

SENSITRON SEMICONDUCTOR

TECHNICAL DATA
DATA SHEET 840, REV. C
Formerly part number SHD52611

POSITIVE ADJUSTABLE 1.5 AMP REGULATOR

FEATURES:

- ISOLATED HERMETIC PACKAGE
- SIMILAR to INDUSTRY TYPE LM117HV
- 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 | - | - | +60, -0.3 | 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 (θ_{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 | $3.0\text{V} \leq (V_{IN} - V_{OUT}) \leq 60\text{V}$ $10\text{ mA} \leq I_{OUT} \leq I_{MAX}$ $P \leq P_{MAX}$ | 1.20 | 1.250 | 1.30 | V |
| Line Regulation | $3.0\text{V} \leq (V_{IN} - V_{OUT}) \leq 60\text{V}$ $I_L = 10\text{mA}$ | - | 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 | - | - | 50 | 100 | μA |
| Adjust Pin Current Change | $10\text{mA} \leq I_{OUT} \leq I_{MAX}$ $3.0\text{V} \leq (V_{IN} - V_{OUT}) \leq 60\text{V}$ | - | 0.2 | 5.0 | μA |
| Minimum Load Current | $(V_{IN} - V_{OUT}) = 60\text{V}$ | - | 3.5 | 7.0 | mA |
| Current Limit | $(V_{IN} - V_{OUT}) \leq 15\text{V}$ | 1.5 | 2.2 | 3.5 | A |
| Temperature Stability | $T_{MIN} \leq T_J \leq T_{MAX}$ | - | 1.0 | - | % |
| Ripple Rejection Ratio | $V_{OUT} = 10\text{V}$, $f = 120\text{Hz}$, $C_{ADJ} = 10\mu\text{F}$ | 66 | 65 80 | - | dB |
| Thermal Regulation | 20 ms pulse, $T_J = 25^{\circ}$ | - | 0.03 | 0.07 | %/W |
| Long Term Stability | $T_J = +125^{\circ}\text{C}$, $t = 1,000\text{hrs}$ | - | 0.3 | 1.0 | % |

