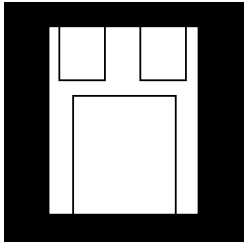


SURFACE MOUNT 1.5 AMP HIGH VOLTAGE NEGATIVE ADJUSTABLE REGULATOR



Three Terminal, High Voltage, Precision
Adjustable Negative 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 LM137HV

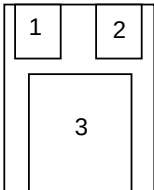
DESCRIPTION

This three terminal negative 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 -47 volts.

ABSOLUTE MAXIMUM RATINGS @ 25°C

Input to Output Voltage Differential	50 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

PIN CONNECTION



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

3.5

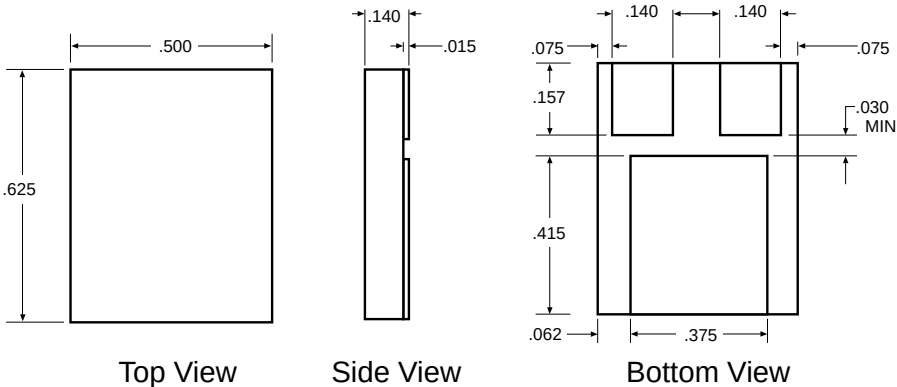
ELECTRICAL CHARACTERISTICS $-55^{\circ}\text{C} \leq T_A \leq 125^{\circ}\text{C}$, $I_L = 8\text{mA}$ (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Reference Voltage	V_{REF}	$ V_{DIFF} = 3.0\text{V}$, $T_A = 25^{\circ}\text{C}$ $ V_{DIFF} = 3\text{V}$ $ V_{DIFF} = 50\text{V}$, $T_A = 25^{\circ}\text{C}$ $ V_{DIFF} = 50\text{V}$	-1.275 -1.30 -1.275 -1.30	-1.225 -1.20 -1.225 -1.20	V
Line Regulation (Note 1)	R_{LINE}	$3.0\text{V} \leq V_{DIFF} \leq 50\text{V}$, $T_A = 25^{\circ}\text{C}$	-10 -25	10 25	mV
Load Regulation (Note 1)	R_{LOAD}	$ V_{DIFF} = 50\text{V}$, $8\text{mA} \leq I_L \leq 110\text{mA}$ $T_A = 25^{\circ}\text{C}$ $ V_{DIFF} = 5\text{V}$, $8\text{mA} \leq I_L \leq 1.5\text{A}$, $T_A = 25^{\circ}\text{C}$	-25 -25 -45	25 25 45	mV
Thermal Regulation	V_{RTH}	$V_{IN} = -14.6\text{V}$, $I_L = 1.5\text{A}$ $P_d = 20\text{ Watts}$, $t = 10\text{ ms}$, $T_A = 25^{\circ}\text{C}$	-5	5	mV
Ripple Rejection (Note 2)	R_N	$f = 120\text{ Hz}$, $V_{OUT} = V_{ref}$ $C_{Adj} = 10\text{ }\mu\text{F}$, $I_{OUT} = 100\text{ mA}$	66		dB
Adjustment Pin Current	I_{Adj}	$ V_{DIFF} = 3.0\text{V}$ $ V_{DIFF} = 40\text{V}$ $ V_{DIFF} = 50\text{V}$		100 100 100	μA
Adjustment Pin Current Change	ΔI_{Adj}	$ V_{DIFF} = 5\text{V}$, $8\text{mA} \leq I_{OUT} \leq 1.5\text{A}$ $3\text{V} \leq V_{DIFF} \leq 50\text{V}$	-5 -6	5 6	μA
Mimumum Load Current	I_{Lmin}	$ V_{DIFF} = 3.0\text{V}$, $V_{OUT} = -1.4\text{V}$ (forced) $ V_{DIFF} = 10\text{V}$, $V_{OUT} = -1.4\text{V}$ (forced) $ V_{DIFF} = 40\text{V}$, $V_{OUT} = -1.4\text{V}$ (forced) $ V_{DIFF} = 50\text{V}$, $V_{OUT} = -1.4\text{V}$ (forced)		3.0 3.0 5.0 5.0	mA
Current Limit (Note 2)	I_{CL}	$ V_{DIFF} = 5\text{V}$ $ V_{DIFF} = 50\text{V}$, $T_A = 25^{\circ}\text{C}$	1.5 0.2	3.5 1.0	A

Notes:

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.

MECHANICAL OUTLINE



3.5