

# Single-Chip System for Radios Monolithic IC LMF501

## Outline

This is a monolithic IC designed for use as a single-chip AM radio. It can be used to configure an AM radio with few external components.

It is ideal for use in watch radios, lighter-radios and other applications intended to operate on low voltage and current.

## Features

1. Operation at low voltages possible  $V_{CC} : 1.1V$
2. Operates with low current consumption
3. Compact, lightweight
4. Broad AGC range

## Package

TO-92A (LMF501T-2)

## Absolute Maximum Ratings

Item	Symbol	Ratings	Units
Operating temperature	$T_{OPR}$	-30~+80	$^{\circ}C$
Storage temperature	$T_{STG}$	-40~+125	$^{\circ}C$
Power supply current	$V_{CC}$	1.5	V

## Electrical Characteristics

Item	Symbol	Min.	Typ.	Max.	Units
Power supply voltage	$V_{CC}$		1.4		V
Operating output voltage	$V_{OUT}$	0.8		1.5	V
Circuit current	$I_{CC}$		0.3		mA
Practical frequency range	fR	150		3000	kHz
Input resistance	$Z_{IN}$		4		$M\Omega$
Audio distortion	THD		4		%
AGC range	AGC	30			dB
Power gain	$G_p$		70		dB

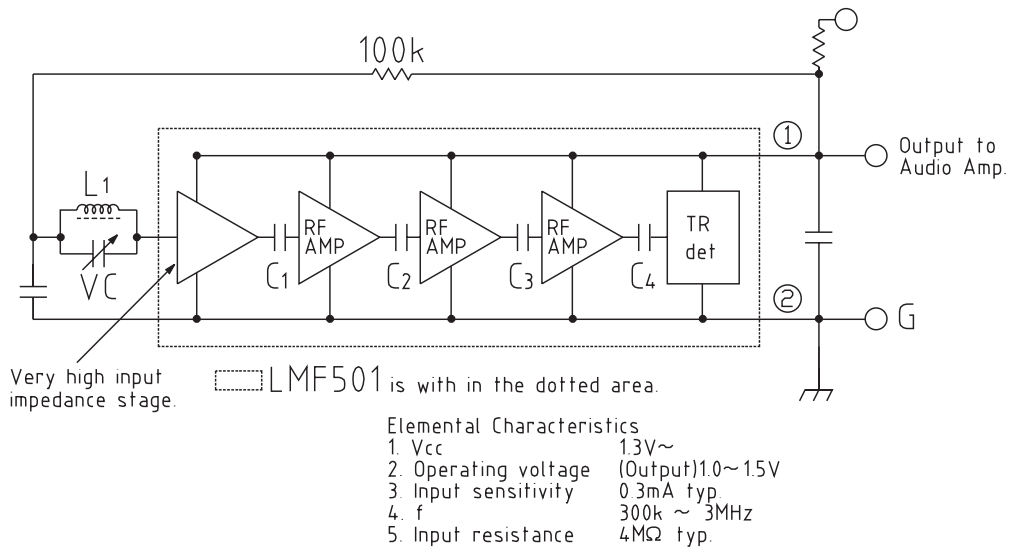
Measurement conditions: Except where noted otherwise, in measurement circuits1

$V_{CC}=1.4 V$ ,  $R_{AGC}=1.5k\Omega$

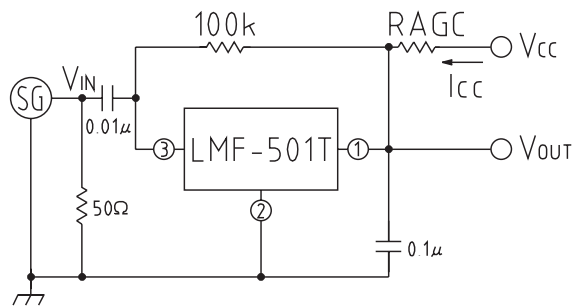
Modulator:  $f=1000Hz$  40%,  $V_{IN}=1m V/rms$



Block Diagram



Measurement Circuit



Application Circuits

