

UTC3414 LINEAR INTEGRATED CIRCUIT

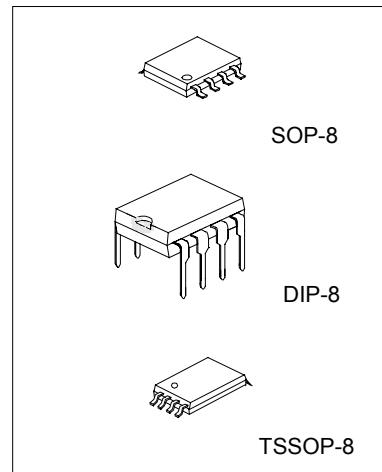
SINGLE-SUPPLY DUAL HIGH CURRENT OPERATIONAL AMPLIFIER

DESCRIPTION

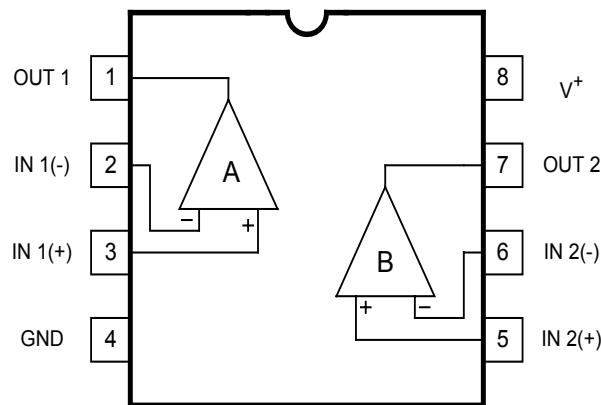
The UTC 3414 integrated circuit is a high gain, high output current, high output voltage swing dual operational amplifier capable of driving 70mA.

FEATURES

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



PIN CONFIGURATIONS

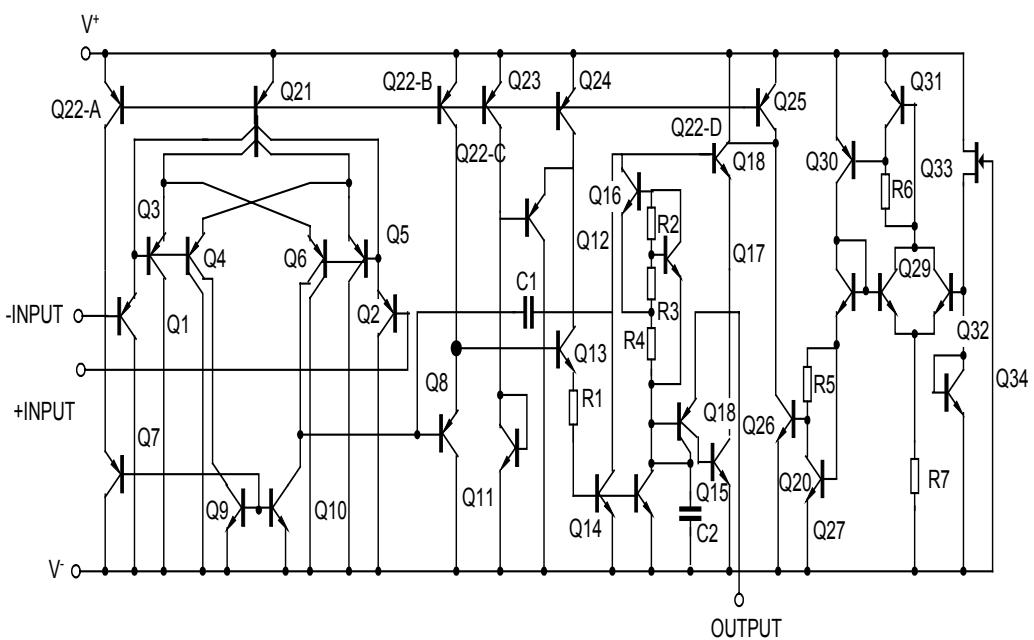


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QW-R105-009.C

UTC3414 LINEAR INTEGRATED CIRCUIT

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	°C
Storage Temperature	T_{stg}	-40 to +125	°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

UTC UNISONIC TECHNOLOGIES CO., LTD. 2

QW-R105-009.C

UTC3414 LINEAR INTEGRATED CIRCUIT

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

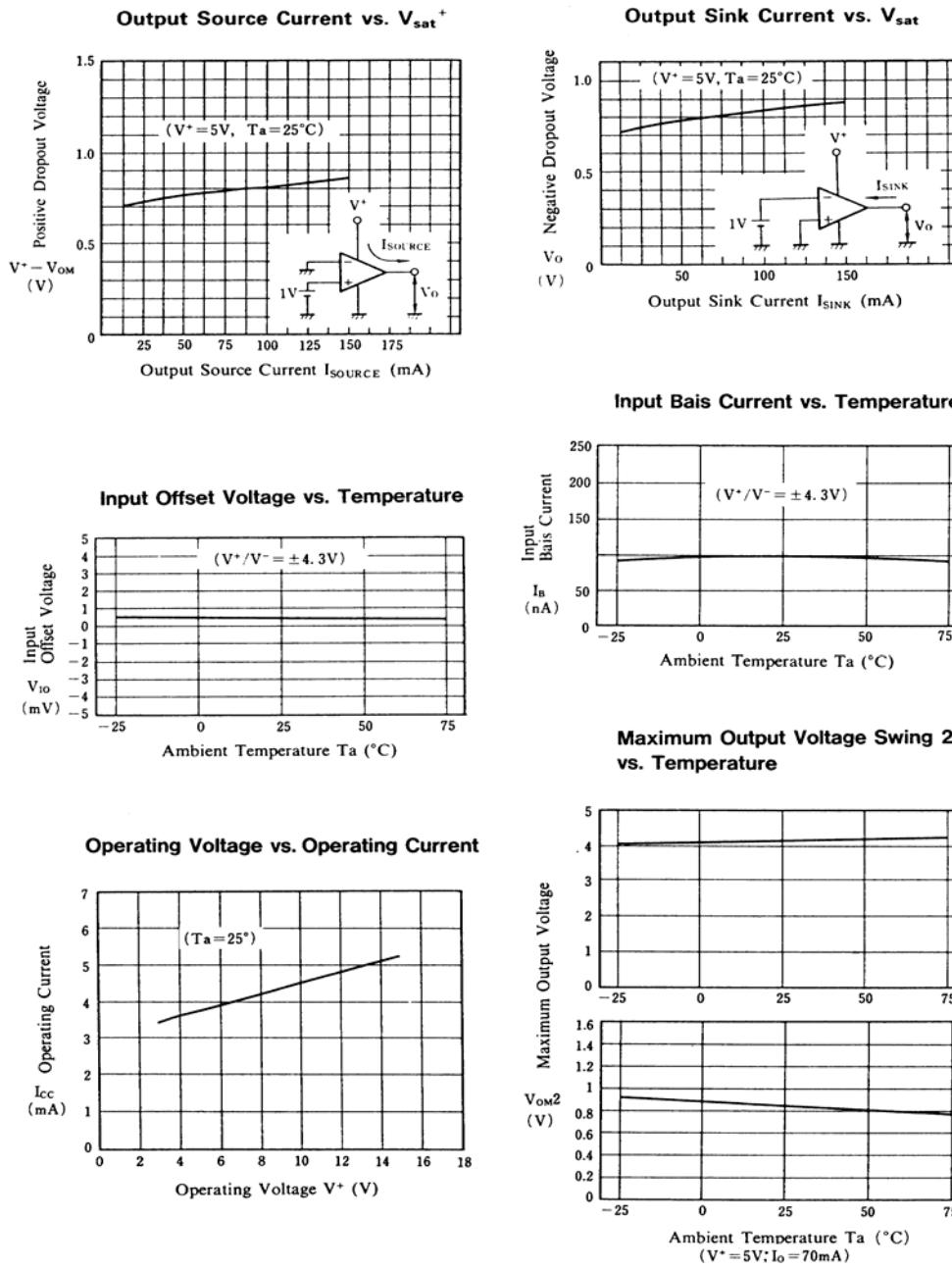
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QW-R105-009.C

UTC3414

LINEAR INTEGRATED CIRCUIT

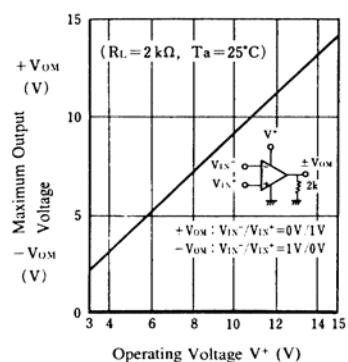
TYPICAL CHARACTERISTICS



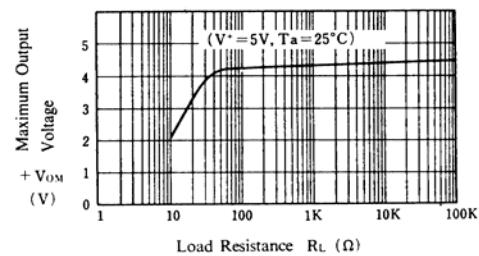
UTC3414

LINEAR INTEGRATED CIRCUIT

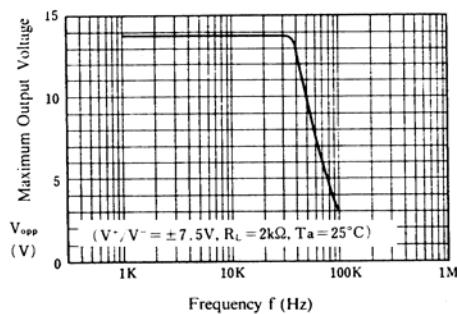
**Maximum Output Voltage
vs. Operating Voltage**



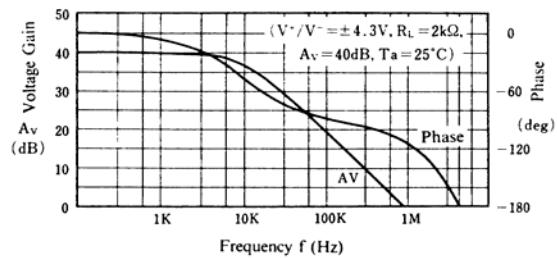
**Maximum Output Voltage
vs. Load Resistance**



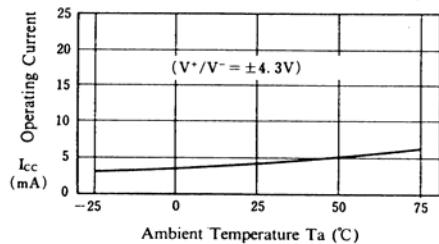
Maximum Output Voltage vs. Frequency



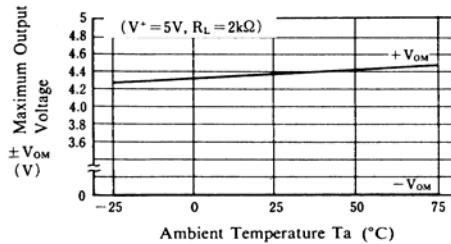
Voltage Gain, Phase vs. Frequency



Operating Current vs. Temperature



Maximum Output Voltage vs. Temperature



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QW-R105-009.C