SERIAL PRESENCE DETECT

M392B1G73DB0-YK002

Organization : 1G x 72
Composition : 512M x 8 * 18ea
Used component part # : K4B4G0846D-BYK0
# of rows in module : 2 Row
# of banks in component : 8 Banks
Feature : 18.75mm height & double sided component
Refresh : 8K/64ms
Bin Sort : K0(DDR3 1600@CL=11)
RCD Vendor and Revision : IDT Alpine

Byte #	Function Described	Function Supported	Hex Value	Note
		YK002	YK002	
0	Number of Serial PD Bytes Written / SPD Device Size / CRC Coverage	CRC coverage 0~116Byte, SP D Byte Total :256Byte, SPD Byte Use : 176Byte	92h	
1	SPD Revision	Version 1.2	12h	
2	Key Byte / DRAM Device Type	DDR3 SDRAM	0Bh	
3	Key Byte / Module Type	Registered DIMM	01h	
4	SDRAM Density and Banks	4Gb 8banks	04h	
5	SDRAM Addressing	Row : 16, Column : 10	21h	
6	Module Nominal Voltage, VDD	1.35V and 1.5V	02h	
7	Module Organization	2Rank / x8	09h	
8	Module Memory Bus Width	ECC, 64bit	0Bh	
9	Fine Timebase Dividend and Divisor	1ps	11h	
10	Medium Timebase Dividend	1/8 (0.125ns)	01h	
11	Medium Timebase Divisor	1/8 (0.125ns)	08h	
12	SDRAM Minimum Cycle Time (tCKmin)	1.25ns	0Ah	
13	Reserved	Reserved	00h	
14	CAS Latencies Supported, Least Significant Byte	6, 7, 8, 9, 10, 11	FCh	
15	CAS Latencies Supported, Most Significant Byte	6, 7, 8, 9, 10, 11	00h	
16	Minimum CAS Latency Time(tAAmin)	13.125ns	69h	
17	Minimum Write Recovery Time (tWRmin)	15ns	78h	
18	Minimum RAS# to CAS# Delay Time (tRCDmin)	13.125ns	69h	
19	Minimum Row Active to Row Active Delay Time (tRRDmin)	6ns	30h	
20	Minimum Row Precharge Time (tRPmin)	13.125ns	69h	
21	Upper Nibbles for tRAS and tRC	-	11h	
22	Minimum Active to Precharge Time (tRASmin), Least Significant Byte	35ns	18h	
23	Minimum Active to Active/Refresh Time (tRCmin), Least Significatn Byte	48.125ns	81h	
24	Minimum Refresh Recovery Time (tRFCmin), Least Significant Byte	260ns	20h	
25	Minimum Refresh Recovery Time (tRFCmin), Most Significant Byte	260ns	08h	
26	Minimum Internal Write to Read Command Delay Time (tWTRmin)	7.5ns	3Ch	
27	Minimum Internal Read to Precharge Command Delay Time (tRTPmin)	7.5ns	3Ch	
28	Upper Nibble for tFAW	30ns	00h	
29	Minimum Four Activate WIndow Delay Time (tFAWmin), Least Significant Byte	30ns	F0h	
30	SDRAM Output Drivers supported	DLL off Mode, RZQ/6, RZQ/7	83h	
31	SDRAM Thermal and Refresh Options	No ODTS, No ASR	01h	
32	Module Thermal Sensor	with TS	80h	
33	SDRAM Device Type	Standard Monolithic DRAM De vice	00h	
34	Fine Offset for SDRAM Minimum Cycle Time(tCKmin)	1.25ns	00h	
35	Fine Offset for Minimum CAS Latency Time(tAAmin)	13.125ns	00h	
36	Fine Offset for Minimum RAS# to CAS# Delay Time(tRCDmin)	13.125ns	00h	
37	Fine Offset for Minimum Row Precharge Delay Time(tRPmin)	13.125ns	00h	
38	Fine Offset for Minimum Active to Active/Refresh Delay Time(tRCmin)	48.125ns	00h	

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Byte #	Function Described	Function Supported	Hex Value	Note
		YK002	YK002	
39~40	Reserved, General Section	Reserved	00h	
41	SDRAM Maximum Activate Count (MAC) Value	Unlimited MAC_pTRR Complian t	88h	
42~59	Reserved, General Section	Reserved	00h	
60	Module Nominal Height	18.75mm	04h	
61	Module Maximum Thickness	Planar Double sides	11h	
62	Reference Raw Card Used	R/C L, 1.0	2Ah	
63	DIMM Module Attributes	1 Row of DRAM / 1 Register used	05h	
64	Heat Spreader Solution	without HS	00h	
65	Register vendor ID code(LSB)	IDT	80h	
66	Register vendor ID code(MSB)	IDT	B3h	
67	Register Revision Number	IDT Alpine	64h	
68	Register Type	SSTE32882	00h	
69	Register Control Word Functions(RC0/RC1)	Default	00h	
70	Register Control Word Functions(RC2/RC3)	R/C L	50h	
71	Register Control Word Functions(RC4/RC5)	R/C L	00h	
72	Register Control Word Functions(RC6/RC7)	Default	00h	
73	Register Control Word Functions(RC8/RC9)	Default	00h	
74	Register Control Word Function(RC10, RC11)	Default	00h	
75	Register Control Word Function(RC12, RC13)	Default	00h	
76	Register Control Word Function(RC14, RC15)	Default	00h	
77~116	Reserved	-	00h	
117	Module Manufacturer ID Code, Least Significant Byte	Samsung	80h	
118	Module Manufacturer ID Code, Most Significant Byte	Samsung	CEh	
119	Module ID: Module Manufacturing Location	Onyang Korea	01h	
120	Module ID: Module Manufacturing Date	-	00h	
121	Module ID: Module Manufacturing Date	-	00h	
122~125	Module ID : Module Serial Number	-	00h	
126	Cyclical Redundancy Code	-	0Eh	
127	Cyclical Redundancy Code	-	1Ah	
128	Module Part Number	M	4Dh	
129	Module Part Number	3	33h	
130	Module Part Number	9	39h	
131	Module Part Number	2	32h	
132	Module Part Number	B	42h	
133	Module Part Number	1	31h	
134	Module Part Number	G	47h	
135	Module Part Number	7	37h	
136	Module Part Number	3	33h	
137	Module Part Number	D-die	44h	
138	Module Part Number	B	42h	
139	Module Part Number	0	30h	
140	Module Part Number	-	2Dh	
141	Module Part Number	Y	59h	
142	Module Part Number	K	4Bh	
143	Module Part Number	0	30h	
144	Module Part Number	Blank	20h	

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		YK002	YK002	
145	Module Part Number	Blank	20h	
146~147	Module Revision Code	-	00h	
148	SDRAM Manufacturer's JEDEC ID Code	Samsung	80h	
149	SDRAM Manufacturer's JEDEC ID Code	Samsung	CEh	
150~175	Manufacturer's Specific Data	-	00h	
176~255	Open for customer use	-	00h	

Note : 1. ### #####.
2. ### #####.
3. ### #####.