



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

**Qualification Report for PCN# 20110822001  
Die Conversion for Select LM258/A, LM358/A, and LM2904 Dual Op-Amp  
Devices  
Information Only**

**Date: 5/02/2012**

Dear Customer:

Texas Instruments is pleased to announce the completion of qualification testing for the product change described in PCN# 20110822001. The details of the qualification results are included in the following pages and are being forwarded to you in response to your inquiry about this PCN.

For questions regarding this notice, contact your local Field Sales Representative or the PCN Manager ([PCN\\_ww\\_admin\\_team@list.ti.com](mailto:PCN_ww_admin_team@list.ti.com)).

Sincerely,

PCN Team  
SC Business Services  
Phone: +1(214) 480-6037  
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**Qualification Report For # 20110822001**  
**Die Conversion for Select LM258/A, LM358/A, and LM2904 Dual Op-Amp Devices**

Qualification Data:			
This qualification has been specifically developed for the validation of this change. The qualification data validates that the proposed change meets the applicable released technical specifications.			
Qualification Device Construction Details:			
Qualification Vehicle #1: LM358D			
Wafer Fab Site:	SH-BIP-1	Wafer Process:	BIPOLAR
Protective Die Coating:	10KACN	Wafer Size Dia.	150mm
Qualification: <input type="checkbox"/> Plan <input checked="" type="checkbox"/> Test Results			
Reliability Test	Conditions	Sample Size/Fails	
		Lot # 1	Lot # 2
**Life Test	150C (300 Hrs)	77/0	-
Electrical Characterization	Full Temp Range	PASS	-
ESD HBM	500V	PASS	-
ESD MM	100V	PASS	-
ESD CDM	1000V	PASS	-
Bond Strength	76 ball bonds, min. 3 units	76/0	76/0
Ball Bond Shear	5 units, >76 balls, 0 fails	76/0	76/0
Latch-up	Per JESD78, Class II	6/0	-
Manufacturability-TQ	Assembly (per mfg. Site specification)	PASS	-
X-ray	(top side only)	5/0	
Notes: **Preconditioning Sequence: Level 1 @ 260C Qualification tests "pass" on zero fails for each test			

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	<a href="mailto:PCNAmericasContact@list.ti.com">PCNAmericasContact@list.ti.com</a>
Europe	<a href="mailto:PCNEuropeContact@list.ti.com">PCNEuropeContact@list.ti.com</a>
Asia Pacific	<a href="mailto:PCNAsiaContact@list.ti.com">PCNAsiaContact@list.ti.com</a>
Japan	<a href="mailto:PCNJapanContact@list.ti.com">PCNJapanContact@list.ti.com</a>