

RoHS Compliant

32GB ECC DDR5 SDRAM UDIMM

Halogen free

Product Specifications

May 26, 2023

Version 1.1



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General Description

Apacer **D32.35301H.001** is a 32GB DDR5 SDRAM (Synchronous DRAM) DIMM. This memory module consists of 20 pieces 2G x 8 bits DDR5 synchronous DRAMs in FBGA packages and 8K Bits EEPROM. The module is a 288-pins dual in-line memory module and is intended for mounting into a connector socket. The following provides general specifications of this module.

Ordering Information

Part Number	Density	Speed	Organization	DRAM Composition	Rank
D32.35301H.001	32GB	5600 Mbps	4Gx72	2Gx8 *20	2

Key Parameters

Speed	DDR5-4800	DDR5-5600	Unit
	-CL40	-CL46	
tCK (min)	0.416	0.357	ns
CAS latency	40	46	nCK
tRCD (min)	16	16	ns
tRP (min)	16	16	ns
tRAS (min)	32	32	ns
tRC (min)	48	48	ns
CL-tRCD-tRP	40-39-39	46-45-45	nCK

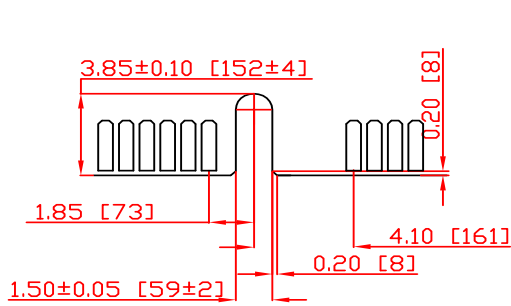
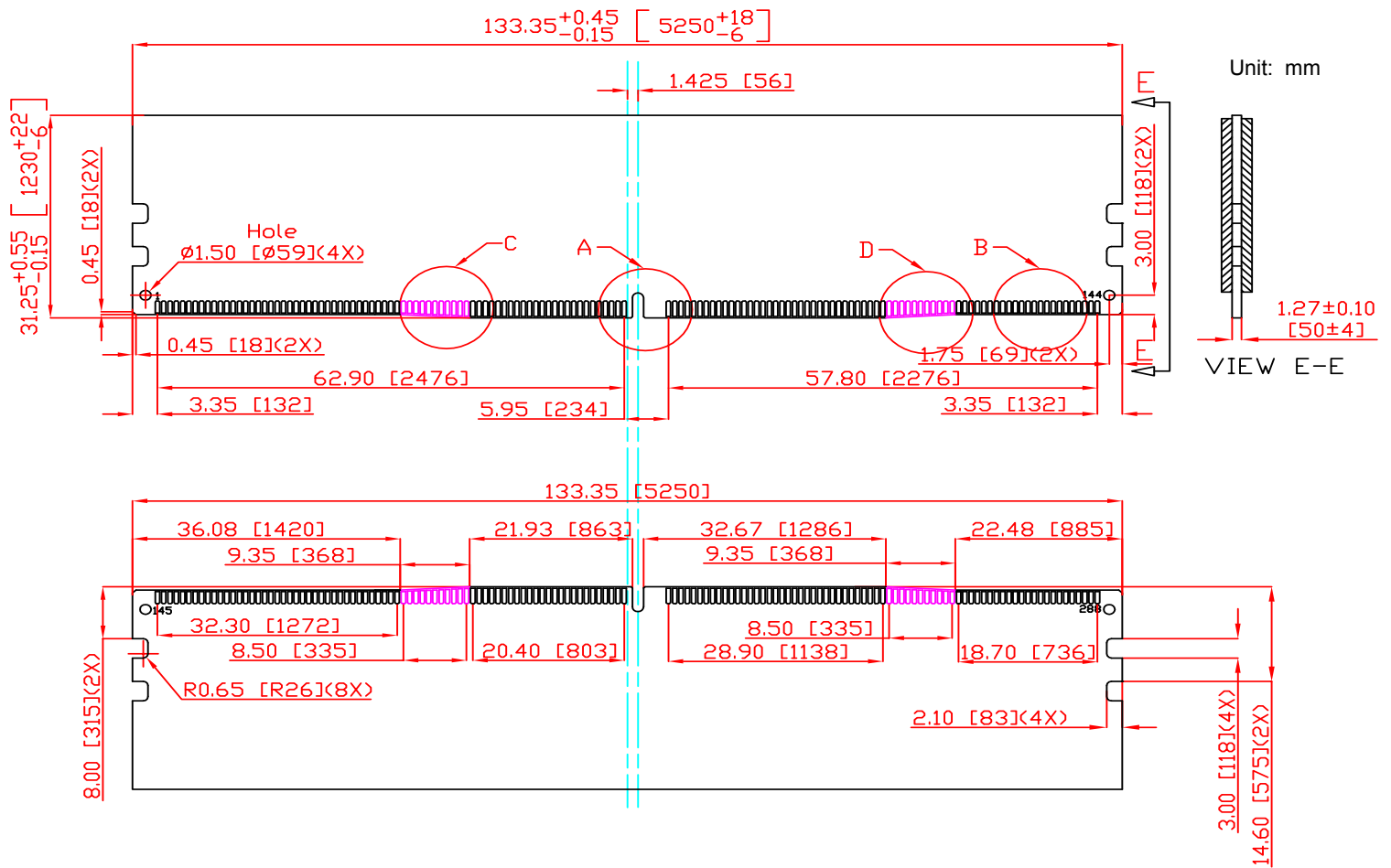
Features:

- ◆ JEDEC standard compliant
- ◆ Support ECC error detection and correction
- ◆ On-DIMM thermal sensor : Yes
- ◆ PCB: height 31.25 mm, lead pitch 0.85 mm (pin),
- ◆ VDD = VDDQ= 1.1V (1.067V to 1.166V)
- ◆ VPP = 1.8V (1.746V to 1.908V) 、VDDSPD = 1.8V
- ◆ 32 internal banks (x4, x8): 8 groups of 4 banks each
- ◆ 16 internal banks (x16): 4 groups of 4 banks each
- ◆ CAS Latency (CL): 22,26,28,30,32,36,40,42,46,48,50
- ◆ CAS Write Latency (CWL): RL-2
- ◆ Operating temperature Tcase=(0°C~85°C)
- ◆ Average Refresh period 3.9us at lower than Tcase 85°C, 1.95us at 85°C < Tcase < 95 °C.
- ◆ All bank and same bank refresh
- ◆ Bi-Directional Differential Data Strobe
- ◆ 16-bit prefetch architecture
- ◆ On-die ECC
- ◆ ECC transparency and error scrub
- ◆ sPPR and hPPR capability
- ◆ Halogen free 、Lead-free (RoHS compliant)
- ◆ PCB: 30μ inch gold finger

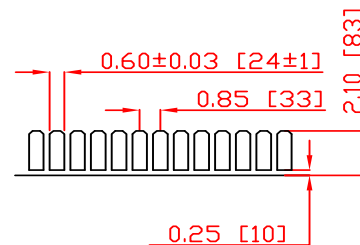
Pin Assignments

Pin No.	Front Side	Pin No.	Back Side	Pin No.	Front Side	Pin No.	Back Side
1	VIN_BULK	145	VIN_BULK	74	VSS	218	VSS
2	RFU	146	VIN_BULK	75	RFU	219	RFU
3	RFU	147	PWR_- GOOD	76	RFU	220	RFU
4	HSCL	148	HSA	77	VSS	221	VSS
5	HSDA	149	RFU	78	CK0_B_t	222	CK1_B_t
6	VSS	150	VSS	79	CK0_B_c	223	CK1_B_c
7	RFU	151	PWR_EN	80	VSS	224	VSS
8	VSS	152	RFU	81	RFU	225	RFU
9	DQ0_A	153	VSS	82	CA12_B	226	RFU
10	VSS	154	DQ2_A	83	VSS	227	VSS
11	DQ1_A	155	VSS	84	CA10_B	228	CA11_B
12	VSS	156	DQ3_A	85	CA8_B	229	CA9_B
13	DQS0_A_c	157	VSS	86	VSS	230	VSS
14	DQS0_A_t	158	DM0_A_n	87	CA6_B	231	CA7_B
15	VSS	159	VSS	88	CA4_B	232	CA5_B
16	DQ4_A	160	DQ6_A	89	VSS	233	VSS
17	VSS	161	VSS	90	CA2_B	234	CA3_B
18	DQ5_A	162	DQ7_A	91	CA0_B	235	CA1_B
19	VSS	163	VSS	92	VSS	236	VSS
20	DQ8_A	164	DQ10_A	93	CS0_B_n	237	CS1_B_n
21	VSS	165	VSS	94	VSS	238	VSS
22	DQ9_A	166	DQ11_A	95	RESET_n	239	DQS4_B_c
23	VSS	167	VSS	96	VSS	240	DQS4_B_t
24	DM1_A_n	168	DQS1_A_c	97	CB0_B	241	VSS
25	VSS	169	DQS1_A_t	98	VSS	242	CB2_B
26	DQ12_A	170	VSS	99	CB1_B	243	VSS
27	VSS	171	DQ14_A	100	VSS	244	CB3_B
28	DQ13_A	172	VSS	101	DQ0_B	245	VSS
29	VSS	173	DQ15_A	102	VSS	246	DQ2_B
30	DQ16_A	174	VSS	103	DQ1_B	247	VSS
31	VSS	175	DQ18_A	104	VSS	248	DQ3_B
32	DQ17_A	176	VSS	105	DQS0_B_c	249	VSS
33	VSS	177	DQ19_A	106	DQS0_B_t	250	DM0_B_n
34	DQS2_A_c	178	VSS	107	VSS	251	VSS
35	DQS2_A_t	179	DM2_A_n	108	DQ4_B	252	DQ6_B
36	VSS	180	VSS	109	VSS	253	VSS
37	DQ20_A	181	DQ22_A	110	DQ5_B	254	DQ7_B
38	VSS	182	VSS	111	VSS	255	VSS
39	DQ21_A	183	DQ23_A	112	DQ8_B	256	DQ10_B

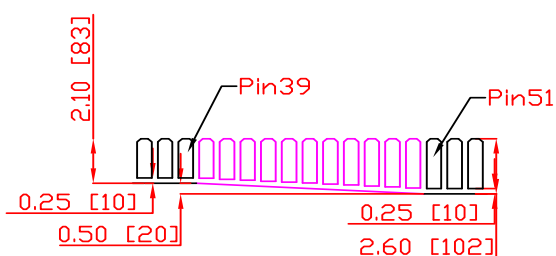
Mechanical Drawing



Detail A

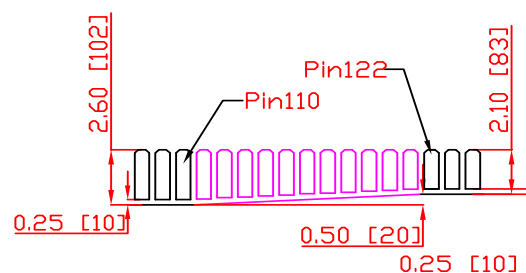


Detail B



Detail C

30μ inch gold finger



Detail D

(All dimensions are in millimeters with ± 0.15 mm tolerance unless specified otherwise.)

Revision History

Revision	Date	Description	Remark
1.0	4/12/2022	Initial release	
1.1	11/4/2022	Updated DIMM Voltage Requirements	

Global Presence

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