



Final Product/Process Change Notification

Document #:FPCN24834X

Issue Date:29 Sep 2022

Title of Change:	Die Bonding Copper 2nd source qualification for KCC supplier with material and dimension change.	
Proposed First Ship date:	05 Jan 2023 or earlier if approved by customer	
Contact Information:	Contact your local onsemi Sales Office or NorlailiHanim.Nordin@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.	
Additional Reliability Data:	Contact your local onsemi Sales Office or ffxg4t@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. 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 PCN.Support@onsemi.com	
Marking of Parts/ Traceability of Change:	Changed material will be identified by date code	
Change Category:	Assembly Change	
Change Sub-Category(s):	Material Change	
Sites Affected:		
onsemi Sites	External Foundry/Subcon Sites	
onsemi Vietnam	None	
Description and Purpose:		
<p>This FPCN is to inform customers about the qualification of KCC DBC (die bonding copper). KCC DBC has different material and thickness compared to Rogers DBC. DBC material from HPS is Al₂O₃.</p> <p>KCC DBC will be used as 2nd source DBC supplier in onsemi Vietnam for TMPIM 650V 50A CIP/DIP-27 module production. Products have been qualified to industrial requirements.</p> <p>The affected assembly site is onsemi Vietnam.</p>		
	DBC before: Rogers DBC	DBC after: Rogers DBC and KCC DBC
DBC material	Rogers DBC: HPS material	Rogers DBC: HPS material KCC DBC: Al ₂ O ₃ material
DBC thickness	Rogers DBC: Cu Top: 0.50 mm Ceramic: 0.32 mm Cu Bottom: 0.50 mm	Rogers DBC: Cu Top: 0.50 mm Ceramic: 0.32 mm Cu Bottom: 0.50 mm KCC DBC: DBC thickness: Cu Top: 0.30 mm Ceramic: 0.63 mm Cu Bottom: 0.30 mm



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	DBC before: Rogers DBC	DBC after: Rogers DBC and KCC DBC
DBC Ni plating thickness	Ni plating thickness: 3-7 μm	Rogers DBC: Ni plating thickness: 3-7 μm KCC DBC: Ni plating thickness: 1-7 μm

No product marking change. Traceability as per date code of implementation.

Reliability Data Summary:

QV DEVICE NAME NXH50M65L4C2SG

RMS: V81139

PACKAGE: DIP27/CIP

Test	Specification	Condition	Interval	Results (KCC)
TC	JESD22-A104 cond. G, soak mode 4	Ta= -40°C to +125°C, Temperature soak = 30 min, Transition time = 20 min max	500, 1000 cyc	0/12

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
NXH50M65L4C2ESG	NXH50M65L4C2SG
NXH50M65L4C2SG	NXH50M65L4C2SG