MITSUMI

Temperature Sensor IC (Analog Output)

MM3154

Outline

This IC is a high-accuracy temperature sensor IC that can linearly output the voltage in response to changes in temperature. The operating temperature range is -40°C to 100°C. Compared to conventional thermistors and similar devices, it has superior linearity and a maximum temperature accuracy error of ± 2.5°C. It is suitable for use in portable devices as the current consumption is as low as 4.5μA typ. (Ta = 25°C)

Applications

Smart phones, Mobile phones
System temperature monitering
Office automation equipments
Flat TVs
Geme console

Features

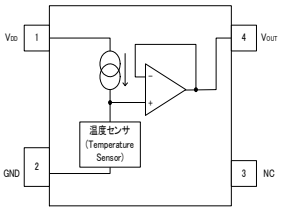
① High temperature accuracy ..... ±2.5°C
② Low current consumption ..... 4.5μA typ.
③ Wide operating supply power voltage ... 2.4V to 6.5V
④ High input stability
⑤ High load stability
⑥ Temperature-output voltage high linearity

Specification

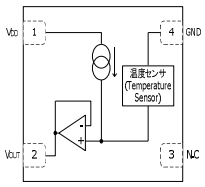
Item	Specification	Unit
Operation temperature	−40～+100	℃
Power supply	2.4～6.5	V
Power dissipation	4.5 (typ.)	μA
Temperature accuracy	±2.5 (−30～+100℃ max.)	℃
Temperature sensitivity	-8.20 (−30～+100℃ typ.)	mV/℃
Nonlinearity	±0.5 (−20～+80℃ typ.)	%
Line Regulation	0.03 max.	%/V
Load Regulation	1.0 max	mV

Block Diagram

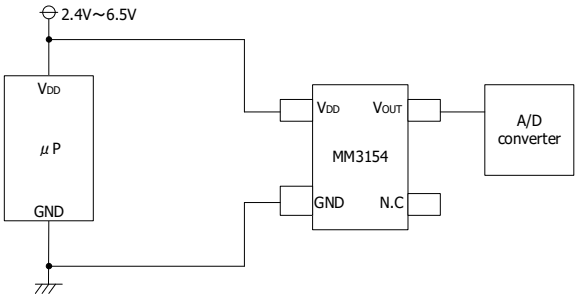
1) MM3154XU



2) MM3154XR

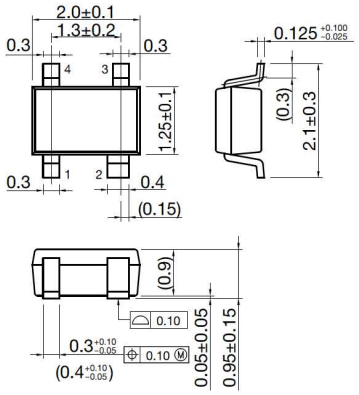


Application circuit

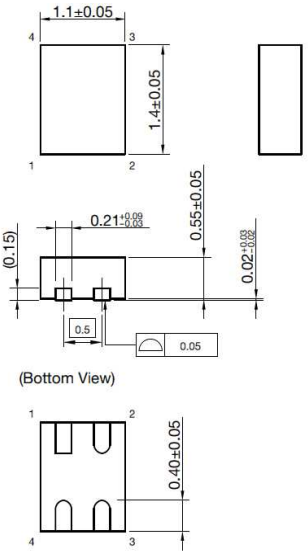


Package

1) SC-82ABB (MM3154XU)



2) SSON-4B (MM3154XR)



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