

CA3031/702A

OPERATIONAL AMPLIFIER

General-purpose amplifier used in narrow-band and bandpass amplifier, feedback amplifier, dc and video amplifier, multivibrator, oscillator, comparator, servo driver, and scaling adder applications. 8-lead "TO-5" package; Outline No. 4.

MAXIMUM RATINGS

Positive DC Supply Voltage	V_{CC}	+18	V
Negative DC Supply Voltage	V_{EE}	-12	V
Input Signal Voltage (Single-ended)		+1.5, -8	V
Total Device Dissipation		300	mW
Temperature Range:			
Operating		-55 to 125	°C
Storage		-65 to 200	°C

TYPICAL CHARACTERISTICS (At ambient temperature = 25°C, $V_{CC} = +12V$, $V_{EE} = -6V$)

Input Offset Voltage	V_{IO}	2	mV
Input Offset Current	I_{IO}	0.5	μA
Input Bias Current	I_I	3	μA
Input Offset Voltage Sensitivity:			
Positive	$\Delta V_{IO}/\Delta V_{CC}$	0.05	mV/V
Negative	$\Delta V_{IO}/\Delta V_{EE}$	0.065	mV/V
Device Dissipation	P_T	85	mW
Open-Loop Differential Voltage Gain			
(f = 1 kHz)	A_{OL}	70	dB
Open-Loop -3-dB Bandwidth	BW_{OL}	700	kHz
Common-Mode Rejection Ratio			
(f = 1 kHz)	CMR	85	dB

TYPICAL CHARACTERISTICS (continued)

Maximum Output-Voltage Swing ($R_L = 100\text{ k}\Omega$, $f = 1\text{ kHz}$)	$V_o(\text{P-P})$	10 min	$V_{\text{P-P}}$
Input Resistance ($f = 1\text{ kHz}$)	R_{in}	25	$\text{k}\Omega$
Output Resistance ($f = 1\text{ kHz}$)	R_{out}	130	Ω
Useful Frequency Range		dc to 40	MHz
Common-Mode Input-Voltage Range ($f = 1\text{ kHz}$)	V_{CMR}	+0.5, -4	V