PCN Number:	20200124000.1A	**PCN Date:**	Mar 18, 2020
Title:	Qualification of TI Malaysia as an additional Assembly and test site for Select Devices		
Customer Contact:	PCN Manager	**Dept:**	Quality Services
Proposed 1st Ship Date:	Apr 30 2020	**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:

Revision A is to announce the addition of new devices that were not included on the original PCN notification. These new devices are highlighted and **bolded** in the device list below. The expected first shipment date for these new devices will be 90 days from this notice (June 18, 2020) for these newly added devices only. The proposed 1st ship date of Apr 30, 2020 still applies for the original set of devices.

Texas Instruments is pleased to announce the qualification of TI Malaysia as an additional assembly and test site for the list of devices below. There are no construction differences between the current and new site.

Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

Reason for Change:

Continuity of Supply

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

None

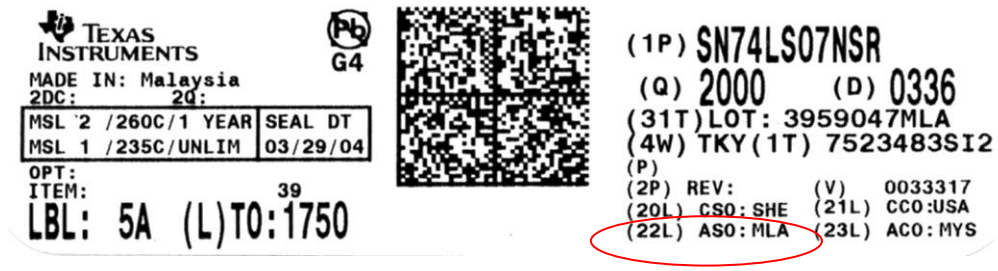
Anticipated impact on Material Declaration

☒	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 at the site link below http://www.ti.com/quality/docs/materialcontentsearch.tsp

Changes to product identification resulting from this PCN:

Assembly Site	Assembly Site Origin (22L)	Assembly Country Code (23L)	Assembly City
TI Mexico	MEX	MEX	Aguascalientes
TI Taiwan	TAI	TWN	Chung Ho
TI Malaysia	**MLA**	**MYS**	**Kuala Lumpur**

Sample product shipping label (not actual product label)



Product Affected:

MSP430FR2422IPW16	TCAN1042HD	TCAN1042HVD	TCAN1051HGVD
MSP430FR2422IPW16R	TCAN1042HDR	TCAN1042HVDR	TCAN1051HGVDR
MSP430FR2512IPW16	TCAN1042HGD	TCAN1051HD	TCAN1051HVD
MSP430FR2512IPW16R	TCAN1042HGDR	TCAN1051HDR	TCAN1051HVDR
MSP430FR2522IPW16	TCAN1042HGVD	TCAN1051HGD	
MSP430FR2522IPW16R	TCAN1042HGVDR	TCAN1051HGDR	

TEXAS INSTRUMENTS

TI Information
Selective Disclosure

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: TCAN1051DQ1	Qual Device: TCAN1042DQ1	Qual Device: TCAN1042HVDQ1	Qual Device: TCAN1051VDQ1
AC	Autoclave 121C	96 Hours	-	1/77/0	1/77/0	1/77/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	1/77/0	1/77/0	1/77/0
HTOL	Life Test, 150C	300 Hours	-	1/77/0	1/77/0	1/77/0
HTSL	High Temp Storage Bake 175C	500 Hours	-	1/45/0	1/45/0	1/45/0
TC	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	1/77/0
WBP	Bond Pull	Wires	1/30/0	1/30/0	1/30/0	1/30/0
WBS	Wire Bond Shear	Wires	1/30/0	1/30/0	1/30/0	1/30/0

- QBS: Qual By Similarity
- Qual Devices TCAN1042DQ1, TCAN1051VDQ1, TCAN1051DQ1 and TCAN1042HVDQ1 are qualified at LEVEL1-260C
- 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

Qualification Results

Approved: 04-Mar-2020

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: MSP430FR2522IPW16
AC	Autoclave 121C	96 Hours	3/231/0
HAST	Biased HAST, 130C/85%RH	96 Hours	3/77/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	3/231/0
TC	Temperature Cycle, -65/150C	500 Cycles	3/231/0
WBP	Bond Pull	Wires	3/228/0
WBS	Ball Bond Shear	Wires	3/228/0

- QBS: Qualification By Similarity
- Qualification Device MSP430FR2522IPW16 is qualified at Moisture Sensitivity LEVEL2-260C.
- Preconditioning was performed for Autoclave, Biased HAST, Temperature Cycle, and HTSL.

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 contacts shown below or your local Field Sales Representative.

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