PCN Number:	20170112001	**PCN Date:**	Jan 16 2017
Title:	Die Coating change for Select Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	April 16 2017	**Estimated Sample Availability:**	Date provided at sample request

Change Type:

☐	Assembly Site	☐	Design	☐	Wafer Bump Site
☒	Assembly Process	☐	Data Sheet	☐	Wafer Bump Material
☒	Assembly Materials	☐	Part number change	☐	Wafer Bump Process
☐	Mechanical Specification	☐	Test Site	☐	Wafer Fab Site
☐	Packing/Shipping/Labeling	☐	Test Process	☐	Wafer Fab Materials
				☐	Wafer Fab Process

PCN Details

Description of Change:

This notification is to announce the change in die coat material set for the 2 groups of devices noted below as follows:

Group 1 Devices

Current	Proposed
Die Overcoat	No Die overcoat

Group 2 Devices:

Current	Proposed
Polyimide Overcoat	PBO overcoat

Reason for Change:

Group 1: Die Coat not needed with Current Material Set
Group 2: Move to standardized material set

Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):

None

Anticipated impact on Material Declaration

☐	No Impact to the Material Declaration	☒	Material Declarations or Product Content reports are driven from production data and will be available following the production release. Upon production release the revised reports can be obtained from the TI ECO website.

Changes to product identification resulting from this PCN:

None

Product Affected:

Group #1 Device List:

TL032ACD	TL032AID	TL052ACD	TL052AID
TL032ACDR	TL032AIDR	TL052ACDR	TL052AIDR

Group #2 Device List:

HDC1000YPAR	HDC1008YPAR	HDC1050DMBR	HDC1050DMBT
HDC1000YPAT	HDC1008YPAT		

Group #1 Qualification Data:

Reference Qualification Data: Approved September, 2012

Qualification Vehicle: LM358DR (MSL 1-260C)

Package / Die Construction Details

Assembly Site:	TI Mexico	Mold Compound:	4211880
# Pins-Designator, Family:	8-D, SOIC	Mount Compound:	4147858
Leadframe (Finish, Base):	NiPdAu, Cu	Bond Wire:	0.96 Mil Dia., Cu

Qualification: ☐ **Plan** ☒ **Test Results**

Reliability Test	Conditions	Sample Size (PASS/FAIL)		
		Lot#1	Lot#2	Lot#3
Steady-state Life Test	150C (168, 300 hrs)	77/0	-	-
Electrical Characterization	-	30/0	-	-
**High Temp. Storage Bake	170C (420hrs)	77/0	-	-
**Biased HAST	130C/85%RH (96 Hrs)	77/0	-	-
**Autoclave 121C	121C, 2 atm (96 Hrs)	77/0	-	-
**T/C -65C/150C	-65C/+150C (500, 1000* Cyc)	77/0	77/0	77/0
Visual / Mechanical	-	328/0	-	-
Lead Pull	# of leads to destruction, min. 3 units	22/0	-	-
Bond Strength	76 ball bonds, min. 3 units	76/0	-	-
Die Shear	-	10/0	-	-
Manufacturability	(per mfg. Site specification)	1/0	-	-
**Thermal Shock	-65C/+150C (500, 1000* Cyc)	77/0	77/0	77/0
X-ray	(top side only)	5/0	-	-
Moisture Sensitivity	(level 1 @ 260C peak +5/-0C)	12/0	12/0	12/0
Notes **- Preconditioning sequence: Level 1-260C.				

Group #2 Qualification Data:

TI Information
Selective Disclosure

Qualification Report

HDC1010YPA New Product Qualification
Approve Date 08-Sep-2016

Product Attributes

Attributes	Qual Device: HDC1010YPA	QBS Product Reference: HDC1000	QBS Process Reference: LM3533
Wafer Fab Supplier	MFAB	MFAB	MFAB
Wafer Process	CMOS9T5V	CMOS9T5V	CMOS9T5V
Assembly Site	TIEM-MALACCA	TIEM-MALACCA	TIEM-MALACCA
Package Family	WCSP	WCSP	WCSP
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0

- QBS: Qual By Similarity
- Qual Device HDC1010is qualified at LEVEL1-260C

Qualification Results
Data Displayed as: Number of lots / Total sample size / Total failed

Type	Test Name / Condition	Duration	Qual Device: HDC1010YPA	QBS Product Reference: HDC1000	QBS Process Reference: LM3533
PC	PreCon Level 1	Level 1-260C	3/924/0	-	-
HTOL	Life Test, 125C	1000 Hours	1/77/0	1/77/0	2/154/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-	-
UHAST	Unbiased HAST 130C/85%RH	96 Hours	3/231/0	-	-
TC	Temperature Cycle, -40/125C	850 Cycles	3/231/0	-	-
HTSL	High Temp Storage Bake 150C	1000 Hours	3/231/0	-	-
HBM	ESD - HBM	1000 V	1/3/0	-	-
CDM	ESD - CDM	750 V	1/3/0	-	-
LU	Latch-up	(per JESD78)	1/6/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	3/Pass	-	-
MQ	Manufacturability (Assembly)	(per mfg. Site specification)	3/Pass	-	-
MQ	Manufacturability (Wafer Fab)	(per mfg. Site specification)	1/Pass	-	-

- Preconditioning was performed for Autoclave, Unbiased HAST, THB/Biased HAST, Temperature Cycle, Thermal Shock, and HTSL, as applicable
- The following are equivalent HTOL options based on an activation energy of 0.7eV : 125C/1k Hours, 140C/480 Hours, 150C/300 Hours, and 155C/240 Hours
- The following are equivalent HTSL options based on an activation energy of 0.7eV : 150C/1k Hours, and 170C/420 Hours
- The following are equivalent Temp Cycle options per JESD47 : -55C/125C/700 Cycles and -65C/150C/500 Cycles

Quality and Environmental data is available at TI's external Web site: http://www.ti.com/

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

For questions regarding this notice, e-mails can be sent to the regional contacts shown below or your local Field Sales Representative.

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