ON Semiconductor

FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20349B

Generic Copy

Issue Date: 07-Apr-2015

TITLE: Qualification of Niigata Fab (Japan) as the additional wafer source for Small Signal General Purpose Transistors and Bias Resistor Transistors.

PROPOSED FIRST SHIP DATE: 07-Jul-2015

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Fab Site

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office or Farrah Omar <farrah.omar@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available
Contact your local ON Semiconductor Sales Office or Laura Rivers <laura.rivers@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 by ON Semiconductor notifying customers of its plan to add Niigata Fab (Japan) as the qualified wafer source for Small Signal General Purpose Transistors and Bias Resistor Transistors.

The Niigata Fab facility is an ON Semiconductor owned wafer fab that has been producing products for ON Semiconductor. Several existing technologies within ON Semiconductor's product families are currently sourced from Niigata Fab. ON Semiconductor Niigata Wafer Fab is an internal factory that is TS16949, ISO-9001 and ISO-14000 certified.

Qualification tests are designed to show that the reliability of the transferred devices will continue to meet or exceed ON Semiconductor standards.

This FPCN20349B is to clarify that 9 devices from Bias Resistor Transistors were unintentionally omitted from the Generic PCN document.

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RELIABILITY DATA SUMMARY:

Small Signal General Purpose Transistor

Package: SOT23
BCX19LT1G (NPN)

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/240
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/240
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/240
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/240
HTSL	Ta = 150C	1008 hrs	0/240
RSH	Ta=260C, 10 sec dwell		0/30
DPA	per AEC Q101-004 post TC		0/2
DPA	per AEC Q101-004 post HAST		0/2

Package: SOT23
MMBT589LT1G (PNP)

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/240
UHAST+PC	Ta=130C RH=85%	96 hrs	0/240
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/240
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/240
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/240
HTSL	Ta = 150C	1008 hrs	0/240
RSH	Ta=260C, 10 sec dwell		0/30
DPA	per AEC Q101-004 post TC		0/2
DPA	per AEC Q101-004 post HAST		0/2

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Bias Resistor Transistor

Package: SC70
DTC115EM3T5G (NPN)

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/80
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/80
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/80
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/80
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/80
HTSL	Ta = 150C	1008 hrs	0/80
RSH	Ta=260C, 10 sec dwell		0/30
DPA	per AEC Q101-004 post TC		0/2
DPA	per AEC Q101-004 post HAST		0/2

Package: SC75
DTA114EYT1G (PNP)

Test:	Conditions:	Interval:	Result
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/80
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/80
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/80
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/80
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/80
HTSL	Ta = 150C	1008 hrs	0/80
RSH	Ta=260C, 10 sec dwell		0/30
DPA	per AEC Q101-004 post TC		0/2
DPA	per AEC Q101-004 post HAST		0/2

Package: SC70
MUN5230T1G (NPN)

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/80
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/80
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/80
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/80
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/80
HTSL	Ta = 150C	1008 hrs	0/80
RSH	Ta=260C, 10 sec dwell		0/30
DPA	per AEC Q101-004 post TC		0/2
DPA	per AEC Q101-004 post HAST		0/2

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Package: SOT23
SMMUN2214LT1G (NPN)

Test:	Conditions:	Interval:	Results
HTRB	Ta=150C,80% Rated Voltage	1008 hrs	0/240
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
HAST+PC	Ta=130C RH=85% bias=80% rated V or100V Max	96 hrs	0/240
IOL+PC	Ta=25C, Delta TJ = 100 C, Ton/off = 2 min.	15000 cyc	0/240
TC+PC	Ta= -65 C to 150 C	1000 cyc	0/240
HTSL	Ta = 150C	1008 hrs	0/240
DPA	per AEC Q101-004 post TC		0/2
DPA	per AEC Q101-004 post HAST		0/2

ELECTRICAL CHARACTERISTIC SUMMARY:

There are no changes in electrical characteristics and product performance meets data sheet specifications. Characterization data is available upon request.

CHANGED PART IDENTIFICATION:

Affected products from ON Semiconductor with date code 1527 representing WW27, 2015 and greater may be sourced from either the Niigata Fab (Japan) or the ISMF Fab (Malaysia).

List of affected General Parts:

Bias Resistor Transistors

NSBC114EDXV6T5G
NSBC114YDXV6T5G
NSBC123JDXV6T5G
EMC3DXV5T5G
NSBC124EDXV6T5G
NSBA144EDXV6T5G
NSBC144EDXV6T5G
EMD4DXV6T5G
NSBC143TDXV6T5G