PCN Number:	20140825000			**PCN Date:**	09/02/2014
Title:	Offload MMT				
Customer Contact:	PCN_ww_admin_team@list.ti.com	**Phone:**	+1(214)480-6037	**Dept:**	Quality Services
Proposed 1st Ship Date:	03/02/2015	**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:

Texas Instruments Incorporated is announcing the move of select SOIC devices assembly/test from subcon Millennium Microtech Thailand (MMT) to Texas Instruments Malaysia (MLA) assembly/test site. Texas Instruments Malaysia assembly/test site is qualified for SOIC assembly/test for more than 20 years and is currently in high volume production for devices in this package.

Along with assembly/test site change, the device topside symbolization format and content will change for the 8 pin devices. The format will remain unchanged for the 14 pin devices but the content will change. The content will change from current 8 character maximum to 6 characters maximum. This format and content change eliminates redundant characters and improves the legibility of the final device symbol.

In addition, the following materials changes are as changing:

	From	To
Mount Compound	SID#14M201001	4042500-0011
Mold Compound	SID#141002067	4205694-0024

Reason for Change:

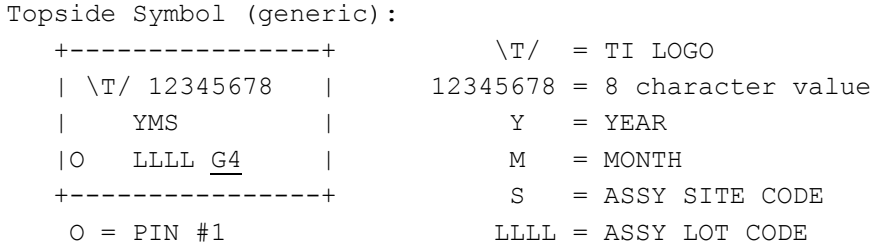
- Consolidate assembly of SOIC package devices in Texas Instruments factories.
- Marking change - Eliminates redundant characters and improves device symbol legibility
- Material change - Improved adhesion and reliability

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

No anticipated impact.

Changes to product identification resulting from this PCN:

Current 8 pin device symbolization format:



New 8 pin device symbolization format:

```
Topside Symbol (generic):
   +----------------+          \T/   = TI LOGO
   |   123456       |        123456 = 6 character value
   |  \Y/  YMS      |           Y    = YEAR
   |O    LLLL       |           M    = MONTH
   +----------------+           S    = ASSY SITE CODE
    O = PIN #1                 LLLL = ASSY LOT CODE
```

Device symbolization content changes:

Device	Pin count	Current 8 character value	New 6 character value
UCC2807DTR-3/70034	8 pin	2807-3	2807-3 (no change)
UC2842AQD8	8 pin	UC2842AQ	2842AQ
UC2842AQD8R	8 pin	UC2842AQ	2842AQ
UC2842AQDR	14 pin	UC2842AQ	2842AQ
UC2843AQD8	8 pin	UC2843AQ	2843AQ
UC2843AQD8G4	8 pin	UC2843AQ	2843AQ
UC2843AQD8R	8 pin	UC2843AQ	2843AQ
UC2843AQD8RG4	8 pin	UC2843AQ	2843AQ
UC2843AQD8RQ1	8 pin	UC2843AQ	2843AQ
UC2843AQD8RQ1	8 pin	UC2843AQ	2843AQ
UC2843AQDR	14 pin	UC2843AQ	2843AQ
UC2844AQD8	8 pin	UC2844AQ	2844AQ
UC2844AQD8R	8 pin	UC2844AQ	2844AQ
UC2844AQDR	14 pin	UC2844AQ	2844AQ
UC2845AQD8	8 pin	UC2845AQ	2845AQ
UC2845AQD8R	8 pin	UC2845AQ	2845AQ
UC2845AQDR	14 pin	UC2845AQ	2845AQ

Current box label:

Assembly site	Assembly site origin (22L)	Assembly country origin (23L)
MMT	ALP	USA

New box label:

Assembly site	Assembly site origin (22L)	Assembly country origin (23L)
TI Malaysia	MLA	MYS

Example product shipping label (not actual product label)

Product Affected:

UC1844AQDTR	UC2843AQD8RQ1
UC2842AQD8	UC2843AQDR
UC2842AQD8R	UC2844AQD8
UC2842AQDR	UC2844AQD8R
UC2843AQD8	UC2844AQDR
UC2843AQD8G4	UC2845AQD8
UC2843AQD8R	UC2845AQD8R
UC2843AQD8RG4	UC2845AQDR
UC2843AQD8RG4Q1	

Automotive New Product Qualification Plan/Summary

(As per AEC-Q100 and JEDEC Guidelines)

Supplier Name:	Texas Instruments Inc.	**Supplier Wafer Fabrication Site:**	Texas Instruments Sherman, Texas (SFAB)
Supplier Code:		**Supplier die revision**	G / no revision
Supplier Part Number:	MSA00021DG4 / LM2901QDG4Q1	**Supplier Assembly/Test Site:**	Texas Instruments Malaysia
Customer Name:	Texas Instruments	**Supplier Package/Pin:**	14D / 16D
Customer Part Number:	Catalog / Catalog	**Pb-Free Lead Frame (Y/N):**	Yes
Device Description:	8-Bit binary counter / Quad comparator	**"Green" Mold Compound (Y/N):**	Yes
MSL Rating:	Level1@260C	**Operating Temp Range:**	-40 to 85C / -40 to 125C
Peak Solder Reflow Temp:	260C	**Automotive Grade Level (1):**	Grade 3 / Grade 1
Prepared by:	James Berry	**Date:**	1/15/2008

Test	#	Reference	Test Conditions	Min Lots (2)	SS / lot (2)	Min Total (2)	Results Lot/pass /fail	Generic Family: Part/Comments	Exceptions to AEC - Q100
TEST GROUP A – ACCELERATED ENVIRONMENT STRESS TESTS (3)									
PC	A1	JESD22-113 J-STD-020	Preconditioning: SMD only; Moisture Preconditioning for THB/HAST, AC/UHST, TC, HTSL, and HTOL	Performed on ALL SMD devices prior to THB/HAST, AC/UHST, TC and PTC					
THB or HAST	A2	JESD22-A101 JESD22-A110	Temperature Humidity Bias: 85°C/85%/1000 hours Highly Accelerated Stress Test: 130°C/85%/96 hours or 110°C/85%/264 hours	1 1 1	77 77 77	77 77 77	3/231/0		
AC or UHST	A3	JESD22-A102 JESD22-A118	Autoclave: 121°C/15 psig/96 hours Unbiased Highly Accelerated Stress Test: 130°C/85%/96 hours or 110°C/85%/264 hours	1 1 1	77 77 77	77 77 77	3/231/0		
TC	A4	JESD22-A104	Temperature Cycle: -65°C/+150°C/500 cycles	1 1 1	77 77 77	77 77 77	3/231/0		
PTC	A5	JESD22-A105	Power Temperature Cycling: -40°C/+125°C/1000 cycles	1	45	45	N/A		
HTSL	A6	JESD22-A103	High Temperature Storage Life: 150°C/1000 hours or 175°C/500 hours	1	45	45	1/45/0		
TEST GROUP B – ACCELERATED LIFETIME SIMULATION TESTS (3)									
HTOL	B1	JESD22-A108	High Temp Operating Life: 125°C/1000 hours 150°C/408 hours	1 1 1	77 77 77	77 77 77	3/231/0		
ELFR	B2	AEC-Q100-008	Early Life Failure Rate:	1 1 1	800 800 800	800 800 800		QBS to existing device data	

TEST GROUP C – PACKAGE ASSEMBLY INTEGRITY TESTS (3)

WBS	C1	AEC-Q100-001	Wire Bond Shear Test: (Cpk > 1.67)	30 bonds	5 parts min.	30 bonds	Pass		
WBP	C2	Mil-Std-883 Method 2011	Wire Bond Pull: Each bonder used (Cpk > 1.67)	30 bonds	5 parts min.	30 bonds	Pass		
SD	C3	JESD22-B102	Solderability: (>95% coverage) 8 hr steam age (1 hour for Au-plated leads)	1	15	15	Pass		
PD	C4	JESD22-B100 JESD22-B108	Physical Dimensions: (Cpk > 1.67)	3	10	30	Pass		
SBS	C5	AEC-Q100-010	Solder Ball Shear: (Cpk > 1.67)	5 balls	10 parts min.	50	Pass		
LI	C6	JESD22-B105	Lead Integrity:	10 leads	5 parts min.	50	Pass		

(1) Grade 0 (or A): -40°C to +150°C ambient operating temperature range
Grade 1 (or Q): -40°C to +125°C ambient operating temperature range
Grade 2 (or T): -40°C to +105°C ambient operating temperature range
Grade 3 (or I): -40°C to +85°C ambient operating temperature range
Grade 4 (or C): -0°C to +150°C ambient operating temperature range

(2) These are recommended minimum lot/sample sizes. Lot/sample size may be reduced depending on available data.

(3) Generic data may be used.

Quality and Reliability Data Disclaimer

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customer should provide adequate design and operating safeguards. Quality and reliability data provided by Texas Instruments is intended to be an estimate of product performance based upon history only. It does not imply that any performance levels reflected in such data can be met if the product is operated outside the conditions expressly stated in the latest published data sheet or agreed-to customer specification for a device.

Reliability data shows characteristic failure mechanisms of the specific environmental stress as documented in the industry standards for each stress condition.

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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USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
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