

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

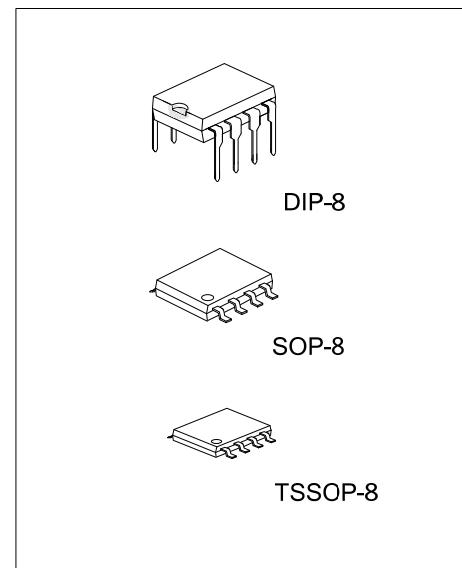
*Single Supply

*Operating Voltage (+3V~+15V) ($\pm 1.5V \sim \pm 7.5V$)

*High Output Current (150mA)

*High Frequency Noise Rejection

*Internal Enhanced Frequency Compensation



■ ORDERING INFORMATION

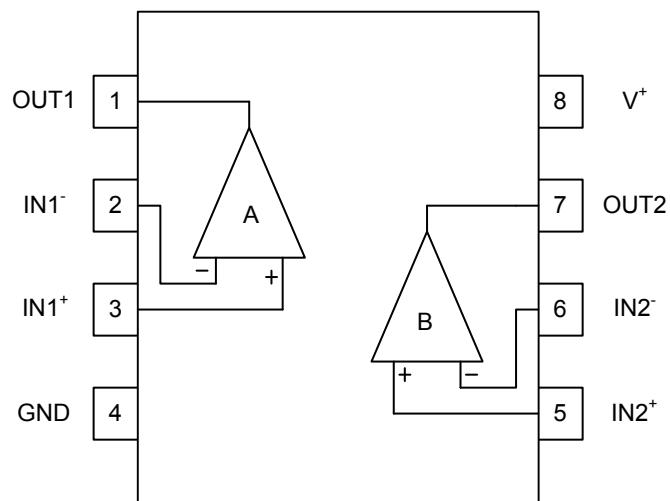
Ordering Number		Package	Packing
Lead Free	Halogen Free		
3308L-D08-T	3308G-D08-T	DIP-8	Tube
-	3308G-P08-R	TSSOP-8	Tape Reel
-	3308G-S08-R	SOP-8	Tape Reel

3308L-D08-T	<ul style="list-style-type: none"> (1)Packing Type (2)Package Type (3)Green Package 	<ul style="list-style-type: none"> (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
<p>Markings on DIP-8 package:</p> <ul style="list-style-type: none"> Date Code: Top row of pins (8, 7, 6, 5). L: Lead Free: Pin 4. G: Halogen Free: Pin 3. Lot Code: Bottom row of pins (1, 2, 3, 4). 	<p>Markings on SOP-8 package:</p> <ul style="list-style-type: none"> Date Code: Top row of pins (8, 7, 6, 5). UTC: Between pins 8 and 7. 3308G: Between pins 6 and 5. •: Between pins 4 and 3. Lot Code: Bottom row of pins (1, 2, 3, 4). 	<p>Markings on TSSOP-8 package:</p> <ul style="list-style-type: none"> Date Code: Top row of pins (8, 7, 6, 5). UTC: Between pins 8 and 7. 3308G: Between pins 6 and 5. •: Between pins 4 and 3. Lot Code: Bottom row of pins (1, 2, 3, 4).

■ PIN CONFIGURATIONS



■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ₊	15V / $\pm 7.5\text{V}$	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

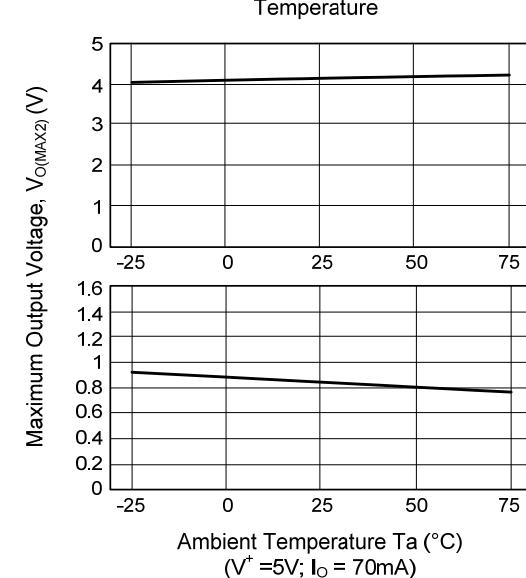
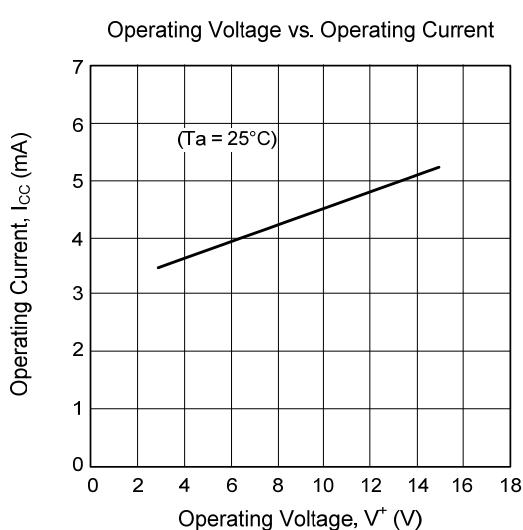
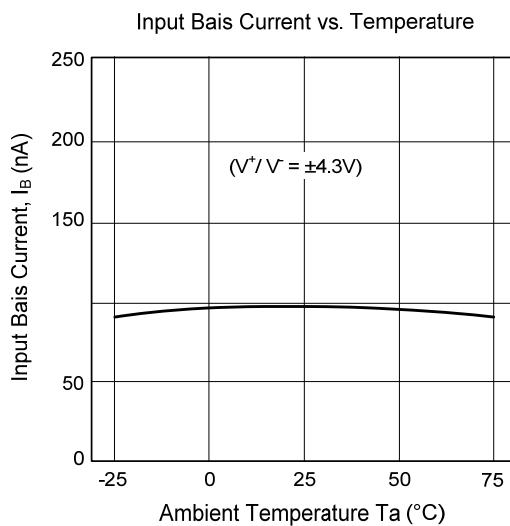
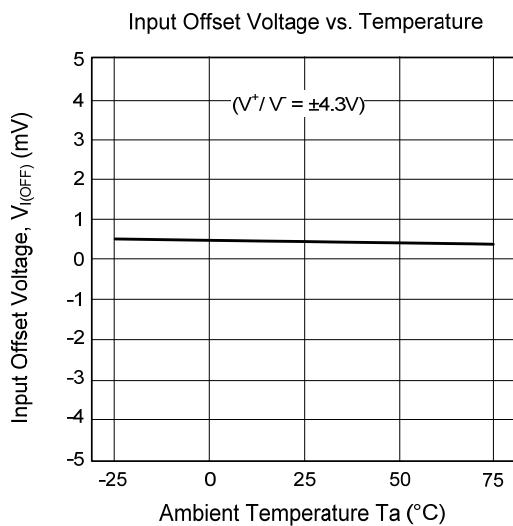
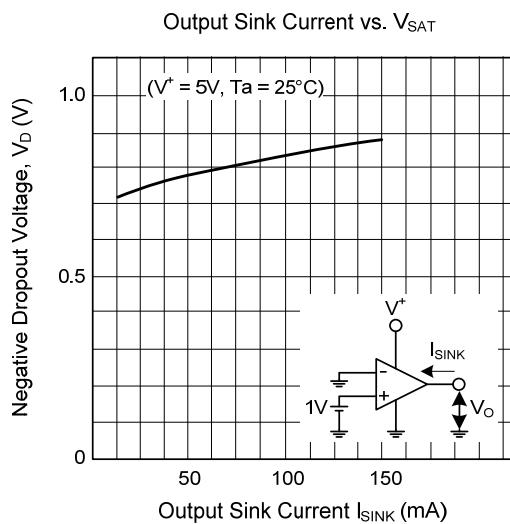
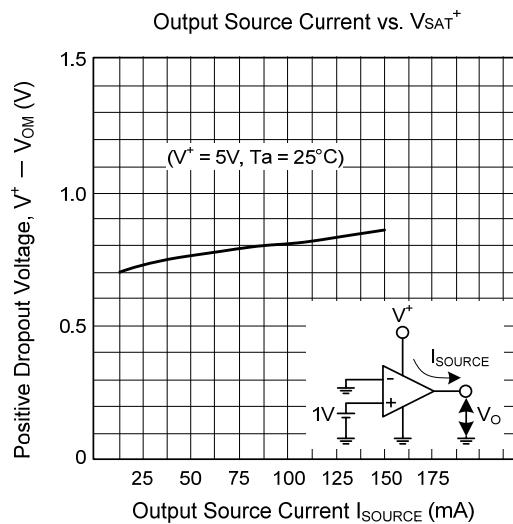
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

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

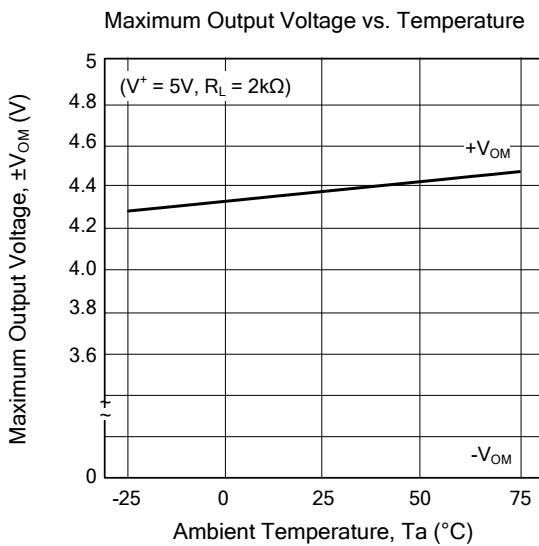
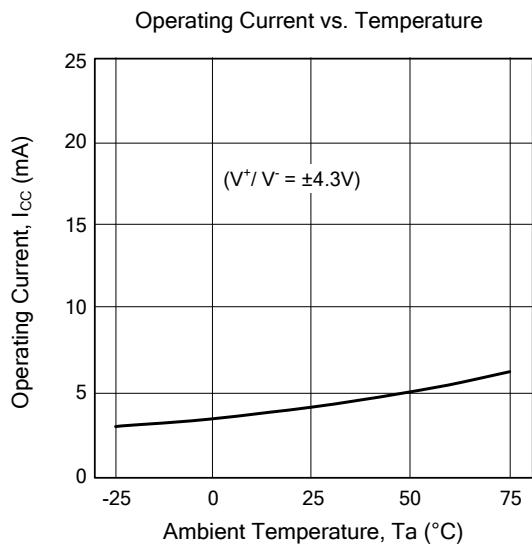
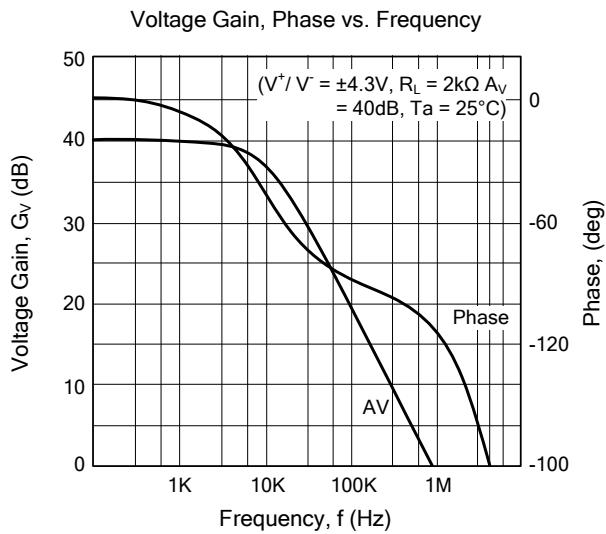
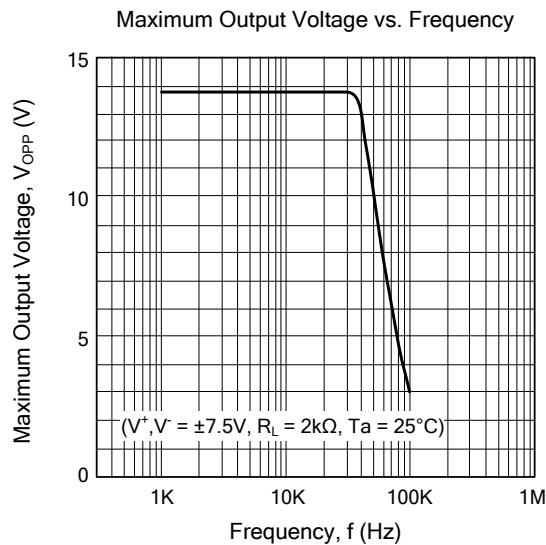
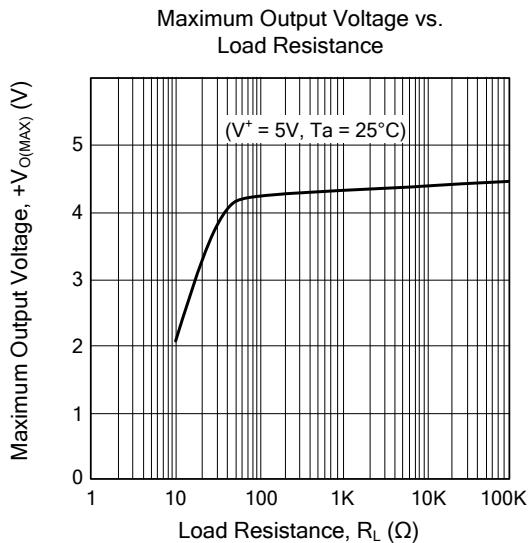
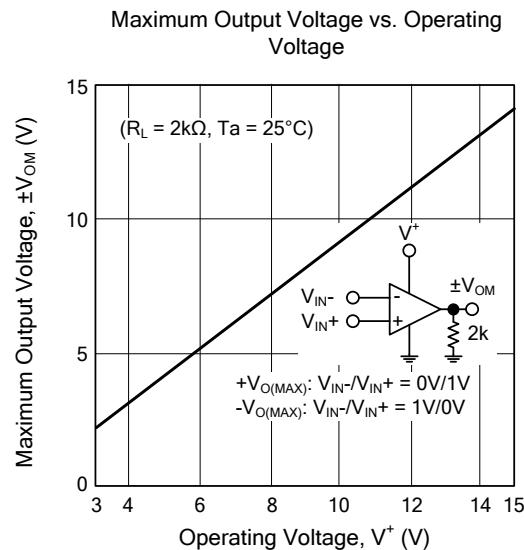
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, V⁺=5V)

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



■ TYPICAL CHARACTERISTICS(Cont.)



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