



3414

LINEAR INTEGRATED CIRCUIT

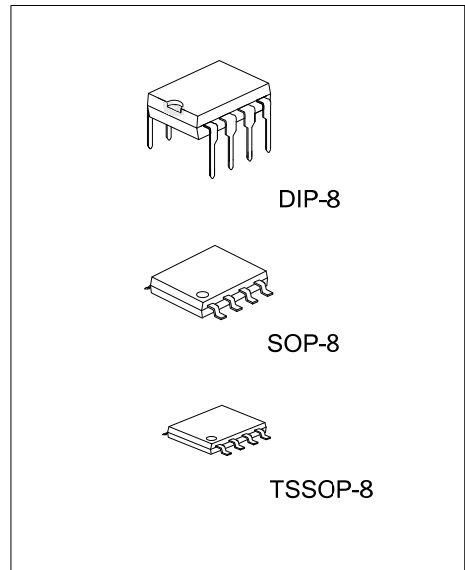
SINGLE-SUPPLY DUAL HIGH CURRENT OPERATIONAL AMPLIFIER

DESCRIPTION

The UTC 3414 integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 70mA.

FEATURES

- * Single supply
- * Operating voltage: 3V~15V
- * High output current: 70mA
- * Slew rate: 1.0V/μA (Typ.)
- * Bipolar technology

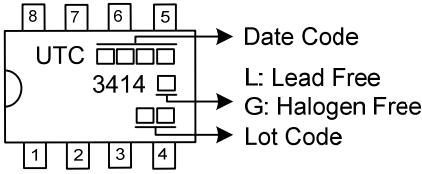
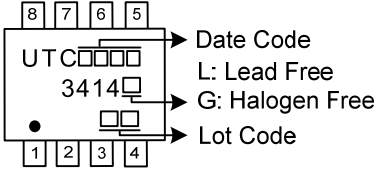
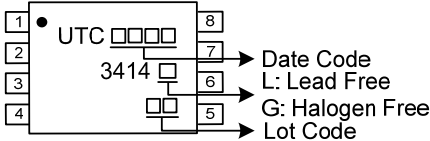


ORDERING INFORMATION

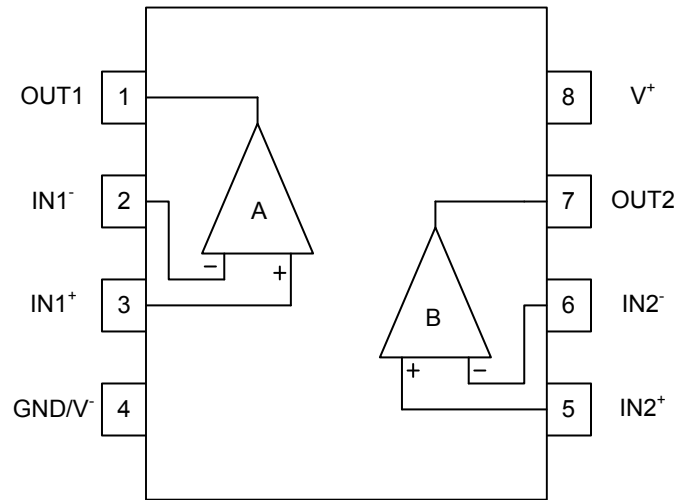
Ordering Number		Package	Packing
Lead Free	Halogen Free		
3414L-D08-T	3414G-D08-T	DIP-8	Tube
3414L-P08-R	3414G-P08-R	TSSOP-8	Tape Reel
3414L-S08-R	3414G-S08-R	SOP-8	Tape Reel

<p>3414G-D08-T</p> <p>(1)Packing Type</p> <p>(2)Package Type</p> <p>(3)Green Package</p>	<p>(1) R: Tape Reel, T: Tube</p> <p>(2) D08: DIP-8, P08: TSSOP-8, S08: SOP-8</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
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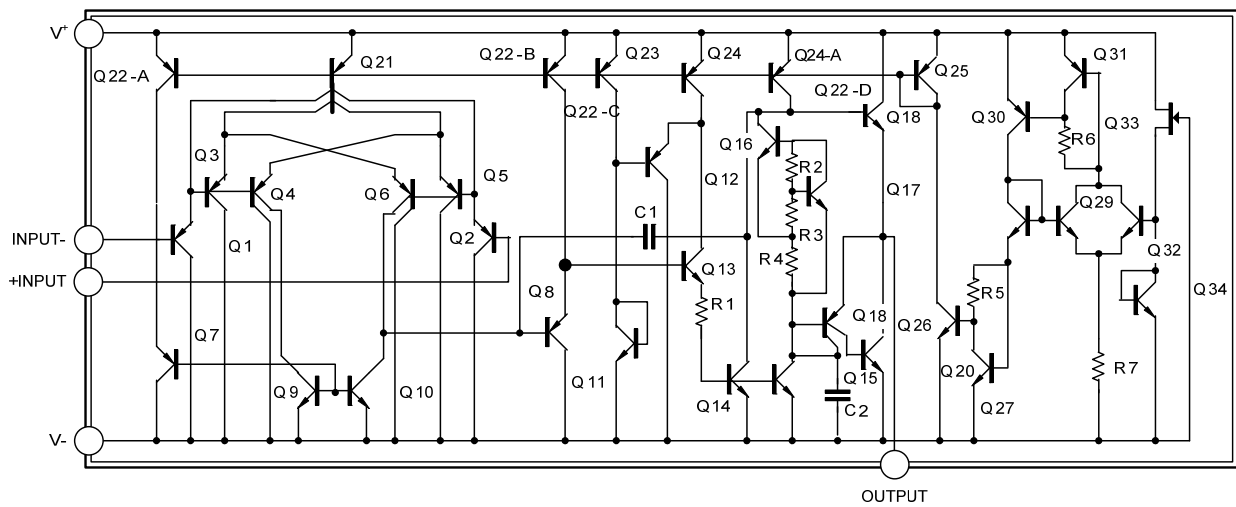
MARKING

PACKAGE	MARKING
DIP-8	 <p>Diagram showing the marking layout for a DIP-8 package. The top edge has pins 8, 7, 6, 5 and the bottom edge has pins 1, 2, 3, 4. Markings include 'UTC' (top left), '3414' (center), and two small boxes (bottom right). Arrows point to 'Date Code' (top right), 'L: Lead Free' (middle right), 'G: Halogen Free' (bottom right), and 'Lot Code' (bottom right).</p>
SOP-8	 <p>Diagram showing the marking layout for an SOP-8 package. The top edge has pins 8, 7, 6, 5 and the bottom edge has pins 1, 2, 3, 4. Markings include 'UTC' (top left), '3414' (center), and two small boxes (bottom right). Arrows point to 'Date Code' (top right), 'L: Lead Free' (middle right), 'G: Halogen Free' (bottom right), and 'Lot Code' (bottom right).</p>
TSSOP-8	 <p>Diagram showing the marking layout for a TSSOP-8 package. The left edge has pins 1, 2, 3, 4 and the right edge has pins 8, 7, 6, 5. Markings include 'UTC' (top left), '3414' (center), and two small boxes (bottom right). Arrows point to 'Date Code' (top right), 'L: Lead Free' (middle right), 'G: Halogen Free' (bottom right), and 'Lot Code' (bottom right).</p>

■ PIN CONFIGURATION



■ BLOCK DIAGRAM



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

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	$V^+(V^+/V)$	15V (or ± 7.5)	V
Differential Input Voltage	$V_{I(DIFF)}$	15	V
Input Voltage	V_{IN}	-0.3 ~ +15	V
Power Dissipation	P_D	300	mW
Operating Temperature	T_{OPR}	-20 ~ +75	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 ~ +125	$^\circ\text{C}$

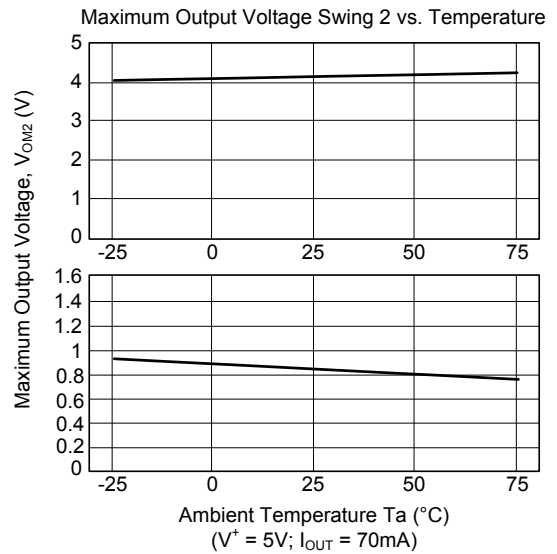
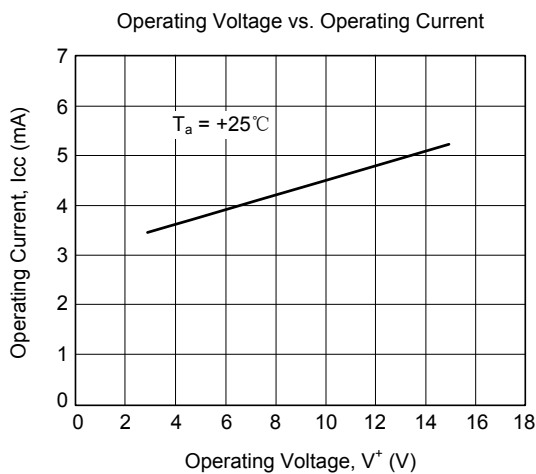
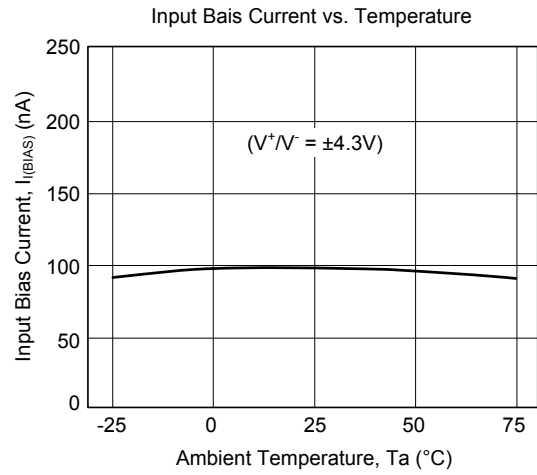
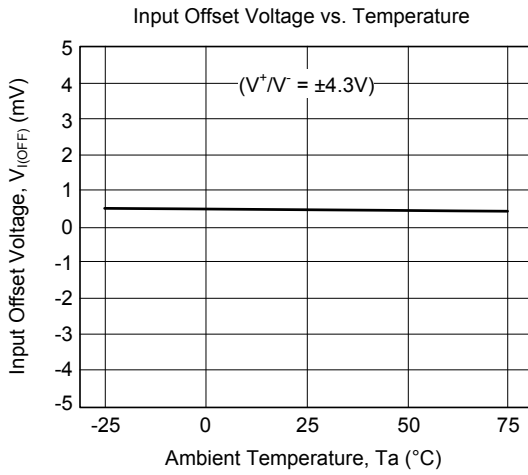
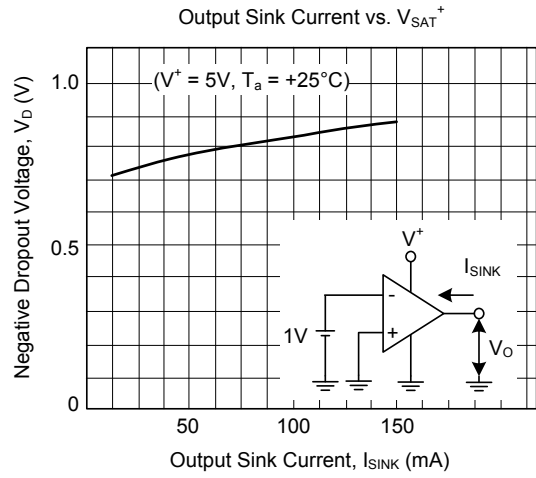
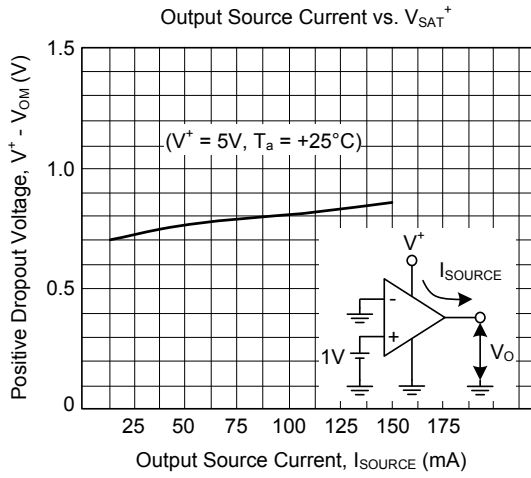
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

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

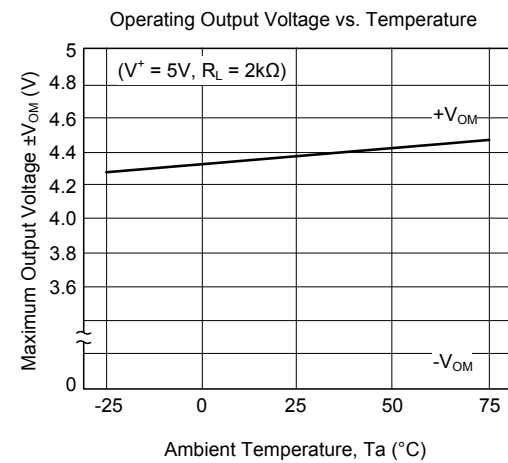
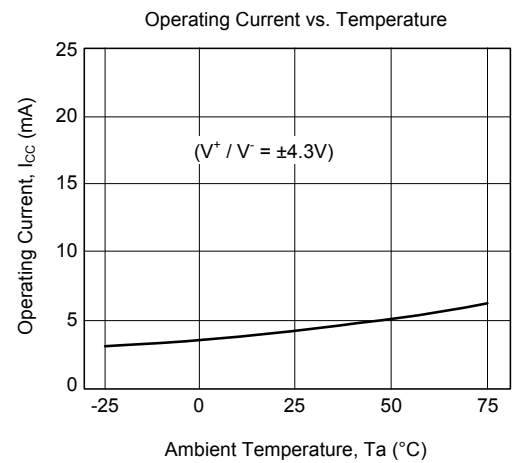
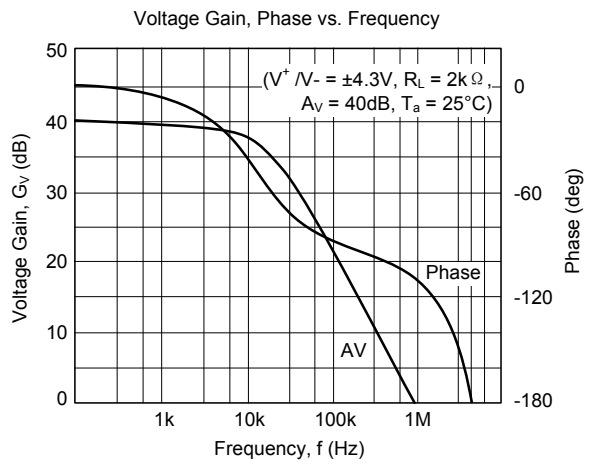
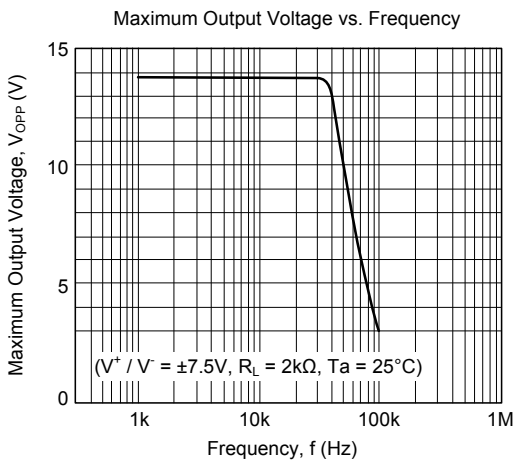
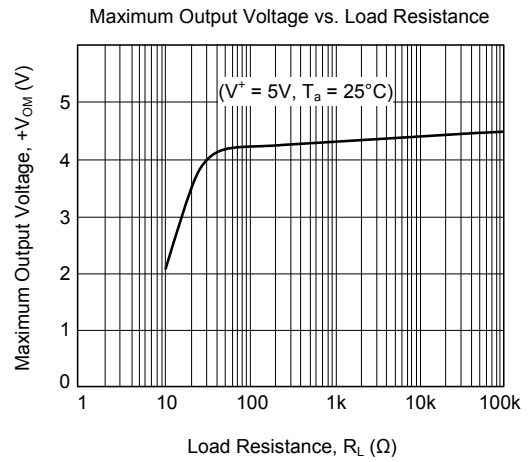
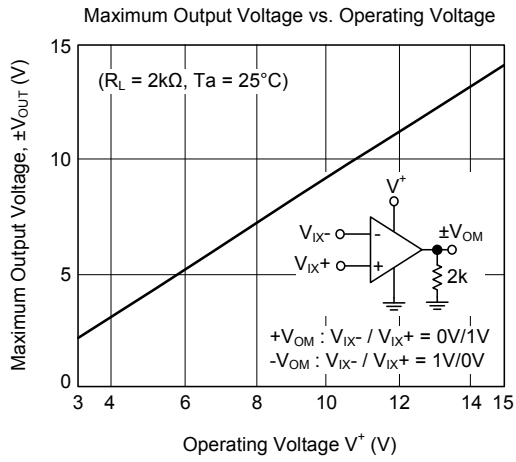
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, $V^+=8.6\text{V}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	$V_{I(OFF)}$	$R_S=0\Omega$		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	$R_L=2\text{k}\Omega$	88	100		dB
Input Common Voltage Range	V_{ICM}		V^+-2			V
Maximum Output Voltage Swing 1	V_{OM1}	$R_L \geq 2\text{k}\Omega, V^+=5\text{V}$	3.5			V
Maximum Output Voltage Swing 2	V_{OM2}	$I_{OUT}=70\text{mA}, V^+=5\text{V}$	3.2			V
Common Mode Rejection Ratio	CMR		80	90		dB
Supply Voltage Rejection Ratio	SVR		80	90		dB
Operating Current	I_{CC}	$R_L=\infty$	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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