



MICROCIRCUIT DATA SHEET

MNLM759-X REV OBL

Original Creation Date: 08/07/95
Last Update Date: 10/13/97
Last Major Revision Date: 08/07/95

POWER OPERATIONAL AMPLIFIER

Industry Part Number

LM759

NS Part Numbers

LM759H/883*

Prime Die

LM759

Controlling Document

5962-9086201MGA*

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: $V_{cc} = \pm 15V$, $V_{cm} = 0V$, $R_s = 50 \text{ Ohms}$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS	
Vio	Input Offset Voltage				-3	3	mV	1	
					-4.5	4.5	mV	2, 3	
		Rs = 10K Ohms				-3	3	mV	1
						-4.5	4.5	mV	2, 3
Iio	Input Offset Current				-30	30	nA	1	
					-60	60	nA	2, 3	
Iib+	Input Bias Current					150	nA	1	
						300	nA	2, 3	
Iib-	Input Bias Current					150	nA	1	
						300	nA	2, 3	
PSRR	Power Supply Rejection Ratio	$V_{cc} = \pm 5V \text{ to } \pm 18V$, $R_s = 10K$	1			100	$\mu V/V$	1, 2, 3	
CMRR	Common Mode Rejection Ratio	$-15V \leq V_{cm} \leq +13V$, $R_s = 10K$			80		dB	1	
		$-14.5V \leq V_{cm} \leq +13V$, $R_s = 10K$			80		dB	2, 3	
Vioadj+	Offset Null				6		mV	1	
Vioadj-	Offset Null					-6	mV	1	
Icc	Power Supply Current	$V_{out} = 0V$				18	mA	1, 2, 3	
Ipk+	Ipeak+	$-12V \leq V_o \leq -5V$	3		325		mA	1, 3	
		$-12V \leq V_o \leq -5V$	3		180		mA	2	
Ipk-	Ipeak-	$+5V \leq V_o \leq +12$	3			-325	mA	1, 3	
		$+5V \leq V_o \leq +12$	3			-180	mA	2	
Ri	Input Resistance		4		250		KOhm	1	
Vir	Input Voltage Value		5		-15	+13	V	1	

Electrical Characteristics

AC PARAMETERS

(The following conditions apply to all the following parameters, unless otherwise specified.)
 AC: $V_{cc} = \pm 15V$, $V_{cm} = 0V$, $R_s = 50 \text{ Ohms}$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vop+	Output Voltage Swing	$R_l = 50 \text{ Ohms}$			10		V	4, 5, 6
Vop-	Output Voltage Swing	$R_l = 50 \text{ Ohms}$				-10	V	4, 5, 6
Avs+	Large Signal Voltage Gain	$R_l = 50 \text{ Ohms}$, $V_o = 0 \text{ to } 10V$	2		50		K	4
			2		25		K	5, 6
Avs-	Large Signal Voltage Gain	$R_l = 50 \text{ Ohms}$, $V_o = 0 \text{ to } -10V$	2		50		K	4
			2		25		K	5, 6

Note 1: Datalog in $\mu V/V$.

Note 2: Datalog in $V/mV = K$.

Note 3: $V_o = \pm 12V$ guaranteed by testing at worst case $V_o = \pm 5V$.

Note 4: Guaranteed by Iib test, $R_I = 4.0 \text{ VT/Iib}$, $V_t = 26mV$ at 25 C.

Note 5: Guaranteed by CMRR testing.

Revision History

Rev	ECN #	Rel Date	Originator	Changes
0BL	M0002125	10/13/97	Barbara Lopez	Initial Release to MDS: MNLM759-X Rev. 0BL for Lifetime Buy.