

Dual 10 bit, 50 KHz, Multiplexed A/D + D/A

**Description:**

The CX23010/CX23060 are the 10 bit, 50 kHz CMOS A/D, D/A Converters for Audio digital signal processing, using a coarse-fine integration technique. Both Analog to Digital and Digital to Analog Conversions are capable with selecting the mode. It can be separated into 2 blocks. One is a digital block includes:

- Digital block includes:
  - A digital limiter
  - A counter
  - A timing generation circuit
- Analog block includes:
  - A current source
  - An operational amplifier
  - A comparator
  - A multiplexer (2-channel)

**Features:**

- A Single Power Supply:  $V_{DD}$  5V
- Minimum Number of External Parts required (Around One-third Compared with our Current A/Ds)
- Two Channel Audio A/D, D/A Processing (L and R Channels)
- 2's Complementary Digital Code is employed
- Low Power Dissipation (Less than 50 mW)

**Applications:**

- Digital Audio Signal Processing
- PCM Audio Processing
- Telecommunications Digitizing
- Computer Interface System

**Structure** Silicon gate CMOSIC:

**Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )**

- Power Supply voltage:  $V_{DD}$  -0.3 to +7 V
- Analog Input Voltage:  $V_{IN}$  -0.3 to  $V_{DD} + 0.3$  V
- Operating Temperature:  $T_{opr}$  -20 to +75  $^\circ\text{C}$
- Storage Temperature:  $T_{stg}$  -55 to +150  $^\circ\text{C}$
- Allowable Power Dissipation:
 

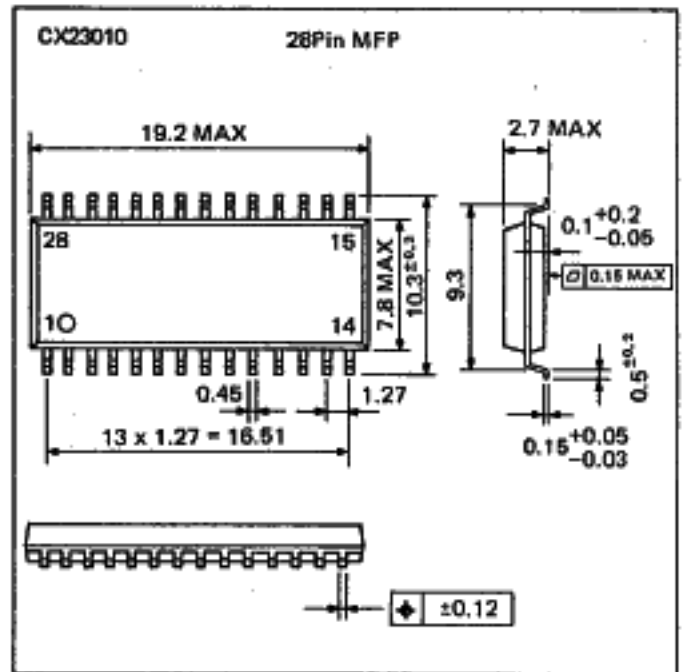
$P_D$	650 mW for CX23010
$P_D$	800 mW for CX23060

**Recommended Operating Conditions**

- (1)  $AV_{DD}, DV_{DD}$  4.5 to 5.5 V
- (2)  $AV_{DD} \leq DV_{DD} + 0.5$  V

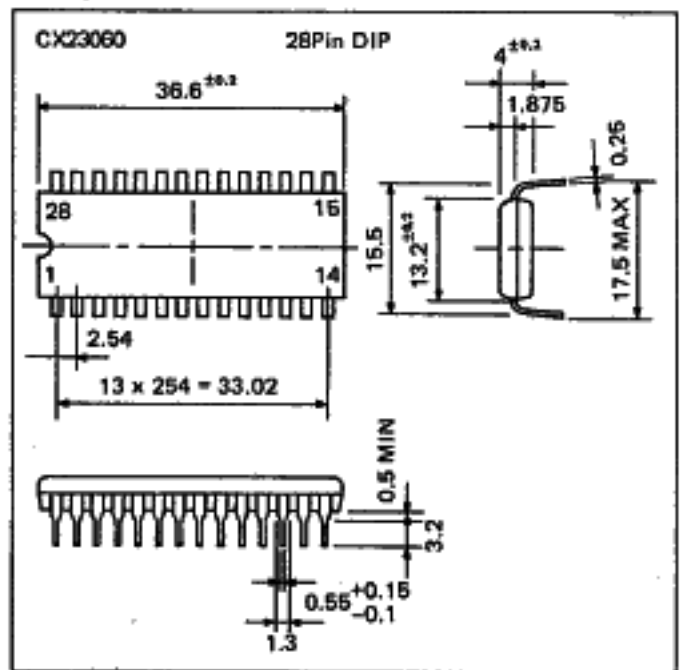
Package outline

Unit: mm



Package outline

Unit: mm



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