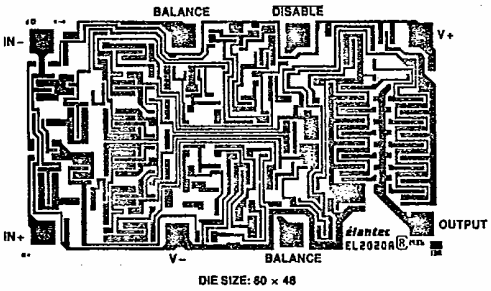
EL2020D Die

50 MHz Current Feedback Amplifier

T-79-07-10

Absolute Maximum Ratings (T_A = 25°C)

V_S	Supply Voltage	±18V or 36V
V_{IN}	Input Voltage	±15V or V_S
ΔV_{IN}	Differential Input Voltage	±10V
I_{IN}	Input Current (Pins 2 or 3)	±10 mA
I_{INS}	Input Current (Pins 1, 5, or 8)	±5 MA
I_{OP}	Peak Output Current	Short Circuit Protected
	Output Short Circuit Duration	Continuous
T_J	Maximum Junction Temperature	175°C



DIE SIZE: 60 x 48

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

Open Loop Characteristics V_S = ±15V, T_A = 25°C

Parameter	Description	Min	Typ	Max	Test Level	Units
V_{OS} (Note 1)	Input Offset Voltage	−10	3	10	I	mV
CMRR (Note 3)	Common Mode Rejection Ratio	50	60		I	dB
PSRR (Note 4)	Power Supply Rejection Ratio	65	75		I	dB
$+I_N$	Non-Inverting Input Current	−15	5	15	I	µA
$+R_{IN}$	Non-Inverting Input Resistance	1	5		I	MΩ
+IPSR (Note 4)	Non-Inverting Input Current Power Supply Rejection		0.05	0.5	I	µA/V
$-I_N$ (Note 1)	− Input Current	−40	10	40	I	µA
−ICMR (Note 3)	−Input Current Common Mode Rejection		0.5	2.0	I	µA/V
−IPSR (Note 4)	−Input Current Power Supply Rejection		0.05	0.5	I	µA/V
R_{OL}	Transimpedance ($\Delta V_{OUT}/\Delta(-I_{IN})$) R_L = 4000Ω, V_{OUT} = ±10V	300	1000		I	V/mA

Open Loop Characteristics $V_S = \pm 15V, T_A = 25°C$ — Contd.

Parameter	Description	Min	Typ	Max	Test Level	Units
A_{VOL1}	Open Loop DC Voltage Gain $R_L = 400\Omega, V_{OUT} = \pm 10V$	70	80		I	dB
A_{VOL2}	Open Loop DC Voltage Gain $R_L = 100\Omega, V_{OUT} = \pm 2.5V$	60	70		I	dB
V_O	Output Voltage $R_L = 400\Omega$	±12	±13		I	V
I_{OUT}	Output Current $R_L = 400\Omega$	±30	±32.5		I	mA
I_S	Quiescent Supply Current		9	12	I	mA
$I_{S\ OFF}$	Supply Current, Disabled, $V_8 = 0V$		5.5	7.5	I	mA
I_{LOGIC}	Pin 8 Current to Disable		1.1	1.5	I	mA
I_D	Min Pin 8 Current to Disable		120	250	I	µA
I_E	Max Pin 8 Current to Disable			30	I	µA

Note 1: The offset voltage and inverting input current can be adjusted with an external 10 kΩ pot between the Balance pins with the wiper connected to V_{CC} to make the output offset voltage zero.
Note 2: A heat sink is required to keep the junction temperature below the absolute maximum when the output is short circuited.
Note 3: $V_{CM} = \pm 10V$.
Note 4: $\pm 4.5V \leq V_S \leq \pm 18V$.