



12500 TI Boulevard, MS 8640, Dallas, Texas 75243

**PCN 20150121000
TLC6C5912QPWRQ1 BOM
Final Change Notification**

Date: 1/26/2015
To: MOUSER 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 Manager (PCN_ww_admin_team@list.ti.com).

Sincerely,

PCN Team
SC Business Services

20150121000
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
TLC6C5912QPWRQ1	null

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

PCN Number:		20150121000		PCN Date:		01/26/2015													
Title:		TLC6C5912QPWRQ1 BOM																	
Customer Contact:		PCN_ww_admin_team@list.ti.com		PCN Type:		180 Days													
Dept:		Quality Services		Proposed 1st Ship Date:		07/26/2015													
Estimated Sample Availability:		Date provided at sample request																	
Change Type:																			
<input type="checkbox"/>	Assembly Site	<input type="checkbox"/>	Design	<input type="checkbox"/>	Wafer Bump Site	<input type="checkbox"/>													
<input type="checkbox"/>	Assembly Process	<input type="checkbox"/>	Data Sheet	<input type="checkbox"/>	Wafer Bump Material	<input type="checkbox"/>													
<input checked="" type="checkbox"/>	Assembly Materials	<input type="checkbox"/>	Part number change	<input type="checkbox"/>	Wafer Bump Process	<input type="checkbox"/>													
<input type="checkbox"/>	Mechanical Specification	<input type="checkbox"/>	Test Site	<input type="checkbox"/>	Wafer Fab Site	<input type="checkbox"/>													
<input type="checkbox"/>	Packing/Shipping/Labeling	<input type="checkbox"/>	Test Process	<input type="checkbox"/>	Wafer Fab Materials	<input type="checkbox"/>													
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	Wafer Fab Process	<input type="checkbox"/>													
PCN Details																			
Description of Change:																			
Texas Instruments Incorporated is announcing a change to device TLC6C5912QPWRQ1 bill of material to convert to copper bond wire and mold compound.																			
<table border="1"> <thead> <tr> <th></th> <th>From:</th> <th>To:</th> </tr> </thead> <tbody> <tr> <td>Die rev</td> <td>B0</td> <td>B1</td> </tr> <tr> <td>Mold Compound</td> <td>4206193</td> <td>4211471</td> </tr> <tr> <td>Bond Wire</td> <td>Au</td> <td>Cu</td> </tr> </tbody> </table>									From:	To:	Die rev	B0	B1	Mold Compound	4206193	4211471	Bond Wire	Au	Cu
	From:	To:																	
Die rev	B0	B1																	
Mold Compound	4206193	4211471																	
Bond Wire	Au	Cu																	
Reason for Change:																			
Continuity of supply. 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) Copper wire is easier to obtain and stock.																			
Anticipated impact on Fit, Form, Function, Quality or Reliability (positive / negative):																			
None																			
Changes to product identification resulting from this PCN:																			
None																			
Product Affected:																			
TLC6C5912QPWRQ1																			

Qualification Data:

Automotive New Product Qualification Plan/Summary (As per AEC-Q100 and JEDEC Guidelines)

Supplier Name:	Texas Instruments Inc.	Supplier Wafer Fabrication Site:	TI Dallas DMOS5
Supplier Code:		Supplier Die Rev.	B1
Supplier Part Number:	TLC6C5912QPWRQ1	Supplier Assembly/Test Site:	TI Taiwan
Customer Name:	All customers	Supplier Package/Pin:	20/PW
Customer Part Number:	N/A	Pb-Free Lead Frame (Y/N):	Y
Device Description:	Automotive Power Logic 12-Bit Shift Register LED Driver	"Green" Mold Compound (Y/N):	Y
MSL Rating:	Level3@260C	Operating Temp Range:	-40C to +125C
Peak Solder Reflow Temp:	260C	Automotive Grade Level (1):	1
Prepared by:	Larry Ting	Date:	9/23/2014

Test	#	Reference	Test Conditions	Min Lots (2)	SS / lot (2)	Min Total (2)	Results Lot/pass/fail	Comments: (N/A =Not Applicable)	Exceptions to AEC - Q100
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TEST GROUP A – ACCELERATED ENVIRONMENT STRESS TESTS (3)

PC	A1	JESD22-113 J-STD-020	Preconditioning: SMD only; Moisture Preconditioning for THB/HAST, AC/UHST, TC, HTSL, and HTOL	Performed on ALL SMD devices prior to THB/HAST, AC/UHST, TC and PTC					
THB or HAST	A2	JESD22-A101 JESD22-A110	Temperature Humidity Bias: 85°C/85%/1000 hours Highly Accelerated Stress Test: 130°C/85%/96 hours or 110°C/85%/264 hours	3	77	231	3/231/0	QBS to TLC6C598QPWQ1	
AC or UHST	A3	JESD22-A102 JESD22-A118	Autoclave: 121°C/15 psig/96 hours Unbiased Highly Accelerated Stress Test: 130°C/85%/96 hours or 110°C/85%/264 hours	3	77	231	3/231/0	QBS to TLC6C598QPWQ1	
TC	A4	JESD22-A104	Temperature Cycle: -65°C/+150°C/500 cycles	3	77	231	3/231/0	QBS to TLC6C598QPWQ1	
PTC	A5	JESD22-A105	Power Temperature Cycling: -40°C/+125°C/1000 cycles	1	45	45	1/45/0	TLC6C5912QPWRQ 1	
HTSL	A6	JESD22-A103	High Temperature Storage Life: 150°C/1000 hours or 175°C/500 hours	1	45	45	1/45/0	QBS to TLC6C598QPWQ1	

TEST GROUP B – ACCELERATED LIFETIME SIMULATION TESTS (3)

HTOL	B1	JESD22-A108	High Temp Operating Life: 125°C/1000 hours 150°C/408 hours	3	77	231	3/231/0	QBS to TLC6C598QPWQ1	
ELFR	B2	AEC-Q100-008	Early Life Failure Rate:	3	800	2400	3/2400/0	QBS to TLC6C598QPWQ1	

TEST GROUP C – PACKAGE ASSEMBLY INTEGRITY TESTS (3)

WBS	C1	AEC-Q100-001	Wire Bond Shear Test: (Cpk > 1.67)	30 bonds	5 parts min.	30 bonds	Pass	TLC6C5912QPWRQ 1	
WBP	C2	Mil-Std-883 Method 2011	Wire Bond Pull: Each bonder used (Cpk > 1.67)	30 bonds	5 parts min.	30 bonds	Pass	TLC6C5912QPWRQ 1	
SD	C3	JESD22-B102	Solderability: (>95% coverage) 8 hr steam age (1 hour for Au-plated leads)	1	15	15	Pass	TLC6C5912QPWRQ 1	
PD	C4	JESD22-B100 JESD22-B108	Physical Dimensions: (Cpk > 1.67)	1	10	10	Pass	TLC6C5912QPWRQ 1	
SBS	C5	AEC-Q100-010	Solder Ball Shear: (Cpk > 1.67)	5 balls	10 parts min.	50	N/A	TLC6C5912QPWRQ 1	
LI	C6	JESD22-B105	Lead Integrity:	10 leads	5 parts min.	50	Pass	TLC6C5912QPWRQ 1	

TEST GROUP E- ELECTRICAL VERIFICATION

TEST	E1	User/Supplier Specification	Pre and Post Stress Electrical Test:	All	All	All	Pass	TLC6C5912QPWRQ 1	
HBM	E2	AEC-Q100-002	Electrostatic Discharge, Human Body Model: (2kV - H2 or better)	1	3	3	Pass	TLC6C5912QPWRQ 1	
MM	E2	AEC-Q100-003	Electrostatic Discharge, Machine Model: (200V – M3 or better)	1			N/A		
CDM	E3	AEC-Q100-101	Electrostatic Discharge, Charged Device Model: (750V corner leads, 500V for all other pins)	1	3	3	Pass	TLC6C5912QPWRQ 1	
LU	E4	AEC-Q100-004	Latch-Up:	1	6	6	Pass	TLC6C5912QPWRQ 1	
ED	E5	AEC-Q100-009	Electrical Distributions: (Cpk > 1.67)	3	30	90	Pass	TLC6C5912QPWRQ 1	

- (1) Grade 0 (or A): -40°C to +150°C ambient operating temperature range
Grade 1 (or Q): -40°C to +125°C ambient operating temperature range
Grade 2 (or T): -40°C to +105°C ambient operating temperature range
Grade 3 (or I): -40°C to +85°C ambient operating temperature range
Grade 4 (or C): -0°C to +150°C ambient operating temperature range
- (2) These are recommended minimum lot/sample sizes. Lot/sample size may be reduced depending on available data.
- (3) Generic data may be used.

Quality and Reliability Data Disclaimer

TI assumes no liability for applications assistance or customer product design. Customers are responsible for their products and applications using TI components. To minimize the risks associated with customer products and applications, customer should provide adequate design and operating safeguards. Quality and reliability data provided by Texas Instruments is intended to be an estimate of product performance based upon history only. It does not imply that any performance levels reflected in such data can be met if the product is operated outside the conditions expressly stated in the latest published data sheet or agreed-to customer specification for a device.

Reliability data shows characteristic failure mechanisms of the specific environmental stress as documented in the industry standards for each stress condition.

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