ON Semiconductor

Final Product/Process Change Notification

Document # : FPCN20984X
Issue Date: 22 July 2015

Title of Change:	Foundry capacity expansion to Hangzhou Silan Integrated Circuit Co. LTD (Silan) and op amp & comparator design change for all wafer fab facilities
Proposed first ship date:	29 October 2015
Contact information:	Contact your local ON Semiconductor Sales Office or <Shannon.Riggs@onsemi.com>
Samples:	Contact your local ON Semiconductor Sales Office
Additional Reliability Data:	Contact your local ON Semiconductor Sales Office or <Ken.Fergus@onsemi.com>.
Type of notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. ON Semiconductor will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <PCN.Support@onsemi.com>.
Change Part Identification:	Changed part identification will be distinguished by manufacturing date code and lot traceability. Changed material will be sourced on or after W40, 2015 depending on inventory depletion schedules. External package labels (bar codes) will identify the fab source location.
Change category:	☒ Wafer Fab Change ☐ Assembly Change ☐ Test Change ☐ Other ________________

Change Sub-Category(s):

☒ Manufacturing Site Change/Addition
☐ Manufacturing Process Change
☐ Material Change
☐ Product specific change
☐ Datasheet/Product Doc change
☐ Shipping/Packaging/Marking
☒ Other: _Design Change

Sites Affected:

☐ All site(s)
☐ not applicable
☒ ON Semiconductor site(s) :
ON Roznov, Czech Republic
☒ External Foundry/Subcon site(s)
Hangzhou Silan Integrated Circuit Co., LTD

Description and Purpose:

In order to provide best in class supply continuity, ON Semiconductor is pleased to announce Hangzhou Silan Integrated Circuit Co. LTD (Silan) has been qualified as an alternate supply source for general purpose, bipolar analog op-amp and comparator products. Additionally, and as part of ON Semiconductor's continuous improvement efforts, the affected designs have been modified in both the ON Semiconductor's Rosnov (Rosnov) and Silan wafer fabrication facilities. Both fab locations will provide the same design version of products, and parts will be pin-for-pin replacements for existing devices, with no change in part nomenclature.

Reliability Data Summary:

Roznov Wafer Fab
QV DEVICE NAME: One lot LM393, two lots LM358
PACKAGE: Soic 8/14

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/240
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		

Silan Wafer Fab
QV DEVICE NAME: One lot LM393, two lots LM358
PACKAGE: Soic 8/14

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/240
ELFR	JESD22-A108	Ta=125C, 100% max rated Vcc	48 hrs	0/2400
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/240
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/240
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		

Electrical Characteristic Summary:

Electrical characterization has been completed with no changes to the AC/DC specifications. ON Semiconductor recommends samples be obtained for application specific review and validation.

As a result of the design modification, the ESD capability will be revised as follows:

Device	from	HBM (V)	MM (V)	to	HBM (V)	MM (V)
LM358DR2G	from	2000	200	to	250	100
LM324DR2G	from	2000	200	to	200	100
LM393DR2G	from	1500	150	to	250	100
LM339DR2G	from	1500	200	to	250	100
LM2901DR2G	from	1500	200	to	250	100
LM2902DR2G	from	2000	200	to	200	100
LM2903DR2G	from	1500	150	to	250	100
LM2904DR2G	from	2000	200	to	250	100

List of affected Standard Parts:

Part Number	Qualification Vehicle
LM358DR2G	LM393DR2G + LM324DR2G
LM324DR2G	LM393DR2G + LM324DR2G
LM393DR2G	LM393DR2G + LM324DR2G
LM339DR2G	LM393DR2G + LM324DR2G
LM2901DR2G	LM393DR2G + LM324DR2G
LM2902DR2G	LM393DR2G + LM324DR2G
LM2903DR2G	LM393DR2G + LM324DR2G
LM2904DR2G	LM393DR2G + LM324DR2G