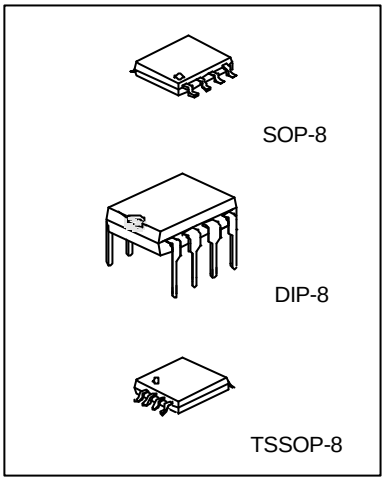
SINGLE-SUPPLY DUAL HIGH CURRENT OPERATIONAL AMPLIFIER



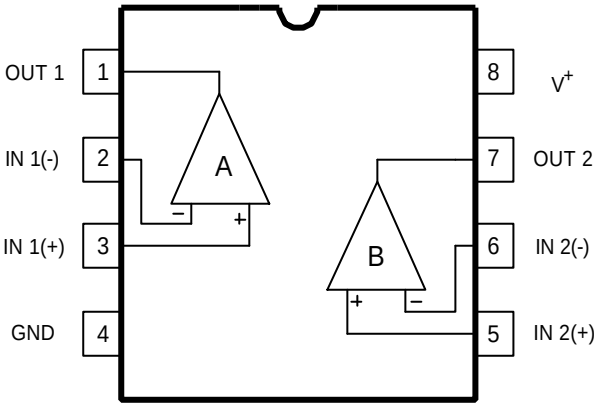
DESCRIPTION

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

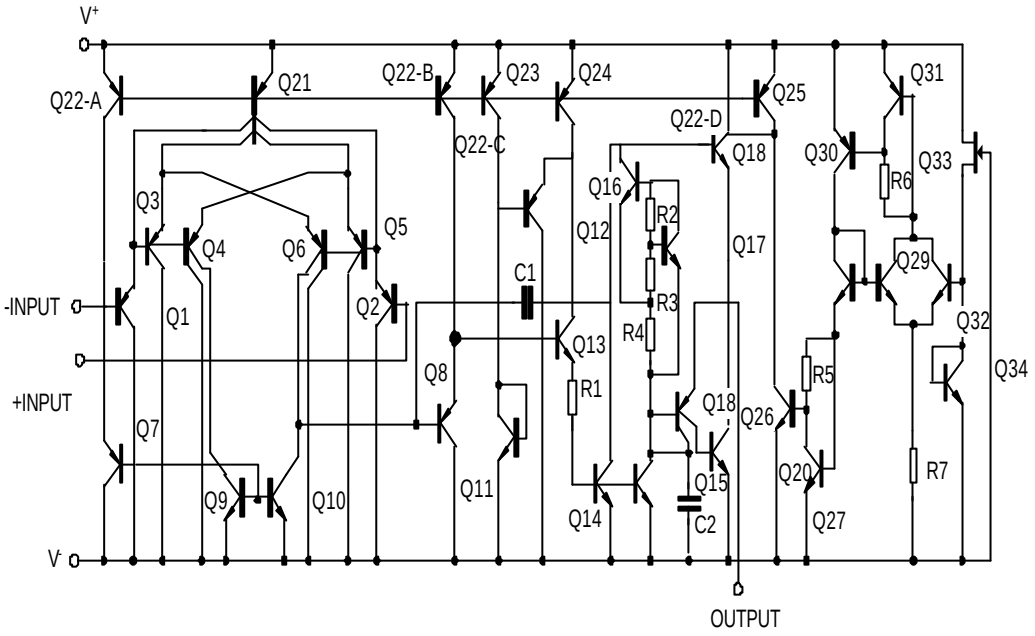
FEATURES

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

PIN CONFIGURATIONS



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_{ID}	15	V
Input Voltage	V_I	-0.3 ~ +15	V
Power Dissipation	P_D	300	mW
Operating Temperature	Topr	-20 to +75	°C
Storage Temperature	Tstg	-40 to +125	°C

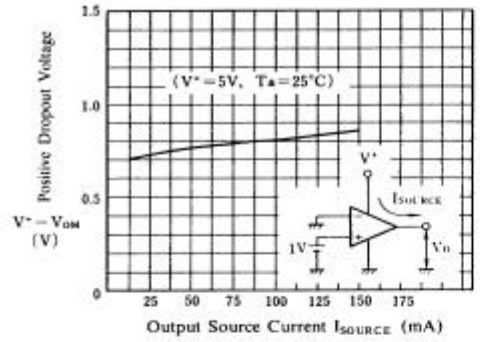
ELECTRICAL CHARACTERISTICS(Ta=25°C, V^+=8.6V)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V_{IO}	Rs=0Ω		2	5	mV
Input Offset Current	I_{IO}			5	100	nA
Input Bias Current	Ib			100	500	nA
Large Signal Voltage Gain	Av	$R_{L=2K\Omega}$	88	100		dB
Input Common Voltage Range	V_{ICM}		V^+-2			V
Maximum Output Voltage Swing 1	V_{OM1}	RL>=2kΩ,V^+=5V	3.5			V

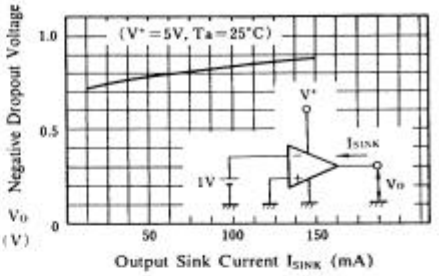
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Output Voltage Swing 2	V_{OM2}	Io=70mA,V^+=5V	3.2			V
Common Mode Rejection Ratio	CMR		80	90		dB
Supply Voltage Rejection Ratio	SVR		80	90		dB
Operating Current	Icc	$R_L=\infty$	3	4	5	mA
Slew Rate	SR			1.0		V/μs
Unity Gain Bandwidth	GB			1.3		MHz
Operating Voltage Range	V^+				15	V

TYPICAL CHARACTERISTICS

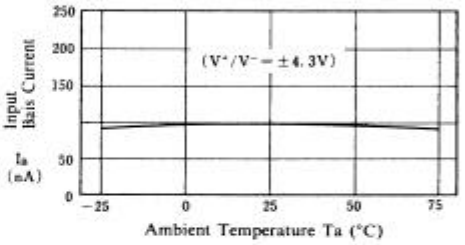
Output Source Current vs. V_{sat}^+



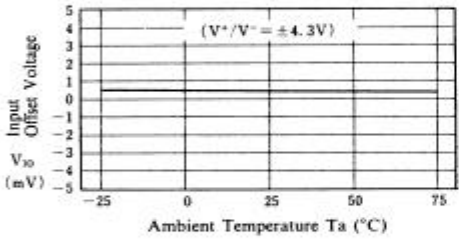
Output Sink Current vs. V_{sat}



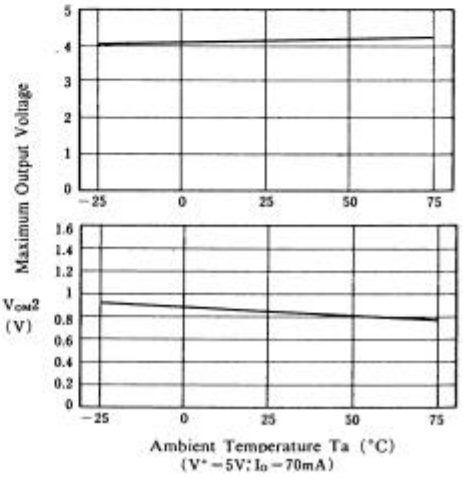
Input Bais Current vs. Temperature



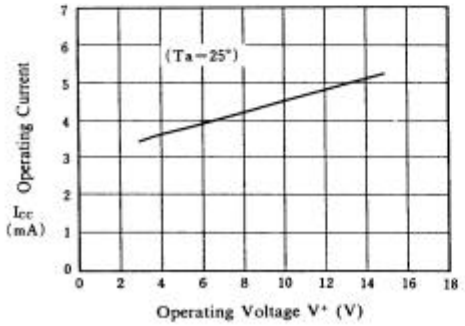
Input Offset Voltage vs. Temperature



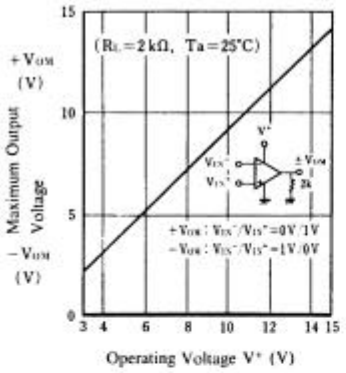
Maximum Output Voltage Swing 2 vs. Temperature



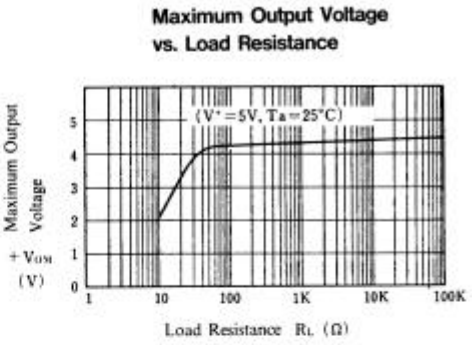
Operating Voltage vs. Operating Current



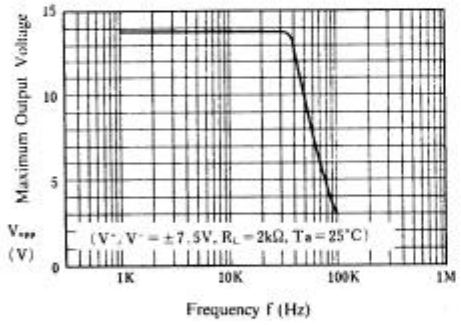
Maximum Output Voltage vs. Operating Voltage



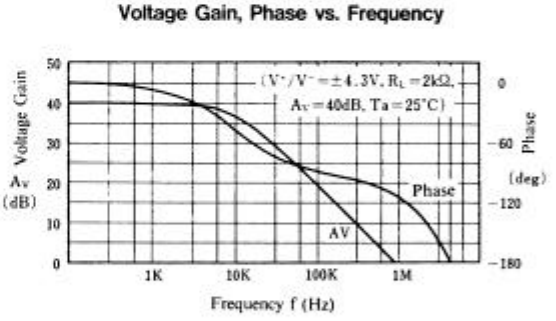
Maximum Output Voltage vs. Load Resistance



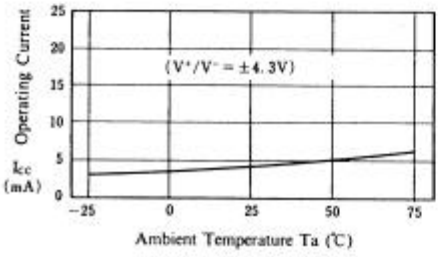
Maximum Output Voltage vs. Frequency



Voltage Gain, Phase vs. Frequency



Operating Current vs. Temperature



Maximum Output Voltage vs. Temperature