



## 3414

## LINEAR INTEGRATED CIRCUIT

### SINGLE-SUPPLY DUAL HIGH CURRENT OPERATIONAL AMPLIFIER

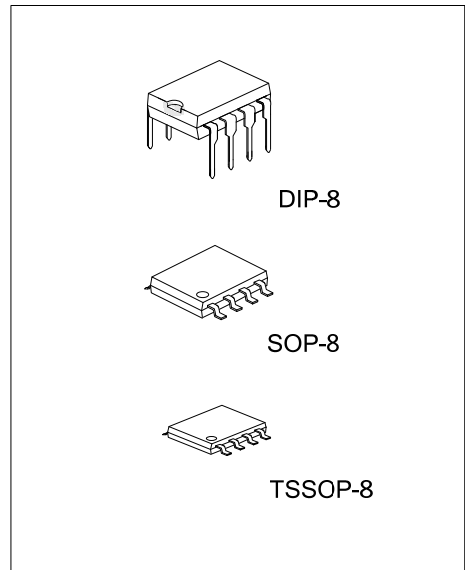
#### DESCRIPTION

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: 10V/μA(Typ.)
- \*Bipolar technology

#### ORDERING INFORMATION

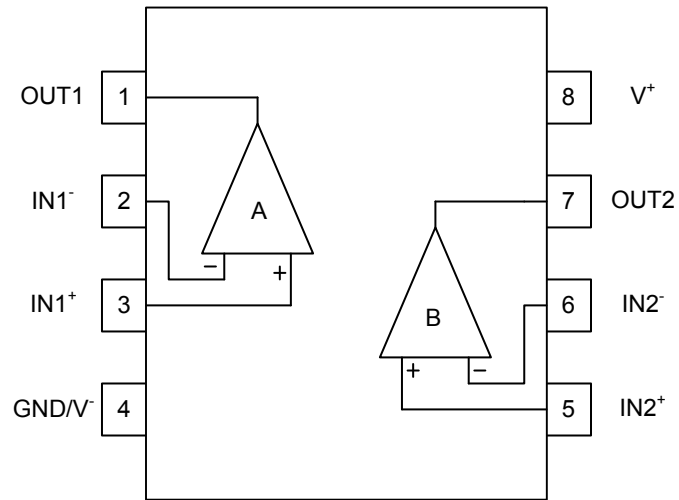


Lead-free: 3414L  
 Halogen-free: 3414G

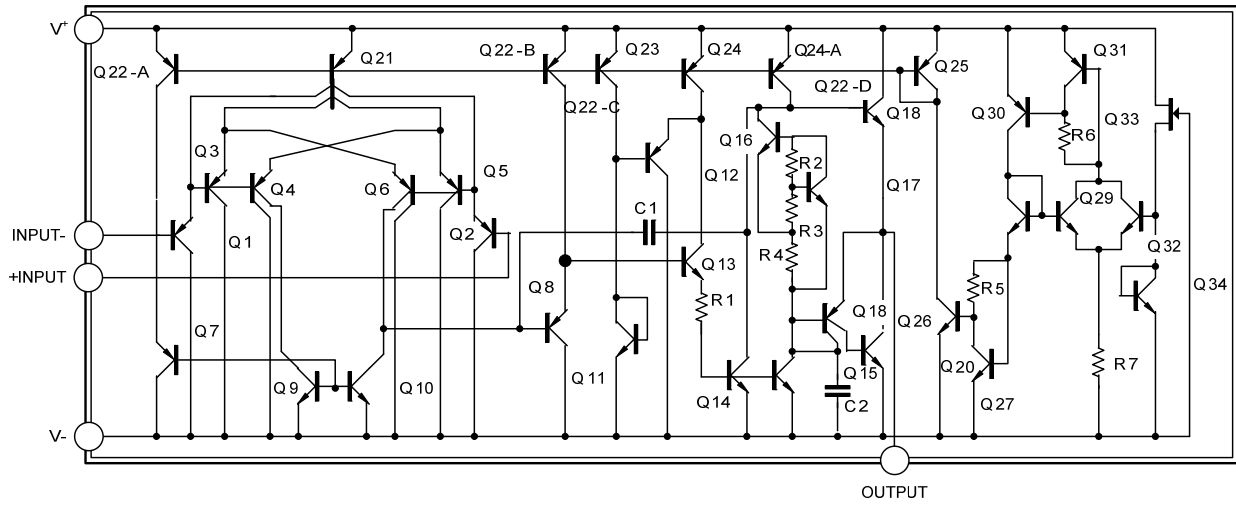
Ordering Number			Package	Packing
Normal	Lead Free Plating	Halogen Free		
3414-D08-T	3414L-D08-T	3414G-D08-T	DIP-8	Tube
3414-P08-R	3414L-P08-R	3414G-P08-R	TSSOP-8	Tape Reel
3414-S08-R	3414L-S08-R	3414G-S08-R	SOP-8	Tape Reel

<p>3414L-D08-T</p> <p>(1)Packing Type        (2)Package Type        (3)Lead Plating</p>	<p>(1) T: Tube, R: Tape Reel        (2) D08: DIP-8, P08: TSSOP-8, S08: SOP-8        (3) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°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	°C
Storage Temperature	$T_{STG}$	-40~+125	°C

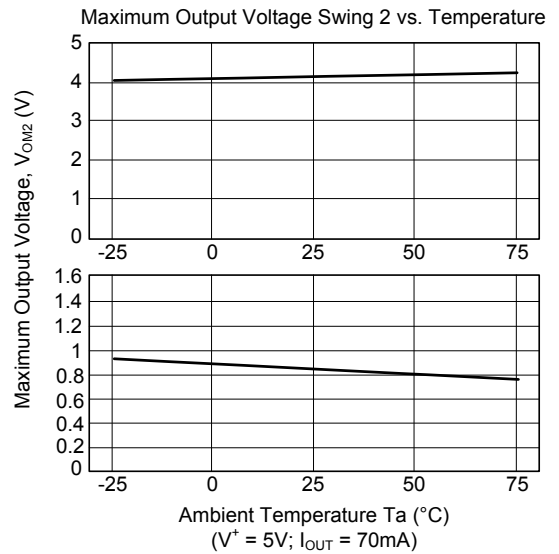
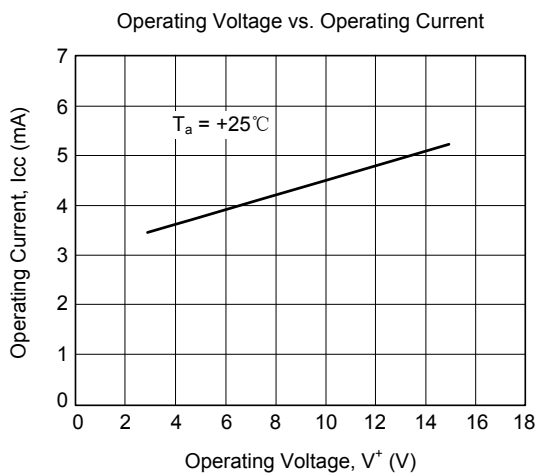
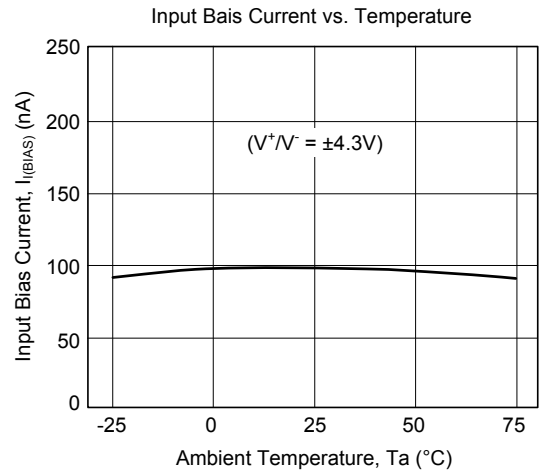
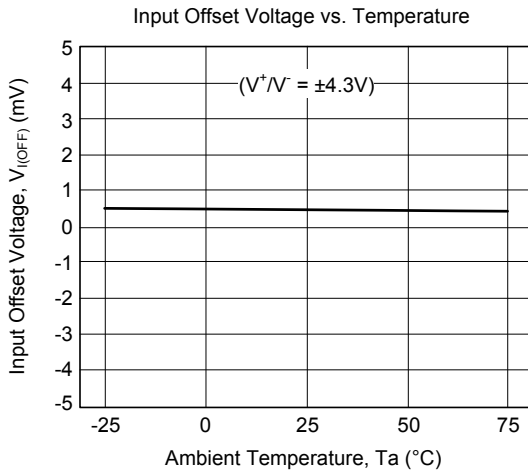
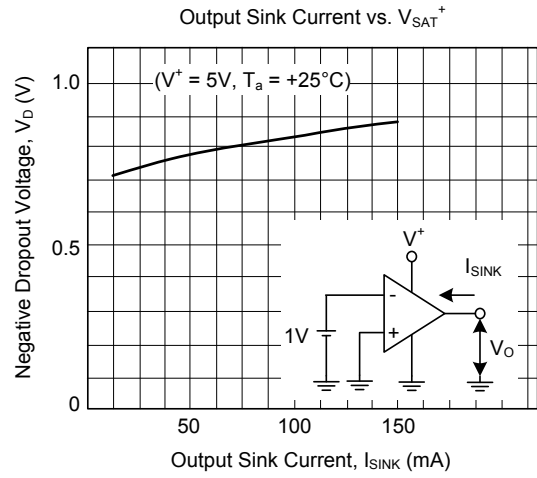
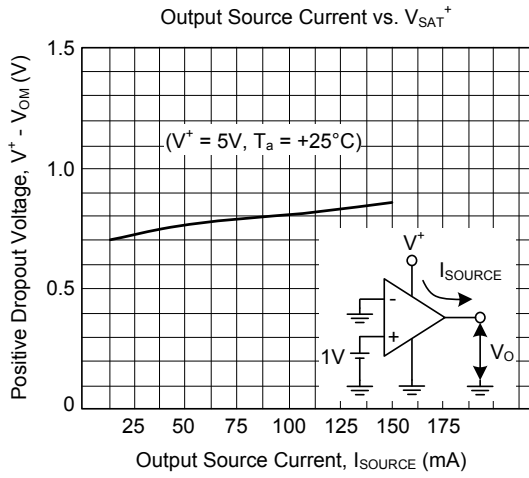
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

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

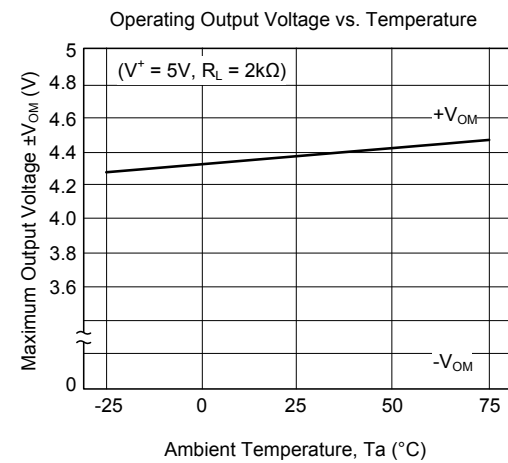
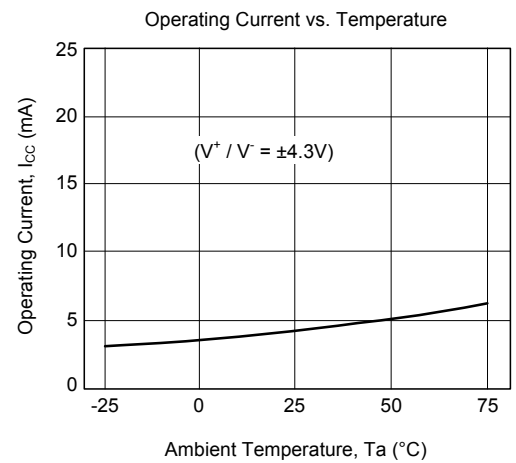
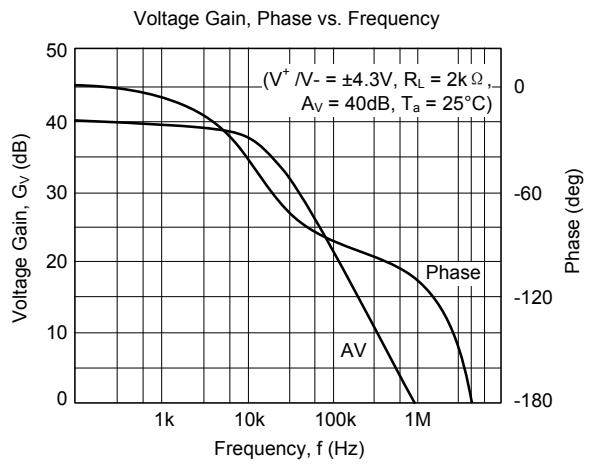
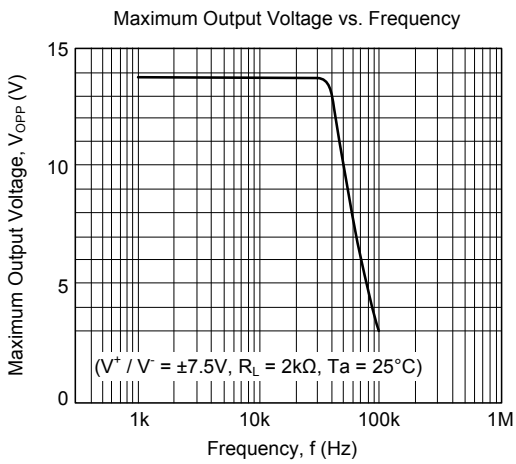
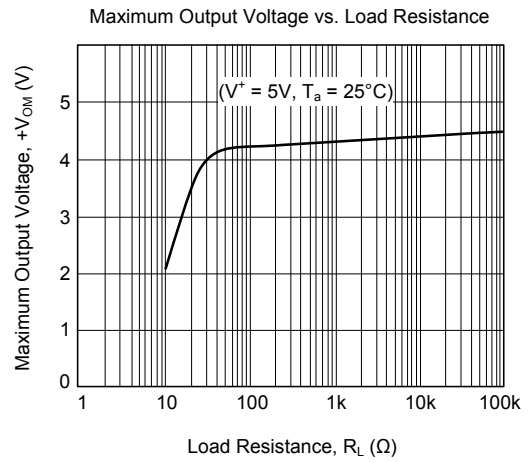
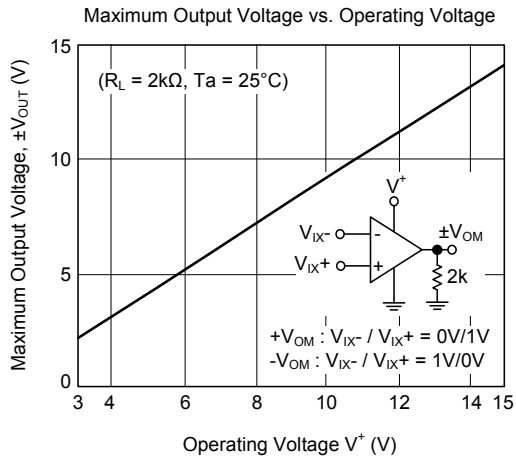
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V+=8.6V)

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	$G_V$	$R_L=2K\Omega$	88	100		dB
Input Common Voltage Range	$V_{ICM}$		$V^+-2$			V
Maximum Output Voltage Swing 1	$V_{OM1}$	$R_L \geq 2k\Omega, V^+=5V$	3.5			V
Maximum Output Voltage Swing 2	$V_{OM2}$	$I_{OUT}=70mA, V^+=5V$	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/ $\mu$ s
Unity Gain Bandwidth	GB			1.3		MHz
Operating Voltage Range	$V^+$				15	V

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS(Cont.)



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