



MILITARY DATA SHEET

MNLM710-X REV 1AL

Original Creation Date: 04/17/96
Last Update Date: 06/28/96
Last Major Revision Date: 06/24/96

VOLTAGE COMPARATOR

Industry Part Number

LM710

NS Part Numbers

LM710H-MLS
LM710H/883

Prime Die

LM710

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 = 12V, -Vcc = -6V

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage	Vo=1.8V(-55 C); 1.4V(25 C); 1V(125 C); Rs≤200 Ohms			-2	2	mV	1
		Vo=1.8V(-55 C); 1.4V(25 C); 1V(125 C); Rs≤200 Ohms			-3	3	mV	2, 3
Iio	Input Offset Current	Vo as in Vio	3		-3	3	uA	1, 2
			3		-7	7	uA	3
Iib	Input Bias Current	Vo as in Vio			-20	20	uA	1
					-40	40	uA	2, 3
CMRR	Common Mode Rejection Ratio	Vin=10V(p-p), (1mV maximum =80dB minimum)			80		dB	1, 2, 3
Voh	Positive Output Level	Vin = 5mV, Ioh = -5mA			2.5	4	V	1
					2.4	4	V	2, 3
Vol	Negative Output Level	Vin = 5mV, Iol = 0mA			-1	-0	V	1, 2, 3
Isink	Output Sink Current	Vin = 5mV, Vout = 0V			2		mA	1
					0.5		mA	2
					1		mA	3
I+	Positive Supply Current	Vo = 1.4V				9	mA	1, 2, 3
I-	Negative Supply Current	Vo = 1.4V			-7		mA	1, 2, 3
Delta Vio/Delta T	Input Offset Voltage Sensitivity	25 C ≤ T ≤ 125 C	2		-10	10	uV/	2
		-55 C ≤ T ≤ 25 C	2		-10	10	uV/	3
Delta Iio/Delta T	Input Offset Current Sensitivity	25 C ≤ T ≤ 125 C	2		-25	25	nA/	2
		-55 C ≤ T ≤ 25 C	2		-75	75	nA/	3
Pd	Power Dissipation	Vo = 1.4V				150	mW	1, 2, 3
Rout	Output Resistance	Vo = 1.4V(K0=K Ohm)				500	Ohm	1
Vin	Input Voltage Range		1		±5		V	1, 2, 3
Avs	Voltage Gain	(Open Loop)(1.25K=1250V/V)			1.25K		V/V	4
					1K		V/V	5, 6

Electrical Characteristics

DC PARAMETERS: DRIFT VALUES

(The following conditions apply to all the following parameters, unless otherwise specified.)

DC: +Vcc = 12V, -Vcc = -6V. Drift Values calculated from Pre Burn-In to Post Burn-In parametric data.
Performed as a 100% screen on "Space" Level product "ONLY".

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage	Vo=1.8V(-55 C); 1.4V(25 C); 1V(125 C); Rs = $\leq$ 200 Ohms			-0.5	0.5	mV	1
Iio	Input Offset Current	Vo as in Vio			-1	1	uA	1
Iib	Input Bias Current	Vo as in Vio			-3.5	3.5	uA	1

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

Note 2: Guaranteed parameter, not tested.

Note 3: To compensate for test box resistance, the datalog limits are 20 times the actual limits. For actual values & for doing drift limits calculations, divide the datalog readings by 20.