



PRODUCT / PROCESS CHANGE NOTIFICATION
Generic Copy

21-DEC-2000

SUBJECT: Product/Process Change Notification 10555

TITLE: 4 To 6-Inch Conversion For E.G. Devices

EFFECTIVE DATE: 01-Apr-2001

AFFECTED CHANGE CATEGORY: Wafer Process

AFFECTED PRODUCT DIVISION: Analog Products Division

ADDITIONAL RELIABILITY DATA: None

SAMPLES: Contact Your Local Sales Office

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact Sales Office or Mark Levshin <TTT490@onsemi.com>

DISCLAIMER:

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 process change notification lists devices which are being converted from manufacturing with a 4-inch wafer size to a 6-inch wafer size at ON Semiconductor's East Greenwich manufacturing facility. The electrical performance and specifications of the devices being converted will be unchanged.



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Affected Part Source:

Transportation Business Unit

Manufacturing Part Number (MPN)	Wafer Fab Process
CS209AYD14	30 Volt Bipolar
CS209AYD8	30 Volt Bipolar
CS209AYDR14	30 Volt Bipolar
CS209AYDR8	30 Volt Bipolar
CS209AYN8	30 Volt Bipolar
CS209YD14	30 Volt Bipolar
CS209YDR14	30 Volt Bipolar
CS299H	60 Volt Bipolar FC
CS3341YD14	30 Volt Bipolar
CS3341YDR14	30 Volt Bipolar
CS3351YD14	30 Volt Bipolar
CS3351YDR14	30 Volt Bipolar
CS387H	30 Volt Bipolar FC
CS41020H	60 Volt Bipolar FC
CS41040H	30 Volt Bipolar FC
CS41081DPR5	50 Volt Bipolar
CS41090T7	50 Volt Bipolar
CS41090TVA7	50 Volt Bipolar
CS41091T5	50 Volt Bipolar
CS43021DWR16	14 Volt Bipolar
CS43081N8	50 Volt Bipolar
CS43081THD5	50 Volt Bipolar
CS43081TQVA5	50 Volt Bipolar
CS44009DR8	50 Volt Bipolar
CS44042DWR16	20 Volt Bipolar
CS44094T5	50 Volt Bipolar
CS44094THB5	50 Volt Bipolar
CS45081DR14	50 Volt Bipolar
CS46128H	20 Volt Bipolar FC
CS48040H	30 Volt Bipolar FC
CS48112DW16	17 Volt Bipolar
CS48112DWR16	17 Volt Bipolar
CS49056N8	40 Volt Bipolar
CS60026DR14	20 Volt Bipolar
CS69124DWR16	20 Volt Bipolar
CS62028H	20 Volt Bipolar FC
CS62120H	17 Volt Bipolar FC
CS68050DWR16	50 Volt Bipolar
CS68050N14	50 Volt Bipolar
CS69023SR14	17 Volt Bipolar
CS69033DR14	30 Volt Bipolar
CS69034D14	30 Volt Bipolar
CS69034DR14	30 Volt Bipolar
CS69061N8	50 Volt Bipolar
CS69123N16	60 Volt Bipolar
CS8120YD14	50 Volt Bipolar
CS8120YDP5	50 Volt Bipolar
CS8120DPR5	50 Volt Bipolar
CS8120YDR14	50 Volt Bipolar
CS8120YN8	50 Volt Bipolar
CS8120YT5	50 Volt Bipolar
CS8120YTHA5	50 Volt Bipolar
CS8120YTVA5	50 Volt Bipolar
CS8141YDWF24	50 Volt Bipolar
CS8141YDWFR24	50 Volt Bipolar



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Affected Part Source:

Transportation Business Unit

**Manufacturing Wafer Fab Process
Part Number (MPN)**

CS8141YN14	50 Volt Bipolar
CS8141YT7	50 Volt Bipolar
CS8141YTHA7	50 Volt Bipolar
CS8141YTVA7	50 Volt Bipolar
CS8147YT5	50 Volt Bipolar
CS8147YTHA5	50 Volt Bipolar
CS8147YTVA5	50 Volt Bipolar
CS8156YT5	50 Volt Bipolar
CS8156YTHA5	50 Volt Bipolar
CS8156YTVA5	50 Volt Bipolar
CS8271YD8	50 Volt Bipolar
CS8271YDR8	50 Volt Bipolar
CS8271YN8	50 Volt Bipolar

Computer Internet Business Unit

**Manufacturing Wafer Fab Process
Part Number (MPN)**

CS51031GD8	14 Volt Bipolar
CS51031GDR8	14 Volt Bipolar
CS51031YD8	14 Volt Bipolar
CS51031YDR8	14 Volt Bipolar
CS51031YN8	14 Volt Bipolar
CS51033GD8	14 Volt Bipolar
CS51033GDR8	14 Volt Bipolar
CS51033YD8	14 Volt Bipolar
CS51033YDR8	14 Volt Bipolar
CS51033YN8	14 Volt Bipolar
CS92528DR16	20 Volt Bipolar
CS92512D8	20 Volt Bipolar
CS92512DR8	20 Volt Bipolar
CS92512N8	20 Volt Bipolar
CS3524AGDW16	40 Volt Bipolar
CS3524AGDWR16	40 Volt Bipolar
CS3524AGN16	40 Volt Bipolar
CS93109N18	20 Volt Bipolar
CS9014DR8	30 Volt Bipolar
CS95594DR8	30 Volt Bipolar
CS5124XD8	14 Volt Bipolar
CS5124XDR8	14 Volt Bipolar
CS5201-1GST3	14 Volt Bipolar
CS5201-1GSTR3	14 Volt Bipolar
CS5201-1GT3	14 Volt Bipolar
CS52015-1GST3	14 Volt Bipolar
CS52015-1GSTR3	14 Volt Bipolar
CS52015-1GT3	14 Volt Bipolar
CS5201-1GDP3	14 Volt Bipolar
CS5201-1GDPR3	14 Volt Bipolar
CS5201-3GDP3	14 Volt Bipolar
CS5201-3GDPR3	14 Volt Bipolar
CS5201-3GT3	14 Volt Bipolar
CS52015-3GDP3	14 Volt Bipolar
CS52015-3GDPR3	14 Volt Bipolar
CS52015-3GST3	14 Volt Bipolar



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Affected Part Source:

Computer Internet Business Unit

**Manufacturing Wafer Fab Process
Part Number (MPN)**

CS52015-3GSTR3	14 Volt Bipolar
CS52015-3GT3	14 Volt Bipolar
CS5203-3GDP3	14 Volt Bipolar
CS5203-3GDPR3	14 Volt Bipolar
CS5203-1GDP3	14 Volt Bipolar
CS5203-1GDPR3	14 Volt Bipolar
CS5203-1GT3	14 Volt Bipolar
CS5201-3GST3	14 Volt Bipolar
CS5201-3GSTR3	14 Volt Bipolar
CS951254DR8	14 Volt Bipolar
CS5106LSW24	14 Volt Bipolar
CS5106LSWR24	14 Volt Bipolar
CS51311GD14	14 Volt Bipolar
CS51311GDR14	14 Volt Bipolar
CS51312GD16	14 Volt Bipolar
CS51312GDR16	14 Volt Bipolar
CS51313GD16	14 Volt Bipolar
CS51313GDR16	14 Volt Bipolar
CS51221ED16	14 Volt Bipolar
CS51221EDR16	14 Volt Bipolar
CS69062DW16	20 Volt Bipolar
CS69062DWR16	20 Volt Bipolar
CS69062N16	20 Volt Bipolar
CS5166GDW16	14 Volt Bipolar
CS5166GDWR16	14 Volt Bipolar
CS5166HGDW16	14 Volt Bipolar
CS5166HGDWR16	14 Volt Bipolar
CS51227ED8	14 Volt Bipolar
CS51227EDR8	14 Volt Bipolar



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QUALIFICATION PLAN:

See Reliability Data.

RELIABILITY DATA SUMMARY:

Reliability Test Conditions:

Test 1: HTOL High Temperature Operating Life (+125 degC Ambient Temperature, Biased)

Test 2: TC Air-to-Air Temperature Cycling (-65 degC to +150 degC, 10-minute dwell times)

Reliability Tests and Results: (Data is based upon tested product with 1999 and 2000 date codes.)

WAFER FAB. PROCESS*	TEST DESCRP.	TEST DURATN.	SAMP. SIZE	# OF LOTS	TOTL # OF UNITS	# OF FAILURES
14 Volt Bipolar	HTOL	168 hours	30	6	180	0
	HTOL	168 hours	77	3	231	0
	HTOL	504 hours	30	3	90	0
	HTOL	504 hours	77	7	539	0
	HTOL	1008 hours	77	23	1771	0
	TC	500 cycles	77	10	770	0
	TC	1000 cycles	77	34	2618	0
17 Volt Bipolar	HTOL	504 hours	77	12	924	0
	HTOL	1008 hours	77	10	770	0
	TC	200 cycles	77	15	1155	0
	TC	1000 cycles	77	9	693	0
20 Volt Bipolar	HTOL**	408 hours	77	3	231	0
	HTOL **	1008 hours	77	3	231	0
	TC	500 cycles	77	3	231	0
30 Volt Bipolar	HTOL	168 hours	77	3	231	0
	HTOL	1008 hours	77	27	2079	0
	TC	1000 cycles	77	21	1617	0
40 Volt Bipolar	HTOL	1008 hours	77	19	1463	0
	TC	1000 cycles	77	19	1463	0
50 Volt Bipolar	HTOL	504 hours	77	9	693	0
	HTOL	1008 hours	77	35	2695	0
	TC	500 cycles	77	6	462	0
	TC	1000 cycles	77	44	3388	7***

*Note 1: Qualification tests of the flip chip bump process and the 60 volt bipolar process on the 6-inch wafer fabrication line have not yet been completed.

**Note 2: The HTOL data shown for 20 volt bipolar process is for product tested with 1996 date codes. No recent HTOL test data was available for the 20 volt bipolar process due to low shipping volumes of the associated parts on this process. Additional testing is planned to obtain more updated reliability information for this process.

***Note 3: The seven failures during temperature cycle testing occurred within two separate lots. All seven failures were due to electrical overstress (EOS) induced damage that were not process related and are, therefore, not considered valid rejects.



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RELIABILITY DATA SUMMARY:

The devices converted to 6 inch wafer size meet or exceed all ON Semiconductor reliability requirements.

ELECTRICAL CHARACTERISTIC SUMMARY:

Electrical Characterization results: Available upon request for each device type.

Electrical Characterization data and samples will be available upon request. Please have your sales representative contact your local ON Semiconductor Sales Engineer.

CHANGED PART IDENTIFICATION:

There will be no visual change to the parts.

ADDITIONAL INFORMATION:

6-inch Conversion Sample Contact(s) at ON Semiconductor

TBU Samples

NAME Dick Berthiaume & Bill Fontes
EMAIL Richard.Berthiaume@onsemi.com
William.Fontes@onsemi.com

CIBU Samples

NAME Will Bender
EMAIL William.Bender@onsemi.com



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AFFECTED DEVICE LIST:

PART

CS209AYD14
CS209AYD8
CS209AYDR14
CS209AYDR8
CS209AYN8
CS209YD14
CS209YDR14
CS299H
CS3341YD14
CS3341YDR14
CS3351YD14
CS3351YDR14
CS3524AGDW16
CS3524AGDWR16
CS3524AGN16
CS387H
CS51031GD8
CS51031GDR8
CS51031YD8
CS51031YDR8
CS51031YN8
CS51033GD8
CS51033GDR8
CS51033YD8
CS51033YDR8
CS51033YN8
CS5106LSW24
CS5106LSWR24
CS51221ED16
CS51221EDR16
CS51227ED8
CS51227EDR8
CS5124XD8
CS5124XDR8
CS51311GD14
CS51311GDR14
CS51312GD16
CS51312GDR16
CS51313GD16
CS51313GDR16
CS5166GDW16
CS5166GDWR16
CS5166HGDW16
CS5166HGDWR16
CS5201-1GDP3
CS5201-1GDPR3
CS5201-1GST3
CS5201-1GSTR3
CS5201-1GT3
CS5201-3GDP3
CS5201-3GDPR3
CS5201-3GST3
CS5201-3GSTR3
CS5201-3GT3
CS52015-1GST3
CS52015-1GSTR3
CS52015-1GT3
CS52015-3GDP3



CS52015-3GDPR3
CS52015-3GST3
CS52015-3GSTR3
CS52015-3GT3
CS5203-1GDP3
CS5203-1GDPR3
CS5203-1GT3
CS5203-3GDP3
CS5203-3GDPR3
CS8120YD14
CS8120YDP5
CS8120YDR14
CS8120YN8
CS8120YT5
CS8120YTHA5
CS8120YTVA5
CS8141YDWF24
CS8141YDWFR24
CS8141YN14
CS8141YT7
CS8141YTHA7
CS8141YTVA7
CS8147YT5
CS8147YTHA5
CS8147YTVA5
CS8156YT5
CS8156YTHA5
CS8156YTVA5
CS8271YD8
CS8271YDR8
CS8271YN8