File E232195
Project 04SC04679

July 20, 2004

REPORT

ON

COMPONENT - TEMPERATURE INDICATING AND REGULATING EQUIPMENT

National Semiconductor Corp.
Santa Clara, California

DESCRIPTION

PRODUCT COVERED:

Component – Temperature Sensing Integrated Circuit Device, Model LM70, followed by CI suffix, followed by LD or MM, may be followed by X, followed by –3 or –5.

ELECTRICAL RATINGS:

* **Absolute Maximum Supply Voltage -0.3V to 6.0V**
Maximum Operating Temperature: 150°C

MODEL NOMENCLATURE: LM70CILDX-3

LM70	CI	X	X	-	X
I		II	III		IV

I: Series Designation

II: Package

* LD: Encapsulated in LLP **(QFN)package without leads**
MM: Encapsulated in MSOP 8-pin package
MM package dimensions: 3.00mm x 3.00mm. height 1.10mm.

III: Shipping material

X: Device delivered in tape-and-reel external shipping material

IV: Power Supply

3: Device used with a 3.3-volt power supply
5: Device used with a 5-volt power supply

GENERAL:

When a supply voltage is applied, the integrated circuit device sends a signal to a software interface that provides a temperature reading in degrees Celsius through an Input/Output serial bus.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Conditions of Acceptability – For use only in complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

1. These devices are intended to be used only in Class 2 or Limited Energy, Low-Voltage (LELV) circuits. These devices have not been evaluated for other circuits or abnormal conditions.

2. These devices have not been evaluated for overshoot temperatures.

3. The enclosure has not been evaluated for insulation of live parts. The body of each device is considered to be a live part. The suitability of spacings between the body of these devices and other live parts shall be determined in the end product evaluation.

4. The suitability of the connection and mounting means of these devices with respect to temperature and secureness shall be determined in the end product evaluation.

5. The devices covered by this Report have undergone 6000 cycles of Endurance Testing. Although calibrated, these devices are not intended for safety (limiting) applications.

"LM70" SERIES

General – Devices consist of an IC with leads for surface mount connection. Only the following materials are controlled. Represents all models.

1. IC Chip – One provided. For models with LD suffix, overall approximately 3 by 3 by 0.8 mm. For models with MM suffix, overall approximately 4.9 by 3 by 0.86 mm.

*2. Pins – **No leads CU SN**. Length may vary. Secured to IC Chip by molding.

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