



Final Product/Process Change Notification

Document #:FPCN23071ZA

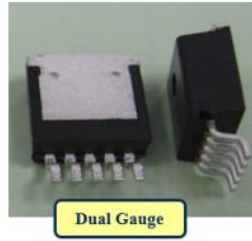
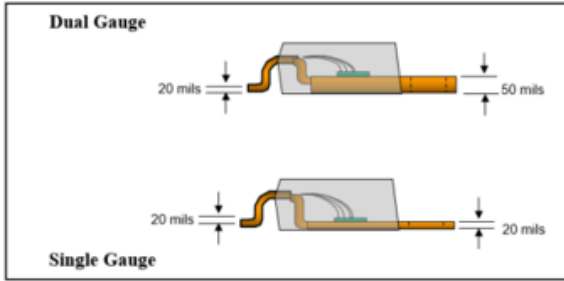
Issue Date: 29 Sep 2022

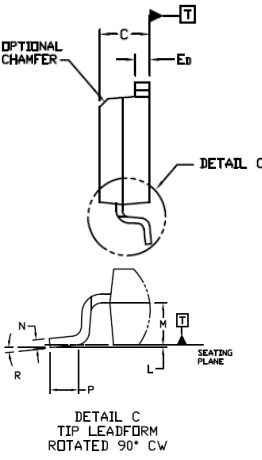
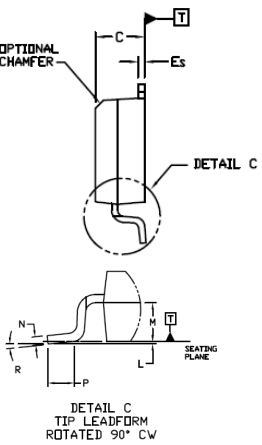
Title of Change:	The change is to improve product package robustness by changing of ICD2PAK 5LD from dual gauge to single gauge frame, change leadframe material from KFC material to HCL-12S, add in mold lock on the heatsink and change mold compound from G600 to G700HF.
Proposed Changed Material First Ship Date:	31 Aug 2023 or earlier if approved by customer
Current Material Last Order Date:	31 Jul 2023 <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:	30 Aug 2023 <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 AhmadFaris.Dzulkipli@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:	03 Oct 2022
PPAP Availability Date:	30 Sep 2023
Additional Reliability Data:	Contact your local onsemi Sales Office or AbdulRasyid.Ruslan@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 - Assembly	Change of mold compound, Change in leadframe dimensions, Change of direct material supplier, Change of leadframe base material

Description and Purpose:

To notify customers of the change in leadframe supplier from KOBE to SDI, change leadframe material from KFC to HCL-12S, heatsink thickness from 50mils to 20mils, add in mold lock design on heatsink and change mold compound from G600 to G700HF.

The change is to improve product package robustness.



Item	Before Change Description	After Change Description
LeadFrame	Leadframe supplier: KOBE Leadframe material: KFC Heatsink thickness: Dual Gauges (50mils) Heatsink area: No mold lock	Leadframe supplier: SDI Leadframe material: HCL-12S Heatsink thickness: Single Gauge (20mils) Heatsink area: add in mold lock
Mold Compound	G600 Compound supplier: Sumitomo	G700HF Compound supplier: Sumitomo
Package case outline	 <p>DETAIL C TIP LEADFORM ROTATED 90° CW</p> <p>CASE 936A-02 Issue D</p> <p>Heatsink Thickness ED: 1.143-1.397mm Package thickness (C): 4.318-4.572mm</p>	 <p>DETAIL C TIP LEADFORM ROTATED 90° CW</p> <p>CASE 936A-02 Issue E</p> <p>Heatsink Thickness Es: 0.457-0.660mm Package thickness (C): 4.318-4.572mm *Detail C and all the other dimension remain same.</p>

There is no product marking change as a result of this change.

Reason / Motivation for Change:	Quality improvement			
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 Seremban, Malaysia			None	
Marking of Parts/ Traceability of Change:	Date Code, Lead frame thickness, Mold lock design			
Reliability Data Summary:				
QV DEVICE NAME: NCV59301DS25R4G RMS: S79205 PACKAGE: ICD2PAK 5LD				
Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	2016 hrs	0/231
TC	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/231
HAST	JESD22-A110	110°C, 85% RH, 18.8psig, bias	528 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @ 260 °C		0/693
RSH	JESD22- B106	Ta = 265C, 10 sec		0/90
SD	JSTD002	Ta = 245C, 5 sec		0/ 45
ELFR	AEC-Q100-008	TA= 125°C , 48hrs		0/2400
NOTE: AEC-1pager is attached.				
<i>To view attachments:</i> 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/s				
Electrical Characteristics Summary:				
Electrical characteristics are not impacted.				



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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**.

Current Part Number	New Part Number	Qualification Vehicle
NCV5662DSADJR4G	N/A	NCV59301DS25R4G
NCV57152DSADJR4G	N/A	NCV59301DS25R4G
NCV57302DSADJR4G	N/A	NCV59301DS25R4G
NCV59151DS18R4G	N/A	NCV59301DS25R4G
NCV59151DS28R4G	N/A	NCV59301DS25R4G
NCV59151DS30R4G	N/A	NCV59301DS25R4G
NCV59301DS25R4G	N/A	NCV59301DS25R4G
NCV59301DS30R4G	N/A	NCV59301DS25R4G
NCV2931ACD2TR4G	N/A	NCV59301DS25R4G
NCV2575D2T-5R4G	N/A	NCV59301DS25R4G
NCV2575D2T-12R4G	N/A	NCV59301DS25R4G