National Semiconductor

MILITARY DATA SHEET

MNLM120-5.0-H REV 0BL

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

Industry Part Number

LM120H-5.0

NS Part Numbers

LM120H-5.0/883

Prime Die

LMJ056DG-5.0

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/AC PARAMETERS

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: Vin = -10V, Il = 5mA
AC: Vin = -10V, Il = 5mA

SYMBOL	PARAMETER	CONDITIONS	NOTES	PIN-NAME	MIN	MAX	UNIT	SUB-GROUPS
Iq	Quiescent Current	Vin = -7V	1			2	mA	1, 2, 3
		Vin = -25V	1			2	mA	1, 2, 3
Delta Iq	Quiescent Current Change	5mA ≤ Il ≤ 0.5A	1		-0.4	0.4	mA	1
		5mA ≤ Il ≤ 0.5A	1		-0.5	0.5	mA	2, 3
		-25V ≤ Vin ≤ -7V	1		-0.4	0.4	mA	1
		-25V ≤ Vin ≤ -7V	1		-0.5	0.5	mA	2, 3
Vout	Output Voltage		1		-5.1	-4.9	V	1
		Vin = -7.5V	1		-5.2	-4.8	V	1, 2, 3
		Vin = -7.5V, IL = 0.5A	1		-5.2	-4.8	V	1, 2, 3
		Vin = -25V	1		-5.2	-4.8	V	1, 2, 3
		Vin = -25V, IL = 100mA	1		-5.2	-4.8	V	1, 2, 3
Rline	Line Regulation	-25V ≤ Vin ≤ -7V	1		-25	25	mV	1
		-25V ≤ Vin ≤ -7V	1		-50	50	mV	2, 3
Rload	Load Regulation	5mA ≤ Il ≤ 0.5A	1		-50	50	mV	1
		5mA ≤ Il ≤ 0.5A	1		-100	100	mV	2, 3
Ios	Short Circuit Output Current	Vin = -25V	1		-1.5	-0.10	A	1
Rr	Ripple Rejection	f = 120Hz, Il=125mA, ein=1V(RMS)	1, 3		54		dB	4
Theta JC	Thermal Resistance	Junction to Case	1, 2			15	C/W	
Theta JA	Thermal Resistance	Junction to Ambient	1, 2			150	C/W	

DC PARAMETERS: DRIFT VALUES

(The following conditions apply to all the following parameters, unless otherwise specified.)
DC: Vin = -10V, Il = 5mA. "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 = -7V	1		-0.2	0.2	mA	1
Vout	Output Voltage	Vin = -7.5V	1		-0.05	0.05	V	1

Note 1: Pre-Burn-In Stress Test Per(SG) RPI-3-371.
Note 2: Guaranteed parameter, not tested.

(Continued)

Note 3: Bench test, use TDN No. 70256656.

Graphics and Diagrams

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

See attached graphics following this page.