National Semiconductor

MILITARY DATA SHEET

MNLM185BY-X-1.2 REV 0AL

Original Creation Date: 08/15/95
Last Update Date: 08/15/95
Last Major Revision Date: 08/15/95

MICROPOWER VOLTAGE REFERENCE DIODE

Industry Part Number

LM185BY

NS Part Numbers

LM185BYH1.2-SMD
LM185BYH1.2/883

Prime Die

LM185BY

Processing

MIL-STD-883, Method 5004

Quality Conformance Inspection

MIL-STD-883, Method 5005

Subgrp	Description	Temp (^{O}C)
1	Static tests at	+25
2	Static tests at	+125
3	Static tests at	-55
4	Dynamic tests at	+25
5	Dynamic tests at	+125
6	Dynamic tests at	-55
7	Functional tests at	+25
8A	Functional tests at	+125
8B	Functional tests at	-55
9	Switching tests at	+25
10	Switching tests at	+125
11	Switching tests at	-55

Electrical Characteristics

DC PARAMETERS

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vref	Reverse Breakdown Voltage	Ir = 10uA			1.223	1.247	V	1
		Ir = 20uA			1.205	1.26	V	2, 3
		Ir = 1mA			1.223	1.247	V	1
					1.205	1.26	V	2, 3
		Ir = 20mA			1.223	1.247	V	1
					1.205	1.26	V	2, 3
Delta Vref/Delta Ir	Reverse Breakdown Voltage Change with Current	10uA ≤ Ir ≤ 1mA			-1.0	1.0	mV	1
		20uA ≤ Ir ≤ 1mA			-1.5	1.5	mV	2, 3
		1mA ≤ Ir ≤ 20mA			-10.0	10.0	mV	1
		1mA ≤ Ir ≤ 20mA			-20.0	20.0	mV	2, 3
Vf	Forward Bias Voltage	If = 2mA			-1.0	-0.4	V	1
Tc	Temperature Coefficient	LM185BY	1			50	ppm/C	1, 2, 3

Note 1: The average temperature coefficient is defined as the maximum deviation of reference voltage at all measured temperatures between the operating Tmax and Tmin, divided by Tmax - Tmin. The measured temperatures are -55 C, -40 C, 0 C, 25 C, 70 C, 85 C and 125 C.