

MNLF156-X REV OBL

Original Creation Date: 06/20/95
 Last Update Date: 12/10/96
 Last Major Revision Date: 06/20/95

MONOLITHIC JFET INPUT OPERATIONAL AMPLIFIERS

Industry Part Number

LF156

NS Part Numbers

LF156H/883

Prime Die

LF156

Processing

MIL-STD-883, Method 5004

Quality Conformance Inspection

MIL-STD-883, Method 5005

Subgrp Description

Temp (°C)

	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				-5	5	mV	1
					-7	7	mV	2, 3
		$V_{cc} = \pm 20V$			-5	5	mV	1
		$V_{cc} = \pm 20V$			-7	7	mV	2, 3
Iio	Input Offset Current	$V_{cc} = \pm 20V$			-0.02	0.02	nA	1
		$V_{cc} = \pm 20V$			-20	20	nA	2, 3
+Iib	Input Bias Current	$V_{cc} = \pm 20V$			-0.1	0.1	nA	1
		$V_{cc} = \pm 20V$			-10	50	nA	2, 3
		$V_{cc} = \pm 20V$, $V_{cm} = -16V$			-0.1	0.1	nA	1
		$V_{cc} = \pm 20V$, $V_{cm} = -16V$			-10	50	nA	2, 3
		$V_{cc} = \pm 20V$, $V_{cm} = 16V$			-0.1	3.5	nA	1
		$V_{cc} = \pm 20V$, $V_{cm} = 16V$			-10	60	nA	2, 3
-Iib	Input Bias Current	$V_{cc} = \pm 20V$			-0.1	0.1	nA	1
		$V_{cc} = \pm 20V$			-10	50	nA	2, 3
		$V_{cc} = \pm 20V$, $V_{cm} = -16V$			-0.1	0.1	nA	1
		$V_{cc} = \pm 20V$, $V_{cm} = -16V$			-10	50	nA	2, 3
		$V_{cc} = \pm 20V$, $V_{cm} = 16V$			-0.1	3.5	nA	1
		$V_{cc} = \pm 20V$, $V_{cm} = 16V$			-10	60	nA	2, 3
+PSRR	Power Supply Rejection Ratio	$+V_{cc} = 20V \text{ to } 10V$, $-V_{cc} = -20V$			85		dB	1, 2, 3
-PSRR	Power Supply Rejection Ratio	$-V_{cc} = -20V \text{ to } -10V$, $+V_{cc} = 20V$			85		dB	1, 2, 3
CMRR	Common Mode Rejection Ratio	$V_{cm} = \pm 11V$			85		dB	1, 2, 3
Icc	Power Supply Current					7	mA	1
						14	mA	2, 3
+Ios	Short Circuit Current	$V_{out} = 0V$			-45	-15	mA	1
					-35	-10	mA	2
					-65	-15	mA	3
-Ios	Short Circuit Current	$V_{out} = 0V$			15	45	mA	1
					10	35	mA	2
					15	65	mA	3

Electrical Characteristics

DC PARAMETERS (Continued)

(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
V _{cm}	V _{cm} Voltage Range		1		-11	11	V	1, 2, 3

AC PARAMETERS

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

+V _{op}	Output Voltage Swing	R _l = 10K Ohms			12		V	4, 5, 6
		R _l = 2K Ohms	1		10		V	4, 5, 6
-V _{op}	Output Voltage Swing	R _l = 10K Ohms				-12	V	4, 5, 6
		R _l = 2K Ohms	1			-10	V	4, 5, 6
A _{vs}	Large Signal Voltage Gain	R _l = 2K Ohms, V _{out} = 0 to 10V			50		V/mV	4
					25		V/mV	5, 6
		R _l = 2K Ohms, V _{out} = 0 to -10V			50		V/mV	4
					25		V/mV	5, 6
Sr _±	Slew Rate	A _v = 1			7.5		V/uS	9

DC PARAMETERS: DRIFT VALUES

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: $V_{cc} = \pm 15V$, $V_{cm} = 0V$, $R_s = 50 \text{ Ohms}$. "Deltas not required on B-Level product. Deltas required for S-Level product ONLY as specified on Internal Processing Instructions (IPI)."

V _{io}	Input Offset Voltage				-1.2	1.2	mV	1
I _{cc}	Power Supply Current				-1	1	mA	1

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

Graphics and Diagrams

GRAPHICS#	DESCRIPTION
05094HR	(blank)
H08CRE	(blank)

See attached graphics following this page.