

UTC3414 LINEAR INTEGRATED CIRCUIT

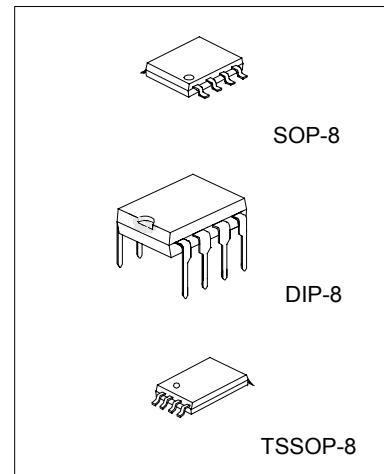
SINGLE-SUPPLY DUAL HIGH CURRENT OPERATIONAL AMPLIFIER

DESCRIPTION

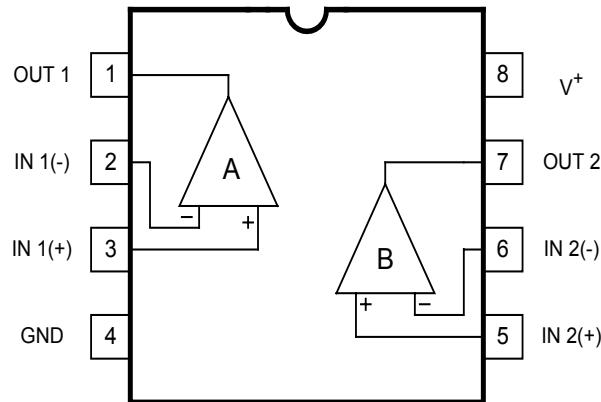
The UTC 3414 integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 70mA.

FEATURES

*Single Supply	
*Operating Voltage	(+3V~+15V)
*High Output Current	(70mA)
*Slew Rate	(1.0V/ μ s typ.)
*Bipolar Technology	

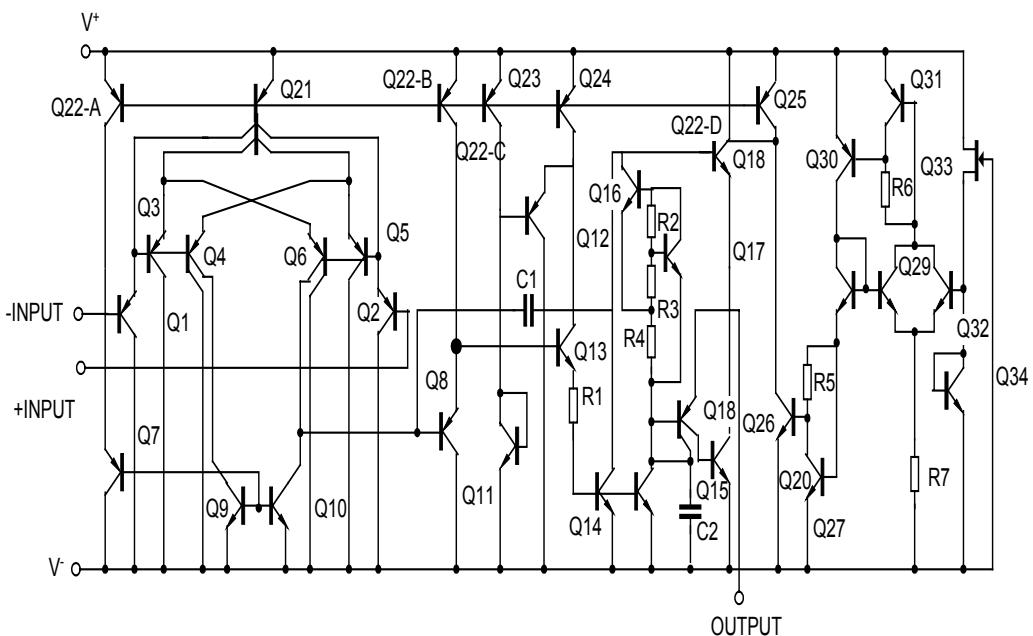


PIN CONFIGURATIONS



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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_{ID}	15	V
Input Voltage	V_I	-0.3 ~ +15	V
Power Dissipation	P_D	300	mW
Operating Temperature	T_{opr}	-20 to +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +125	$^\circ\text{C}$

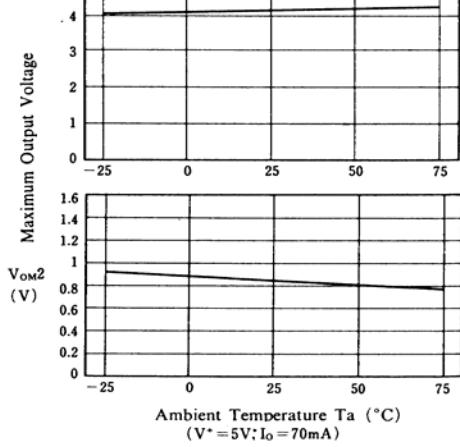
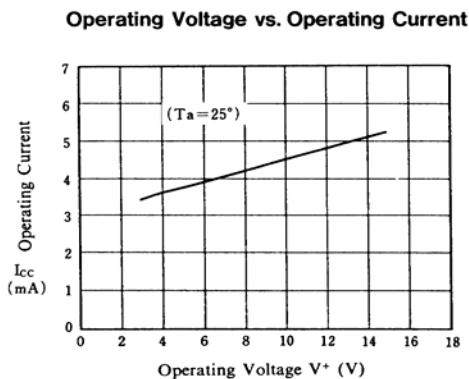
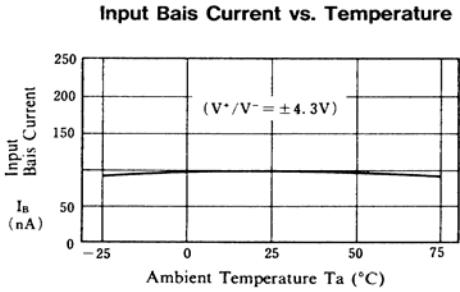
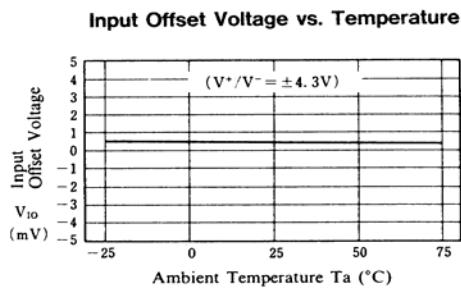
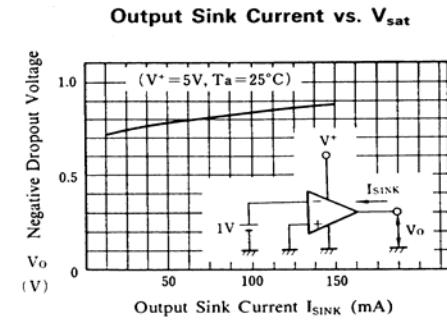
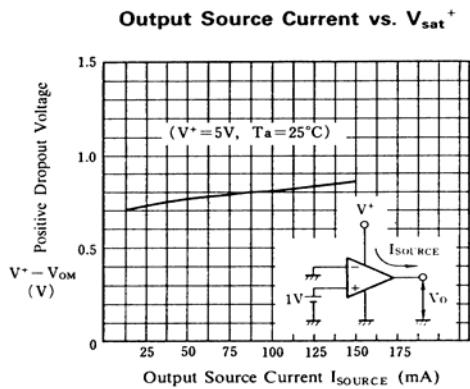
ELECTRICAL CHARACTERISTICS($T_a=25^\circ\text{C}$, $V^+=8.6\text{V}$)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V_{IO}	$R_s=0\Omega$	2	5		mV
Input Offset Current	I_{IO}			5	100	nA
Input Bias Current	I_b			100	500	nA
Large Signal Voltage Gain	A_v	$R_L=2\text{k}\Omega$	88	100		dB
Input Common Voltage Range	V_{ICM}		V^+-2			V
Maximum Output Voltage Swing	V_{OM1}	$R_L \geq 2\text{k}\Omega, V^+=5\text{V}$	3.5			V

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PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Output Voltage Swing 2	VOM2	$I_o=70mA, V^+=5V$	3.2			V
Common Mode Rejection Ratio	CMR		80	90		dB
Supply Voltage Rejection Ratio	SVR		80	90		dB
Operating Current	Icc	$R_L=\infty$	3	4	5	mA
Slew Rate	SR			1.0		V/ μ s
Unity Gain Bandwidth	GB			1.3		MHz
Operating Voltage Range	V ⁺				15	V

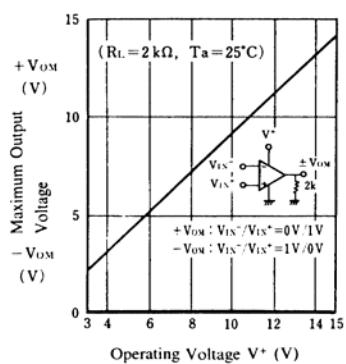
TYPICAL CHARACTERISTICS



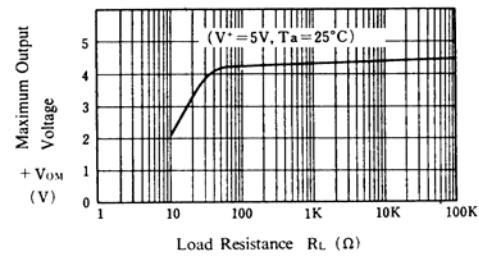
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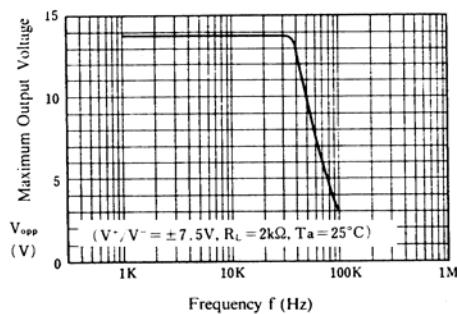
**Maximum Output Voltage
vs. Operating Voltage**



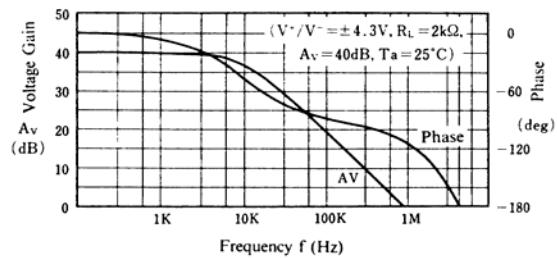
**Maximum Output Voltage
vs. Load Resistance**



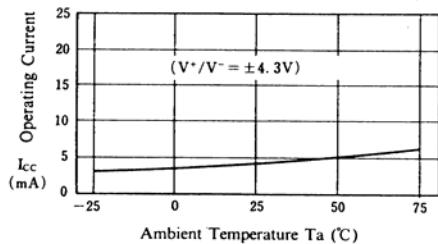
Maximum Output Voltage vs. Frequency



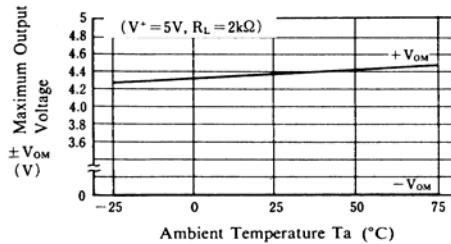
Voltage Gain, Phase vs. Frequency



Operating Current vs. Temperature



Maximum Output Voltage vs. Temperature



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