED MOISTURE	1645	MAX11632EEG+	130C, 85%	96	HRS	80	0	EF4ZAA050Q1
BIASED MOISTURE	1645	MAX11632EEG+	130C, 85%	96	HRS	80	0	EF4ZAA050Q2
BIASED MOISTURE	1645	MAX11632EEG+	130C, 85%	96	HRS	80	0	EF4ZAA050Q3
BIASED MOISTURE	1646	MAX6959AAEE+	130C, 85%	96	HRS	80	0	EBCF7A017HF
BIASED MOISTURE	1703	MAX11606EUA+	130C, 85%	96	HRS	80	0	E2B2GA061DG
Total:							0	

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	LOT NO.	
MOISTURE SOAK	1619	MAX1168BEEG+	130C, 85%	96	HRS	80	0	EJ50FA010Q4
MOISTURE SOAK	1619	MAX1168BEEG+	130C, 85%	96	HRS	80	0	EJ50FA010Q5
MOISTURE SOAK	1619	MAX1031BCTI+	130C, 85%	96	HRS	80	0	EF4ZAA055E
MOISTURE SOAK	1619	MAX1031BCTI+	130C, 85%	96	HRS	80	0	EF4ZAA055F
MOISTURE SOAK	1619	MAX1031BCTI+	130C, 85%	96	HRS	80	0	EF4ZAA055G
MOISTURE SOAK	1635	MAX11632EEG+	130C, 85%	96	HRS	80	0	EF4ZA051QA

MOISTURE SOAK	1645	MAX11632EEG+	130C, 85%	96	HRS	80	0	EF4ZAA050Q1
MOISTURE SOAK	1645	MAX11632EEG+	130C, 85%	96	HRS	100	0	EF4ZAA050Q2
MOISTURE SOAK	1645	MAX11632EEG+	130C, 85%	96	HRS	100	0	EF4ZAA050Q3
					Total:		0	

FAILURE RATE: **MTTF (YRS): 219709** **QUANTITY: 1176** **FAILS: 0** **FITS: 0.5**