



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION
Generic Copy

13 Nov 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification # 16361

TITLE: Addition of ON Semiconductor Gresham Fab for CAT24C02 2K-bit I²C Serial EEPROM

PROPOSED FIRST SHIP DATE: The production shipments will be available: **January 1st, 2010**.
Existing Customers will have until **April 1st, 2010** to qualify Gresham die.

AFFECTED CHANGE CATEGORY(S): CAT24C02 (all packages, all temperatures)

AFFECTED PRODUCT DIVISION(S): Catalyst Group

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

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

SAMPLES: CAT24C02 in SOIC and TSSOP packages available: **November 25, 2009**
For other packages samples availability, see Affected Device List on Page #3. Contact your local ON Semiconductor Sales Office.

ADDITIONAL RELIABILITY DATA: Available upon request. Contact your local ON Semiconductor Sales Office or Tony Luciani<ffxyjj@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 your local ON Semiconductor Sales Office.

DESCRIPTION AND PURPOSE:

This change allows the addition of the ON Semiconductor wafer manufacturing facility in Gresham, Oregon, USA, ("Gresham") to provide internal additional capacity. The current CAT24C02 product is fabricated at the OKI Semiconductor, Japan 6-inch Fab in a 0.35um CMOS process. The new CAT24C02 die will be fabricated at the Gresham 8-inch Fab in a 0.35um CMOS process. This will provide increased die capacity to meet our growing demand, while maintaining 100% backward compatibility to the previous CAT24C02 die revision.

The CAT24C02 Gresham die will be assembled in fully RoHS-compliant packages at the ON Semiconductor facility, OSPI – Philippines (SOIC packages) and at existing external assembly contractors, UTAC - Thailand and STARS – Thailand (all packages).



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RELIABILITY DATA SUMMARY:

Test	Conditions	Lot Number	Sample Size	168hrs	408hrs	1000hrs			
HTOL High Temp Op Life	408hrs, 150C release Per JA108 Tritemp test before and after								
		EGF09090	77	Pass	Pass	Pass			
		Lot Number	Sample Size	24hrs					
ELFR Early Life Failure Rate	Per AEC-Q100-008 HTOL conditions, 24hrs, 150C Room/Hot testing before and after								
		EGF09090	800	Pass					
		Lot Number	Sample Size	100k	200k	300k	400k	500k	
EDR NVM Endurance	1M Cycles Per JESD22-A103/Q100-005 Room/Hot test before and after	EGF09090	77	Pass	Pass	Pass	Pass	Pass	
		Lot Number	Sample Size	600k	700k	800k	900k	1M	
		EGF09090	77	Pass	Pass	Pass	Pass	Pass	Pass
		Data	Lot Number	Sample Size	168hrs	336hrs	500hrs	1000hrs	
EDR NVM Data Retention	1000hrs, 150C Cycling Precon to 100k Per Q100-005 Room/Hot test before and after	"00"	EGF09090	77	Pass	Pass	Pass	Pass	
		Data	Lot Number	Sample Size	168hrs	336hrs	500hrs	1000hrs	
		"FF"	EGF09090	77	Pass	Pass	Pass	Pass	Pass
		Lot Number	Sample Size	500V	1000V	1500V	2000V		
ESD	Human Body Model AEC Q100-002	EGF09090	3/level	Pass	Pass	Pass	Pass		
		PH1020346A	3/level	Pass	Pass	Pass	Pass		
		Lot Number	Sample Size	2500V	3000V	3500v	4000v		
		EGF09090	3/level	Pass	Pass	Pass	Pass		
		PH1020346A	3/level	Pass	Pass	Pass	Pass		
		Lot Number	Sample Size	50V	100V	150V	200V		
ESD	Machine Model AEC Q100-003	EGF09090	3/level	Pass	Pass	Pass	Pass		
		PH1020346A	3/level	Pass	Pass	Pass	Pass		
		Lot Number	Sample Size	250V	500V	750V	1000V	1250V	
ESD	Charged Device Model AEC Q100-011								
		EGF09090	3/level	Pass	Pass	Pass	Pass	Pass	
		Lot Number	Sample Size	100ma					
LU	Latch Up per AEC-Q100-004 Room / Hot testing after LU test			25C	125C				
		EGF09090	6	P	P				
		Package	Lot Number	Sample Size	Result				
GL	Gate Leakage Per AEC-Q100-006 Room testing before and after 6 units per sample								
		SOIC	EGF09090	6	Pass				
		TSSOP	EGF09090	6	Pass				



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ELECTRICAL CHARACTERISTIC SUMMARY:

The CAT24C02 Gresham die is 100% compatible to OKI die product Revision G within the same data sheet parameters. The device data sheet is available at: http://www.onsemi.com/pub_link/Collateral/MD-1115-D.PDF

A detailed characterization report is available upon request.

CHANGED PART IDENTIFICATION:

The orderable part number (OPN) for the new Gresham die will have the letter “A” added at the end of the part number. See [Affected Device List](#).

The top package marking for the new Gresham die versus current marking for the OKI die is shown in the attached Appendix.

The Gresham die will also be identified though a 2-digit country code for wafer fabrication (CS: US) on the label of the packaging box. OKI die is identified on the label of the packaging box as CS: Japan.

AFFECTED DEVICE LIST

Part Number - OKI die	Part Number - Gresham die	Samples Avail Date
CAT24C02LI-G	CAT24C02LI-GA	5-Dec-09
CAT24C02WI-GT3	CAT24C02WI-GT3A	25-Nov-09
CAT24C02YI-GT3	CAT24C02YI-GT3A	25-Nov-09
CAT24C02VP2I-GT3	CAT24C02VP2IGT3A	20-Dec-09
CAT24C02ZI-GT3	CAT24C02ZI-GT3A	20-Dec-09
CAT24C02TDI-GT3	CAT24C02TDI-GT3A	20-Dec-09
CAT24C02LE-G	CAT24C02LE-GA	20-Dec-09
CAT24C02WE-GT3	CAT24C02WE-GT3A	20-Dec-09
CAT24C02YE-GT3	CAT24C02YE-GT3A	20-Dec-09
CAT24C02VP2E-GT3	CAT24C02VP2EGT3A	20-Dec-09
CAT24C02ZE-GT3	CAT24C02ZE-GT3A	20-Dec-09
CAT24C02TDE-GT3	CAT24C02TDE-GT3A	20-Dec-09

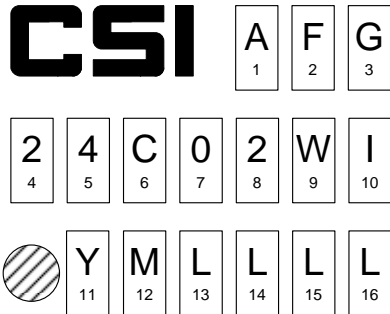


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Appendix
Package Marking - Gresham die versus actual OKI die

SOIC 8 (W)

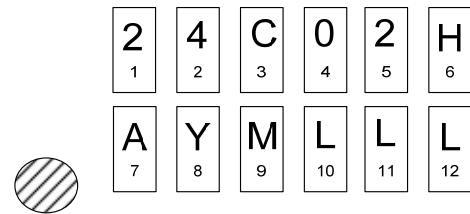
Current Marking: OKI die



FRONT SIDE MARK:

- 1: Assembly location code
- 2: Mark "4" for (lead finish NiPdAu)
- 3: Product Revision: Fixed as "G"
- 4-9: Product Name: "24C02W"
- 10: Temp Range (I=Industrial; E=Extended)
- 11: Production Year (last digit)
- 12: Production Month (1-9, A,B,C)
- 13-16: Last four digits of assembly lot number

Gresham die

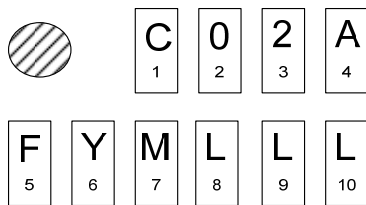


FRONT SIDE MARK:

- 1-5: Device Code "24C02"
- 6: Product Revision - Fixed as "H"
- 7: Assembly Location
- 8: Production Year
- 9: Production Month
- 10-12: Lot Number

TSSOP 8 (Y)

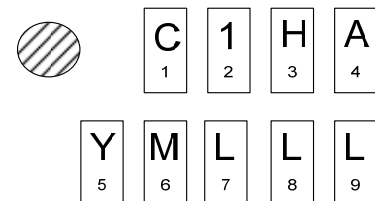
Current Marking: OKI die



FRONT SIDE MARK:

- 1-3: Device Code "C02"
- 4: Assembly location
- 5: Lead finish
- 6: Production Year
- 7: Production Month
- 8-10: Lot Number

Gresham die



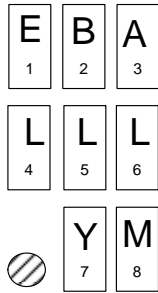
FRONT SIDE MARK:

- 1-2: Device Code "C1"
- 3: Product Revision - Fixed as "H"
- 4: Assembly Location
- 5: Production Year
- 6: Production Month
- 7-9: Lot Number



TDFN 2x3mm (VP2)

Current Marking: OKI die



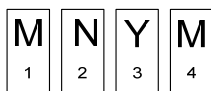
FRONT SIDE MARK:

- 1-2: Device Code
- 3: Assembly location
- 4-6: Lot Number
- 7: Production Year
- 8: Production Month

TSOT-23 5LD (TD)

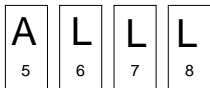
Current Marking: OKI die marking)

TOP MARKING:



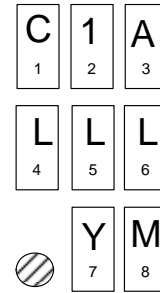
- 1-2 : Device Code
- 3 : Production Year
- 4 : Production Month

BOTTOM MARKING:



- 5 : Assembly location
- 6-8 : Lot Number

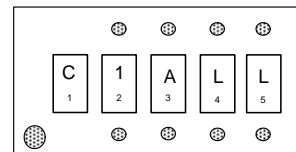
Gresham die



FRONT SIDE MARK:

- 1-2: Device Code "C1"
- 3: Assembly location
- 4-6: Lot Number
- 7: Production Year
- 8: Production Month

Gresham Die (No bottom marking)

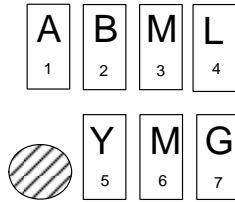


- 1-2. Device Code "C1"
- 3. Assembly location
- 4-5. Lot number
- Binary code for date code



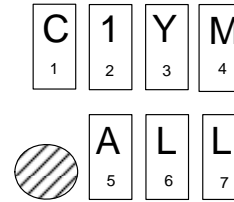
MSOP 8LD (Z)

Current top marking: OKI die



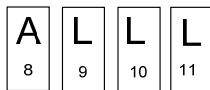
- 1-4. Device Code
- 5. Production Year
- 6. Production Month
- 7. Product Revision

Gresham die:



- 1-2. Device Code
- 3. Production Year
- 4. Production Month
- 5. Assembly location
- 6-7. Lot Number

Bottom marking

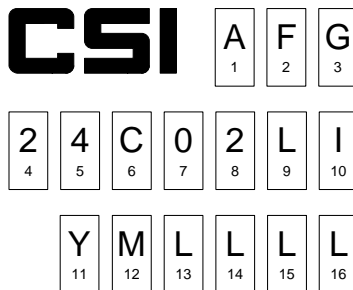


- 8: Assembly Location
- 9-11 Lot Number

No Bottom marking

PDIP 8 (L)

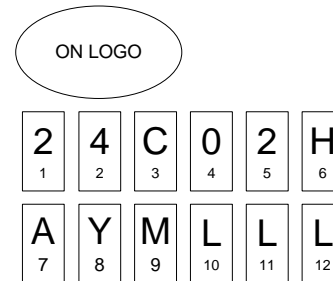
Current marking: OKI die



FRONT SIDE MARK:

- 1: Assembly location code
- 2: Mark "4" for (lead finish NiPdAu)
- 3: Product Revision: Fixed as "G"
- 4-9: Device Code: "24C02W"
- 10: Temp Range (I=Industrial; E=Extended)
- 11: Production Year (last digit)
- 12: Production Month (1-9, A,B,C)
- 13-16: Last four digits of assembly lot number

Gresham die



FRONT SIDE MARK:

- 1-5: Device Code "24C02"
- 6: Product Revision
- 7: Assembly Location
- 8: Production Year
- 9: Production Month
- 10-12: Lot Number