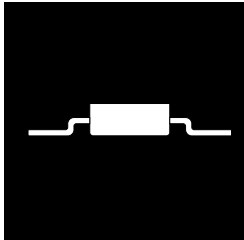


SURFACE MOUNT NEGATIVE ADJUSTABLE 1.0 AMP VOLTAGE REGULATOR



**Isolated Hermetic Surface Mount Package
1.0 Amp, Negative Adjustable Voltage
Regulator**

FEATURES

- Isolated Hermetic Surface Mount Package
- Adjustable Output Voltage
- Eliminates Stocking Fixed Voltages
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Product Is Available Hi-Rel Screened
- Electrically Similar To Industry Standard Type LM137

DESCRIPTION

This three terminal negative regulator is supplied in a hermetically sealed metal 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 -37 volts.

ABSOLUTE MAXIMUM RATINGS

Input to Output Voltage Differential	40V
Operating Junction Temperature Range	- 55°C to + 150°C
Storage Temperature Range	- 55°C to + 150°C
Typical Power/Thermal Characteristics:	
Rated Power @ 25°C	
T_C	17.5W
T_A	3W
Thermal Resistance:	
θ_{JC}	3.5°C/W
θ_{JA}	42°C/W
Lead Temperature at Case (5 sec)	225°C

3.5

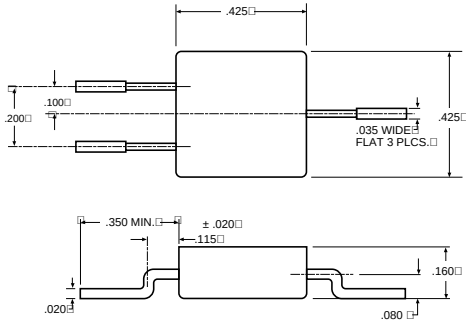
ELECTRICAL CHARACTERISTICS -55°C ≤ T_A ≤ 125°C, I_L = 8mA (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Reference Voltage	V _{REF}	$ V_{DIFF} = 3.0V, T_A = 25^{\circ}C$ $ V_{DIFF} = 3.0V$ $ V_{DIFF} = 40V, T_A = 25^{\circ}C$ $ V_{DIFF} = 40V$	-1.275 -1.30 -1.275 -1.30	-1.225 -1.20 -1.225 -1.20	V
Line Regulation (Note 1)	R _{LINE}	$3.0V \leq V_{DIFF} \leq 40V, T_A = 25^{\circ}C$ $3.0V \leq V_{DIFF} \leq 40V$	-9 -23	9 23	mV
Load Regulation (Note 1)	R _{LOAD}	$ V_{DIFF} = 5.0V, 8mA \leq I_L \leq 1.5A$ $ V_{DIFF} = 12V, 8mA \leq I_L \leq 1.5A, T_A = 25^{\circ}C$ $ V_{DIFF} = 40V, 8mA \leq I_L \leq 200mA, T_A = 25^{\circ}C$ $ V_{DIFF} = 40V, 8mA \leq I_L \leq 100mA$	-25 -25 -25 -25	25 25 25 25	mV
Thermal Regulation	V _{RTH}	V _{in} = -14.6V, I _L = 1.5A P _d = 20 Watts, t = 20 ms, T _A = 25°C	-5	5	mV
Ripple Rejection (Note 2)	R _N	f = 120 Hz, V _{out} = V _{ref} C _{Adj} = 10 μF	66		dB
Adjustment Pin Current	I _{Adj}	$ V_{DIFF} = 3.0V$ $ V_{DIFF} = 40V$		100 100	μA
Adjustment Pin Current Change	ΔI _{Adj} (Line) ΔI _{Adj} (Load)	$3.0V \leq V_{DIFF} \leq 40V$ $ V_{DIFF} = 5V, 8mA \leq I_L \leq 1.5A$	-5 -5	5 5	μA
Mimumum Load Current	I _{Lmin}	$ V_{DIFF} = 3.0V, V_{out} = -1.4V$ (forced) $ V_{DIFF} = 10V, V_{out} = -1.4V$ (forced) $ V_{DIFF} = 40V, V_{out} = -1.4V$ (forced)		3.0 3.0 5.0	mA
Current Limit (Note 2)	I _{CL}	$ V_{DIFF} \leq 5V$ $ V_{DIFF} = 40V, T_A = 25^{\circ}C$	1.5 0.24	3.5 1.2	A

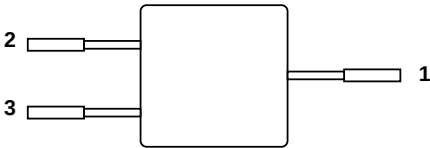
Notes:

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



PIN CONNECTION



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