

## High Speed Operational Amplifiers MICROPHONE PREAMP W/VAR COMPRESS

Manufacturers	<a href="#">Analog Devices, Inc</a>
Package/Case	SOIC-14
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for SSM2166SZ-REEL7 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

The SSM2166 integrates a complete and flexible solution for conditioning microphone inputs in computer audio systems. It is also excellent for improving vocal clarity in communications and public address systems. A low noise, voltage-controlled amplifier (VCA) provides a gain that is dynamically adjusted by a control loop to maintain a set compression characteristic. The compression ratio is set by a single resistor and can be varied from 1:1 to over 15:1 relative to a user-defined rotation point; signals above the rotation point are limited to prevent overload and to eliminate popping. In the 1:1 compression setting, the SSM2166 can be programmed with a fixed gain of up to 20 dB; this gain is in addition to the variable gain in other compression settings. The input buffer can also be configured for front-end gains of 0 dB to 20 dB. A downward expander (noise gate) prevents amplification of noise or hum. This results in optimized signal levels prior to digitization, thereby eliminating the need for additional gain or attenuation in the digital domain that could add noise or impair accuracy of speech recognition algorithms. The compression ratio and time constants are set externally. A high degree of flexibility is provided by the VCA gain, rotation point, and noise gate adjustment pins.

The SSM2166 is an ideal companion product for audio codecs used in computer systems. The SSM2166 is available in a 14-lead SOIC package and is guaranteed for operation over the extended industrial temperature range of  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .

## Features

Complete microphone conditioner in a 14-lead package

Single 5 V operation

Adjustable noise gate threshold

Compression ratio set by external resistor

Automatic limiting feature—prevents ADC overload

Adjustable release time

Low noise and distortion

Power-down feature

20 kHz bandwidth ( $\pm 1$  dB)

## Application

Microphone preamplifiers/processors

Computer sound cards

Public address/paging systems

Communication headsets

Telephone conferencing

Guitar sustain effects generators

Computerized voice recognition

Surveillance systems

Karaoke and DJ mixers

## Related Products



### [SSM2143SZ](#)

Analog Devices, Inc  
SOIC-8



### [SSM2211SZ](#)

Analog Devices, Inc  
SOP8



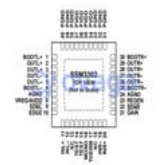
### [SSM2164S](#)

Analog Devices, Inc  
SOP-16



### [SSM2135SZ](#)

Analog Devices, Inc  
SOIC-8



### [SSM3302ACPZ](#)

Analog Devices, Inc  
LFCSP-40



### [SSM2142PZ](#)

Analog Devices, Inc  
DIP-8



### [SSM2165-1S](#)

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SOP8



### [SSM2135S](#)

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