



LM317K

3-Terminal Positive Adjustable Regulators

GENERAL DESCRIPTION

The LM317T are monolithic integrated circuits in TO220 packages. They are intended for use as positive adjustable voltage regulators, and designed to supply more than 1.5A of load current with an output voltage adjustable over a 1.2 to 37V range. Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings	Value	Unit
V_i-V_o	Input-Output Voltage Differential	40	V
I_o	Output Current	1.5	A
P_D	Power Dissipation	Internally Limited	W
T_{OP}	Operating Junction Temperature	0° to 125	°C
T_{STG}	Storage Temperature	-65° to 150	°C

THERMAL DATA

Symbol	Ratings	Value	Unit
R_{thJC}	From Junction to Case Thermal Resistance	1.67	°C/W
R_{thJA}	From Junction to Free-Air Thermal Resistance	62.5	

CHARACTERISTICS

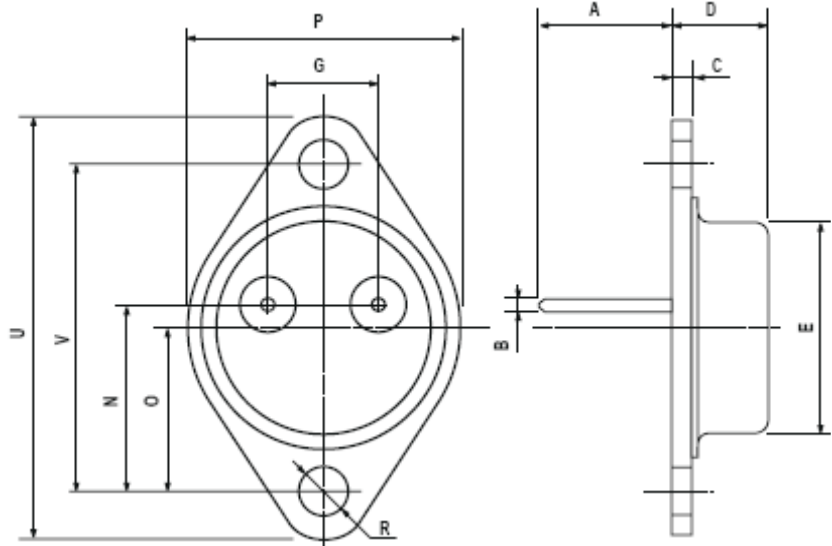
$V_i-V_o = 5\text{ V}$, $I_o = 500\text{ mA}$, $I_{MAX} = 1.5\text{ A}$, $P_{MAX} = 20\text{ W}$, unless otherwise specified

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
V_{REF}	Reference Voltage	$V_i-V_o = 5\text{ V}$ $I_o = 40\text{ to }500\text{ mA}$	1.2	1.25	1.3	V
ΔV_o	Line Regulation	$V_i-V_o = 3\text{ to }40\text{ V}$ $I_o = 500\text{ mA}$	-	-	0.05	%/V
ΔV_o	Load Regulation	$V_i-V_o = 5\text{ V}$ $I_o = 10\text{mA to }1.5\text{ A}$	-	-	1	%
I_{ADJ}	Adjustment Pin Current	$V_i-V_o = 5\text{ V}$ $I_o = 40\text{ to }500\text{ mA}$	-	-	100	μA
ΔI_{ADJ}	Adjustment Pin Current	$V_i-V_o = 3\text{ to }40\text{ V}$ $I_o = 40\text{ to }500\text{ mA}$	-	-	5	μA
ΔI_{ADJ}	Adjustment Pin Current	$V_i-V_o = 5\text{ V}$ $I_o = 10\text{mA to }1.5\text{ A}$	-	-	5	μA
S_{VR}	Ripple Rejection	$V_i-V_o = 5\text{ V}$; $I_o = 500\text{ mA}$ $V_o = 10\text{ V}$; $f = 100\text{ Hz}$ $C_{ADJ} = 10\text{ }\mu\text{F}$	66	-	-	dB

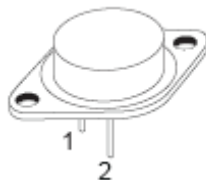
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MECHANICAL DATA CASE TO-3

DIMENSIONS (mm)		
	min	max
A	11	13.10
B	0.97	1.15
C	1.5	1.65
D	8.32	8.92
F	19	20
G	10.70	11.1
N	16.50	17.20
P	25	26
R	4	4.09
U	38.50	39.30
V	30	30.30



Pin 1 :	Adjust.
Pin 2 :	Input
Case :	Output



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