SOUND SIGNAL PROCESSOR

Pitch Changer

YM3408 PTC

■ OUTLINE

YM3408 is a Pitch Changer LSI that lowers the pitch of the input signals in realtime by one octave.

The use of this LSI enables audio signals that are played back at double-speed to be heard at normal pitch.

■ FEATURES

- Corrective processing of non-consecutive points to prevent the generation of "jointed" sounds
- Built-in 12-bit D/A and A/D converters
- 28 KHz sampling frequency (when the Master Clock frequency is 3.58 MHz)
- Use of a 16k-bit SRAM as external memory
- CMOS-processed low power consumption
- 28 pin plastic DIP (Dual Inline Package)
- +5V power supply

■ ELECTRICAL CHARACTERISTICS

1. Absolute Maximum Ratings

Item	Rated Value	Unit
Input terminal voltage	−0.3~7.0	V
Operating temperature	0~70	°C
Storage temperature	−50~125	°C

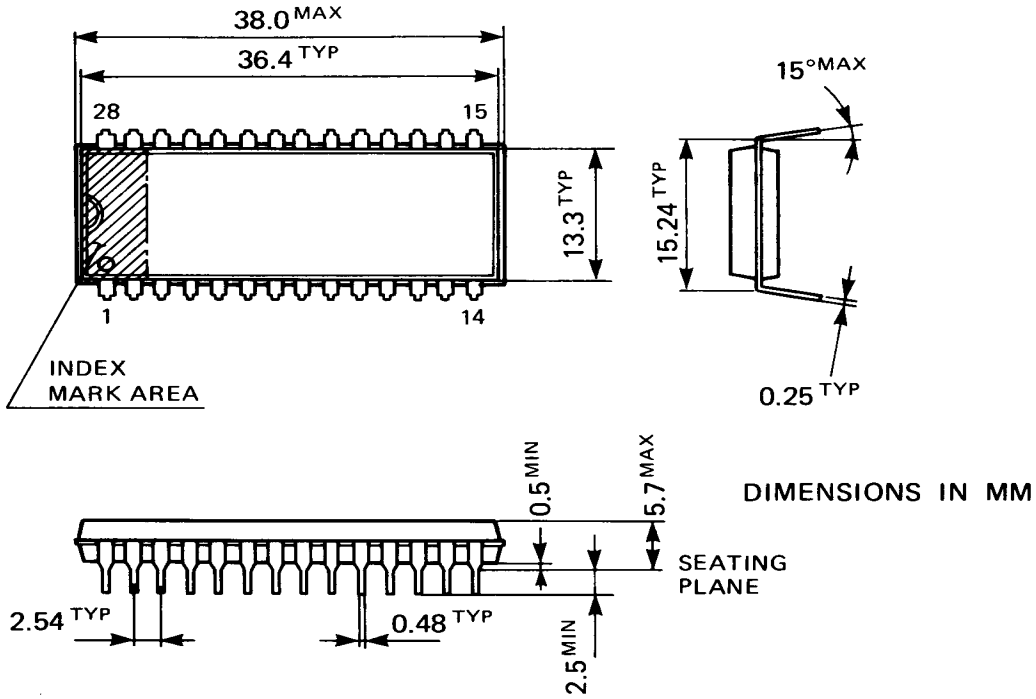
2. Recommended Operating Conditions

Item	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	VCC	4.75	5.0	5.25	V
	GND, AGND	0	0	0	V

3. DC Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Low-level input voltage	V_{IL}				0.8	V
High-level input voltage	V_{IH}		2.0			V
Low-level clock input voltage	V_{CL}				0.8	V
High-level clock input voltage	V_{CH}		2.0			V
Input leak current	I_{IL}	V_{IN} = 1~5V	−10		10	μA
Low-level output voltage	V_{OL}	I_{OL} = 2mA			0.4	V
High-level output voltage	V_{OH}	I_{OH} = 100μA	4.0			V
Analog input voltage	V_{IA}	AIN	1.0		4.0	V
Analog output voltage	V_{OA}	AOUT max. magnitude			3.0	Vp-p
DC output offset		CV		2.5		V
Supply current	I_{CC}				5.0	mA
Input capacity	C_I	f = 1MHz			10	pF
Output capacity	C_O				10	pF

■ OUTLINE DIMENSIONS



DIMENSIONS IN MM

■ BLOCK DIAGRAM