



MICROCIRCUIT DATA SHEET

MNLF441M-X REV 0BL

Original Creation Date: 06/21/95
Last Update Date: 03/17/97
Last Major Revision Date: 06/21/95

LOW POWER JFET INPUT OPERATIONAL AMPLIFIER

Industry Part Number

LF441

NS Part Numbers

LF441MH/883

Prime Die

LF441

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: $V_s = \pm 15V$, $V_{cm} = 0$, $R_s = 0$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage	$R_s = 10K\ \Omega$ ms			-5	5	mV	1
					-7.5	7.5	mV	2, 3
Iio	Input Offset Current		2		-0.05	0.05	nA	1
			2		-10	10	nA	2
Iib+	Input Bias Current		2		-0.1	0.1	nA	1
			2		-20	20	nA	2
Iib-	Input Bias Current		2		-0.1	0.1	nA	1
			2		-20	20	nA	2
CMRR	Common Mode Rejection Ratio	$R_s \leq 10K\ \Omega$ ms, $V_{cm} = \pm 9V$			70		dB	1, 2, 3
PSRR+	Supply Voltage Rejection Ratio	$+V_s=6V$, $-V_s=-15V$			70		dB	1, 2, 3
PSRR-	Supply Voltage Rejection Ratio	$+V_s=15V$, $-V_s=-6V$			70		dB	1, 2, 3
Is	Supply Current					0.25	mA	1, 2, 3
-Ios	Output Short Circuit Current	$+V_{in} = -11V$, $-V_{in} = 11V$, $R_s = 10K\ \Omega$ ms			3	20	mA	1
					3	40	mA	2, 3
+Ios	Output Short Circuit Current	$+V_{in} = +11V$, $-V_{in} = -11V$, $R_s = 10K\ \Omega$ ms			-20	-3	mA	1
					-40	-3	mA	2, 3
+Vioadj	Input Offset Voltage Adjustment				7.5		mV	1
-Vioadj	Input Offset Voltage Adjustment					-7.5	mV	1
Vcm	Input Common Mode Voltage Range		1		± 9		V	1, 2, 3
+Avs	Large Signal Voltage Gain	$V_o = 0$ to $10V$, $R_l = 10K\ \Omega$ ms	3		25		V/mV	4
			3		15		V/mV	5, 6
-Avs	Large Signal Voltage Gain	$V_o = 0$ to $-10V$, $R_l = 10K\ \Omega$ ms	3		25		V/mV	4
			3		15		V/mV	5, 6
Vo+	Output Voltage Swing	$R_l = 10K\ \Omega$ ms, $R_s = 10K\ \Omega$ ms			12		V	4, 5, 6
Vo-	Output Voltage Swing	$R_l = 10K\ \Omega$ ms, $R_s = 10K\ \Omega$ ms				-12	V	4, 5, 6

Electrical Characteristics

AC PARAMETERS

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

AC: $V_s = \pm 15V$, $V_{cm} = 0$, $R_s = 0$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Sr+	Slew Rate	$V_{out} = -5V$ to $+5V$			0.6		V/ μ S	7
Sr-	Slew Rate	$V_{out} = +5V$ to $-5V$			0.6		V/ μ S	7
Gbw	Gain Bandwidth Product	No Subgroups			0.6		MHz	

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

Note 2: $R_s = 10K$ Ohms @ $+125$ C.

Note 3: V/mV in units column equivalent to K in datalog.

Graphics and Diagrams

GRAPHICS#	DESCRIPTION
05262HR	(blank)
J08ARL	CERDIP (J), 8 LEAD (P/P DWG)

See attached graphics following this page.

