QREE0023
QUALIFICATION REPORT

MP8000 Mold Compound
SO14 Muar

THIS REPORT

This Qualification Report summarizes the reliability trials and results performed to qualify new Nitto Mold Compound called MP8000 used on SO14 package (Small Outline Package) in Muar plan. This material is already qualify for SO8 package (see qualification report R99008).

This document serves for the qualification of the mold compound material change, using the products. Test conditions are presented in Table 2 and results in Table 3.

Table 1. Product and Process used for Qualification

Product	Package	Process	Fab Line
M93CS66F	SO14	CMOSF4S	Rousset

PRODUCT DESCRIPTION

The M93CS66F is 4 Kbits EEPROM with microwire serial bus interface organised as 512x8 bits. This product is already qualified, and in production.

PROCESS DESCRIPTION

The CMOSF4S process is a 0.9µm single poly process already qualified, and in production for EEPROM memory products.

Table 2. Plastic package qualification, Package-related tests
M93CS66F, SO14, CMOSF4S

Sub group	Test Procedure	Method	Test Conditions	Num of Lots	Criteria[1]
1	Preconditioning	JEDEC Level 1	Surface mounting simulation before reliability tests	3	0/265
2	Temperature Shock	Mil Std 883 Method 1011B	-55°C / +125°C, 500 shocks	3	0/25
3	Temperature Cycling	Mil Std 883 Method 1010C	–65 °C / +150 °C, 1000 cycles	3	0/60
4	Temperature and Humidity Biased	CECC 90000	85 °C, 85% RH, 5.5 V, 1000 hr	3	0/60
5	Pressure Pot	Internal spec.	121 °C, 2 atm, 100% RH, 240 hr	3	0/60
6	High Temperature Bake	Mil Std 883 Method 1005	150 °C, 1000 hr or 200 °C, 500 hr	3	0/60

Note: 1. Criteria 0/60 means: accepted with 0 rejects out of 60units (rejected with 1 reject).

Table 3. Package qualification, Results
M93CS66F, SO14, CMOSF4S

Sub group	Test Procedure	Test Conditions	Lot 1	Lot 2	Lot 3
1	Preconditioning	JEDEC Level 1	0/265	0/265	0/265
2	Temperature Shock	-55°C / +125°C, 500 shocks	0/25	0/25	0/25
		-55°C / +125°C, 1000 shocks	0/25	0/25	0/25
3	Temperature Cycling	–65 °C / +150 °C, 500 cycles	0/60	0/60	0/60
		–65 °C / +150 °C, 1000 cycles	0/60	0/60	0/60
4	Temperature and Humidity Biased	85 °C, 85% RH, 5.5 V, 500 hr	0/60	0/60	0/60
		85 °C, 85% RH, 5.5 V, 1000 hr	0/60	0/60	0/60
5	Pressure Pot	121 °C, 2 atm, 100% RH, 168 hr	0/60	0/60	0/60
		121 °C, 2 atm, 100% RH, 240 hr	0/60	0/60	0/60
6	High Temperature Bake	150 °C, 500 hr	0/60	0/60	0/60
		150 °C, 1000 hr	0/60	0/60	0/60

Table 4. Revision History

Date	Description
22-Nov-2000	Document written

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If you have any questions or suggestions concerning the matters raised in this document, please send them to the following electronic mail addresses:

ask.memory@st.com (for general enquiries)

Please remember to include your name, company, location, telephone number and fax number.