

Product Planning & Application Eng.Team
Memory Division
SAMSUNG ELECTRONICS HWASUNG PLANT
SAN #16 BANWOL-RI, TAEAN-EUP HWASUNG -CITY
GYEONGGI-DO, KOREA
Tel : 82-31-208-6319
Fax : 82-31-208-6799

Subject : 512Mb GDDR3 I-die description comparing to H-die

1. Ordering information

	H-die		I-die	
	Part number	VDD/VDDQ	Part number	VDD/VDDQ
1.3/1.2GHz	K4J52324QH-HJ7A/08	2.05V \pm 0.05V	K4J52324KI-HC7A/08	1.8V \pm 0.1V
1.0GHz	K4J52324QH-HJ1A	1.9V \pm 0.1V	K4J52324KI-HC1A	
800/700MHz	K4J52324QH-HC12/14	1.8V \pm 0.1V	K4J52324KI-HC12/14	

(Note) 1. I-die is operating at 1.8V VDD/VDDQ condition for overall speed bins

2. AC Timing conditions for 1.3/1.2GHz (comparison table for H/I-die)

(tCK)	1.3GHz		1.2GHz	
	H-die	I-die	H-die	I-die
tRAS	28	36	28	34
tRC	41	51	40	48
tRFC	52	66	50	62
tRCDR	14	17	14	16
tRCDW	9	13	9	12
tRP	13	15	12	14
tRRD	9	13	9	12
tWR	13	15	13	15
tCDLR	7	8	7	8
VDD	2.05V \pm 0.05V	1.8V \pm 0.1V	2.05V \pm 0.05V	1.8V \pm 0.1V

(Note) 1. It is required to relax AC timings for 1.3/1.2GHz since I-die adopts 1.8V VDD/VDDQ conditions while H-die is 2.05V typical

2. AC timings for other bins are same as H-die