

## Analog Temperature Sensor IC

# 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  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$ . Compared to conventional thermistors and similar devices, it has superior linearity and a maximum temperature accuracy error of  $\pm 2.5^{\circ}\text{C}$ . It is suitable for use in portable devices as the current consumption is as low as  $4.5\mu\text{A}$  typ. ( $T_a = 25^{\circ}\text{C}$ )

### Applications

Smart phones, Mobile phones      Flat TVs  
System temperature monitoring      Game console  
Office automation equipments

### Features

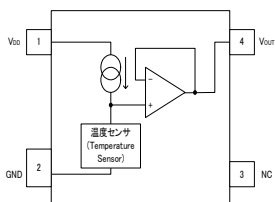
- ① High temperature accuracy .....  $\pm 2.5^{\circ}\text{C}$
- ② Low current consumption .....  $4.5\mu\text{A}$  typ.
- ③ Wide operating supply power voltage ...  $2.4\text{V}$  to  $6.5\text{V}$
- ④ High input stability
- ⑤ High load stability
- ⑥ Temperature-output voltage high linearity

### Specification

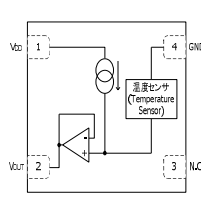
Item	Specification	Unit
Operation temperature	$-40\sim+100$	$^{\circ}\text{C}$
Power supply	$2.4\sim 6.5$	V
Power dissipation	4.5 (typ.)	$\mu\text{A}$
Temperature accuracy	$\pm 2.5$ ( $-30\sim+100^{\circ}\text{C}$ max.)	$^{\circ}\text{C}$
Temperature sensitivity	$-8.20$ ( $-30\sim+100^{\circ}\text{C}$ typ.)	$\text{mV}/^{\circ}\text{C}$
Nonlinearity	$\pm 0.5$ ( $-20\sim+80^{\circ}\text{C}$ typ.)	%
Line Regulation	0.03 max.	$\%/V$
Load Regulation	1.0 max	$\text{mV}$

### Block Diagram

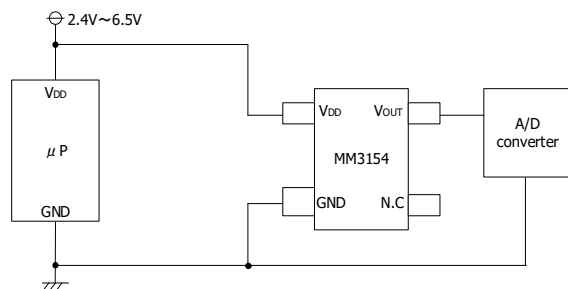
1) MM3154XU



2) MM3154XR



### Application circuit



### Package

1) SC-82ABB (MM3154XU) 2) SSON-4B (MM3154XR)

