



# Final Product/Process Change Notification

Document #:FPCN24888XA

Issue Date:14 Mar 2023

<b>Title of Change:</b>	DPAK case outline 369C - Assembly and Test Qualification to JCET Semiconductor (Suqian) Co.Ltd., China for Capacity Expansion
<b>Proposed First Ship date:</b>	07 Jul 2023 or earlier if approved by customer
<b>Contact Information:</b>	Contact your local onsemi Sales Office or <a href="mailto:SitiNurhaza.MohdRamli@onsemi.com">SitiNurhaza.MohdRamli@onsemi.com</a> or <a href="mailto:Rafidah.MohdRasid@onsemi.com">Rafidah.MohdRasid@onsemi.com</a>
<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 or <a href="mailto:MohdAzizi.Azman@onsemi.com">MohdAzizi.Azman@onsemi.com</a>
<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.
<b>Change Category:</b>	Test Change, Assembly Change
<b>Change Sub-Category(s):</b>	Material Change, Manufacturing Site Transfer

**Sites Affected:**

**onsemi Sites**

None

**External Foundry/Subcon Sites**

JCET, China

**Description and Purpose:**

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

	Before Change		After Change		
	onsemi Seremban, Malaysia	onsemi Vietnam	onsemi Seremban, Malaysia	onsemi Vietnam	JCET Semiconductor (Suqian) Co.Ltd.
Assembly Site	onsemi Seremban, Malaysia	onsemi Vietnam	onsemi Seremban, Malaysia	onsemi Vietnam	JCET Semiconductor (Suqian) Co.Ltd.
LeadFrame	LF DPAK SINGLE GAUGE	LF DPAK SINGLE GAUGE	LF DPAK SINGLE GAUGE	LF DPAK SINGLE GAUGE	Single Gauge, Ni plating
Die Attach	Pb95Sn5	Pb95Sn5	Pb95Sn5	Pb95Sn5	92.5%Pb,2.5%Sn,5%Ag
Mold Compound	G700HF GE 8000CH4ES	G700HF GE 8000CH4ES	G700HF GE 8000CH4ES	G700HF GE 8000CH4ES	CEL-9240HF10



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## Reliability Data Summary:

**QV DEVICE NAME: MURHD560T4G**

**RMS: S84192**

**PACKAGE: DPAK**

Test	Specification	Condition	Interval	Results
High	JESD22-A108	Ta=150°C, 100% max rated V	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre IOL, TC, uHAST, H3TRB 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 = 2min	15000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/231
High Humidity High Temperature Reverse Bias	JESD22-A101	85°C, 85% RH, bias	1008 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 Required for through hole devices only		0/90
Solderability	JSTD002	Ta = 245°C, 5 sec		0/45
Physical Dimensions	JESD22-B120			0/10

**QV DEVICE NAME: MBRD5H100T4G**

**RMS: S84190, S86500**

**PACKAGE: DPAK**

Test	Specification	Condition	Interval	Results
Early Life Failure Rate	JESD22-A108	Ta=90°C, 100% max rated V	48 hrs	0/3320
High Temperature Reverse Bias	JESD22-A108	Ta=90°C, 100% max rated V	1008 hrs	0/231
High Temperature Storage Life	JESD22-A103	Ta= 150C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre IOL, TC, uHAST, H3TRB 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 = 2min	15000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/231
High Humidity High Temperature Reverse Bias	JESD22-A101	85°C, 85% RH, bias	1008 hrs	0/231
Unbiased Highly Accelerated Stress Test	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs	0/231



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Resistance to Solder Heat	JESD22- B106	Ta = 265°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

**QV DEVICE NAME: NTD25P03LT4G**

**RMS: S84104**

**PACKAGE: DPAK**

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= 150C	1008 hrs	0/231
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C, Pre IOL, TC, uHAST, H3TRB 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 = 2min	15000 cyc	0/231
Temperature Cycling	JESD22-A104	Ta= -55°C to +150°C, mount on board	1000 cyc	0/231
High Humidity High Temperature Reverse Bias	JESD22-A101	85°C, 85% RH, bias	1008 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 Required for through hole devices only		0/90
Solderability	JSTD002	Ta = 245°C, 5 sec		0/45
Physical Dimensions	JESD22-B120			0/10



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**NOTE 2: Parts list section below will be automatically populated based on PCN Creator's inputs in PCN System.**

## 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
NTD14N03RT4G	NTD25P03LT4G
NTD20N03L27T4G	NTD25P03LT4G
NTD25P03LT4G	NTD25P03LT4G
MBRD5H100T4G	MBRD5H100T4G
MBRD330RLG	MBRD5H100T4G
MBRD340T4G	MBRD5H100T4G
MBRD350T4G	MBRD5H100T4G
MBRD360T4G	MBRD5H100T4G
MBRD620CTT4G	MBRD5H100T4G
MBRD640CTT4G	MBRD5H100T4G
MBRD650CTT4G	MBRD5H100T4G
MURHD560W1T4G	MURHD560T4G
MURHD560T4G	MURHD560T4G
MURD620CTT4G	MURHD560T4G
MURD550PFT4G	MURHD560T4G
MURD320T4G	MURHD560T4G
MSRD620CTT4RG	MURHD560T4G
MSRD620CTT4G	MURHD560T4G
MBRD1045T4G	MBRD5H100T4G
MBRD1035CTLT4G	MBRD5H100T4G
MBRD835LT4G	MBRD5H100T4G
MBRD660CTT4G	MBRD5H100T4G

**Appendix A: Changed Products**

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
NTD14N03RT4G		NTD25P03LT4G		
NTD25P03LT4G		NTD25P03LT4G		
MBRD5H100T4G		MBRD5H100T4G		
MBRD340T4G		MBRD5H100T4G		
MBRD350T4G		MBRD5H100T4G		
MBRD360T4G		MBRD5H100T4G		
MBRD620CTT4G		MBRD5H100T4G		
MBRD640CTT4G		MBRD5H100T4G		
MBRD650CTT4G		MBRD5H100T4G		
MURHD560W1T4G		MURHD560T4G		
MURHD560T4G		MURHD560T4G		
MURD620CTT4G		MURHD560T4G		
NTD20N03L27T4G		NTD25P03LT4G		
MURD320T4G		MURHD560T4G		
MURD550PFT4G		MURHD560T4G		
MSRD620CTT4RG		MURHD560T4G		
MBRD1045T4G		MBRD5H100T4G		
MSRD620CTT4G		MURHD560T4G		
MBRD835LT4G		MBRD5H100T4G		
MBRD1035CTLT4G		MBRD5H100T4G		
MBRD660CTT4G		MBRD5H100T4G		