



Final Product/Process Change Notification

Document #:FPCN25818Z

Issue Date:13 Dec 2023

Title of Change:	Wafer fab transfer of Power Metal Processing to onsemi Gresham, Oregon USA from Nepes Semiconductor, Korea.
Proposed Changed Material First Ship Date:	15 Jun 2024 or earlier if approved by customer
Current Material Last Order Date:	N/A <i>Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability.</i>
Current Material Last Delivery Date:	N/A <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local onsemi Sales Office or Diane.Nelson@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order. Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	10 Nov 2023
PPAP Availability Date:	29 Dec 2023
Additional Reliability Data:	Contact your local onsemi Sales Office or Steven.Vandeweghe@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com .
Change Category	
Category	Type of Change
Process - Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor
Data Sheet	Change of datasheet parameters/electrical specification (min./max./typ. values) and/or AC/DC specification

Description and Purpose:

This final notification is to notify customers that the subcontractor NEPES phased out its Cu Power Metal process at the end September 2023. Early approval required to prevent supply distribution. The affected product has been qualified with Cu Power Metal developed, qualified and running into production in onsemi Gresham. A bridge build has been anticipated according to existing backlog.

	Before Change Description	After Change Description
Change of Orderable Part Number	NCV7705DQAR2G	NCV7705DQBR2G
Change in process technology	Current: Power Metal Nepes	New: Cu Power Metal Gresham
Change of datasheet parameters/electrical specification	See Datasheet NCV7705	See Datasheet NCV7705B-D_revP0

	From	To
Product marking change	NCV7705A	NCV7705B

Reason / Motivation for Change: Source/Supply/Capacity Changes

Anticipated impact on fit, form, function, reliability, product safety or manufacturability:

The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by onsemi in relation to the PCN, associated risks are verified and excluded.

No anticipated impacts.

Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi, Gresham United States	None

Marking of Parts/ Traceability of Change: New product release of NCV7705DQBR2G with new marking NCV7705B

Reliability Data Summary:

QV DEVICE NAME: NCV7705DQBR2G

RMS: B84921

PACKAGE: SSOP 36 – EP – Cu wire

Test	Specification	Condition	Interval	Results
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1000 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150°C	2000 hrs	0/231
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100 % max rated Vcc	48 hrs	0/2440
Preconditioning	J-STD-020 JESD-A113	Moisture soak JEDEC MSL = 3 (192 Hrs @ 30°C/60%RH) + Convection Reflow Soldering (3x @ 260°C)		0/231
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	1000 cyc	0/231
Highly Accelerated Stress Test	JESD22-A113 JESD22-A101	110°C, 85% RH, 18.8psig, bias	264 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A113 JESD22-A101	110°C, 85% RH, 18.8psig, unbiased	264 hrs	0/231

Refer to the attached AEC1 Pager for more details.

To view attachments:

1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file.

Electrical Characteristics Summary:

Electrical characteristics will be provide upon request.

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](#).

Current Part Number	New Part Number	Qualification Vehicle
NCV7705DQAR2G	NCV7705DQBR2G	NCV7705DQBR2G