



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20272Generic Copy

Issue Date: 15-Oct-2013

TITLE: Qualification of Serial Microwire CAT93C86, CAT93C76, CAT93C46/46R and SPI CAT64LC40 EEPROM devices for fabrication at ON Semiconductor's Gresham, Oregon Wafer Fab.

PROPOSED FIRST SHIP DATE: 15-Jan-2014 or earlier upon customers approval

AFFECTED CHANGE CATEGORY(S): ON Semiconductor Fabrication Site

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Denisa Stefan<denisa.stefan@onsemi.com>

SAMPLES:

Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office or Francis Lualhati<ffxczy@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation 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 <quality@onsemi.com>.

DESCRIPTION AND PURPOSE:

ON Semiconductor is pleased to announce that, as part of its ongoing effort to improve product availability, the Serial Microwire EEPROM devices CAT93Cxx and SPI EEPROM CAT64LC40 are now qualified for production in the 0.35 μ m CMOS EE process at ON Semiconductor's 8-inch Wafer Fab in Gresham, Oregon, USA. The Gresham Wafer Fab is ISO9001:2008, ISO/TS16949:2009 and ISO14001:2004 certified.

This change will provide increased production capacity, while maintaining backward compatibility to the previous CAT93Cxx and CAT64LC40 die revisions fabricated at OKI, Japan. The previous product revisions, CAT93Cxx, CAT64LC40 will gradually be phase-out.



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20272

RELIABILITY DATA SUMMARY:

Package: TSSOP
Qual Vehicles: CAV24C64YE-GT3

Qualification Results and Analysis:

Test:	Conditions:	Interval:	Results
HTOL	TA=150°C, Biased	1008 hrs	0/231
ELFR	TA=150°C, Biased	24 hrs	0/231
EDR(Endurance)	TA=25°C	1 Mil cycle	0/231
EDR(Data Retention)	TA=150°C	1008 hrs	0/231
HTSL	TA = 150°C	1008 hrs	0/80
HAST+PC	Ta=130C RH=85%, unbiased	96 hrs	0/240
TC+PC	Ta= -65 C to 150 C	500 cyc	0/240
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
DPA	Following TC+PC		0/15

Conclusion: All reliability requirements have been met.

Package: SOIC
Qual Vehicles: CAV24C64WE-GT3

Qualification Results and Analysis:

Test:	Conditions:	Interval:	Results
HTOL	TA=150°C, Biased	1008 hrs	0/231
ELFR	TA=150°C, Biased	24 hrs	0/231
EDR(Endurance)	TA=25°C	1 Mil cycle	0/231
EDR(Data Retention)	TA=150°C	1008 hrs	0/231
HTSL	TA = 150°C	1008 hrs	0/80
HAST+PC	Ta=130C RH=85%, unbiased	96 hrs	0/240
TC+PC	Ta= -65 C to 150 C	500 cyc	0/240
Autoclave+PC	Ta=121C RH=100% ~15 psig	96 hrs	0/240
DPA	Following TC+PC		0/15

Conclusion: All reliability requirements have been met.

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20272****ELECTRICAL CHARACTERISTIC SUMMARY:**

Device parameters will continue to meet all datasheet specifications. Characterization data is available upon request. Even though device specifications remain unchanged, ON Semiconductor recommends samples be obtained for application specific review.

CHANGED PART IDENTIFICATION:

The top package marking for the new Gresham die versus current marking used for the OKI die is shown in the attached Appendix. The new top package marking used for newly introduced Gresham die reflects the integration of former CSI (Catalyst) into ON Semiconductor, and provides for easier identification of device and die revision.

Die origin will also be identified on the packaging box label by the 2-digit wafer fabrication country code, CS: US for Gresham and CS: Japan for OKI.


FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20272
List of Affected General Parts:

Part Number (OPN)	Samples Availability	Comments
CAT93C86L		Use CAT93C86LI-G
CAT93C86LI-G	Now	
CAT93C86VI-G	Now	
CAT93C86VI-GT3	Now	
CAT93C86XI	Now	
CAT93C76LI-G	Now	
CAT93C76VI-GT3	Now	
CAT93C76YI-GT3	Now	
CAT93C46LI-G	Now	
CAT93C46VI		Use CAT93C46VI-G
CAT93C46VI-G	Now	
CAT93C46VI-GT3	Now	
CAT93C46VP2I-GT3	Now	Not recommended for New designs: Replace with CAT93C46BHU4I-GT3
CAT93C46WI-G	Now	
CAT93C46WI-GT3	Now	
CAT93C46XI	Now	
CAT93C46XI-T2	Now	
CAT93C46YI-G	Now	
CAT93C46YI-GT3	Now	
CAT93C46RLI-G	Now	
CAT93C46RVI-G	Now	
CAT93C46RVI-GT3	Now	
CAT93C46RVP2IGT3	N/A	Not recommended for New designs: Replace with CAT93C46BHU4I-GT3
CAT93C46RYI-GT3	Now	
CAT64LC40WI		Use CAT64LC40WI-G
CAT64LC40WI-G	Now	
CAT64LC40WI-GT3	Now	
CAT64LC40YI-GT3	Now	

Appendix – PART IDENTIFICATION

GRESHAM 0.35

CSI					F	R
				1	2	3
N	N	N	N	N	N	
4	5	6	7	8	9	10
						
	11	12	13	14	15	16

-

- 1-5: Product Code
- 6: Product Revision
- 7: Assembly Location Code
- 8: Production Year
- 9: Production Month
- 10-12: Assembly Lot Number
- : Pb-free microdot

Gresham (Rev. P)

CC

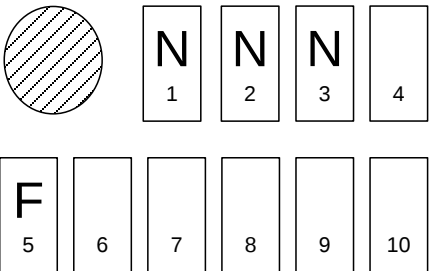
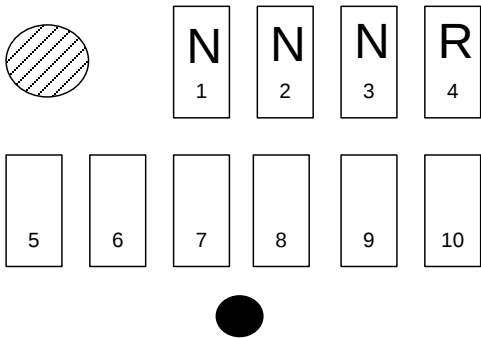
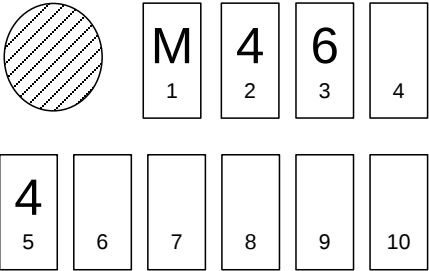
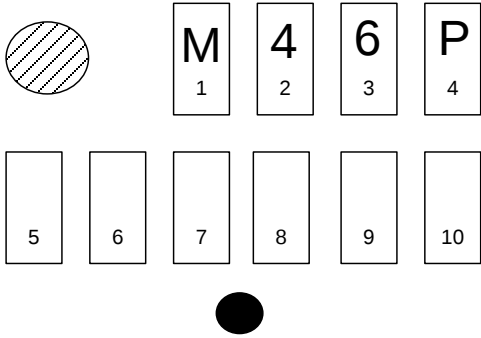
9 1	3 2	C 3	4 4	6 5	P 6
7	8	9	10	11	12

- 1-5: Product Code
- 6: Product Revision
- 7: Assembly Location Code
- 8: Production Year
- 9: Production Month
- 10-12: Assembly Lot Number
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FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20272

CAT93CXX Package Marking – Gresham die versus actual OKI die, Cont'd

OKI 0.35	GRESHAM 0.35
TSSOP-8(Y)	
 1-3: Product Code 4: Assembly Location Code 5: Lead Finish (NiPdAu) 6: Production Year 7: Production Month 8-10: Assembly Lot Number	 1-3: Product Code 4: Product Revision 5: Assembly Location Code 6: Production Year 7: Production Month 8-10: Assembly Lot Number ●: Pb-free microdot
Example: CAT93C46	
OKI  1-3: Product Code 4: Assembly Location Code 5: Lead Finish (NiPdAu) 6: Production Year 7: Production Month 8-10: Assembly Lot Number	Gresham  1-3: Product Code 4: Product Revision 5: Assembly Location Code 6: Production Year 7: Production Month 8-10: Assembly Lot Number ●: Pb-free microdot



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CAT93CXX Package Marking – Gresham die versus actual OKI die

OKI 0.35	GRESHAM 0.35
PDIP-8(L)	
The diagram shows the marking layout for an OKI 0.35 package. It features the 'CSI' logo on the left. To its right are three boxes labeled 1, 2, and 3 containing 'F' and 'R'. Below these are two rows of six boxes each, labeled 4 through 16. The first row contains 'N' in boxes 4 through 9, and the second row contains 'N' in boxes 10 through 15. Box 16 is empty.	The diagram shows the marking layout for a Gresham 0.35 package. It features a large 'ON' logo on the left. To its right are two rows of six boxes each, labeled 1 through 12. The first row contains 'N' in boxes 1 through 5, and the second row contains 'R' in boxes 6 through 10. Below these are two rows of six boxes each, labeled 11 through 16. The first row contains 'G' in boxes 11 through 14, and the second row contains 'G' in boxes 15 through 16.
1: Assembly Location Code 2: Lead Finish (NiPdAu) 3: Product Revision 4-9: Product Code 10: Temp Range 11: Production Year 12: Production Month 13-16: Assembly Lot Number	1-5: Product Code 6: Product Revision 7: Assembly Location Code 8-10: Assembly Lot Number 11-12: Production Year 13-14: Production Week 15: Pb-free designator
Example; CAT93C46	
The diagram shows the marking layout for an example CAT93C46 package. It features the 'CSI' logo on the left. To its right are three boxes labeled 1, 2, and 3 containing '4' and 'N'. Below these are two rows of six boxes each, labeled 4 through 16. The first row contains '9' in boxes 4 through 9, and the second row contains 'L' in boxes 10 through 15. Box 16 is empty.	The diagram shows the marking layout for an example CAT93C46 package. It features a large 'ON' logo on the left. To its right are two rows of six boxes each, labeled 1 through 12. The first row contains '9' in boxes 1 through 5, and the second row contains 'P' in boxes 6 through 10. Below these are two rows of six boxes each, labeled 11 through 16. The first row contains 'G' in boxes 11 through 14, and the second row contains 'G' in boxes 15 through 16.
1: Assembly Location Code 2: Lead Finish (NiPdAu) 3: Product Revision 4-9: Product Code 10: Temp Range 11: Production Year 12: Production Month 13-16: Assembly Lot Number	1-5: Product Code 6: Product Revision 7: Assembly Location Code 8-10: Assembly Lot Number 11-12: Production Year 13-14: Production Week 15: Pb-free designator



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #20272

CAT93CXX Package Marking – Gresham die versus actual OKI die, Cont'd

OKI 0.35	GRESHAM 0.35
TDFN-8(VP2)	
1-2: Product Code 3: Assembly Location Code 4-6: Assembly Lot Number 7: Production Year 8: Production Month	1-3: Product Code 4: Assembly Location Code 5-6: Assembly Lot Number 7: Production Year 8: Production Month ●: Pb-free microdot
Example CAT93C46	
1-2: Product Code 3: Assembly Location Code 4-6: Assembly Lot Number 7: Production Year 8: Production Month	1-3: Product Code 4: Assembly Location Code 5-6: Assembly Lot Number 7: Production Year 8: Production Month ●: Pb-free microdot