

#### 12500 TI Boulevard, MS 8640, Dallas, Texas 75243

## Notification# 20160812001 Datasheet for OPA4188 Change Notification

**Date:** 9/26/2016

**To:** Newark/Farnell PCN

#### Dear Customer:

This is a notice of change to a product data sheet for 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.

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.

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 www admin team@list.ti.com).

Sincerely,

PCN Team SC Business Services

# Notification# 20160812001 Data Sheet Change Notification Attachments

#### **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**OPA4188AID
OPA4188AIPW

**CUSTOMER PART NUMBER** 

null null

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

<b>PCN Number:</b> 201608120		08120	001	PCN Date:	Sept	. 26, 20	16		
<b>Title:</b> Datasheet for	OPA4	188							
Customer Contact: PCN Manage			-		De	pt:	Quality Services		
Proposed 1 <sup>st</sup> Ship Dat	Dec. 2	26, 2016							
<b>Change Type:</b>									
Assembly Site			Design		Bump Site				
Assembly Process			🛛 Data Sh		Wafer Bump Material				
Assembly Materials			Part nur		Wafer Bump Process				
Mechanical Specification			Test Site		Wafer Fab Site				
Packing/Shipping/Labeling			Test Pro		Wafer Fab Materials				
						Wafer	Fab Process		
			Notificati	on Details					
Description of Change			<u>.</u>						
Texas Instruments Inco	rpora	ted is a	announcing a	an information of	only no	otificatio	on.		
<b>T</b>									
The product datasheet(s) is being updated as summarized below.									
The product datasneet(s									
	istory	nrovid	les further de	taile					
The following change hi	istory	provid	les further de	etails.					
	istory	provid	les further de	etails.					
The following change hi	istory	provid	les further de	etails.			OPA4188		
	istory	provid	les further de		9S641D – JU	NE 2012-RE	OPA4188 VISED SEPTEMBER 2016		
The following change hi					9S641D – JU	NE 2012-RE			
Texas INSTRUMENTS  Changes from Revision C (Ap  Changed high supply over-t	oril 2015	5) to Revi	ision D t bias current limit	SBO in High-Voltage Opera	ation Elec	trical Chara	Page acteristics		
Texas Instruments  Changes from Revision C (Ap  Changed high supply over-table	oril 2015 temperat	5) to Revi	ision D t bias current limit	SBO in High-Voltage Opera	ation Elec	trical Chara	Page acteristics 6		
TEXAS INSTRUMENTS  Changes from Revision C (Ap  Changed high supply over-trable	emperat	ture input	ision D t bias current limit	SBO in High-Voltage Opera	ation Elec	trical Chara	VISED SEPTEMBER 2016           Page           acteristics         6           6         6		
Texas Instruments  Changes from Revision C (Ap  Changed high supply over-table	emperations units in	ture input High-Ope	ision D  t bias current limit  erating Voltage Ele escent current limit	in High-Voltage Opera cetrical Characteristics in High-Voltage Oper	ation Elec	trical Chara	Page           acteristics         6           racteristics         6		
TEXAS INSTRUMENTS  Changes from Revision C (Ap  Changed high supply over-table	emperation units in temperations temperate	ture input  High-Ope  ature quies	ision D  t bias current limit erating Voltage Ele escent current limit	SBO in High-Voltage Opera ectrical Characteristics in High-Voltage Opera	ation Elec s table ration Elec ation Elec	trical Chara ctrical Char	Page		
TEXAS INSTRUMENTS  Changes from Revision C (Ap  Changed high supply over-table	emperation units in the temperation the temper	ture input  High-Ope  ature quie  ture quies	ision D  t bias current limit  erating Voltage Ele escent current limit	SBO in High-Voltage Opera ectrical Characteristics in High-Voltage Opera	ation Elec s table ration Elec ation Elec	trical Chara ctrical Char trical Chara	Page  acteristics 6  racteristics 7  acteristics 7		
TEXAS INSTRUMENTS  Changes from Revision C (Ap.  Changed high supply over-table Changed high supply noise Changed high supply roomtable Changed high supply over-table Changed high supply over-table Changed high supply over-table Changed low supply over-table	emperation of the months in the more attempts and the more attempts attempts and the more attempts and the more attempts and the mor	ture input  High-Ope ature quie  ture quies  ure input l	ision D  t bias current limit  erating Voltage Ele escent current limit  scent current limit bias current limit ii	SBO  in High-Voltage Opera ectrical Characteristics in High-Voltage Opera in High-Voltage Opera	ation Electrical Elect	trical Chara ctrical Char trical Chara	Page  acteristics 6  racteristics 7  acteristics 7  acteristics 7		
TEXAS INSTRUMENTS  Changes from Revision C (Ap.  Changed high supply over-table  Changed high supply noise Changed high supply roomtable Changed high supply over-table Changed high supply over-table Changed high supply over-table Changed low supply over-teable Changed low supply over-teable	units in temperate	ture input  High-Ope ature quie  ture quies  ure input l	ision D  t bias current limit erating Voltage Electory escent current limit scent current limit bias current limit in	in High-Voltage Opera ectrical Characteristics in High-Voltage Opera in High-Voltage Opera in Low-Voltage Operat	ation Election Election	trical Charactrical Charac	VISED SEPTEMBER 2016           Page           acteristics         6           racteristics         7           acteristics         7           cteristics         7           cteristics         7           ctrical         7		
TEXAS INSTRUMENTS  Changes from Revision C (Ap.  Changed high supply over-table Changed high supply noise Changed high supply roomtable Changed high supply over-table Changed high supply over-table Changed low supply over-teable Changed low supply over-teable Changed low supply noise to	units in tempera	ture input  High-Ope ature quies  ture input input volt	ision D  t bias current limit erating Voltage Electoric current limit scent current limit bias current limit in	in High-Voltage Opera ectrical Characteristics in High-Voltage Opera in High-Voltage Opera in Low-Voltage Operat parameter in Low-Vo	s table ration Elec ation Elec tion Electr	ctrical Charactrical Charactric	VISED SEPTEMBER 2016           Page           acteristics         6		
TEXAS INSTRUMENTS  Changes from Revision C (Ap  Changed high supply over-table Changed high supply noise Changed high supply roomtable Changed high supply over-table Changed high supply over-table Changed low supply over-teable Changed low supply noise of Changed low supply noise o	emperaturnits for	ture input ture quies ture input ture input ture input ture input ture quies	ision D  t bias current limit erating Voltage Ele escent current limit scent current limit bias current limit in tage noise density	in High-Voltage Operation High-Voltage Operation Low-Voltage Opera	ation Electrical Elect	ctrical Charactrical Characteristics	Page           acteristics         6           acteristics         7           acteristics         7           acteristics         7           ctristics         7           ctristics         7           ctristics         7           ctristics         7           ctristics         7           ctristics         8		
TEXAS INSTRUMENTS  Changes from Revision C (Ap  Changed high supply over-table Changed high supply noise Changed high supply roomtable Changed high supply over-table Changed low supply over-table Changed low supply noise under the changed low supply noise under	emperaturnits for	ture input ture quies ture input ture input ture input ture input ture quies	ision D  t bias current limit erating Voltage Ele escent current limit scent current limit bias current limit in tage noise density	in High-Voltage Operation High-Voltage Operation Low-Voltage Opera	ation Electrical Elect	ctrical Charactrical Characteristics	Page           acteristics         6           acteristics         7           acteristics         7           acteristics         7           ctristics         7           ctristics         7           ctristics         7           ctristics         7           ctristics         7           ctristics         8		

		PARAMETER	CONDITIONS	PREVIOUS REVISION			NEW REVISION				
		PARAMETER		MIN	ТҮР	MAX	UNIT	MIN	ТҮР	MAX	UNIT
	INPUT BIAS CURRENT										
			V <sub>CM</sub> = V <sub>S</sub> / 2		±160	±1400	pA		±160	±1400	pА
187	IB	Input bias current	T <sub>A</sub> = -40°C to +125°C			±8	nA			±18	nA
0	> Input offset current			±320	±2800	pА		±320	±2800	pА	
4 V		Input offset current	T <sub>A</sub> = -40°C to +125°C			±6	nA			±6	nA
#1 II	POWER SUPPLY										
××			V <sub>S</sub> = ±4 V to VS = ±18 V		415	475	μΑ		415	500	μА
	Ιq	Quiescent Current (per amplifier)	I <sub>0</sub> = 0 mA, T <sub>A</sub> = -40°C to +125°C			525	μА			570	μА
	INPUT BIAS CURRENT										
		Input bing gurrent	V <sub>CM</sub> = V <sub>S</sub> / 2		±160	±1400	pA		±160	±1400	pА
> 4	IB	Input bias current	T <sub>A</sub> = -40°C to +125°C			±8	nA			±18	nA
t +		Input offset current			±320	±2800	pΑ		±320	±2800	pA
±2 V to ±4 V	los		T <sub>A</sub> = -40°C to +125°C			±6	nA			±6	nA
- S	POWER SUPPLY										
>			V <sub>S</sub> = ±2 V to VS = ±4 V		385	440	μΑ		385	465	μА
	Ιq	Quiescent Current (per amplifier)	I <sub>O</sub> = 0 mA, T <sub>A</sub> = -40°C to +125°C			525	μА			540	μА

The datasheet number will be changing.

Device Family	Change From:	Change To:
OPA4188	SBOS641C	SBOS641D

These changes may be reviewed at the datasheet links provided. <a href="http://www.ti.com/product/OPA4188">http://www.ti.com/product/OPA4188</a>

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

To more accurately reflect device characteristics.

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

No anticipated impact. This is a specification change announcement only. There are no changes to the actual device.

# Changes to product identification resulting from this PCN:

None.

#### **Product Affected:**

	OPA4188AID	OPA4188AIDR	OPA4188AIPW	OPA4188AIPWR
--	------------	-------------	-------------	--------------

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