

CA3130/..., CA3130A/...

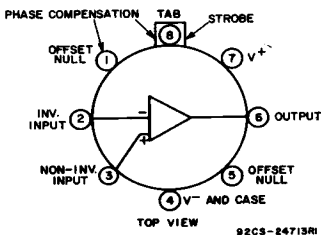
High-Reliability BiMOS Operational Amplifiers

With MOSFET Input, CMOS Output

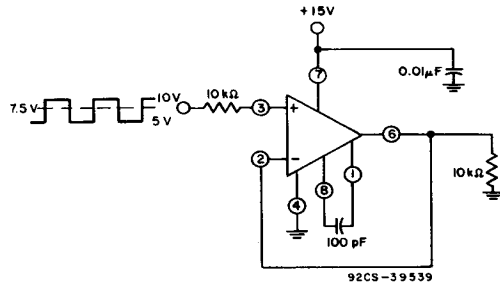
The CA3130 and CA3130A Slash (/) Series types are supplied in the 8-lead TO-5 style package.

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
Input Offset Current: CA3130 CA3130A	I_{IO}	$V^\pm = \pm 7.5\text{ V}$	-	-	-	500	30	5000	pA
Input Current: CA3130 CA3130A	I_I	$V^\pm = \pm 7.5\text{ V}$	-	-	-	50	0.05	50	nA
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
Common-Mode Rejection Ratio: CA3130 CA3130A	CMRR		64	70	64	-	-	-	dB
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	$\mu\text{V/V}$
Maximum Output Voltage V_{OM}^+ V_{OM}^-	$R_L = 2\text{ k}\Omega$		10	12	10	-	-	-	V
Maximum Output Voltage V_{OM}^+ V_{OM}^-	$R_L = \infty$		14.95	14.99	14.95	-	-	-	V
Maximum Output Current I_{OM}^+ I_{OM}^-	$V_O = 0\text{ V}$ $V_O = 15\text{ V}$		-	12	-	-	45	-	mA
Supply Current i^+	$V_O = 7.5\text{ V}, R_L = \infty$ $V_O = 0\text{ V}, R_L = \infty$		-	-	-	-	15	-	mA



Functional diagram of the CA3130 Series.



Burn-in and Life Test Circuit.

CA3130/..., CA3130A/...

TABLE B. DELTA LIMITS at $T_A = 25^\circ\text{C}$, $V^+ = 7.5\text{ V}$, $V^- = -7.5\text{ V}$ (*I*₁ only)

CHARACTERISTIC	SYMBOL	LIMITS		UNITS	
		MAX.Δ			
Input Offset Voltage	CA3130	V _{IO}	±8		mV
	CA3130A		±3		
Input Offset Current	CA3130	I _{IO}	±15		pA
	CA3130A		±8		
Input Current	CA3130	I _I	±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	V _{IO}	-	30	mV
	CA3130A		-	17	
Input Offset Current	CA3130	I _{IO}	-	30	pA
	CA3130A		-	20	
Input Current	CA3130	I _I	-	0.05	nA
	CA3130A		-	0.03	
Large Signal Voltage Gain	CA3130	AOL	91	-	dB
	CA3130A		91	-	