

November 1996

**63kHz, Nanopower,
 BiMOS Operational Amplifiers**

Features

- High Input Resistance $2T\Omega$ (Typ)
- Standby Power at $V_+ = 5V$ 300nW (Typ)
- Supply Current, BW, Slew Rate Programmable Using External Resistor
- Input Current 10pA (Typ)
- 5V to 15V Supply
- Output Drives Typical Bipolar Type Loads

Ordering Information

PART NUMBER (BRAND)	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
CA3440AE	-55 to 125	8 Ld PDIP	E8.3
CA3440E	-55 to 125	8 Ld PDIP	E8.3
CA3440M (3440)	-55 to 125	8 Ld SOIC	M8.15

Description

The CA3440A and CA3440 (see Note) are integrated circuit operational amplifiers that combine the advantages of MOS and bipolar transistors on a single monolithic chip.

The CA3440A and CA3440 BiMOS op amps feature gate protected PMOS transistors in the input circuit to provide very high input impedance, very low input currents (less than 10pA). These devices operate at total supply voltage from 5V to 15V and can be operated over the temperature range from -55°C to 125°C. Their virtues are programmability and very low standby power consumption (300nW). These operational amplifiers are internally phase compensated to achieve stable operation in the unity gain follower configuration. Terminals are also provided for use in applications requiring input offset voltage nulling. The use of PMOS in the input stage results in common mode input voltage capability down to 0.5V below the negative supply terminals, an important attribute for single supply applications. The output stage uses MOS complementary source follower form which permits moderate load driving capability (10k Ω) at very low standby currents (50nA).

The CA3440A and CA3440 have the same 8 pin terminal pinout as the "741" and other industry standard op amps with two exceptions: terminals one and five must be connected to the negative supply or to a potentiometer if nulling is required. Terminal 8 must be programmed through an external resistor returned to the negative supply.

NOTE: Formerly Developmental Type No TA10590.

Pinout

