

SERIAL PRESENCE DETECT

M393B2K70CM0-CF704/CF804/CH904/CK004

Organization : 2G x 72
 Composition : 1G x 4(st) * 36ea
 Used component part # : K4B4G0446C-MCF7/MCF8/MCH9/MCK0
 # of rows in module : 4 Rows
 # of banks in component : 8 Banks
 Feature : 30mm height & double sided component
 Refresh : 8K/64ms
 Bin Sort : F7(DDR3 800@CL=6), F8(DDR3 1066@CL=7), H9(DDR3 1333@CL=9), K0(DDR3 1600@CL=11)
 RCD Vendor and Revision : IDT LV-DDR3 B0

Byte #	Function Described	Function Supported				Hex Value				Note
		CF704	CF804	CH904	CK004	CF704	CF804	CH904	CK004	
0	Number of Serial PD Bytes Written / SPD Device Size / CRC Coverage	CRC coverage 0~116Byte, SPD Byte Total :256Byte, SPD Byte Use : 176Byte				92h				
1	SPD Revision	Version 1.0				10h				
2	Key Byte / DRAM Device Type	DDR3 SDRAM				0Bh				
3	Key Byte / Module Type	Registered DIMM				01h				
4	SDRAM Density and Banks	2Gb 8banks				03h				
5	SDRAM Addressing	Row : 15, Column : 11				1Ah				
6	Module Nominal Voltage, VDD	1.5V only				00h				
7	Module Organization	4Rank / x4				18h				
8	Module Memory Bus Width	ECC, 64bit				0Bh				
9	Fine Timebase Dividend and Divisor	2.5ps				52h				
10	Medium Timebase Dividend	1/8 (0.125ns)				01h				
11	Medium Timebase Divisor	1/8 (0.125ns)				08h				
12	SDRAM Minimum Cycle Time (tCKmin)	2.5ns	1.875ns	1.5ns	1.25ns	14h	0Fh	0Ch	0Ah	
13	Reserved	Reserved				00h				
14	CAS Latencies Supported, Least Significant Byte	6	6, 7, 8	6, 7, 8, 9	6, 7, 8, 9, 10, 11	04h	1Ch	3Ch	FCh	
15	CAS Latencies Supported, Most Significant Byte	6	6, 7, 8	6, 7, 8, 9	6, 7, 8, 9, 10, 11	00h				
16	Minimum CAS Latency Time(tAamin)	15ns	13.125ns	13.125ns	13.125ns	78h	69h	69h	69h	
17	Minimum Write Recovery Time (tWRmin)	15ns				78h				
18	Minimum RAS# to CAS# Delay Time (tRCDmin)	15ns	13.125ns	13.125ns	13.125ns	78h	69h	69h	69h	
19	Minimum Row Active to Row Active Delay Time (tRRDmin)	10ns	7.5ns	6ns	6ns	50h	3Ch	30h	30h	
20	Minimum Row Precharge Time (tRPmin)	15ns	13.125ns	13.125ns	13.125ns	78h	69h	69h	69h	
21	Upper Nibbles for tRAS and tRC	-				11h				
22	Minimum Active to Precharge Time (tRASmin), Least Significant Byte	37.5ns	37.5ns	36ns	35ns	2Ch	2Ch	20h	18h	
23	Minimum Active to Active/Refresh Time (tRCmin), Least Significant Byte	52.5ns	50.625ns	49.125ns	48.125ns	A4h	95h	89h	81h	
24	Minimum Refresh Recovery Time (tRFCmin), Least Significant Byte	160ns				00h				
25	Minimum Refresh Recovery Time (tRFCmin), Most Significant Byte	160ns				05h				
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	40ns	37.5ns	30ns	30ns	01h	01h	00h	00h	
29	Minimum Four Activate Window Delay Time (tFAWmin), Least Significant Byte	40ns	37.5ns	30ns	30ns	40h	2Ch	F0h	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	Non-Standard Device				80h				
34-59	Reserved, General Section	-				00h				
60	Module Nominal Height	30mm				0Fh				

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		CF704	CF804	CH904	CK004	CF704	CF804	CH904	CK004	
61	Module Maximum Thickness	DDP Double sides(With Flat Type H/S)				33h				
62	Reference Raw Card Used	R/C F, 0.0				05h				
63	DIMM Module Attributes	2 Rows of DRAM / 2 Register used				0Ah				
64	Heat Spreader Solution	with HS				80h				
65	Register vendor ID code(LSB)	IDT				80h				
66	Register vendor ID code(MSB)	IDT				B3h				
67	Register Revision Number	IDT LV-DDR3 B				61h				
68	Register Type	SSTE32882				00h				
69	Register Control Word Functions(RC0/RC1)	Default				00h				
70	Register Control Word Functions(RC2/RC3)	R/C F				50h				
71	Register Control Word Functions(RC4/RC5)	R/C F				50h				
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	-	-			11h	89h	CBh	FFh	
127	Cyclical Redundancy Code	-	-			9Ah	C3h	6Ah	B5h	
128	Module Part Number	M				4Dh				
129	Module Part Number	3				33h				
130	Module Part Number	9				39h				
131	Module Part Number	3				33h				
132	Module Part Number	B				42h				
133	Module Part Number	2				32h				
134	Module Part Number	K				48h				
135	Module Part Number	7				37h				
136	Module Part Number	0				30h				
137	Module Part Number	C-die				43h				
138	Module Part Number	M				4Dh				
139	Module Part Number	0				30h				
140	Module Part Number	-				2Dh				
141	Module Part Number	C				43h				
142	Module Part Number	F	F	H	K	46h	46h	48h	4Bh	
143	Module Part Number	7	8	9	0	37h	38h	39h	30h	
144	Module Part Number	Blank				20h				
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				

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		CF704	CF804	CH904	CK004	CF704	CF804	CH904	CK004	
150~175	Manufacturer's Specific Data	-				00h				
176~255	Open for customer use	-				00h				