



BA3308

Preliminary

LINEAR INTEGRATED CIRCUIT

DUAL PREAMPLIFIER WITH ALC

DESCRIPTION

The UTC **BA3308** is designed to have dual preamplifier ICs with built – in ALC circuits for use in stereo amplification. The preamplifiers have high gain and low distortion. A built-in rectifier for ALC circuit implies good channel balance and large dynamic range can be constructed with addition of just an external time constant circuit.

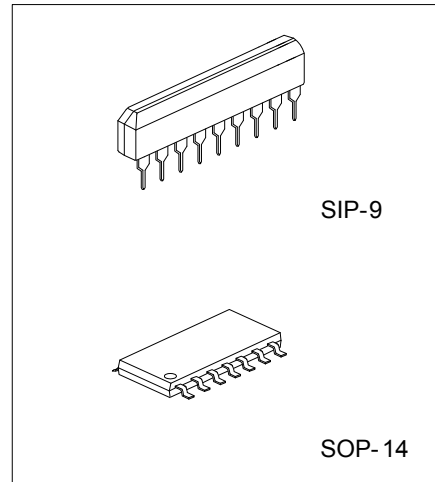
FEATURES

- * Wide operating power supply voltage range ($V_{CC}=4.5V \sim 14V$)
- * Power-on mute circuit to avoid “pop” noise generation.
- * No input coupling capacitors are necessary
- * High gain ($G_{VO}=80dB$)and low noise ($V_{NIN}=1\mu Vrms$)
- * Low distortion (THD=0.1%)
- * Good ALC channel balance with built-in ALC rectifier diode
- * Adjustable ALC dynamic range by external input resistor.

ORDERING INFORMATION

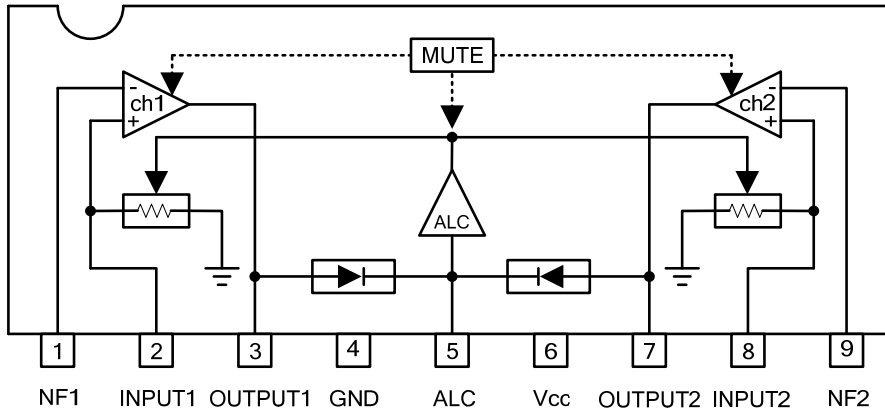
Ordering Number		Package	Packing
Lead Free	Halogen Free		
BA3308L-G09-T	BA3308G-G09-T	SIP-9	Tube
BA3308L-S14-R	BA3308G-S14-R	SOP-14	Tape Reel
BA3308L-S14-T	BA3308G-S14-T	SOP-14	Tube

<p>BA3308G-G09-R</p> <p>(1)Packing Type (2)Package Type (3)Halogen Free</p>	<p>(1) R: Tape Reel, T: Tube (2) G09: SIP-9, S14: SOP-14 (3) G: Halogen Free, L: Lead Free</p>
---	--

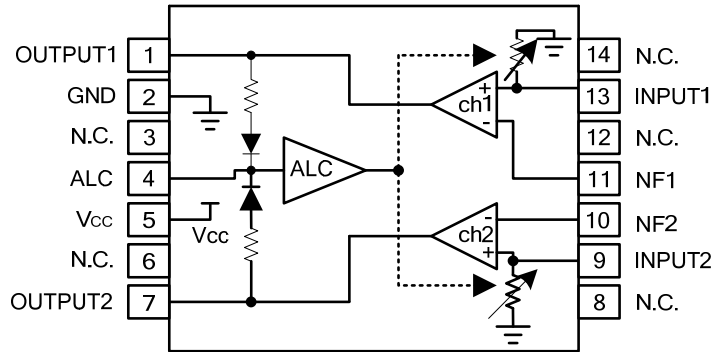


■ BLOCK DIAGRAM

SIP-9



SOP-14



■ ABSOLUTE MAXIMUM RATING (Ta = 25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Power Supply Voltage		V_{CC}	16	V
Power Dissipation	SIP-9	P_D	950	mW
	SOP-14		450	
Derating above Ta = 25°C	SIP-9		9.5	°C/mW
	SOP-14		4.5	
Operating Temperature		T_{OPR}	0 ~ +85	°C
Storage Temperature		T_{STG}	-65 ~ +125	°C

■ RECOMMENDED OPERATING CONDITIONS (Ta = 25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Power Supply Voltage	V_{CC}	+4.5~ +14	V

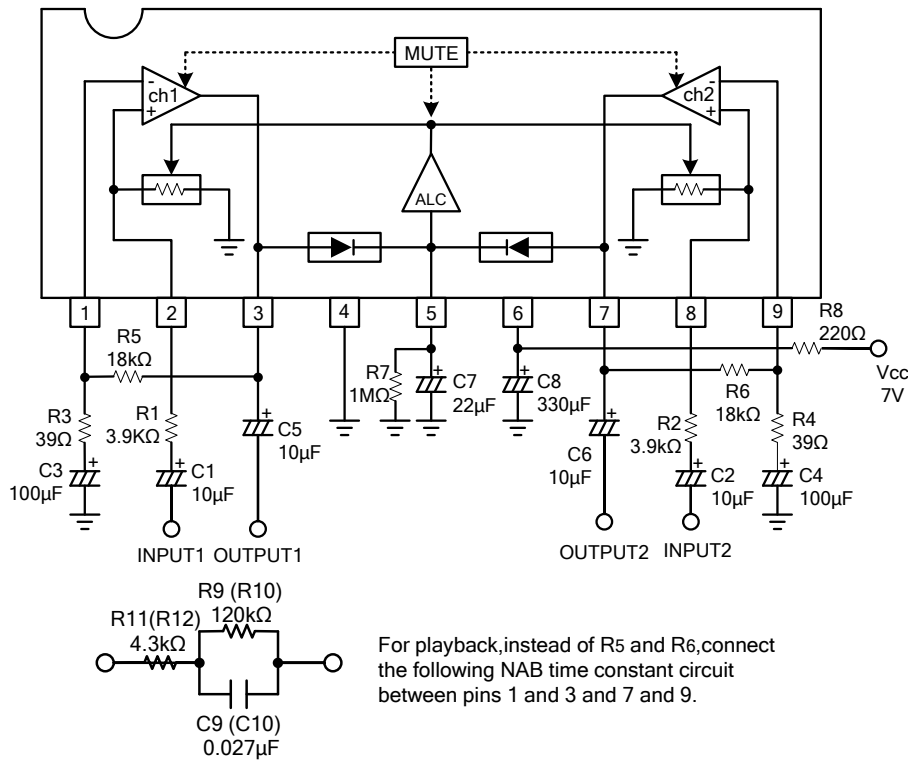
Note: This IC is not designed to be radiation-resistant.

■ ELECTRICAL CHARACTERISTICS

(Ta = 25°C, V_{CC} = 7.0V, f = 1kHz and BPF: 20Hz ~ 20kHz, unless otherwise noted.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Maximum Output Voltage	V_{OM}	THD=1%	0.6	1.2		V_{rms}
Input Conversion Noise Voltage	V_{NIN}	Conversion with $R_g=2.2k\Omega$ and NAB34dB at 1kHz		1.0	2.0	μV_{rms}
Quiescent Current	I_Q	$V_{IN}=0V_{rms}$	1.5	3.3	4.5	mA
Input Resistance	R_{IN}		15	31.5	45	k Ω
Total Harmonic Distortion	THD	NAB34dB, $V_{OUT}=40mV_{rms}$		0.1	0.3	%
Open Loop Voltage Gain	G_{VO}	$V_{OUT} = -10dBV$	70	80		dB
ALC Range	ALC	$R_G = 3.9k\Omega$, $V_{IN} = -70dBV$ reference, THD=3%	40	70		dB
ALC Channel Balance	ΔALC	$V_{IN} = -60dBV$, $-30dBV$		0	2.5	dB
Channel Separation	CS	$V_O = 0dBV$, NAB34dB	60	75		dB

■ TYPICAL APPLICATION CIRCUIT



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.