

# D/A CONVERTER

2-Channel Serial & Binary input Floating D/A Converter

## YM3016 DAC(CD)

### ■ OUTLINE

The YM3016 : DAC-GS is a Floating D/A converter (referred to as DAC hereafter) with the 2-channel serial and 16-bit binary input or 2's complement input. It can produce analog 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 can select either binary or 2's complement (due to built-in floating converter logic).
- Analog output can be obtained easily by adding a buffer operational amplifier, etc.
- 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.
- Package type: 16 pin plastic SOP : YM3016F  
DIP : YM3016D
- +5V single power supply.

### ■ Electrical characteristics

#### ① Absolute Maximum Ratings

Item	Rating	Unit
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	°C
Storing temperature	-50 ~ +125	°C

#### ② Recommended Operating Conditions

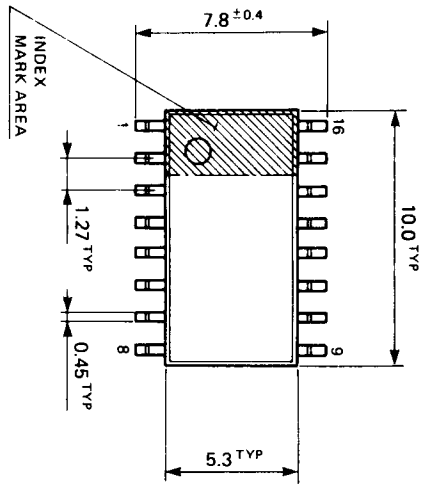
Item	Symbol	Min	Max	Unit
Supply voltage	$V_{DD}$	4.75*	5.0	V
	$V_{SS}$	0	0	V
Input signal voltage	CLOCK			
	SD	0	—	$V_{DD}$
	SMP1, 2 ICL			
Operating ambient temperature	$T_a$	0	70	°C

#### ③ DC Characteristics

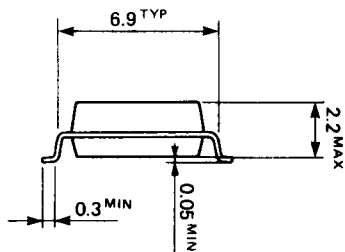
Item	Symbol	Measuring Conditions	Min	Typ	Max	Unit
High-level input voltage	$V_{IH}$		$0.66V_{DD}$	—	—	V
Low-level input voltage	$V_{IL}$		—	—	$0.30V_{DD}$	V
Input current	$I_{IN}$	$V_{DD} = 5.0V$	—	—	$10^{-3}$	$\mu A$
Analog output voltage	$V_{OUT}$		—	$0.50V_{DD}$	—	$V_{p-p}$
Supply current	$I_{DD}$	$V_{DD} = 5.0V$	—	—	6	mA

## ■ OUTLINE DIMENSIONS

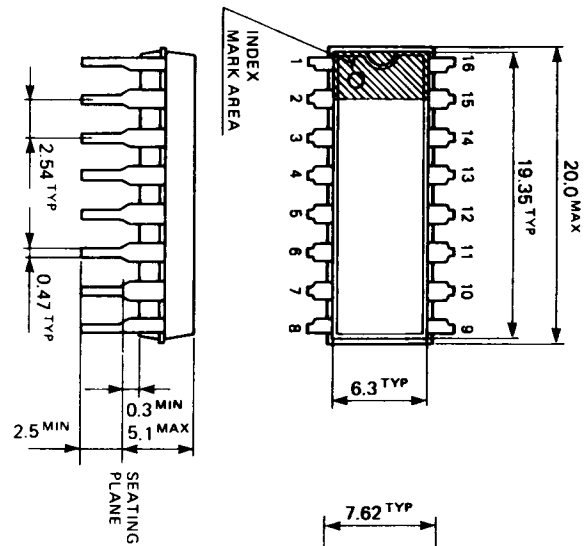
### YM3016-F



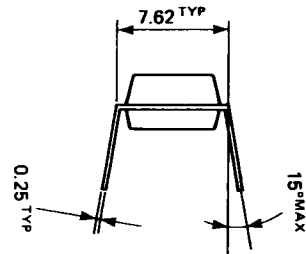
UNIT : MM



### YM3016-D



UNIT : MM



## ■ BLOCK DIAGRAM

