Final Product/Process Change Notification

Document #:FPCN25132XA
Issue Date:20 Jul 2023

Title of Change:	TO247 Assembly and Test Qualification of Shantou Huashan (SHEDCL), China for capacity expansion.
Proposed First Ship date:	30 Oct 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Jeanie.Wang@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 Lalan.Ortega@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:	The traceability of marking will be maintained by assembly plant code, date code and lot code.
Change Category:	Test Change, Assembly Change
Change Sub-Category(s):	Manufacturing Site Addition

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
None	SHANTOU HUASHAN Electronic Devices Co., Ltd., China

Description and Purpose:

This Product Change Notification is to announce qualification of TO247 assembly and test sites at Shantou Huashan (SHEDCL), China.

There are no changes in product electrical performances and specifications.

	Before Change Description	**After Change Description**	
Assembly Site	onsemi Suzhou (ONSZ)	onsemi Suzhou (ONSZ)	Shantou Huashan (SHEDCL)
Test Site	onsemi Suzhou (ONSZ)	onsemi Suzhou (ONSZ)	Shantou Huashan (SHEDCL)
Die Attach (For all devices of the list)	Use Pb base solder, DA SLDR WIRE PB92.5SN5AG2.5	Use Pb base solder, DA SLDR WIRE PB92.5SN5AG2.5	Change to Pb-free solder, DA SLDR WIRE SN80AG20

The traceability of marking will be maintained by assembly plant code, data code and lot code.

Reliability Data Summary:

QV DEVICE NAME: NTHL019N65S3H
RMS: U88933, O89274, S89281, U90617
PACKAGE: TO-247

Test	Specification	Condition	Interval	Results
High Temperature Reverse Bias	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0 / 231
High Temperature Gate Bias	JESD22-A108	Ta=150°C, 100% max rated Vgss	1008 hrs	0 / 231
High Temperature Storage Life	JESD22-A103	Ta=150°C	1008 hrs	0 / 231
Intermittent Operating Life	MIL-STD-750(M1037) AEC-Q101	Ta=+25°C, delta Tj=100°C On/off = 5.0 min	6000 cyc	0 / 120
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 = 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	Per case outline		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
NTHL125N65S3H	NTHL019N65S3H
NTHL095N65S3H	NTHL019N65S3H
NTHL067N65S3H	NTHL019N65S3H
NTHL019N65S3H	NTHL019N65S3H