isc Adjustable Voltage Regulator LM317K

FEATURES

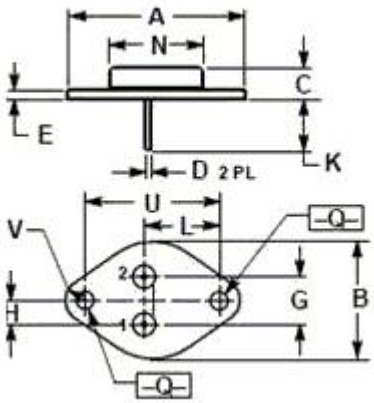
- Output Voltage Range :1.2V to 37V
- Output Current In Excess of 1.5A
- 0.1% Line and Load Regulation
- Floating Operation for High Voltage
- Complete Series of Protections:
  Current Limiting,
  Thermal Shutdown and SOA Control.
- Minimum Lot-to-Lot variations for robust device performance and reliable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

PIN 1.Adjust
2.Input
3.Output case)

TO-3 package

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.



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ABSOLUTE MAXIMUM RATING(T_a=25℃)

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	℃
T_{STG}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	4	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	35	℃/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
$\triangle V_O$	Line Regulation	V_i -V_o= 3V to 40V; I_O=500mA			0.04	%/ V
$\triangle V_O$	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
$\triangle I_{ADJ}$	Adjustment Pin Current	V_i -V_o= 3V to 40V; I_O= 40mA to 500mA			5	μA
$\triangle I_{ADJ}$	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 μF	66			dB