

PART NUMBER

LM1536J883-ROCS

Rochester Electronics

Manufactured Components

Rochester branded components are manufactured using either die/wafers purchased from the original suppliers or Rochester wafers recreated from the original IP. All re-creations are done with the approval of the Original Component Manufacturer. (OCM)

Parts are tested using original factory test programs or Rochester developed test solutions to guarantee product meets or exceeds the OCM data sheet.

Quality Overview

- ISO-9001
- AS9120 certification
- Qualified Manufacturers List (QML) MIL-PRF-38535
 - Class Q Military
 - Class V Space Level

Qualified Suppliers List of Distributors (QSLD)

- Rochester is a critical supplier to DLA and meets all industry and DLA standards.

Rochester Electronics, LLC is committed to supplying products that satisfy customer expectations for quality and are equal to those originally supplied by industry manufacturers.

The original manufacturer's datasheet accompanying this document reflects the performance and specifications of the Rochester manufactured version of this device. Rochester Electronics guarantees the performance of its semiconductor products to the original OCM specifications. 'Typical' values are for reference purposes only. Certain minimum or maximum ratings may be based on product characterization, design, simulation, or sample testing.

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Texas Instruments.

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MICROCIRCUIT DATA SHEET

MDLM1536X-1 REV 0AL

Original Creation Date: 08/08/95
Last Update Date: 08/08/95
Last Major Revision Date: 08/08/95

HIGH VOLTAGE OPERATIONAL AMPLIFIER

Industry Part Number

LM1536

NS Part Numbers

LM1536H/883
LM1536J/883

Prime Die

LM1536

Controlling Document

DESC.# 78003G

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: $V_s = \pm 28V$, $R_s = 50\ \Omega$, $V_{cm} = 0V$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vio	Input Offset Voltage	$V_{cm} = -24V$, $R_l = 5K\ \Omega$			-5	5	mV	1
					-7	7	mV	2, 3
		$V_{cm} = 24V$, $R_l = 5K\ \Omega$			-5	5	mV	1
					-7	7	mV	2, 3
		$R_l = 5K\ \Omega$			-5	5	mV	1
					-7	7	mV	2, 3
		$V_{cm} = -24V$, $R_l = 5K\ \Omega$, $R_s = 50K\ \Omega$			-5	5	mV	1
					-7	7	mV	2, 3
		$V_{cm} = 24V$, $R_l = 5K\ \Omega$, $R_s = 50K\ \Omega$			-5	5	mV	1
					-7	7	mV	2, 3
Iio	Input Offset Current	$V_{cm} = -24V$, $R_l = 5K\ \Omega$				5	mV	1
						7	mV	2, 3
		$V_{cm} = 24V$, $R_l = 5K\ \Omega$				5	mV	1
						7	mV	2, 3
		$V_s = \pm 28V$, $R_l = 5K\ \Omega$				5	mV	1
						7	mV	2, 3
		$V_s = \pm 28V$, $R_l = 5K\ \Omega$				5	mV	1
						7	mV	2, 3
Iib	Input Bias Current	$V_{cm} = -24V$, $R_l = 5K\ \Omega$			0.1	20	nA	1
					0.1	35	nA	2, 3
		$V_{cm} = 24V$, $R_l = 5K\ \Omega$			0.1	20	nA	1
					0.1	35	nA	2, 3
					0.1	20	nA	1
					0.1	35	nA	2, 3
		$V_s = \pm 28V$, $R_l = 5K\ \Omega$				20	nA	1
						35	nA	2, 3

Electrical Characteristics

DC PARAMETERS(Continued)

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: $V_s = \pm 28V$, $R_s = 50\ \Omega$, $V_{cm} = 0V$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
I _{cc}	Supply Current	$R_L = 5K\ \Omega$				4	mA	1
		$V_s = \pm 28V$, $R_L = 5K\ \Omega$				4	mA	1
		$V_s = \pm 28V$, $R_L = 5K\ \Omega$				4.5	mA	2, 3
+V _o	Output Voltage Swing	$R_L = 5K\ \Omega$			22		V	1, 2, 3
		$V_s = \pm 36V$, $R_L = 5K\ \Omega$			30		V	1
-V _o	Output Voltage Swing	$R_L = 5K\ \Omega$				-22	V	1, 2, 3
		$V_s = \pm 36V$, $R_L = 5K\ \Omega$				-30	V	1
V _o	Output Voltage Swing	$V_s = \pm 28V$, $R_L = 5K\ \Omega$			± 22		V	1, 2, 3
		$V_s = \pm 36V$			± 30		V	1
I _{os} +	Output Short Circuit Current					-12	mA	1
I _{os} -	Output Short Circuit Current				12		mA	1
I _{os}	Output Short Circuit Current		2		± 12		mA	1
V _{ir}	Input Voltage Range	$R_L = 5K\ \Omega$	1		-24	24	V	1, 2, 3
		$V_s = \pm 28V$, $R_L = 5K\ \Omega$	1		-24	24	V	1, 2, 3

Electrical Characteristics

DC/AC PARAMETERS

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

DC: $V_s = \pm 28V$, $R_s = 50\ \Omega$, $V_{cm} = 0V$

AC: $V_s = \pm 28V$, $R_s = 50\ \Omega$, $V_{cm} = 0V$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
SVRR	Supply Voltage Rejection Ratio	$V_s = \pm 15V$ to $\pm 28V$	3		80		dB	4, 5, 6
CMRR	Common Mode Rejection Ratio	$V_{cm} = -24V$ to $+24V$, $R_l = 5K\ \Omega$			80		dB	4, 5, 6
-Avol	Large Signal Voltage Gain	$V_o = -10V$, $R_l = 2K\ \Omega$			100		V/mV	4
					50		V/mV	5, 6
+Avol	Large Signal Voltage Gain	$V_o = +10V$, $R_l = 2K\ \Omega$			100		V/mV	4
					50		V/mV	5, 6
Avol	Large Signal Voltage Gain	$V_o = \pm 10V$, $R_l = 2K\ \Omega$	4		100		V/mV	4
		$V_o = \pm 10V$, $R_l = 2K\ \Omega$	4		50		V/mV	5, 6
Sr+	Slew Rate	$A_v = 1$, $V_{in} = -10V$ to $+10V$			1.4		V/ μ S	4
Sr-	Slew Rate	$A_v = 1$, $V_{in} = +10V$ to $-10V$			1.4		V/ μ S	4
Sr	Slew Rate	$A_v = 1$	2		1.4		V/ μ S	4

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

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

Note 3: 80dB is equivalent to 100 μ V/V.

Note 4: Tested on LTX system.