



3414

LINEAR INTEGRATED CIRCUIT

SINGLE-SUPPLY DUAL HIGH CURRENT OPERATIONAL AMPLIFIER

DESCRIPTION

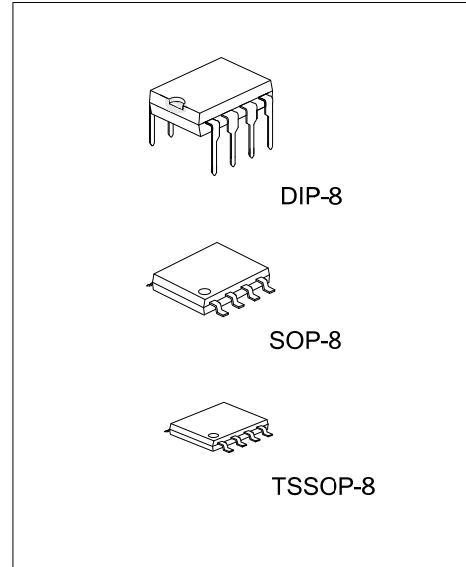
The UTC **3414** integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 70mA.

FEATURES

- *Single supply
- *Operating voltage: 3V~15V
- *High output current: 70mA
- *Slew rate: 10V/ μ A(Typ.)
- *Bipolar technology

ORDERING INFORMATION

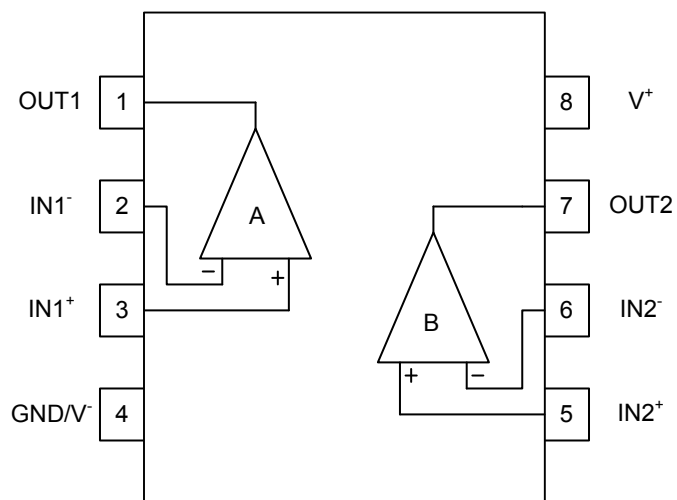
Ordering Number			Package	Packing
Normal	Lead Free Plating	Halogen Free		
3414-D08-T	3414L-D08-T	3414G-D08-T	DIP-8	Tube
3414-P08-R	3414L-P08-R	3414G-P08-R	TSSOP-8	Tape Reel
3414-S08-R	3414L-S08-R	3414G-S08-R	SOP-8	Tape Reel



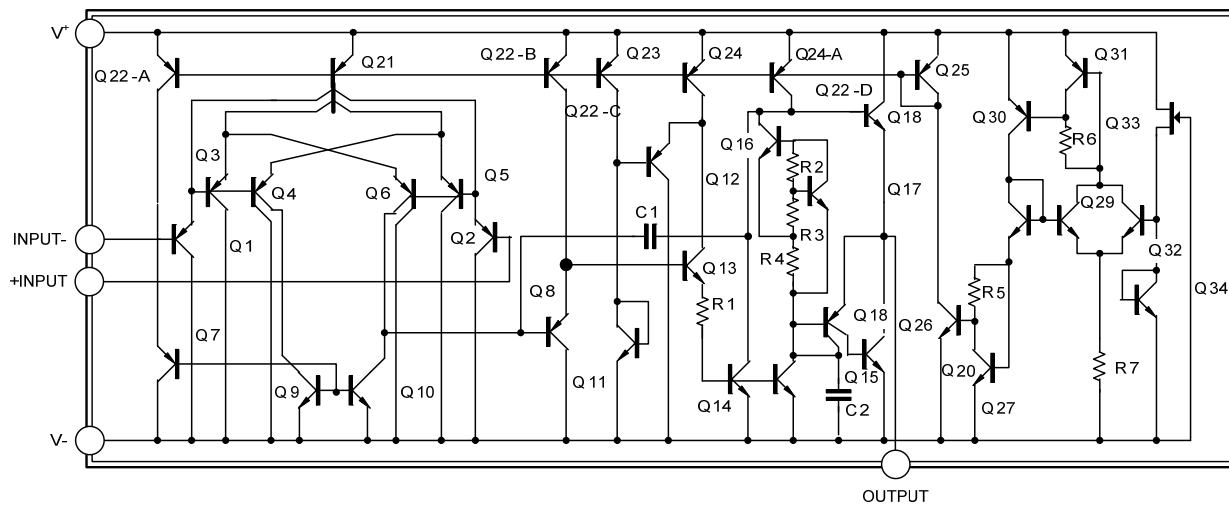
Lead-free: 3414L
Halogen-free: 3414G

	(1)Packing Type	(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
	(2)Package Type	
	(3)Lead Plating	

■ 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

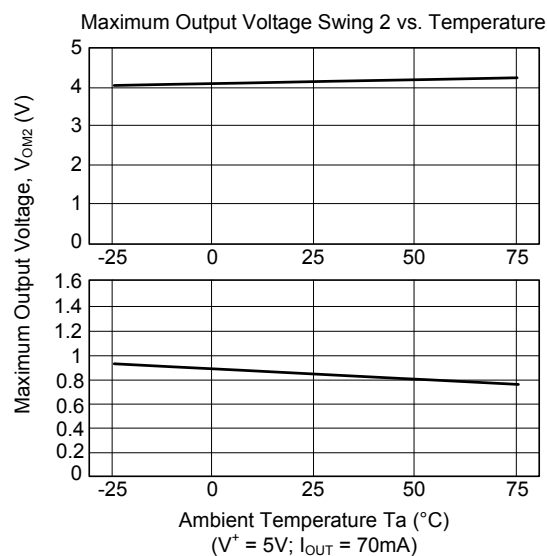
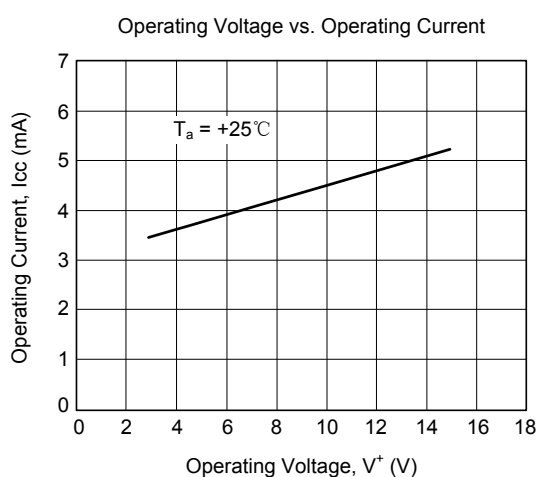
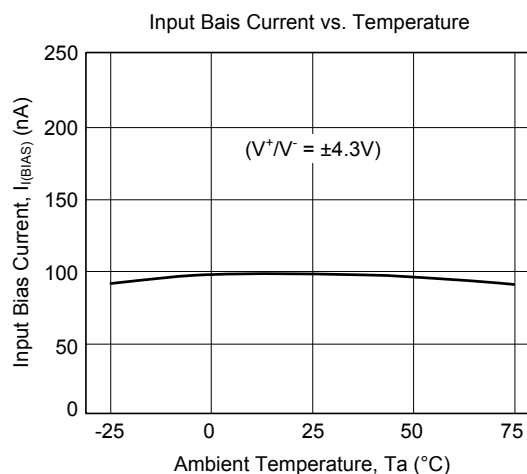
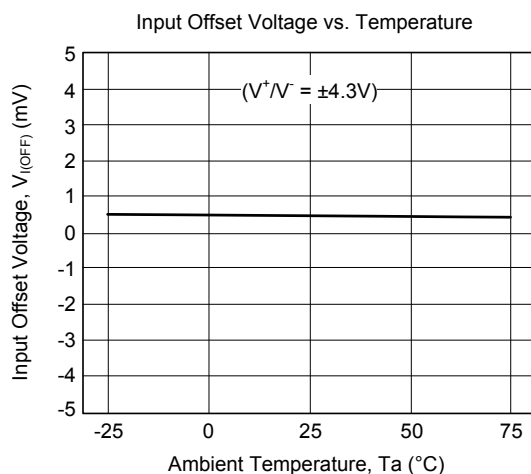
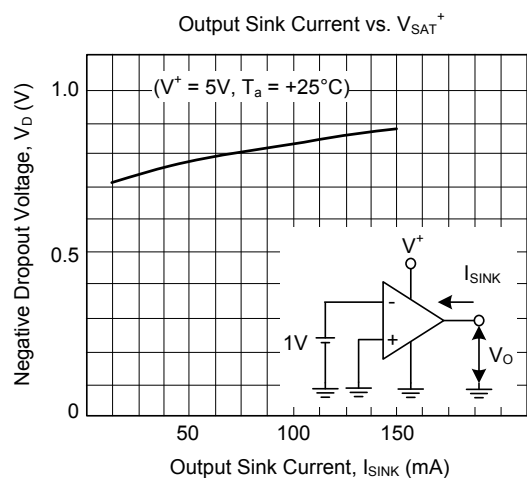
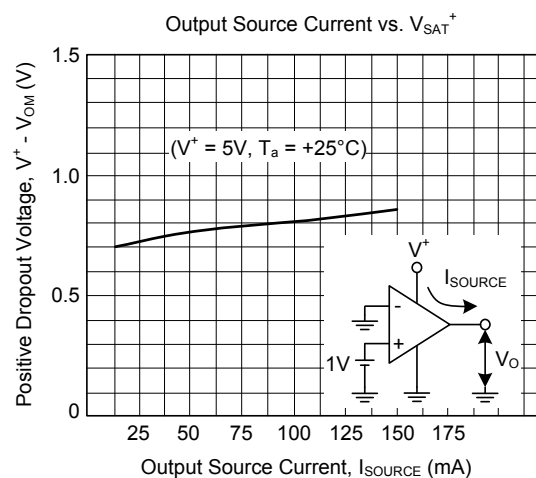
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

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

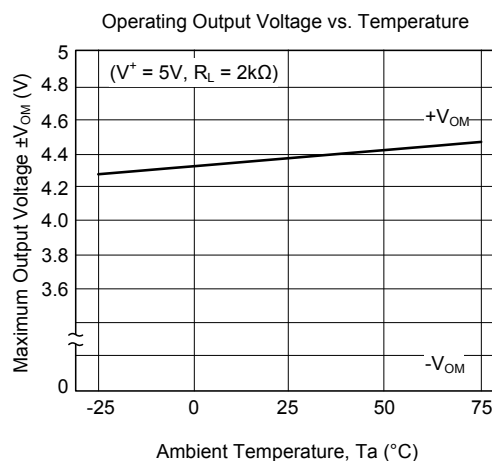
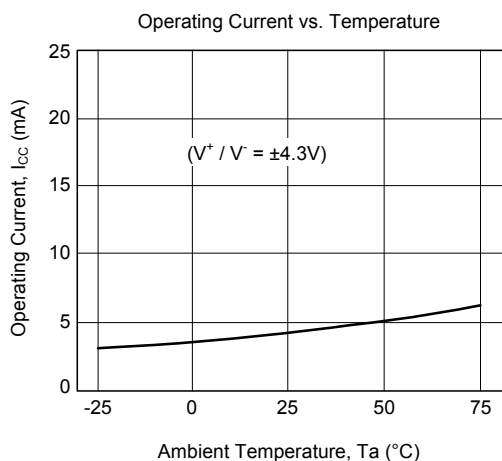
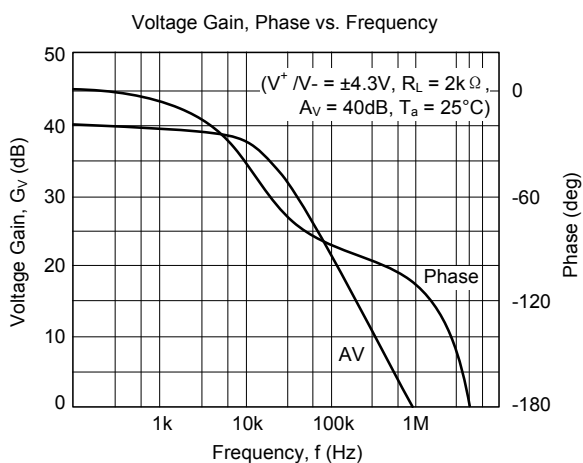
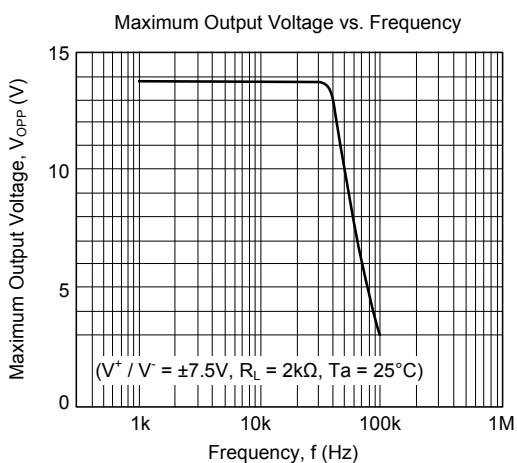
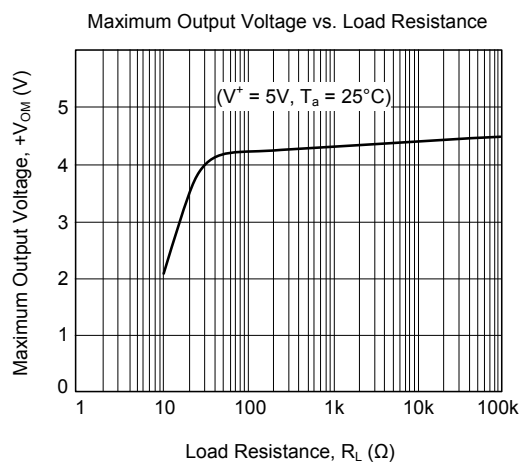
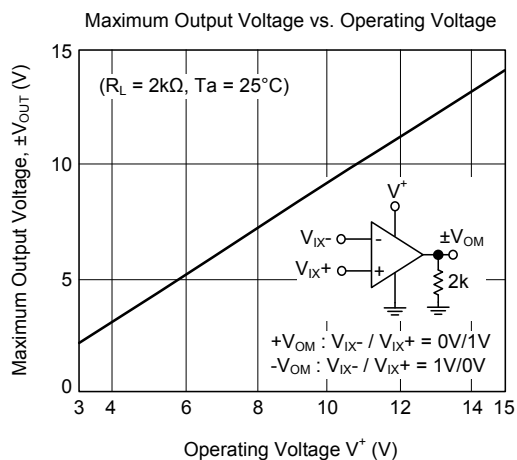
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, $V^+=8.6V$)

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/ μs
Unity Gain Bandwidth	GB			1.3		MHz
Operating Voltage Range	V^+				15	V

■ TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS(Cont.)



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