TECHNICAL DATA
DATA SHEET 4095, REV. -

POSITIVE FIXED 3.3 VOLT 3.0 AMP VOLTAGE REGULATOR

Features:

- **Isolated Hermetic Package (TO-257)**
- **Three-Terminal Fixed**
- **Operates Down to 1V Dropout**
- **Guaranteed Dropout Voltage at Multiple Current Levels**
- **On-Chip Thermal Limiting**
- **Electrically Equivalent to LT1085-3.3**

Applications:

- **High Efficiency Linear Regulators**
- **Post Regulator for Switching Supplies**
- **Constant Current Regulators**

Description:

This positive +3.3V regulator is designed to provide 3A with high efficiency using simple 3-terminal configurations. All internal circuitry is designed to operate down to 1V input-to-output differential and the dropout voltage is fully specified as a function of load current. Dropout is guaranteed at a maximum of 1.5V at maximum output current, decreasing at lower load currents. Current limit is trimmed to ensure specified output current and controlled short-circuit current. On-chip thermal limiting provides protection against any combination of overload that would create excessive junction temperatures.

MAXIMUM RATINGS All ratings are at T_A = 25°C unless otherwise specified.

Parameter	Conditions	Typical	Limit	Units
Input Voltage Max	Transient	-	30	Vdc
Storage Temperature Range	-	-	-65 to +150	°C
Lead Temperature	Soldering, 10 seconds	-	+300	°C
Power Dissipation (P_D)		-	Internally Limited	W
Maximum Thermal Resistance Junction to Case (θ_{JC})	-	-	3.5	°C/W
Junction Temperature (T_J)	-	-	+150	°C
Ambient Operating Temperature Range (T_A)	Recommended Conditions	-	-55 to +125	°C
Output Current (I_{OUT})	Recommended Conditions	-	2.0	A
Input Voltage	Recommended Conditions	-	20	V

SENSITRON
SEMICONDUCTOR

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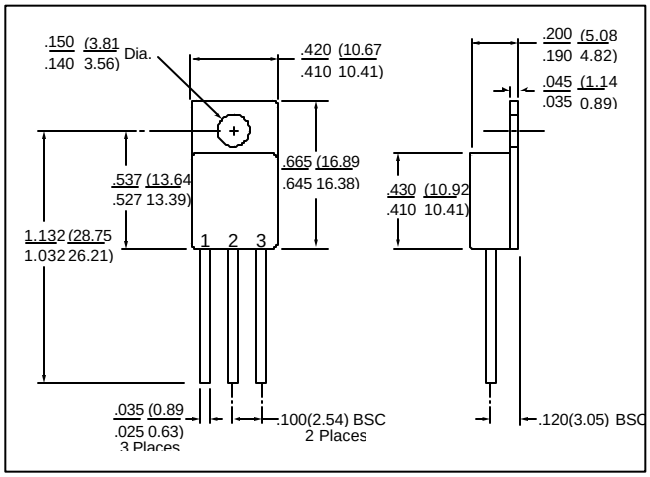
ELECTRICAL CHARACTERISTICS

Parameter	Conditions	Typ	Min / Max	Units
Output voltage (V_0)	I_{OUT} = 10.0mA, 5V ≤ V_{IN} ≤ 15V T_A = +25°C	3.30 3.30	3.27 / 3.33 **3.235 / 3.365**	V
Line Regulation (V_{RLINE}) ΔV_{OUT} / ΔV_{IN}	5V ≤ V_{IN} ≤ 15V I_{OUT} = 10mA	1.0	**6.0 Max**	mV
Load Regulation (V_{RLOAD}) ΔV_{OUT} / ΔI_{OUT}	V_{IN} = 5.0V 10mA ≤ I_{OUT} ≤ 3.0A	7	**20 Max**	mV
Quiescient Current I_{MIN}	V_{IN} = 18V	-	10 Max	mA
Current Limit I_{CL}	V_{IN} = 8.0V T_J = 25°C	4.0	**3.2 Min**	A
Temperature Stability ΔV_{OUT} / Δt	-55°C ≤ T_J ≤ +125°C	1.0	2.0 Max	%
Ripple Rejection	f = 120Hz C_{OUT} = 25µF (tantalum) I_{OUT} = 2.0A V_{IN} = 6.3V	60	-	dB
Dropout Voltage V_{DO}	I_{OUT} = 2.0A, ΔVo = 33mV	1.3	**1.5 Max**	V
Thermal Regulation	30 ms pulse, T_A = 25°C	-	0.02	%/W
Long Term Stability	T_A = +125°C, t = 1,000hrs	-	1.0	%

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

TO-257 MECHANICAL DIMENSIONS: in inches / mm



PINOUT TABLE

TYPE	PIN 1	PIN 2	PIN 3
TO – 257, 3.0A Regulator	Common	V_{OUT}	V_{IN}

TECHNICAL DATA

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