Datasheet

PC107A Datasheet Addendum for the Extended-Industrial Temperature Grade

Description

This document describes part-number-specific changes to recommended operating conditions and revised electrical specifications, as applicable, from those described in the general PC107A PCI Bridge Memory Controller datasheet. The PC107A is a PCI Bridge Memory Controller.

Specifications provided in this document supersede those in the PC107A PCI Bridge Memory Controller datasheet, Rev. E or later, for the "E" temperature range. Specifications not addressed herein are unchanged.

Note that headings and table numbers in this document are not consecutively numbered. They intended to correspond to the heading or table affected in the general datasheet.

Screening

Extended - Industrial temperature ranges (T_J = -45°C/+115°C)

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5.3 Recommended Operating Conditions

Table 5.2 provides the recommended operating conditions for the PC107A.

Table 5.2. Recommended Operating Conditions

Symbol	Characteristic		Recommended Value	Unit	Notes
V_{DD}	Supply Voltage		2.5 ±5%	V	(4)
GV_{DD}	Supply Voltages for Memory Bus Drivers		3.3 ±5%	V	(6)
BV_{DD}	Supply Voltages for Processor Bus Drivers		3.3 ±5%	V	(6)
			2.5 ±5%		
OV_{DD}	I/O Buffer supply for PCI and Standard		3.3 ±0.3	V	(4)
AV_{DD}	PLL Supply Voltage		2.5 ±5%	V	(5)
LAV_{DD}	DLL Supply Voltage		2.5 ±5%	V	(5)
LV_{DD}	PCI Reference		5.0 ±5%	V	(7)(8)
			3.3 ±0.3	V	(7)(8)
V_{IN}	Input Voltage	PCI Inputs	0 to 3.6 or 5.75	V	(1)(2)
		All Other Inputs	0 to 3.6	V	(3)
T_J	Die-Junction Temperature	Extended Industrial Temperature	-45°C to 115°C	°C	

Notes: 1. PCI pins are designed to withstand LV_{DD} + 0.5V DC when LV_{DD} is connected to a 5.0V DC power supply.

2. PCI pins are designed to withstand LV_{DD} + 0.5V DC when LV_{DD} is connected to a 3.3V DC power supply.

Cautions:

3. Input voltage (V_{IN}) must not be greater than the supply voltage (V_{DD}/AV_{DD}/LAV_{DD}) by more than 2.5V at all times, including during power-on reset.
4. OV_{DD} must not exceed V_{DD}/AV_{DD}/LAV_{DD} by more than 1.8V at any time, including during power-on reset. This limit may be exceeded for a maximum of 20 ms during power-on reset and power-down sequences.
5. V_{DD}/AV_{DD}/LAV_{DD} must not exceed OV_{DD} by more than 0.6V at any time, including during power-on reset. This limit may be exceeded for a maximum of 20 ms during power-on reset and power-down sequences.
6. BV_{DD}/GV_{DD} must not exceed V_{DD}/AV_{DD}/LAV_{DD} by more than 1.8V at any time, including during power-on reset. This limit may be exceeded for a maximum of 20 ms during power-on reset and power-down sequences.
7. LV_{DD} must not exceed V_{DD}/AV_{DD}/LAV_{DD} by more than 5.4V at any time including during power-on reset. This limit may be exceeded for a maximum of 20 ms during power-on reset and power-down sequences
8. LV_{DD} must not exceed OV_{DD} by more than 3.6V at any time, including during power-on reset. This limit may be exceeded for a maximum of 20 ms during power-on reset and power-down sequences.

12. Ordering Information

Product Code (1)	Part Identifier	Temperature Range: T_J (1)	Package (1)	Screening Level	Operating Frequency	Bus Divider	Revision Level (1)
PC(X) (2)	107A	E: -45˚C ; +115˚C	GH: HiTCE - CBGA	Blank: Standard	100: 100 MHz	L: 2.5 ± 125 mV	C = 1.3 D = 1.4

Notes: 1. For availability of the different versions, contact your local e2v sales office.

2. The letter X in the part number designates a "Prototype" product that has not been qualified by e2v. Reliability of a PCX part-number is not guaranteed and such part-number shall not be used in Flight Hardware. Product changes may still occur while shipping prototypes.

13.2 Differences with Commercial Part

	Commercial part	Extended Industrial Part
Temperature range	T_J = 0 to 105°C	T_J = -45°C to 115°C

14. Document Revision History

Table 14-1 provides a revision history for this datasheet.

Table 14-1. Document Revision History

Revision Number	Date	Substantive Change(s)
A	07/07	Initial revision

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