



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION

Issue Date
August 14, 2009

SUBJECT: ON Semiconductor Final Product/Process Change Notification # 16318

TITLE: CAT25xxx SPI Serial EEPROM New Die Revision with Timing Specification Change

PROPOSED FIRST SHIP DATE: The new product revision is available and can be shipped upon request. For customers who have qualified the previous die revision, we will continue to ship the existing product revision until we deplete the inventory.

AFFECTED CHANGE CATEGORY(S): All SPI Serial EEPROM devices (all packages, all temperatures)

AFFECTED PRODUCT DIVISION(S): Catalyst Group

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:
Contact your local ON Semiconductor Sales Office.

SAMPLES: Available upon request. Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Not applicable
Contact your local ON Semiconductor Sales Office.

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 our SPI Serial EEPROM devices to be compatible with applications where the CS signal is brought immediately high (within t_{CSH}) after the rising clock edge that latches the last data bit during the write instruction.

The new die revisions are 100% backward compatible in applications designed for the earlier die revisions.

For additional detail (including the exact Chip Select Hold Time - t_{CSH} – specification) please refer to the respective “Electrical Characteristics Summary” on page 2.



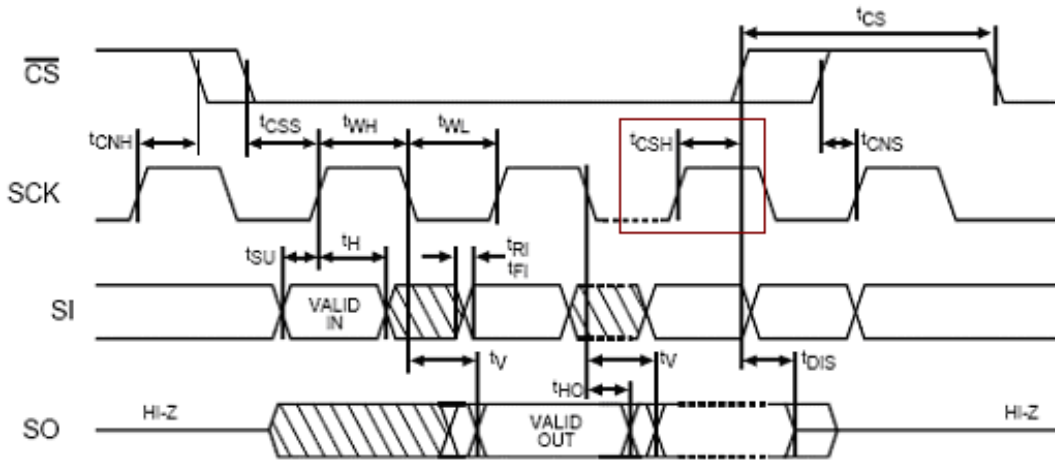
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RELIABILITY DATA SUMMARY: NA

ELECTRICAL CHARACTERISTIC SUMMARY: Chip Select Hold Time (t_{CSH})

For the new die revision, the Chip Select (CS) input low to high transition timing is changed to be defined relative to the rising edge of the clock input, independent of SPI mode (0, 0) or (1,1). In the earlier die revisions, the CS input low to high transition was recognized (latched) on either the positive or the negative transition of the clock input - as a function of SPI mode.

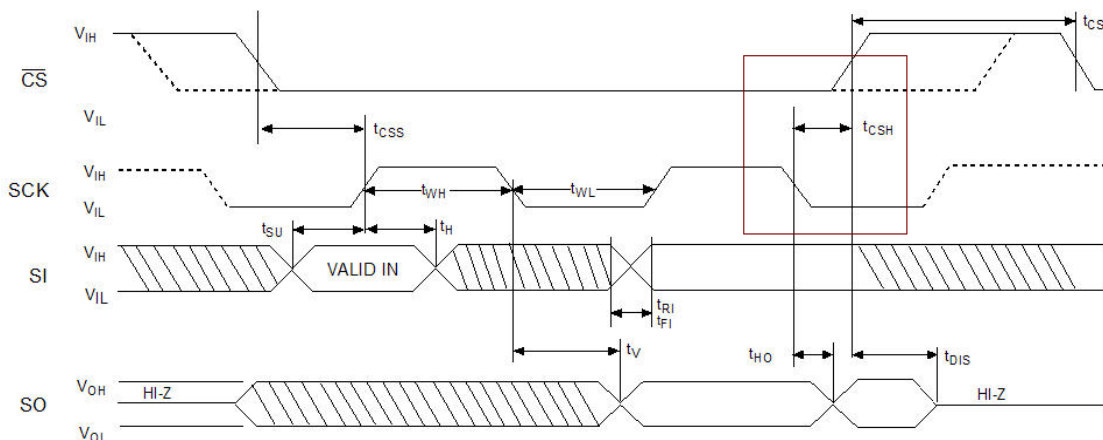
a) New Die Revision



t_{CSH} value – New Die Revision

Symbol	Parameter	VCC = 1.8V – 5.5V / -40°C to +85°C VCC = 2.5V – 5.5V / -40°C to +125°C		VCC = 2.5V – 5.5V -40°C to +85°C		Units
		Min	Max	Min	Max	
t_{CSH}	CS Hold Time	30		20		ns

b) Previous Die Revision





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t_{CSH} value – Previous Die Revision

Symbol	Parameter	VCC = 1.8V – 5.5V / -40°C to +85°C VCC = 2.5V – 5.5V / -40°C to +125°C		VCC = 2.5V – 5.5V -40°C to +85°C		Units
		Min	Max	Min	Max	
t _{CSH}	CS Hold Time	50		15		ns

CHANGED PART IDENTIFICATION:

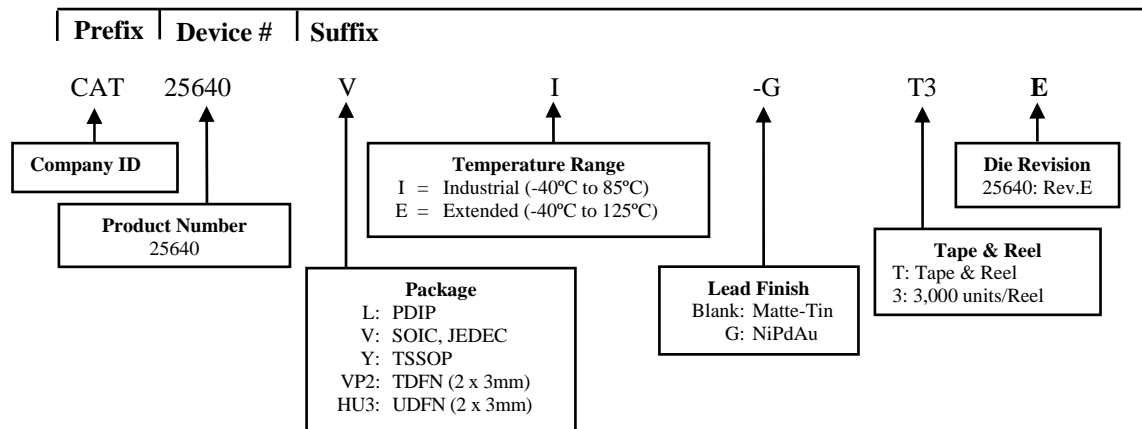
The new die revision is reflected in the marking on top of the package.
The die revision change per every CAT25xxx product is shown in Table 1.

Table 1

Device name	Existing Rev	New Die Rev
CAT25010	C	D
CAT25020	C	D
CAT25040	C	D
CAT25080	B	C
CAT25160	B	C
CAT25320	B	C
CAT25640	D	E
CAT25128	C	D
CAT25256	B	C

The orderable part number for the new die revision will have the product revision letter added in the end of part numbering.

Example of Ordering Information: CAT25640 Die Rev. E





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AFFECTED DEVICE LIST

Existing Die	New Die Rev
CAT25010LI-G	CAT25010LI-GD
CAT25010VI-GT3	CAT25010VI-GT3D
CAT25010YI-GT3	CAT25010YI-GT3D
CAT25010VP2I-GT3	CAT25010VP2IGT3D
CAT25010ZI-GT3	CAT25010ZI-GT3D
CAT25010LE-G	CAT25010LE-GD
CAT25010VE-GT3	CAT25010VE-GT3D
CAT25010YE-GT3	CAT25010YE-GT3D
CAT25010VP2E-GT3	CAT25010VP2EGT3D
CAT25010ZE-GT3	CAT25010ZE-GT3D
CAT25020LI-G	CAT25020LI-GD
CAT25020VI-GT3	CAT25020VI-GT3D
CAT25020YI-GT3	CAT25020YI-GT3D
CAT25020VP2I-GT3	CAT25020VP2IGT3D
CAT25020ZI-GT3	CAT25020ZI-GT3D
CAT25020LE-G	CAT25020LE-GD
CAT25020VE-GT3	CAT25020VE-GT3D
CAT25020YE-GT3	CAT25020YE-GT3D
CAT25020VP2E-GT3	CAT25020VP2EGT3D
CAT25020ZE-GT3	CAT25020ZE-GT3D
CAT25040LI-G	CAT25040LI-GD
CAT25040VI-GT3	CAT25040VI-GT3D
CAT25040YI-GT3	CAT25040YI-GT3D
CAT25040VP2I-GT3	CAT25040VP2IGT3D
CAT25040ZI-GT3	CAT25040ZI-GT3D
CAT25040LE-G	CAT25040LE-GD
CAT25040VE-GT3	CAT25040VE-GT3D
CAT25040YE-GT3	CAT25040YE-GT3D
CAT25040VP2E-GT3	CAT25040VP2EGT3D
CAT25040ZE-GT3	CAT25040ZE-GT3D
CAT25080LI-G	CAT25080LI-GC
CAT25080VI-GT3	CAT25080VI-GT3C
CAT25080YI-GT3	CAT25080YI-GT3C
CAT25080VP2I-GT3	CAT25080VP2IGT3C
CAT25080HU2I-GT3	CAT25080HU2IGT3C
CAT25080LE-G	CAT25080LE-GC
CAT25080VE-GT3	CAT25080VE-GT3C
CAT25080YE-GT3	CAT25080YE-GT3C
CAT25080VP2E-GT3	CAT25080VP2EGT3C
CAT25080HU2E-GT3	CAT25080HU2EGT3C
CAT25160LI-G	CAT25160LI-GC
CAT25160VI-GT3	CAT25160VI-GT3C
CAT25160YI-GT3	CAT25160YI-GT3C
CAT25160VP2I-GT3	CAT25160VP2IGT3C
CAT25160HU2I-GT3	CAT25160HU2IGT3C

Existing Die	New Die Rev
CAT25160LE-G	CAT25160LE-GC
CAT25160VE-GT3	CAT25160VE-GT3C
CAT25160YE-GT3	CAT25160YE-GT3C
CAT25160VP2E-GT3	CAT25160VP2EGT3C
CAT25160HU2E-GT3	CAT25160HU2EGT3C
CAT25320LI-G	CAT25320LI-GC
CAT25320VI-GT3	CAT25320VI-GT3C
CAT25320YI-GT3	CAT25320YI-GT3C
CAT25320VP2I-GT3	CAT25320VP2IGT3C
CAT25320HU3I-GT3	CAT25320HU3IGT3C
CAT25320LE-G	CAT25320LE-GC
CAT25320VE-GT3	CAT25320VE-GT3C
CAT25320YE-GT3	CAT25320YE-GT3C
CAT25320VP2E-GT3	CAT25320VP2EGT3C
CAT25320HU3E-GT3	CAT25320HU3EGT3C
CAT25640LI-G	CAT25640LI-GE
CAT25640VI-GT3	CAT25640VI-GT3E
CAT25640YI-GT3	CAT25640YI-GT3E
CAT25640VP2I-GT3	CAT25640VP2IGT3E
CAT25640HU3I-GT3	CAT25640HU3IGT3E
CAT25640LE-G	CAT25640LE-GE
CAT25640VE-GT3	CAT25640VE-GT3E
CAT25640YE-GT3	CAT25640YE-GT3E
CAT25640VP2E-GT3	CAT25640VP2EGT3E
CAT25640HU3E-GT3	CAT25640HU3EGT3E
CAT25128LI-G	CAT25128LI-GD
CAT25128VI-GT3	CAT25128VI-GT3D
CAT25128YI-GT3	CAT25128YI-GT3D
CAT25128VP2I-GT3	CAT25128VP2IGT3D
CAT25128XI-T2	CAT25128XI-T2D
CAT25128LE-G	CAT25128LE-GD
CAT25128VE-GT3	CAT25128VE-GT3D
CAT25128YE-GT3	CAT25128YE-GT3D
CAT25128VP2E-GT3	CAT25128VP2EGT3D
CAT25128XE-T2	CAT25128XE-T2D
CAT25256LI-G	CAT25256LI-GC
CAT25256VI-GT3	CAT25256VI-GT3C
CAT25256YI-GT3	CAT25256YI-GT3C
CAT25256ZD2I-GT2	CAT25256ZD2IGT2C
CAT25256XI-T2	CAT25256XI-T2C
CAT25256LE-G	CAT25256LE-GC
CAT25256VE-GT3	CAT25256VE-GT3C
CAT25256YE-GT3	CAT25256YE-GT3C
CAT25256ZD2E-GT2	CAT25256ZD2EGT2C
CAT25256XE-T2	CAT25256XE-T2C