

RoHS Compliant

2GB ECC Registered DDR2 SO-DIMM

Product Specifications

October 3, 2016

Version 1.1



Apacer Technology Inc.

1F., No.32, Zhongcheng Rd., Tucheng Dist., New Taipei City 236, Taiwan

Tel: +886-2-2267-8000

Fax: +886-2-2267-2261

www.apacer.com

General Description

Apacer **78.A2G80.4000C** is 256M x 72 bit DDR2 SDRAM (Synchronous DRAM) Small-Outline Registered Dual In-line Memory Module (SORDIMM).

It consists of 18 pieces 128M x 8 bit with 8banks Double Data Rate SDRAMs in 60Ball FBGA packages mounted on a 200pin glass-epoxy substrate.

Synchronous design allows precise cycle control with the use of system clock. Data I/O transactions are possible on both edges of DQS. Range of operating frequencies, programmable latencies and burst lengths allow the same device to be useful for a variety of high bandwidth, high performance memory system applications.

Ordering Information

Part Number	Bandwidth	Speed Grade	Max Frequency	CAS Latency
78.A2G80.4000C	5.3 GB/sec	667 Mbps	333 MHz	CL5

Density	Organization	Component	Rank
2GB	256M x 72	128M x8*18	2

Key Parameters

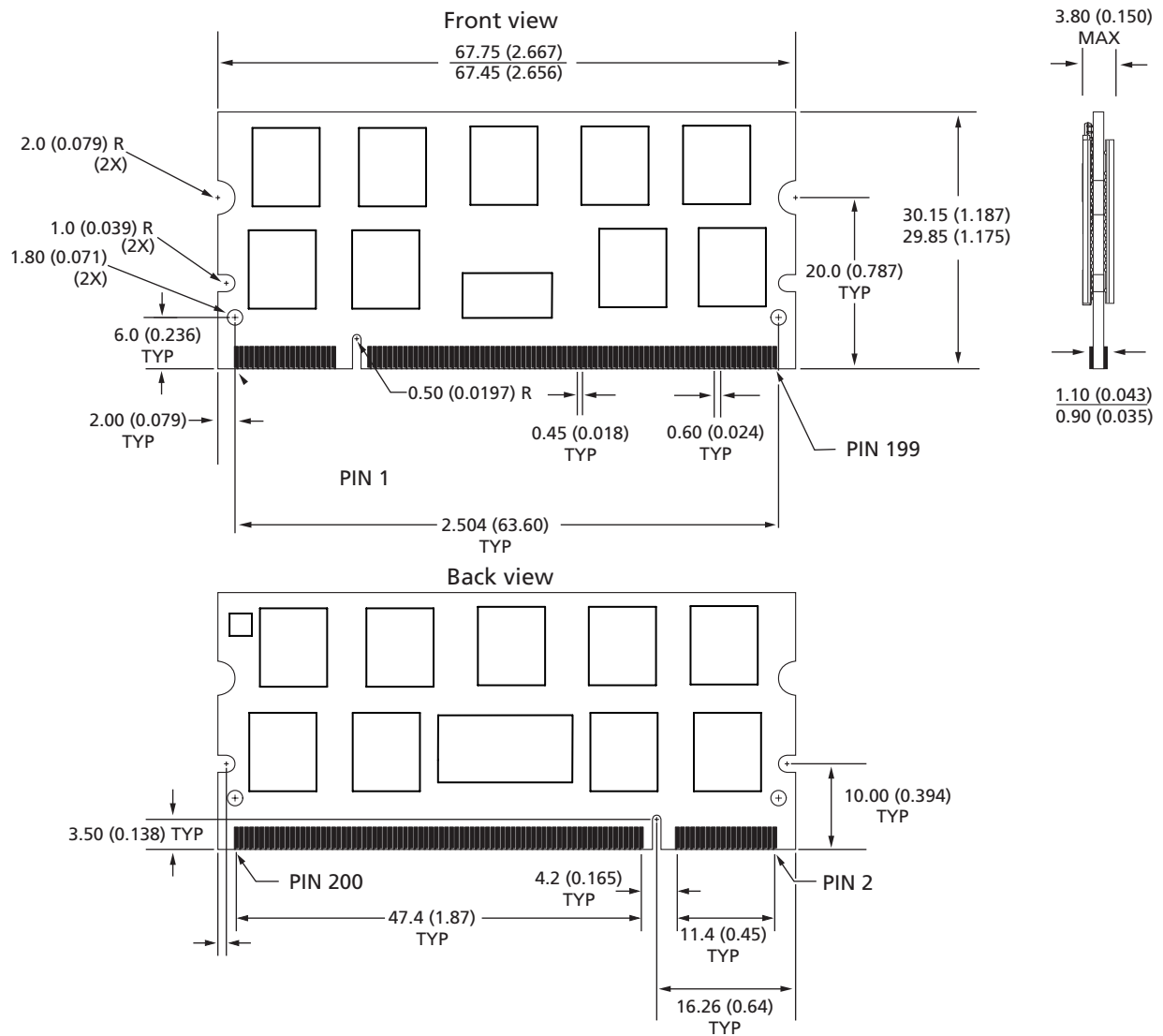
MT/s	DDR2-667	DDR2-800	DDR2-800	Unit
Grade	-CL5	-CL5	-CL6	
tCK (min)	3	2.5	2.5	ns
CAS latency	5	5	6	tCK
tRCD (min)	15	12.5	15	ns
tRP (min)	15	12.5	15	ns
tRAS (min)	45	45	45	ns
tRC (min)	60	57.5	60	ns
CL-tRCD-tRP	5-5-5	5-5-5	6-6-6	tCK

Specifications:

- ◆ Support ECC error detection and correction
- ◆ JEDEC standard 1.8V $\pm$ 0.1V
- ◆ Power Supply VDDQ = 1.8V $\pm$ 0.1V
- ◆ Interface: SSTL_18
- ◆ Posted CAS
- ◆ Programmable CAS Latency: 3, 4, 5
- ◆ Programmable Additive Latency: 0, 1, 2, 3, 4
- ◆ Write Latency (WL) = Read Latency (RL) -1
- ◆ Burst Length: 4 , 8(Interleave/nibble sequential)
- ◆ Programmable Sequential / Interleave Burst Mode
- ◆ Bi-directional Differential Data-Strobe (Single-ended data-strobe is an optional feature)
- ◆ Off-Chip Driver(OCD) Impedance Adjustment
- ◆ On Die Termination
- ◆ Refresh and Self Refresh
Average Refresh Period 7.8us
- ◆ Serial presence detect with EEPROM
- ◆ Compliance with RoHS
- ◆ Compliance with CE
- ◆ Supports auto-refresh/self-refresh
- ◆ Operating Temperature Range:
Commercial 0°C $\leq$ TC $\leq$ 85°C
- ◆ Average refresh period
7.8us at 0°C $\leq$ TC $\leq$ 85°C
3.9us at 85°C $\leq$ TC $\leq$ 95°C

Mechanical Drawing

Unit: mm



Tolerances: ± 0.15 mm unless otherwise specified

Global Presence

Taiwan (Headquarters)

Apacer Technology Inc.

1F., No.32, Zhongcheng Rd., Tucheng Dist.,

New Taipei City 236, Taiwan R.O.C.

Tel: +886-2-2267-8000

Fax: +886-2-2267-2261

amtsales@apacer.com

U.S.A.

Apacer Memory America, Inc.

46732 Lakeview Blvd., Fremont, CA 94538

Tel: 1-408-518-8699

Fax: 1-510-249-9568

sa@apacerus.com

Japan

Apacer Technology Corp.

5F, Matsura Bldg., Shiba, Minato-Ku

Tokyo, 105-0014, Japan

Tel: 81-3-5419-2668

Fax: 81-3-5419-0018

jpservices@apacer.com

Europe

Apacer Technology B.V.

Science Park Eindhoven 5051 5692 EB Son,

The Netherlands

Tel: 31-40-267-0000

Fax: 31-40-290-0686

sales@apacer.nl

China

Apacer Electronic (Shanghai) Co., Ltd.

Room D, 22/FL, No.2, Lane 600, Jieyun Plaza,

Tianshan RD, Shanghai, 200051, China

Tel: 86-21-6228-9939

Fax: 86-21-6228-9936

sales@apacer.com.cn

India

Apacer Technologies Pvt Ltd.

Unit No.201, "Brigade Corner", 7th Block Jayanagar,

Yediyur Circle, Bangalore – 560082, India

Tel: 91-80-4152-9061

Fax: 91-80-4170-0215

sales_india@apacer.com