

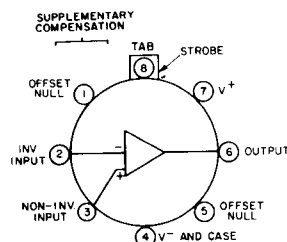
CA3160/..., CA3160A/...

1

High-Reliability BiMOS Operational Amplifiers

With MOSFET Input, CMOS Output

The CA3160 and CA3160A Slash (/) Series types are supplied in the 8-lead TO-5 style package.



92CS-27794

Functional diagram of the CA3160 Series.

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

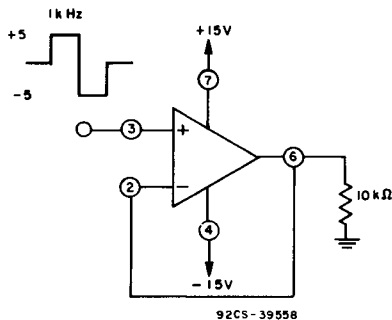
CHARACTERISTIC	SYMBOL	TEST CONDITIONS V ⁺ = +15 V, V ⁻ = 0 V Unless Otherwise Specified	LIMITS						UNITS
			MINIMUM			MAXIMUM			
			-55	+25	+125	-55	+25	+125	
Input Offset Voltage: CA3160	V _{IO}	V [±] = ±7.5 V	—	—	—	40	25	40	mV
CA3160A			—	—	—	20	12	20	
Input Offset Current: CA3160	I _{IO}	V [±] = ±7.5 V	—	—	—	500	30	5000	pA
CA3160A			—	—	—	300	20	3000	
Input Current: CA3160	I _I	V [±] = ±7.5 V	—	—	—	50	0.05	50	nA
CA3160A			—	—	—	40	0.03	40	
Large Signal Voltage Gain: CA3160	A _{OL}	V _O = 10 V _{p-p}	86	94	86	—	—	—	dB
CA3160A			88	94	88	—	—	—	
Common-Mode Rejection Ratio: CA3160	CMRR		64	70	64	—	—	—	dB
CA3160A			74	80	74	—	—	—	
Common-Mode Input Voltage Range	V _{ICR}		0	0	0	10	10	10	V
Power Supply Rejection Ratio: CA3160	PSRR	V [±] = ± 7.5 V	—	—	—	400	320	400	μV/V
CA3160A			—	—	—	200	150	200	
Maximum Output Voltage	V _{OM} ⁺ V _{OM} ⁻	R _L = 2 kΩ	10	12	12	—	—	—	V
			—	—	—	0.05	0.01	0.05	
Maximum Output Voltage	V _{OM} ⁺ V _{OM} ⁻	R _L = ∞	14.95	14.99	14.95	—	—	—	V
			—	—	—	0.05	0.01	0.05	
Maximum Output Current	I _{OM} ⁺ I _{OM} ⁻	V _O = 0 V	—	12	—	—	45	—	mA
		V _O = 15 V	—	12	—	—	45	—	
Supply Current	I ⁺	V _O = 7.5V, R _L = ∞	—	—	—	—	15	—	mA
		V _O = 0V, R _L = ∞	—	—	—	—	3	—	

CA3160/..., CA3160A/...**TABLE B. DELTA LIMITS** at $T_A = 25^\circ\text{C}$, $V^+ = +7.5\text{ V}$, $V^- = -7.5\text{ V}$ (/1 only)

CHARACTERISTIC	SYMBOL	LIMITS	UNITS
		MAX. Δ	
Input Offset Voltage	CA3160	± 8	mV
	CA3160A	± 3	
Input Offset Current	CA3160	± 15	pA
	CA3160A	± 8	
Input Current	CA3160	± 0.01	nA
	CA3160A	± 0.01	

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

CHARACTERISTIC	SYMBOL	LIMITS		UNITS
		MIN.	MAX.	
Input Offset Voltage	CA3160	—	30	mV
	CA3160A	—	17	
Input Offset Current	CA3160	—	30	pA
	CA3160A	—	20	
Input Current	CA3160	—	0.05	nA
	CA3160A	—	0.03	
Large Signal Voltage Gain	CA3160	91	—	dB
	CA3160A	91	—	

*Burn-in and life test circuit.*