



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20385Generic Copy

Issue Date: 06-Mar-2014**TITLE:** Addition of ASE Shanghai, China and Amkor P3, Philippines as qualified assembly sites for Filter & Protection devices in DFN packages**PROPOSED FIRST SHIP DATE:** 06-Jun-2014 or earlier with customer approval**AFFECTED CHANGE CATEGORY(S):** ON Semiconductor Assembly Site**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or Mike Begonia <ffy3bt@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or Francis Lualhati <ffxczy@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation 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 <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

This is the final notification announcing that ON Semiconductor has qualified its Filter & Protection devices in DFN package (please refer to the list of affected general parts section for complete device list), for assembly at ASE Shanghai factory located in the China and at Amkor P3, located in the Philippines. Both sites are ISO/TS16949:2009 certified and have already been qualified and utilized by ON Semiconductor.

Two devices have been identified as qualification vehicle, based on the package dimension, die size and volumes. Reliability testing and full electrical characterization over temperatures were performed to ensure device functionality and electrical specifications are met.

Upon expiration or approval of the FPCN, devices listed in this final PCN will have ASE Shanghai as additional assembly site. Customer may receive devices assembled in our in-house Seremban, Malaysia assembly facilities; UTAC, Thailand, Amkor P3 Philippines and ASE Shanghai after that.

The location of the assembly sites can be identified by the marking of the date code



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RELIABILITY DATA SUMMARY:

Qual Vehicle: EMI4183MUTAG

Qualification Results and Analysis:

Test:	Conditions:	Interval:	Results
HTRB	TA=150°C, 80% rated voltage	1008 hrs	0/240
HTSL	TA = 150°C	1008 hrs	0/240
TC-PC	Ta= -65 C to 150 C	1000 cyc	0/240
HAST-PC	Ta=130C RH=85%,	96 hrs	0/240
Autoclave-PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240

Conclusion: All reliability requirements have been met.

Qual Vehicle for ESDR0502MNTBG: MG2040MUTAG

Qualification Results and Analysis:

Test:	Conditions:	Interval:	Results
HTRB	TA=150°C, 80% rated voltage	1008 hrs	0/240
HTSL	TA = 150°C	1008 hrs	0/240
TC-PC	Ta= -65 C to 150 C	1000 cyc	0/240
HAST-PC	Ta=130C RH=85%,	96 hrs	0/240
Autoclave-PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240

Conclusion: All reliability requirements have been met.

Additional Qualification Requirement for ESDR0502MNTBG

Test:	Conditions:	Interval:	Results
TC-PC	Ta= -65 C to 150 C	1000 cyc	0/240

Conclusion: All reliability requirements have been met.

CHANGED PART IDENTIFICATION:

- Marking of the month date codes:
 Seremban Malaysia assembled devices: M
 UTAC Thailand assembled devices: \bar{M}
 Amkor P3 assembled devices: $\bar{\bar{M}}$
 ASE Shanghai assembled devices: $\bar{\bar{\bar{M}}}$

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20385****List of affected General Parts:**

Device	SBN	UTAC	Amkor	ASE
EMI4183MUTAG	E	E	E	N
EMI4182MUTAG	E	E	E	N
EMI4183MTTAG	E	E	E	N
EMI4182MTTAG	E	E	E	N
EMI4192MTTAG	E	E	E	N
EMI2121MTTAG	E	E	E	N
EMI2124MTTAG	E	E	E	N
ESDR0502NMUTBG	E		N	N

Note: E – Existing Assembly Site
N – New Assembly Site