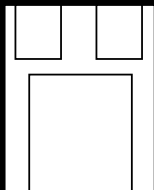


HERMETIC SURFACE MOUNT ADJUSTABLE NEGATIVE VOLTAGE REGULATORS



**Three Terminal, Adjustable Voltage,
3.0 Amp Precision Negative Regulators
In Hermetic Surface Mount Package**

FEATURES

- Hermetic Surface Mount Package
- Reference Voltage Set Internally To $\pm 2\%$
- Built-In Thermal Overload Protection
- Short Circuit Current Limiting
- Product Is Available Hi-Rel Screened

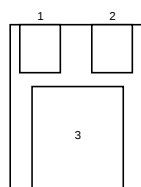
DESCRIPTION

These three terminal negative regulators are supplied in a hermetic 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 3.0 amps of output current. These units feature 2% initial voltage tolerance, with 1.0% load regulation and .015% line regulation.

ABSOLUTE MAXIMUM RATINGS

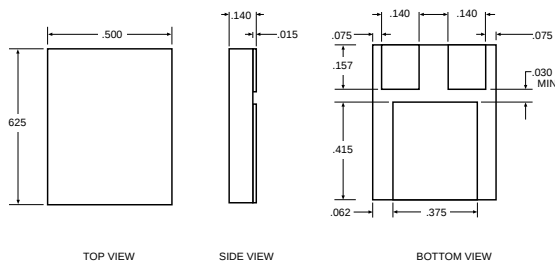
Input to Output Voltage Differential	 -35 V
Operating Junction Temperature Range	 - 55°C to + 150°C
Storage Temperature Range	 - 55°C to + 150°C
Typical Power/Thermal Characteristics:	
Rated Power @ 25°C	
T_C	 28W
T_A	 3W
Thermal Resistance:	
θ_{JC}	 3.5°C/W
θ_{JA}	 42°C/W
Lead Temperature at Case (5 sec)	 225°C

PIN CONNECTION



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

MECHANICAL OUTLINE



3.5

ELECTRICAL CHARACTERISTICS $-55^{\circ}\text{C} \leq T_A \leq +125^{\circ}\text{C}$ (unless otherwise specified)

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Reference Voltage	V_{REF}	$ V_{\text{IN}} - V_{\text{OUT}} = 5\text{ V}, I_{\text{OUT}} = 5\text{ mA}, T_A = 25^{\circ}\text{C}$	-1.238	-1.262	V
		$3\text{ V} \leq V_{\text{IN}} - V_{\text{OUT}} \leq 35\text{ V}$	• -1.215	-1.285	
Line Regulation (Note 1)	$\frac{\Delta V_{\text{OUT}}}{\Delta V_{\text{IN}}}$	$3\text{ V} \leq V_{\text{IN}} - V_{\text{OUT}} \leq 35\text{ V}$		0.015	%V
			•	0.04	
Load Regulation (Note 1)	$\frac{\Delta V_{\text{OUT}}}{\Delta I_{\text{OUT}}}$	$ V_{\text{OUT}} \leq 5\text{ V}, T_A = 25^{\circ}\text{C}$ $10\text{ mA} \leq I_{\text{OUT}} \leq I_{\text{MAX.}}$		50	mV
			•	75	
		$ V_{\text{OUT}} \geq 5.0\text{ V}$ $10\text{ mA} \leq I_{\text{OUT}} \leq I_{\text{MAX.}}$		1.0	%
			•	1.5	
Thermal Regulation	-	30 ms pulse, $T_A = 25^{\circ}\text{C}$		0.02	%/W
Ripple Rejection (Note 2)	$\frac{\Delta V_{\text{IN}}}{\Delta V_{\text{REF}}}$	$ V_{\text{OUT}} = -10\text{ V}, f = 120\text{ Hz}, C_{\text{Adj}} = 0$	56		dB
			• 53		
		$ V_{\text{OUT}} = -10\text{ V}, f = 120\text{ Hz}, C_{\text{Adj}} = 10\text{ }\mu\text{F}$	70		dB
			• 60		
Adjust Pin Current	I_{Adj}	$V_{\text{DIFF}} = 35\text{ V}, I_L = 10\text{ mA}$	•	100	μA
Adjust Pin Current Change	ΔI_{Adj}	$10\text{ mA} \leq I_{\text{OUT}} \leq I_{\text{MAX.}}$	•	2.0	μA
		$3\text{ V} \leq V_{\text{IN}} - V_{\text{OUT}} \leq 35\text{ V}$	•	5.0	
Minimum Load Current	I_{Min}	$ V_{\text{IN}} - V_{\text{OUT}} \leq 35\text{ V}$	•	5.0	mA
		$ V_{\text{IN}} - V_{\text{OUT}} \leq 10\text{ V}$	•	3.0	
Current Limit	I_{Lim}	$ V_{\text{IN}} - V_{\text{OUT}} \leq 10\text{ V}$	3.0	6.0	A
			• 3.0		
		$ V_{\text{IN}} - V_{\text{OUT}} = 35\text{ V}$	0.5	2.5	A
			• 0.5		
Temperature Stability (Note 2)	$\frac{\Delta V_{\text{OUT}}}{\Delta T}$	$-55^{\circ}\text{C} \leq T_J \leq +125^{\circ}\text{C}$	•	1.5	%
Long Term Stability (Note 2)	$\frac{\Delta V_{\text{OUT}}}{\Delta T}$	$T_A = +125^{\circ}\text{C}, t = 1000\text{ hrs}$		1.0	%

Notes:

- Line and Load Regulation are measured at a constant junction temperature using a low duty cycle pulse technique. Although power dissipation is internally limited, regulation is guaranteed up to the maximum power dissipation of 30 W. Power dissipation is determined by the input/output differential voltage and the output current. Guaranteed maximum power dissipation will not be available over the full input/output voltage range.
- Guaranteed by design, characterization or correlation to other tested parameters.
- The • denotes the specifications which apply over the full operating temperature range.