

CA3130/..., CA3130A/...

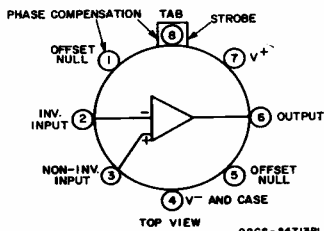
High-Reliability BiMOS Operational Amplifiers

With MOSFET Input, CMOS Output

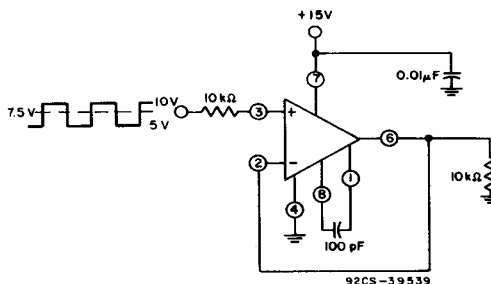
The CA3130 and CA3130A Slash (/) Series types are supplied in the 8-lead TO-5 style package.

TABLE A. POST BURN-IN, FINAL ELECTRICAL AND GROUP A SAMPLING TESTS

CHARACTERISTIC	SYMBOL	TEST CONDITIONS $V^+ = +15\text{ V}$, $V^- = 0\text{ V}$ Unless Otherwise Specified	LIMITS						UNITS
			MINIMUM			MAXIMUM			
			-55	+25	+125	-55	+25	+125	
Input Offset Voltage: CA3130 CA3130A	V_{IO}	$V^\pm = \pm 7.5\text{ V}$	-	-	-	40	25	40	mV
			-	-	-	20	12	20	
Input Offset Current: CA3130 CA3130A	I_{IO}	$V^\pm = \pm 7.5\text{ V}$	-	-	-	500	30	5000	pA
			-	-	-	300	20	3000	
Input Current: CA3130 CA3130A	I_I	$V^\pm = \pm 7.5\text{ V}$	-	-	-	50	0.05	50	nA
			-	-	-	40	0.03	40	
Large Signal Voltage Gain: CA3130 CA3130A	A_{OL}	$V_O = 8\text{ V}_{p-p}$ (-55, +125°C) $V_O = 10\text{ V}_{p-p}$ (25°C)	86	94	86	-	-	-	dB
			88	94	88	-	-	-	
Common-Mode Rejection Ratio: CA3130 CA3130A	CMRR		64	70	64	-	-	-	dB
			74	80	74	-	-	-	
Common-Mode Input Voltage Range	V_{ICR}		0	0	0	10	10	10	V
Power Supply Rejection Ratio: CA3130 CA3130A	PSRR	$V^\pm = \pm 7.5\text{ V}$	-	-	-	400	320	400	$\mu\text{V/V}$
			-	-	-	200	150	200	
Maximum Output Voltage	V_{OM}^+ V_{OM}^-	$R_L = 2\text{ k}\Omega$	10	12	10	-	-	-	V
			-	-	-	0.05	0.01	0.05	
Maximum Output Voltage	V_{OM}^+ V_{OM}^-	$R_L = \infty$	14.95	14.99	14.95	-	-	-	V
			-	-	-	0.05	0.01	0.05	
Maximum Output Current	I_{OM}^+ I_{OM}^-	$V_O = 0\text{ V}$ $V_O = 15\text{ V}$	-	12	-	-	45	-	mA
			-	12	-	-	45	-	
Supply Current	i^+	$V_O = 7.5\text{ V}, R_L = \infty$ $V_O = 0\text{ V}, R_L = \infty$	-	-	-	-	15	-	mA
			-	-	-	-	3	-	



Functional diagram of the CA3130 Series.



Burn-In and Life Test Circuit.

CA3130/..., CA3130A/...

TABLE B. DELTA LIMITS at $T_A = 25^\circ\text{C}$, $V^+ = 7.5\text{ V}$, $V^- = -7.5\text{ V}$ (I1 only)

CHARACTERISTIC	SYMBOL	LIMITS		UNITS
		MAX. Δ		
Input Offset Voltage	CA3130	± 8		mV
	CA3130A	± 3		
Input Offset Current	CA3130	± 15		pA
	CA3130A	± 8		
Input Current	CA3130	± 0.01		nA
	CA3130A	± 0.01		

TABLE C. GROUPS AND D END-POINT TESTS at $T_A = 25^\circ\text{C}$, $V^+ = +15\text{ V}$, $V^- = -15\text{ V}$

CHARACTERISTIC	SYMBOL	LIMITS		UNITS
		MIN.	MAX.	
Input Offset Voltage	CA3130	—	30	mV
	CA3130A	—	17	
Input Offset Current	CA3130	—	30	pA
	CA3130A	—	20	
Input Current	CA3130	—	0.05	nA
	CA3130A	—	0.03	
Large Signal Voltage Gain	CA3130	91	—	dB
	CA3130A	91	—	