1.28 GBit Synchronous DRAM - Hermetic package

Features

- Organized as 40M x 32-bit.
- Single +3.3V ±0.3V power supply
- Two stacks of ten 64 MBit SDRAM mounted on ceramic hermetic package
- Fully synchronous; all signals registered on positive edge of system clock.
- Internal pipelined operation; column address can be changed every clock cycle.
- Programmable burst lengths: 1, 2, 4, 8 or full page.
- Auto Precharge, includes Concurrent Auto Precharge, and Auto Refresh Modes.
- Self Refresh Mode
- LVTTL - compatible inputs and outputs
- Vcc and Vss are decoupled with four 10nF and four 100nF capacitors inside the module
- MIL-STD-883D Class S screening - temperature range : -15°C to +80°

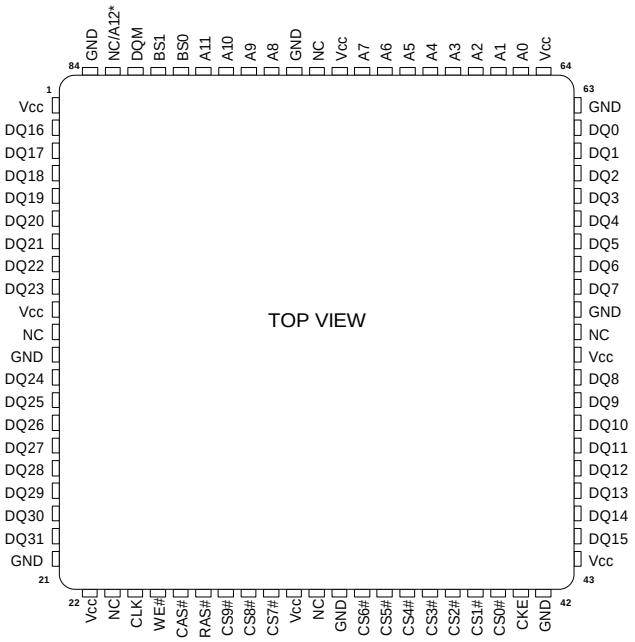
General Description

The 3DSD1280-323H is a highly integrated Synchronous Dynamic Random Access Memory ceramic module, containing 1,342,177,280 bits. It is organized with ten banks of 128 Mbit. Each Bank has a 32-bit interface, and is selected with specific CS#. All other signals are common to the twenty 64 MBit SDRAM memories.

It is particularly well suited for use in high performance and high density aerospace applications, such as solid state recorder for airbornes and satellites.

The 3DSD1280-323H is packaged in a 84-pin CQFJ.

Pin configuration for 3DSD1024-0863S

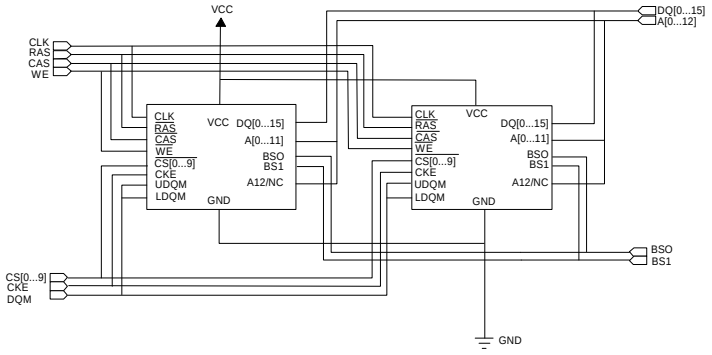


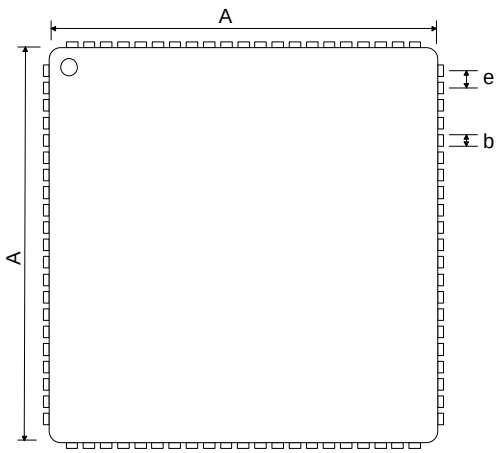
* : A12 is a provision for 256Mb components extension

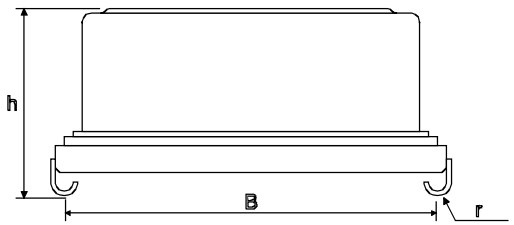
Pin Description

DQ0-DQ31	Data Inputs/Outputs
A0-A12*	Address
CAS#	Column Address Select
RAS#	Row Address Select
WE#	Write Enable
CS0# - CS9#	Chip Select
BS0,BS1	Bank Address Input
CLK	Clock
CKE	Clock Enable
DQM	Input/Output Mask
Vcc	Power (+3.3v)
GND	Ground
NC	No Connection

Block Diagram







	Dimensions (mm)
A	34.29 ± 0.25
B	33.02 ± 0.50
b	0.432 typ.
r	0.762 ref.
h	18.35 ± 0.35
e	1.27

ABSOLUTE MAXIMUM RATINGS

(Stressed greater than those listed may cause permanent damage to the device)

Parameter	Symbol	Rating	Units
Power Supply Voltage	Vcc	- 0.3 to +4.6	V
Power Supply Voltage for Output	Vccq	- 0.3 to +4.6	V
Input Voltage	Vin	- 0.3 to Vcc+0.3	V
Output Voltage	Vout	- 0.3 to Vcc+0.3	V
Storage temperature	Tstg	- 55 to +150	°C
Short Circuit Output Current	Iout	TBD	mA

RECOMMENDED OPERATING CONDITIONS

(Voltage referenced to GND, Ta = -15°C to +80°C)

Parameter	Symbol	Min	Typ	Max	Units
Power Supply Voltage	Vcc, VccQ	3.0	3.3	3.6	V
Input High Voltage	V_{IH}	2.0	-	Vcc+0.3	V
Input Low Voltage	V_{IL}	-0.3	-	0.8	V
Operating Temperature	T_{ope}	-15		+80	°C
Operating with one bank oper--ation	I_{CC1}			300	mA
Standby in power down mode	I_{CC2}			20	mA
Operating (burst)	I_{CC3}			300	mA

PRODUCT MARKING

- 3D PLUS Logo
- Part Number
- Date Code (ww,yy)
- Serial Number on request



TEST TOOLS

3DSD1280-323H	Support YAMAICHI IC51-1004-405-1

ORDERING INFORMATION

3DSD1280-323H/PROTO	CQFJ 84 - prototype (0°C to +70°C)
3DSD1280-323H/883D-S	CQFJ 84 - MIL STD 883D - Class S (-15°C to +80°C)

MAIN SALES OFFICE

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DISTRIBUTOR

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