



Application Note for
PFC 512Mb Word Mode
NAND Flash Memory

PF79AL1216

Rev. 1.0

Aug. 23, 2005



Contents

- I. Vcc Operating Range**
- II. Multi-plane Operation**
- III. Read ID**
- IV. Word Mode (x16) Sequential Read**
- V. Device Resetting Time during Read and Standby**
- VI. CE# High to Ready**
- VII. Device Maximum Program Time**
- VIII. Device Active Current for Program Operation**
- IX. Reset Command after Power Up**

The contents of this application show the specification differences between Samsung's K9F1216U0A and PFC's PF79AL1216 Word Mode.



I. Vcc Operating Range

PF79AL1208 power supply (Vcc) range from 3.0 To 3.6V for both read and write operations.

II. Multi-plane Operation

PF79AL1208 current version do not support the function of multi-plane page program, block erase and copy back

III. Read ID

During Read ID operation, the manufacturing ID and device ID will be output by the following sequence.

7F → 56 → A5 → C0 → 7F → 1F → A5 → C0
maker 1st word. device code. Multi Plane. maker 2nd word. maker 3rd word.

Manufacturing ID (3 words): 0x7F, 0x7F, 0x1F

Device ID: 0x56 (for PF79AL1216, x16 Word Mode part)

After the 8th words, the entire ID codes sequence will be repeated again.

Any valid command listed in the datasheet can be used to reset this Read ID operation. An invalid command will not reset the Read ID operation.

IV. Word Mode Sequential Read

Sequential read is also allowed in x16 word mode device (PF79AL1216), and it reads 256 words + 8 words in spare area. This automatic read algorithm is triggered by the last rising edge of RE# of the last address. It will loop back to the 1st page of the block after reading the last page of the same block.

V. Device Resetting Time during Read and Standby

Device Resetting Time is the time the device takes to be ready for the new command after “RESET” command was issued.



Device Resetting Time		
Device	PF79AL1216	K9F1216U0A
trst (read/standby)	15us	5us

VI. CE# High to Ready

When using CE# to intercept the read mode or sequential read mode, CE# needs to stay high for 250ns to allow the internal circuitry to reset the read mode and back to Ready.

CE# High to Ready		
Device	PF79AL1216	K9F1216U0A
t _{cry}	250ns	50ns

VII. Device Maximum Program Time

Maximum program time is the time the device required to finish programming one page.

Device Maximum Program Time		
Device	PF79AL1216	K9F1216U0A
t _{PROG} (Max.)	1300us	500us

VIII. Device Active Current for Program Operation

Active Current represents the average current the will consume during Program Operation.

Device Active Current		
Device	PF79AL1216	K9F1216U0A
I _{cc} (Program) Max.	30mA	20mA

IX. Reset Command after Power Up

It is required for the user to send a Reset Command (0xFF) every time the chip is Powered Up and before start with any operation.

