

Title of Change:	PQFN_33CLP Large Die Device Metal Clip + Gate Wire Conversion Qualification.
Proposed First Ship date:	23 Mar 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Joseph.Mendoza@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 Aileen.Allado@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:	Affected products will be identified with date code.
Change Category:	Assembly Change
Change Sub-Category(s):	Shipping/Packaging/Marking, Datasheet/Product Doc change, Material Change, Manufacturing Process Change

Sites Affected:

onsemi Sites

onsemi Cebu, Philippines

External Foundry/Subcon Sites

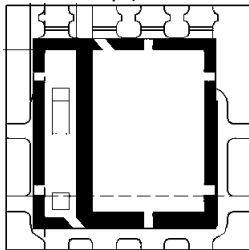
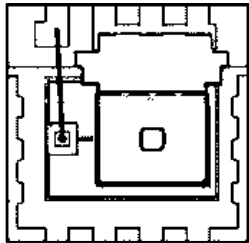
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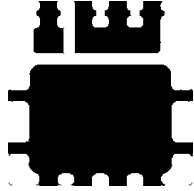
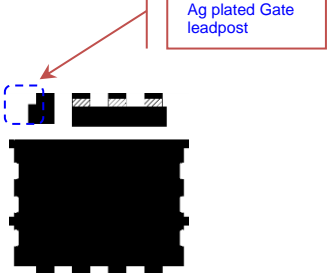
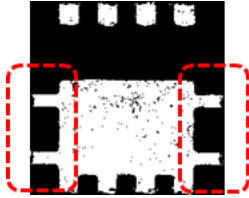

Description and Purpose:

Conversion of PQFN_33CLP from using Pre-Molded Clip to Metal Clip with Cu Gate wire to improve Gate leadpost interconnection.

The conversion will entail the following assembly process and package dimension changes:

1. Change of Clip from Saw Singulated Pre-molded Clip to Punch Singulated Metal Clip, and addition of Wirebond process for Gate wire.
2. Removal of exposed tie bars at bottom part of package and change in overall package thickness from 0.90-1.05mm to 0.75-0.85mm

Material to be changed	Before Change Description	After Change Description
Clipframe	Pre-molded Clip (0.254mm thick) 	Bare Metal Clip (0.127mm thick) with 2mil Pd coated Cu (PCC) Gate Wire 
Leadframe	Leadframe without plating on Gate leadpost Die Attach Pad Dimensions: 2.667x2.032mm Source Leadpost Pad Dimensions: 1.62x0.47mm Gate Leadpost Pad Dimensions: 0.58x0.47mm	Leadframe with Spot Ag plating on Gate leadpost for Cu wire bonding purposes Die Attach Pad Dimensions: 2.898x2.261mm Source Leadpost Pad Dimensions: 1.705x0.35mm

	 <p>Top View</p>	<p>Gate Leadpost Pad Dimensions: 0.46x0.35mm</p>  <p>Top View</p>
<p>Package Case Outline</p>	<p>Presence of exposed tie bars at bottom part of package.</p> <p>Case 483AK with Dim A (Package thickness) at 0.90-1.05mm</p>  <p>Bottom View (Package Outline)</p>	<p>No exposed tie bars at bottom part of package.</p> <p>Case 483AW with Dim A (Package thickness) at 0.75-0.85mm</p>  <p>Bottom View (Package Outline)</p>

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

Reliability Data Summary:

QV DEVICE NAME: FDMS8321L

RMS: F77016, F84224

PACKAGE: PQFN_33CLP

Test	Specification	Condition	Interval	Results
HTRB	JESD22-A108	Ta=150°C, 80% max rated V	1008 hrs	0/231
HTGB	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0/231
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/231
PC	J-STD-020 JESD-A113	MSL 1 @150°C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only		0/693
IOL	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cyc	0/231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
RSH	JESD22- B106	Ta = 265°C, 10 sec Required for through hole devices only		0/30



Final Product/Process Change Notification

Document #: FPCN23091X

Issue Date: 08 Dec 2022

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
FDMC7660S	FDMC8321L
FDMC7570S	FDMC8321L
FDMC86248	FDMC8321L
FDMC8588	FDMC8321L
FDMC8321L	FDMC8321L
FDMC7660-P	FDMC8321L
FDMC7660	FDMC8321L
FDMC610P	FDMC8321L

Appendix A: Changed Products

PCN#: FPCN23091X
Issue Date: Dec 08, 2022

DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
FDMC7660S		FDMC8321L		
FDMC86248		FDMC8321L		
FDMC8588		FDMC8321L		
FDMC8321L		FDMC8321L		
FDMC7660		FDMC8321L		
FDMC610P		FDMC8321L		
FDMC7570S		FDMC8321L		