

2MHz, Operational Transconductance Amplifier (OTA)

The CA3080 and CA3080A types are Gatable-Gain Blocks which utilize the unique operational-transconductance-amplifier (OTA) concept described in Application Note AN6668, "Applications of the CA3080 and CA3080A High-Performance Operational Transconductance Amplifiers".

The CA3080 and CA3080A types have differential input and a single-ended, push-pull, class A output. In addition, these types have an amplifier bias input which may be used either for gating or for linear gain control. These types also have a high output impedance and their transconductance (g_M) is directly proportional to the amplifier bias current (I_{ABC}).

The CA3080 and CA3080A types are notable for their excellent slew rate (50V/ μ s), which makes them especially useful for multiplexer and fast unity-gain voltage followers. These types are especially applicable for multiplexer applications because power is consumed only when the devices are in the "ON" channel state.

The CA3080A's characteristics are specifically controlled for applications such as sample-hold, gain-control, multiplexing, etc.

Part Number Information

PART NUMBER (BRAND)	TEMP. RANGE (°C)	PACKAGE	PKG. NO.
CA3080AE	-55 to 125	8 Ld PDIP	E8.3
CA3080AM (3080A)	-55 to 125	8 Ld SOIC	M8.15
CA3080AM96 (3080A)	-55 to 125	8 Ld SOIC Tape and Reel	M8.15
CA3080E	0 to 70	8 Ld PDIP	E8.3
CA3080M (3080)	0 to 70	8 Ld SOIC	M8.15
CA3080M96 (3080)	0 to 70	8 Ld SOIC Tape and Reel	M8.15

Features

- Slew Rate (Unity Gain, Compensated) 50V/ μ s
- Adjustable Power Consumption. 10 μ W to 30 μ W
- Flexible Supply Voltage Range. \pm 2V to \pm 15V
- Fully Adjustable Gain 0 to g_{MRL} Limit
- Tight g_M Spread:
 - CA3080. 2:1
 - CA3080A 1.6:1
- Extended g_M Linearity 3 Decades

Applications

- Sample and Hold
- Multiplexer
- Voltage Follower
- Multiplier
- Comparator

Pinouts

