NEW ENGLAND SEMICONDUCTOR

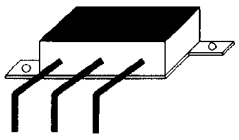
NSG2610

3 AMPERE VOLTAGE REGULATORS

3 TERMINAL POSITIVE ADJUSTABLE

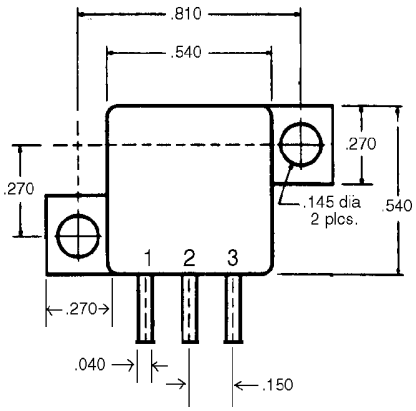
- 0.3% Load Regulation
- 0.01% Line Regulation
- Hermetic TO-254Z Pak
- Output Current 3.0A
- Ceramic Feed Throughs

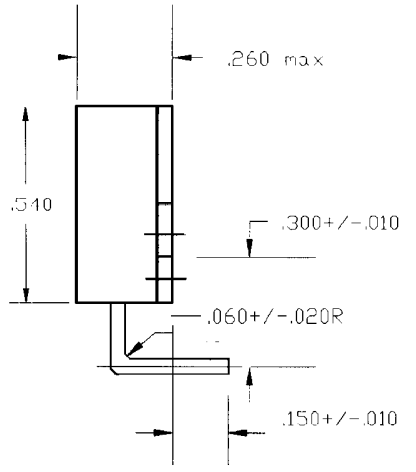
	Pinout
Pin 1	Adjust
Pin 2	Vout
Pin 3	Vin



TO-254Z

MECHANICAL OUTLINE

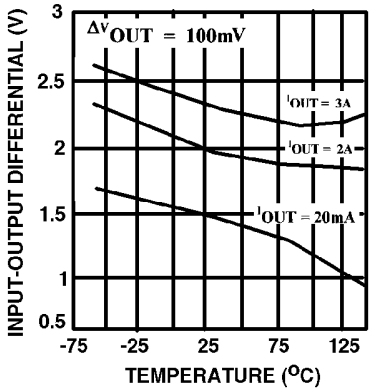




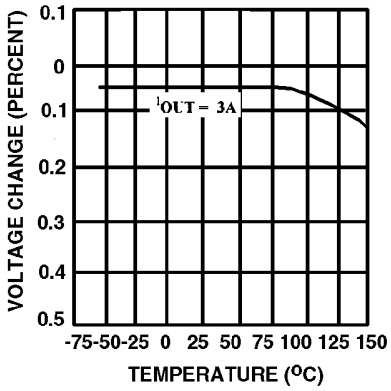
ABSOLUTE MAXIMUM RATINGS

Power Dissipation	Internally limited
Operating Junction Temperature Range	- 55°C to + 150°C
Storage Temperature	- 65°C to + 150°C
Output Current--	
NSG2610	3.0 A
Input Voltage	35 V

DROPOUT VOLTAGE



LOAD REGULATION



NEW ENGLAND SEMICONDUCTOR 6 Lake Street Lawrence, MA 01841
1-800-446-1158 / (978) 794-1666 / FAX: (978) 689-0803

NEW ENGLAND SEMICONDUCTOR

NSG2610

Electrical Characteristics ($T_C = 25^0C$ unless otherwise noted)

Parameter	Conditions	NSG2610 Min	NSG2610 Typ	NSG2610 Max	Units
Line Regulation	$V \le \lvert V_{IN} - V_{OUT} \rvert \le 5V$ $T_j = 25^0C$ $15V \le \lvert V_{IN} - V_{OUT} \rvert \le 35V$		0.015 0.035 0.05	0.2 0.2 0.5	% % %
Load Regulation	$V \le \lvert V_{IN} - V_{OUT} \rvert \le 3V$ $10mA \le I_{OUT} \le I_{FULL\ LOAD}$ $T_j = 25^0C$ (1,2)		0.1 0.2	0.3 0.4	% %
Thermal Regulation NSG2610	$T_A = 25^0C$, 30ms Pulse		0.004	0.02	%W
Adjust Pin Current Change	$10\ mA \le I_{OUT} \le I_{FULL\ LOAD}$ $1.5V \le \lvert V_{IN} - V_{OUT} \rvert \le 25V$		0.2	5	µA
Adjust Pin Current	$T_j = 25^0C$		55		µA
Reference Voltage	$I_{OUT} = 10mA$, $Tj = 25^0C$ $\lvert V_{IN} - V_{OUT} \rvert = 3V$ $10\ mA \le I_{OUT} \le I_{FULL\ LOAD}$ $1.5V \le \lvert V_{IN} - V_{OUT} \rvert \le 25V$	1.238 1.225	1.250 1.250	1.262 1.270	V V
Temperature Stability	$-55^0C \le T_j \le +150^0C$		0.5		%
Minimum Load Current	$\lvert V_{IN} - V_{OUT} \rvert = 25V$		5	10	mA
Current Limit NSG2610	$\lvert V_{IN} - V_{OUT} \rvert = 5V$ $\lvert V_{IN} - V_{OUT} \rvert = 25V$	3.2 0.2	4.0 0.5		A A
RMS Output Noise (% of V_{OUT})	$T_A = 25^0C$, 10 Hz ≤ f ≤ 10 kHz		0.003		%
Ripple Rejection	f = 120 Hz $C_{ADJ} = 25µF, C_{OUT} = 25µF$ Tantalum $I_{OUT} - I_{FULL\ LOAD}$ $\lvert V_{IN} - V_{OUT} \rvert = 3V$	60	75		dB
Long-Term Stability	$T_A = 125^0C$, 1000 Hours		0.3	1	%

NOTE 1: Unless otherwise specified, these specifications apply for $V_{in} - V_{out} = 5V$ and $I_{out} = 1.5A$. Power dissipation is guaranteed at these values up to 15 Volts input-output differential. Above 15 Volts input-output differential power dissipation is limited by device internal protection circuitry.

NOTE 2: Regulation is measured at a constant T_j. Changes in output due to heating must be taken into account separately. Pulse testing with low duty cycle is used.

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