National Semiconductor

MILITARY DATA SHEET

MNLF155-X REV 0BL

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MONOLITHIC JFET INPUT OPERATIONAL AMPLIFIERS

Industry Part Number

LF155

NS Part Numbers

LF155H/883

Prime Die

LF155

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: Rs = 50 Ohms, Vcc= ±15V, Vcm = 0V

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage				-5	5	mV	1
					-7	7	mV	2, 3
		Vcc = ±20V			-5	5	mV	1
		Vcc = ±20V			-7	7	mV	2, 3
Iio	Input Offset Current	Vcc = ±20V			-0.02	0.02	nA	1
		Vcc = ±20V			-20	20	nA	2, 3
+Iib	Input Bias Current	Vcc = ±20V			-0.1	0.1	nA	1
		Vcc = ±20V			-10	50	nA	2, 3
		Vcc = ±20V, Vcm = -16V			-0.1	0.1	nA	1
		Vcc = ±20V, Vcm = -16V			-10	50	nA	2, 3
		Vcc = ±20V, Vcm = 16V			-0.1	3.5	nA	1
		Vcc = ±20V, Vcm = 16V			-10	60	nA	2, 3
-Iib	Input Bias Current	Vcc = ±20V			-0.1	0.1	nA	1
		Vcc = ±20V			-10	50	nA	2, 3
		Vcc = ±20V, Vcm = -16V			-0.1	0.1	nA	1
		Vcc = ±20V, Vcm = -16V			-10	50	nA	2, 3
		Vcc = ±20V, Vcm = 16V			-0.1	3.5	nA	1
		Vcc = ±20V, Vcm = 16V			-10	60	nA	2, 3
+PSRR	Power Supply Rejection Ratio	+Vcc = 20V to 10V, -Vcc = -20V			85		dB	1, 2, 3
-PSRR	Power Supply Rejection Ratio	-Vcc = -20V to -10V, +Vcc = 20V			85		dB	1, 2, 3
CMRR	Common Mode Rejection Ratio	Vcm = ±11V			85		dB	1, 2, 3
Icc	Power Supply Current					4	mA	1
						14	mA	2, 3
+Ios	Short Circuit Current	Vout = 0V			-45	-15	mA	1
					-35	-10	mA	2
					-65	-15	mA	3
-Ios	Short Circuit Current	Vout = 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: Rs = 50 Ohms, Vcc= ±15V, Vcm = 0V

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vcm	VCM Voltage Range		1		-11	11	V	1, 2, 3
+Vop	Output Voltage Swing	Rl = 10K Ohms			12		V	4, 5, 6
		Rl = 2K Ohms	1		10		V	4, 5, 6
-Vop	Output Voltage Swing	Rl = 10K Ohms				-12	V	4, 5, 6
		Rl = 2K Ohms	1			-10	V	4, 5, 6
+Avs	Large Signal Voltage Gain	Rl=2K Ohms, Vout = 0 to 10V			50		V/mV	4
					25		V/mV	5, 6
-Avs	Large Signal Voltage Gain	Rl=2K Ohms, Vout = 0 to -10V			50		V/mV	4
					25		V/mV	5, 6
+Sr	Slew Rate	Av = 1			3		V/uS	7
-Sr	Slew Rate	Av = 1			3		V/uS	7

DC PARAMETERS: DRIFT VALUES

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: Rs = 50 Ohms, Vcc= ±15V, Vcm = 0V. "Deltas not required on B-Level product. Deltas required for S-Level product ONLY as specified on Internal Processing Instructions (IPI)."

Vio	Input Offset Voltage				-1.2	1.2	mV	1
Icc	Power Supply Current				-0.8	0.8	mA	1

Note 1: Parameter Guaranteed by Avs test

Graphics and Diagrams

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

See attached graphics following this page.