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EMC1103

SST Compliant Hardware Monitor with Three Temperature Channels

PRODUCT FEATURES

Data Brief

General Description

The EMC1103 is a one-wire sensor that is capable of monitoring up to three temperature zones for an Intel PC platform containing an SST host. The three temperature zones consist of an internal temperature diode and two externally connected temperature diodes. In cooperation with a host device, thermal management and fan control can be performed. Communication takes place over a one-wire SST based interface. The internal 11-bit delta-sigma ADC architecture provides superb linearity, high accuracy, and excellent noise immunity.

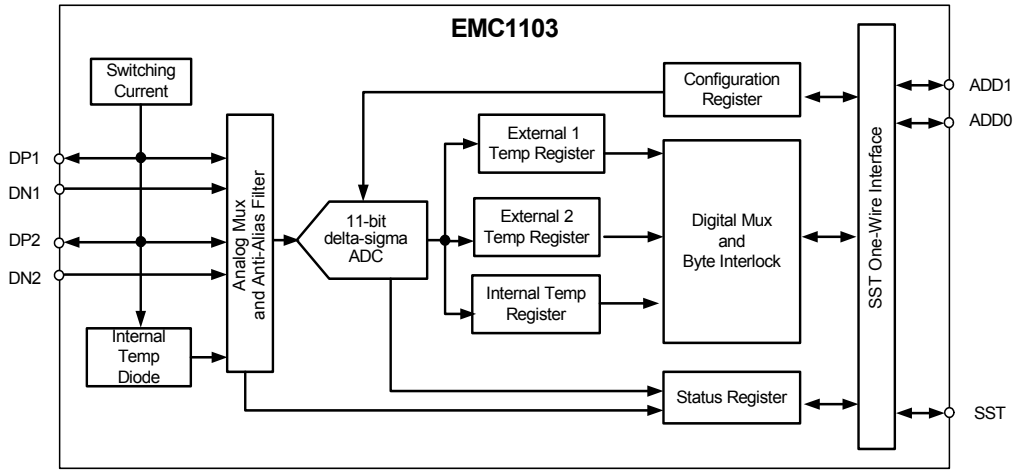
Applications

- Desktop PCs, Servers and Workstations

Features

- Single Wire Interface (SST based)
  - SST 1.0 compliant
  - Fixed Address, Discoverable Device
  - Nine programmable addresses
  - Supports FCS Abort functionality not available in SST 0.9 compliant devices
- Resistance Error Correction
- Ideality Configuration
- Beta Compensation
- Two External Temperature Monitors
  - 0.125°C resolution
  - ±1°C Accuracy (50°C to 70°C)
  - Diode Fault Reporting
  - Second External Diode configured to read a discrete diode.
- Internal Temperature Monitor
  - Range -40°C to +125°C
  - 0.125°C resolution
  - ±2°C Accuracy (40°C to 70°C)
- Supply
  - 3.0V to 3.6V

Simplified Block Diagram



ORDER NUMBER(S):

PART NUMBER	FEATURES	PACKAGE
EMC1103-AIZL-TR	External Diode 1 configured to monitor 65nm CPU External Diode 2 configured to monitor 2N3904	10 pin MSOP Lead-Free ROHS Compliant
EMC1103-1-AIZL-TR	External Diode 1 configured to monitor 2N3904 External Diode 2 configured to monitor 2N3904	10 pin MSOP Lead-Free ROHS Compliant

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

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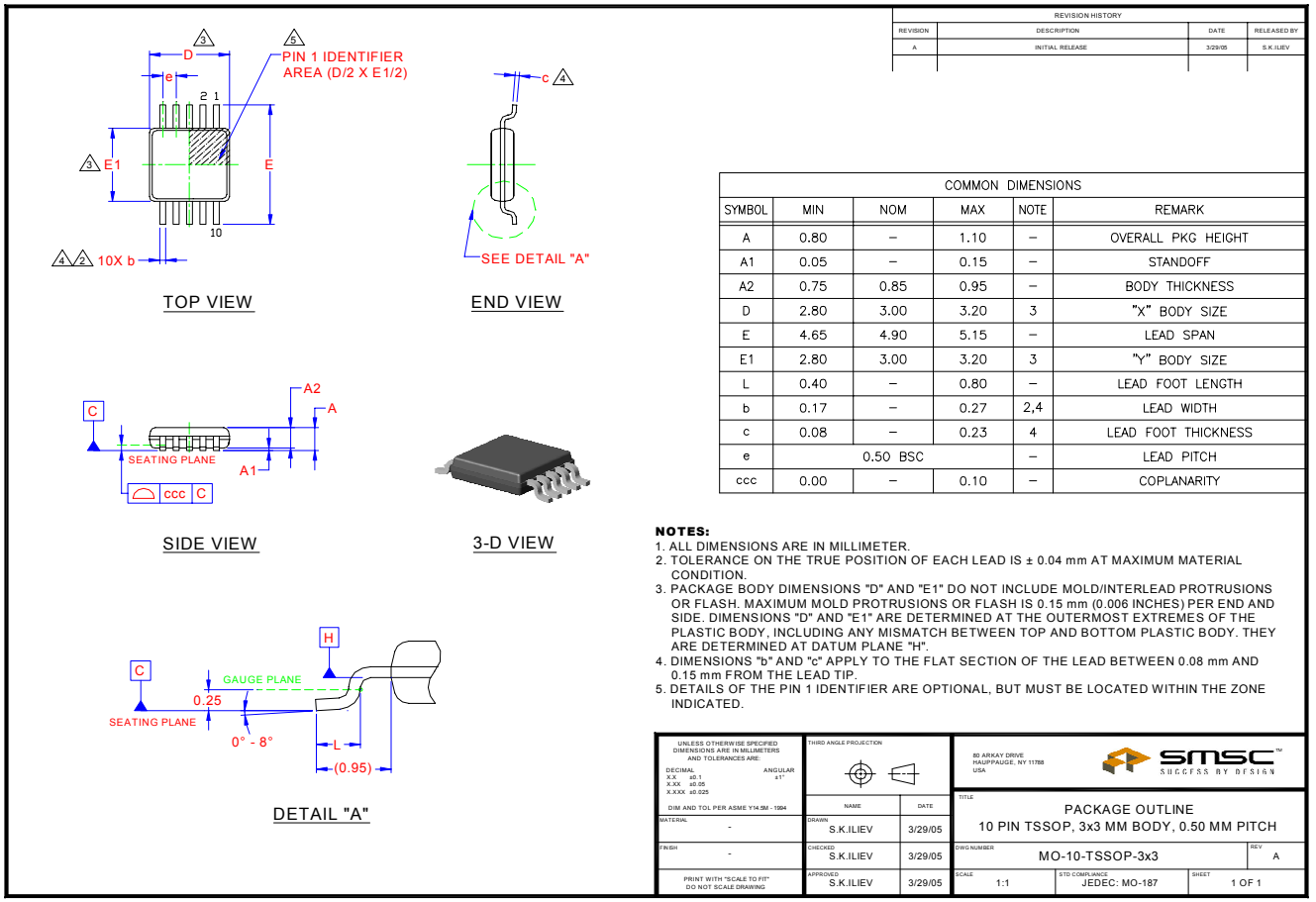
Package Outline



REVISION HISTORY

REVISION	DESCRIPTION	DATE	RELEASED BY
A	INITIAL RELEASE	3/29/05	S.K.ILIEV

COMMON DIMENSIONS

SYMBOL	MIN	NOM	MAX	NOTE	REMARK
A	0.80	–	1.10	–	OVERALL PKG HEIGHT
A1	0.05	–	0.15	–	STANDOFF
A2	0.75	0.85	0.95	–	BODY THICKNESS
D	2.80	3.00	3.20	3	"X" BODY SIZE
E	4.65	4.90	5.15	–	LEAD SPAN
E1	2.80	3.00	3.20	3	"Y" BODY SIZE
L	0.40	–	0.80	–	LEAD FOOT LENGTH
b	0.17	–	0.27	2,4	LEAD WIDTH
c	0.08	–	0.23	4	LEAD FOOT THICKNESS
e		0.50 BSC		–	LEAD PITCH
ccc	0.00	–	0.10	–	COPLANARITY

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETER.
2. TOLERANCE ON THE TRUE POSITION OF EACH LEAD IS ± 0.04 mm AT MAXIMUM MATERIAL CONDITION.
3. PACKAGE BODY DIMENSIONS "D" AND "E1" DO NOT INCLUDE MOLD/INTERLEAD PROTRUSIONS OR FLASH. MAXIMUM MOLD PROTRUSIONS OR FLASH IS 0.15 mm (0.006 INCHES) PER END AND SIDE. DIMENSIONS "D" AND "E1" ARE DETERMINED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY, INCLUDING ANY MISMATCH BETWEEN TOP AND BOTTOM PLASTIC BODY. THEY ARE DETERMINED AT DATUM PLANE "H".
4. DIMENSIONS "b" AND "c" APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN 0.08 mm AND 0.15 mm FROM THE LEAD TIP.
5. DETAILS OF THE PIN 1 IDENTIFIER ARE OPTIONAL, BUT MUST BE LOCATED WITHIN THE ZONE INDICATED.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETERS AND TOLERANCES ARE:
DECIMAL X.X ±0.1, X.XX ±0.05, X.XXX ±0.025; ANGULAR ±1°
DIM AND TOL PER ASME Y14.5M - 1994
MATERIAL -
FINISH -
PRINT WITH "SCALE TO FIT" DO NOT SCALE DRAWING

THIRD ANGLE PROJECTION

	NAME	DATE
DRAWN	S.K.ILIEV	3/29/05
CHECKED	S.K.ILIEV	3/29/05
APPROVED	S.K.ILIEV	3/29/05

80 ARKAY DRIVE
HAUPPAUGE, NY 11788
USA

SMSC SUCCESS BY DESIGN

TITLE: PACKAGE OUTLINE
10 PIN TSSOP, 3x3 MM BODY, 0.50 MM PITCH

DWG NUMBER: MO-10-TSSOP-3x3 REV: A

SCALE: 1:1 STD COMPLIANCE: JEDEC: MO-187 SHEET: 1 OF 1

Figure 1 EMC1103 10-Pin MSOP Package Drawing