

SONY®

CX20052A

## 8 bit 20MHz Sub-ranging A/D Converter

### Description

CX20052A is a serial-parallel type high speed A/D converter with a resolution of 8 bit for processing video signals driven by a single -5.0V power source.

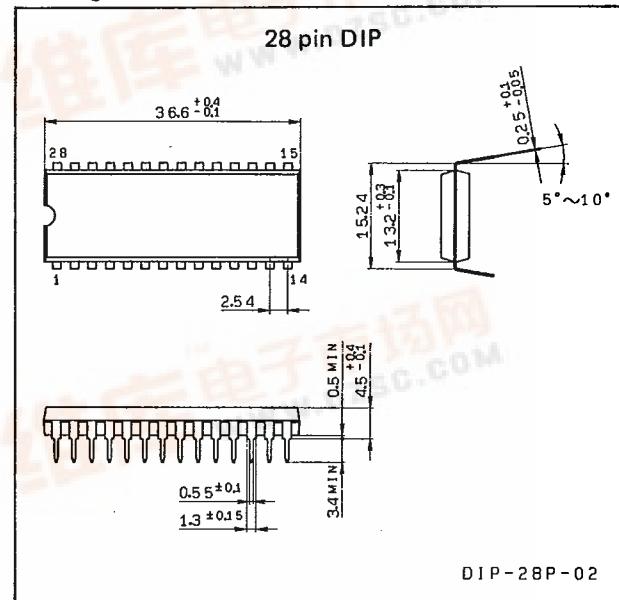
It performs an A/D conversion of video signals with an external sample & holding circuit. A reference voltage and a clock should be added external to it.

The digital output is provided in 8 bit parallel with an open emitter. Both the clock and the digital output are in ECL level.

### Features

- Maximum sampling frequency of 20 MHz (Min.)
- Low power consumption 700 mW (Typ.)
- Non-linearity error  $\pm 1/2$  LSB
- -5.0V single power supply
- Both clock input and digital output are in ECL level

### Package Outline



### Structure

Bipolar Silicon Monolithic IC.

### Absolute Maximum Ratings ( $T_a=25^\circ C$ )

• Supply voltage	$V_{EE}$	-9.0	V
• Clock voltage	$V_{CLK}$	$V_{EE}$ to +0.3	V
• Input signal voltage	$V_{IN}$	$V_{EE}$ to +0.3	V
• Reference voltage	$V_{REF}$	$V_{EE}$ to +0.3	V
• Digital output current	$I_{OH}$	10	mA
• Operating temperature	$T_{OPR}$	-10 to +70	$^\circ C$
• Storage temperature	$T_{STG}$	-50 to +150	$^\circ C$
• Allowable power dissipation	$P_D$	1.47	W

### Recommended Operating Conditions

• Supply voltage	$V_{EE}$	-5.25 to -4.75	V
• Clock voltage	$V_{IH}$	-1.04 to -0.74	V
	$V_{IL}$	-1.9 to -1.6	V
• Input signal voltage	$V_{IN}$	-2.0 to 0	V
• Reference voltage	$V_{REF}$	-2.1 to -1.9	V