



## Final Product/Process Change Notification

Document #:FPCN26212X

Issue Date:23 Dec 2024

<b>Title of Change:</b>	Qualification of onsemi ISMF FAB (Malaysia) and ATO site onsemi Leshan (China) for PIN diode housed in X3DFN package.
<b>Proposed First Ship date:</b>	31 Mar 2025 or earlier if approved by customer
<b>Contact Information:</b>	Contact your local onsemi Sales Office
<b>PCN Samples Contact:</b>	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.
<b>Additional Reliability Data:</b>	Contact your local onsemi Sales Office
<b>Type of Notification:</b>	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 <a href="mailto:PCN.Support@onsemi.com">PCN.Support@onsemi.com</a>
<b>Marking of Parts/ Traceability of Change:</b>	Changed material can be identified by assembly plant code and lot code which follow onsemi marking format.
<b>Change Category:</b>	Wafer Fab Change, Assembly Change
<b>Change Sub-Category(s):</b>	Manufacturing Site Transfer, Manufacturing Process Change, Material Change, Shipping/Packaging/Marking

### Sites Affected:

onsemi Sites	External Foundry/Subcon Sites
onsemi Leshan, China	None
onsemi, ISMF Malaysia	

### Description and Purpose:

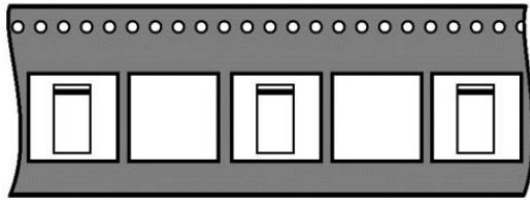
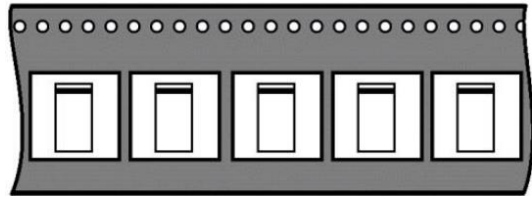
This final notification announces the qualification of the onsemi ISMF fab (Malaysia) and Assembly and Test Site of onsemi Leshan (China) for PIN diode devices packaged in the X3DFN package.


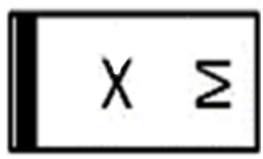
Both the onsemi ISMF fab and onsemi Leshan (China) are existing qualified manufacturing sites for onsemi, certified with IATF16949:2016 and ISO/TS 16949:2009, respectively.

Included in the change are several bill of material changes to standardize the BOM, aligning it with the existing onsemi diode product family.

### X3DFN package

	From	To	
<b>Fab Site</b>	JS Foundry, Japan	JS Foundry, Japan	onsemi, ISMF Malaysia
<b>Backgrind process site</b>	JS Foundry, Japan	JS Foundry, Japan	onsemi, ISMF Malaysia
<b>Wafer probe site</b>	JS Foundry, Japan	JS Foundry, Japan	onsemi, ISMF Malaysia
<b>Wafer front metal</b>	2.5 um Al	2.5 um Al	2um AiSi
<b>Wafer back metal</b>	8kA Au	8kA Au	11.5kA TiNiVAg
<b>Assembly and Test Site</b>	onsemi Seremban, Malaysia	onsemi Leshan, China	
<b>Bond Wire</b>	0.8 mils Au wire	0.8 mils Cu wire	

Leadframe	NiPdAuPd	AuNiAg
Die attach	CDAF515	8008HT
Mold compound	G760	G750N
Device Taping	 with Dummy pockets	 Without Dummy pockets
Product Packing	MPQ Quantity: 10,000 Full Box Container Quantity: 100,000	MPQ Quantity: 15,000 Full Box Container Quantity: 150,000

	From	To
Product marking change for X3DFN package	 X = Specific Device code M = Date code	 X = Specific Device code M = Date code

Reliability Data Summary:

QV DEVICE NAME : SNSDP301MX3T5G (ISMF)

RMS : S96826 / L101781

PACKAGE : X3DFN

Test	Specification	Condition	Interval	Results
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/231
Preconditioning	J-STD-020 / JESD-A113	MSL 1@260°C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only	-	0/924
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/30



## Final Product/Process Change Notification

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QV DEVICE NAME : SNSDP301MX3T5G (JSF)

RMS : L93349

PACKAGE : X3DFN

Test	Specification	Condition	Interval	Results
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/231
Preconditioning	J-STD-020 / JESD-A113	MSL 1@260°C, Pre IOL, TC, uHAST, HAST for surface mount pkgs only	-	0/924
Intermittent Operating Life	MIL-STD-750 (M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 2 min	15,000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C	1000 cyc	0/231
Highly Accelerated Stress Test	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231
Resistance to Solder Heat	JESD22- B106	Ta = 265°C, 10 sec	-	0/30

### 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
NSDP301MX3T5G	SNSDP301MX3T5G