



MICROCIRCUIT DATA SHEET

MJLM120-12-H REV 0BL

Original Creation Date: 06/30/95
Last Update Date: 09/26/96
Last Major Revision Date: 06/30/95

VOLTAGE REGULATOR -12 VOLTS AT .5A

Industry Part Number

LM120

NS Part Numbers

JL120-12BXA
JL120-12SXA

Prime Die

LM120

Controlling Document

38510/11502, AMEND.1 REV A

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

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Vout	Output Voltage	Vin = -15V, Il = 5mA			-12.6	-11.4	V	1, 2, 3
		Vin = -15V, Il = 500mA			-12.6	-11.4	V	1, 2, 3
		Vin = -27V, Il = 5mA			-12.6	-11.4	V	1, 2, 3
		Vin = -27V, Il = 500mA			-12.6	-11.4	V	1, 2, 3
		Vin = -35V, Il = 5mA			-12.6	-11.4	V	1, 2, 3
		Vin = -35V, Il = 50mA			-12.6	-11.4	V	1, 2, 3
Vrline	Line Regulation	-35V ≤ Vin ≤ -15V, Il = 50mA			-360	360	mV	1, 2, 3
		-32V ≤ Vin ≤ -15V, Il = 350mA			-120	120	mV	1, 2, 3
Vrload	Load Regulation	Vin = -17V, 5mA ≤ Il ≤ 500mA			-240	240	mV	1, 2, 3
		Vin = -35V, 5mA ≤ Il ≤ 50mA			-360	360	mV	1, 2, 3
Iscd	Standby Current Drain	Vin = -17V, Il = 5mA			0.5	3	mA	1, 2, 3
		Vin = -35V, Il = 5mA			0.5	4	mA	1, 2, 3
Delta Iscd(line)	Standby Current Drain Change (vs. Line Voltage)	-35V ≤ Vin ≤ -15V, Il = 5mA			-1	1	mA	1, 2, 3
Delta Iscd(load)	Standby Current Drain Change (vs. Load Current)	5mA ≤ Il ≤ 500mA, Vin = -17V			-0.5	0.5	mA	1, 2, 3
Ios	Output Short Circuit Current	Vin = -32V			0	1.5	A	1, 2, 3
		Vin = -35V			0	1	A	1, 2, 3
Ipk	Peak Output Current	Forced Delta Vout = 1.13V, Vin = -15V			0.5	2	A	1, 2, 3
Vstart	Voltage Startup	Vin = -27V, Rl = 24 Ohms			-12.6	-11.4	V	1, 2, 3
Vrth	Thermal Regulation	Vin = -22V, Il = 500mA			-120	120	mV	1
Vout	Output Voltage	Vin = -17V, Il = 5mA	1, 4		-12.72	-11.28	V	2

Electrical Characteristics

AC PARAMETERS

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Delta Vin/Delta Vout	Ripple Rejection	Vin = -17V, I _L = 125mA, e _i = 1Vrms at 2400Hz			50		dB	4, 5, 6
V _{no}	Output Noise Voltage	Vin = -17V, I _L = 50mA				600	uVrms	7
Delta Vout/Delta Vin	Line Transient Response	Vin = -17V, Vpulse = -3V, I _L = 5mA	2			90	mV	7
Delta Vout/Delta I _L	Load Transient Response	Vin = -17V, I _L = 50mA, Delta I _L = 200mA	3			0.5	V	7

DC PARAMETERS: DRIFT VALUES

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

DC: "Delta calculations performed on JAN S and QMLV devices at group B, subgroup 5 only".

Vout	Output Voltage	Vin = -15V, I _L = 5mA			-0.12	0.12	V	1
		Vin = -15V, I _L = 500mA			-0.12	0.12	V	1
		Vin = -27V, I _L = 5mA			-0.12	0.12	V	1
		Vin = -27V, I _L = 500mA			-0.12	0.12	V	1
		Vin = -35V, I _L = 5mA			-0.12	0.12	V	1
		Vin = -35V, I _L = 50mA			-0.12	0.12	V	1
Iscd	Standby Current Drain	Vin = -35V, I _L = 5mA			-20	20	%	1

Note 1: Tested at +125 C, correlated to +150 C for National Die.

Note 2: S/S limit of 30mV/V is equivalent to 90mV.

Note 3: S/S limit of 2.5mV/mA is equivalent to .5V.

Note 4: Vout = +150 C at Subgroup 2.

Graphics and Diagrams

GRAPHICS#	DESCRIPTION
09107HR	(blank)
H03ARB	(blank)

See attached graphics following this page.