

TECHNICAL DATA
DATA SHEET 184, REV. A
Formerly part number SHD52401

POSITIVE ADJUSTABLE 7.5 AMP REGULATOR

FEATURES:

- ISOLATED HERMETIC PACKAGE
- SIMILAR to INDUSTRY TYPE LT1083M

MAXIMUM RATINGS

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

Parameter	Conditions	Typical	Limit	Units
Output Current I_{OUT}	-	-	7.5	A
Input to Output Voltage Differential	-	-	35	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	W
Maximum Thermal Resistance Junction to Case (θ_{JC})	-	-	2.75	$^\circ\text{C/W}$
Junction Temp. (T_J)	-	-	+150	$^\circ\text{C}$
Ambient Operating Temperature Range (T_A)	Recommended Conditions	-	-55 to +125	$^\circ\text{C}$
Output Current I_{OUT}	Recommended Conditions	-	10	A
Input to Output Voltage Differential	Recommended Conditions	-	25	V
Full Load Current I_{FL}	Recommended Conditions	-	5.0	A

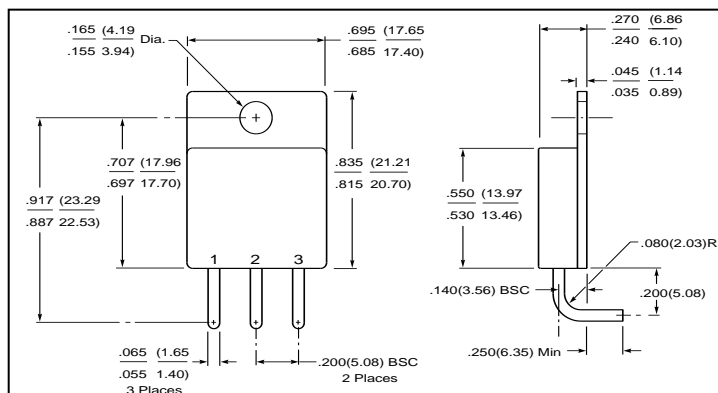
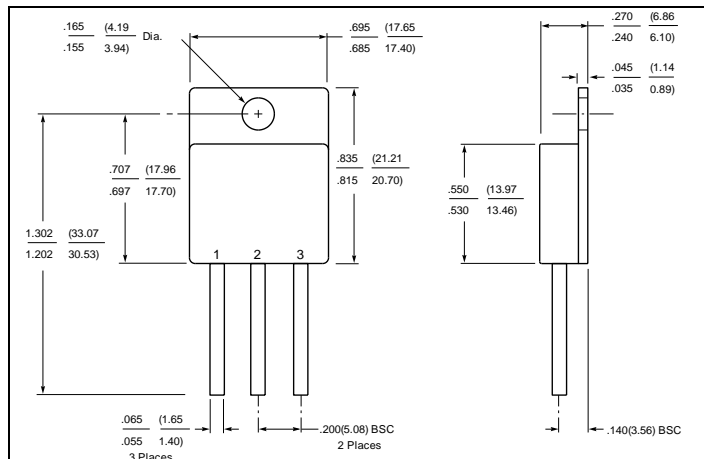
ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Min	Limit	Units
Reference Voltage (V_{REF})	$V_{IN} - V_{OUT} = 3.0\text{V}$, $I_{OUT} = 10\text{mA}$, $1.5\text{V} \leq V_{IN} - V_{OUT} \leq 25\text{V}$ $10\text{mA} \leq I_{OUT} \leq 5.0\text{A}$ $T_A = +25^\circ\text{C}$	1.238 1.225	1.262 1.270	V
Line Regulation (V_{RLINE})	$\frac{\Delta V_{OUT}}{\Delta V_{IN}}$ $1.5\text{V} \leq V_{IN} - V_{OUT} \leq 15\text{V}$ $I_{OUT} = 10\text{mA}$	-	0.2	%/V
Load Regulation (V_{RLOAD})	$\frac{\Delta V_{OUT}}{\Delta I_{OUT}}$ $V_{IN} - V_{OUT} = 3.0\text{V}$ $10\text{mA} \leq I_{OUT} \leq 5.0\text{A}$	-	0.3	mV %
Adjust Pin Current	I_{ADJ} $1.5\text{V} \leq V_{IN} - V_{OUT} \leq 25\text{V}$ $10\text{mA} \leq I_{OUT} \leq 5.0\text{A}$	-	120	μA
Adjust Pin Current Change	ΔI_{ADJ} $10\text{mA} \leq I_{OUT} \leq 5.0\text{A}$ $1.5\text{V} \leq V_{IN} - V_{OUT} \leq 25\text{V}$	-	2.0	μA
Minimum Load Current	I_{MIN} $V_{IN} - V_{OUT} = 25\text{V}$	-	10	mA
Current Limit	I_{CL} $V_{IN} - V_{OUT} \leq 5.0\text{V}$ $V_{IN} - V_{OUT} \leq 25\text{V}$	8.0 0.4	-	A
Temperature Stability	$\Delta V_{OUT} / \Delta t$ $-55^\circ\text{C} \leq T_J \leq +125^\circ\text{C}$	-	1.5	%
Ripple Rejection ($\Delta V_{IN} / \Delta V_{OUT}$)	$f = 120\text{Hz}$, $C_{ADJ} = 25\mu\text{F}$ $C_{OUT} = 25\mu\text{F}$ (tantalum) $I_{OUT} = I_{FULL\ LOAD}$, $I_{FULL\ LOAD} = 5.0\text{A}$ $V_{IN} - V_{OUT} = 3.0\text{V}$	60	-	dB
Dropout Voltage	V_{DO} $I_{OUT} = 5.0\text{A}$, $\Delta V_{REF} = 1\%$	-	1.5	V
Thermal Regulation	30 ms pulse, $T_A = 25^\circ$	-	0.01	%/W
Long Term Stability ($\Delta V_{OUT} / \Delta t$)	$T_A = +125^\circ\text{C}$, $t = 1,000\text{hrs}$	-	1.0	%

SENSITRON
DATA SHEET 184, REV. A

TO-258

MECHANICAL DIMENSIONS



Lead Form Option B

PINOUT TABLE

TYPE	PIN 1	PIN 2	PIN 3
TO - 258, 7.5A Regulator	ADJUST	V _{OUT}	V _{IN}

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