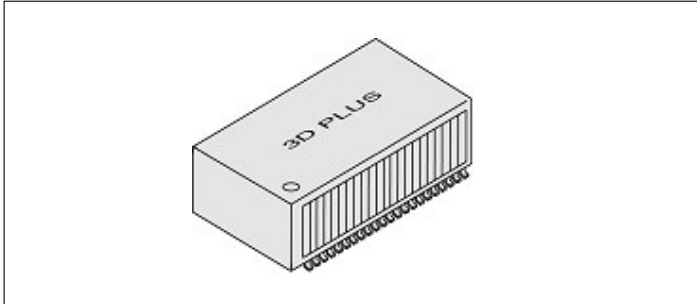


Synchronous Dynamic Ram MODULE

3D SD2G32VS4484

2Gbit SDRam organized as 64Mx32, based on 32Mx16



Features

- Stack of four 512Mbit SDRam.
- Organized as 32Mx32-bit.
- Single +3.3V power supply.
- 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 Modes.
- LVTTTL-compatible inputs and outputs.
- Available Temperature Range :
 - 0°C to +70°C
 - 40°C to +85°C
- Available with screening option for high reliability application (Space, etc...).

General description

The 3D SD2G32VS4484 is a high-speed highly integrated Synchronous Dynamic Random Access Memory containing 2.147.483.648 bits.

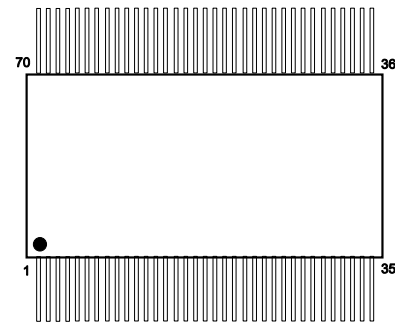
Each bank has 32-bit interface and is selected with specific #CS. All other signals are common to the four 512Mbit SDRAM memories.

It is particularly well suited for use in high reliability, high performance and high density system applications, such as solid state mass recorder, server or workstation.

The 3D SD2G32VS4484 is packaged in a 70 pin SOP.

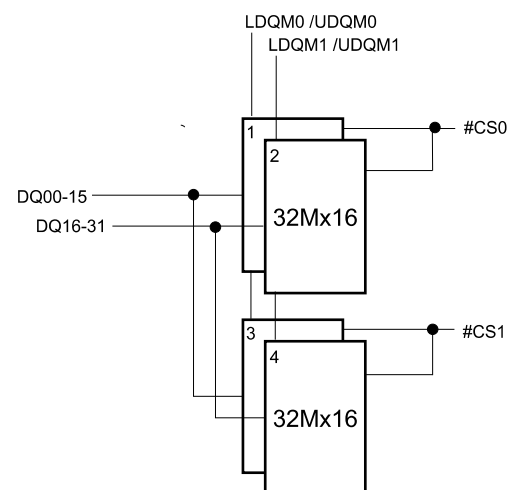
Pin Assignment (Top View)

SOP 70 - (Pitch : 0.635 mm)



1	VDD	15	DQ5	29	BA0	43	A9	57	VSSQ
2	DQ0	16	DQ21	30	BA1	44	A11	58	DQ11
3	DQ16	17	DQ6	31	A10	45	A12	59	DQ27
4	VDDQ	18	DQ22	32	A0	46	CKE	60	DQ12
5	DQ1	19	VSSQ	33	A1	47	CLK	61	DQ28
6	DQ17	20	DQ7	34	A2	48	UDQM0	62	VDDQ
7	DQ2	21	DQ23	35	VDD	49	UDQM1	63	DQ13
8	DQ18	22	LDQM1	36	VSS	50	DQ8	64	DQ29
9	VSSQ	23	LDQM0	37	A3	51	DQ24	65	DQ14
10	DQ3	24	#WE	38	A4	52	VDDQ	66	DQ30
11	DQ19	25	#CAS	39	A5	53	DQ9	67	VSSQ
12	DQ4	26	#RAS	40	A6	54	DQ25	68	DQ15
13	DQ20	27	#CS0	41	A7	55	DQ10	69	DQ31
14	VDDQ	28	#CS1	42	A8	56	DQ26	70	VSS

FUNCTIONAL BLOCK DIAGRAM



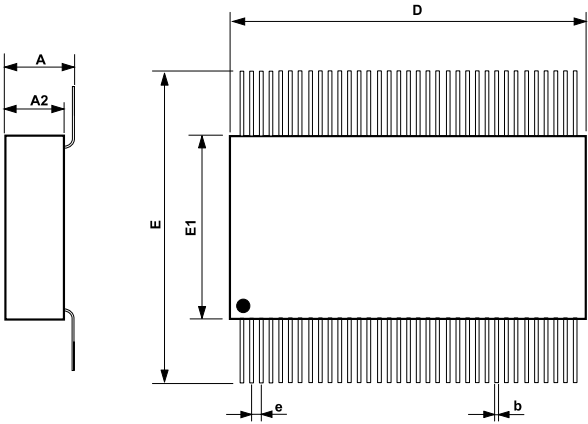
(All other signals are common to the two memories)

Synchronous Dynamic Ram MODULE

3D SD2G32VS4484

2Gbit SDRam organized as 64Mx32, based on 32Mx16

Mechanical Drawing



	Min	Max
A	9.35	9.95
A2	8.10	8.70
D	23.80	24.20
E	35.20	35.60
E1	14.90	15.10
b	0.30	
e	0.635	
Dimensions (mm)		
Max. weight : 4.50 gr.		

Test Tools

3D SD2G32VS4484	ENPLAS : OTQ 164-0.635-05	Modified by 3D PLUS
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DC Operating conditions and characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Supply voltage	V _{DD}	3.0	3.3	3.6	V
Input logic high voltage	V _{IH}	2.0	3.0	V _{DD} +0.3	V
Input logic low voltage	V _{IL}	-0.3	-	0.8	V
Output logic high Voltage	V _{OH}	2.4	-	-	V
Output logic low voltage	V _{OL}	-	-	0.4	V

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Voltage on any pin relative to VSS	V _{IN} , V _{OUT}	-0.5 ~ V _{DD} +0.5	V
Storage temperature	T _{STG}	-55 ~ +150	°C
Power dissipation	P _D	1.5	W
Short circuit current	I _{OS}	50	mA

DC Characteristics

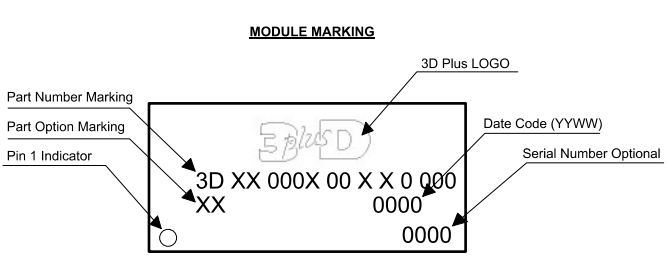
Parameter	Symbol	Value	Unit
Operating Current (1bank active @20MHz)	I _{CC1}	310	mA
Standby current in power down	I _{CC2P}	12	mA
power-down mode	I _{CC2PS}	8	mA

3D SD2G32VS4484

Temperature Range
C = (0°C to + 70°C)
I = (-40°C to + 85°C)
M = (-55°C to + 125°C)
S = Specific

Quality Level
N = Commercial Grade
B = Industrial Grade
S = Space Grade
C = Custom

MODULE MARKING



Part Number Marking: 3D XX 000X 00 X X 0 000
 Part Option Marking: XX
 Pin 1 Indicator: (circle)
 Date Code (YYWW): 0000
 Serial Number Optional: 0000

MAIN SALES OFFICE

	FRANCE	USA				DISTRIBUTOR
	3D PLUS 408, rue Hélène Boucher Z.I. 78532 BUC Cedex	3D PLUS USA, Inc 6633 Eldorado Parkway Suite 420 Mckinney, TX 75070	Tél : 33 (0)1 30 83 26 50	Fax : 33 (0)1 39 56 25 89	Web : www.3d-plus.com e-mail : sales@3d-plus.com	
			Tél : (214) 733-8505	Fax : (214) 733-8506	e-mail : sales@3d-plus.com	