VDIC
EEPROM

VDEE1M08XS40XX1C250
USER MANUAL

Version : A5

Document NO.：ORBITA/SIP-VDEE1M08XS40XX1C250-USM-01
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Contents

VDIC-EEPROM

5.0V 128K × 8bit

1 Description

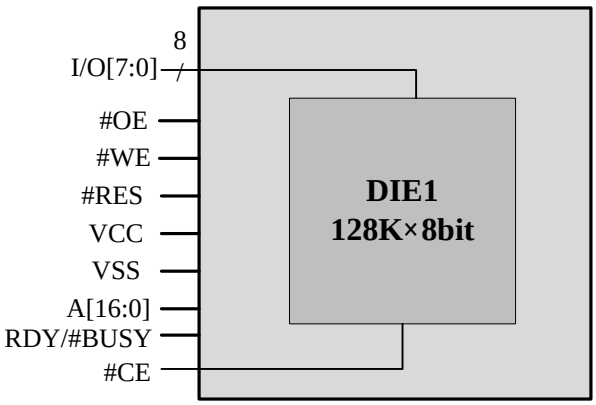
The VDEE1M08XS40XX1C250 is a 131.072 words of 8-bit. Electrically Erasable and Programmable CMOS ROM . It is organized with one bank of 1Mbit . This module operates at high speed, low power consumption and high reliability by employing advanced NMOS memory technology and CMOS process and circuitry technology. It is particularly well suited for use in high reliability, high performance and high density system applications.

The VDEE1M08XS40XX1C250 is packaged in a 40 pins SOP.

2 Features

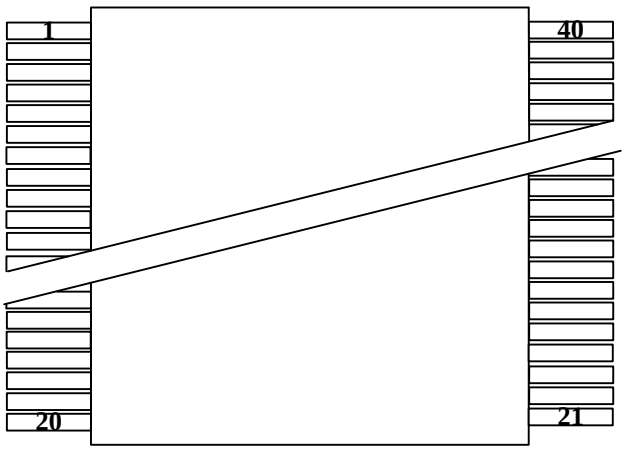
- Single 5.0V supply: 4.5 V to 5.5 V
- Access time: 150 ns (max)
- Power dissipation
  - Active: 20 mW/MHz, (typ)
  - Standby: 110 μW (max)
- On-chip latches: address, data, #CE0, #OE, #WE
- Automatic byte write: 15 ms (max)
- Automatic page write (128 bytes): 15 ms (max)
- Data polling and RDY/#Busy
- Reliable CMOS with MNOS cell technology
- 10^4erase/write cycles (in page mode)
- 10 years data retention
- Software data protection
- Write protection by #RES pin

3 Block Diagram



4 Pin Descriptions

Pin Id	Pin #		Pin Id
VSS	1	40	**NC**
NC	2	39	**NC**
A11	3	38	**#OE**
A9	4	37	**A10**
A8	5	36	**#CE0**
A13	6	35	**I/O7**
#WE	7	34	**I/O6**
#RES	8	33	**I/O5**
A15	9	32	**I/O4**
VCC	10	31	**I/O3**
RDY/#BUSY	11	30	**VSS**
A16	12	29	**I/O2**
A14	13	28	**I/O1**
A12	14	27	**I/O0**
A7	15	26	**A0**
A6	16	25	**A1**
A5	17	24	**A2**
A4	18	23	**A3**
NC	19	22	**NC**
NC	20	21	**NC**



Name	Function
A0~A16	Address Input..
I/O0- I/O7	Data Input/Output Ports. 8 bit-directional ports are used to read data from or

	write data into the EEPROM.
#CE0	Die Enable Input .When #CE0 is Low, the command input cycle becomes valid. When #CE0 is High, input are ignored.
RDY/#BUSY	Ready busy.
#RES	Reset input.
#OE	Output enable.
#WE	Write Enable Input. Enables write operation.
VCC	Power supply
VSS	Ground
NC	No connection This pin is recommended to be left No Connection on the device.

5 Electrical Specifictions

5.1 Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply voltage relative toV_{SS}	V_{CC}	-0.6 to +7.0	V
Input voltage relative toV_{SS}	V_{IN}	-0.5to +7.0	V
Operating temperature range	T_{OPR}	-55 to +125	℃
Storage temperature range	T_{STG}	-65 to +150	℃
Power Dissipation	P_D	2	W

5.2 Recommended DC Operating Conditions

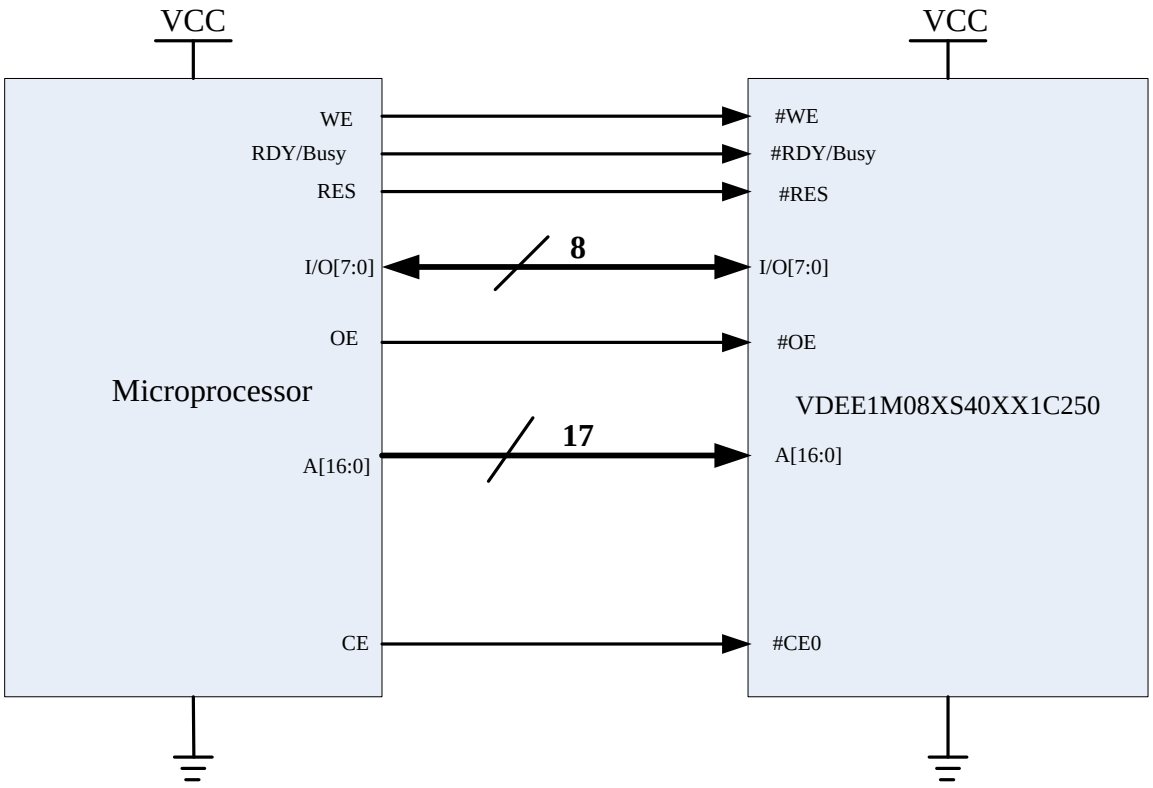
Parameter	Symbol	Min	Typ	Max	Unit
Supply voltage	V_{CC}	4.5	5.0	5.5	V
	V_{SS}	0	0	0	V
Input voltage	V_{IL}	–0.3	-	0.8	V
	V_{IH}	2.2	-	V_{CC}+0.3	V
	V_H	V_{CC}-0.5	-	V_{CC}+1.0	V

5.3 DC Characteristics (VCC = 4.5 V to 5.5 V)

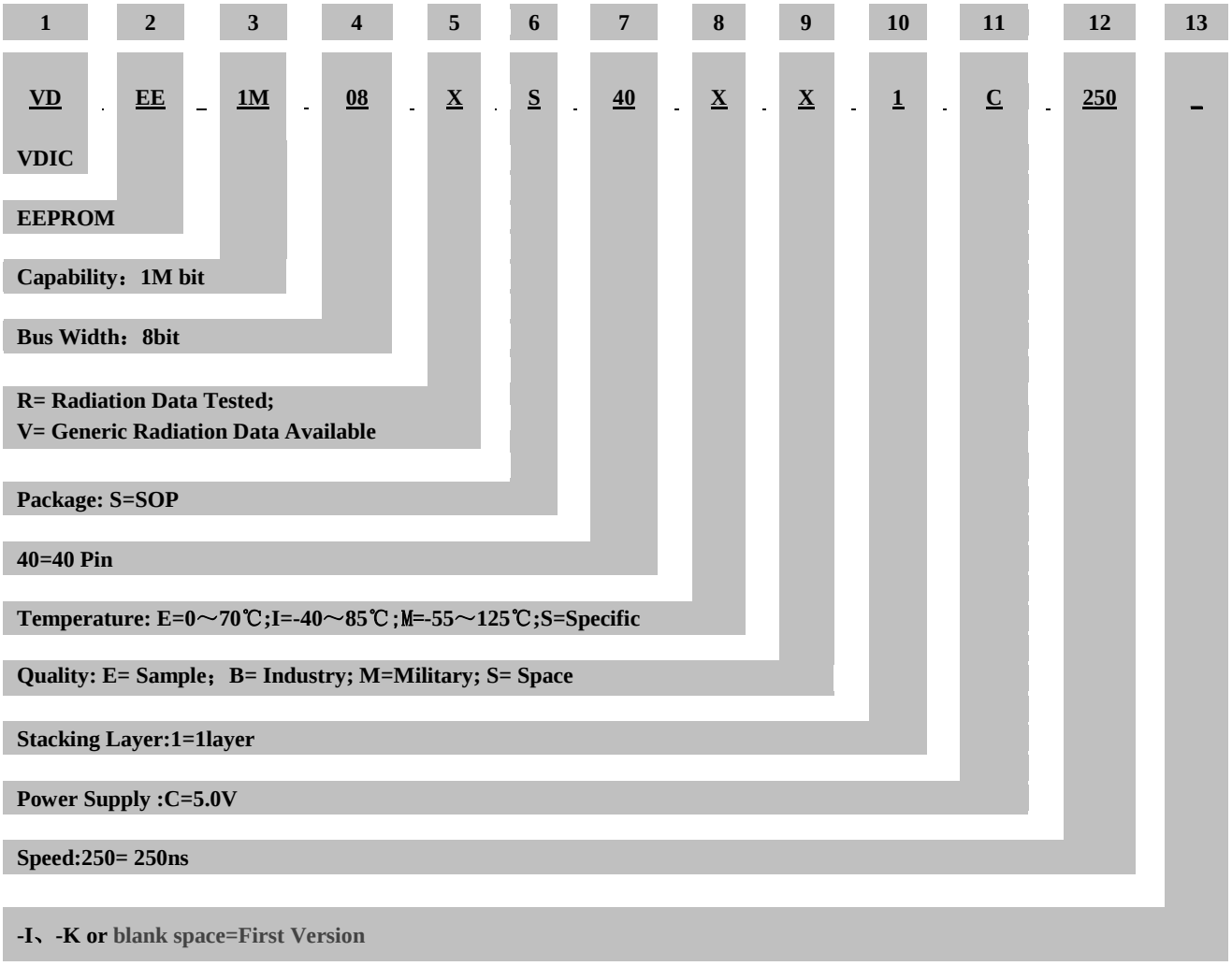
Parameter	Symbol	Test conditions	min.	max.	Unit
Output voltage low level	VOL	Vcc=4.5V，I_{OL} = 2.1mA	—	0.4	V

Parameter	Symbol	Test conditions	min.	max.	Unit
Output voltage high level	VOH	Vcc=4.5V，I_{OH}= -400uA	2.4	—	V

6 Typical Application



7 Ordering Information

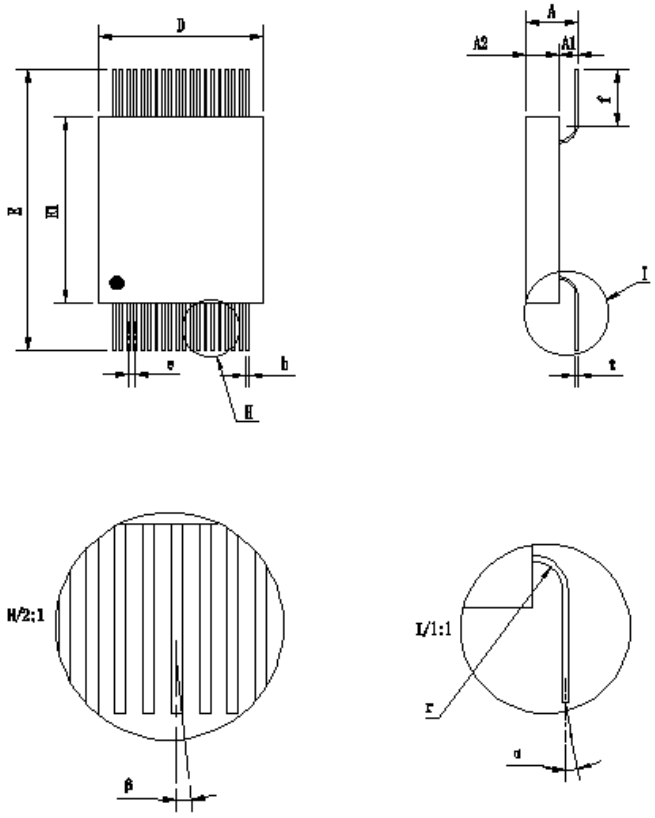


Part Number	Capacity (bit)	Bus Width (bit)	Radiation			Packaging	Temperature (℃)
			TID[1]	SEL[2]	SEU[3]		
VDEE1M08VS40EE1C250	1M	8	-	-	-	SOP40	0 ~ + 70
VDEE1M08VS40IB1C250	1M	8	-	-	-	SOP40	-40 ~ + 85
VDEE1M08VS40MB1C250	1M	8	-	-	-	SOP40	-55 ~ + 125
VDEE1M08VS40MM1C250	1M	8	-	-	-	SOP40	-55 ~ + 125

[1] TID: Total Dose（Krads(Si)）
[2] SEL: LET Threshold（Mev.cm2/mg）
[3] SEU:SEU Threshold （Mev.cm2/mg）

VDEE1M08RS40MS1C250	1M	8	30	99.8	25	SOP40	-55 ~ + 125

8 Package Dimensions



	Min	Max
A	3.80	4.30
A2	2.60	3.00
D	11.50	11.90
E	19.80	20.20
E1	13.00	13.40
f	3.98	
b	0.25	
e	0.5	
r	1.0	
t	0.2	
α	≤3°	
β	≤3°	
NOTE：1.U int：mm 2. A1= A - A2		

9 REVISION HISTORY

Revision	Date	Description of Change
A0	Nov 3,2015	First Created
A1	Mar 14,2016	Modified the PIN DESCRIPTIONS
A2	Aug 23,2016	Modified the ORDERING INFORMATION
A3	Jan 9,2017	Modified the PACKAGE DIMENSIONS
A4	Oct.25,2017	Changed company's name to Zhuhai Orbita Aerospace Science & Technology Co.，Ltd
A5	Mar 16,2018	Add or reduce chapters