



# Single/Dual Single-Wire Temp Sensor in SOT23-5 Using SMSC BudgetBus™ Sensor Interface

## PRODUCT FEATURES

Data Brief

### General Description

The EMC1201 and EMC1202 are temperature sensors that communicate with a host over a single-wire SMSC BudgetBus™ Sensor Interface. The EMC1201 has an internal temperature sensor and the EMC1202 adds one remote diode. Packaged in a SOT23-5, the EMC1201 provides an accurate, low-cost, low-current, solution for critical temperature monitoring in applications such as embedded systems or computers. When used in combination with an SMSC Super I/O host, such as a keyboard controller, a complete thermal management system is created. A power down mode extends battery life in portable applications. The internal 11-bit sigma delta temperature-to-digital converter provides superb linearity, high accuracy and excellent noise immunity.

PART NUMBER	INTERNAL TEMPERATURE MONITOR	EXTERNAL TEMPERATURE MONITOR
EMC1201	1	0
EMC1202	1	1

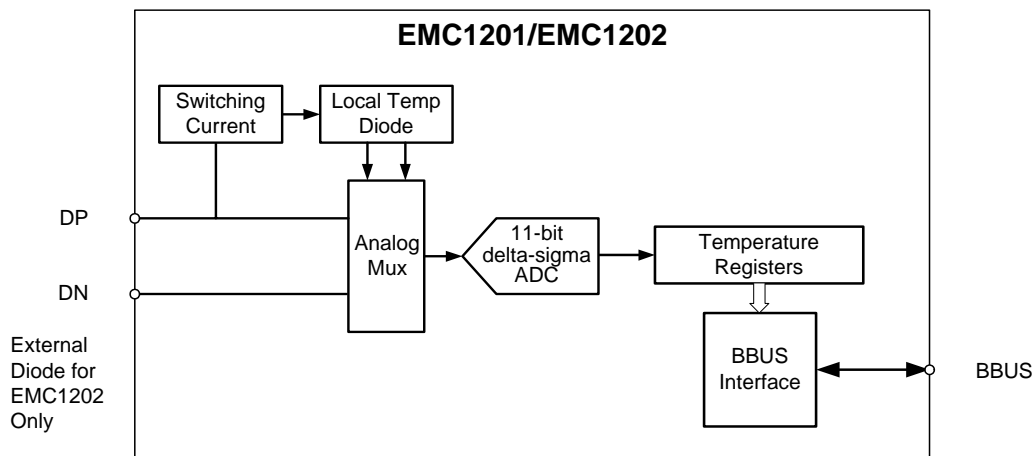
### Features

- Single-wire SMSC BudgetBus™ Sensor Interface
- Low Power, 3.0V to 3.6V Supply
  - < 50uA at 1 conversion per second
  - < 3uA in Standby
- External Temperature Sensor
  - Range -63.875° C to +191.875° C
  - 0.125° C resolution
  - ±1° C Accuracy 60° C to 100° C
  - Diode Fault Reporting
- Self Contained Internal Temperature Sensor
  - Range 0° C to +85° C
  - 0.125° C resolution
  - ±3° C Accuracy 0° C to 85° C
- SOT23-5 Lead-free RoHS Compliant Packages

### Applications

- Desktop and Notebook Computers
- Thermostats
- Smart batteries
- Industrial/Automotive
- Other Electronic Systems

### Simplified Block Diagram





**ORDER NUMBERS:**

**EMC1201-AGZQ-TR IN 5 PIN, SOT23-5 LEAD-FREE ROHS COMPLIANT PACKAGE**

**EMC1202-AGZQ-TR IN 5 PIN, SOT23-5 LEAD-FREE ROHS COMPLIANT PACKAGE**



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# Package Outline

Revision 1.0 (06-10-08)

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SMSC PartNumber

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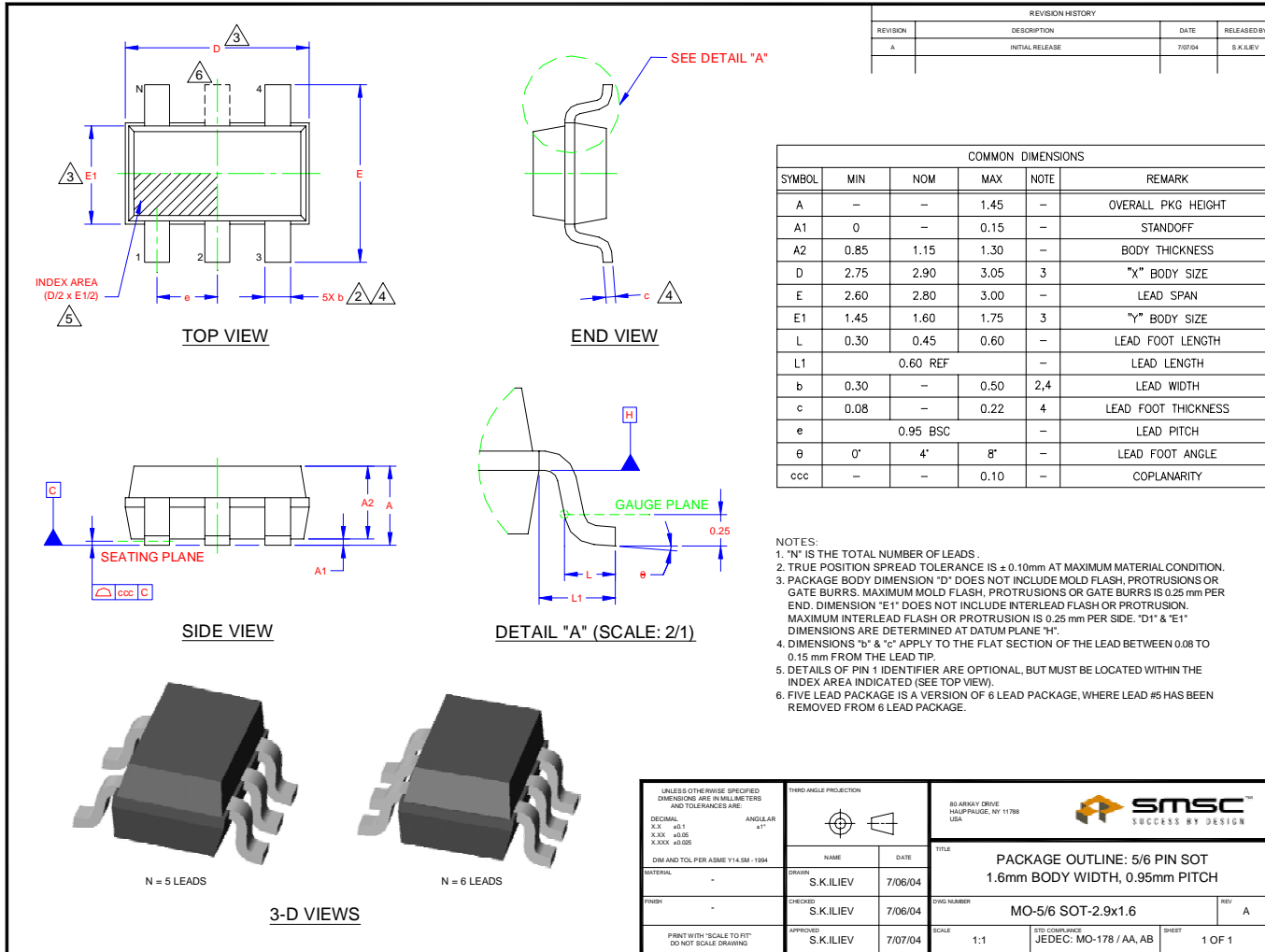


Figure 1 EMC1201/EMC1202 5 Pin SOT Package Outline; 1.6mm Body Width, 0.95mm Pitch