



LM317K

3-Terminal Positive Adjustable Regulators

GENERAL DESCRIPTION

The LM317K are monolithic integrated circuits in TO-3 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

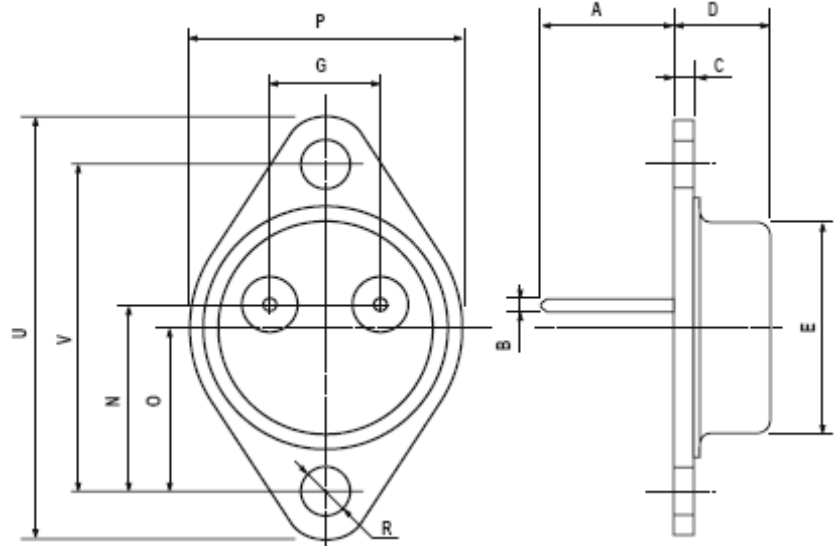
$V_i-V_o = 5\text{ V}$, $I_o = 500\text{ mA}$, $I_{MAX} = 1.5\text{ A}$, $P_{MAX} = 20\text{ W}$, unless otherwise specified

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

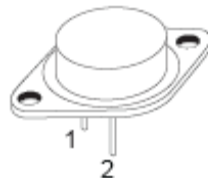
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MECHANICAL DATA CASE TO-3

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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