

TECHNICAL DATA  
DATA SHEET 599, REV. A  
*Formerly part number –SHD52622*

## FIXED POSITIVE 5.0 VOLT REGULATOR

**FEATURES:**

- **FIXED VOLTAGE REGULATOR IN A TO-257 PACKAGE**
- **SIMILAR to INDUSTRY TYPE 7805A**

**MAXIMUM RATINGS**

All ratings are at  $T_A = 25^\circ\text{C}$  unless otherwise specified.

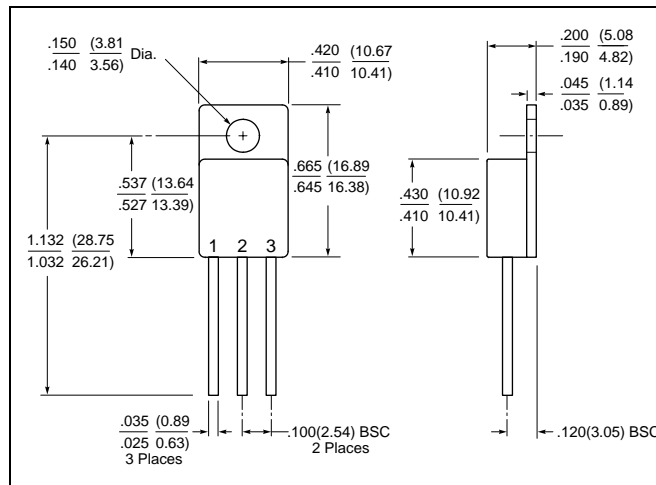
Parameter	Conditions		Maximum	Units
Input Voltage	-	-	35	Vdc
Ambient Operating Temperature Range ( $T_A$ )	-	-	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	-	-	-65 to +150	$^\circ\text{C}$
Thermal Resistance ( $R\theta_{JC}$ )	-	-	6.3	$^\circ\text{C/W}$
Rated Power	$T_C = +25^\circ\text{C}$	-	20	W

**ELECTRICAL CHARACTERISTICS**

Parameter	Conditions	Minimum	Maximum	Units
Output Voltage ( $V_{OUT}$ )	$T_A = 25^\circ\text{C}$	4.95	5.05	V
	$V_{IN} = 7.5\text{V to } 20\text{V}$ $-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$	4.85	5.15	V
Line Regulation ( $V_{RLINE}$ )	$V_{IN} = 7.5\text{V to } 20\text{V}$ $-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$	-	5.0 12	mV
	$V_{IN} = 8.0\text{V to } 12\text{V}$ $-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$	-	4.0 10	mV
Load Regulation ( $V_{RLOAD}$ )	$I_O = 5.0\text{ mA to } 1.0\text{ A}$ $-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$	-	12 25	mV
	$I_O = 250\text{ mA to } 750\text{ mA}$ $-55^\circ\text{C} \leq T_A \leq +125^\circ\text{C}$	-	6.0 15	mV
Standby Current Drain ( $I_{SCD}$ )	-	-	6.0 6.5	mA
Standby Current Drain Change With Line ( $\Delta I_{SCD}$ (Line))	$V_{IN} = 7.5\text{V to } 20\text{V}$	-	0.8	mA
Standby Current Drain Change With Load ( $\Delta I_{SCD}$ (Load))	$I_O = 5.0\text{ mA to } 1000\text{mA}$	-	0.5	mA
Dropout Voltage ( $V_{DO}$ )	$\Delta V_{OUT} = 100\text{mV}$ , $I_O = 1.0\text{A}$	-	2.5	V
Short Circuit Current ( $I_{DS}$ )	$V_{IN} = 35\text{V}$ , Maximum assured short circuit protection $-55\text{ to } +150$	-	1.2 2.8	A
Ripple Rejection ( $\frac{\Delta V_{IN}}{\Delta V_{OUT}}$ )	$f = 120\text{ Hz}$ , $\Delta V_{IN} = 10\text{V}$	66	-	dB
	If not tested, shall be guaranteed to the spec limits $-55\text{ to } +125$	60	-	dB
Output Noise Voltage ( $N_O$ ) If not tested, shall be guaranteed to the spec limits	$T_A = 25^\circ\text{C}$ , $f = 10\text{Hz to } 100\text{kHz}$	-	40	$\mu\text{V/V RMS}$
Long Term Stability ( $\frac{\Delta V_{OUT}}{\Delta t}$ ) If not tested, shall be guaranteed to the spec limits	$T_A = 25^\circ\text{C}$ , $t = 1000\text{ hrs.}$	-	75	mV

**Note:** Output Voltage tolerance; +/- 1% @ 25° C, +/- 2% from -55° to +80° C

**MECHANICAL DIMENSIONS: In Inches / mm**



**TO-257**

**PINOUTS**

DEVICE TYPE	PIN 1	PIN 2	PIN 3
VOLTAGE REGULATOR TO-257 PACKAGE	INPUT	GROUND	OUTPUT

**DISCLAIMER:**

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.