

TECHNICAL DATA DATA SHEET 840, REV. E

# POSITIVE ADJUSTABLE 1.5 AMP REGULATOR

#### **FEATURES:**

- Isolated hermetic package (TO-257)
- Hot solder dipped
- Similar to industry type LM117HV
- Add Suffix "S" for S-100 Screening per MIL-PRF-38535
- Add Suffix "SA" for S-100 Screening per MIL-PRF-38535 and Group A per Method 5005 of MIL-STD-883

# **ABSOLUTE MAXIMUM RATINGS**

Parameter	Conditions	MIN	MAX	Units
Output Current (I <sub>OUT</sub> )	-	=	1.5	Α
Input to Output Voltage Differential	-	-0.3	60	V dc
Storage Temperature Range	-	-	-65 to +150	°C
Junction Temperature	-	-	+150	°C
Power Dissipation (P <sub>D</sub> )	-	-	Internally Limited	
Maximum Thermal Resistance	-	-	4.2	°C/W
Junction to Case (θ <sub>JC</sub> )				
Ambient Operating Temperature Range (T <sub>A</sub> )	Recommended Conditions	-	-55 to +125	°C

Note: Lead soldering temperature shall comply with MIL-STD-883 Test Method 2036.1 requirements.

### **ELECTRICAL CHARACTERISTICS**

Unless otherwise specified,  $T_J = 25^{\circ}C$ ,  $V_{IN} - V_{OUT} = 5V$ ,  $I_{OUT} = 10mA$ 

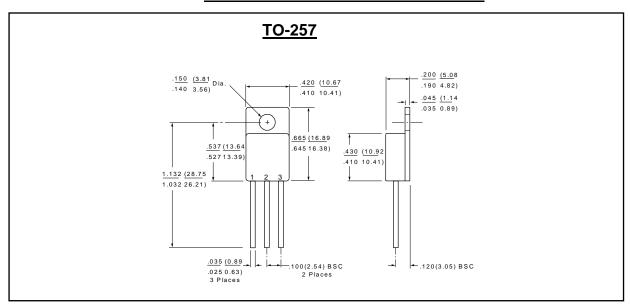
Parameter	Conditions	Min	Тур.	Limit	Units
Reference Voltage	$3.3V \le V_{IN} - V_{OUT} \le 40V$	1.2	1.25	1.3	V
	10 mA $\leq I_{OUT} \leq 1.5A$ , $T_J = -55^{\circ}C$ to $125^{\circ}C$				
Line Regulation	$3.3V \le V_{IN} - V_{OUT} \le 40V$	-8.64	-	8.64	mV
	$I_{OUT} = 10mA$				
	$T_{\rm J} = -55^{\circ}{\rm C}$ to $125^{\circ}{\rm C}$	-18	-	18	mV
Load Regulation	$10\text{mA} \le I_{OUT} \le 1.5\text{A}$	-20	-	20	mV
	$T_{J} = -55^{\circ}C$ to $125^{\circ}C$	-40	-	40	mV
Adjust Pin Current	$T_J = -55^{\circ}C \text{ to } 125^{\circ}C$	-	50	100	μА
Adjust Pin Current Change	$10mA \le I_{OUT} \le 1.5A$ ,	-5.0	-	5.0	μА
	$3.3V \le V_{IN} - V_{OUT} \le 40V$				
	$T_{J} = -55^{\circ}C$ to $125^{\circ}C$				
Minimum Load Current	$V_{IN} - V_{OUT} = 40V$	-	-	5.0	mA
	$T_{J} = -55^{\circ}C$ to $125^{\circ}C$				
Current Limit	$V_{IN} - V_{OUT} = 3V$	1.5	-	3.0	Α
	$V_{IN} - V_{OUT} = 60V$	0.0	-	0.4	Α
Temperature Stability	$T_{\rm J} = -55^{\rm 0}$ C to 125 $^{\rm 0}$ C	-	1.0	-	%
Ripple Rejection Ratio	$V_{OUT} = 10V, f = 120Hz,$	=	65	-	dB
	$C_{ADJ} = 0\mu F$				
	$V_{OUT} = 10V, f = 120Hz,$	-	80	-	dB
	$C_{ADJ} = 10 \mu F$				
Thermal Regulation	20 ms pulse	-	0.03	0.10	%/W
Long Term Stability <sup>1</sup>	$T_J = +125^{\circ}C$ , $t = 1,000$ hrs	-	0.3	1.0	%

<sup>1</sup>Guaranteed but not tested



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#### **MECHANICAL DIMENSIONS in inches & mm**



# PINOUT TABLE

TYPE	PIN 1	PIN 2	PIN 3
TO – 257, 1.5A Regulator	ADJUST	<sup>V</sup> OUT	$V_{IN}$

# PART ORDERING INFORMATION:

Part Number	Description
SHD526050S	Includes S-100 screening per MIL-PRF-38535
SHD526050SA	Includes S-100 screening per MIL-PRF-38535 and Group A testing per
	Method 5005 of MIL-STD-883

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