

TECHNICAL DATA
DATA SHEET 329, REV. A
Formerly part number SHD52621

FIXED POSITIVE 1.5 AMP 12 VOLT REGULATOR

FEATURES:
ISOLATED HERMETIC PACKAGE
SIMILAR to INDUSTRY TYPE 7815A

MAXIMUM RATINGS

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

Parameter	Conditions		Maximum	Units
Input Voltage	$V_O = 15\text{V}$	-	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 ($R_{\theta JC}$)	-	-	4.3	$^\circ\text{C/W}$
Rated Power	$T_C = +25^\circ\text{C}$	-	15	W

ELECTRICAL CAHRACTERISTICS

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Units
V_O	Output Voltage	$T_j = 25^\circ\text{C}$	11.88	12	12.12	V
		$P_D \leq 15\text{W}$, $5\text{ mA} \leq I_O \leq 1\text{A}$ $14.5\text{V} \leq V_{IN} \leq 27\text{V}$	11.64		12.36	V
V_{RLINE}	Line Regulation	$14.5\text{V} \leq V_{IN} \leq 27\text{V}$			18	mV
		$T_A = 25^\circ\text{C}$			50	mV
		$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$				
		$16\text{V} \leq V_{IN} \leq 22\text{V}$			9	mV
		$T_C = 25^\circ\text{C}$			30	mV
		$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$				
V_{RLOAD}	Load Regulation	$T_j = 25^\circ\text{C}$			32	mV
		$5\text{ mA} \leq I_O \leq 1.5\text{A}$			20	mV
		$250\text{ mA} \leq I_O \leq 750\text{mA}$				
		$5\text{ mA} \leq I_O \leq 0.5\text{A}$, $-55^\circ \leq T_C \leq +125^\circ\text{C}$			60	mV
I_Q	Quiescent Current	$T_C = 25^\circ\text{C}$			6	mA
		$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$			6.5	mA
ΔI_Q	Quiescent Current Change	$5\text{ mA} \leq I_O \leq 1.0\text{A}$, $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$			0.5	mA
		$15\text{V} \leq V_{IN} \leq 30\text{V}$, $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$			0.8	mA
V_{DO}	Dropout Voltage	$T_C = 25^\circ\text{C}$, $I_O = 1.0\text{A}$			2.5	V
$I_{O(pk)}$	Peak Output Current	$T_C = 25^\circ\text{C}$	1.5		3.3	A
I_{OS}	Short Circuit Current	$V_{IN} = 35\text{V}$			1.2	A
		$T_C = 25^\circ\text{C}$			2.8	
		$-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$				
$\frac{\Delta V_{IN}}{\Delta V_{OUT}}$	Ripple Rejection	$f = 120\text{Hz}$	61	70	-	dB
		$\Delta V_{IN} = 10\text{V}$	54		-	dB
		$I_O \leq 1\text{A}$, $T_C = 25^\circ\text{C}$				
		$I_O \leq 500\text{ mA}$, $-55^\circ\text{C} \leq T_C \leq +125^\circ\text{C}$				
N_O	Output Noise Voltage	$T_C = 25^\circ\text{C}$, $f = 10\text{Hz to } 100\text{kHz}$	-		40	$\mu\text{V/V rms}$
$\frac{\Delta V_{OUT}}{\Delta t}$	Long Term Stability	$T_C = 25^\circ\text{C}$, $t = 1000\text{ hours}$		-	75	mV

Technical drawing of a 3-pin connector. The drawing shows two views: a front view on the left and a side view on the right. Dimensions are provided in inches (in) and millimeters (mm).

Front View Dimensions:

- Overall width: $.150$ (3.81)
- Width of top section: $.420$ (10.67)
- Width of bottom section: $.410$ (10.41)
- Distance from top edge to center of pin: $.537$ (13.64)
- Distance from bottom edge to center of pin: $.527$ (13.39)
- Distance from top edge to top of pin: $.665$ (16.89)
- Distance from bottom edge to top of pin: $.645$ (16.38)
- Pin diameter: $.035$ (0.89)
- Pin spacing: $.100$ (2.54) BSC 2 Places
- Pin diameter: $.025$ (0.63) 3 Places
- Overall height: 1.132 (28.75)
- Height of top section: 1.032 (26.21)

Side View Dimensions:

- Overall width: $.200$ (5.08)
- Width of top section: $.190$ (4.82)
- Width of bottom section: $.045$ (1.14)
- Distance from top edge to center of pin: $.430$ (10.92)
- Distance from bottom edge to center of pin: $.410$ (10.41)
- Distance from top edge to top of pin: $.120$ (3.05) BSC

TYPE	PIN 1	PIN 2	PIN 3
TO - 257, +12V Regulator	V _{IN}	GROUND	V _{OUT}

TECHNICAL DATA

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.