



# Final Product/Process Change Notification

Document #:FPCN23934XA

Issue Date:19 Apr 2022

<b>Title of Change:</b>	BL401 polyimide material for ASEKH (Advanced Semiconductor Engineering Inc., Kaohsiung) WLCSP assembly
<b>Proposed First Ship date:</b>	26 Jul 2022 or earlier if approved by customer
<b>Contact Information:</b>	Contact your local onsemi Sales Office or <a href="mailto:Marek.Haluska@onsemi.com">Marek.Haluska@onsemi.com</a>
<b>PCN Samples Contact:</b>	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.
<b>Additional Reliability Data:</b>	Contact your local onsemi Sales Office or <a href="mailto:Vladislav.Hrachovec@onsemi.com">Vladislav.Hrachovec@onsemi.com</a>
<b>Type of Notification:</b>	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a>
<b>Marking of Parts/ Traceability of Change:</b>	Affected products will be traceable by date code
<b>Change Category:</b>	Assembly Change
<b>Change Sub-Category(s):</b>	Material Change

**Sites Affected:**

onsemi Sites	External Foundry/Subcon Sites
None	ASEKH, Taiwan (Kaohsiung)

**Description and Purpose:**

onsemi is announcing the addition of an alternate polyimide material (re-passivation layer) from Asahi Kasei's BL401 for ASEKH assembly site.

This is an alternate polyimide material only; there are no changes to the WLCSP package structure or polyimide thicknesses because of this change. There are no changes to electrical parameters or part marking due to this this alternate material.

The polyimide addition will apply to all devices shown in the affected part list (below), as well as future products released in this location.

Upon effectivity of this FPCN either passivation material may be utilized during manufacturing. Full traceability will be maintained, and there will be no mixing of materials within a lot.

	Polyimide Layer Before Change	Polyimide Layer After Change
PI layer name	HD4000E	HD4000E or BL401
Supplier name	HD Microsystems	HD Microsystems or Asahi Kasei



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## Reliability Data Summary:

QV DEVICE NAME: SCY99247CFCS120T2G

RMS#: S79642

PACKAGE: WLCSP-6\_567XZ

Test	Specification	Condition	Interval	Results
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	3x reflow	0/480
TC	JESD22-A104	Ta= -40°C to +125°C	1000 cyc	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
ED	ON Data Sheet	Test @ Cold & Room & Hot	Cpk ≥ 1.67	0/30
PD	JESD22-B100	Per case outline	Cpk > 1.67	0/30
SBS	AEC-Q100-010	Solder Ball Shear	Cpk > 1.67	Pass

QV DEVICE NAME: SCY99224AFCT115T2G

RMS#: S79641

PACKAGE: WLCSP-4\_567VS

Test	Specification	Condition	Interval	Results
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	3x reflow	0/480
TC	JESD22-A104	Ta= -40°C to +125°C	1000 cyc	0/240
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
ED	ON Data Sheet	Test @ Cold & Room & Hot	Cpk ≥ 1.67	0/30
PD	JESD22-B100	Per case outline	Cpk > 1.67	0/30
SBS	AEC-Q100-010	Solder Ball Shear	Cpk > 1.67	Pass

## Electrical Characteristics Summary:

Electrical characteristics are not impacted.

## 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
NCP110AFCT060T2G	SCY99224AFCT115T2G
NCP110AFCT080T2G	SCY99224AFCT115T2G
NCP110AFCT085T2G	SCY99224AFCT115T2G
NCP110AFCT100T2G	SCY99224AFCT115T2G
NCP110AFCT105T2G	SCY99224AFCT115T2G
NCP110AFCT110T2G	SCY99224AFCT115T2G
NCP110AFCT120T2G	SCY99224AFCT115T2G
NCP110AFCT180T2G	SCY99224AFCT115T2G
NCP110AFCT280T2G	SCY99224AFCT115T2G
NCP148AFCT180T2G	SCY99224AFCT115T2G
NCP148AFCT250T2G	SCY99224AFCT115T2G



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NCP148AFCT260T2G	SCY99224AFCT115T2G
NCP148AFCT270T2G	SCY99224AFCT115T2G
NCP148AFCT280T2G	SCY99224AFCT115T2G
NCP148AFCT285T2G	SCY99224AFCT115T2G
NCP160AFCT180T2G	SCY99224AFCT115T2G
NCP160AFCT285T2G	SCY99224AFCT115T2G
NCP160AFCT300T2G	SCY99224AFCT115T2G
NCP160AFCT330T2G	SCY99224AFCT115T2G
NCP160AFCTC330T2G	SCY99224AFCT115T2G
NCP160BFCT280T2G	SCY99224AFCT115T2G
NCP161AFCT180T2G	SCY99224AFCT115T2G
NCP161AFCT280T2G	SCY99224AFCT115T2G
NCP161AFCT300T2G	SCY99224AFCT115T2G
NCP167BFCT330T2G	SCY99224AFCT115T2G
NCP167AFCTC350T2G	SCY99224AFCT115T2G
NCP167AFCT350T2G	SCY99224AFCT115T2G
NCP167AFCT330T2G	SCY99224AFCT115T2G
NCP167AFCT295T2G	SCY99224AFCT115T2G
NCP167AFCT285T2G	SCY99224AFCT115T2G
NCP167AFCT180T2G	SCY99224AFCT115T2G
NCP163AFCT330T2G	SCY99224AFCT115T2G
NCP163AFCT2925T2G	SCY99224AFCT115T2G
NCP163AFCT285T2G	SCY99224AFCT115T2G
NCP163AFCT280T2G	SCY99224AFCT115T2G
NCP163AFCT180T2G	SCY99224AFCT115T2G
NCP161BFCT514T2G	SCY99224AFCT115T2G
NCP161BFCT280T2G	SCY99224AFCT115T2G
NCP161BFCT180T2G	SCY99224AFCT115T2G
NCP161AFCTC350T2G	SCY99224AFCT115T2G
NCP161AFCTC280T2G	SCY99224AFCT115T2G
NCP161AFCT330T2G	SCY99224AFCT115T2G
NCP161AFCT185T2G	SCY99224AFCT115T2G

**Appendix A: Changed Products**

**PCN#: FPCN23934XA**  
**Issue Date: Apr 19, 2022**

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NCP161AFCT330T2G		SCY99224AFCT115T2G		
NCP161AFCT280T2G		SCY99224AFCT115T2G		
NCP161AFCT180T2G		SCY99224AFCT115T2G		
NCP160AFCT330T2G		SCY99224AFCT115T2G		
NCP160AFCT300T2G		SCY99224AFCT115T2G		
NCP160AFCT180T2G		SCY99224AFCT115T2G		
NCP110AFCT060T2G		SCY99224AFCT115T2G		
NCP110AFCT080T2G		SCY99224AFCT115T2G		
NCP110AFCT100T2G		SCY99224AFCT115T2G		
NCP110AFCT120T2G		SCY99224AFCT115T2G		
NCP110AFCT180T2G		SCY99224AFCT115T2G		
NCP148AFCT180T2G		SCY99224AFCT115T2G		
NCP148AFCT250T2G		SCY99224AFCT115T2G		
NCP148AFCT260T2G		SCY99224AFCT115T2G		
NCP148AFCT270T2G		SCY99224AFCT115T2G		
NCP148AFCT280T2G		SCY99224AFCT115T2G		
NCP148AFCT285T2G		SCY99224AFCT115T2G		
NCP167BFCT330T2G		SCY99224AFCT115T2G		
NCP167AFCT330T2G		SCY99224AFCT115T2G		
NCP167AFCT285T2G		SCY99224AFCT115T2G		
NCP167AFCT180T2G		SCY99224AFCT115T2G		
NCP163AFCT330T2G		SCY99224AFCT115T2G		
NCP163AFCT280T2G		SCY99224AFCT115T2G		
NCP161BFCT280T2G		SCY99224AFCT115T2G		
NCP161BFCT180T2G		SCY99224AFCT115T2G		
NCP161AFCT300T2G		SCY99224AFCT115T2G		