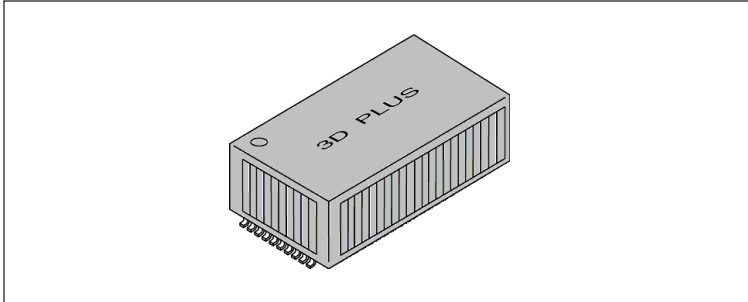


Flash Memory MODULE

3D FO64M16VS1281

64Mbit organized as 4Mx16, based on 4Mx16



Features

Single 3.0V Power Supply.
Organization 4Mx16-Bit.

Simultaneous Reas/Write operation.

- Data can be continuously read one bank while executing erase/program functions in another bank.
- Zero latency between read and write operation.

Flexible Bank architecture.

Boot Sectors.

- Top and Bottom boot sectors in the same device.
- Any combination of sectors can be erased.

Zero Power Operation.

- Sophisticated power management circuits reduce power consumed during inactive periods to nearly zero.

High performance

- Access Time as fast as 90ns.
- Program time : 4µs/word typical utilizing Accelerate function.

Ultra low power consumption

Minimum 1 million erase cycles guaranteed per sector
20 year data retention

- Available for screening option for high reliability application (Space, etc.)

General description

The 3D FO64M16VS1281 is a 64-Mbit high-density simultaneous Read/Write FLASH Memory module organized as 4Mx16-bit.

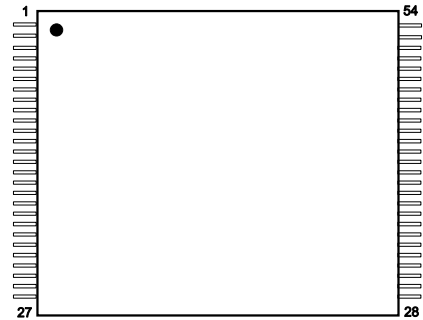
Using high-performance and high-reliability technology chips, stacking with the well-known 3D Plus MCM-V technology, this FLASH memory module provides a cost-effective solution for low power and high-capacity non-volatile memory data storage needs.

Basic device of the module is a 64M-Bit FLASH Memory, organized 4Mx16bit that can be accessed by activating the associated control signals (#CE and #WP/ACC)

The 3D FO64M16VS1281 module is packaged in a 54 SOP Package and is available for commercial, industrial and military temperature range .

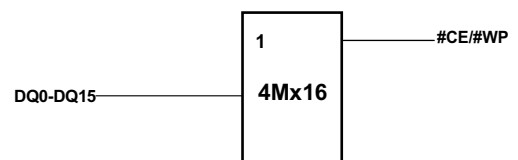
Pin Assignment (Top View)

SOP 54 - (Pitch : 0.50 mm)



1		19	A17	37	DQ2
2	NC	20	A7	38	DQ10
3	A15	21	A6	39	DQ3
4	A14	22	A5	40	DQ11
5	A13	23	A4	41	VCC
6	A12	24	A3	42	DQ4
7	A11	25	A2	43	DQ12
8	A10	26	A1	44	DQ5
9	A9	27		45	DQ13
10	A8	28		46	DQ6
11	A19	29	A0	47	DQ14
12	A20	30	#CE	48	DQ7
13	#WE	31	VSS	49	DQ15/A1
14	#RESET	32	#OE	50	VSS
15	A21	33	DQ0	51	#BYTE
16	#WP/ACC	34	DQ8	52	A16
17	RY/#BY	35	DQ1	53	NC
18	A18	36	DQ9	54	

FUNCTIONAL BLOCK DIAGRAM



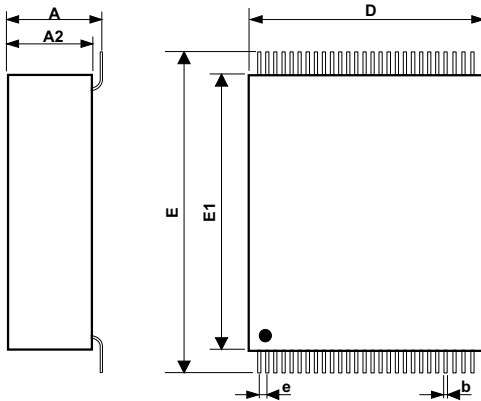
(All other signals are common to the four memories)

Flash Memory MODULE

3D FO64M16VS1281

64Mbit organized as 4Mx16, based on 4Mx16

Mechanical Drawing



	Min	Max
A	3.40	4.10
A2	2.30	2.70
D	14.50	14.90
E	20.00	20.40
E1	18.60	18.80
b	0.20	
e	0.50	
Dimensions (mm)		
Max. weight : 1.50gr.		

Test Tools

3D FO64M16VS1281	ENPLAS OTS-56-0.5-01	Modified by 3D PLUS
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DC Operating conditions and characteristics

Parameter	Symbol	Min	Typ	Max	Unit
Supply voltage	V _{CC}	2.7	3.0	3.6	V
Input logic high voltage	V _{IH}	2.1	-	V _{CC} +0.3	V
Input logic low voltage	V _{IL}	-0.5	-	0.8	V
Output logic high Voltage	V _{OH}	2.6	-	-	V
Output logic low voltage	V _{OL}	-	-	0.45	V

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Voltage on any pin relative to VSS	V _{IN} , V _{OUT}	-0.5 ~ 4.0	V
Storage temperature	T _{STG}	-55 ~ +150	°C
Power dissipation	P _D	1	W
Short circuit current	I _{OS}	200	mA
Thermal Resistance j-a	R _{TH}	50	°C/W

DC Characteristics

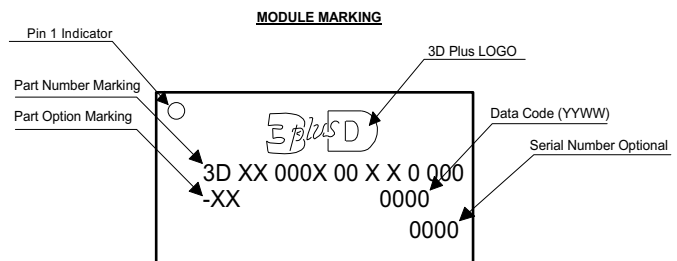
Parameter	Symbol	Value	Unit
V _{CC} Active Read Current (5MHz)	I _{CC1}	16	mA
V _{CC} Active Write Current (5MHz)	I _{CC2}	30	mA
Stand-by current	I _{CC3}	5	uA

3D FO64M16VS1281

X X

Temperature Range
C = (0°C to +70°C)
I = (-40°C to +85°C)
S = (-55°C to +115°C)

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



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