Final Product/Process Change Notification

Document #:FPCN24888Z
Issue Date:12 Jul 2023

Title of Change:	DPAK case outline 369C - Assembly and Test Qualification to JCET Semiconductor (Suqian) Co.Ltd., China for Capacity Expansion
Proposed Changed Material First Ship Date:	16 Jan 2024 or earlier if approved by customer
Current Material Last Order Date:	N/A *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*.
Current Material Last Delivery Date:	N/A *The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory*
Product Category:	Active components – Discrete components
Contact information:	Contact your local onsemi Sales Office or Nor'Ain.Lotepi@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:	30 Sep 2023
PPAP Availability Date:	31 Jul 2023
Additional Reliability Data:	Contact your local onsemi Sales Office or MohdAzizi.Azman@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
Test Flow	Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor
Process - Assembly	Move of all or part of assembly to a different location/site/subcontractor., Change of mold compound, Die attach material

Description and Purpose:

This Final Notification announces to customers the qualification of new assembly and final test site of DPAK package (Case Outline 369C) products to JCET Semiconductor (Suqian) Co.Ltd., China for capacity expansion.

	Before Change	After Change	
Assembly & Final Test Site	onsemi Seremban, Malaysia	onsemi Seremban, Malaysia	JCET Semiconductor (Suqian) Co.Ltd.
LeadFrame	LF DPAK SINGLE GAUGE	LF DPAK SINGLE GAUGE	Single Gauge, Ni plating
Die Attach	Pb95Sn5	Pb95Sn5	92.5%Pb,2.5%Sn,5%Ag
Mold Compound	G700HF	G700HF	CEL-9240HF10

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Reason / Motivation for Change:	Capacity 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	JCET, China

Marking of Parts/ Traceability of Change:	Changed material can be identified by assembly plant code.

Reliability Data Summary:

QV DEVICE NAME : NSV50350ADT4G
RMS: S85513 and S88009
PACKAGE: DPAK

Test	Specification	Condition	Interval	Results
High Temperature Operation Life	JESD22-A108	Ta=125°C, 100% max rated V	1008 hrs	0/231
Early Life Failure Rate	JESD22-A108	Ta=125°C, 100% max rated V	48 hrs	0/1230
High Temperature Storage Life	JESD22-A103	Ta=175°C	2016 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	30000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C, mount on board	1000 cyc	0/231
Temperature Humidity Bias	JESD22-A101	85°C, 85% RH, biased	2016 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 = 268°C, 10 sec Required for through hole devices only		0/90
Solderability	JSTD002	Ta = 245°C, 5 sec		0/45
Physical Dimensions	JESD22-B120			0/10

Refer to the attached AEC1 Pager for more details.

To view attachments:
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.

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
NSV50350ADT4G	NA	NSV50350ADT4G