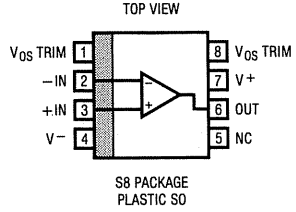


ABSOLUTE MAXIMUM RATINGS

Supply Voltage	$\pm 22V$
Differential Input Voltage	$\pm 30V$
Input Voltage Equal to Supply Voltage	
Output Short Circuit Duration	Indefinite
Operating Temperature Range	$0^{\circ}C$ to $70^{\circ}C$
Storage Temperature Range	
All Devices	$-65^{\circ}C$ to $150^{\circ}C$
Lead Temperature (Soldering, 10 sec.)	$300^{\circ}C$

PACKAGE/ORDER INFORMATION

	ORDER PART NUMBER
	OP-07CS8
	PART MARKING
	OP07CS8

ELECTRICAL CHARACTERISTICS $V_S = \pm 15V$, $T_A = 25^{\circ}C$, unless otherwise noted.

SYMBOL	PARAMETER	CONDITIONS	OP-07CS8 TYP		UNITS
V_{OS}	Input Offset Voltage	(Note 1)	60	150	μV
$\frac{\Delta V_{OS}}{\Delta Time}$	Long Term Input Offset Voltage Stability	(Notes 2 and 3)	0.4	2.0	$\mu V/Month$
I_{OS}	Input Offset Current		0.8	6.0	nA
I_B	Input Bias Current		± 1.8	± 7.0	nA
e_n	Input Noise Voltage	0.1Hz to 10Hz (Note 2)	0.35	0.65	$\mu V/p-p$
	Input Noise Voltage Density	$f_0 = 10Hz$	10.5	20.0	$nV/\sqrt{Hz}$
		$f_0 = 100Hz$ (Note 2)	10.2	13.5	$nV/\sqrt{Hz}$
		$f_0 = 1000Hz$	9.8	11.5	$nV/\sqrt{Hz}$
I_n	Input Noise Current	0.1Hz to 10Hz (Note 2)	15	35	pA/p-p
	Input Noise Current Density	$f_0 = 10Hz$	0.32	0.90	$pA/\sqrt{Hz}$
		$f_0 = 100Hz$ (Note 2)	0.15	0.27	$pA/\sqrt{Hz}$
		$f_0 = 1000Hz$	0.13	0.18	$pA/\sqrt{Hz}$
R_{in}	Input Resistance Differential Mode	(Note 4)	8	33	M Ω
	Input Resistance Common-Mode			120	G Ω
	Input Voltage Range		± 13.0	± 14.0	V
CMRR	Common-Mode Rejection Ratio	$V_{CM} = \pm 13V$	100	120	dB
PSRR	Power Supply Rejection Ratio	$V_S = \pm 3V$ to $\pm 18V$	90	104	dB
A_{VOL}	Large Signal Voltage Gain	$R_L = 2k\Omega$, $V_O = \pm 10V$ $R_L = 500\Omega$, $V_O = \pm 0.5V$ $V_S = \pm 3V$ (Note 4)	120 100	400 400	V/mV V/mV
V_O	Maximum Output Voltage Swing	$R_L = 10k\Omega$ $R_L \geq 2k\Omega$ $R_L \geq 1k\Omega$	± 12.5 ± 11.5 ± 12.0	± 13.0 ± 12.8 ± 12.0	V V V
SR	Slewing Rate	$R_L \geq 2k\Omega$ (Note 2)	0.1	0.25	V/ μs
GBW	Closed Loop Bandwidth	$A_{VOL} = +1$ (Note 2)	0.4	0.6	MHz
Z_O	Open Loop Output Impedance	$V_O = 0$, $I_O = 0$, $f = 10Hz$		60	Ω
P_d	Power Dissipation	$V_S = \pm 15V$ $V_S = \pm 3V$	80 4	150 8	mW mW
	Offset Adjustment Range	Null Pot = $20k\Omega$	± 4		mV

ELECTRICAL CHARACTERISTICS

 $V_S = \pm 15V, 0^\circ C \leq T_A \leq 70^\circ C$, unless otherwise noted.

OP-07CS8

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
V_{OS}	Input Offset Voltage			85	250	μV
ΔV_{OS}	Average Input Offset Voltage Drift			0.5	1.8	$\mu V/^\circ C$
ΔV_{OS}	Without External Trim			0.4	1.6	$\mu V/^\circ C$
ΔV_{OS}	With External Trim	Null Pot = 20k Ω (Note 2)		1.6	8.0	$\mu V/^\circ C$
I_{OS}	Input Offset Current			1.6	8.0	nA
ΔI_{OS}	Average Input Offset Current Drift	(Note 2)		12	50	pA/°C
I_B	Input Bias Current			± 2.2	± 9.0	nA
ΔI_B	Average Input Bias Current Drift	(Note 2)		18	50	pA/°C
ΔI_B	Input Voltage Range			± 13.0	± 13.5	V
CMRR	Common-Mode Rejection Ratio	$V_{CM} = \pm 13V$		97	120	dB
PSRR	Power Supply Rejection Ratio	$V_S = \pm 3V$ to $\pm 18V$		86	100	dB
A_{VOL}	Large Signal Voltage Gain	$R_L \geq 2k\Omega, V_O = \pm 10V$		100	400	V/mV
V_{OUT}	Output Voltage Swing	$R_L \geq 2k\Omega$		± 11.0	± 12.6	V

The $\bullet$ denotes specifications which apply over the full operating temperature range.

Note 1: Offset voltage is measured with high speed test equipment, approximately 1 second after power is applied.

Note 2: This parameter is tested on a sample basis only.

Note 3: Long Term Input Offset Voltage Stability refers to the averaged trend line of V_{OS} versus Time over extended periods after the first 30 days of operation. Excluding the initial hour of operation, changes in V_{OS} during the first 30 operating days are typically $\pm 2.5\mu V$.

Note 4: This parameter is guaranteed by design.