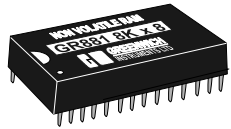


GR881 (8K x 8) NON-VOLATILE RAM

GREENWICH
INSTRUMENTS LTD



ABSOLUTE MAXIMUM RATINGS

Symbol	Min	Max	Units
Vdd	- 0.3	7.0	Volts
Vi/o	- 0.3	Vdd +0.3	Volts
Temp	- 20	+70	deg. C

OPERATING CONDITIONS

Symbol	Min	Typ	Max	Unit
Vdd	4.75	5.0	5.5	Volts
Vin (1)	2.2		Vdd+0.3	Volts
Vin (0)	- 0.3		0.8	Volts
Iin (any other pin)	- 1.0		+1.0	µA
Vout (1)(Iout = -1mA)	2.4			Volts
Vout (0)(Iout = +2mA)			0.4	Volts
Idd (Active)		30		mA
Idd (Deselected)		1.0		mA
Tcycle			100	nS.
Cin (any pin)		10		pF

OPERATING MODE					
CE	OE	WR	MODE	OUTPUT	Idd
H	X	X	Unsel.	Hi-Z	Standby
L	H	H	Unsel.	Hi-Z	Active
L	L	H	Read	Dout	Active
L	X	L	Write	Din	Active

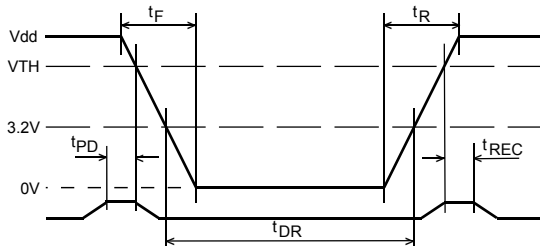
PIN CONNECTIONS

NC	1	28
A12	2	27
A7	3	26
A6	4	25
A5	5	24
A4	6	23
A3	7	22
A2	8	21
A1	9	20
A0	10	19
D0	11	18
D1	12	17
D2	13	16
GND	14	15

PIN DESIGNATIONS

Pin	Function
A0-A12	Address I/P's
D0-D7	Data in/out
OE	Output Enable
CE ₁ CE ₂	Chip Enable
WR	Write Enable
Vdd	+5Volt Power
D7	Ground

DATA RETENTION OPERATING CONDITIONS

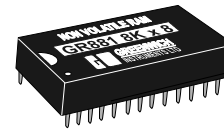


Symbol	Parameter	Min	Typ	Max	Units
Vdd	Operating supply voltage	4.75	5.0	5.50	Volts
VTH	Data retention voltage		4.5		Volts
tF	Vdd slew to 0V	15			µS
tR	Vdd slew 0V to 5.0V	15			µS
tREC	CE to O/P valid from power up			15	µS
tDR	Data retention time		10		Years
tPD	CE at Vin(1) before power down	0			µS

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Tcycle			100	nS.
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CE	OE	WR	MODE	OUTPUT	Idd
H	X	X	Unsel.	Hi-Z	Standby
L	H	H	Unsel.	Hi-Z	Active
L	L	H	Read	Dout	Active
L	X	L	Write	Din	Active

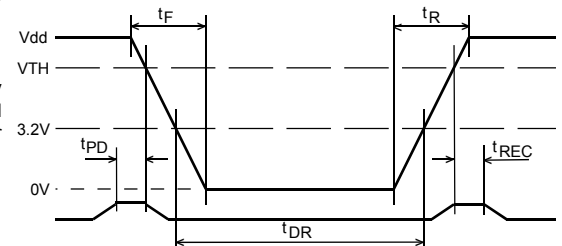
PIN CONNECTIONS

NC	1	28
A12	2	27
A7	3	26
A6	4	25
A5	5	24
A4	6	23
A3	7	22
A2	8	21
A1	9	20
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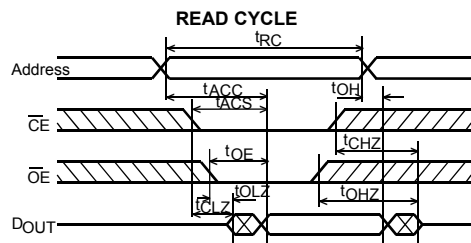
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tREC	CE to O/P valid from power up			15	µS
tDR	Data retention time		10		Years
tPD	CE at Vin(1) before power down	0			µS

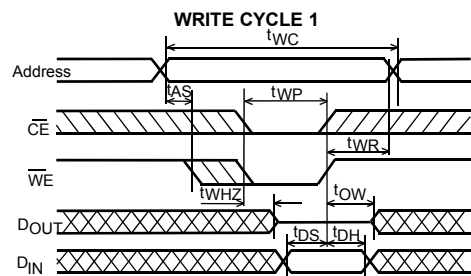
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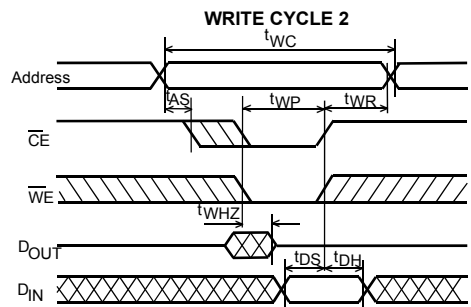
TIMING (nS-nano seconds)

Symbol	Parameter	Min	Max
tRC	Read cycle time	100	
tACC	Access time		100
tACS	CE to output valid		100
tOE	OE to output valid		40
tCLZ	CE to output active	10	
tOLZ	OE to output active	5	
tOH	Output hold time	10	
tCHZ	CE to output disable		30
tOHZ	OE to output disable		20



Write Cycle

Symbol	Parameter	Min	Max
tWC	Write cycle time	100	
tWP	Write pulse width	60	
tAS	Address setup time	0	
tWR	Write recovery time	0	
tWHZ	WR to output disable		30
tOW	Output active from WR	10	
tDS	Data setup time	40	
tDH	Data HOLD TIME	0	

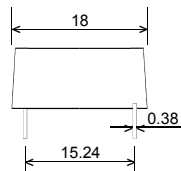
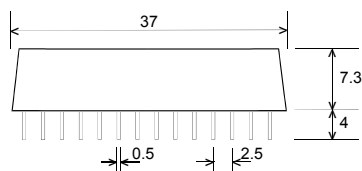


Notes

1. WE must be high during address transitions.
2. A Write occurs during the overlap of active CE and a low WE.
3. CE = CE1 and CE2
4. WE is high for a read cycle.

REPLACES 6264., 5565., etc.

DIMENSIONS (mm)

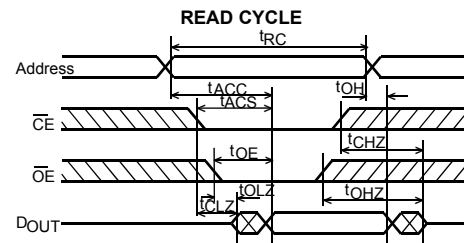


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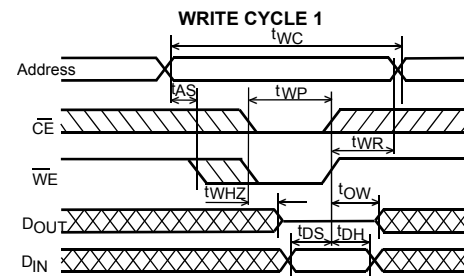
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GR881 (8K x 8) NON-VOLATILE RAM



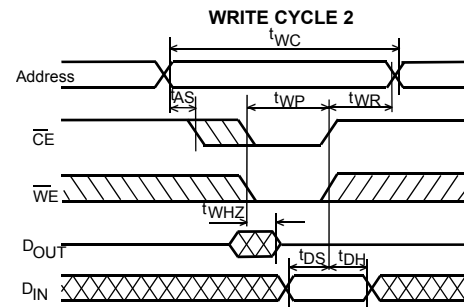
TIMING (nS-nano seconds)

Symbol	Parameter	Min	Max
tRC	Read cycle time	100	
tACC	Access time		100
tACS	CE to output valid		100
tOE	OE to output valid		40
tCLZ	CE to output active	10	
tOLZ	OE to output active	5	
tOH	Output hold time	10	
tCHZ	CE to output disable		30
tOHZ	OE to output disable		20



Write Cycle

Symbol	Parameter	Min	Max
tWC	Write cycle time	100	
tWP	Write pulse width	60	
tAS	Address setup time	0	
tWR	Write recovery time	0	
tWHZ	WR to output disable		30
tOW	Output active from WR	10	
tDS	Data setup time	40	
tDH	Data HOLD TIME	0	

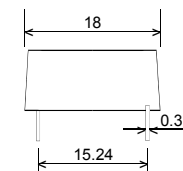
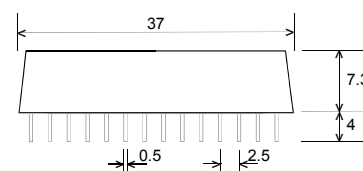


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