

## PCN#20150316001 Qualification of PTI as an alternate Assembly/Test site for the Sipario RKG Family of Devices Change Notification / Sample Request

Dear Customer:

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

We request you acknowledge 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. If you require samples or additional data to support your evaluation, please request within 30 days.

The changes discussed within this PCN will not take effect any earlier than **90** days from the date of this notification, unless customer agreement has been reached on an earlier implementation of the change. This notification period is per TI's standard process.

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 Manager (<u>PCN\_ww\_admin\_team@list.ti.com</u>).

Sincerely,

PCN Team SC Business Services

# PCN# 20150316001 Attachment: 1

# **Products Affected:**

According to our records, there are the affected device(s) that you have purchased within the past twenty-four (24) months. Technical details of this Product Change follow on the next page(s).

PCN Number:		20150316001				PCN Date:		03/18/2015		
Title: Qualification of PTI as an alternate Assembly/Test site for the Sipario RKG Family of Devices										
Customer Contact:		PCN I	<u>CN Manager</u>		De	ept:	Quality Services			
Proposed 1 <sup>st</sup> Ship Date:		р	06,	′18/2015		Estimated Sample Availab		ailability:		te provided on request
Change T	Change Type:									
Assembly Site		е		Assembly Process			Assembly Materials		als	
Design				Electrical Specification			Mechanical Specification		ification	
Test Site Pa		Packing/Shipping/Labeling		Test Process	Test Process					
Wafer Bump Site			Wafer Bump Material			Wafer Bump Process				
🗌 Wafer Fab Site 🗌 Wafer Fa		er Fab Materials		Wafer Fab Process						
Part num				nber change						
PCN Details										

#### **Description of Change:**

Texas Instruments is pleased to announce the qualification of Powertech Technology (PTI) as an alternate Assembly and test site for the family of Sipario RKG devices listed below. The material set will be the same between the 2 sites.

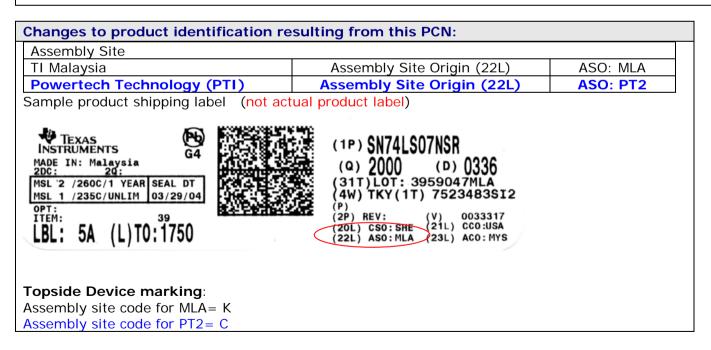
Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.

#### **Reason for Change:**

Continuity of Supply

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

None



Product Affected						
LMZ30602RKGR	LMZ30606RKGT	TPS84210RKGR	TPS84259RKGT			
LMZ30602RKGT	LMZ34002RKGR	TPS84210RKGT	TPS84410RKGR			
LMZ30604RKGR	LMZ34002RKGT	TPS84250RKGR	TPS84410RKGT			
LMZ30604RKGT	LMZ35003RKGR	TPS84250RKGT	TPS84610RKGR			
LMZ30606RKGR	LMZ35003RKGT	TPS84259RKGR	TPS84610RKGT			



#### **Qualification Report**

## Qualify Power Tech (PTI) for assembly of IPS TPS84410RKG Approved 01/27/2015

#### **Product Attributes**

Attributes	Qual Device: TPS84410RKG	QBS Process: BQ24730RGF	QBS Package: TPS84620RUQ	
Assembly Site	PTI-TAIWAN	MLA	PTI-TAIWAN	
Package Family	QFN	QFN	QFN	
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0	
Wafer Fab Site	DMOS5	DMOS5	MIHO 8	
Wafer Fab Process LBC7		LBC7	LBC7	

- QBS: Qual By Similarity

- Qual Device TPS84410RKG is qualified at LEVEL3-260C

- QBS Device TPS84620RUQ is qualified at LEVEL3-260C

#### Qualification Results

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

Туре	Test Name / Condition	Duration	Qual Device: TPS84410RKG	QBS Process: BQ24730RGF	QBS Package: TPS84620RUQ
PC	PreCon Level 3	260C	1/308/0	-	3/231/0
THB	Biased Temperature and Humidity, 85C/85%RH	1000 hours	1/77/0	-	1/77/0
UHAST	Unbiased HAST 110C/85%RH	264 hours	1/77/0	-	3/231/0
TC	Temperature Cycle, -65/150C	500 cycles	1/77/0	-	3/231/0
HTSL	High Temp Storage Bake 150C	1000 hours	1/77/0	-	1/77/0
HTOL	Life Test, 155C	240 Hours	-	3/348/0	-
HTOL	Life Test, 125C	1000 hours	1/77/0	-	1/77/0
ELFR	Early Life Failure Rate, 155C	48 Hours	-	3/1833/0	-
ED	Electrical Characterization	Per Datasheet Parameters	-	-	-

- 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 Report**

## Qualify Power Tech (PTI) for assembly of IPS TPS84250RKG Approved 03/09/2015

## **Product Attributes**

Attributes	Qual Device: TPS84250RKG	QBS Product: TPS84410RKG	QBS Package: TPS84620RUQ
Assembly Site	PTI-TAIWAN	PTI-TAIWAN	PTI-TAIWAN
Package Family	QFN	QFN	QFN
Flammability Rating	UL 94 V-0	UL 94 V-0	UL 94 V-0
Wafer Fab Site	DMOS5	DMOS5	MIHO 8
Wafer Fab Process	LBC5X	LBC7	LBC7

- QBS: Qual By Similarity

- Qual Device TPS84520RKG is qualified at LEVEL3-260C

- Qual Device TPS84410RKG is qualified at LEVEL3-260C

- QBS Device TPS84620RUQ is qualified at LEVEL3-260C

## Qualification Results

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

Туре	Test Name / Condition	Duration	Qual Device: TPS84250RKG	QBS Package: TPS84410RKG	QBS Package: TPS84620RUQ
PC	PreCon Level 3	260C	1/308/0	1/308/0	3/231/0
ТНВ	Biased Temperature and Humidity, 85C/85%RH	1000 hours	1/77/0	1/77/0	1/77/0
UHAST	Unbiased HAST 110C/85%RH	264 hours	1/77/0	1/77/0	3/231/0
TC	Temperature Cycle, -65/150C	500 cycles	1/77/0	1/77/0	3/231/0
HTSL	High Temp Storage Bake 150C	1000 hours	1/77/0	1/77/0	1/77/0
HTOL	Life Test, 155C	240 hours	-	-	-
HTOL	Life Test, 125C	1000 hours	-	1/77/0	1/77/0
HTOL	Life Test, 105C	3000 hours	1/77/0	-	-
PTC	Power Cycle, 25C/70C	1000 cycles	1/77/0	-	-
ED	Electrical Characterization	Per Datasheet Parameters	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/

For questions regarding this notice, e-mails can be sent to the regional 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
Japan	PCNJapanContact@list.ti.com