



MILITARY DATA SHEET

MNLM137AK-X REV 0AL

Original Creation Date: 07/12/95
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3 TERMINAL ADJUSTABLE NEGATIVE REGULATORS

Industry Part Number

LM137

NS Part Numbers

LM137AK/883

Prime Die

LM137

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: $V_{in}=-4.25V$, $I_l=8mA$, $V_{out}=V_{ref}$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vref	Reference Voltage		3		-1.262	-1.238	V	1
			3		-1.28	-1.22	V	2, 3
		Vin=-42V	1, 3		-1.262	-1.238	V	1
			1, 3		-1.28	-1.22	V	2, 3
Iq	Minimum Load Current	Vout=-1.7V	3			3	mA	1, 2, 3
		Vout=-1.7V, Vin=-11.75	3			3	mA	1, 2, 3
		Vout=-1.7V, Vin=-42V	1, 3			5	mA	1, 2, 3
Vrline	Line Regulation	$-42V \leq V_{in} \leq -4.25V$	2, 3		-4.5	4.5	mV	1
		$-42V \leq V_{in} \leq -4.25V$	2, 3		-13.5	13.5	mV	2, 3
Vrload	Load Regulation	$8mA \leq I_l \leq 1.5A$, Vin=-6.25V	3		-25	25	mV	1, 2, 3
		$8mA \leq I_l \leq 1.5A$, Vin=-14.5V	3		-25	25	mV	1
		$8mA \leq I_l \leq 300mA$, Vin=-40V	3		-25	25	mV	1, 2, 3
Iadj	Adjustment Pin Current		3			100	uA	1, 2, 3
		Vin=-42V	1, 3			100	uA	1, 2, 3
Delta Iadj/(line)	Change vs Line Voltage	$-42V \leq V_{in} \leq -4.25V$, $I_l=5mA$	2, 3		-5	5	uA	1, 2, 3
Delta Iadj/(load)	Change vs Load Current	$8mA \leq I_l \leq 1.5A$, Vin=-6.5V	3		-2	2	uA	1, 2, 3
Vrth	Thermal Regulation	Vin=-14.5V, $I_l=1.5A$, t=10mS	3		-5	5	mV	1
		Vin=-14.5V, $I_l=8mA$, t=10mS	3		-5	5	mV	1
Icl	Current Limit	Vin=-5V	3		-3.5	-1.5	A	1, 2, 3
		Vin=-40V	3		-1.2	-.24	A	1, 2, 3

AC PARAMETERS

Rr	Ripple Rejection Ratio	Vin=-6.25V, Vout=Vref, f=120HZ, ei=1Vrms, $I_l=.5A$			66		db	4, 5, 6
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Note 1: Vin=-41.3V at +125 C and -55C.

(Continued)

Note 2: $-43.3V \leq V_{in} \leq -4.25V$ at +125 C and -55C.
Note 3: Pre Burn-In Stress Test per RPI-5-024.