

TECHNICAL DATA  
DATA SHEET 843, REV. A  
Formerly part number SHD52613

## NEGATIVE ADJUSTABLE 1.5 AMP REGULATOR

**FEATURES:**

- ISOLATED HERMETIC PACKAGE
- SIMILAR to INDUSTRY TYPE LM137HV
- Add Suffix "S" for S-100 Screening

**MAXIMUM RATINGS**

All ratings are at  $-55^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$  unless otherwise specified.

Parameter	Conditions	Typical	Limit	Units
Output Current $I_{OUT}$	-	-	1.5	A
Input to Output Voltage Differential	-	-	50	Vdc
Storage Temperature Range	-	-	-65 to +150	$^{\circ}\text{C}$
Lead Temperature	Soldering, 10 seconds	-	+300	$^{\circ}\text{C}$
Power Dissipation ( $P_D$ )	-	-	Internally Limited	
Maximum Thermal Resistance Junction to Case ( $\theta_{JC}$ )	-	-	4.2	$^{\circ}\text{C}/\text{W}$
Junction Temp. ( $T_J$ )	-	-	+150	$^{\circ}\text{C}$
Ambient Operating Temperature Range ( $T_A$ )	Recommended Conditions	-	-55 to +125	$^{\circ}\text{C}$

**ELECTRICAL CHARACTERISTICS**

Parameter	Conditions	Min	Typ.	Limit	Units
Reference Voltage	$T_J = +25^{\circ}\text{C}$ $3.0\text{V} \leq  V_{IN} - V_{OUT}  \leq 50\text{V}$ $10\text{mA} \leq I_{OUT} \leq I_{MAX}$ $P \leq P_{MAX}$	-1.225 -1.200	-1.250 -1.250	-1.275 -1.300	V
Line Regulation	$3.0\text{V} \leq  V_{IN} - V_{OUT}  \leq 50\text{V}$ $I_L = 10\text{mA}$	-	0.02	0.05	%/V
Load Regulation	$10\text{mA} \leq I_{OUT} \leq I_{MAX}$ $T_J = +25^{\circ}\text{C}$	-	0.3	1.0	%
Adjust Pin Current	-	-	65	100	$\mu\text{A}$
Adjust Pin Current Change	$10\text{mA} \leq I_L \leq I_{MAX}$ $3.0\text{V} \leq  V_{IN} - V_{OUT}  \leq 50\text{V}$ $T_J = +25^{\circ}\text{C}$	-	2.0 4.0	5.0 6.0	$\mu\text{A}$
Minimum Load Current	$ V_{IN} - V_{OUT}  = 50\text{V}$ $ V_{IN} - V_{OUT}  = 10\text{V}$	-	2.5 1.2	5.0 3.0	mA
Current Limit	$ V_{IN} - V_{OUT}  = 13\text{V}$ $ V_{IN} - V_{OUT}  = 50\text{V}$	1.5 0.2	2.2 0.4	3.2 0.8	A
Temperature Stability	$T_{MIN} \leq T_J \leq T_{MAX}$	-	0.6	-	%
Ripple Rejection Ratio	$V_{OUT} = -10\text{V}$ , $f = 120\text{Hz}$ , $C_{ADJ} = 10\mu\text{F}$	66	77	-	dB
Thermal Regulation	10 ms pulse, $T_J = 25^{\circ}$	-	0.002	0.02	%/W
Long Term Stability	$T_J = +125^{\circ}\text{C}$ , $t = 1,000\text{hrs}$	-	0.3	1.0	%

