PRELIMINARY
Notice: This is not a final specification. Some parametric limits are subject to change.

MITSUBISHI HIGH SPEED CMOS

M74HC377P/FP/DWP

OCTAL D-TYPE FLIP-FLOP WITH COMMON CLOCK AND ENABLE

DESCRIPTION

The M74HC377 is a semiconductor integrated circuit consisting of eight positive-edge triggered D-type flip flops with common clock and enable inputs.

FEATURES

- High-speed: (clock frequency)40MHz typ. (C_L=15pF, V_{CC}=5V)
- Low power dissipation: 20μW/package, max (V_{CC}=5V, T_a=25℃, quiescent state)
- High noise margin: 30% of V_{CC}, min (V_{CC}=4.5V, 6V)
- Capable of driving 10 74LSTTL loads
- Wide operating voltage range: V_{CC}=2~6V
- Wide operating temperature range: T_a=−40~+85℃

APPLICATION

General purpose, for use in industrial and consumer digital equipment.

FUNCTIONAL DESCRIPTION

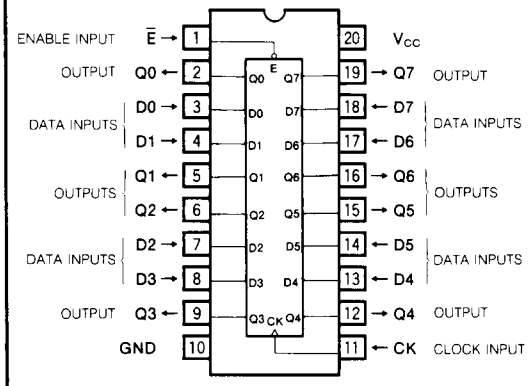
Use of silicon gate technology allows the M74HC377 to maintain the low power dissipation and high noise margin characteristics of the standard CMOS logic 4000B series while giving high-speed performance equivalent to the 74LS377.

The M74HC377 contains eight D-type flip flops with common clock and enable inputs.

When CK changes from low-level and high-level, the signals just previously input at D appears at outputs Q in accordance with function table given.

When $\overline{E}$ is high, the output does not change, irrespective of other inputs. Changing $\overline{E}$ from high to low, or from low to high does not cause misoperation.

PIN CONFIGURATION (TOP VIEW)



Outline 20P4
20P2N
20P2V

FUNCTION TABLE (Note 1)

Inputs			Output
$\overline{E}$	CK	D	Q
H	X	X	Q^0
L	↑	H	H
L	↑	L	L
X	L	X	Q^0

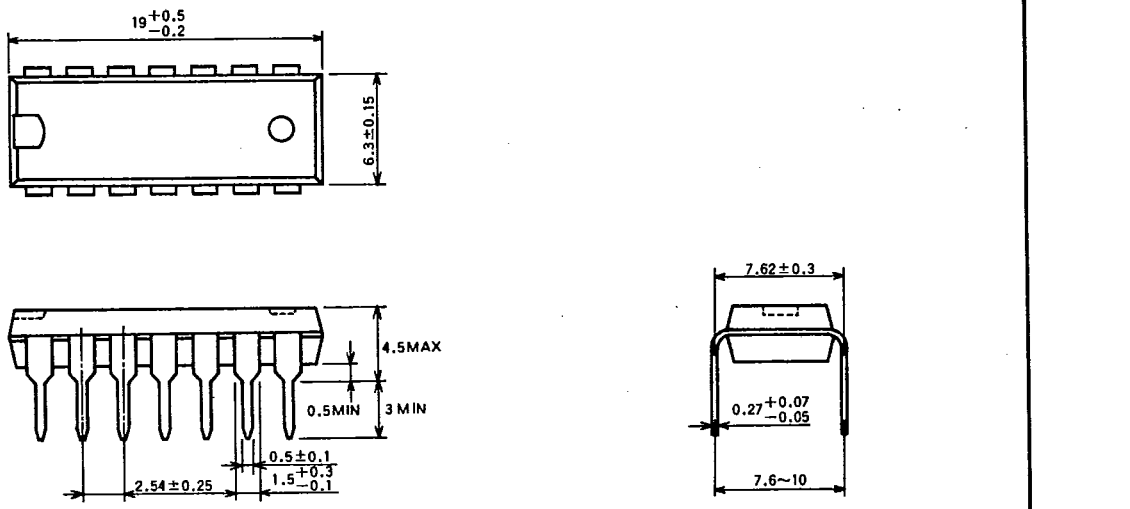
Note 1 : ↑ : Change from low to high
Q^0 : Output state Q before input conditions are set
X : Irrelevant

MITSUBISHI HIGH SPEED CMOS

PACKAGE OUTLINES

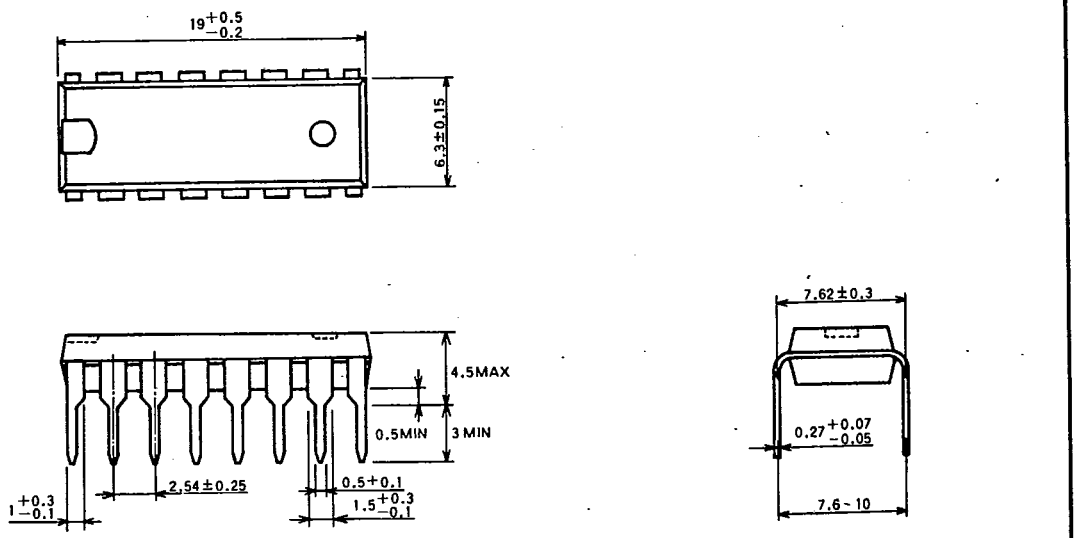
TYPE 14P4 14-PIN MOLDED PLASTIC DIP

Dimension in mm



TYPE 16P4 16-PIN MOLDED PLASTIC DIP

Dimension in mm

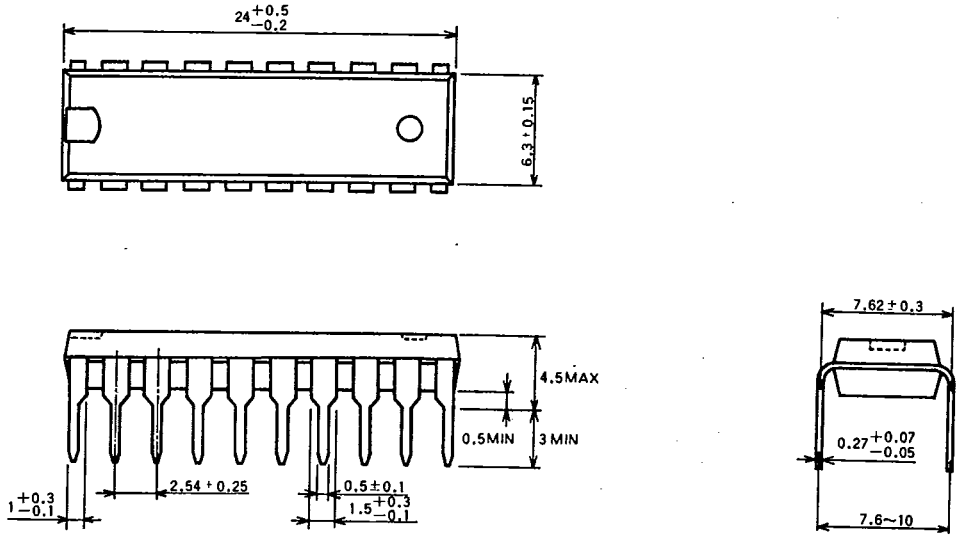


MITSUBISHI HIGH SPEED CMOS

PACKAGE OUTLINES

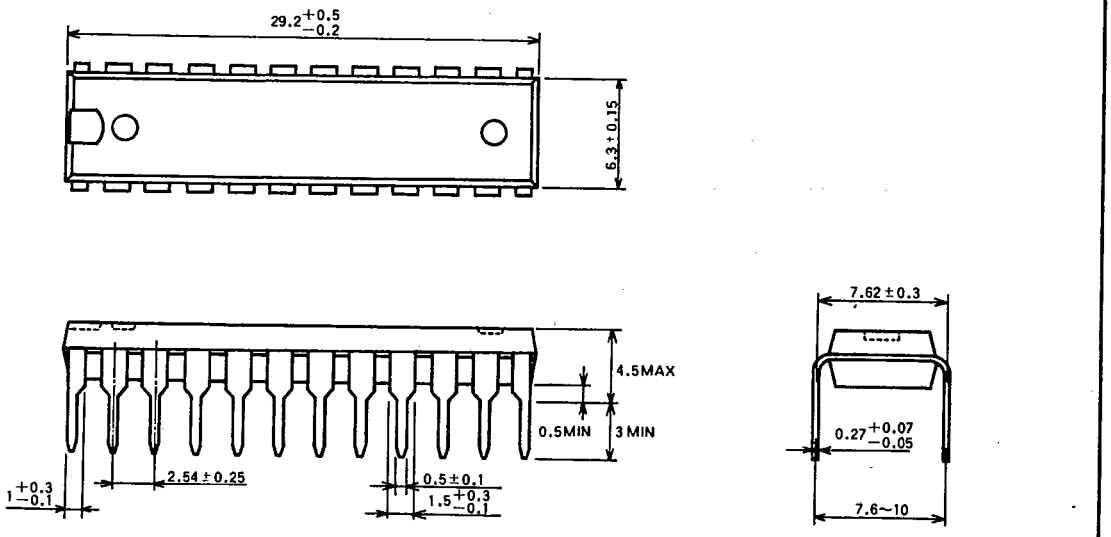
TYPE 20P4 20-PIN MOLDED PLASTIC DIP

Dimension in mm



TYPE 24P4D 24-PIN MOLDED PLASTIC DIP

Dimension in mm



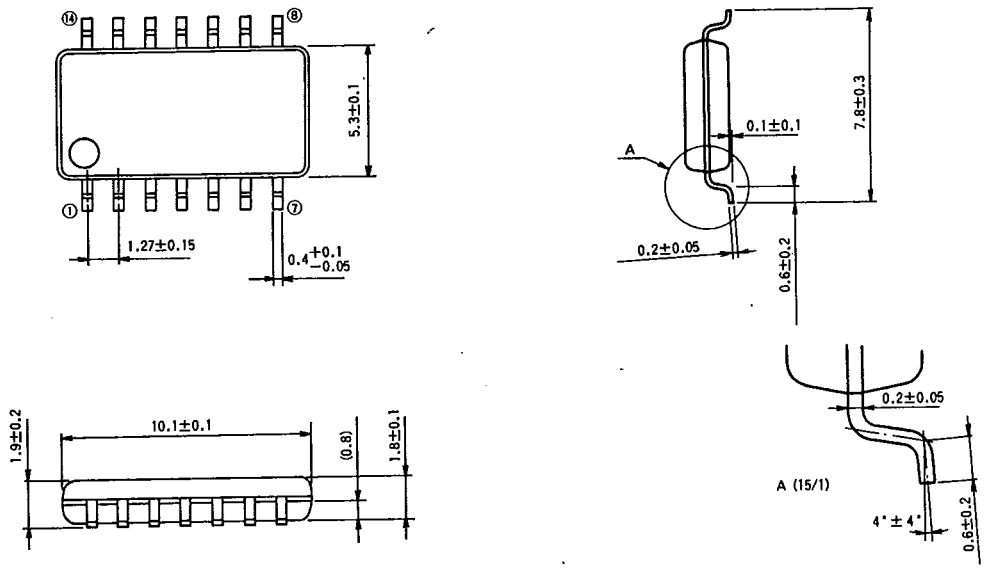
MITSUBISHI ELECTRIC

MITSUBISHI HIGH SPEED CMOS

PACKAGE OUTLINES

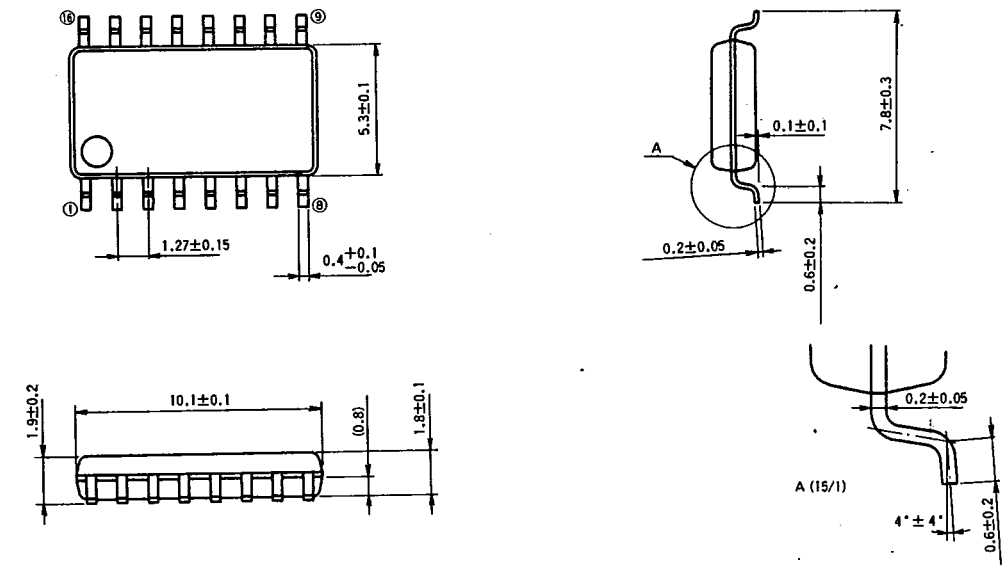
TYPE 14P2N 14PIN MOLDED PLASTIC SOP

Dimension in mm



TYPE 16P2N 16PIN MOLDED PLASTIC SOP

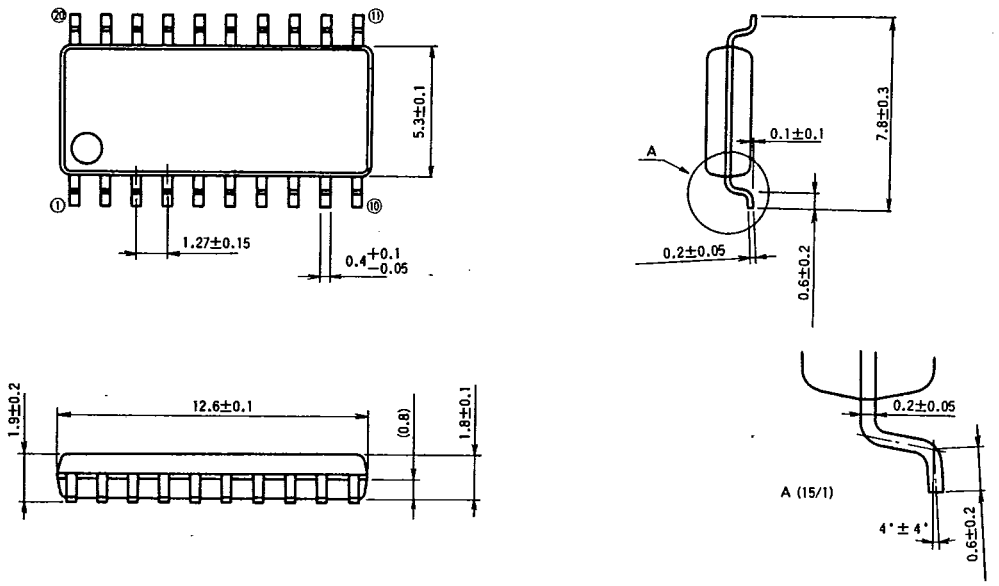
Dimension in mm



PACKAGE OUTLINES

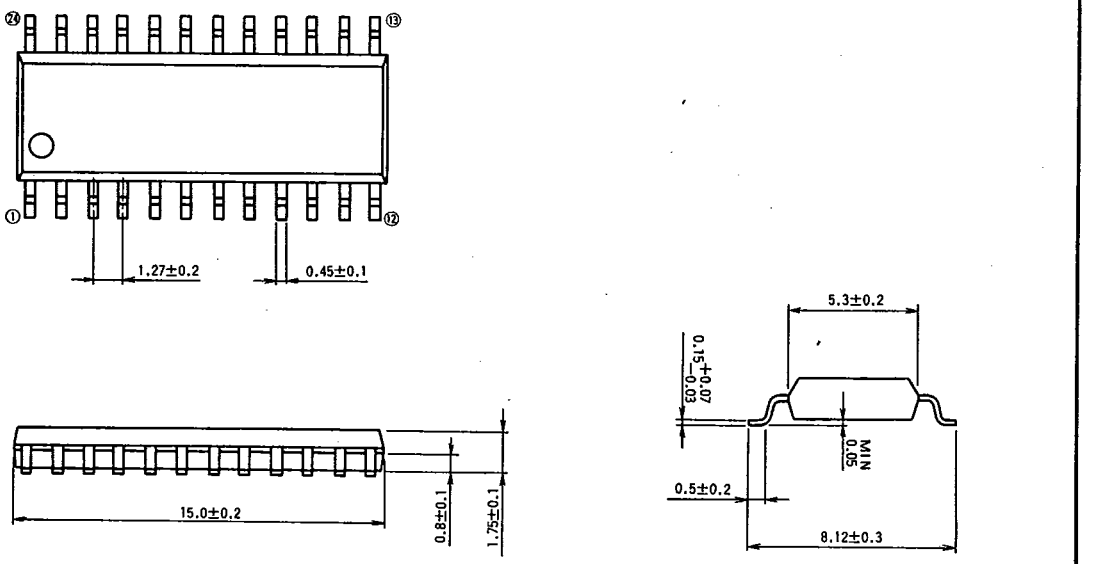
TYPE 20P2N 20PIN MOLDED PLASTIC SOP

Dimension in mm



TYPE 24P2 24PIN MOLDED PLASTIC SOP

Dimension in mm

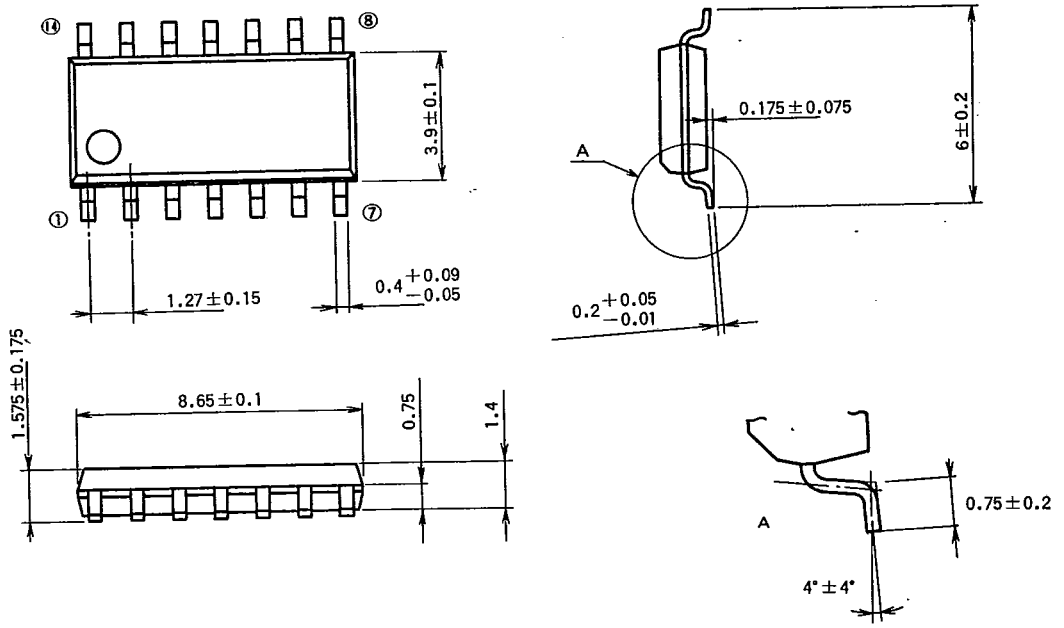


MITSUBISHI ELECTRIC

PACKAGE OUTLINES

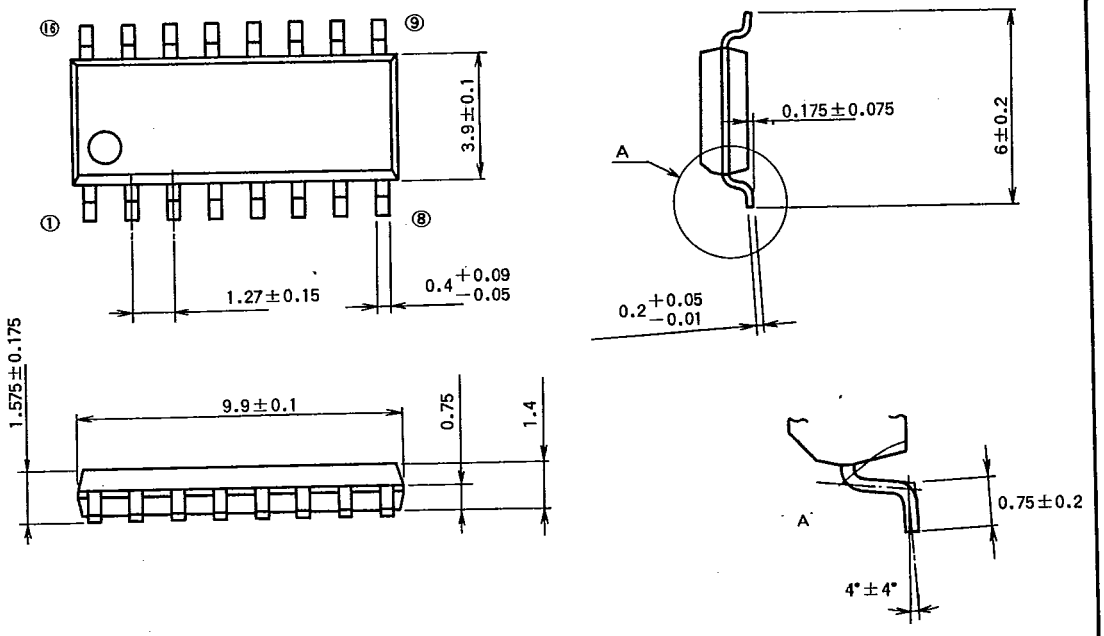
TYPE 14P2P 14-PIN MOLDED PLASTIC SOP(JEDEC 150mil body)

Dimension in mm



TYPE 16P2P 16-PIN MOLDED PLASTIC SOP(JEDEC 150mil body)

Dimension in mm



PACKAGE OUTLINES

TYPE 20P2V 20-PIN MOLDED PLASTIC SOP(JEDEC 300mil body)

Dimension in mm