



MILITARY DATA SHEET

MNLM120-15-K REV 0BL

Original Creation Date: 07/06/95
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THREE TERMINAL NEGATIVE REGULATOR

Industry Part Number

LM120K-15

NS Part Numbers

LM120K-15/883

Prime Die

LMJ120EG-15

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: $I_L = 5\text{mA}$

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Iq	Quiescent Current	Vin = -17V	4			4	mA	1, 2, 3
		Vin = -35V	4			4	mA	1, 2, 3
Delta Iq	Quiescent Current Change	Vin = -17V, $5\text{mA} \leq I_L \leq 1\text{A}$	4			0.4	mA	1
		Vin = -17V, $5\text{mA} \leq I_L \leq 1\text{A}$	4			0.5	mA	2, 3
		$-35\text{V} \leq \text{Vin} \leq -17\text{V}$	4			0.4	mA	1
		$-35\text{V} \leq \text{Vin} \leq -17\text{V}$	4			0.5	mA	2, 3
Rload	Load Regulation	Vin = -20V, $5\text{mA} \leq I_L \leq 1\text{A}$	4		-80	80	mV	1, 2, 3
Rline	Line Regulation	$-35\text{V} \leq \text{Vin} \leq -17\text{V}$	4		-10	10	mV	1
		$-35\text{V} \leq \text{Vin} \leq -17\text{V}$	4		-20	20	mV	2, 3
Ios	Short Circuit Current	Vin = -35V	2, 4		0.4	3	A	1
Vout	Output Voltage	Vin = -20V	4		-15.3	-14.7	V	1
		Vin = -35V	4		-15.5	-14.5	V	1, 2, 3
		Vin = -35V, $I_L = 1\text{A}$	4		-15.5	-14.5	V	1, 2, 3
		Vin = -17.5V	4		-15.5	-14.5	V	1, 2, 3
		Vin = -17.5V, $I_L = 1.5\text{A}$	4		-15.5	-14.5	V	1, 2, 3
Delta Vout/Delta Time	Long Term Stability		1, 4			150	mV	1
Rr	Ripple Rejection	f = 120Hz	3, 4		56		dB	4
Theta JC	Thermal Resistance	Junction to Case	1, 4			3	C/W	
Theta JA	Thermal Resistance	Junction to Ambient	1, 4			35	C/W	

DC PARAMETERS: DRIFT VALUES

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

DC: $I_L = 5\text{mA}$. "Deltas not required on B-Level product. Deltas required for S-Level product ONLY as specified on Internal Processing Instructions (IPI)."

Iq	Quiescent Current	Vin = -17V	4		-0.4	0.4	mA	1
Vout	Output Voltage	Vin = -17.5V	4		-0.15	0.15	V	1

- Note 1: Guaranteed parameter, not tested.
- Note 2: Datalog will have negative readings.
- Note 3: Bench test, use 70256656.
- Note 4: Pre Burn-In Stress Test per (SG)RPI-3-371.

Graphics and Diagrams

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

See attached graphics following this page.

National Semiconductor was acquired by Texas Instruments.

http://www.ti.com/corp/docs/investor_relations/pr_09_23_2011_national_semiconductor.html

This file is the datasheet for the following electronic components:

LM120H-12/883 - <http://www.ti.com/product/lm120h-12/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11507BYA - <http://www.ti.com/product/jm38510/11507bya?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11506BYA - <http://www.ti.com/product/jm38510/11506bya?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120H-5.0 - <http://www.ti.com/product/lm120h-5.0?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11501BXA - <http://www.ti.com/product/jm38510/11501bxa?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120H-15 - <http://www.ti.com/product/lm120h-15?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120K-5.0/883 - <http://www.ti.com/product/lm120k-5.0/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JL120-5SXA - <http://www.ti.com/product/jl120-5sxa?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11502BXA - <http://www.ti.com/product/jm38510/11502bxa?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11503SXA - <http://www.ti.com/product/jm38510/11503sxa?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120H-5.0/883 - <http://www.ti.com/product/lm120h-5.0/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120K-15/883 - <http://www.ti.com/product/lm120k-15/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120H-12 - <http://www.ti.com/product/lm120h-12?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11503BXA - <http://www.ti.com/product/jm38510/11503bxa?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120K-12/883 - <http://www.ti.com/product/lm120k-12/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JL120-15SYA - <http://www.ti.com/product/jl120-15sya?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120KG-5 MD8 - <http://www.ti.com/product/lm120kg-5 md8?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120KG-15 MW8 - <http://www.ti.com/product/lm120kg-15 mw8?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120KG-12 MW8 - <http://www.ti.com/product/lm120kg-12 mw8?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
LM120H-15/883 - <http://www.ti.com/product/lm120h-15/883?HQS=TI-null-null-dscatalog-df-pf-null-wwe>
JM38510/11505BYA - <http://www.ti.com/product/jm38510/11505bya?HQS=TI-null-null-dscatalog-df-pf-null-wwe>