



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
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03-SEP-2002

SUBJECT: ON Semiconductor Final Product/Process Change Notification #12448

TITLE: Assembly Transfer of Narrow Body SOIC Packaged Analog Devices to ON Semiconductor Phillipines (OSPI)

EFFECTIVE DATE: 02-Nov-2002

AFFECTED CHANGE CATEGORY:

On Semiconductor Assembly Site
On Semiconductor Test Site

AFFECTED PRODUCT DIVISION: Analog Products Div

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Bob Marquis <FC88FC@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office or Bill Fontes <FC8HYB@onsemi.com>

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Bill Fontes <FC8HYB@onsemi.com>

DISCLAIMER:

Final Product/Process Change Notification (FPCN) - Final Notification completing the notification process. Distributed at least 60 days from the effective date of the change. ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

This is the final PCN for the qualification of the listed narrow body SO-packaged part types for assembly at ON Semiconductor, Carmona, Philippines. Devices will be transferred from Amkor, and Carsem-S in the Philippines. Devices will also be transferred from Orient Semiconductor Engineering (OSE) to Carmona, however, OSE will remain as an alternate site to ensure no capacity limitations. An improved moisture sensitivity level of one (MSL-1) has been achieved for all devices transferred to ON Semiconductor Phillipines (OSPI). MSL1 packages will no longer require drypack. The devices will also be tested at Carmona. Carmona is a certified QS-9000 and ISO-9000 facility qualified for the assembly and test of automotive product.



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RELIABILITY DATA SUMMARY:

**Reliability Test Summary: Package SOIC NB 8 ld
Device = CS951254DR8**

Test	Conditions	Interval	SS
THB +PC	Ta=85degC, RH=85%, bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual	Readout	0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10

**Reliability Test Summary: Package SOIC NB 8 ld
Device = CS1108EDF8**

Test	Conditions	Interval	SS
THB +PC	Ta=85 degC, RH=85%, bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual	Readout	0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10

**Reliability Test Summary: Package SOIC NB 8 ld
Device = CS41080DR8**

Test	Conditions	Interval	SS
THB +PC	Ta=85 degC, RH=85%, bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual	Readout	0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10
ELFR	Ta = 125 deg C, bias	48 hours	0/2400



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**Reliability Test Summary: Package SOIC NB 8 ld
Device = CS43108DR8**

Test	Conditions	Interval	SS
THB +PC	Ta=85 degC, RH=85%,bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual	Readout	0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10

**Reliability Test Summary: Package SOIC NB 14 ld
Device = CS45008D14**

Test	Conditions	Interval	SS
THB +PC	Ta=85 degC, RH=85%, bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual	Readout	0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10

**Reliability Test Summary: Package SOIC NB 14 ld
Device = CS47111DR14**

Test	Conditions	Interval	SS
THB +PC	Ta=85 degC, RH=85%, bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual	Readout	0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10
ELFR	Ta = 125 deg C, bias	48 hours	0/2400



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**Reliability Test Summary: Package SOIC NB 16 ld
Device = CS51220ED16**

Test	Conditions	Interval	SS
THB +PC	Ta=85 degC, RH=85%, bias	500 hours	0/231
A/clave +PC	Ta=121degC,P=15psig,RH=100%	96 hours	0/231
Temp Cyc +PC	Ta = -65 to +150 deg C	500 cycles	0/231
HTB	Ta = 150 deg C.	500 hours	0/231
HTOL	Ta = 125 deg C, bias	504 hours	0/231
MSL1	24 hr bake@125degC +168 hr 85/85 Readout +3IR @ 235 deg C + 1x Flux immersion + DI rinse + visual		0/231
Solderability	In-line data	n/a	0/45
Bond Pull*	In-line data	n/a	0/30
*after 500 Temp Cycles			
Ball Shear	In-line data	n/a	0/10
Physical Dim	In-line data	n/a	0/10

ELECTRICAL CHARACTERISTIC SUMMARY:

The electrical performance, specifications, and designs of the devices being transferred are unchanged. Device specific comparison data is available upon request.

CHANGED PART IDENTIFICATION:

Material with datecode marking 0244 and later may be sourced from OSPI. OSPI assembly code marking is "P"

AFFECTED DEVICE LIST (WITHOUT SPECIALS):

PART

CS1009GD8, CS1009GDR8, CS1107EDF8, CS1107EDFR8
 CS1108EDF8, CS1108EDFR8, CS1124YD8, CS1124YDR8
 CS209AYD14, CS209AYD8, CS209AYDR14, CS209AYDR8
 CS209YD14, CS209YDR14, CS2841BED14, CS2841BEDR14
 CS2842ALD14, CS2842ALDR14, CS3341YD14, CS3341YDR14
 CS3351YD14, CS3351YDR14, CS3361YD14, CS3361YDR14
 CS51021AED16, CS51021AEDR16, CS51022AED16, CS51022AEDR16
 CS51023AED16, CS51023AEDR16, CS51024AED16, CS51024AEDR16
 CS51031GD8, CS51031GDR8, CS51031YD8, CS51031YDR8
 CS51033GD8, CS51033GDR8, CS51033YD8, CS51033YDR8
 CS51220ED16, CS51220EDR16, CS51221ED16, CS51221EDR16
 CS5124XD8, CS5124XDR8, CS5126XD8, CS5126XDR8
 CS51311GD14, CS51311GDR14, CS51312GD16, CS51312GDR16
 CS51313GD16, CS51313GDR16, CS51411ED8, CS51411EDR8
 CS51411GD8, CS51411GDR8, CS51412ED8, CS51412EDR8
 CS51412GD8, CS51412GDR8, CS51413ED8, CS51413EDR8
 CS51413GD8, CS51413GDR8, CS51414ED8, CS51414EDR8
 CS51414GD8, CS51414GDR8, CS5150GD16, CS5150GDR16
 CS5150HGD16, CS5150HGDR16, CS5151GD16, CS5151GDR16
 CS5151HGD16, CS5151HGDR16, CS5155GD16, CS5155GDR16
 CS5155HGD16, CS5155HGDR16, CS5156GD16, CS5156GDR16
 CS5156HGD16, CS5156HGDR16, CS5157GD16, CS5157GDR16
 CS5157HGD16, CS5157HGDR16, CS5158GD16, CS5158GDR16
 CS5159GD16, CS5159GDR16, CS5160GD16, CS5160GDR16
 CS5161GD16, CS5161GDR16, CS5161HGD16, CS5170GD8
 CS5170GDR8, CS5171ED8, CS5171EDR8, CS5171GD8
 CS5171GDR8, CS5172ED8, CS5172EDR8, CS5172GD8

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CS5172GDR8, CS5173ED8, CS5173EDR8, CS5173GD8
CS5173GDR8, CS5174ED8, CS5174EDR8, CS5174GD8
CS5174GDR8, CS5211ED14, CS5211EDR14, CS5211GD14
CS5211GDR14, CS5231-3GDF8, CS5231-3GDFR8, CS5233-3GDF8
CS5233-3GDFR8, CS52843ED14, CS52843ED8, CS52843EDR14
CS52843EDR8, CS69131DR14, CS8101YD8, CS8101YDR8
CS8120YD14, CS8120YDR14, CS8182YDF8, CS8182YDFR8
CS8221YDFR8, CS8311YD8, CS8311YDR8, CS8312YD8
CS8312YDR8, CS9027DR8, CS9028DR8, CS9201YDF8
CS9201YDFR8, CS9202YDF8, CS9202YDFR8, NCP1570D
NCP1570DR2, NCP5162D, NCP5162DR2, NCV7310D
NCV7310DR2