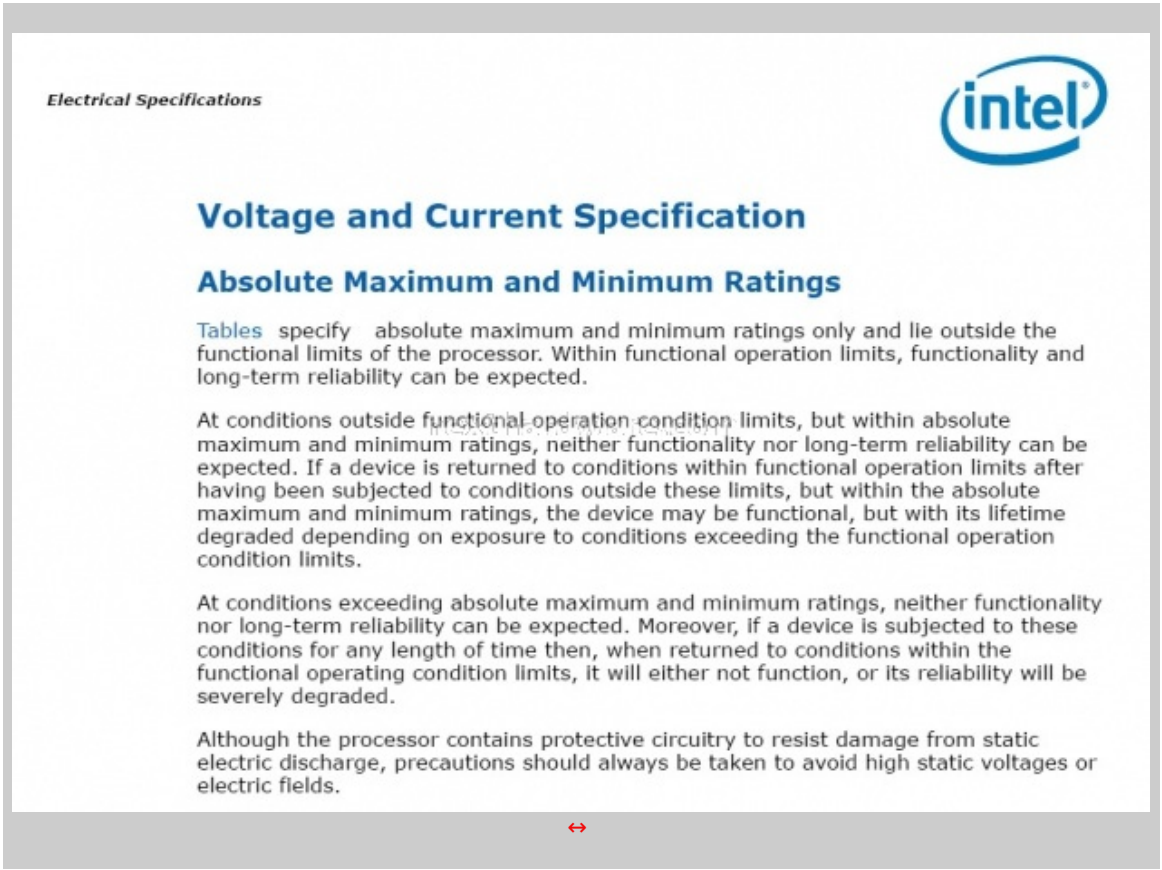
a cura di: **Nicolò Cardobi - Chicco85 - 20-01-2008 23:11**

Intel Wolfdale (45 nm): overclocking e vcore

LINK (https://www.nexthardware.com/news/processori-chipset/480/intel-wolfdale-45-nm-overclocking-e-vcore.htm)

Stanno per arrivare sul mercato le nuove cpu dual core a 45 nm. Qual'è il range di sicurezza per l'overclocking di queste cpu in termini di vcore?

La risposta la si può ritrovare negli stessi datasheet Intel.



Electrical Specifications

Voltage and Current Specification

Absolute Maximum and Minimum Ratings

Tables specify absolute maximum and minimum ratings only and lie outside the functional limits of the processor. Within functional operation limits, functionality and long-term reliability can be expected.

At conditions outside functional operation condition limits, but within absolute maximum and minimum ratings, neither functionality nor long-term reliability can be expected. If a device is returned to conditions within functional operation limits after having been subjected to conditions outside these limits, but within the absolute maximum and minimum ratings, the device may be functional, but with its lifetime degraded depending on exposure to conditions exceeding the functional operation condition limits.

At conditions exceeding absolute maximum and minimum ratings, neither functionality nor long-term reliability can be expected. Moreover, if a device is subjected to these conditions for any length of time then, when returned to conditions within the functional operating condition limits, it will either not function, or its reliability will be severely degraded.

Although the processor contains protective circuitry to resist damage from static electric discharge, precautions should always be taken to avoid high static voltages or electric fields.

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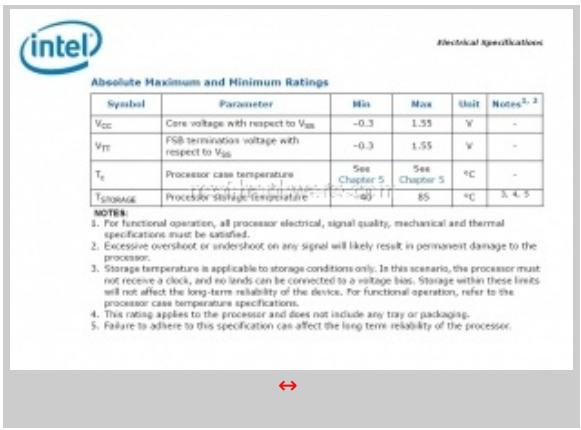
Questo è quanto succede se si fa operare la cpu oltre alle specifiche riportate sotto.

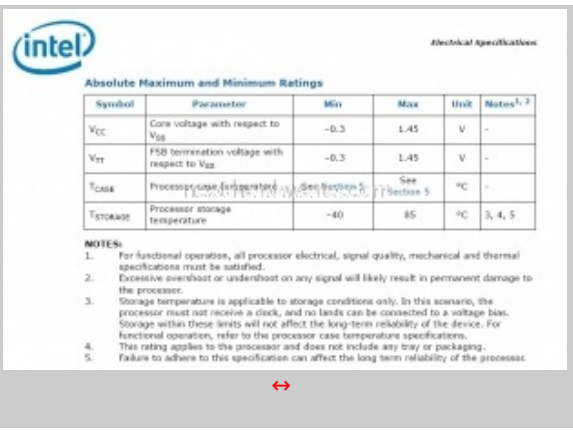


Electrical Specifications

Absolute Maximum and Minimum Ratings

Symbol	Parameter	Min	Max	Unit	Notes[1, 2]
V_{CC}	Core voltage with respect to V_{SS}	-0.3	1.55	V	-
V_{TT}	FSB termination voltage with respect to V_{SS}	-0.3	1.55	V	-
T_c	Processor case temperature	See Chapter 5	See Chapter 5	°C	-
$T_{STORAGE}$	Processor storage temperature	-40	85	°C	3, 4, 5

NOTES:
1. For functional operation, all processor electrical, signal quality, mechanical and thermal specifications must be satisfied.
2. Excessive overshoot or undershoot on any signal will likely result in permanent damage to the processor.
3. Storage temperature is applicable to storage conditions only. In this scenario, the processor must not receive a clock, and no lands can be connected to a voltage bias. Storage within these limits will not affect the long-term reliability of the device. For functional operation, refer to the processor case temperature specifications.
4. This rating applies to the processor and does not include any tray or packaging.
5. Failure to adhere to this specification can affect the long term reliability of the processor.



Electrical Specifications

Absolute Maximum and Minimum Ratings

Symbol	Parameter	Min	Max	Unit	Notes[1, 2]
V_{CC}	Core voltage with respect to V_{SS}	-0.3	1.45	V	-
V_{TT}	FSB termination voltage with respect to V_{SS}	-0.3	1.45	V	-
T_{CASE}	Processor case temperature	See Section 5	See Section 5	°C	-
$T_{STORAGE}$	Processor storage temperature	-40	85	°C	3, 4, 5

NOTES:
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A sinistra vedete le specifiche relative alle cpu a 65 nm, mentre a destra le specifiche delle cpu a 45 nm.

In calce alla news, potete trovare il link al download dei datasheet da cui sono state tratte queste informazioni. Più precisamente, le informazioni relative ai voltaggi d'esercizio le trovate rispettivamente alla pagina 20 del documento dedicato alle cpu Conroe a 65 nm e a pagina 17 del documento dedicato alle cpu Wolfdale 45 nm.

Buona lettura.

P.s.: si ringrazia l'utente rge del forum Xtreme Systems per lo spunto.