



MILITARY DATA SHEET

MNLM106-X REV 0BL

Original Creation Date: 06/23/95
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VOLTAGE COMPARATOR

Industry Part Number

LM106

NS Part Numbers

LM106H/883
LM106W/883

Prime Die

LM106

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: $V_+ = 12V$, $V_- = -6V$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
I _{cex}	Output Leakage Current	$V_{in} \geq 5mV$, $8V \leq V_{out} \leq 24V$				1	uA	1, 3
		$V_{in} \geq 5mV$, $8V \leq V_{out} \leq 24V$				100	uA	2
I _{cc+}	Positive Supply Current	$V_{in} = -5mV$, $V_- = -12V$				10	mA	1, 2, 3
I _{cc-}	Negative Supply Current	$V_- = -12V$, $V_{in} = -5mV$				-3.6	mA	1, 2, 3
V _{oh} (MIN)	Logical "1" Output Voltage	I _{oh} = -400uA, $V_{in} \geq 5mV$			2.5	5.5	V	1, 2, 3
V _{ol}	Logical "0" Output Voltage	I _{ol} = 16mA, $V_{in} \leq -5mV$				0.4	V	1, 2, 3
V _{sat}	(Saturation Voltage)	I _{ol} = 50mA, $V_{in} \leq -5mV$				1	V	1, 2, 3
		I _{ol} = 100mA, $V_{in} \leq -5mV$				1.5	V	1
I _{strobe}	Strobe Current	V _{strobe} = 0.4V				-3.2	mA	1, 2, 3
I _{bias}	Input Bias Current	$V_- = -12V$, V _{strobe} = 2.5V				20	uA	1, 2
						45	uA	3
V _{diff}	Differential Input Voltage Range		1		± 5		V	1, 2, 3
V _{io}	Input Offset Voltage	$V_- = -12V$, $0.5V \leq V_{out} \leq 4.4V$, $-5V \leq V_{cm} \leq +5V$				± 2	mV	1
		$V_- = -12V$, $0.5V \leq V_{out} \leq 4.4V$, $-5V \leq V_{cm} \leq +5V$				± 3	mV	2, 3
I _{io}	Input Offset Voltage	$V_- = -12V$, $0.5V \leq V_{out} \leq 4.4V$, $-5V \leq V_{cm} \leq 5V$				± 3	uA	1, 2
		$V_- = -12V$, $0.5V \leq V_{out} \leq 4.4V$, $-5V \leq V_{cm} \leq 5V$				± 7	uA	3
V _{strobeL}	Strobe On Voltage		1		0.9		V	1, 2, 3
V _{strobeH}	Strobe Off Voltage		1			2.2	V	1, 2, 3
V _{in}	Input Voltage Range	$-7V \geq V_- \geq -12V$, $V_+ = 12V$	1		± 5		V	1, 2, 3

Electrical Characteristics

AC PARAMETERS

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

AC: $V_+ = 12V$, $V_- = -6V$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
t _{RHLC}		R _L = 500 Ohms to +5V, C _L = 70pF, 50mV Overdrive	2, 3			40	nS	7
			2, 3			60	nS	8A, 8B
t _{RLHC}		R _L = 500 Ohms to +5V, C _L = 70pF, 50mV Overdrive	2, 3			40	nS	7
			2, 3			60	nS	8A, 8B

DC PARAMETERS: DRIFT VALUES

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

DC: $V_+ = 12V$, $V_- = -6V$. "Deltas not required on B-Level product. Deltas required for S-Level product ONLY as specified on Internal Processing Instructions (IPI)."

I _{bias}	Input Bias Current	$V_- = -12V$, $V_{strobe} = 2.5V$			-5	5	uA	1
V _{io}	Input Offset Voltage	$V_- = -12V$, $0.5V \leq V_{out} \leq 4.4V$, $-5V \leq V_{cm} \leq +5V$			-1	1	mV	1

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

Note 2: Guaranteed but not tested @ +125 C & -55 C

Note 3: Optional test method: parameters can be bench tested per (SG)THP-2-100.

Graphics and Diagrams

GRAPHICS#	DESCRIPTION
W14BRK	(blank)

See attached graphics following this page.