2M Bytes (256K x 64) SGRAM 144Pin SODIMM based on 256K x 32

General Description

The UG4256G6412FQG0 is a 256K byte by 64 bits 2M SGRAM SODIMM module .The UG4256G6412FQG0 is assembled using 2 pcs of 256K x 32 SGRAMs mounted on 144 pin unbuffered printed circuit board.

Absolute Maximum Ratings

- Voltage Relative to GND -1.0 to +4.6 V
- Operating Temperature 0 to +70°C
- Storage Temperature -55°to +150°C
- Short-circuit Output Current 50mA
- Power Dissipation 2.0 W

Features

- Single 3.3 +/- 0.3V power supply
- Burst Mode Operation
- BLOCK WRITE and WRITE-BIT modes
- Internal pipelined operation; column address can be changed every clock cycle
- All inputs are sampled at the positive going edge of the system clock
- Programmable burst lengths : 1,2,4,8 or full page
- Auto & self refresh capability (1024 Cycles/16ms)
- LVTTL compatible inputs and output
- Serial PD with EEPROM
- JEDEC standard
- PCB:Height (1100mil),single sided component

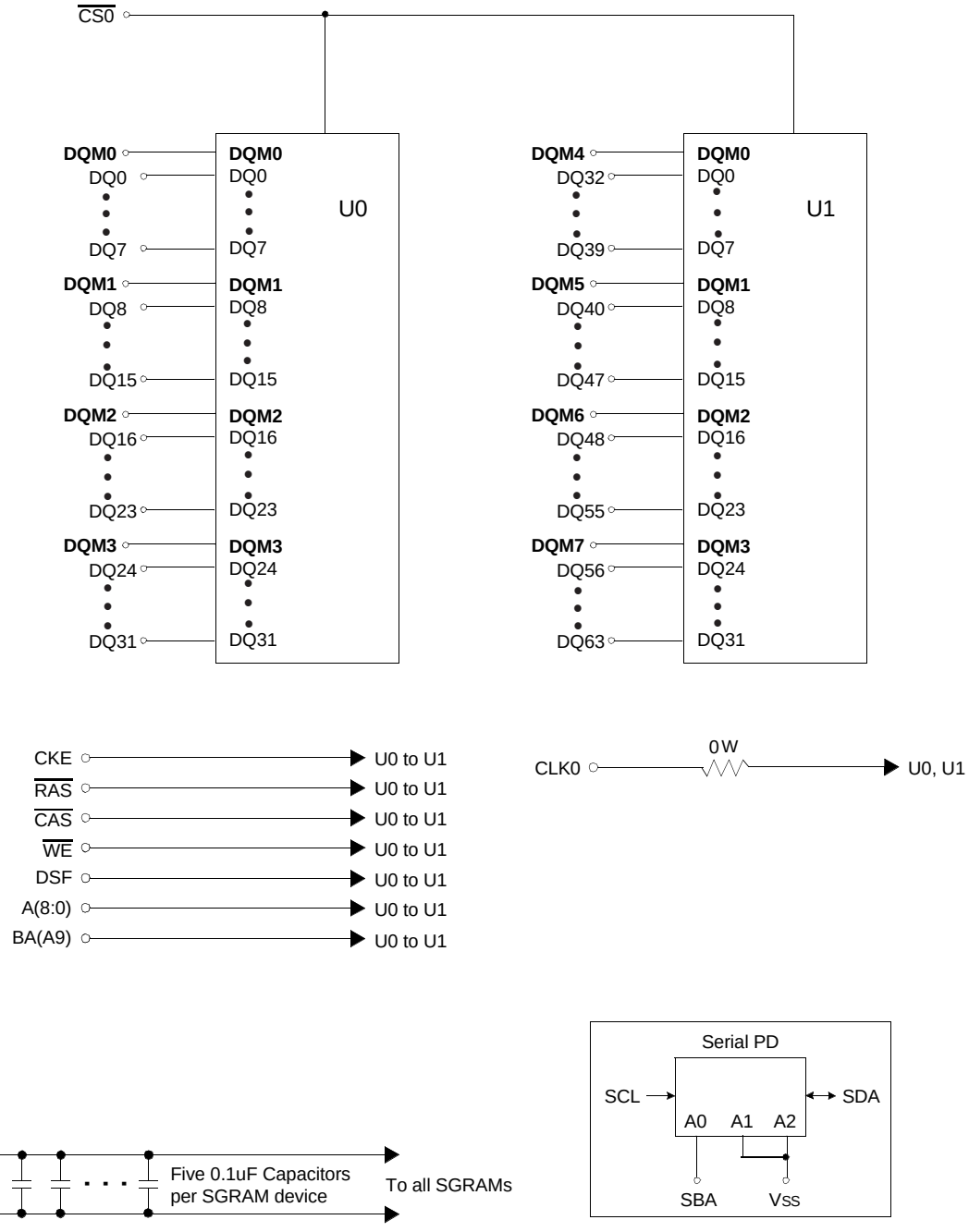
Pin Assignment

Pin #	Signal	Pin #	Signal	Pin #	Signal	Pin #	Signal
1	VSS	2	VSS	73	NC	74	CLK0
3	DQ63	4	DQ62	75	VCC	76	VCC
5	DQ61	6	DQ60	77	RSVD	78	RSVD
7	DQ59	8	DQ58	79	NC	80	NC
9	DQ57	10	DQ56	81	BA(A9)	82	A8
11	VCC	12	VCC	83	A7	84	A6
13	DQ55	14	DQ54	85	VSS	86	VSS
15	DQ53	16	DQ52	87	A5	88	A4
17	DQ51	18	DQ50	89	A3	90	A2
19	DQ49	20	DQ48	91	A1	92	A0
21	VSS	22	VSS	93	VCC	94	VCC
23	DQM7	24	DQM6	95	DQ31	96	DQ30
25	DQM5	26	DQM4	97	DQ29	98	DQ28
27	VCC	28	VCC	99	DQ27	100	DQ26
29	DQ47	30	DQ46	101	DQ25	102	DQ24
31	DQ45	32	DQ44	103	VSS	104	VSS
33	DQ43	34	DQ42	105	DQ23	106	DQ22
35	DQ41	36	DQ40	107	DQ21	108	DQ20
37	VSS	38	VSS	109	DQ19	110	DQ18
39	DQ39	40	DQ38	111	DQ17	112	DQ16
41	DQ37	42	DQ36	113	VCC	114	VCC
43	DQ35	44	DQ34	115	DQM3	116	DQM2
45	DQ33	46	DQ32	117	DQM1	118	DQM0
47	VCC	48	VCC	119	VSS	120	VSS
49	RSVD	50	RSVD	121	DQ15	122	DQ14
51	RSVD	52	RSVD	123	DQ13	124	DQ12
53	RSVD	54	RSVD	125	DQ11	126	DQ10
55	VSS	56	VSS	127	DQ9	128	DQ8
57	DSF	58	RFU	129	VCC	130	VCC
59	RFU	60	RFU	131	DQ7	132	DQ6
61	RFU	62	SBA	133	DQ5	134	DQ4
63	VCC	64	VCC	135	DQ3	136	DQ2
65	NC	66	CS0	137	DQ1	138	DQ0
67	RAS	68	CAS	139	VSS	140	VSS
69	WE	70	CKE	141	SDA	142	SCL
71	VSS	72	VSS	143	VCC	144	VCC

Pin Names

Pin Name	Function
A0 ~ A8	Address input (Multiplexed)
BA(A9)	Select bank
DQ0 ~ DQ63	Data input/output
CLK0	Clock input
CKE	Clock enable input
$\overline{CS0}$	Chip select input
$\overline{RAS}$	Row address storbe
$\overline{CAS}$	Colume address strobe
$\overline{WE}$	Write enable
DSF	Define special function
DQM0 ~ 7	DQM
Vcc	Power supply (3.3V)
Vss	Ground
SDA	Serial data I/O
SBA	EEPROM Device Address
SCL	Serial clock
RSVD	Reserved
RFU	Reserved for future use
NC	No connection

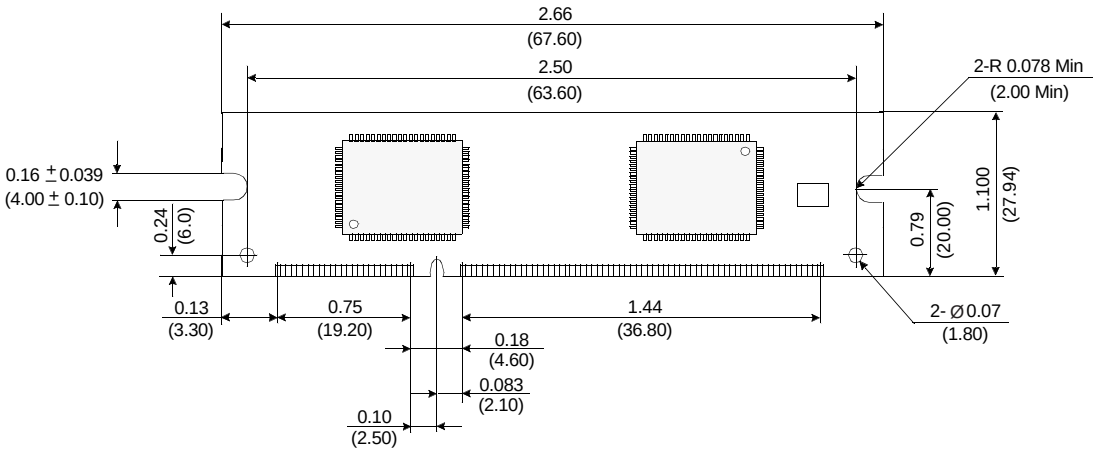
Functional Block Diagram

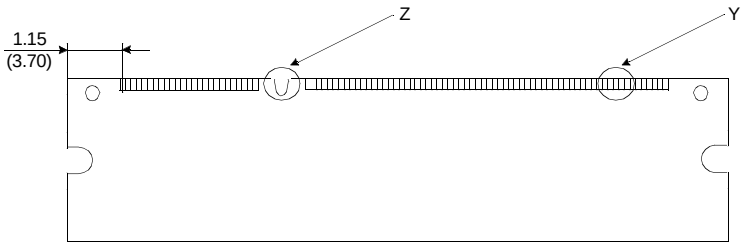


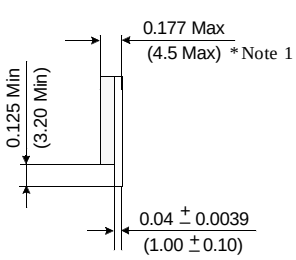
Physical Dimension

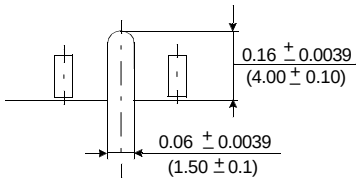
144 Pin SGRAM SODIMM Module

Units : Inches (millimeters)

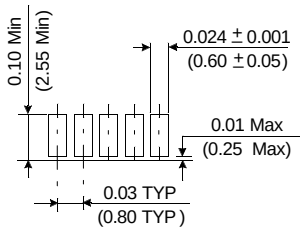








Detail Z



Detail Y

Tolerances : ± 0.005(.13) unless otherwise specified

Units : Inches (Millimeters)