

**FEATURES**

- 76 dB typical gain (open loop)
- 1.0 to 3 VDC operating range
- frequency response 20 kHz (min)
- Total harmonic distortion 2%

**STANDARD PACKAGING**

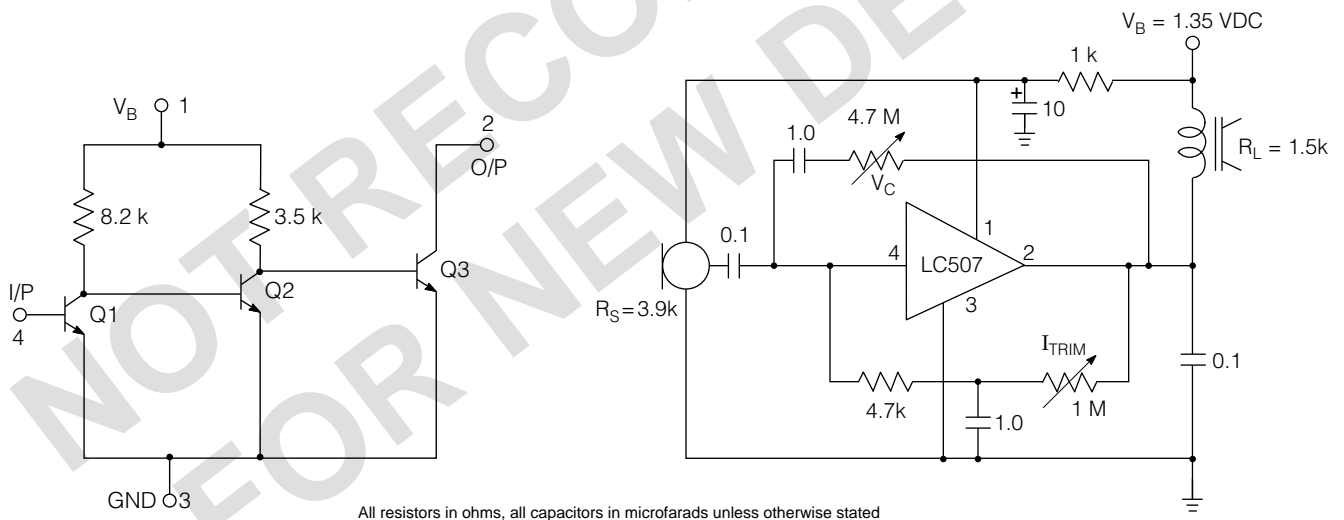
- 4 pin MICROpac
- 8 pin PLID

**DESCRIPTION**

The LC507 is a low voltage, 3 stage, linear class A amplifier, available in a Gennum single-in-line 4 pin MICROpac. The LC507 features high gain, low current and a wide frequency response.

The simplicity of the design allows the LC507 to be used with a minimal amount of external components to produce low voltage miniature electronic devices.

The electrical and packaging specifications make the LC507 suitable as a pin for pin replacement for three transistor amplifiers such as the Philips OM 200 and Siemens TAA 141 .



**FUNCTIONAL SCHEMATIC**

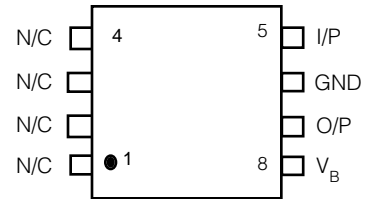
**TYPICAL HEARING AID CIRCUIT**

## ABSOLUTE MAXIMUM RATINGS

PARAMETER	VALUE / UNITS
Supply Voltage	5 VDC
Power Dissipation	25 mW
Storage Temperature	-20 to + 80°C
Operating Temperature	-20 to + 80°C

**CAUTION**  
CLASS 1 ESD SENSITIVITY

## PIN CONNECTION

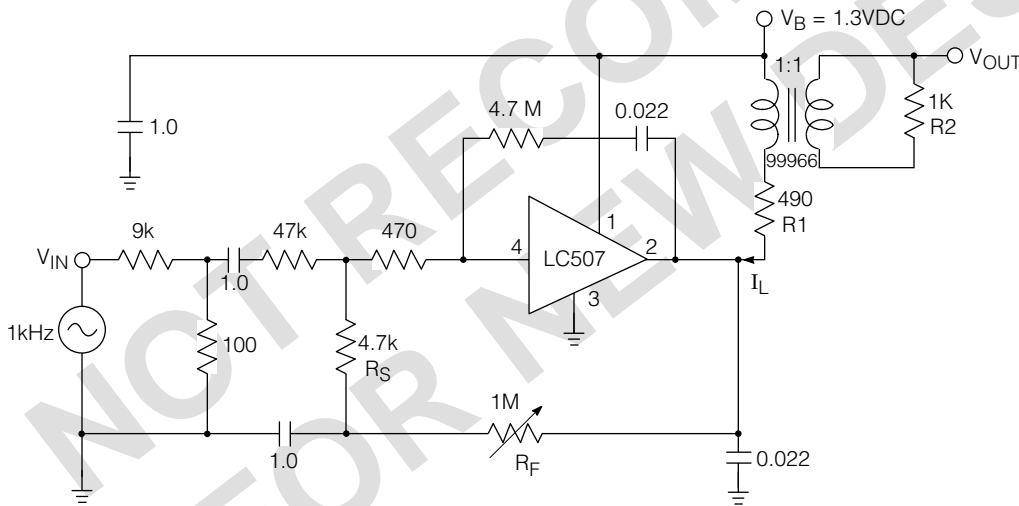


(In MICROpac pins 1 to 4 do not exist)

## ELECTRICAL CHARACTERISTICS

Conditions: Supply Voltage 1.3 VDC, Transducer current  $I_L = 0.7$  mA, Ambient temperature 25°C

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Voltage Gain (closed loop)	$A_{CL}$	Output Level= 0.2 mW	56	58	60	dB
Total Harmonic Distortion	THD	Output Level= 0.2 mW	-	2.0	3.5	%
Total Current	$I_{TOTAL}$		-	1.0	1.2	mA
Frequency Response at -3 dB	Low	High	-	20	-	kHz
			-	0.2	-	kHz
Potentiometer Resistance		$I_L = 0.7$ mA	40	500	1000	k $\Omega$



All external resistors in ohms, all capacitors in microfarads unless otherwise stated

Fig. 1 Test Circuit

### REVISION NOTES

Packaging information correction

### DOCUMENT IDENTIFICATION

#### PRODUCT PROPOSAL

This data has been compiled for market investigation purposes only, and does not constitute an offer for sale.

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#### DATA SHEET

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