

## Multiple Channel 1°C Temperature Sensor with Selectable Address

### PRODUCT FEATURES

Data Brief

#### General Description

The EMC1073 and EMC1074 are high accuracy, low cost, System Management Bus (SMBus) temperature sensor with pin selectable SMBus addressings.

Each device provides  $\pm 1^\circ$  accuracy for external diode temperatures and  $\pm 2^\circ\text{C}$  accuracy for the internal diode temperature. The EMC1073 monitors three temperature channels (two external and one internal). The EMC1074 monitors four temperature channels (three external and one internal).

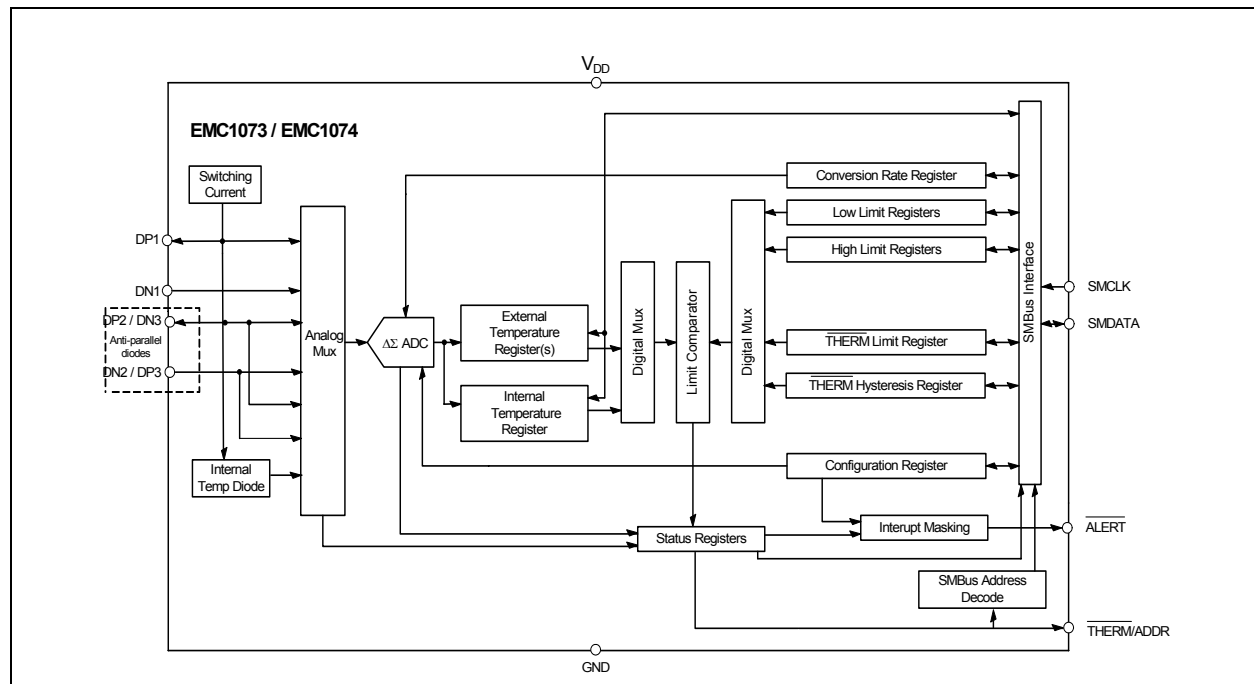
#### Applications

- Notebook Computers
- Desktop Computers
- Industrial
- Embedded applications

#### Features

- External Temperature Monitors
  - $\pm 25^\circ\text{C}$  Typ Accuracy ( $60^\circ\text{C} < T_{\text{DIODE}} < 100^\circ\text{C}$ )
  - $0.125^\circ\text{C}$  Resolution
  - Supports 2N3904 and AMD diodes
  - Anti-parallel diodes for extra diode support
- Internal Temperature Monitor
  - $\pm 0.25^\circ\text{C}$  Typ Accuracy
- 3.3V Supply Voltage
- SMBus 2.0 Compliant
  - Programmable SMBus Address
- Programmable temperature limits for ALERT and THERM
- Available in these Lead-free RoHS Compliant Packages
  - 10-pin 3mm x 3mm DFN
  - 10-pin MSOP

### Block Diagram



**ORDER NUMBERS:****EMC1073-1-AIZL-TR FOR 10-PIN, MSOP LEAD-FREE ROHS COMPLIANT PACKAGE****EMC1073-A-AIZL-TR FOR 10-PIN, MSOP LEAD-FREE ROHS COMPLIANT PACKAGE****EMC1073-1-AIA-TR FOR 10-PIN, DFN LEAD-FREE ROHS COMPLIANT PACKAGE****EMC1073-A-AIA-TR FOR 10-PIN, DFN LEAD-FREE ROHS COMPLIANT PACKAGE****EMC1074-1-AIZL-TR FOR 10-PIN, MSOP LEAD-FREE ROHS COMPLIANT PACKAGE****EMC1074-A-AIZL-TR FOR 10-PIN, MSOP LEAD-FREE ROHS COMPLIANT PACKAGE****REEL SIZE IS 4,000 PIECES**

80 ARKAY DRIVE, HAUPPAUGE, NY 11788 (631) 435-6000, FAX (631) 273-3123

Copyright © 2008 SMSC or its subsidiaries. All rights reserved.

Circuit diagrams and other information relating to SMSC products are included as a means of illustrating typical applications. Consequently, complete information sufficient for construction purposes is not necessarily given. Although the information has been checked and is believed to be accurate, no responsibility is assumed for inaccuracies. SMSC reserves the right to make changes to specifications and product descriptions at any time without notice. Contact your local SMSC sales office to obtain the latest specifications before placing your product order. The provision of this information does not convey to the purchaser of the described semiconductor devices any licenses under any patent rights or other intellectual property rights of SMSC or others. All sales are expressly conditional on your agreement to the terms and conditions of the most recently dated version of SMSC's standard Terms of Sale Agreement dated before the date of your order (the "Terms of Sale Agreement"). The product may contain design defects or errors known as anomalies which may cause the product's functions to deviate from published specifications. Anomaly sheets are available upon request. SMSC products are not designed, intended, authorized or warranted for use in any life support or other application where product failure could cause or contribute to personal injury or severe property damage. Any and all such uses without prior written approval of an Officer of SMSC and further testing and/or modification will be fully at the risk of the customer. Copies of this document or other SMSC literature, as well as the Terms of Sale Agreement, may be obtained by visiting SMSC's website at <http://www.smisc.com>. SMSC is a registered trademark of Standard Microsystems Corporation ("SMSC"). Product names and company names are the trademarks of their respective holders.

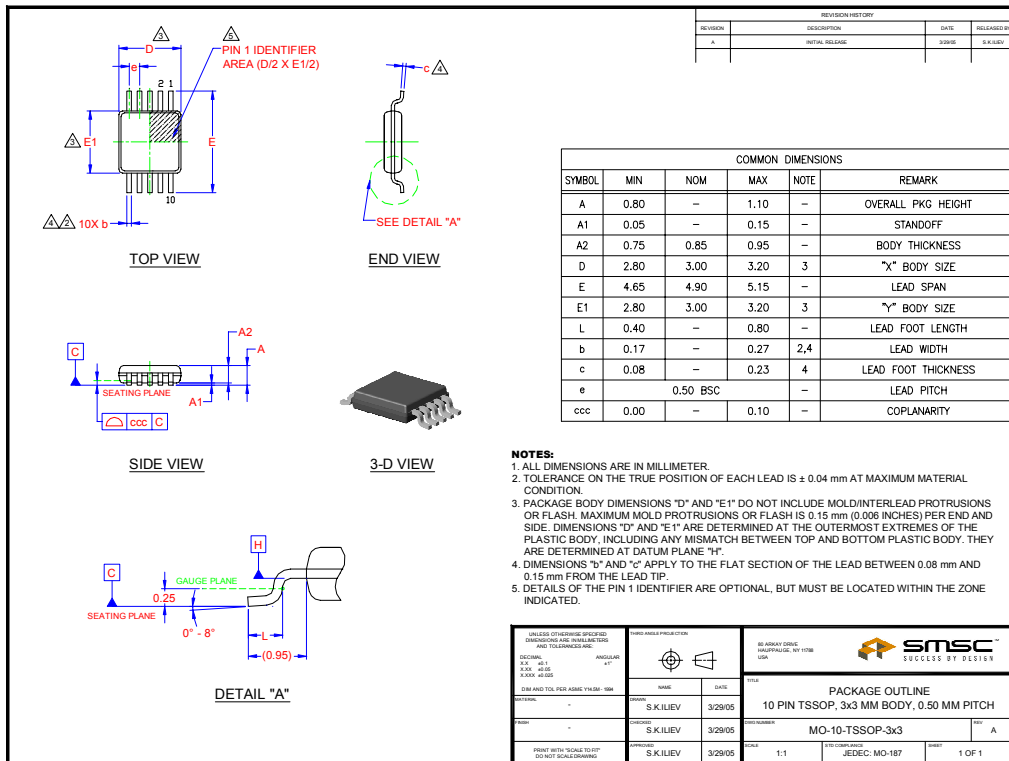
**SMSC DISCLAIMS AND EXCLUDES ANY AND ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND AGAINST INFRINGEMENT AND THE LIKE, AND ANY AND ALL WARRANTIES ARISING FROM ANY COURSE OF DEALING OR USAGE OF TRADE. IN NO EVENT SHALL SMSC BE LIABLE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES; OR FOR LOST DATA, PROFITS, SAVINGS OR REVENUES OF ANY KIND; REGARDLESS OF THE FORM OF ACTION, WHETHER BASED ON CONTRACT; TORT; NEGLIGENCE OF SMSC OR OTHERS; STRICT LIABILITY; BREACH OF WARRANTY; OR OTHERWISE; WHETHER OR NOT ANY REMEDY OF BUYER IS HELD TO HAVE FAILED OF ITS ESSENTIAL PURPOSE, AND WHETHER OR NOT SMSC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**

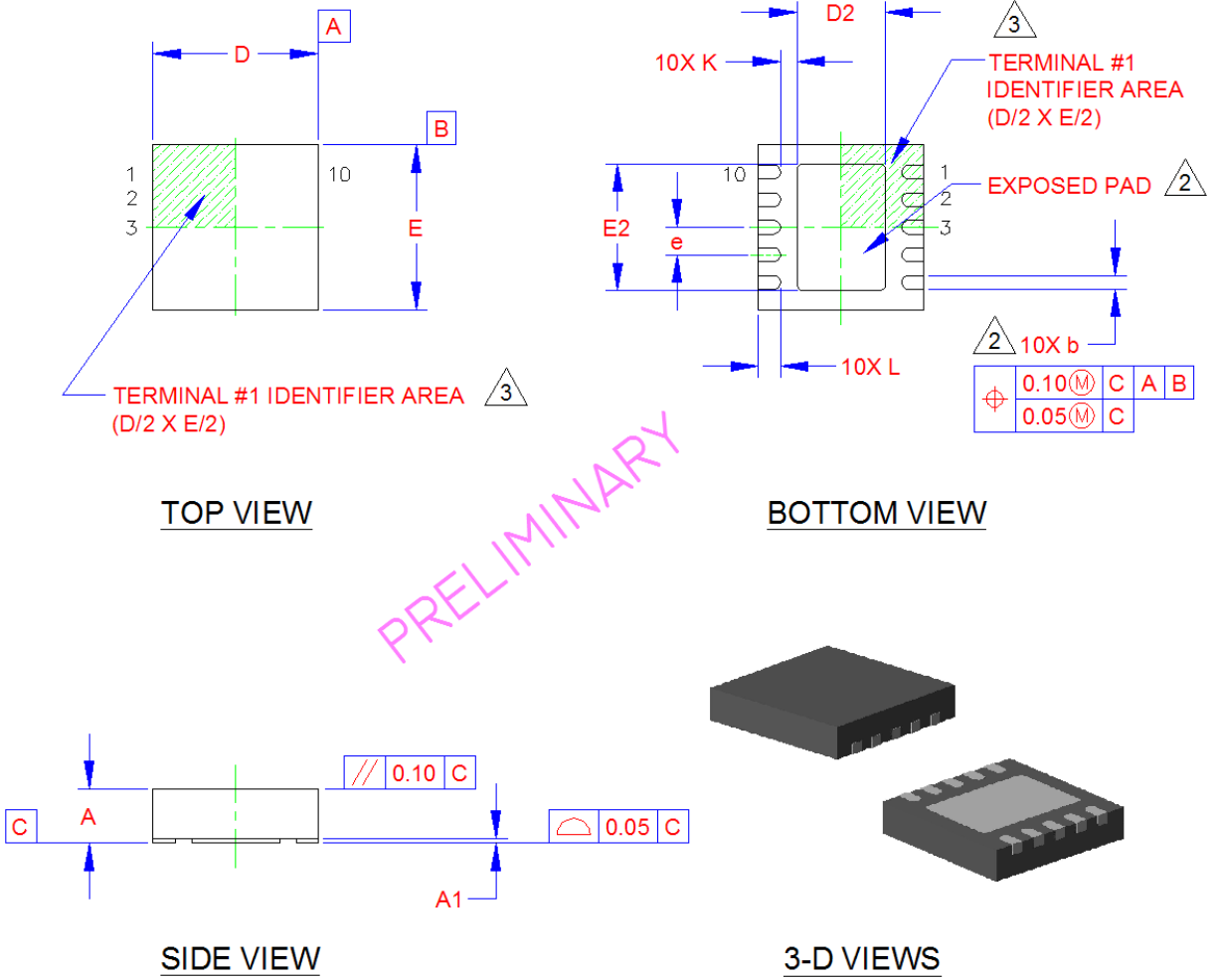
# Package Outline

Revision 1.34 (12-02-08)

PRODUCT 3 PREVIEW

SMSC EMC1073/EMC1074

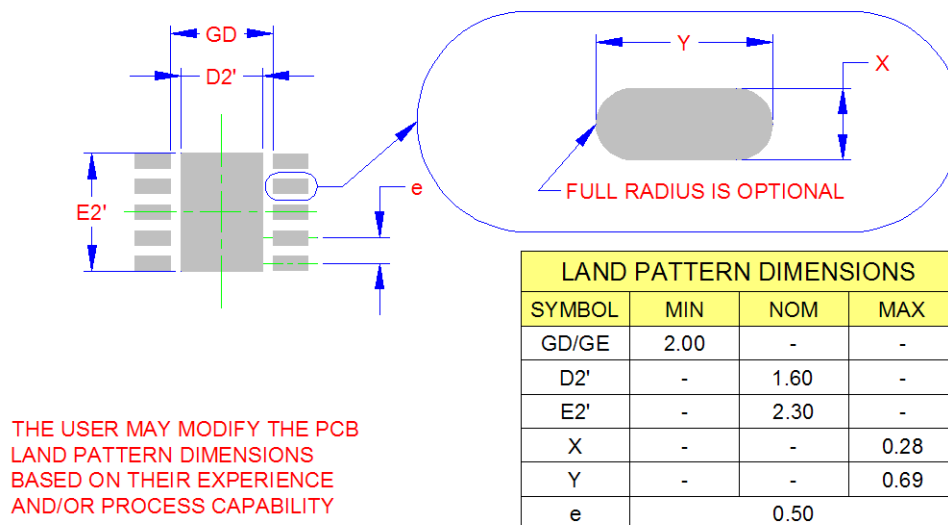



**Figure 2 10-Pin DFN Package Drawing**

COMMON DIMENSIONS					
SYMBOL	MIN	NOM	MAX	NOTE	REMARK
A	0.80	0.85	0.90	-	OVERALL PACKAGE HEIGHT
A1	0	0.02	0.05	-	STANDOFF
D/E	2.90	3.00	3.10	-	X/Y BODY SIZE
D2	1.50	1.60	1.70	2	X EXPOSED PAD SIZE
E2	2.20	2.30	2.40	2	Y EXPOSED PAD SIZE
L	0.35	0.40	0.45	-	TERMINAL LENGTH
b	0.18	0.25	0.30	2	TERMINAL WIDTH
K	0.20	-	-	-	TERMINAL TO PAD DISTANCE
e	0.50 BSC			-	TERMINAL PITCH

**NOTES:**

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. UNILATERAL COPLANARITY ZONE APPLIES TO THE EXPOSED PAD, AS WELL AS THE TERMINALS. DIMENSIONS "b" APPLIES TO PLATED TERMINALS AND IT IS MEASURED BETWEEN 0.15 AND 0.30 mm FROM THE TERMINAL TIP.
3. DETAILS OF TERMINAL #1 IDENTIFIER ARE OPTIONAL BUT MUST BE LOCATED WITHIN THE AREA INDICATED.

**Figure 3 10-Pin DFN Package Dimensions****RECOMMENDED PCB LAND PATTERN****Figure 4 10-Pin DFN PCB Foot print**