



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

PCN# 20140205002

**Qualification of Additional Fab (DMOS6), Assembly/Test (Clark-AT) and Cu Wire
Option for select MSP430FR57xx devices in the QFN Package
Change Notification / Sample Request**

Date: 2/13/2014
To: MOUSER PCN

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 (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services
Phone: +1(214) 480-6037
Fax: +1(214) 480-6659

20140205002
Attachment: 1

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
MSP430FR5720IRGER	null
MSP430FR5721IRHAT	null
MSP430FR5722IRGET	null
MSP430FR5725IRHAR	null
MSP430FR5725IRHAT	null
MSP430FR5727IRHAT	null
MSP430FR5728IRGET	null
MSP430FR5729IRHAR	null
MSP430FR5729IRHAT	null
MSP430FR5730IRGER	null
MSP430FR5730IRGET	null
MSP430FR5731IRHAT	null
MSP430FR5735IRHAR	null
MSP430FR5737IRHAT	null
MSP430FR5738IRGET	null
MSP430FR5739IRHAT	null

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

PCN Number:	20140205002			PCN Date:	02/13/2014													
Title:	Qualification of Additional Fab (DMOS6), Assembly/Test (Clark-AT) and Cu Wire Option for select MSP430FR57xx devices in the QFN Package																	
Customer Contact:	PCN Manager	Phone:	+1(214)480-6037	Dept:	Quality Services													
*Proposed 1st Ship Date:	05/13/2014	Estimated Sample Availability:	Date Provided at Sample request															
Change Type:																		
<input checked="" type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Assembly Materials													
<input type="checkbox"/>	Design	<input type="checkbox"/>	Electrical Specification	<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"/>	Wafer Bump Site	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>	Wafer Bump Process													
<input checked="" type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>	Wafer Fab Process													
		<input type="checkbox"/>	Part number change															
PCN Details																		
Description of Change:																		
<p>This notification is to announce the qualification of additional fab (DMOS6), assembly/test (Clark-AT) and Cu wire option for select MSP430FR57xx devices in the QFN Package.</p> <p>Wafer Fab Differences</p> <table border="1"> <tr> <th>Currently Qualified Sites, process, wafer dia.</th> <th>Additional Site, process, wafer dia.</th> </tr> <tr> <td>DP1DM5, E035 Process, 200mm</td> <td>DMOS6, E035 Process, 300mm</td> </tr> </table> <p>Assembly Site Material Differences</p> <table border="1"> <tr> <th>Material</th> <th>Current Site/MLA</th> <th>Additional Site/TI Clark</th> </tr> <tr> <td>Bond Wire Composition</td> <td>Au</td> <td>Cu</td> </tr> <tr> <td>Bond Wire Diameter</td> <td>.96 mil</td> <td>.8 mil</td> </tr> </table> <p>Test coverage, insertions, conditions will remain consistent with current testing and verified with test MQ.</p> <p>The QFN package was previously qualified at Clark-AT in 09/2009. Details are provided in the Qual Data Section.</p>						Currently Qualified Sites, process, wafer dia.	Additional Site, process, wafer dia.	DP1DM5, E035 Process, 200mm	DMOS6, E035 Process, 300mm	Material	Current Site/MLA	Additional Site/TI Clark	Bond Wire Composition	Au	Cu	Bond Wire Diameter	.96 mil	.8 mil
Currently Qualified Sites, process, wafer dia.	Additional Site, process, wafer dia.																	
DP1DM5, E035 Process, 200mm	DMOS6, E035 Process, 300mm																	
Material	Current Site/MLA	Additional Site/TI Clark																
Bond Wire Composition	Au	Cu																
Bond Wire Diameter	.96 mil	.8 mil																
Reason for Change:																		
<p>Continuity of supply.</p> <ol style="list-style-type: none"> 1) To align with world technology trends and use wiring with enhanced mechanical and electrical properties 2) Maximize flexibility within our Assembly/Test production sites. 3) Cu is easier to obtain and stock 																		
Anticipated impact on Form, Fit, Function, Quality or Reliability (positive / negative):																		
None																		

Changes to product identification resulting from this PCN:

There will be no change to topside symbol.

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Topside Symbol      : 40RHA-ECAT/REV
+-----+          TI = TI LETTERS
! O              ! YM = YEAR MONTH DATE CODE
! M430          ! LLLL = ASSEMBLY LOT CODE
! FR5739        ! S = ASSEMBLY SITE CODE
! TI #YMS       ! (PER QSS 005-120)
! LLLL G4       ! # = DIE REVISION
+-----+
O - PIN 1 (MARKED)  7 CHARACTERS MAX LINE 1
                    7 CHARACTERS MAX LINE 2

                    G4    MUST BE SYMBOLIZED WITH AN UNDERSCORE

#SYMBOL ECAT       : G4
#SYMBOL PIN 1 QUADRANT : 1
#SYMBOL DEVICE NAME1 : M430
#SYMBOL DEVICE NAME2 : FR5739
#SYMBOL LOGO       : TI
  
```

Shipment Labels:

Current Fab Site

Chip Site	Chip site code (20L)	Chip country code (21L)
DP1DM5	DM5	USA

New

Chip Site	Chip site code (20L)	Chip country code (21L)
DMOS6	DM6	USA

Current Assembly Site

Assembly Site	Assembly site Origin (22L)	Assembly country Origin (23L)
TI-Malaysia	MLA	MYS

New

Assembly Site	Assembly site Origin (22L)	Assembly country Origin (23L)
CLARK-AT	QAB	PHL

Device Marking for TI Malaysia and TI Clark are the same.

Assembly site code for TI Malaysia = K

Assembly site code for TI Clark = I

Sample product shipping label (not actual product label)

 TEXAS INSTRUMENTS MADE IN: Malaysia 2DC: 29: MSL 2 /260C/1 YEAR SEAL DT MSL 1 /235C/UNLIM 03/29/04 OPT: ITEM: 39 LBL: 5A (L)T0:1750		(1P) SN74LS07NSR (Q) 2000 (D) 0336 (31T) LOT: 3959047MLA (4W) TKY (1T) 7523483SI2 (P) (2P) REV: (V) 0033317 (20L) CS0: SHE (21L) CC0: USA (22L) AS0: MLA (23L) ACO: MYS
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Product Affected:				
MSP430FR5720IRGER	MSP430FR5725IRHAR	MSP430FR5730IRGER	MSP430FR5735IRHAR	
MSP430FR5720IRGET	MSP430FR5725IRHAT	MSP430FR5730IRGET	MSP430FR5735IRHAT	
MSP430FR5721IRHAR	MSP430FR5726IRGER	MSP430FR5731IRHAR	MSP430FR5736IRGER	
MSP430FR5721IRHAT	MSP430FR5726IRGET	MSP430FR5731IRHAT	MSP430FR5736IRGET	
MSP430FR5722IRGER	MSP430FR5727IRHAR	MSP430FR5732IRGER	MSP430FR5737IRHAR	
MSP430FR5722IRGET	MSP430FR5727IRHAT	MSP430FR5732IRGET	MSP430FR5737IRHAT	
MSP430FR5723IRHAR	MSP430FR5728IRGER	MSP430FR5733IRHAR	MSP430FR5738IRGER	
MSP430FR5723IRHAT	MSP430FR5728IRGET	MSP430FR5733IRHAT	MSP430FR5738IRGET	
MSP430FR5724IRGER	MSP430FR5729IRHAR	MSP430FR5734IRGER	MSP430FR5739IRHAR	
MSP430FR5724IRGET	MSP430FR5729IRHAT	MSP430FR5734IRGET	MSP430FR5739IRHAT	
Qualification Data:				
This qualification has been developed for the validation of this change. The qualification data will validate that the proposed change meets the applicable released technical specifications.				
Qualification Device: MSP430FR5739IRHA (Approved: 1/14/2014)				
Package & Die Attributes				
Wafer Fab Site:	DMOS6	Wafer Diameter:	300 mm	
Wafer Fab Process:	E035	MSL Level:	Level 3-260C	
Assembly Site:	CLARK-AT	# Pins-Designator, Family:	40, RHA, QFN	
Lead Frame (Finish, Base):	NIPDAU, Cu	Mold Compound:	4208625	
Bond Wire Composition:	Cu	Mount Compound:	4205846	
Bond Wire Diameter:	.8 mil			
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results				
Reliability Test	Conditions	Sample Size / Fail		
		Lot#1	Lot#2	Lot#3
**Life Test	125C (1000 Hrs)	77/0	77/0	77/0
** Endurance: FRAM extrinsic cycle	25C, 1e^7 cycles, full size	77/0	77/0	77/0
**FRAM data retention and imprint	125C/85C (1000 hrs)	77/0	77/0	77/0
**Autoclave 121C	121C, 2 ATM (96 Hrs)	77/0	77/0	77/0
**Temp Cycle	-65C/+150C (500 Cycles)	77/0	77/0	77/0
**High Temp. Storage Bake	150C (600, 1000 Hrs)	77/0	77/0	77/0
** Biased HAST	110C/85RH (264 hrs)	77/0	77/0	77/0
ESD CDM (MSP430)	500V	3/0	3/0	3/0
ESD HBM	2000V	3/0	3/0	3/0
Latch-Up	-	6/0	6/0	6/0
Manufacturability (Assembly)	(per mfg. Site specification)	Pass	-	-
**Preconditioning: MSL 3@260C				

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