National Semiconductor

MILITARY DATA SHEET

MNLM725-X REV 0BL

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OPERATIONAL AMPLIFIER

Industry Part Number

LM725

NS Part Numbers

LM725H/883

Prime Die

LM725

Processing

MIL-STD-883, Method 5004

Quality Conformance Inspection

MIL-STD-883, Method 5005

Subgrp	Description	Temp (°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

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: Vcc = ±15V, Rs = 0, Vcm = 0

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage	(No external trim)			-1	1	mV	1
					-1.5	1.5	mV	2, 3
		Rs = 10K Ohms (No external trim)			-1	1	mV	1
					-1.5	1.5	mV	2, 3
Vio(adj)	Offset Null	Rs = 10K Ohms			+3	-3	mV	1
Iio	Input Offset Current	Rs = 10K Ohms			-20	20	nA	1, 2
					-40	40	nA	3
Iib	Input Bias Current	Rs = ±10K Ohms				100	nA	1, 2
		Rs = ±10K Ohms				200	nA	3
+Avs	Open Loop Voltage Gain	Rl = 2K Ohms, Vout = 0V to 10V	2		1		M	1, 2
			2		0.25		M	3
-Avs	Open Loop Voltage Gain	Rl = 2K Ohms, Vout = 0V to -10V	2		1		M	1, 2
			2		0.25		M	3
CMRR	Common Mode Rejection Ratio	+13.5V ≥ Vcm ≥ -13.5V			110		dB	1
		+13.5V ≥ Vcm ≥ -13.5V			100		dB	2, 3
+PSRR	Power Supply Rejection Ratio	Vcc = +20V to +10V			100		dB	1
					94		dB	2, 3
-PSRR	Power Supply Rejection Ratio	Vcc = -20V to -10V			100		dB	1
					94		dB	2, 3
Vout	Output Voltage Swing	Vcc = ±22V, Vin = ±0.5V, Rl=2K Ohms			+18	-18	V	1, 2, 3
		Vin = ±0.5V, Rl = 2K Ohms			+10	-10	V	1, 2, 3
		Vin = ±0.5V, Rl =10K Ohms			+12	-12	V	1
Icc	Power Supply Current				0.5	3.5	mA	1
					0.5	3.35	mA	2
					0.5	4	mA	3
Rin	Input Resistance		1		1.2		MOhms	1
Vin	Input Voltage Range		1		±13.5		V	1, 2, 3

Electrical Characteristics

DC PARAMETERS: DRIFT VALUES

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: Vcc = ±15V, Rs = 0, Vcm = 0. "Deltas not required on B-Level product. Deltas required for S-Level product ONLY as specified on Internal Processing Instructions (IPI)."

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage	(No external trim)			-0.25	0.25	mV	1
		Rs = 10K Ohms (No external trim)			-0.25	0.25	mV	1
Iio	Input Offset Current	Rs = 10K Ohms			-3	3	nA	1
Iib	Input Bias Current	Rs = ±10K Ohms			-5	5	nA	1

Note 1: Parameter tested go-no-go only.
Note 2: Avs = Reading (M) X 10(6).

National Semiconductor was acquired by Texas Instruments.

http://www.ti.com/corp/docs/investor_relations/pr_09_23_2011_national_semiconductor.html

This file is the datasheet for the following electronic components:

LM725 MD8 - http://www.ti.com/product/lm725 md8?HQS=TI-null-null-dscatalog-df-pf-null-wwe

LM725CH - http://www.ti.com/product/lm725ch?HQS=TI-null-null-dscatalog-df-pf-null-wwe

LM725H/883 - http://www.ti.com/product/lm725h/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe

LM725CN - http://www.ti.com/product/lm725cn?HQS=TI-null-null-dscatalog-df-pf-null-wwe

LM725AH/883 - http://www.ti.com/product/lm725ah/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe

LM725 MW8 - http://www.ti.com/product/lm725 mw8?HQS=TI-null-null-dscatalog-df-pf-null-wwe