



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN#20200124000.2

**Qualification of TI Malaysia an additional Assembly and test site for Select Devices
Change Notification / Sample Request**

Date: January 31, 2020
To: Newark/Farnell PCN

Dear Customer:

This is an announcement of change to a device that is currently offered by Texas Instruments. The details of this change are on the following pages.

Texas Instruments requires acknowledgement of receipt of this notification within **30** days of the date of this notice. Lack of acknowledgement of this notice within 30 days constitutes acceptance of the change. The proposed first ship date is indicated on page 3 of this notification, unless customer agreement has been reached on an earlier implementation of the change.

If samples or additional data are required, requests must be received within 30 days of acknowledgement as samples are not built ahead of the change. You may contact the PCN Manager or your local Field Sales Representative to acknowledge this PCN and request samples or additional data.

This notice does not change the end-of-life status of any product. Should product affected be on a previously issued product withdrawal/discontinuance notice, this notification does not extend the life of that product or change the life time buy offering/discontinuance plan.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Team (PCN_ww_admin_team@list.ti.com). For sample requests or sample related questions, contact your field sales representative.

Sincerely,

PCN Team
SC Business Services

20200124000.2
Change Notification / Sample Request
Attachments

Products Affected:

The devices listed on this page are a subset of the complete list of affected devices. According to our records, these are the devices that you have purchased within the past twenty-four (24) months. The corresponding customer part number is also listed, if available.

DEVICE	CUSTOMER PART NUMBER
TCAN1042HGVDQR1	null
TCAN1043DQ1	null
TCAN1043GDQ1	null
TCAN1043HDQ1	null
TCAN1043HGDQ1	null
TCAN1051VDRQ1	null
TCAN1051GVDRQ1	null

Technical details of this Product Change follow on the next page(s).

PCN Number: 20200124000.2		PCN Date: Jan 31 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: Jul 29 2020		Estimated Sample Availability: Date provided at sample request	
Change Type:			
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change
<input type="checkbox"/>	Mechanical Specification	<input checked="" type="checkbox"/>	Test Site
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Site
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Materials
<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process
PCN Details			
Description of Change:			
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			
<input checked="" type="checkbox"/>	No Impact to the Material Declaration	<input type="checkbox"/>	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	Aguaascalientes
TI Malaysia	MLA	MYS	Kuala Lumpur
Sample product shipping label (not actual product label)			
<p> TEXAS INSTRUMENTS MADE IN: Malaysia 2DC: 20: MSL 2 /260C/1 YEAR SEAL DT MSL 1 /235C/UNLIM 03/29/04 OPT: ITEM: 39 LBL: 5A (L)TO:1750 </p> <p> (1P) SN74LS07NSR (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY (1T) 7523483SI2 (P) (2P) REV: (V) 0033317 (20L) CSO: SHE (21L) CCO: USA (22L) ASO: MLA (23L) ACO: MYS </p>			
Product Affected:			
TCAN1042DQ1	TCAN1042HGVDQ1	TCAN1043HDQ1	TCAN1051HDRQ1

TCAN1042DRQ1	TCAN1042HGVDRQ1	TCAN1043HDRQ1	TCAN1051HGDQ1
TCAN1042GDQ1	TCAN1042HVDQ1	TCAN1043HGDQ1	TCAN1051HGDRQ1
TCAN1042GDRQ1	TCAN1042HVDRQ1	TCAN1043HGDRQ1	TCAN1051HGVDRQ1
TCAN1042GVDQ1	TCAN1042VDQ1	TCAN1051DQ1	TCAN1051HGVDRQ1
TCAN1042GVDRQ1	TCAN1042VDRQ1	TCAN1051DRQ1	TCAN1051HVDQ1
TCAN1042HDQ1	TCAN1043DQ1	TCAN1051GDQ1	TCAN1051HVDRQ1
TCAN1042HDRQ1	TCAN1043DRQ1	TCAN1051GVDQ1	TCAN1051VDQ1
TCAN1042HGDQ1	TCAN1043GDQ1	TCAN1051GVDRQ1	TCAN1051VDRQ1
TCAN1042HGDRQ1	TCAN1043GDRQ1	TCAN1051HDQ1	TCAN1051GDRQ1



TI Information
Selected Disclosure

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

Type	#	Test Spec	Min Lot Qty	SS/ Lot	Test Name / Condition	Duration	Qual Device: TCAN1043DQ1	QBS Product Reference: TCAN1043DQ1 (EMX)	QBS Product Family Reference: TCAN1042DQ1	QBS Product Family Reference: TCAN1042HVDQ1	QBS Product Family Reference: TCAN1051VDQ1	QBS Process Reference: TCAN1042HVDRQ1	QBS Process Reference: TCAN1051VDRQ1
Test Group A – Accelerated Environment Stress Tests													
PC	A1	JEDEC J-STD-020 JESD22-A113	3	77	Preconditioning	Level 1-260C	No Fails	-	No Fails	No Fails	1 Fail (1)	No Fails	No Fails
HAST	A2	JEDEC JESD22-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	3/231/0	-	1/77/0	1/77/0	1/77/0	2/154/0	1/77/0
AC	A3	JEDEC JESD22-A102	3	77	Autoclave 121C	96 Hours	3/231/0	-	1/77/0	1/77/0	1/77/0	2/154/0	1/77/0
TC	A4	JEDEC JESD22-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	3/231/0	-	1/77/0	1/77/0	1/77/0	2/154/0	1/77/0
TC-WBP	A4	MIL-STD883 Method 2011	1	60	Bond Pull Post T/C 500 Cycles	Wires	1/60/0	-	1/30/0	1/30/0	1/30/0	2/60/0	1/30/0
PTC	A5	JEDEC JESD22-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	N/A	-	-	-	-	-
HTSL	A6	JEDEC JESD22-A103	1	45	High Temp Storage Bake 175C	500 Hours	1/45/0	-	-	-	-	2/90/0	1/45/0

Type	#	Test Spec	Min Lot Qty	SS/ Lot	Test Name / Condition	Duration	Qual Device: TCAN1043DQ1	QBS Product Reference: TCAN1043DQ1 (EMX)	QBS Product Family Reference: TCAN1042HVDQ1	QBS Product Family Reference: TCAN1042HVDQ1	QBS Product Family Reference: TCAN1051VDQ1	QBS Process Reference: TCAN1042HVDRQ1	QBS Process Reference: TCAN1051VDRQ1
Test Group B – Accelerated Lifetime Simulation Tests													
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 125C	1000 Hours	1/77/0	-	-	-	-	-	-
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 150C	300 Hours	-	-	1/77/0	1/77/0	1/77/0	2/154/1 (2)	1/77/0
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	-	2/1600/0	1/800/0
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A	-	-	-	-	-
Test Group C – Package Assembly Integrity Tests													
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear Cpk>1.67	Wires	1/30/0	-	-	-	-	2/60/0	1/30/0
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull Cpk>1.67	Wires	1/30/0	-	-	-	-	2/60/0	1/30/0
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	PB Free Solder	1/15/0	-	-	-	-	-	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	PB Solder	1/15/0	-	-	-	-	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk >1.67	3/30/0	-	-	-	-	-	-

							Qual Device: TCAN1043DQ1	QBS Product Reference: TCAN1043DQ1 (FMX)	QBS Product Family Reference:	QBS Product Family Reference: TCAN1042HVDQ1	QBS Product Family Reference: TCAN1051VDQ1	QBS Process Reference: TCAN1042HVDRO1	QBS Process Reference: TCAN1051VDRO1
Test Group D – Die Fabrication Reliability Tests													
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	-	-	-	-	-	
TDDDB	D2	JESD35	-	-	Time Dependant Dielectric Breakdown	-	Completed Per Process Technology Requirements	-	-	-	-	-	
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	-	-	-	-	-	
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	-	-	-	-	-	
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	-	-	-	-	-	
Test Group E – Electrical Verification Tests													
HBM	E2	AEC Q100-002	1	3	ESD - HBM	4000 V	-	1/3/0	-	-	-	-	
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1500 V	-	1/3/0	-	-	-	-	
LU	E4	AEC Q100-004	1	6	Latch-up	(Per AEC Q100-004)	-	1/6/0	-	-	-	-	
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk > 1.67	1/30/0	3/90/0	-	-	-	-	

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C
Grade 1 (or Q): -40°C to +125°C
Grade 2 (or T): -40°C to +105°C
Grade 3 (or I): -40°C to +85°C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED
Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
Room: AC/uHAST

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

TI Qualification ID: 20190404-129345

Notes/ Comments:

(1)EOS. QEM-EVAL-1905-00063. Discounted
(2)EOS. QEM-EVAL-1801-00348. Discounted

Qualification Results

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

Type	#	Test Spec	Min Lot Qty	SS/Lot	Test Name / Condition	Duration	Qual Device: TCAN1042DQ1	Qual Device: TCAN1042HVDQ1	Qual Device: TCAN1051VDQ1	Qual Device: TCAN1051DQ1	QBS Product Reference: TCAN1042DQ1	QBS Product Reference: TCAN1042HVDQ1	QBS Product Reference: TCAN1051DQ1	QBS Product Reference: TCAN1051VDQ1
Test Group A – Accelerated Environment Stress Tests														
PC	A1	JEDEC J-STD-020 JESD2 2-A113	3	77	Preconditioning	Level 1-260C	No Fails	No Fails	1 Fail (1)	No Fails	-	-	-	-
HAST	A2	JEDEC JESD2 2-A110	3	77	Biased HAST, 130C/85%RH	96 Hours	1/77/0	1/77/0	1/77/0	-	-	-	-	-
AC	A3	JEDEC JESD2 2-A102	3	77	Autoclave 121C	96 Hours	1/77/0	1/77/0	1/77/0	-	-	-	-	-
TC	A4	JEDEC JESD2 2-A104 and Appendix 3	3	77	Temperature Cycle, -65/150C	500 Cycles	1/77/0	1/77/0	1/77/0	1/77/0	-	-	-	-
TC-BP	A4	MIL-STD883 Method 2011	1	60	Post Temp Cycle Bond Pull	Wires	1/50/0	1/50/0	1/50/0	1/50/0	-	-	-	-
PTC	A5	JEDEC JESD2 2-A105	1	45	Power Temperature Cycle	1000 Cycles	N/A	N/A	N/A	N/A	-	-	-	-
HTSL	A6	JEDEC JESD2 2-A103	1	45	High Temp Storage Bake 175C	500 Hours	1/45/0	1/45/0	1/45/0	-	-	-	-	-
							Qual Device: TCAN1042DQ1	Qual Device: TCAN1042HVDQ1	Qual Device: TCAN1051VDQ1	Qual Device: TCAN1051DQ1	QBS Product Reference: TCAN1042DQ1	QBS Product Reference: TCAN1042HVDQ1	QBS Product Reference: TCAN1051DQ1	QBS Product Reference: TCAN1051VDQ1
Test Group B – Accelerated Lifetime Simulation Tests														
HTOL	B1	JEDEC JESD22-A108	3	77	Life Test, 150C	300 Hours	1/77/0	1/77/0	1/77/0	-	-	-	-	-
ELFR	B2	AEC Q100-008	3	800	Early Life Failure Rate, 125C	48 Hours	-	-	-	-	2/1600/0	-	1/800/0	-
EDR	B3	AEC Q100-005	3	77	NVM Endurance, Data Retention, and Operational Life	-	N/A	N/A	N/A	N/A	-	-	-	-
Test Group C – Package Assembly Integrity Tests														
WBS	C1	AEC Q100-001	1	30	Wire Bond Shear Cpk>1.67	Wires	1/30/0	1/30/0	1/30/0	1/30/0	-	-	-	-
WBP	C2	MIL-STD883 Method 2011	1	30	Bond Pull Cpk>1.67	Wires	1/30/0	1/30/0	1/30/0	1/30/0	-	-	-	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Free Solder	1/15/0	-	-	-	-	-	-	-
SD	C3	JEDEC JESD22-B102	1	15	Surface Mount Solderability	Pb Solder	1/15/0	-	-	-	-	-	-	-
PD	C4	JEDEC JESD22-B100 and B108	3	10	Physical Dimensions	Cpk > 1.67	-	1/10/0	1/10/0	1/10/0	-	-	-	-

							Qual Device: TCAN1042DQ1	Qual Device: TCAN1042HVDQ1	Qual Device: TCAN1051VDQ1	Qual Device: TCAN1051DQ1	QBS Product Reference: TCAN1042DQ1	QBS Product Reference: TCAN1042HVDQ1	QBS Product Reference: TCAN1051DQ1	QBS Product Reference: TCAN1051VDQ1
Test Group D – Die Fabrication Reliability Tests														
EM	D1	JESD61	-	-	Electromigration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-
TDDB	D2	JESD35	-	-	Time Dependent Dielectric Breakdown	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-
HCI	D3	JESD60 & 28	-	-	Hot Injection Carrier	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-
NBTI	D4	-	-	-	Negative Bias Temperature Instability	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-
SM	D5	-	-	-	Stress Migration	-	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	Completed Per Process Technology Requirements	-	-	-	-

							Qual Device: TCAN1042DQ1	Qual Device: TCAN1042HVDQ1	Qual Device: TCAN1051VDQ1	Qual Device: TCAN1051DQ1	QBS Product Reference: TCAN1042DQ1	QBS Product Reference: TCAN1042HVDQ1	QBS Product Reference: TCAN1051DQ1	QBS Product Reference: TCAN1051VDQ1
Test Group E – Electrical Verification Tests														
HBM	E2	AEC Q100-002	1	3	ESD - HBM	6000 V	-	-	-	-	1/3/0	1/3/0	1/3/0	1/3/0
HBM	E2	AEC Q100-002	1	3	ESD - HBM (Bus Pins Only)	16000 V	-	-	-	-	1/3/0	1/3/0	1/3/0	1/3/0
CDM	E3	AEC Q100-011	1	3	ESD - CDM	1500 V	-	-	-	-	1/3/0	1/3/0	1/3/0	1/3/0
LU	E4	AEC Q100-004	1	6	Latch-up	Per AEC Q100-004	-	-	-	-	1/6/0	1/6/0	1/6/0	1/6/0
ED	E5	AEC Q100-009	3	30	Electrical Distributions	Cpk>1.67	1/30/0	1/30/0	1/30/0	1/30/0	1/30/0	3/90/0	1/30/0	3/90/0

A1 (PC): Preconditioning:

Performed for THB, Biased HAST, AC, uHAST, TC & PTC samples, as applicable.

Ambient Operating Temperature by Automotive Grade Level:

Grade 0 (or E): -40°C to +150°C
Grade 1 (or Q): -40°C to +125°C
Grade 2 (or T): -40°C to +105°C
Grade 3 (or I): -40°C to +85°C

E1 (TEST): Electrical test temperatures of Qual samples (High temperature according to Grade level):

Room/Hot/Cold: HTOL, ED
Room/Hot: THB / HAST, TC / PTC, HTSL, ELFR, ESD & LU
Room: AC/uHAST

Green/Pb-free Status:

Qualified Pb-Free(SMT) and Green

Notes/ Comments:

(1) EOS. QEM-EVAL-1905-00063. Discounted

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

Location	E-Mail
USA	PCNAmericasContact@list.ti.com
Europe	PCNEuropeContact@list.ti.com
Asia Pacific	PCNAsiaContact@list.ti.com
WW PCN Team	PCN_ww_admin_team@list.ti.com

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