

YM 64AXX series

■ OUTLINE

The YM64AXX Series is a product line of ICs designed for automatic performance employing FM sound sources.

The IC stores timbre data and performance data in a built-in ROM, and is capable of automatic performance in up to 511 steps (4 melodies selectable), with 4 sounds generated simultaneously and in 3 full octaves of sound range.

Rewriting of this ROM data allows the user to produce various kinds of FM music.

A built-in DAC and crystal oscillation circuit for the simplified circuit configuration also make low cost development of an automatic performance system possible.

■ FEATURES

- Realistic sounds that employ FM sound sources (2-operator mode)
- Number of simultaneous sounds ... Up to 4 sounds (4 independent timbres possible)
- Melody data ... 4 melodies (or 4 phrases) selectable within up to 511 steps)
- Timbre data* ... Up to 4 timbres can be set for 1 melody (or 1 phrase).

Maximum of 16 timbre presets for 4 melodies.

* 14 timbres are supplied by the manufacturer.

- Performance modes ... Repeated performance of all melodies or of specified melody is possible.
- Repeated performance is also possible by using the JUMP command.
- Built-in DAC and crystal oscillation circuit.
- C-MOS low power consumption
- +5V power supply
- 16-pin DIP package (plastic)

■ ELECTRICAL CHARACTERISTICS

1. Absolute maximum ratings

Parameter	Rating	Unit
Input terminal voltage	-3.0-7.0	V
Operating temperature	0-70	°C
Storage temperature	-50-125	°C

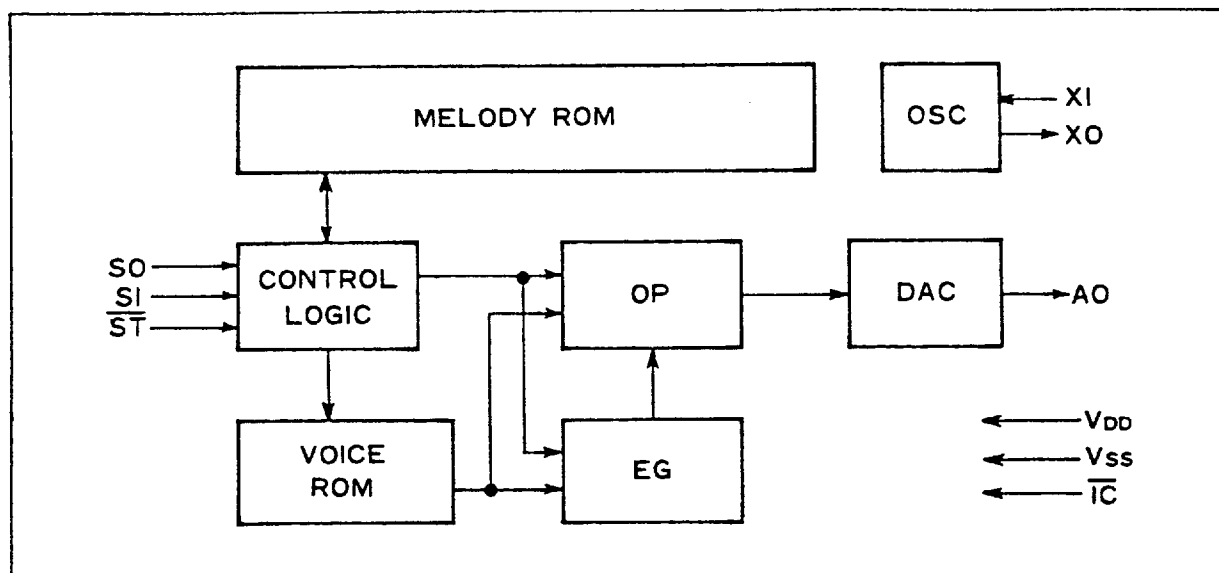
2. Recommended operating conditions

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Power supply voltage	VDD	4.75	5.0	5.25	V
	GND	0	0	0	V

3. DC characteristics

Parameter	Symbol	Condition	Minimum	Typical	Maximum	Unit
Low-level input voltage	VIL	VIN=0-5V	-0.3		0.8	V
High-level input voltage	VIH		2.0		VDD	V
Low-level clock input voltage	VCL		-0.3		0.8	V
High-level clock input voltage	VCH		2.0		VDD	V
Input current leak	IIL	AOUT maximum amplitude	-10		10	μA
Low-level output voltage	VOL				0.4	V
High-level output voltage	VOH		4.0			V
Analog output voltage	VOA				2.5	Vp-p
Power supply current	IDD	f=1MHz			18	mA
Input capacitance	CI				10	pF
Output capacitance	CO				10	pF

■ BLOCK DIAGRAM



■ EXAMPLES (for reference)

Example of standard circuit

