

**POSITIVE LOW DROPOUT
1.5 AMP REGULATOR**

FEATURES:

- ISOLATED HERMETIC PACKAGE
- SIMILAR TO INDUSTRY TYPE LT1086M
- FIXED 3.3V, 5V, 12V OR ADJUSTABLE
- CUSTOM FIXED VOLTAGES AVAILABLE (*CONTACT FACTORY*)

MAXIMUM RATINGS

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

Parameter	Conditions	Limit	Units
Input to Output Voltage Differential		29	V
Lead Temperature	Soldering, 10 seconds	+300	$^\circ\text{C}$
Power Dissipation (P_D)		Internally Limited	
Maximum Thermal Resistance Junction to Case (θ_{JC})		3.5	$^\circ\text{C}/\text{W}$
Junction Temperature		-55 to +150	$^\circ\text{C}$
Storage Temperature Range		-65 to +150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Min	Max	Units
Reference Voltage (V_{REF}) SHD526170	$V_{IN} - V_{OUT} = 3.0\text{V}$, $I_{OUT} = 10\text{mA}$ $1.5\text{V} \leq V_{IN} - V_{OUT} \leq 15\text{V}$, $10\text{mA} \leq I_{OUT} \leq I_{FULL\ LOAD}$	1.238 1.225	1.262 1.270	V
Output Voltage (V_{OUT})				
SHD526171	$I_{OUT} = 0\text{mA}$, $V_{IN} = 8\text{V}$ $0\text{mA} \leq I_{OUT} \leq I_{FULL\ LOAD}$, $6.5\text{V} \leq V_{IN} \leq 20\text{V}$	4.950 4.900	5.050 5.100	V
SHD526172	$I_{OUT} = 0\text{mA}$, $V_{IN} = 15\text{V}$ $0\text{mA} \leq I_{OUT} \leq I_{FULL\ LOAD}$, $13.5\text{V} \leq V_{IN} \leq 25\text{V}$	11.880 11.760	12.120 12.240	V
SHD526173	$I_{OUT} = 0\text{mA}$, $V_{IN} = 18\text{V}$ $0\text{mA} \leq I_{OUT} \leq I_{FULL\ LOAD}$, $16.5\text{V} \leq V_{IN} \leq 28\text{V}$	14.850 14.700	15.150 15.300	V
SHD526174	$I_{OUT} = 0\text{mA}$, $V_{IN} = 5\text{V}$ $0\text{mA} \leq I_{OUT} \leq I_{FULL\ LOAD}$, $4.8\text{V} \leq V_{IN} \leq 15\text{V}$	3.270 3.235	3.330 3.365	V
Line Regulation (V_{RLINE}) SHD526170	$I_{OUT} = 10\text{mA}$, $1.5\text{V} \leq V_{IN} - V_{OUT} \leq 15\text{V}$	-	0.2 0.2	%
SHD526171	$I_{OUT} = 0\text{mA}$, $6.5\text{V} \leq V_{IN} \leq 20\text{V}$		10 10	mV
SHD526172	$I_{OUT} = 0\text{mA}$, $13.5\text{V} \leq V_{IN} \leq 25\text{V}$		25 25	mV
SHD526173	$I_{OUT} = 0\text{mA}$, $16.5\text{V} \leq V_{IN} \leq 28\text{V}$		30 30	mV
SHD526174	$I_{OUT} = 0\text{mA}$, $4.8\text{V} \leq V_{IN} \leq 15\text{V}$		6 6	mV

SENSITRON

SEMICONDUCTOR

SHD526170
 SHD526171
 SHD526172
 SHD526173
 SHD526174

DATA SHEET 5194, Preliminary

Load Regulation (V_{RLOAD}) SHD526170	$V_{IN} - V_{OUT} = 3.0V, 10mA \leq I_{OUT} \leq I_{FULL\ LOAD}$	-	1.2 1.8	%
SHD526171	$V_{IN} = 8V, 0\ mA \leq I_{OUT} \leq I_{FULL\ LOAD}$		60 90	mV
SHD526172	$V_{IN} = 15V, 0\ mA \leq I_{OUT} \leq I_{FULL\ LOAD}$		144 216	mV
SHD526173	$V_{IN} = 18V, 0\ mA \leq I_{OUT} \leq I_{FULL\ LOAD}$		180 270	mV
SHD526174	$V_{IN} = 5V, 0\ mA \leq I_{OUT} \leq I_{FULL\ LOAD}$	-	40 59	mV
Adjust Pin Current SHD526170		-	120	μA
Adjust Pin Current Change SHD526170	$10mA \leq I_{OUT} \leq I_{FULL\ LOAD}, 1.5V \leq V_{IN} - V_{OUT} \leq 25V$	-	5.0	μA
Minimum Load Current SHD526170	$V_{IN} - V_{OUT} = 25V$	-	10	mA
Quiescent Current SHD526171	$V_{IN} \leq 20V$	-	10	mA
SHD526172	$V_{IN} \leq 25V$		10	mA
SHD526173	$V_{IN} \leq 28V$		10	mA
SHD526174	$V_{IN} \leq 18V$		10	mA
Current Limit SHD526170	$V_{IN} - V_{OUT} = 5.0V$ $V_{IN} - V_{OUT} = 25V$	1.5 0.05		A A
SHD526171	$V_{IN} - V_{OUT} = 10.0V$	1.5		A
SHD526172	$V_{IN} - V_{OUT} = 17.0V$	1.5		A
SHD526173	$V_{IN} - V_{OUT} = 20.0V$	1.5		A
SHD526174	$V_{IN} - V_{OUT} = 8.0V$	1.5		A
Ripple Rejection SHD526170	$f = 120Hz, C_{OUT} = 25\mu F (tant), I_{OUT} = 1.5A,$ $C_{ADJ} = 25\mu F, V_{IN} - V_{OUT} = 3.0V$	60	-	dB
SHD526171	$V_{IN} = 8.0V$	60	-	dB
SHD526172	$V_{IN} = 15.0V$	54	-	dB
SHD526173	$V_{IN} = 18.0V$	52	-	dB
SHD526174	$V_{IN} = 6.3V$	60	-	dB
Dropout Voltage	$I_{OUT} = 1.5A, \Delta V_{REF} = 1\%$	-	1.5	V
Long Term Stability	$T_A = +125^\circ C, t = 1,000hrs$	-	1.0	%

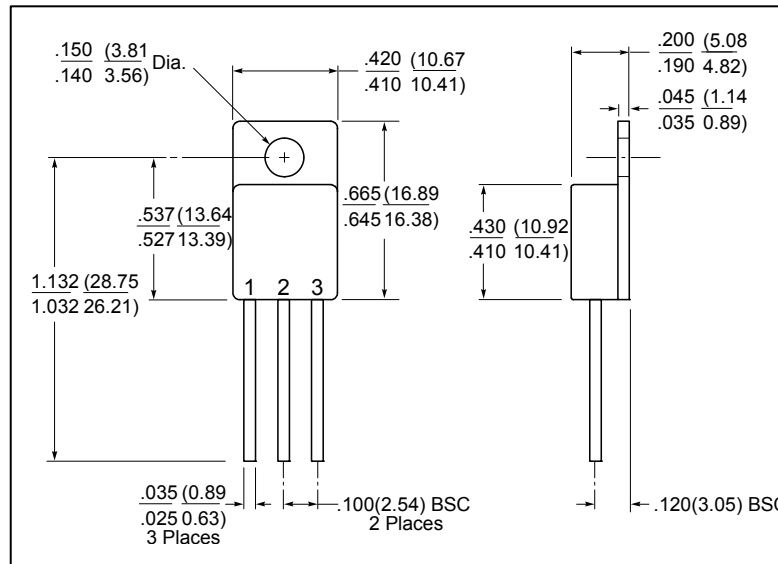
Parameters in boldface denotes the specification applies over the full operating temperature range.

SENSITRON **SEMICONDUCTOR**

SHD526170
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SHD526174

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MECHANICAL DIMENSIONS: inches/mm



TO-257

PINOUT TABLE

TYPE	PIN 1	PIN 2	PIN 3
TO - 257, 1.5A Regulator, Adj	ADJUST	V_{OUT}	V_{IN}
TO - 257, 1.5A Regulator, Fixed	V_{IN}	GND	V_{OUT}

Alternate pinouts, packages, and lead bends available. Contact factory.

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