

EHA0-2400-6 Die

4 Channel Programmable Amplifier

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

Voltage between V+ and V-	45V
Differential Input Voltage	$\pm V$ Supply
Output Current	Short Circuited Protected
T_A Operating Temperature Range	$-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$
Storage Temperature Range	$-65^\circ\text{C} \leq T_A \leq +150^\circ\text{C}$
Maximum Junction Temperature	175°C

Important Note:

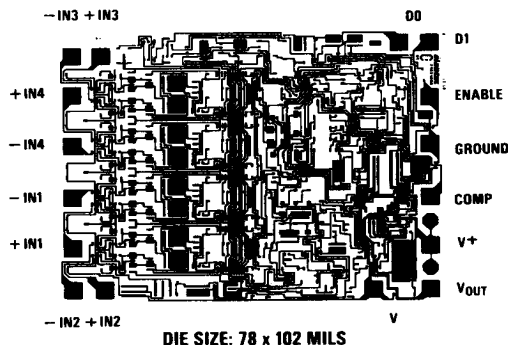
For AC electrical characteristics, refer to the typical electrical table and performance curves in the package data sheet. These characteristics are guaranteed but not tested in die form. Unless otherwise noted, all tests are pulsed tests, therefore $T_J = T_C = T_A$.

Test Level

I

Test Procedure

100% production tested in wafer form.
See remarks under Electrical Testing in the General Die section.



DC Electrical Characteristics

$V_S = \pm 15\text{V}$, $R_L = 2\text{ k}\Omega$, $V_{IL} = 0.5\text{V}$, $V_{IH} = \pm 2.4\text{V}$, limits apply to each of the four channels, when addressed, $T_A = 25^\circ\text{C}$

Parameter	Description	Min	Typ	Max	Test Level	Units
V_{OS}	Offset Voltage		4	9	I	mV
I_B	Bias Current (Note 1)		50	200	I	nA
I_{OS}	Offset Current (Note 1)		5	50	I	nA
V_{CM}	Common Mode Range	± 9			I	V
A_V	Large Signal Voltage Gain (Note 2)	50k	150k		I	V/V
CMRR	Common-Mode Rejection Ratio (Note 3)	80	100		I	dB
V_O	Output Voltage Swing	± 10	± 12		I	V
I_O	Output Current (Note 4)	± 10	± 20		I	mA
I_S	Supply Current		4.8	6	I	mA
PSRR	Power Supply Rejection Ratio (Note 5)	74	90		I	dB

Channel Select Characteristics

Parameter	Description	Test Conditions	Min	Typ	Max	Test Level	Units
I_{INL}	Digital Input Current	$V_{IN} = 0\text{V}$		0.1	1.5	I	mA
CT	Crosstalk (Note 6)		-80	-110		I	dB

Note 1: Unselected channels have approximately the same input parameters.

Note 2: $V_{OUT} = \pm 10\text{V}$.

Note 3: Two tests are performed. $V_{CM} = 0\text{V}$ to $+5\text{V}$ and $V_{CM} = 0\text{V}$ to -5V .

Note 4: $A_V = +1$, $C_{comp} = 15\text{ pF}$, $R_L = 2\text{ k}\Omega$, $C_L = 50\text{ pF}$.

Note 5: Two tests are performed. $V^+ = +15\text{V}$, and V^- is changed from -10V to -20V . $V^- = -15\text{V}$, and V^+ is changed from $+10\text{V}$ to $+20\text{V}$.

Note 6: Unselected input to output, $V_{IN} = \pm 10\text{V}$.