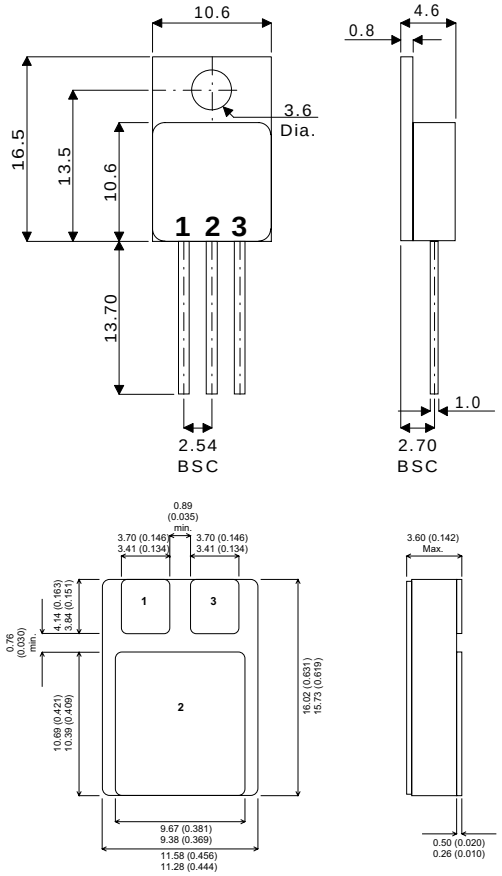
LM117-220M
LM117SMD

POSITIVE ADJUSTABLE VOLTAGE REGULATOR IN TO 220 METAL AND CERAMIC SURFACE MOUNT PACKAGES

MECHANICAL DATA
Dimensions in mm



Pin 1 - Adjust **Pin 2 - Output** **Pin 3 - Input**

FEATURES

- **HERMETIC TO220 METAL OR CERAMIC SURFACE MOUNT PACKAGES**
- **SCREENING OPTIONS AVAILABLE**
- **ALL LEADS ISOLATED FROM CASE(METAL PACKAGE)**
- **OUTPUT VOLTAGE RANGE OF 1.25 TO 37V (1.25 TO 57V FOR -HV VERSION)**
- **OUTPUT CURRENT IN EXCESS OF 1.5A**
- **0.1% LINE AND LOAD REGULATION**
- **FLOATING OPERATION FOR HIGH VOLTAGES**
- **COMPLETE SERIES OF PROTECTIONS:**
  - **CURRENT LIMITING**
  - **THERMAL SHUTDOWN**
  - **SOA CONTROL**
  - **1% VOLTAGE TOLERANCE OPTION**

TO220M -TO220 Metal Package - Isolated
SMD1 - SMD1Ceramic Surface Mount Package

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{I-O}	Input - Output Differential Voltage	– Standard	40V
		– HV Series	60V
I_O	Output Current		Internally limited
P_D	Power Dissipation		Internally limited
T_j	Operating Junction Temperature Range		–55 to 150°C
T_{stg}	Storage Temperature		–65 to 150°C

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ELECTRICAL CHARACTERISTICS ($V_I - V_O$ = 5V, I_O = 500mA, unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit.
ΔV_O	Line Regulation	$V_I - V_O$ = 3 to 40V	T_j = 25°C		0.01	0.02	% / V
					0.02	0.05	
ΔV_O	Load Regulation	$V_O \leq 5V$	T_j = 25°C		5	15	mV
		I_O = 10mA to 1.5 A			20	50	
		$V_O \geq 5V$	T_j = 25°C		0.1	0.3	%
		I_O = 10mA to 1.5A			0.3	1	
I_{ADJ}	Adjust Pin Current				50	100	µA
ΔI_{ADJ}	Adjust Pin Current Change	$V_I - V_O$ = 2.5 to 40V I_O = 10mA to 1.5A			0.2	5	µA
V_{REF}	Reference Voltage (between pin 3 and pin 1)	$V_I - V_O$ = 3 to 40V I_O = 10mA to 1.5A		1.2	1.25	1.3	V
$\frac{\Delta V_O}{V_O}$	Output Voltage Temperature Stability				1		%
$I_{O(min)}$	Minimum Load Current	$V_O - V_O$ = 40V			3.5	5	mA
$I_{O(max)}$	Maximum Load Current	$V_I - V_O \leq 15V$		1.5	2.2		A
		$V_I - V_O$ = 40V			0.4		
e_N	Output Noise (percentage of V_O)	T_j = 25°C, 10Hz to 10kHz			0.003		%
SVR	Supply Voltage Rejection (*)	T_j = 25°C	C_{ADJ} = 0		65		dB
		f = 100Hz	C_{ADJ} = 10µF	66	80		

(*) C_{ADJ} is connected between pin 1 and ground.

THERMAL DATA

$R_{THj-case}$	Thermal Resistance Junction – Case	Max. 3°C / W
$R_{THj-amb}$	Thermal Resistance Junction – Ambient	Max. 50°C / W