ON Semiconductor®

Final Product/Process Change Notification

Document #:FPCN23475X
Issue Date:11 Nov 2020

Title of Change:	Addition of Selective Ag Plated on LF (Spot Ag on Gate Leadpost of LSFET Die)
Proposed First Ship date:	17 Feb 2021 or earlier if approved by customer
Contact Information:	Contact your local ON Semiconductor Sales Office or Rodrigo.Milana.Jr@onsemi.com
PCN Samples Contact:	Contact your local ON Semiconductor Sales Office or <PCN.samples@onsemi.com>. 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 ON Semiconductor Sales Office or Abegail.Gavilo@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. ON Semiconductor 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:	Through date code cut-off
Change Category:	Assembly Change
Change Sub-Category(s):	Material Change

Sites Affected:

ON Semiconductor Sites	**External Foundry/Subcon Sites**
ON Semiconductor Cebu, Philippines	None

Description and Purpose:

Qualification of Selective Ag Plated with treatment on LF (Spot Ag on Gate Lead post of LSFET Die) on PQFN 56 Multiphase Package to improve Gate Pad Solder Void performance. The qualification will entail the following changes:

	Before Change Description	**After Change Description**
LeadFrame Finishing (Gate Pad Lead & Other Solderable Area)	No Ag plating	Selective Ag plating

- There are no product material changes for wire, clip, solder & mold compound as a result of this change.

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

Reliability Data Summary:

QV DEVICE NAME: NTMFD001N03P9
RMS# : F70141
PACKAGE : PQFN 5X6

Test	Specification	Condition	Interval	Results
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/ 231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/ 231
HAST (Die 1)	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/ 231
HAST (Die 2)	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
PC	J-STD-020, JESD22-A113	MSL 1 @ 260°C	-	0/924
SD	JSTD002	Ta = 245°C, ±5 sec	-	0/45
DPA	AEC Q101-004 Section 4	Destructive Physical Analysis after TC1000 cycles	-	0/6
DPA	AEC Q101-004 Section 4	Destructive Physical Analysis after HAST192 hours (Die 1)	-	0/6
DPA	AEC Q101-004 Section 4	Destructive Physical Analysis after HAST192 hours (Die 2)	-	0/6

QV DEVICE NAME: NTMFD0D9N02P1E
RMS# : F70139
PACKAGE : PQFN 5X6

Test	Specification	Condition	Interval	Results
HTSL	JESD22-A103	Ta= 150°C	1008 hrs	0/ 231
TC	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/ 231
HAST (Die 1)	JESD22-A110	130°C, 85% RH, 18.8psig, bias	192 hrs	0/ 231
HAST (Die 2)	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
PC	J-STD-020, JESD22-A113	MSL 1 @ 260°C	-	0/924
SD	JSTD002	Ta = 245°C, ±5 sec	-	0/45
DPA	AEC Q101-004 Section 4	Destructive Physical Analysis after TC1000 cycles	-	0/6
DPA	AEC Q101-004 Section 4	Destructive Physical Analysis after HAST192 hours (Die 1)	-	0/6
DPA	AEC Q101-004 Section 4	Destructive Physical Analysis after HAST192 hours (Die 2)	-	0/6

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
FDPC8016S-B801	NTMFD001N03P9, NTMFD0D9N02P1E