



3308

LINEAR INTEGRATED CIRCUIT

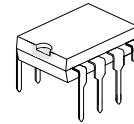
DUAL HIGH CURRENT OPERATIONAL AMPLIFIER

DESCRIPTION

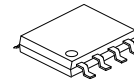
The UTC 3308 integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 150mA, specially for CD ROM, DVD devices.

FEATURES

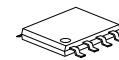
- *Single Supply
- *Operating Voltage (+3V~+15V) ($\pm 1.5V \sim \pm 7.5V$)
- *High Output Current (150mA)
- *High Frequency Noise Rejection
- *Internal Enhanced Frequency Compensation



DIP-8



SOP-8



TSSOP-8

ORDERING INFORMATION

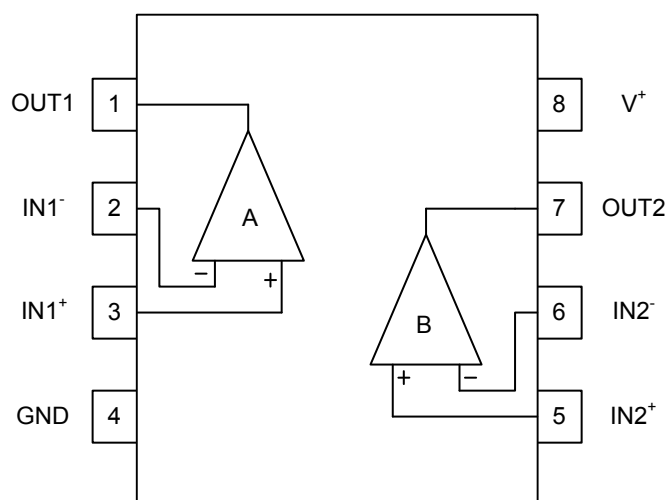
Ordering Number		Package	Packing
Lead Free	Halogen Free		
3308L-D08-T	3308G-D08-T	DIP-8	Tube
-	3308G-P08-R	TSSOP-8	Tape Reel
-	3308G-S08-R	SOP-8	Tape Reel

3308L-D08-T (1) Packing Type (2) Package Type (3) Green Package	(1) T: Tube, R: Tape Reel (2) D08: DIP-8, P08: TSSOP-8, S08: SOP-8 (3) L: Lead Free, G: Halogen Free and Lead Free
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MARKING

DIP-8	SOP-8	TSSOP-8
8 7 6 5 UTC □□□□ → Date Code 3308 □ → L: Lead Free □ → G: Halogen Free □ □ → Lot Code 1 2 3 4	8 7 6 5 UTC □□□□ → Date Code 3308G □ □ → Lot Code 1 2 3 4	1 2 3 4 8 7 6 5 UTC □□□□ → Date Code 3308G □ □ → Lot Code

■ PIN CONFIGURATIONS



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	15V / ±7.5V	V
Differential Input Voltage	V _{I(DIFF)}	15	V
Input Voltage	V _{IN}	-0.3 ~ +15	V
Power Dissipation	P _D	300	mW
Junction Temperature	T _J	+125	°C
Operating Temperature	T _{OPR}	-20~+85	°C
Storage Temperature	T _{STG}	-40~+150	°C

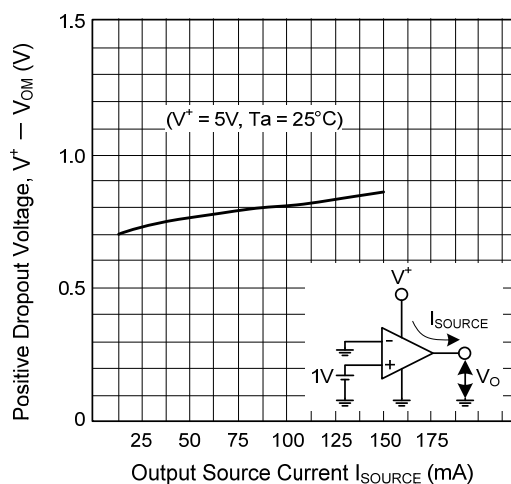
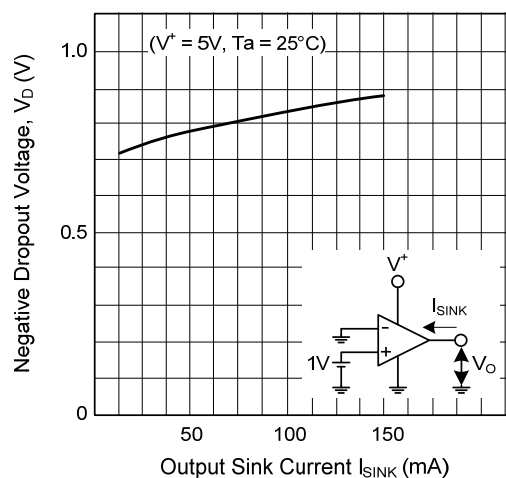
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

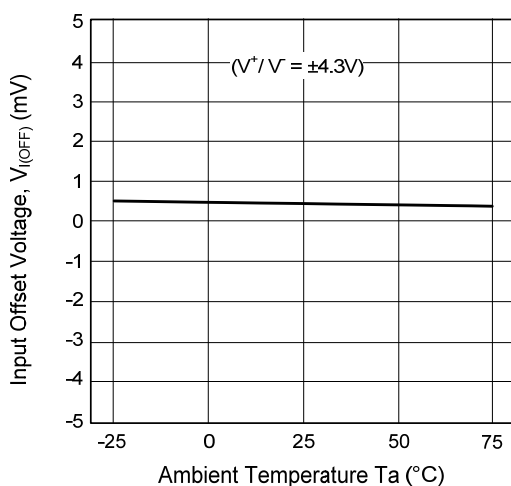
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, V⁺=5V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V _{I(OFF)}	R _S =0Ω		2	5	mV
Input Offset Current	I _{I(OFF)}			5	100	nA
Input Bias Current	I _{I(BIAS)}			100	500	nA
Large Signal Voltage Gain	G _V	R _L =2kΩ	88	100		dB
Input Common Voltage Range	V _{I(COM)}		V ⁺ -2			V
Maximum Output Voltage Swing 1	V _{OM1}	R _L ≥2kΩ	3.5			V
Maximum Output Voltage Swing 2	V _{OM2}	I _O =70mA	3.2			V
Common Mode Rejection Ratio	CMR		80	90		dB
Supply Voltage Rejection Ratio	SVR		80	90		dB
Operating Current	I _{CC}	R _L = ∞	3	4	5	mA
Slew Rate	SR			1.0		V/μs
Unity Gain Bandwidth	GB			1.3		MHz
Operating Voltage Range	V ⁺				15	V

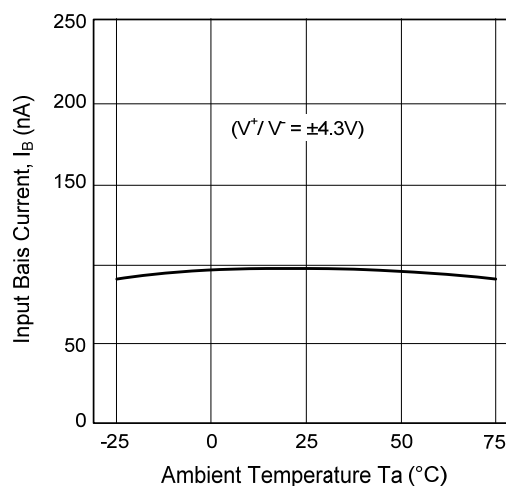
■ TYPICAL CHARACTERISTICS

Output Source Current vs. V_{SAT}^+ Output Sink Current vs. V_{SAT} 

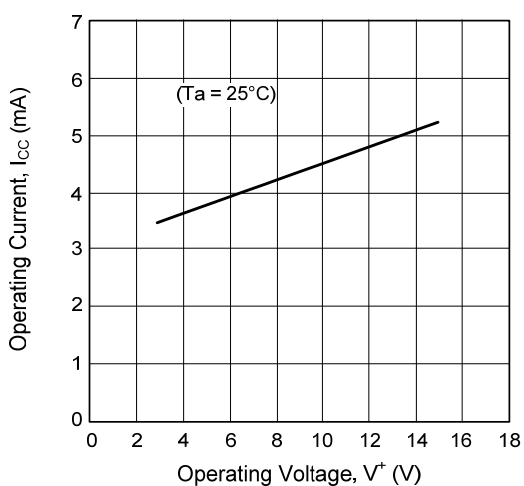
Input Offset Voltage vs. Temperature



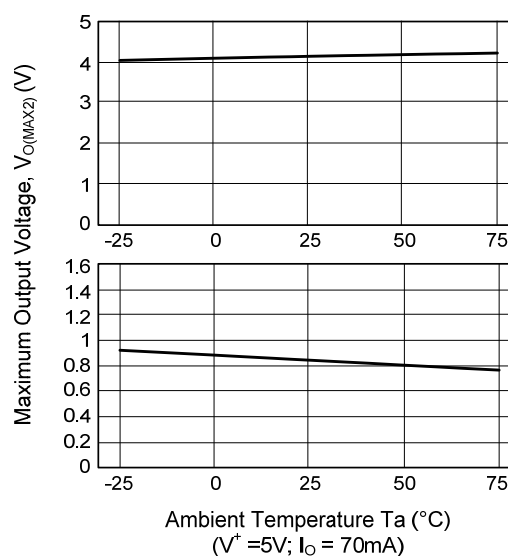
Input Bias Current vs. Temperature



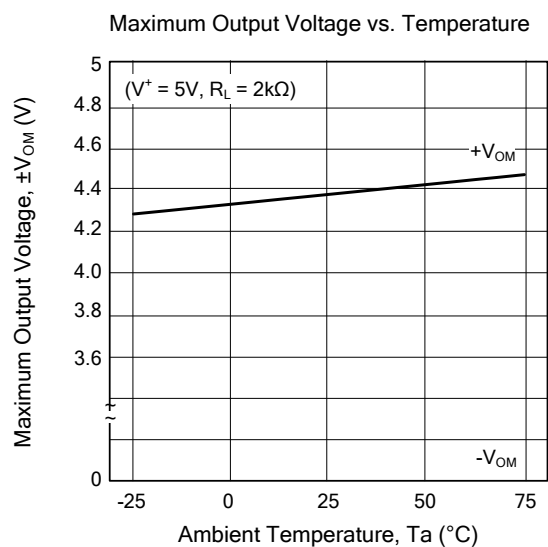
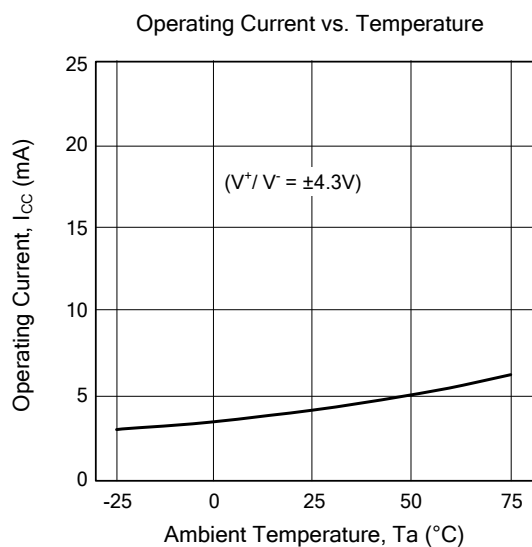
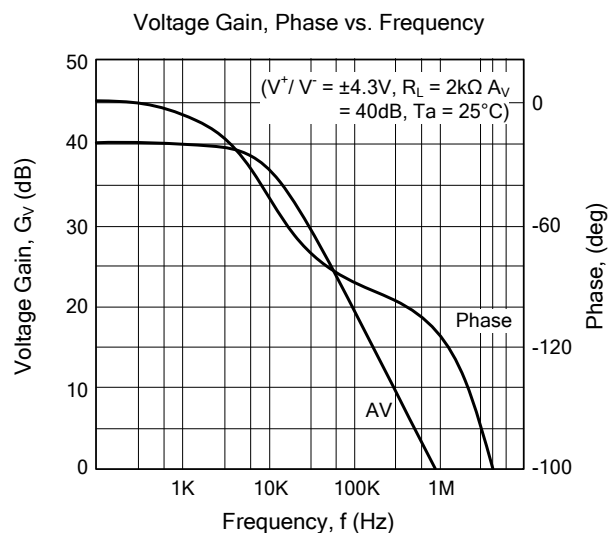
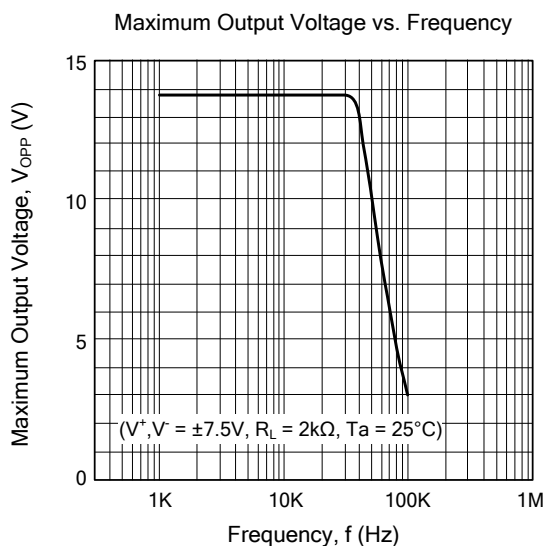
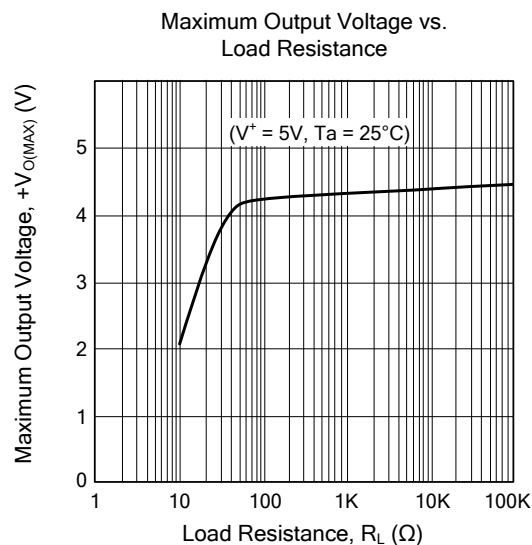
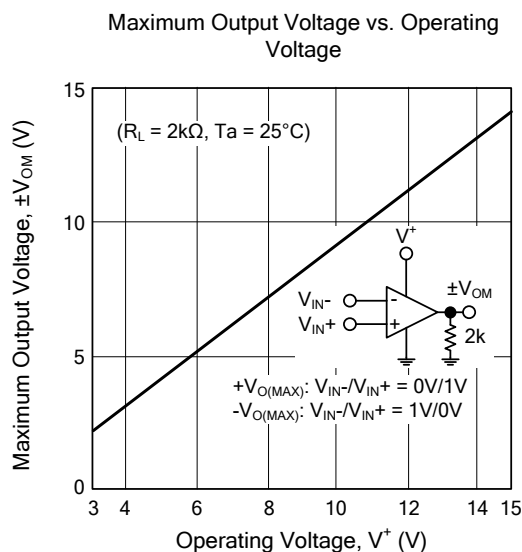
Operating Voltage vs. Operating Current



Maximum Output Voltage Swing 2 vs. Temperature



TYPICAL CHARACTERISTICS(Cont.)



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