ON Semiconductor

PRODUCT/PROCESS CHANGE NOTIFICATION
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14-AUG-2001

SUBJECT: ON Semiconductor Product/Process Change Notification #11634

TITLE: Assembly Site Qualification For TSSOP24 lds

EFFECTIVE DATE: 13-Oct-2001

AFFECTED CHANGE CATEGORY: On Semiconductor Assembly Site

AFFECTED PRODUCT DIVISION: Logic Products Div

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Ken Fergus <RRST50@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or
Won Kang <R12237@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact Sales Office or Won Kang <R12237@onsemi.com>

DISCLAIMER:
Initial Product/Process Change Notification (IPCN) -First Notification distributed to customers. Distributed at least 120 days from the effective date of the change.

Final Product/Process Change Notification (FPCN) -Final Notification completing the notification process. Distributed at least 60 days from the effective date of the change. ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:
ON Semiconductor is pleased to announce that it will be expanding its assembly capacity by qualifying the ON Semiconductor Philippines Incorporated (OSPI) facility located in Carmona, Philippines to assemble selected Logic products in TSSOP24 packages. Currently, TSSOP24 lds packages are assembled in Amkor Korea (ATK4) & AIT Indonesia, and are tested at ON Semiconductor Philippines Incorporated (OSPI). ON Semiconductor's OSPI facility has been producing high quality SOIC, PLCC and TSSOP products for over 8 years. The OSPI facility is certified to QS-9000 and ISO-9001:1994 standards. There will be no change in device functionality. Device parameters will continue to meet all Data Book specifications, and reliability will continue to meet or exceed ON Semiconductor standards.

QUALIFICATION PLAN: See Reliability Summary

Product/Process Change Notification #11634

RELIABILITY DATA SUMMARY:
Reliability data provided below are taken from OSPI Reliability test results for 48 lds TSSOP. Reliability test specific for TSSOP24 lds is in-process.

Test	Condition	MC74LCX 16374DT	MC74LCX 16373DT	MC74LCX 16244DT
Precondition (PC per JA112/JA113)	85C/85% RH, 168 hrs IR reflow @235C	0/693	0/308	0/462
Temperature Cycle(TC) with PC (JA104)	-65C/+150C @ 500 cycles	0/231	0/77	0/154
	1000 cycles	0/231	0/77	0/154
Autoclave(AC) with PC (JA102)	121C, 100% RH 96 hrs	0/231	0/77	0/154
	192 hrs	0/231	0/77	0/154
High Temp Bake (HTB) JA103	175C, 504 hrs	0/231	NA	NA
	1008 hrs	0/231		
Physical dimension (JB100)	Per case outline measured by factory	All passed	All passed	All passed
Bond Pull Strength (BPS) M2011	Per Factory testing with CpK >=1.33	Meets CpK >=1.33	Meets CpK >=1.33	Meets CpK >=1.33
Bond Shear Test (BS)	Per Factory testing with CpK >=1.33	Meets CpK >=1.33	Meets CpK >=1.33	Meets CpK >=1.33
Solderability Test (SD)	245C, 5 seconds dwell	0/45	0/15	0/30

Reliability Test Conclusions:
Reliability test results meet all quality and reliability requirements.

ELECTRICAL CHARACTERISTIC SUMMARY:
Meets all datasheet specifications and is consistent with current product. OSPI assembly site packaging change does not impact electrical performance.

CHANGED PART IDENTIFICATION:
Beginning in Q4 '01, customers may receive products manufactured from AMKOR, Korea (location code: SB), AIT, Indonesia (location code: CP), or OSPI, Carmona, Philippines (location code: P). OSPI assembled parts can have Ni/Pd/Au leadfinish.

Customers are encouraged to contact ON Semiconductor to determine sample availability and to communicate sample requests.

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART
MC74LCX2952DT, MC74LCX646DT, MC74LCX646DTR2,
MC74LCX652DT, MC74LCX652DTR2,
MC74LVX4245DT, MC74LVX4245DTR2,
MC74LVXC3245DT, MC74LVXC3245DTR2