

PCN Number:	20140818000	PCN Date:	08/29/2014
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Title:	Updates to datasheet for improvement and correction and adding new device LMK04821		
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Customer Contact:	PCN Manager	Phone:	+1(214) 480-6037	Dept:	Quality Services
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Change Type:					
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site
<input type="checkbox"/>	Assembly Process	<input checked="" type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material
<input type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site
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				<input type="checkbox"/>	Wafer Fab Process

PCN Details

Description of Change:

Texas Instruments Incorporated is announcing an information only notification. The product datasheet(s) is being updated as summarized in the following revision history:

Revision History

Changes from Revision AP (June 2013) to Revision AQ	Page
• Changed data sheet flow and layout to conform with new TI standards. Added, updated, or renamed the following sections: Device Information Table, Application and Implementation; Power Supply Recommendations; Layout; Device and Documentation Support; Mechanical, Packaging, and Ordering Information	1
• Added values for LMK04821 under "Features" section.	1
• Changed LMK04820 family to LMK0482x family	1
• Added values for LMK04821 under "Device Configuration Information" section	5
• Added "holdover DAC" in Description for Pin Number 36.	7
• Changed thermal table header from LMK0482xB to LMK0482x	9
• Changed "CLKinX_BUF_TYPE" to "CLKinX_TYPE"	10
• Added values for LMK04821 under "Internal VCO Specifications"	13
• Added values for LMK04821 under "Noise Floor"	14
• Added values for LMK04821 under "CLKout Closed Loop Phase Noise Specifications a Commercial Quality VCXO" ..	15
• Added 245.76 MHz as frequency for LMK04826B phase noise data L(f) _{CLKout} for VCO0	16
• Added 245.76 MHz as frequency for LMK04826B phase noise data L(f) _{CLKout} for VCO1	16
• Added 245.76 MHz as frequency for LMK04828B phase noise data L(f) _{CLKout} for VCO0	16
• Added 245.76 MHz as frequency for LMK04828B phase noise data L(f) _{CLKout} for VCO1	16
• Added values for LMK04821 under "CLKout Closed Loop Jitter Specifications a Commercial Quality VCXO"	17
• Added SDCLKoutY_HS = 0 for ts _{JESD204B} in Electrical Characteristics	20
• Added "Propagation Delay from CLKin0 to SDCLKoutY" in Electrical Characteristics	20
• Added footnote that LMK04821 has no DCLKoutX or SDCLKoutY outputs on at power up, only OSCout.	20
• Changed V _{OH} TEST CONDITIONS to "= 3 or 4" and V _{OL} TEST CONDITIONS to "3, 4, or 6" under DIGITAL OUTPUTS (CLKin_SELX, Status_LDX, and RESET/GPO) subheading in Electrical Characteristics	23
• Changed Digital Inputs (SCK, SDIO, CS*) I _{IH} V _{IH} = VCC min line from 5 µA to -5 µA	23
• Added "4 wire mode read back has same timing as SDIO pin", "R/W bit = 0 is for SPI write", "R/W bit = 1 is for SPI read", "W1 and W0 shall be written as 0.".....	24
• Added LMK04821 phase noise graphs under "Clock Output AC Characteristics"	25
• Added link to AN-912 Application Report	29
• Changed from "Glitchless Half Shift" to "Glitchless Half Step".....	32
• Changed block from SDCLKoutY_POL to DCLKoutX_POL in Figure 10	34
• Added SYSREF_CLKin0_MUX block to Figure 11 image.	35
• Changed Figure 11 to show that FB_MUX SYSREF input comes from SYSREF Divider, not SYSREF_MUX.	35
• Changed term pulsor to pulser throughout	36
• Changed DCLKout0_1_DIV to DCLKout0_DIV; DCLKout2_3_DIV to DCLKout2_DIV; DCLKout4_5_DIV to DCLKout4_DIV	37
• Added DCLKout4_DIV = 20	37
• Added DCLKout0_DDLY_PD = 0, DCLKout2_DDLY_PD = 0, DCLKout4_DDLY_PD = 0.....	37

- Changed text to read, "Set device clock and SYSREF divider digital delays: DCLKout0_DDLY_CNTH, DCLKout0_DDLY_CNTL, DCLKout2_DDLY_CNTH, DCLKout2_DDLY_CNTL, DCLKout4_DDLY_CNTH, DCLKout4_DDLY_CNTL, SYSREF_DDLY." 37
- Added "= 1" in [SYSREF Request](#) section 38
- Changed step numbers in dynamic delay and references to steps to be correct, step 8 was duplicated 41
- Added note "LMK04821 includes VCO1 divider on VCO1 output." 46
- Added note "LMK04821 includes VCO1 divider on VCO1 output." 47
- Added LMK04821 detailed block diagram..... 49
- Added "R/W bit = 0 is for SPI write. R/W bit = 1 is for SPI read." 51
- Added "If using LMK04821, program register 0x174" in [Recommended Programming Sequence](#) section 51
- Added SYSREF_CLKin0_MUX and VCO1_DIV to register map 53
- Added CLKin_OVERRIDE bit to register map 54
- Changed from "half shift" to "half step" 59
- Changed definition of SDCLKoutY_DDLY value of 0 from "Reserved" to "Bypass" 59
- Changed from "Sets the polarity of SYSREF clocks" to "Sets the polarity of clock on SDCLKoutY when device clock output is selected with SDCLKoutY_MUX" 62
- Changed "Sets the polarity of the device clocks" to "Sets the polarity of the device clocks from the DCLKoutX outputs" 62
- Added LMK04821 DCLKoutX_FMT power on reset values as powerdown..... 62
- Changed from "SYSREF" to "SYSREF Divider" in "Source" column of Register 0x13F table. 66
- Changed reserved to Off for CLKout1_OUT_MUX. 71
- Changed reserved to Off for CLKout0_OUT_MUX. 71
- Added CLKin_OVERRIDE bit 78
- Added LMK04821 register 0x174 for VCO1_DIV 93
- Deleted (LMK04828 from Core line 103
- Added VCO1 Icc including VCO1 Divider for LMK04821 103
- Changed VCO1 Icc and power dissipated for LMK04828B/26B from 6 mA to 13.5 mA and 19.8 mW to 44.55 mW 103

The datasheet number will be changing.

Device Family	Change From:	Change To:
LMK0482	SNAS605AP	SNAS605AQ

These changes may be reviewed at the datasheet links provided.

<http://www.ti.com/product/lmk04821?keyMatch=LMK04821&tisearch=Search-EN>

Reason for Change:		
Adding new device in family, typo in electrical characteristics, exposing extra bits for improved performance, correction of information.		
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):		
Electrical specification performance changes as indicated above.		
Changes to product identification resulting from this PCN:		
None.		
Product Affected:		
LMK04826BEVM	LMK04826BISQX/NOPB	LMK04828BISQE/NOPB
LMK04826BISQ/NOPB	LMK04828BISQ/NOPB	LMK04828BISQX/NOPB
LMK04826BISQE/NOPB		

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