



Initial Product/Process Change Notification

Document #: IPCN25232X

Issue Date: 15 Feb 2023

Title of Change:	Qualification of onsemi Aizu as an additional wafer fab facility for ONC25 technology and bonding wire material change for SC88A and TSOP5 packages assembled in onsemi, Seremban, Malaysia – NCS333A family.
Proposed First Ship date:	30 Sep 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or CheePan.Foo@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan. The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 90 days prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >
Marking of Parts/ Traceability of Change:	The affected products will be identified with date code and custom source
Change Category:	Assembly Change, Wafer Fab Change
Change Sub-Category(s):	Material Change, Manufacturing Site Addition

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Aizu, Japan	None
onsemi Seremban, Malaysia	

Description and Purpose:

This notification is to announce planned wafer fab capacity expansion to onsemi Aizu wafer fab, located in Aizuwakamatsu, Japan, for the NCS333A product family. The same process technology has been transferred as is currently running in the onsemi wafer fab located at Gresham, Oregon, USA. Tool sets are different but the exact same masking layers and steps are being used in onsemi Aizu.

This is an expansion to supplement the existing onsemi wafer fab capacity. The parts being qualified will be dual sourced and may be processed at either wafer fab in the future depending on supply chain requirements.

Additionally, the assembly of these packages will change bonding material from 0.8mil Au wire to 0.8mil Au flash, Pd coated Cu. All changes are detailed in the following change table and apply to both packages, unless otherwise noted.

There will be no change to the orderable part number, and there will be no product marking change because of this notification. Fab source and BOM material information will be identified using the encoded traceability.

	Before Change Description	After Change Description
Fab Site	onsemi Gresham, Oregon, USA	onsemi Aizu, Aizuwakamatsu, Japan, onsemi Gresham, Oregon, USA
LeadFrame – TSOP5	Ag Stripe	roughened ppf
Die Attach – TSOP5	CRM1084P	Ablestick 8006NS
Bond Wire	0.8mil Au	0.8mil AuFlash PCC



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QV DEVICE NAME: NCS333ASQ3T2G

RMS: S89456

PACKAGE: SC-88A-5

Test	Specification	Condition	Interval
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs
Highly Accelerated Stress Test	J-STD-020, JESD22-A110	130°C/85%RH/18.8psig, biased	96 hrs
Unbiased Highly Accelerated Stress Test	J-STD-020, JESD22-A118	130°C/85%RH/18.8psig	96 hrs
Temperature Cycling	J-STD-020, JESD22-A104	-65°C to +150C	1000 cyc
ESD-HBM	JS-001-2017	2000V	-
ESD-CDM	JS-002-2018	1000V	-
LU Class II	JESD-78	100mA	-
Electrical Distribution / Thermal Characterization	onsemi DataSheet	Test @ Cold & Room & Hot Cpk ≥ 1.67	-

Estimated date for qualification completion: 30 June 2023

List of Affected Parts:

Note: Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the [PCN Customized Portal](#).

Part Number	Qualification Vehicle
NCS333ASN2T1G	NCS333ASQ3T2G
NCS333ASQ3T2G	NCS333ASQ3T2G

Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCS333ASN2T1G		NCS333ASQ3T2G	NA	
NCS333ASQ3T2G		NCS333ASQ3T2G	NA	