



Initial Product/Process Change Notification

Document #: IPCN25616Z

Issue Date: 02 Oct 2023

Title of Change:	TOLL Standard Leadframe, Die Attach Material, EMC Change and Plasma Clean/ Adhesion Promoter (AP)Coat Removal.	
Proposed Changed Material First Ship Date:	23 May 2024 or earlier if approved by customer	
Current Material Last Order Date:	N/A <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:	N/A <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 – Discrete components	
Contact information:	Contact your local onsemi Sales Office or Joseph.Mendoza@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.	
Additional Reliability Data:	Contact your local onsemi Sales Office or Aileen.Allado@onsemi.com	
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. 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 6 months prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >.	
Change Category		
Category	Type of Change	
Process - Assembly	Die attach material, Change of direct material supplier, Change of lead frame finishing material / area (internal), Change of specified assembly process sequence (deletion and/or additional process step), Change of encapsulation/sealing material	
Description and Purpose:		
Changes in leadframe, die attach material, epoxy molding compound, and removal of adhesion promoter and pre-molding step.		
	Before Change Description	After Change Description
LeadFrame	With Selective Ni/NiP plated Die Attach Pad (DAP) and leadposts	With Selective Ni plated leadposts only and bare Cu DAP
Die Attach	95.5PbSn2Ag2.5 solder composition	92.5Pb5Sn2.5Ag solder composition
Pre-molding Steps	With Plasma Clean, Adhesion Promoter (AP) Spray Coating, and Curing	None
Adhesion Promoter	AP8000	None
Mold Compound	CEL9240HF10LS	EME-G700HF
There is no product marking change as a result of this change.		



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Reason / Motivation for Change:	Cost improvement, Process/Materials Change
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device will be qualified and validated based on the same Product Specification. No anticipated impacts.

Sites Affected:	
onsemi Sites	External Foundry/Subcon Sites
onsemi Cebu, Philippines	None

Marking of Parts/ Traceability of Change:	Affected products will be identified with date code
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Reliability Data Summary:

QV DEVICE NAME: FDBL86361-F085

RMS: F93036

PACKAGE: F385 | CUST8 AL SNGL HPBF

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 175°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

QV DEVICE NAME: FDBL86210-F085

RMS: F93454

PACKAGE: F385 | CUST8 AL SNGL HPBF

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 175°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc



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Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

QV DEVICE NAME: NVBLS4D0N15MC

RMS: F93040

PACKAGE: F385 | CUST8 AL SNGL HPBF

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 175°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

QV DEVICE NAME: NTBLS0D7N06C

RMS: F94024

PACKAGE: F385 | CUST8 AL SNGL HPBF

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 175°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

QV DEVICE NAME: NVBLS1D1N08H

RMS: F93038

PACKAGE: F385 | CUST8 AL SNGL HPBF

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 175°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

QV DEVICE NAME: NTBLS0D8N08XTXG

RMS: F94025

PACKAGE: F385 | CUST8 AL SNGL HPBF

Test	Specification	Condition	Interval
High Temperature Reverse Bias	JESD22-A108	Ta=175°C, 100% max rated V	1008 hrs
High Temperature Gate Bias	JESD22-A108	Ta=175°C, 100% max rated Vgss	1008 hrs
High Temperature Storage Life	JESD22-A103	Ta= 175°C	1008 hrs
Preconditioning	J-STD-020 JESD-A113	MSL1 @ 260 °C	
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15000 cyc
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs
Solderability	JSTD002	Ta = 245°C, 5 sec	
Physical Dimension	JESD22-B120		

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
FDBL9401-F085T6	NA	NTBLS0D7N06C
FDBL9403-F085T6	NA	NTBLS0D7N06C
FDBL9406-F085T6	NA	NTBLS0D7N06C
NTBLS0D7N06C	NA	NTBLS0D7N06C
NTBLS001N06C	NA	NTBLS0D7N06C
NVBLS0D5N04CTXG	NA	NTBLS0D7N06C
NVBLS0D7N06C	NA	NTBLS0D7N06C
NVBLS001N06C	NA	NTBLS0D7N06C
FDBL0200N100	NA	NVBLS4D0N15MC
FDBL86062-F085	NA	NVBLS4D0N15MC
FDBL86063	NA	NVBLS4D0N15MC
FDBL86063-F085	NA	NVBLS4D0N15MC
FDBL86066-F085	NA	NVBLS4D0N15MC
NTBLS1D5N08MC	NA	NVBLS4D0N15MC
NTBLS1D5N10MCTXG	NA	NVBLS4D0N15MC
NTBLS1D7N10MCTXG	NA	NVBLS4D0N15MC
NTBLS002N08MC	NA	NVBLS4D0N15MC
NTBLS4D0N15MC	NA	NVBLS4D0N15MC
NVBLS1D5N10MCTXG	NA	NVBLS4D0N15MC
NVBLS1D7N10MCTXG	NA	NVBLS4D0N15MC
NTBLS0D8N08XTXG	NA	NTBLS0D8N08XTXG
NVBLS1D7N08H	NA	NVBLS1D1N08H
NVBLS1D1N08H	NA	NVBLS1D1N08H
NTBLS1D7N08H	NA	NVBLS1D1N08H
NTBLS1D1N08H	NA	NVBLS1D1N08H
FDBL86566-F085	NA	FDBL86361-F085
FDBL86563-F085	NA	FDBL86361-F085
FDBL86561-F085	NA	FDBL86361-F085
FDBL86366-F085	NA	FDBL86361-F085
FDBL86363-F085	NA	FDBL86361-F085



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FDBL86361-F085	NA	FDBL86361-F085
FDBL9406-F085	NA	FDBL86361-F085
FDBL9403-F085	NA	FDBL86361-F085
FDBL9401-F085	NA	FDBL86361-F085
FDBL0330N80	NA	FDBL86361-F085
FDBL0210N80	NA	FDBL86361-F085
FDBL0150N80	NA	FDBL86361-F085
FDBL0150N60	NA	FDBL86361-F085
FDBL0120N40	NA	FDBL86361-F085
FDBL0110N60	NA	FDBL86361-F085
FDBL0090N40	NA	FDBL86361-F085
FDBL0065N40	NA	FDBL86361-F085
FDBL86210-F085	NA	FDBL86210-F085
FDBL0630N150	NA	FDBL86210-F085
FDBL0260N100	NA	FDBL86210-F085
FDBL0240N100	NA	FDBL86210-F085
NVBLS4D0N15MC	NA	NVBLS4D0N15MC