

# UTC 3404 LINEAR INTEGRATED CIRCUIT

## SINGLE-SUPPLY DUAL OPERATIONAL AMPLIFIER

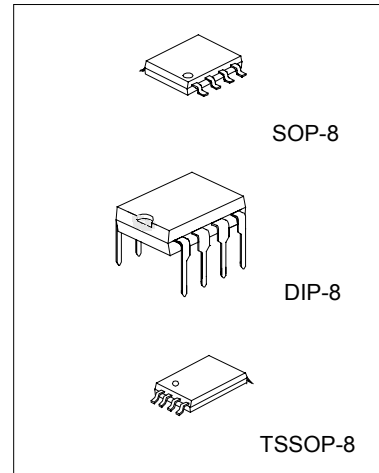
### DESCRIPTION

The UTC 3404 is high performance single supply dual operational amplifier.

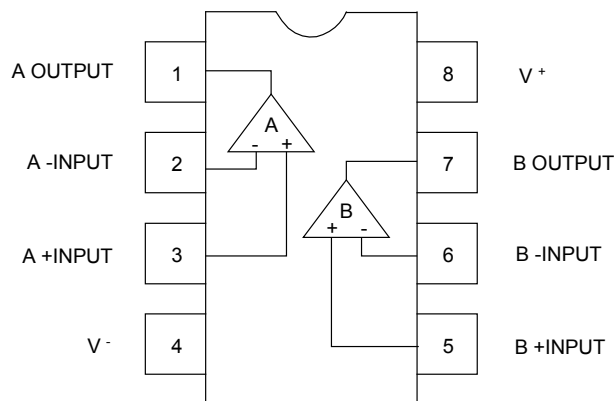
The UTC 3404 is improved version of the UTC M2904 on slew rate & cross-over distortion.

### FEATURES

- \*Single Supply
- \*Operating Voltage: +4V~+36V
- \*Low Operating Current: 2.0mA (typ.)
- \*Slew Rate: 1.2V/ $\mu$ s (typ.)



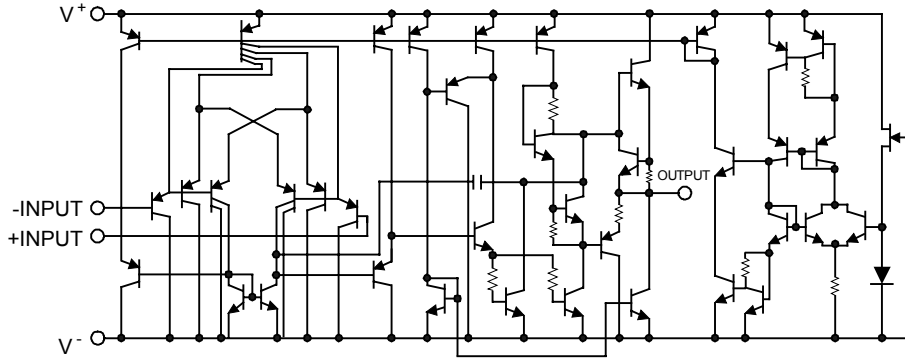
### PIN CONFIGURATION



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EQUIVALENT CIRCUIT (1/2 SHOWN)



## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	$V^+(V^+/V^-)$	36V (or±18)	V
Differential Input Voltage	$V_{ID}$	36	V
Input Voltage	$V_{IC}$	-0.3 ~ 36	V
Power Dissipation	$P_D$	500 300 250	mW
DIP8			
SOP8 TSSOP8			
Operating Temperature Range	$T_{opr}$	-40 ~ +85	°C
Storage Temperature Range	$T_{stg}$	-40 ~ +125	°C

## ELECTRICAL CHARACTERISTICS (Ta=25°C, $V^+/V^- = \pm 15V$ )

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	50	nA
Input Bias Current	$I_B$			70	200	nA
Large Signal Voltage Gain	$A_v$	$R_L > 2K\Omega$	88	100		dB
Maximum Output Voltage Swing	$V_{OM}$	$R_L=2K\Omega$	±13	±14		V
Input Common Mode Voltage Range	$V_{ICM}$		-15 ~ +13			V
Common Mode Rejection Ratio	CMR	DC	70	90		dB
Supply Voltage Rejection Ratio	SVR		80	94		dB
Operating Current	$I_{CC}$	$R_L=\infty$		2.0	3.5	mA
Output Source Current	$I_{SOURCE}$	$V_{IN^+}=1V, V_{IN^-}=0V$	20	30		mA
Output Sink Current	$I_{SINK}$	$V_{IN^+}=0V, V_{IN^-}=1V$	10	20		mA
Slew Rate	SR			1.2		V/μs
Unity Gain Bandwidth	$f_T$			1.2		MHz

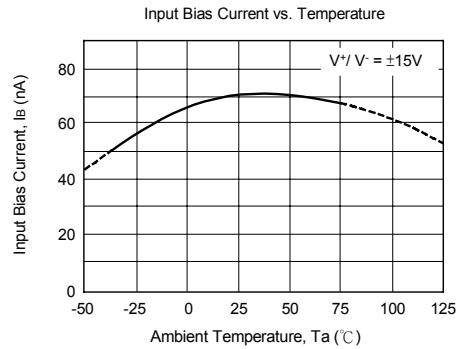
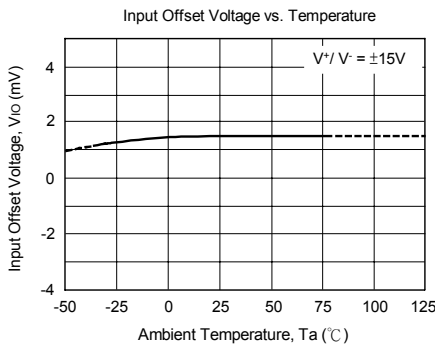
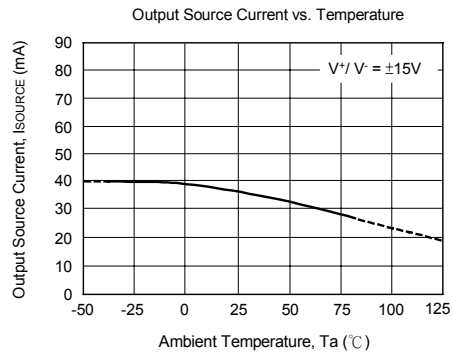
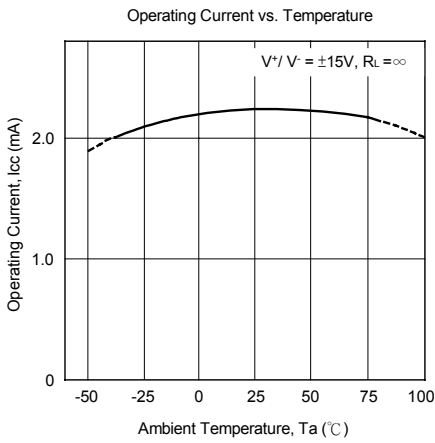
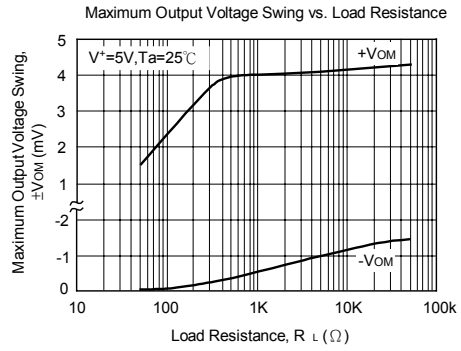
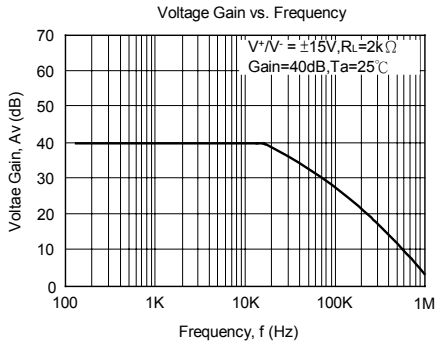
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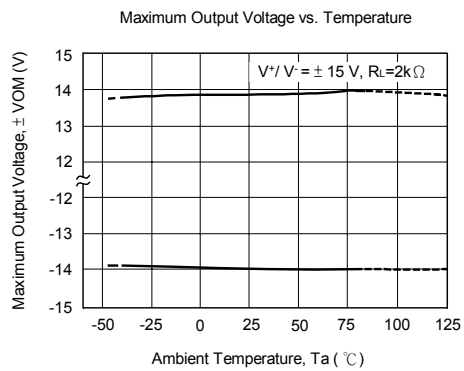
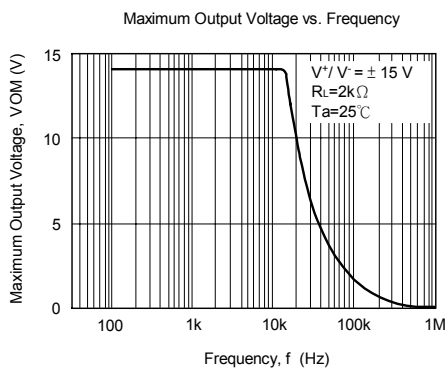
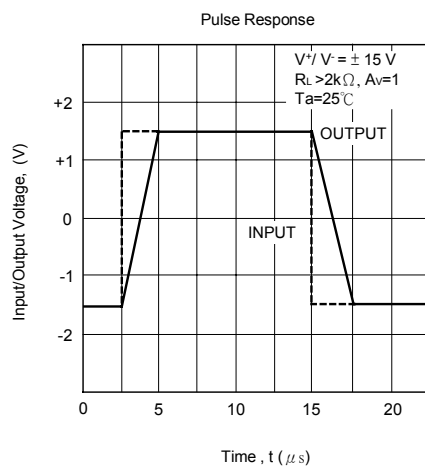
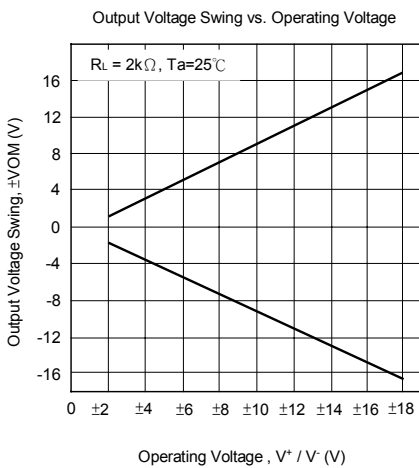
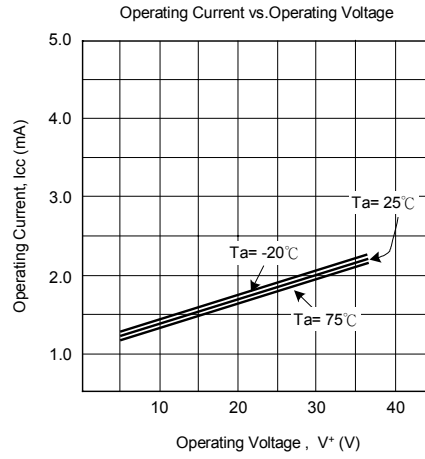
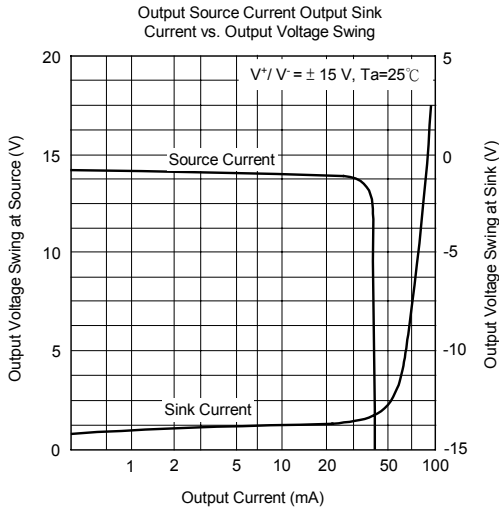
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TYPICAL CHARACTERISTICS

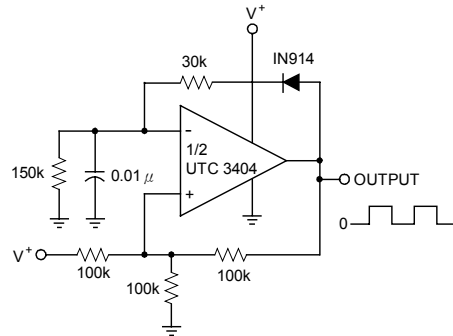




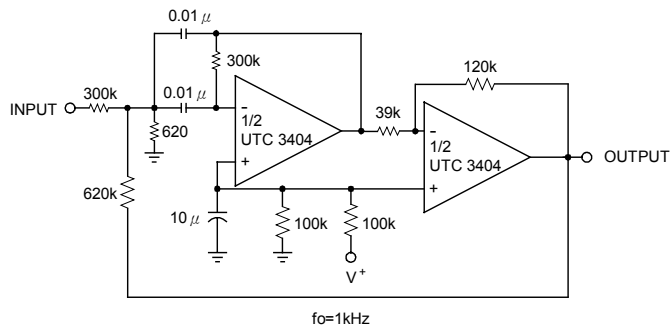
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## TYPICAL APPLICATIONS



Square Wave Oscillator



Bandpass Filter

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