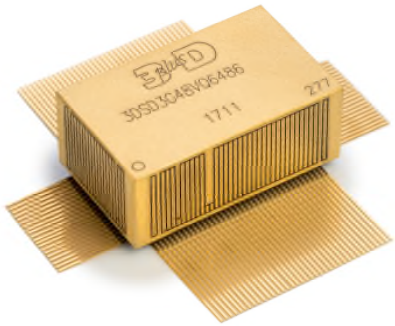
MEMORY MODULE

SDRAM

3 Gbit SDRAM

Organized as 64M x48, based on 32M x16

3DSD3G48VQ6486



GENERAL DESCRIPTION

The 3DSD3G48VQ6486 is a 3Gb high-speed highly integrated Synchronous Dynamic Random Access Memory organized with 6 banks of 512 Mbit.

Each bank has a 16-bit interface and is selected with specific #CS, UDQM and LDQM.

It is particularly well suited for use in high reliability, high performance and high density system applications. Independent UDQM and LDQM control signals also make it suitable to use as 10-bit configuration.

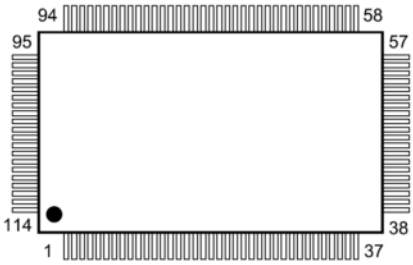
The 3DSD3G48VQ6486 is packaged in a 114 QFP.

KEY FEATURES

- Organized as 64M x48-bit.
- Single +3.3V power supply.
- Clock frequency: 133MHz/CL3 Operation.
- Operating temperature: -40°C to +85°C
- Single pulsed #RAS
- 2 Burst sequence variations
  - Sequential (BL=1/2/4/8)
  - Interleave (BL=1/2/4/8)
- Programmable #CAS latency (CL): 2/3
- 64ms Refresh cycle
- Auto refresh cycles and self refresh
- LVTTL-compatible inputs and outputs
- Available Temperature Range:
  - 0°C to +70°C
  - -40°C to +85°C
  - Specific temperature range on demand
- Available with screening option for high reliability application (Space, etc…)

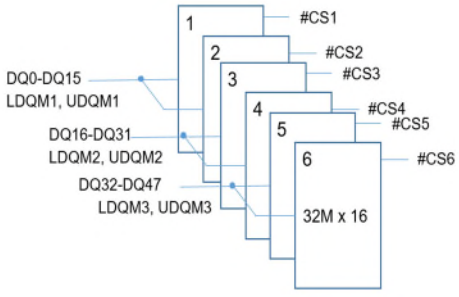
PIN ASSIGNMENT (top view)

QFP 114 - Pitch 0.635 mm



1	VCC	27	D27	53	D21	79	NC	105	VSSQ
2	VSS	28	VCCQ	54	D5	80	CLK	106	A9
3	D47	29	VSSQ	55	D36	81	#CS1	107	A10
4	D31	30	D11	56	VSS	82	#CS3	108	A11
5	D15	31	D42	57	VCC	83	#CS5	109	A12
6	NC	32	D26	58	VCC	84	NC	110	#WE
7	#CS6	33	D10	59	VSS	85	#CAS	111	CKE
8	#CS4	34	D41	60	D20	86	VCCQ	112	NC
9	VSSQ	35	D25	61	D4	87	VSSQ	113	VSSQ
10	VCCQ	36	VSS	62	D0	88	#RAS	114	VCCQ
11	#CS2	37	VCC	63	D16	89	BA0		
12	NC	38	VCC	64	D32	90	BA1		
13	NC	39	VSS	65	D1	91	A0		
14	LDQM1	40	D9	66	D17	92	A1		
15	LDQM2	41	D40	67	VSSQ	93	VSS		
16	LDQM3	42	D24	68	VCCQ	94	VCC		
17	D46	43	D8	69	D33	95	VCC		
18	D30	44	D39	70	D2	96	VSS		
19	D14	45	D23	71	D18	97	A2		
20	D45	46	D7	72	D34	98	A3		
21	D29	47	VCCQ	73	D3	99	A4		
22	D13	48	VSSQ	74	D19	100	A5		
23	D44	49	D38	75	D35	101	A6		
24	D28	50	D22	76	UDQM1	102	A7		
25	D12	51	D6	77	UDQM2	103	A8		
26	D43	52	D37	78	UDQM3	104	VCCQ		

FUNCTIONAL BLOCK DIAGRAM



All other signals are common to the six memories.

3D PLUS reserves the right to cancel or change specifications without notice.

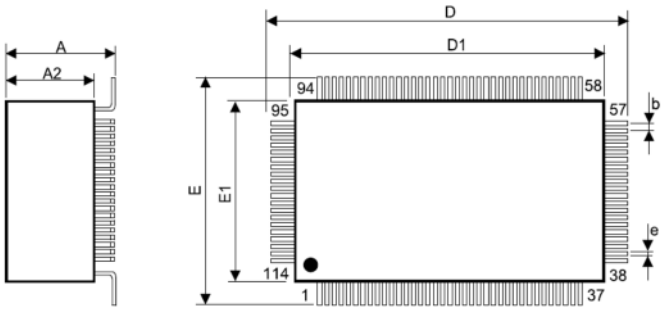
MEMORY MODULE

SDRAM

3 Gbit SDRAM

Organized as 64M x48, based on 32M x16

MECHANICAL DRAWING



Dimensions (mm)

	MIN	MAX
A	11.60	12.30
A2	10.50	10.90
D	32.80	33.20
D1	27.80	28.80
E	22.00	22.40
E1	17.00	17.40
b	0.635	
e	0.30	

Max. weight: 12.3 g

DC operating conditions and characteristics

PARAMETER	SYMBOL	MIN	MAX	UNIT
Supply voltage	V_{CC}, V_{CCQ}	3.0	3.6	V
Input logic high voltage	V_{IH}	2.0	V_{cc} +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

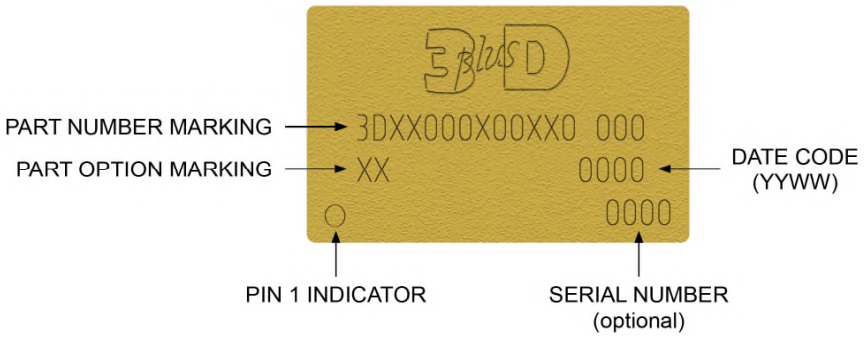
Absolute maximum ratings

PARAMETER	SYMBOL	VALUE	UNIT
Input voltage	V_{IN}	-1.0 to V_{CC} +0.5	V
Output voltage	V_{OUT}	-1.0 to V_{CCQ} +0.5	V
Storage temperature	T_{STG}	-65 ~ +150	°C
Power dissipation	P_D	2.5	W
Short circuit current	I_{CS}	50	mA

DC Characteristics

PARAMETER	SYMBOL	VALUE	UNIT
Operating Current (one bank active)	I_{CC1}	525	mA
Precharge standby current in power-down mode	I_{CC2P}	24	mA
Active standby current in power-down	I_{CC3P}	123	mA

MODULE MARKING



3DSD2G08VS6486 **X** **X**

Temperature Range

C = (0°C to +70°C)
I = (-40°C to +85°C)
S = Specific (-40°C to +105°C)

Quality Level

N = Commercial Grade
B = Industrial Grade
S = Space Grade

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