

MILITARY DATA SHEET

MNLM725-X REV 0BL

Original Creation Date: 08/04/95
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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: $V_{cc} = \pm 15V$, $R_s = 0$, $V_{cm} = 0$

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
		$R_s = 10K\ \Omega$ (No external trim)			-1	1	mV	1
					-1.5	1.5	mV	2, 3
Vio(adj)	Offset Null	$R_s = 10K\ \Omega$			+3	-3	mV	1
Iio	Input Offset Current	$R_s = 10K\ \Omega$			-20	20	nA	1, 2
					-40	40	nA	3
Iib	Input Bias Current	$R_s = \pm 10K\ \Omega$				100	nA	1, 2
		$R_s = \pm 10K\ \Omega$				200	nA	3
+Avs	Open Loop Voltage Gain	$R_l = 2K\ \Omega$, $V_{out} = 0V$ to $10V$	2		1		M	1, 2
			2		0.25		M	3
-Avs	Open Loop Voltage Gain	$R_l = 2K\ \Omega$, $V_{out} = 0V$ to $-10V$	2		1		M	1, 2
			2		0.25		M	3
CMRR	Common Mode Rejection Ratio	$+13.5V \geq V_{cm} \geq -13.5V$			110		dB	1
		$+13.5V \geq V_{cm} \geq -13.5V$			100		dB	2, 3
+PSRR	Power Supply Rejection Ratio	$V_{cc} = +20V$ to $+10V$			100		dB	1
					94		dB	2, 3
-PSRR	Power Supply Rejection Ratio	$V_{cc} = -20V$ to $-10V$			100		dB	1
					94		dB	2, 3
Vout	Output Voltage Swing	$V_{cc} = \pm 22V$, $V_{in} = \pm 0.5V$, $R_l = 2K\ \Omega$			+18	-18	V	1, 2, 3
		$V_{in} = \pm 0.5V$, $R_l = 2K\ \Omega$			+10	-10	V	1, 2, 3
		$V_{in} = \pm 0.5V$, $R_l = 10K\ \Omega$			+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		M Ω	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: $V_{cc} = \pm 15V$, $R_s = 0$, $V_{cm} = 0$. "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
		$R_s = 10K \text{ Ohms}$ (No external trim)			-0.25	0.25	mV	1
Iio	Input Offset Current	$R_s = 10K \text{ Ohms}$			-3	3	nA	1
Iib	Input Bias Current	$R_s = \pm 10K \text{ Ohms}$			-5	5	nA	1

Note 1: Parameter tested go-no-go only.

Note 2: $A_{vs} = \text{Reading (M)} \times 10(6)$.