NON-VOLATILE MEMORY/NON-VOLATILE RAM S-2210R S-2212R

★Under development

The non-volatile RAM (NV RAM) is a non-volatile CMOS memory combining a static CMOS RAM and a non-volatile electronically programmable memory (E^2PROM) as its back-up on a 1-to-1 basis. Since the RAM is an asynchronous CMOS static RAM, it is used very little current.

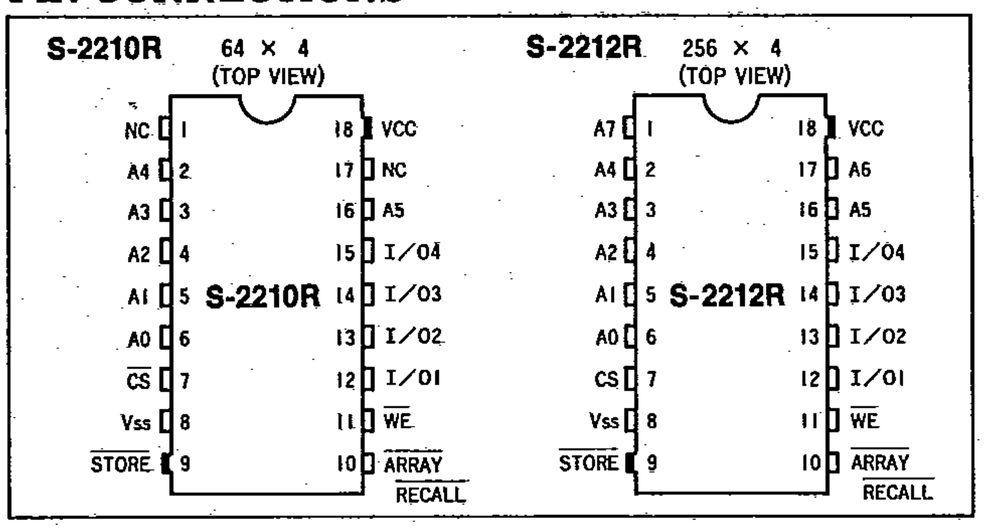
FEATURES

- Single 5V power supply. All inputs and outputs are TTL compatible
- Store and recall are controlled by a narrow signal width > 100ns
- E^2PROM rewritings: 10^4 times
- E^2PROM memory preservability: 10 years
- Erroneous storage prevention function: Approx. 3.5V or less
- Autorecall function at power making
- Tri-state output

APPLICATIONS

- Constants setting
- Data memory
- Rewritable programs and firmware
- System configuration setting
- System parameters and part No. setting
- System status monitor
- Others

PIN CONNECTIONS



SPECIFICATIONS

Model No.	Capacity	Configuration	Operating voltage range (V)	Current consumption (mA)		Static RAM operation (ns)				Store operation (ns)		Array recall operation (ns)		Package
				Operating MAX	Standby MAX	Read cycle time MIN	Access time MAX	Write cycle time MIN	Write pulse width MIN	Store time MAX	Store pulse width MIN	Recall cycle time MIN	Recall pulse width MIN	
S-2210R	256bits	64×4	5±10%	40	0.03	300	300	300	200	10×10^6	200	1,300	300	18 DIP
S-2212R	1kbits	256×4	5±10%	50	0.03	300	300	300	200	10×10^6	200	1,300	300	18 DIP

VOLTAGE REGULATOR S-802 S-812 Series

The S-802 and S-812 Series are voltage regulators developed by using the CMOS process. Both series are the fixed type which the output voltage is fixed internally. The S-802 Series is a negative voltage regulator and the S-812 is a positive voltage regulator. Both are made up of a low current consumption standard voltage source of high precision, error amplifier, control transistor, and voltage setting resistor. The package is a TO-92 plastic package.

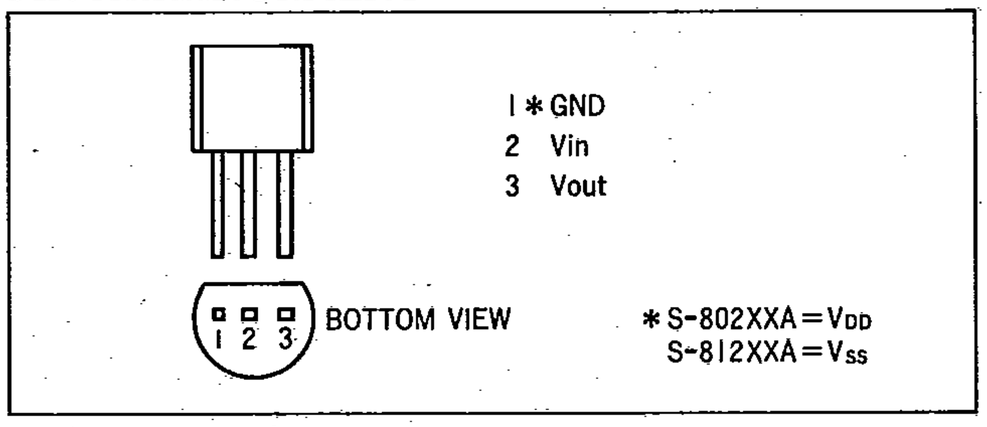
FEATURES

- Low current consumption
- Low input/output voltage difference
- Low temperature coefficient of output voltage (TYP ± 0.38mV/°C for the S-81230AG)
- Wide operating voltage range
- Good input stability (TYP 0.1%/V)

APPLICATIONS

- Automobile voltage regulator
- High stability standard voltage
- Constant voltage power supply for battery-powered equipment, communications equipment, video equipment, and other equipments which require voltage temperature control

PIN ARRANGEMENT



SPECIFICATIONS

Model No.	Output voltage (V)	Output current (mA)	Load stability (mV)	Input/output voltage difference (mV)	Current consumption (μA)	Input voltage (V)	Absolute maximum rating (V)
S-80230AG	−3±5%	TYP30 (Vin=−5V)	TYP60 (Iout=1—20mA)	TYP60	TYP2.5	MAX−10	−12
S-80250AG	−5±5%	TYP50 (Vin=−7V)	TYP40 (Iout=1—40mA)	TYP30	TYP3.0	MAX−10	−12
S-81230AG	3±5%	TYP30 (Vin=5V)	TYP60 (Iout=1—20mA)	TYP60	TYP2.5	MAX10	12
S-81250AG	5±5%	TYP50 (Vin=7V)	TYP40 (Iout=1—40mA)	TYP30	TYP3.0	MAX10	12
S-81250HG	5±5%	TYP50 (Vin=7V)	TYP40 (Iout=1—40mA)	TYP30	TYP3.0	MAX12	18