

MM1969

2023/07/20

Outline

MM1969 contains a low noise operational amplifier with a spiral inductor.

This inductor detects a magnetic field generated when AC current flows through the power line.

MM1969 amplifies the detected electromotive force with the built-in low noise operational amplifier (the gain can be set by changing external resistance), and transmits analog signals to an external ADC and microcontroller.

This makes it possible to detect AC current in a non-contact manner.

Specifications

Operating Ambient Temperature lower limit [deg.C]	-40
Operating Ambient Temperature upper limit [deg.C]	85
VCC operating voltage lower limit [V]	3
VCC operating voltage upper limit [V]	5.5
BIAS operating voltage1 lower limit [V]	0.42
BIAS operating voltage1 upper limit [V]	1
Supply Current Tup. [mA]	0.8
Stand by supply Current max. [μA]	2
Spiral inductor DC resistance [kΩ]	32
Spiral inductor input capacitor	420

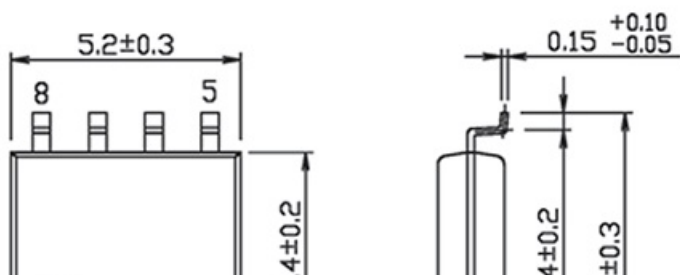
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[pF]	
Spiral inductor Cutoff frequency [KHz]	17.5
Output Voltage Noise BPF=10~30kHz Av=101 [μVrms]	50
AMP Common-mode Voltage Range lower limit [V]	0.2
AMP Common-mode Voltage Range upper limit [V]	Vcc-1.7
AMP Output Voltage H lower limit [V]	Vcc-0.3
AMP Output Voltage H upper limit [V]	Vcc
AMP Output Voltage L lower limit [V]	0
AMP Output Voltage L upper limit [V]	0.3
AMP Output Source Current lower limit [mA]	1
AMP Output Sink Current lower limit [mA]	1

Dimensional Drawing

Top View

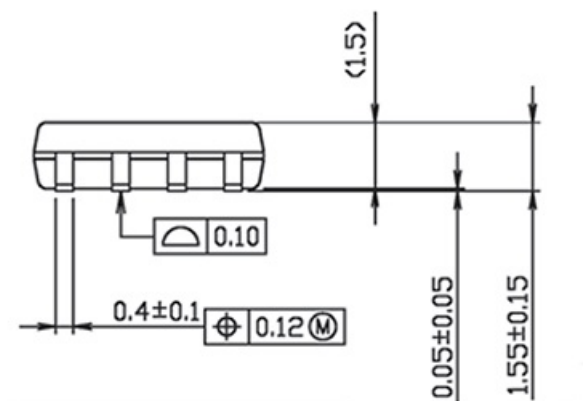
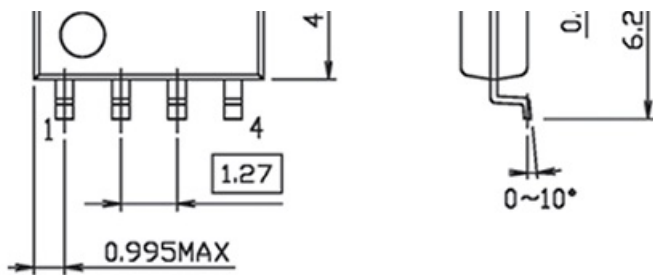


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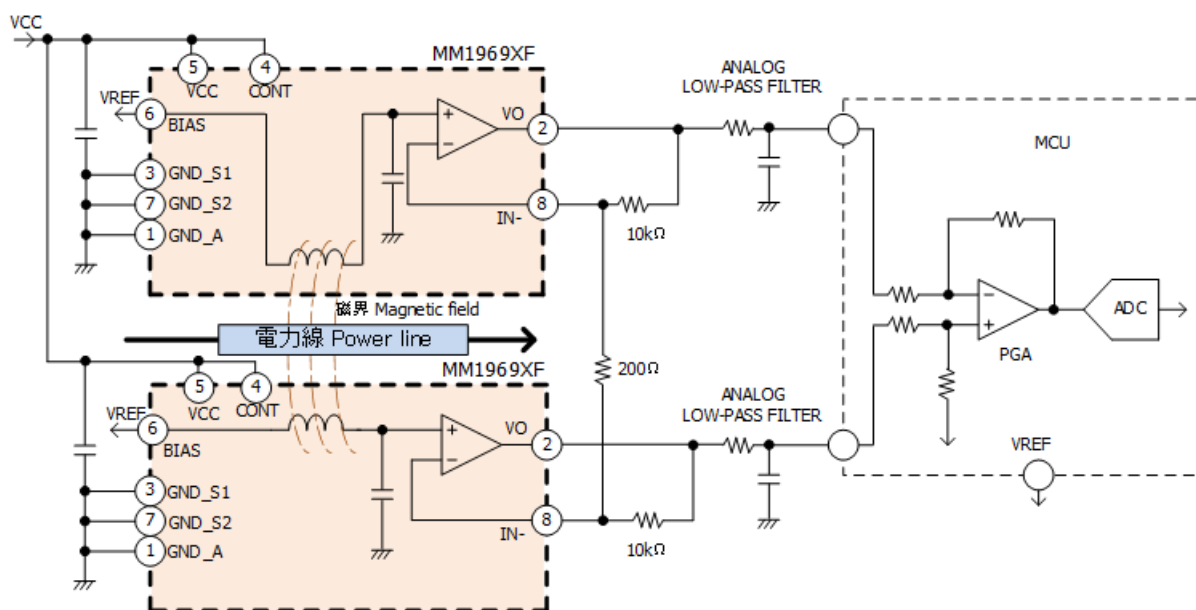
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Unit: mm

Application circuit



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Package

SOP-8G