ON Semiconductor®

Initial Product/Process Change Notification

Document # : IPCN21576X
Issue Date: 16 December 2016

Title of Change:	Announcement of several changes to the CPH3105-TL-E product. Addition of passivation with changes to the pad design and top metal. Qualification of copper wire with changes to the lead frame and mold compound.
Proposed first ship date:	24 April 2017
Contact information:	Contact your local ON Semiconductor Sales Office or < Yasunari.Noguchi@onsemi.com>
Samples:	Contact your local ON Semiconductor Sales Office.
Type of notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. IPCNs are issued at least 30 days prior to the issuance of the Final Change Notice (FPCN). 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>.
Change Part Identification:	Affected products will be identified with date code.
Change category:	☒ Wafer Fab Change ☒ Assembly Change ☐ Test Change ☐ Other _____

Change Sub-Category(s):

☐ Manufacturing Site Change/Addition
☒ Manufacturing Process Change
☒ Material Change
☐ Product specific change
☐ Datasheet/Product Doc change
☐ Shipping/Packaging/Marking
☐ Other: _____

Sites Affected:

☐ All site(s) ☐ not applicable
☒ ON Semiconductor site(s) :
ON Niigata, Japan
ON Shenzhen, China
☐ External Foundry/Subcon site(s)
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Description and Purpose:

This is an Initial Process Change Notification to announce the following change.

ITEM		Before Change	After Change	Reason
Die	Pattern layout	Existing pad design	To change the position of bonding pads To add separated probe pads	Quality improvement
	Top metal	3.2um	5.5um	For copper wire
	Passivation	None	SiN+ Polyimide	Quality improvement
Wire		Gold	Copper	Stable supply
Mold compound		Halide	Halide Free	Environmental response
Lead frame		Large flag Wide post	Small flag Narrow post	Quality improvement

Qualification Plan:

QV DEVICE NAME: CPH3105-TL-E
PACKAGE: CPH3

Test	Specification	Condition	Interval	Quantity
HTRB	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs	231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	231
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc	231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, 80% bias	96 hrs	231
AC	JESD-A102	Tj=121°C, RH=100%, Pressure=15psig	96 hrs	231

PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C	
RSH	JESD22- B106	Ta = 265°C, 10 sec	90

Estimated date for qualification completion: **16 January 2017**

List of Affected Standard Parts:

Part Number	Qualification Vehicle
CPH3105-TL-E	CPH3105-TL-E