

6/25/2020



**RELIABILITY MONITOR REPORT
FOR**

LGA Package

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 Package Reliability Monitor. The specific assemblies included in this package monitor are:

ASSY SITE	PINS	PACKAGE		
ASE Chung-Li	10	LGA	ASE Chung-Li	18 LGA
ASE Chung-Li	14	OLGA (Pb-Free)	ASE Chung-Li	38 OLGA (Pb-Free)

The calculated failure rate for this assembly is:

FAILURE RATE: MTTF (YRS): 105487 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. At the start of this data is a description of the assembly vehicle used to generate this reliability data. The next section is the detailed reliability data for each stress. The reliability data section includes the latest data available. This report covers data between 1/1/2020 and 3/31/2020

Assembly Information:

Package Type: LGA
Date Code Range: 1942 to 1942

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE		MAX30208	125°C	1000 HRS	80	0	
HIGH TEMP OP LIFE		MAX30208	125°C	1000 HRS	79	0	
HIGH TEMP OP LIFE		MAX30208	125°C	192 HRS	80	0	
Total:						0	

PACKAGE TESTS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
CONVECTION REFLOW		MAX30208	85 C/85% R.H.	3 PASS	99	0	
CONVECTION REFLOW	1942	MAXM25265ALN/V+		3 PASS	240	0	
CONVECTION REFLOW	1942	MAXM25265ALN/V+		3 PASS	149	0	
CONVECTION REFLOW	1942	MAXM25265ALN/V+		3 PASS	149	0	
CONVECTION REFLOW	1942	MAXM25265ALN/V+		3 PASS	250	0	
CONVECTION REFLOW	1942	MAXM25265ALN/V+		3 PASS	250	0	
CONVECTION REFLOW	1942	MAXM25265ALN/V+		3 PASS	250	0	
Total:						0	

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE		MAX30208	150°C	1000 HRS	80	0	
STORAGE LIFE		MAX30208	150°C	1000 HRS	80	0	
STORAGE LIFE		MAX30208	150°C	1000 HRS	80	0	

STORAGE LIFE	1942	MAXM25265ALN/V+	150°C	1000	HRS	146	0
STORAGE LIFE	1942	MAXM25265ALN/V+	150°C	192	HRS	240	0
STORAGE LIFE	1942	MAXM25265ALN/V+	150°C	1000	HRS	80	0
STORAGE LIFE	1942	MAXM25265ALN/V+	150°C	96	HRS	80	0
Total:							0

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX30208	-65C TO +150C (Condition C)	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX30208	-65C TO +150C (Condition C)	1000	CYS	79	0
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX30208	-65C TO +150C (Condition C)	1000	CYS	80	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1942	MAXM25265ALN/V+	-65C TO +150C (Condition C)	1000	CYS	240	0
TEMP CYCLE, 5' RAMP, 10' DWELL	1942	MAXM25265ALN/V+	-65C TO +150C (Condition C)	1000	CYS	150	0
Total:							0

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE		MAX30208	130C, 85% R.H.	96	HRS	27	0
BIASED MOISTURE		MAX30208	130C, 85% R.H.	96	HRS	26	0
BIASED MOISTURE		MAX30208	130C, 85% R.H.	96	HRS	26	0
BIASED MOISTURE		MAX30208	130C, 85% R.H.	96	HRS	26	0
BIASED MOISTURE		MAX30208	130C, 85% R.H.	96	HRS	26	0
Total:							0

UNBIASED MOISTURE RESISTANCE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
MOISTURE SOAK		MAX30208	130C, 85% R.H.	96	HRS	80	0
MOISTURE SOAK	1942	MAXM25265ALN/V+	130C, 85% R.H.	96	HRS	240	0
Total:							0

Assembly Information:

Package Type: OLGA (Pb-Free)
Date Code Range: 1850 to 1850

OPERATING LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
HIGH TEMP OP LIFE		MAX86161EFD+	125°C	1000	HRS	80	0
HIGH TEMP OP LIFE		MAX86146CFU+	125°C	1000	HRS	41	0
HIGH TEMP OP LIFE		MAX86146CFU+	125°C	1000	HRS	45	0
HIGH TEMP OP LIFE		MAX86146CFU+	125°C	1000	HRS	44	0

HIGH TEMP OP LIFE	1850	MAX86161EFD+	125°C	1000 HRS	80	0
HIGH TEMP OP LIFE	1850	MAX86161EFD+	125°C	1000 HRS	80	0
					Total:	0

STORAGE LIFE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
STORAGE LIFE		MAX86146CFU+	150°C	1000 HRS	80	0	
STORAGE LIFE		MAX86146CFU+	150°C	1000 HRS	80	0	
STORAGE LIFE		MAX86146CFU+	150°C	1000 HRS	80	0	
					Total:	0	

TEMPERATURE CYCLE

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX86146CFU+	-65C TO +150C (Condition C)	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX86146CFU+	-65C TO +150C (Condition C)	1000 CYS	80	0	
TEMP CYCLE, 5' RAMP, 10' DWELL		MAX86146CFU+	-65C TO +150C (Condition C)	1000 CYS	80	0	
					Total:	0	

TEMPERATURE HUMIDITY BIAS

DESCRIPTION	DATE CODE	TEST VEHICLE	CONDITION	READPOINT	QUANTITY	FAILS	FA NO
BIASED MOISTURE		MAX86146CFU+	85 C/85% R.H.	1000 HRS	45	0	
BIASED MOISTURE		MAX86146CFU+	85 C/85% R.H.	1000 HRS	45	0	
BIASED MOISTURE		MAX86146CFU+	85 C/85% R.H.	1000 HRS	45	0	
					Total:	0	

FAILURE RATE: MTTF (YRS): 105487 FITS: 1.1