

# UtRAM Code Information(1/2)

Last Updated : April 2008

**K** 1 X X X X X X X X - X X X X X X X

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

## 1. Memory (K)

## 2. UtRAM : 1

## 3. Small Classification

B : UtRAM (Sync, Burst Type)  
 C : UtRAM2  
 S : UtRAM (Asynch.LPSRAM Type)

## 4~5. Density, Refresh

12 : 512M, Self-contained Refresh  
 16 : 16M, Self-contained Refresh  
 1G : 1G, Self-contained Refresh  
 28 : 128M, Self-contained Refresh  
 32 : 32M, Self-contained Refresh  
 40 : 4M, Self-contained Refresh  
 56 : 256M, Self-contained Refresh  
 64 : 64M, Self-contained Refresh  
 80 : 8M, Self-contained Refresh

## 6~7. Organization

16: x16

## 8. VDD, VDDQ

1 : 3.0V, 3.0V                      2 : 3.0V, 2.5V  
 3 : 3.0V, 1.8V                      5 : 2.5V, 2.5V  
 6 : 2.5V, 1.8V                      B : 1.8V, 1.8V

## 9. Mode

1 : Demux  
 2 : MRS, PAR, DPD, All Modes  
**3 : MRS (High enable), All Modes**  
 4 : Page, DPD                      5 : DPD  
 6 : MRS, PAR, All Modes    7 : MRS, DPD, All Modes  
 8 : Mux, MRS, PAR, DPD, All Modes  
 9 : Mux  
 A : MRS, PAR, DPD, Mode 1, 2  
 B : MRS, PAR, DPD, Mode 1, 3  
 C : Page                              D : MRS, All Modes  
 E : MRS, PAR, Mode 1, 2  
 F : MRS, PAR, Mode 1, 3  
 G : MRS, PAR, All Modes  
 H : Mux, MRS, PAR, DPD, Mode 1, 3

\* PAR : Partial Refresh  
 \* DPD : Deep Power Down  
 \* MRS : Mode Register Set

## 10. Generation

M : 1st Generation                      A : 2nd Generation  
 B : 3rd Generation                      C : 4th Generation  
 D : 5th Generation                      E : 6th Generation  
 F : 7th Generation

## 11. "—"

## 12. Package

**A : FBGA (Lead-Free, OSP)**  
 B : FBGA (Lead-Free)                      E : TBGA  
 F : FBGA  
 T : TBGA (Lead-Free)  
 C : CHIP BIZ                              W : WAFER

## 13. Temp, Power

- COMMON (Temp, Power)  
 C : Commercial, Normal  
 E : Extended, Normal  
 I : Industrial, Normal  
 0 : NONE, NONE  
 (Containing of exception handling code)

## - WAFER, CHIP BIZ Level division

0 : NONE, NONE  
 2 : Hot DC, selected AC sort  
 3 : Cold / Hot DC, selected AC sort

## 14~15. Speed (tAA)

10 : 100ns                              60 : 60ns  
 70 : 70ns                              75 : 75ns  
 85 : 85ns                              90 : 90ns  
 00 : NONE

# U<sub>t</sub>RAM Code Information(2/2)

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<u>K</u> <u>1</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>-</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u> <u>X</u>
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

## 16. Packing Type

- Common to all products, except of Mask ROM
- Divided into TAPE & REEL(In Mask ROM, divided into TRAY, AMMO Packing Separately)

Divide	Packing Type	New Marking
<b>Component</b>	TAPE & REEL	T
	Other ( Tray, Tube, Jar )	0 ( Number)
	Stack	S
<b>Module</b>	MODULE TAPE & REEL	P
	MODULE Other Packing	M

## 17~18. Customer "Customer List Reference"