

Product Change Notice

E71M and E42K MC-Qualified Mask Sets

Motorola Inc. will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice.

Issue Date	Effective Date	Notification #
03-May-95	02-Jun-95	R00274

Affected Change Categories		Affected Product Divisions
SGRLC040, SGELC040, SGREC040, SGEEC040, SGR68040, SGE68040		Imaging and Storage
Additional Reliability Data		Samples
Included		Available

For any questions concerning this notification:

Contact: Customer Service

Phone:

Description and Purpose

Source Devices Affected:

E71M:	XC68LC040RCXXB XC68LC040FEXXB XC68EC040RCXXB XC68EC040FEXXB	E42K:	XC68040RCXXM XC68040FEXXM
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Motorola is pleased to announce the introduction of the MC-qualified (fully qualified) E71M maskset for 68EC040 and 68LC040 devices, and the MC-qualified E42K maskset for 68040 devices. In PGA packaging these new revisions will be identified as MC68EC040RCXX, MC68LC040RCXX, and MC68040RCXX with no device suffixes; in CQFP packaging these new revisions will be identified as MC68EC040FEXX, MC68LC040FEXX, and MC68040FEXX with no device suffixes. Production transition to the MC masksets will occur during 3rd Quarter 1995.

These new masksets enhance the functionality of the 68EC040, 68LC040, and 68040 by correcting several functional errata found in previous XC-qualified masksets. Changes to device logical and electrical functionality were restricted to these errata corrections.

Documentation clarification to the user's manual and data sheet for these masksets is available on the Motorola website located at <http://www.mot.com/isd>.

These masksets also provide improvements in device manufacturability without affecting device logical and electrical functionality. No changes to processing technology are incorporated in these MC-qualified masksets compared to previous masksets. Reliability data for both masksets is attached; also included in reliability data for previous masksets that represent the same process technology.

Samples are currently available for distribution. Please contact Customer Service.

Reliability / Qualification Summary

68040/LC040 MC Qualification Data

Package: RC (179 PGA) Wafer Fab: MOS 11
 Assembly Site: Austin, TX Mask Set: E71M - 461.4 x 431.6
 Test Site: Oak Hill, TX Mask Set: E42K - 473.3 x 499.7

Operating Life Test (125 Degree C, 6V)

Rel Job	Mask	Wafer Lot	168 Hr	504 Hr	1008 Hr	Comments
95646-1	E42K	E22809	0/75	0/75	1/75	Test Mode
95646-2	E71M	E26942	1/80	0/79	0/79	Test Mode
95646-3	E42K	E29667	0/77	0/77	0/77	----
95646-4	E71M	E31575	1/80	0/79	0/79	ICACHE
Total			2/312	0/310	1/310	

ESD (HBM)

Rel Job	Mask	Wafer Lot	400 V	Comments
95646-5	E42K	E22809	0/3	---
95646-6	E71M	E26942	0/3	---
Total			0/6	

The following data are from the previous mask sets.

Devices: 0E31F, 2E31F - 68040 Assembly Site: Austin, TX
 2E23G - 68LC040 Kuala Lumpur, Malaysia
 Package: 179 PGA (RC), 184 CQFP (FE) Test Site: Oak Hill, TX

Operating Life Test (125 Degree C, 5.5V)

Rel Job	24	168	504	1008	1512	2016	3024	4032	Mask	Pkg
65816-1	0/77	0/77	0/77	0/77	0/76	0/76	0/76	0/76	0E31F	RC
65816-7	0/77	0/77	0/77	0/77	0/75	0/75	0/73	0/73	0E31F	RC
65816-13	0/77	0/77	0/77	0/77	0/77	0/77	0/77	0/71	0E31F	RC
65816-21	0/77	0/77	0/77	1/77	0/76	0/72	--	--	0E31F	RC

65816-23	0/77	0/77	0/77	0/77	0/77	0/77	--	--	0E31F	RC
65816-29	0/77	0/77	0/77	0/77	--	0/77	--	--	0E31F	RC
65816-30	0/70	0/67	0/67	0/65	0/65	0/65	--	--	0E31F	RC
65816-31	0/77	0/77	0/77	0/76	0/76	0/76	--	--	0E31F	RC
65816-32	0/77	0/70	0/68	0/59	0/59	0/59	--	--	0E31F	RC
65816-33	0/75	0/75	0/75	0/73	0/67	1/66	0/65	---	0E31F	RC
75573-1	0/77	1/77	1/76	0/75	---	1/75	---	---	2E31F	RC
75573-3	0/77	0/77	0/77	0/77	---	0/77	---	---	2E31F	RC
75573-5	0/77	0/77	0/77	0/77	---	0/77	---	---	2E31F	RC
71204-1	---	0/77	0/77	0/77	---	0/77	---	---	2E23G	RC
71204-7	---	0/77	0/77	0/77	---	0/77	---	---	2E23G	RC
71204-13	---	0/76	0/76	1/75	---	1/74	---	---	2E23G	RC
75805-1	---	0/77	0/76	0/74	---	0/73	---	---	2E23G	FE
75805-3	---	0/76	0/76	0/75	---	1/70	---	---	2E23G	FE
75805-5	---	0/77	0/74	1/72	---	---	---	---	2E23G	FE
TOTAL	0/992	1/1442	1/1435	3/1414	0/648	4/1320	0/291	0/220		

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