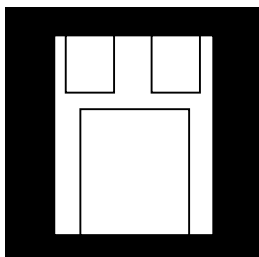


SURFACE MOUNT 1.5 AMP HIGH VOLTAGE POSITIVE ADJUSTABLE REGULATOR



Three Terminal, High Voltage, Precision Adjustable Positive Voltage Regulator In Hermetic Surface Mount Package

FEATURES

- Hermetic Surface Mount Package
- Adjustable Output Voltage
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Product Is Available Hi-Rel Screened
- Electrically Similar To Industry Standard Type LM117HV

DESCRIPTION

This three terminal positive regulator is supplied in a hermetically sealed surface mount 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 1.0 amp of output current. This unit features output voltages that can be trimmed using external resistors, from 1.2 volts to 57 volts.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Input to Output Voltage Differential 60 V
 Operating Junction Temperature Range - 55°C to + 150°C
 Storage Temperature Range - 55°C to + 150°C
 Typical Power/Thermal Characteristics:

Rated Power:

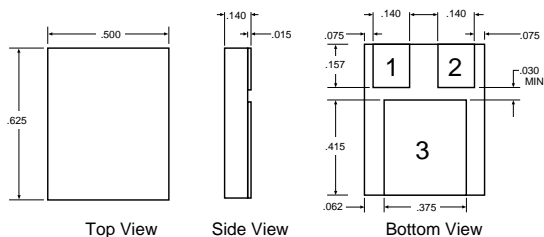
T_C 17.5 W
 T_A 3 W

Thermal Resistance:

θ_{JC} 3.5 °C/W
 θ_{JA} 42 °C/W

Lead Temperature at Case (5 sec) 225 °C

MECHANICAL OUTLINE



Pin Connection

Pin 1: Adjust

Pin 2: V_{IN}

Pin 3: V_{OUT}

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ELECTRICAL CHARACTERISTICS -55°C T_A 125°C, I_L = 8mA (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Reference Voltage	V _{REF}	V _{DIFF} = 3.0V, T _A = 25°C V _{DIFF} = 3.3V V _{DIFF} = 40V V _{DIFF} = 60V	1.20 • 1.20 • 1.20 • 1.20	1.30 1.30 1.30 1.30	V
Line Regulation (Note 1)	R _{LINE}	3.0V V _{DIFF} 40V, V _{OUT} = V _{ref} , T _A = 25°C 3.3V V _{DIFF} 40V, V _{OUT} = V _{ref} 40V V _{DIFF} 60V, V _{OUT} = V _{ref} , T _A = 25°C 40V V _{DIFF} 60V, V _{OUT} = V _{ref}	• -9 • -23 -5 • -10	9 23 5 10	mV
Load Regulation (Note 1)	R _{LOAD}	V _{DIFF} = 3.0V, 10mA I _L 1.5A, T _A = 25°C V _{DIFF} = 3.3V, 10mA I _L 1.5A V _{DIFF} = 40V, 10mA I _L 300mA, T _A = 25°C V _{DIFF} = 40V, 10mA I _L 195mA V _{DIFF} = 60V, 10mA I _L 30mA	• -15 • -15 -15 • -15 • -15	15 15 15 15 15	mV
Thermal Regulation	V _{RTH}	V _{IN} = 14.6V, I _L = 1.5A P _d = 20 Watts, t = 20 ms, T _A = 25°C	-16	16	mV
Ripple Rejection (Note 2)	R _N	f = 120 Hz, V _{OUT} = V _{ref} C _{Adj} = 10 μF, I _{OUT} = 100 mA	• 66		dB
Adjustment Pin Current	I _{Adj}	V _{DIFF} = 3.0V, T _A = 25°C V _{DIFF} = 3.3V V _{DIFF} = 40V V _{DIFF} = 60V		100 100 100 100	μA
Adjustment Pin Current Change	I _{Adj}	V _{DIFF} = 3.0V, 10mA I _L 1.5A, T _A = 25°C V _{DIFF} = 3.3V, 10mA I _L 1.5A V _{DIFF} = 40V, 10mA I _L 300mA, T _A = 25°C V _{DIFF} = 40V, 10mA I _L 195mA 3.0V V _{DIFF} 40V, T _A = 25°C 3.3V V _{DIFF} 40V 3.3V V _{DIFF} 60V	• -5 • -5 -5 • -5 • -5 • -5	5 5 5 5 5 5	μA
Mimumin Load Current	I _{Lmin}	V _{DIFF} = 3.0V, V _{OUT} = 1.4V (forced) V _{DIFF} = 3.3V, V _{OUT} = 1.4V (forced) V _{DIFF} = 40V, V _{OUT} = 1.4V (forced) V _{DIFF} = 60V, V _{OUT} = 1.4V (forced)		5.0 5.0 5.0 7.0	mA
Current Limit (Note 2)	I _{CL}	V _{DIFF} = 5V V _{DIFF} = 40V, T _A = 25°C V _{DIFF} = 60V, T _A = 25°C	• 1.5 0.3 0.05	3.5 1.5 0.50	A

Notes:

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1. Load and Line Regulation are specified at a constant junction temperature. Pulse testing with low duty cycle is used. Changes in output voltage due to heating effects must be taken into account separately.
2. If not tested, shall be guaranteed to the specified limits.
3. The • denotes the specifications which apply over the full operating temperature range.

