T-77-13

Sound generator

ADPCM Sound Generating LSI

PRELIMINARY

YM7140

■ OUTLINE

- This LSI is a sound reproduction LSI using ADPCM1 cell (Yamaha Standerd-cell for sound reproduction).
- This ADPCM Sound Generator series has built-in ROM and customers can implement arbitrary sound data.
- LSI chip including following DRUM sound is available as an example.
  ① Bass drum ② Snare drum ③ Tom Tom ④ Cymbal ⑤ Hi-hat
- Sampling frequency 8KHz
- ROM capacity 64Kbit
- Total sound generating duration 2seconds
- Start trigger input 5
- Built-in Chattering canceller
- Built-in 8bit DA converter
- Master clock 4KHz
- +5V power supply
- 18pin DIP

■ ELECTRICAL CHARACTERISTICS

Maximum Ratings

ITEM	SYMBOL	RATING		UNIT
		Min.	Max.	
Supply voltage	V_{DD}	$V_{SS}-0.5$	$V_{SS}+7.0V$	V
Input voltage	Vi	$V_{SS}-0.5$	$V_{DD}+0.5$	V
Output voltage	Vo	$V_{SS}-0.5$	$V_{DD}+0.5$	V
Input current	Ii	−20	+20	mA
Storage temparature	T_{STG}	−50	125	℃

($V_{SS}=0V$)

Recommended Operating Conditions

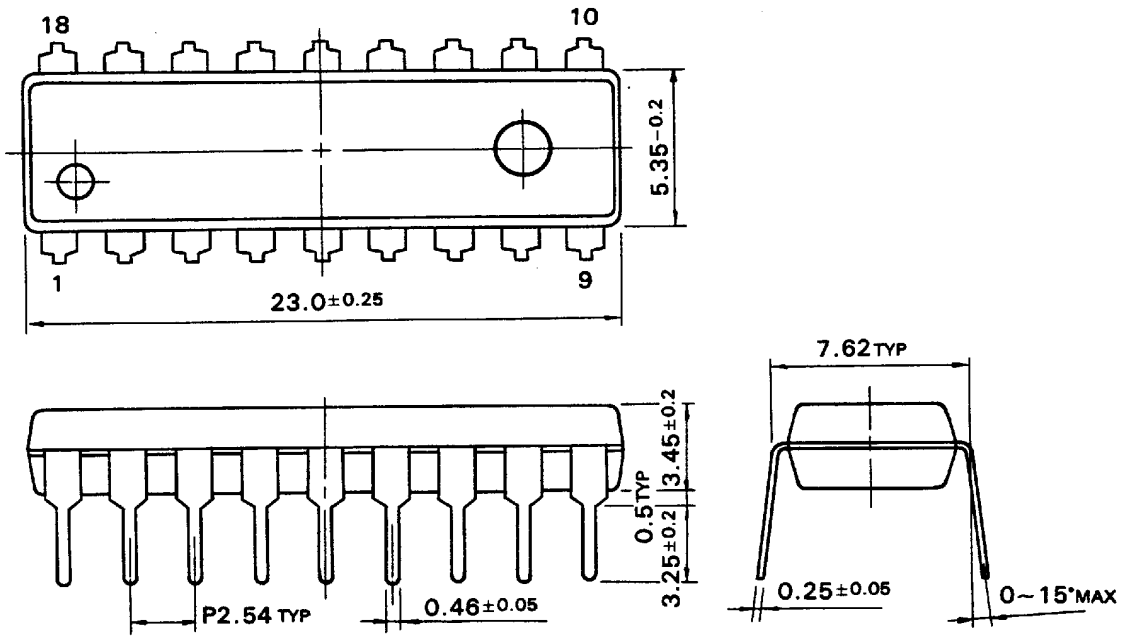
ITEM	SYMBOL	Min.	Typ.	Max.	UNIT
Supply voltage	V_{DD}	4.75	5.00	5.25	
Ambient operating temparature	Top	0	25	70	℃

DC Characteristics

ITEM		SYMBOL	Min.	Typ.	Max.	UNIT
Input high level voltage	All input	V_{IH}	3.5	—	—	V
Input low level voltage	All input	V_{IL}	—	—	1.0	V
Input leak current			−10	—	+10	MA

The specifications of this product are subject to improvement changes without prior notice.

■ OUTLINE DIMENSIONS



■ BLOCK DIAGRAM