D/A CONVERTER

2-Channel 2's complement MSB 1st input Floating D/ A Converter

YM3025 DAC(CD)

■OUTLINE

The YM3025 is a floating D/A converter with the 2-channel serial and 16-bit 2's complement input. It can produce anglog output (16-bit dynamic range) which has 10-bit mantissa and 7-step exponent characteristic for the input digital signal.

■FEATURES

- 16-bit input format is 2's complement and MSB 1st (equipped with a built-in floating converter logic).
- Analog output can be easily obtained by connecting external buffer op-amp and other components.
- +5V single power supply including op-amp.
- Can be used in 1-channel operation.
- LRCK or SHL input is also available.
- 16-bit wide dynamic range.
- Capable of processing PCM sound source up to 2 channels.
- Equipped with a built-in analog switch for sample hold.
- Lower noise and less harmonic distortion and outstanding temperature characteristics.
- Made by the monolithic process of highly accurate thin film resistor and CMOS and enclosed in 16-pin plastic flat package.

■ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings

Item	Rated value	Units
Power supply voltage	-0.3～+15.0	V
High-level input voltage	V_{DD}+0.3	V
Low-level input voltage	V_{SS}-0.3	V
Operating ambient temperature	0～70	℃
Storing temperature	-50～+125	℃

Recommented Operating Conditions

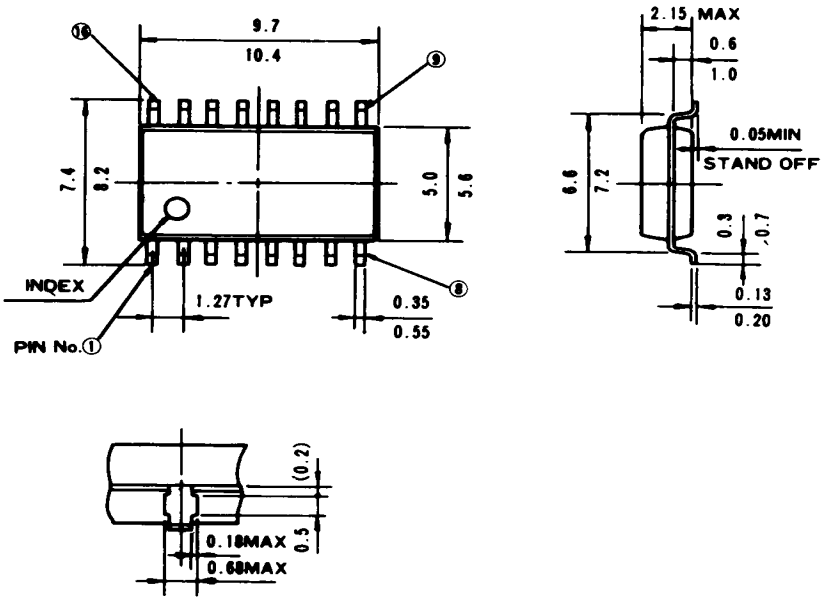
Item	Symbol	Min.	Typ.	Max.	Units
Power supply voltage	V_{DD}	4.75	5.0	5.25	V
	V_{SS}	0	0	0	V
Input signal voltage	CLOCK, SD, SMP1, 2, $\overline{ICL}$	0	–	V_{DD}	V
Operating ambient temperature	Ta	0	–	70	℃

Electrical Characteristics

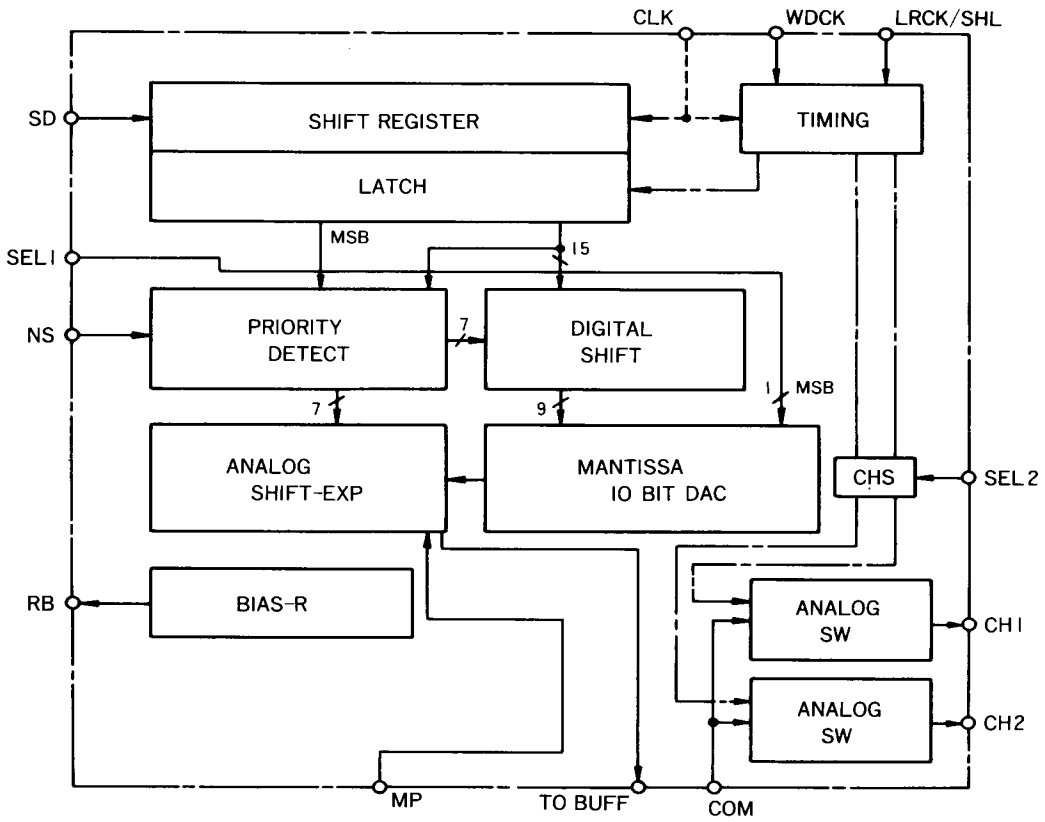
Item	Symbol	Condition	Min.	Typ.	Max.	Units
High-level input voltage	V_{IH}		3.3	–	–	V
Low-level input voltage	V_{IL}		–	–	1.0	V
Input current	I_{IN}	V_{DD}=5.0V	–	–	1	μA
Analogue output voltage	V_{OUT}		–	$\frac{1}{3}V_{DD}$		Vp−p
Supply current	I_{DD}	V_{DD}=5.0V	–	–	6	mA

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■ OUTLINE DIMENSIONS



■ BLOCK DIAGRAM



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