

MJLM120-15-K REV 0BL

 Original Creation Date: 07/06/95
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VOLTAGE REGULATOR -15 VOLTS AT 1.0A
Industry Part Number

LM120

NS Part Numbers

 JL120-15BYA
 JL120-15SYA

Prime Die

LM120

Controlling Document

38510/11507, 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 = -18.5, Il = 5mA			-15.75	-14.25	V	1, 2, 3
		Vin = -18.5, Il = 1A			-15.75	-14.25	V	1, 2, 3
		Vin = -30V, Il = 5mA			-15.75	-14.25	V	1, 2, 3
		Vin = -30V, Il = 1A			-15.75	-14.25	V	1, 2, 3
		Vin = -35V, Il = 5mA			-15.75	-14.25	V	1, 2, 3
		Vin = -35V, Il = 0.1A			-15.75	-14.25	V	1, 2, 3
Vrline	Line Regulation	-35V ≤ Vin ≤ -18.5V, Il = 0.5A			-150	150	mV	1, 2, 3
Vrload	Load Regulation	Vin = -20V, 5mA ≤ Il ≤ 1A			-300	300	mV	1, 2, 3
		Vin = -35V, 5mA ≤ Il ≤ 0.1A			-450	450	mV	1, 2, 3
Iscd	Standby Current Drain	Vin = -20V, 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 Current)	-35V ≤ Vin ≤ -18.5V, Il = 5mA			-1	1	mA	1, 2, 3
Delta Iscd(load)	Standby Current Drain Change (vs. Load Current)	Vin = -20V, 5mA ≤ Il ≤ 1A			-0.5	0.5	mA	1, 2, 3
Ios	Output Short Circuit Current	Vin = -20V			0	3.5	A	1, 2, 3
		Vin = -35V			0	2	A	1, 2, 3
Ipk	Peak Output Current	Vin = -18.5V, forced Delta Vout = 1.43V			1	4	A	1, 2, 3
Vstart	Voltage Startup	Vin = -30V, Rl = 15 Ohms			-15.75	-14.25	V	1, 2, 3
Vrth	Thermal Regulation	Vin = -25V, Il = 1A			-150	150	mV	1
Vout	Output Voltage	Vin = -20V, Il = 5mA	1, 4		-15.9	-14.1	V	2

Electrical Characteristics

AC PARAMETERS

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Delta Vin/Delta Vout	Ripple Rejection	Vin = -20V, I _L = 350mA, e _i = 1Vrms at f = 2400Hz			50		dB	4, 5, 6
V _{no}	Output Noise Voltage	Vin = -20V, I _L = 0.1A				700	uVrms	7
Delta Vout/Delta Vin	Line Transient Response	Vin = -20V, Vpulse = -3V, I _L = 5mA	2			90	mV	7
Delta Vout/Delta I _L	Load Transient Response	Vin = -20V, I _L = 100mA, Delta I _L = 400mA	3			1	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 = -18.5V, I _L = 5mA			-0.15	0.15	V	1
		Vin = -18.5V, I _L = 1A			-0.15	0.15	V	1
		Vin = -30V, I _L = 5mA			-0.15	0.15	V	1
		Vin = -30V, I _L = 1A			-0.15	0.15	V	1
		Vin = -35V, I _L = 5mA			-0.15	0.15	V	1
		Vin = -35V, I _L = 0.1A			-0.15	0.15	V	1
Iscd	Standby Current Drain	Vin = -35V, I _L = 5mA			-20	20	%	1

Note 1: Tested at +125 C, correlated to TA = +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 1V.

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

Graphics and Diagrams

GRAPHICS#	DESCRIPTION
09107HR	(blank)
K02CRB	(blank)

See attached graphics following this page.