

isc Adjustable Voltage Regulator

LM317K

FEATURES

- Output Voltage Range :1.2V to 37V
- Output Current In Excess of 1.5A
- 0.1% Line and Load Regulation
- Floating Operation for High Voltage
- Complete Series of Protections:
Current Limiting,
Thermal Shutdown and SOA Control.
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

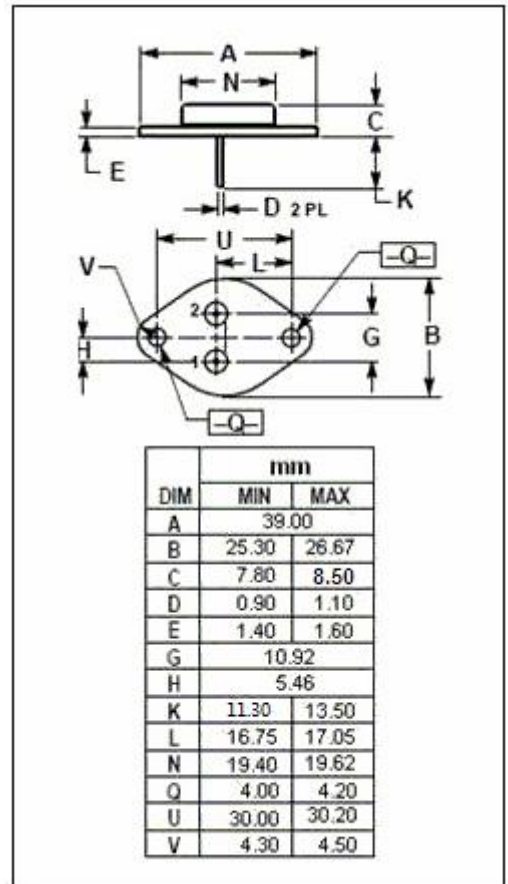
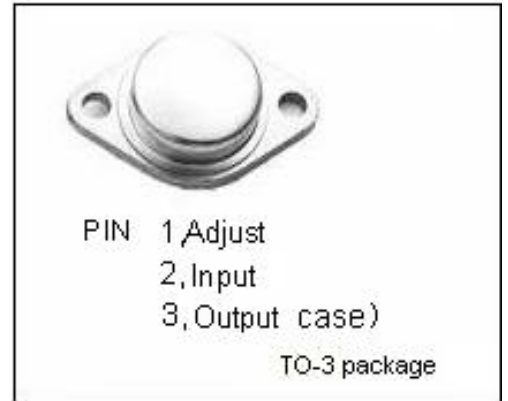
- For use as positive adjustable voltage regulators.
- Designed to supply more than 1.5A of load current with an output voltage adjustable over a 1.2 to 37V range.
- The nominal output voltage is selected by means of only a resistive divider , making the device exceptionally easy to use and eliminating the stocking of many fixed regulators.

ABSOLUTE MAXIMUM RATING(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _i -V _o	Input-output Differential Voltage	40	V
I _o	Output Current	1.5	A
P _D	Power Dissipation	Internally Limited	W
T _{OP}	Operating Junction Temperature	0~125	°C
T _{STG}	Storage Temperature	-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	4	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	35	°C/W



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• ELECTRICAL CHARACTERISTICS

 ($V_i - V_o = 5V$, $I_o = 0.5A$, $I_{MAX} = 1.5A$, $P_{MAX} = 20W$, unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V_{REF}	Reference Voltage	$V_i - V_o = 5V$; $I_o = 40mA$ to $500mA$,	1.2	1.25	1.3	V
ΔV_o	Line Regulation	$V_i - V_o = 3V$ to $40V$; $I_o = 500mA$			0.04	%/V
ΔV_o	Load Regulation	$V_i - V_o = 5V$; $I_o = 10mA$ to $1.5A$			0.5	%
I_{ADJ}	Adjustment Pin Current	$V_i - V_o = 5V$; $I_o = 40mA$ to $500mA$			100	μA
ΔI_{ADJ}	Adjustment Pin Current	$V_i - V_o = 3V$ to $40V$; $I_o = 40mA$ to $500mA$			5	μA
ΔI_{ADJ}	Adjustment Pin Current	$V_i - V_o = 5V$; $I_o = 10mA$ to $1.5A$			5	μA
S_{VR}	Ripple Rejection	$V_o = 10V$; $I_o = 500mA$; $V_i - V_o = 5V$; $f = 100Hz$, $C_{ADJ} = 10 \mu F$	66			dB

NOTICE:

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