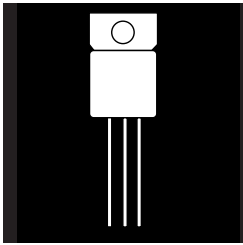


3.0 AMP POSITIVE ADJUSTABLE VOLTAGE REGULATOR APPROVED TO DESC DRAWING 5962-87675



**Three Terminal, Adjustable Voltage, 3.0 Amp
Precision Positive Regulator In Hermetic
JEDEC TO-257AA Package**

FEATURES

- Approved To DESC Standardized Military Drawing 5962-8767501UX/TX and 5962-8767502UX/TX
- Isolated Hermetic Package, JEDEC TO-257AA Outline
- Reference Voltages Set To $\pm 1\%$ and $\pm 2\%$
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Similar Electrically To Industry Standard LM150A

DESCRIPTION

These three terminal positive regulators approved by DESC, are supplied in a hermetically sealed isolated, metal TO-257 package. All protective features are designed into the circuit including thermal shutdown, current limiting and safe-area control. With heat sinking, they can deliver over 3.0 amps of output current. These units feature 1% and 2% initial voltage tolerance, 0.35% load regulation and .01% line regulation.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Input - Output Voltage Differential..... +35 V
Operating Junction Temperature Range..... - 55°C to + 150°C
Storage Temperature Range - 65°C to + 150°C

Typical Power/Thermal Characteristics:

Rated Power @ 25°C

T_C 25 W

T_A 3 W

Thermal Resistance:

θ_{JC} Case U..... 4.2°C/W

θ_{JC} Case T..... 3.5°C/W

θ_{JA} 50°C/W

3.3

DESC DRAWING	REFERENCE VOLTAGE	OMNIREL PART NUMBER
5962-8767501UX	$\pm 2\%$	OM3910STM
5962-8767502UX	$\pm 1\%$	OM3911STM
5962-8767501TX	$\pm 2\%$	OM3910NTM
5962-8767502TX	$\pm 1\%$	OM3911NTM

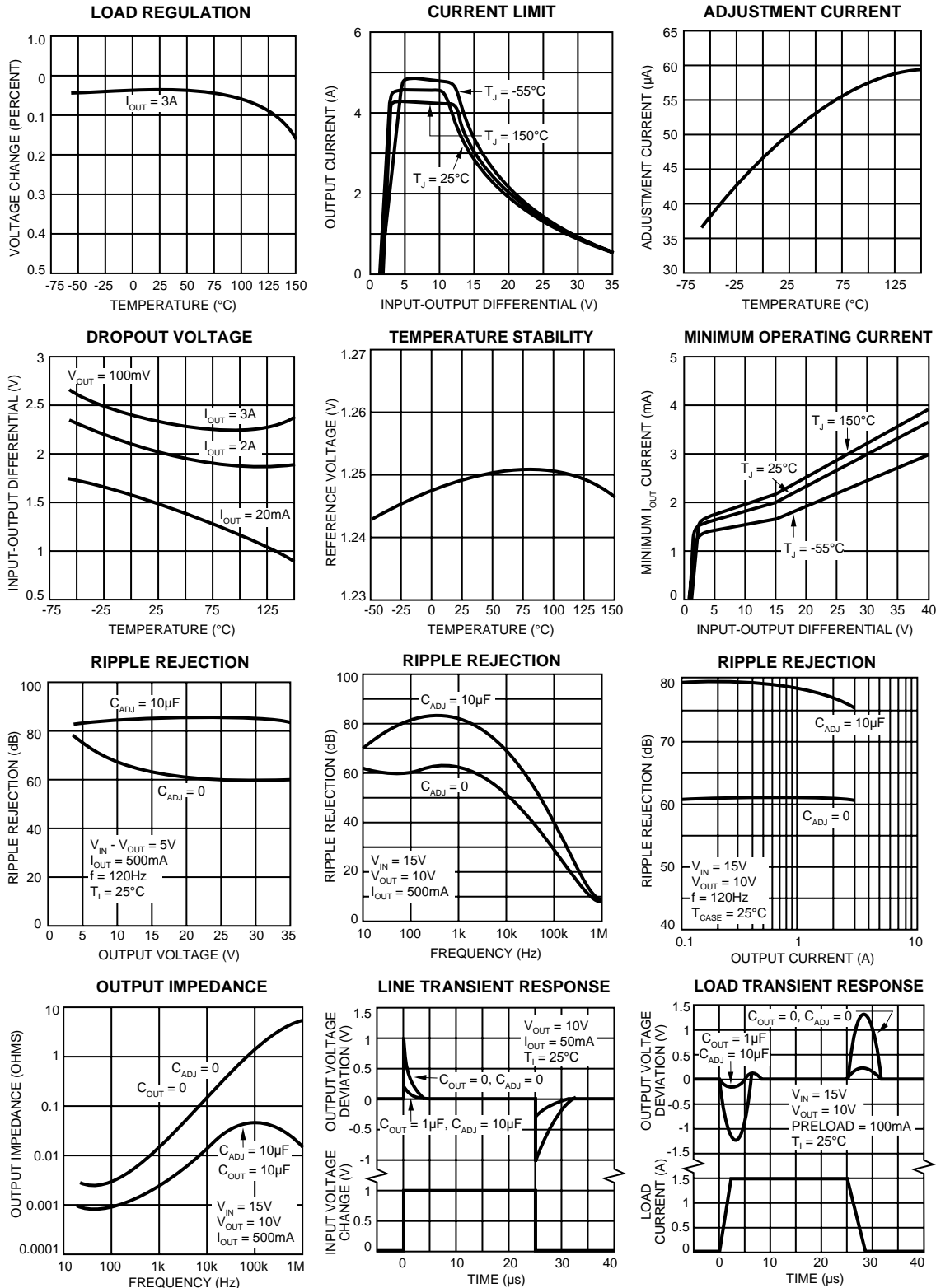
ELECTRICAL CHARACTERISTICS -55°C T_A 125°C (Note 1) unless otherwise specified

Test	Symbol	Conditions	Dash No.	Limits		Unit
				Min.	Max.	
Reference Voltage	V_{REF}	$I_{OUT} = 10mA$	01	1.20	1.30	V
		$T_A = 25^\circ C$	02	1.238	1.262	V
		3.0V ($V_{IN} - V_{OUT}$) 35V, P 30W	01	1.20	1.30	V
		10mA I_{OUT} 3.0A (Note 2)	02	1.225	1.270	V
Line Regulation (Note 2)	R_{LINE}	3.0V ($V_{IN} - V_{OUT}$) 35V, $I_{OUT} = 10mA, T_J = 25^\circ C$	All P/N's		0.01	%/V
		3.0V ($V_{IN} - V_{OUT}$) 35V, $I_{OUT} = 10mA$	All P/N's		0.05	%/V
Load Regulation (Note 2)	R_{LOAD}	10mA I_{OUT} 3.0A, V_{OUT} 5.0A, $T_J = 25^\circ C$	All P/N's		17.5	mV
		10mA I_{OUT} 3.0A, V_{OUT} 5.0A	All P/N's		50	mV
		10mA I_{OUT} 3.0A, V_{OUT} 5.0A, $T_J = 25^\circ C$	All P/N's		0.35	%
		10mA I_{OUT} 3.0A, V_{OUT} 5.0A	All P/N's		1.0	%
Thermal Regulation		20ms pulse, $T_A = 25^\circ C$	All P/N's		0.01	%/W
Ripple Rejection (Note 3)	R_N	$V_{OUT} = 10V, f = 120Hz$ $C_{ADJ} = 10\mu F$	All P/N's	66		dB
Adjust Pin Current	I_{Adj}		All P/N's		100	μA
Adjust Pin Current Change	$^3I_{Adj}$	10mA I_{OUT} 3.0A, $I_{OUT} = 10mA$ 3.0V ($V_{IN} - V_{OUT}$) 35V	All P/N's		5.0	μA
Minimum Load Current	I_{MIN}	$(V_{IN} - V_{OUT}) = 35V$	All P/N's		5.0	mA
Current Limit	I_{CL}	$(V_{IN} - V_{OUT}) = 10V$	All P/N's	3.0		A
		$(V_{IN} - V_{OUT}) = 30V$	All P/N's	0.3		A

Notes:

1. Unless otherwise specified, these specifications apply for $(V_{IN} - V_{OUT}) = 5.0V$ and $I_{OUT} = 1.5A$.
2. Regulation is measured at a constant junction temperature using a pulse technique. Changes in output voltage due to heating effects are covered under the specification for thermal regulation.
3. Guaranteed if not tested to the limits specified.

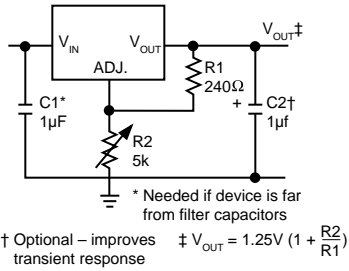
TYPICAL PERFORMANCE CHARACTERISTICS



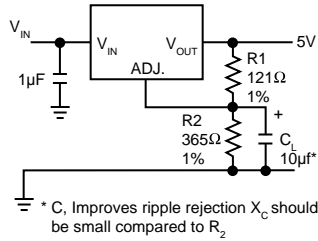
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TYPICAL APPLICATIONS

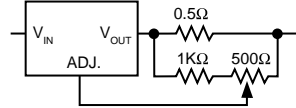
1.2 - 25V Adjustable Regulator



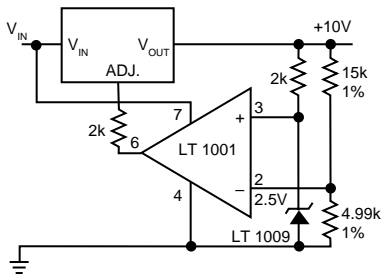
Improving Ripple Rejection



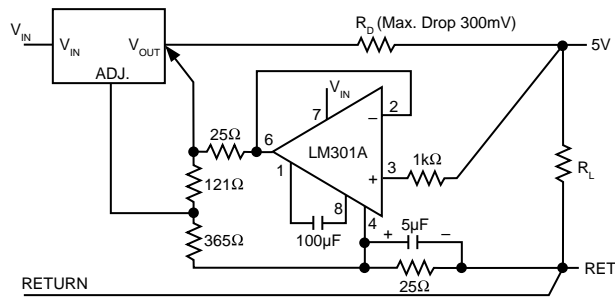
Adjustable Current Limiter



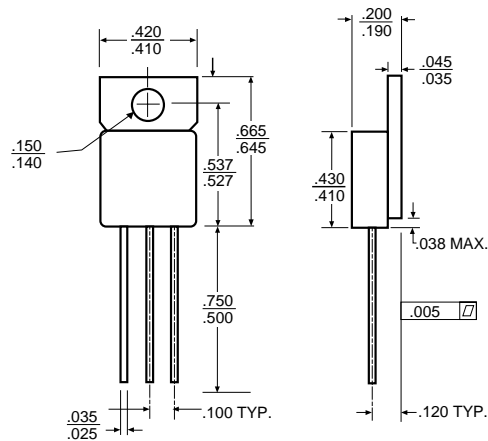
Precision High Current Reference



Remote Sensing



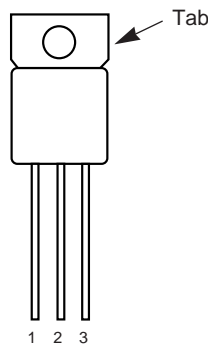
MECHANICAL OUTLINE



NOTES:

- Case is metal/hermetically sealed
- Isolated Tab

CONNECTION DIAGRAM



CASE U

FRONT VIEW

- Pin 1: Adjust
- Pin 2: V_{OUT}
- Pin 3: V_{IN}
- Tab: Isolated

CASE T

FRONT VIEW

- Pin 1: Adjust
- Pin 2: V_{OUT}
- Pin 3: V_{IN}
- Tab: V_{OUT}