

Mobile-SDR/DDR Code Information(1/3)

Last Updated : July 2009

<u>K</u>	<u>4</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

1. Memory (K)

2. DRAM : 4

3. Small Classification

M : Mobile-SDRAM (Discrete Device for Mobile)
 X : Mobile-DDR SDRAM (Discrete Device for Mobile)
 P : Mobile-DDR2-S4 SDRAM
 Q : Mobile DDR2-S2 SDRAM

4~5. Density, Refresh3. Small Classification

64 : 64M, 4K/64ms
 28 : 128M, 4K/64ms
 56 : 256M, 8K/64ms
 51 : 512M, 8K/64ms
 1G : 1G, 8K/64ms
 2G : 2G, 8K/64ms
4G : 4G, 8K/64ms

6~7. Organization

15 : x16 (2CS)	16 : x16
30 : x32 (2CS/2CKE)	31 : x32 (2CS)
32 : x32	

8. Bank

3 : 4Bank	4 : 8Bank
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9. Interface(VDD, VDDQ)

3 : LVCMOS (3.0V & 3.3V, 3.0V & 3.3V)
 L : LVCMOS (2.5V, 2.5V)
 P : LVCMOS (1.8V, 1.8V)
 G : LVCMOS,1.8V,1.2V
 B : HSUL_1,1.8V,N/A,1.2V,1.2V
 C : HSUL_1,1.8V,1.35V,1.2V,1.2V
 E : HSUL_1,1.8V,1.2V,1.2V,1.2V

10. Generation

11. "—"

12. Package

- Mobile-SDRAM(M)
B : 54-CSP(LF, HF)
 H : 90-FBGA_S(LF, HF)

- Mobile-DDR SDRAM(X)
 8 : 90-FBGA(LF, HF)
 A : 168-FBGA(LF, HF, DDP)
 F : 60-FBGA(LF, HF)
 N : 168-FBGA(LF, POP, HF)
X : 152-FBGA(POP,HF,LF)

- Mobile DDR2-S2 SDRAM
A : 168-FBGA (POP,HF,LF)

- Mobile DDR2-S4 SDRAM
A : 168-FBGA(POP,HF,LF)
C : 136-FBGA(POP,HF,LF)

- DRAM COMMON
 W : WAFER

※ HF : Halogen-Free
 LF : Lead-Free
 DDP : Dual Die Package
 POP : Package on Package

Mobile-SDR/DDR Code Information(2/3)

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

13. Temp, Power

E : Extended, Normal, PASR & TCSR

G : Extended, Low, PASR & TCSR

14~15. Speed

- Mobile-SDRAM(M)

60 : 166MHz @ CL3

75 : 133MHz @ CL3, 111MHz @ CL2

DP : Daisy Chain (PCB)

- Mobile-DDR SDRAM(X)

C8 : 5ns @ CL3

C7 : 5.4ns @ CL3

C6 : 6ns @ CL3

C3 : 7.5ns @ CL3

DP : Daisy Chain (PCB)

- Mobile DDR2-S4 SDRAM(P)

C9 : 3.75ns@RL4,TRCD18ns,TRP18ns

C0 : 3.0ns@RL5,TRCD18ns,TRP18ns

C1 : 2.5ns@RL6,TRCD18ns,TRP18ns

DP : Daisy Chain (PCB)

- Mobile DDR2-S2 SDRAM(Q)

C6 : 6.0ns@RL3,TRCD18ns,TRP18ns

C8 : 5.0ns@RL3,TRCD18ns,TRP18ns

DP : Daisy Chain (PCB)

Mobile-SDR/DDR Code Information(3/3)

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

16. Packing “Packing Type Reference”

- 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
Component	TAPE & REEL	T
	Other (Tray, Tube, Jar)	0 (Number)
	Stack	S
Module	MODULE TAPE & REEL	P
	MODULE Other Packing	M

17~18. Customer “Customer List Reference”