



## Final Product/Process Change Notification

Document #:FPCN22976X

Issue Date:25 Jan 2022

Title of Change:	Capacity Expansion for Assembly and Test operations for onsemi Cebu SC70-6 package to onsemi Leshan Phoenix Semiconductor, China and add additional site for back metal to onsemi Niigata, Japan. The wafers for affected OPN will be added with passivation.	
Proposed First Ship date:	31 May 2022 or earlier if approved by customer	
Contact Information:	Contact your local onsemi Sales Office or <a href="mailto:York.Yu@onsemi.com">York.Yu@onsemi.com</a>	
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 <a href="mailto:ChangKit.Mok@onsemi.com">ChangKit.Mok@onsemi.com</a>	
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 <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a>	
Marking of Parts/ Traceability of Change:	Parts from Leshan Phoenix Semiconductor, China can be identified through product marking which follow onsemi marking format	
Change Category:	Test Change, Assembly Change, Wafer Fab Change	
Change Sub-Category(s):	Manufacturing Site Addition, Shipping/Packaging/Marking, Material Change, Manufacturing Process Change	
Sites Affected:		
onsemi Sites		External Foundry/Subcon Sites
Leshan Phoenix Semiconductor, China		None
onsemi Mountain Top, United States		
Description and Purpose:		
This Product Change Notification is to announce that onsemi is expanding Assembly and Test Operations of onsemi Cebu Semiconductor for SC70-6 (SC88) package to onsemi Leshan Phoenix Semiconductor, China.		
<ul style="list-style-type: none"><li>No change on existing OPN name. There will be separate BOMs for onsemi Cebu, Philippines and Leshan Phoenix Semiconductor, China.</li><li>Marking date code &amp; Tape/Reel &amp; Label will follow onsemi standard format.</li><li>Case Outline is still compatible with existing solder footprint.</li><li>These products will continue to be Pb-free, Halide free and RoHS compliant. Qualification tests are designed to show that the reliability of the impacted devices will continue to meet or exceed onsemi standards.</li></ul>		

Detail of changes is as per below table:

	Before Change Description	After Change Description	
Assembly & Test site	onsemi Cebu, Philippines	onsemi Cebu, Philippines	onsemi Leshan Phoenix Semiconductor, China
Lead Frame	Ag Plated LF	Ag Plated LF	Cu Plated LF
Mold Compound	CK5000A	CK5000A	Henkel GR640 HV L1
Case outline	419AD	419B-02	419B-02
Marking	Ex-FCS Format	onsemi format	onsemi format
Passivation on Die	Without passivation	Without passivation	With passivation
Back Grind & Back Metal Site	onsemi Bucheon, Korea	onsemi Bucheon, Korea	onsemi Niigata, Japan
Back metal type	TiNiAgSn Back metal	TiNiAgSn Back metal	Sintered Gold back metal

## Reliability Data Summary:

Reliability is passed, detail reliability report can be provided upon customer requirement.

**QV DEVICE NAME: FDG410NZ**

**RMS: F64276 / F79312**

**PACKAGE: SC88 (SC70-6L)**

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 80% max rated V	1008 hrs	0/240
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/240
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/240
IOL + PC	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cyc	0/240
TC + PC	JESD22-A104	Ta= -55°C to + 150°C	1000 cyc	0/240
HAST + PC	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/240
uHAST + PC	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/240
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	-	0/960
RSH	JESD22- B106	Ta = 265C, 10 sec	-	0/30

## Electrical Characteristics Summary:

Data is still comparable before / after changing, detail data can be provided upon customer requirement.



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### 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
FDG8850NZ	FDG410NZ
FDG8842CZ	FDG410NZ
FDG1024NZ	FDG410NZ