



PCN# 3906

## Product/Process Change Notification (PCN)

Customer: Solid State Supplies

Date: March 4, 2010

Customer P/N and/or Lot# effected: A3906SESTR-T

Originator: Scott Mitti

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### Duration of Change:

Permanent ☒

Temporary ☐

### Summary description of change:

Part Change ☐

Process Change ☒

Output Resistance of output drivers – based on recent product performance Allegro is changing the output resistance specification of the 3906 by reducing the Source driver maximum from 0.68 ohms to 0.60 ohms, and increasing the Sink driver maximum from 0.68 ohms to 0.74 ohms. These changes effectively improve the on-resistance specification of the relevant half-bridge by 0.02 ohms.

### What is the part or process changing from (provide details)?

Allegro is changing the output resistance specification of the 3906 by reducing the Source driver maximum from 0.68 ohms and increasing the Sink driver maximum from 0.68 ohms.

Output Resistance	$R_{DS(on)}$	Source driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 25^\circ\text{C}$	–	0.52	0.68	$\Omega$
		Source driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 85^\circ\text{C}$	–	0.710	–	$\Omega$
		Sink driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 25^\circ\text{C}$	–	0.52	0.68	$\Omega$
		Sink driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 85^\circ\text{C}$	–	0.710	–	$\Omega$

### What is the part or process changing to (provide details)?

Allegro is changing the output resistance specification of the 3906 by reducing the Source driver maximum to 0.60 ohms and increasing the Sink driver maximum to 0.74 ohms.

Output Resistance	$R_{DS(on)}$	Source driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 25^\circ\text{C}$	–	0.52	0.60	$\Omega$
		Source driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 85^\circ\text{C}$	–	0.78	–	$\Omega$
		Sink driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 25^\circ\text{C}$	–	0.62	0.74	$\Omega$
		Sink driver, $I_{OUT} = 400\text{ mA}$ , $V_{BB} = 3\text{ V}$ , $T_J = 85^\circ\text{C}$	–	0.93	–	$\Omega$



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**Describe how this change affects the customer:**

These changes effectively improve the on-resistance specification of the relevant half-bridge by 0.02 ohms.

**Is a PPAP update required?**

Yes \_\_\_\_\_

No ✓\_\_\_\_\_

**Is reliability testing required?**

Yes \_\_\_\_\_

No ✓\_\_\_\_\_

**Target implementation date:** March 1, 2010

**Estimated Date of first shipment:** March 1, 2010

**Expected sample availability date:** N/A

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Customer Approval Required

Yes \_\_\_\_\_ Date Required \_\_\_\_\_

No ✓\_\_\_\_\_ For Notification Only