

PCN Number:	20151009000		PCN Date:	10/13/2015	
Title:	ISO7842DW / AFE4491 Die Revision Change				
Customer Contact:	PCN Manager		Dept:	Quality Services	
Proposed 1st Ship Date:	1/13/2016	Estimated Sample Availability:	Date provided at sample request.		
Change Type:					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Assembly Materials
<input checked="" type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<input type="checkbox"/>	Mechanical Specification
<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process
<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process
<input type="checkbox"/>		<input type="checkbox"/>	Part number change		
PCN Details					
Description of Change:					
This notification is to inform of a design change to select devices. The design changes do not affect the device's guaranteed datasheet specifications or electrical performance. Affected devices are listed in "Product Affected" section. Design changes as follows:					
Group 1 Devices: ISO7842DW/ISO7842DWR Die Rev Change (Rev B to Rev C)					
Description of Change					
The die change is for manufacturing optimization and harmonization across ISO78xx family.					
Group 2 Devices: AFE4491 Die Rev Change (Rev G to Rev K)					
Description of Change					
MSP430 Die (Die2) design changes are at metal levels only which involve a change in the USB11 module. No changes are done to AFE Die (Die1).					
Reason for Change:					
Improved product performance					
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):					
None					
Changes to product identification resulting from this PCN:					
Sample product shipping label (not actual product label)					
Group 1 Devices – Die Rev Marking:					
Current		New			
Die Rev [2P]		Die Rev [2P]			
B		C			
Group 2 Devices – Die Rev Marking:					
Current		New			
Die Rev [2P]		Die Rev [2P]			
G		K			

Product Affected Group 1: ISO7842DW/ISO7842DWR Die Rev Change (Rev B to Rev C)

ISO7842DW	ISO7842DWR	
Product Affected Group 2: AFE4491 Die Rev Change (Rev G to Rev K)		
AFE4491ZRC	AFE4491ZRCR	AFE4491ZRCT

Group 1: Qualification Report**ISO7842DW die change (Pg3.0)**

Approve Date 10-Jul-2015

Product Attributes

Attributes	Qual Device: ISO7842DW	QBS Product Reference: ISO7841DW_PG2.0	QBS Process Reference: ISO7841DW	QBS Package Reference: ISO1050DW
Assembly Site	TAI	TAI	TAI	TAI
Package Family	SOIC	SOIC	SOIC	SOIC
Wafer Fab Supplier	DMOS5	DMOS5	DMOS5	DFAB, DMOS5
Wafer Process	LBC8LVISO	LBC8LVISO	LBC8LVISO	50HPA07ISO, LBC4

- QBS: Qual By Similarity
- Qual Device ISO7842DW is qualified at LEVEL2-260C
- Device ISO7842DW contains multiple dies.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: ISO7842DW	QBS Product Reference: ISO7841DW_PG2.0	QBS Process Reference: ISO7841DW	QBS Package Reference: ISO1050DW
AC	Autoclave 121C	96 Hours	-	-	3/231/0	3/231/0
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	-	-
ELFR	Early Life Failure Rate, 125C	48 Hours	-	-	3/2999/0	-
FLAM	Flammability (IEC 695-2-2)	--	-	-	-	3/15/0
FLAM	Flammability (UL 94V-0)	--	-	-	-	3/15/0
FLAM	Flammability (UL-1694)	--	-	-	-	3/15/0
HAST	Biased HAST, 130C/85%RH	96 Hours	-	-	3/231/0	1/77/0
HBM	ESD - HBM	7000 V	1/3/0	-	-	-
CDM	ESD - CDM	1500 V	1/3/0	1/3/0	-	1/3/0
HTOL	Life Test, 125C	1000 Hours	-	-	3/231/0	-
HTOL	Life Test, 140C	480 Hours	-	-	-	3/231/0
HTSL	High Temp. Storage Bake, 150C	1000 Hours	-	-	-	2/90/0
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	-	3/231/0	3/157/0
LI	Lead Fatigue	Leads	-	-	-	3/66/0
LI	Lead Pull	Leads	-	-	-	3/66/0
LU	Latch-up	(per JESD78)	1/6/0	-	-	-
PD	Physical Dimensions	--	-	-	-	3/15/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	1/77/0	3/231/0	2/154/0
TS	Thermal Shock -65/150C	500 Cycles	-	-	3/231/0	3/231/0
WBP	Bond Pull	Wires	-	-	3/228/0	3/228/0
WBS	Ball Bond Shear	Wires	-	-	3/228/0	3/228/0

- 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

Group 2: Qualification Report

AFE4491ZRC die rev (MSP430 die rev change to K)

Approve Date 06-Aug-2015

Product Attributes

Attributes	Qual Device: AFE4491ZRCT	QBS Product Reference: AFE4491ZRC_PG1.1	QBS Product Reference: AFE4491ZRC_PG2.1	QBS Product Reference: AFE4491ZRC_PG2.2
Assembly Site	PHI	PHI	PHI	PHI
Package Family	jrBGA	jrBGA	jrBGA	jrBGA
Wafer Fab Supplier	DMOS5, TSMC	DMOS5, TSMC FAB11	DMOS5, TSMC FAB11	DMOS5, TSMC FAB11
Wafer Process	0.18 EMB FLASH, LBC8LV	0.18UM, LBC8LV	0.18UM, LBC8LV	0.18UM, LBC8LV

- QBS: Qual By Similarity
- Qual Device AFE4491ZRCT is qualified at LEVEL3-260C
- Device AFE4491ZRCT contains multiple dies.

Qualification Results

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

Type	Test Name / Condition	Duration	Qual Device: AFE4491ZRCT	QBS Product Reference: AFE4491ZRC_PG1.1	QBS Product Reference: AFE4491ZRC_PG2.1	QBS Product Reference: AFE4491ZRC_PG2.2
AC	Autoclave 121C	96 Hours	-	2/154/0	1/77/0	-
ED	Electrical Characterization	Per Datasheet Parameters	Pass	Pass	Pass	Pass
HBM	ESD - HBM	4000 V	-	-	-	1/3/0
CDM	ESD - CDM	1500 V	-	1/3/0	-	1/3/0
HTOL	Life Test, 125C	1000 Hours	-	2/154/0	1/77/0	-
HTSL	High Temp. Storage Bake, 170C	420 Hours	-	2/154/0	1/77/0	-
LU	Latch-up	(per JESD78)	-	-	-	1/6/0
TC	Temperature Cycle, -65/150C	500 Cycles	-	2/154/0	1/77/0	-
WBP	Bond Pull	Wires	-	2/152/0	1/76/0	-
WBS	Ball Bond Shear	Wires	-	2/152/0	1/76/0	-

- 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 you can contact 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