

isc Adjustable Voltage Regulator

LM317

FEATURES

- Output Voltage Range :1.2V to 37V
- Output Current in Excess of 1.5A
- 0.1% Line and Load Regulation
- Floating Opearation for High Voltages
- Complete Series of Protections:
Current Limiting,
Thermal Shutdown and SOA Control

DESCRIPTION

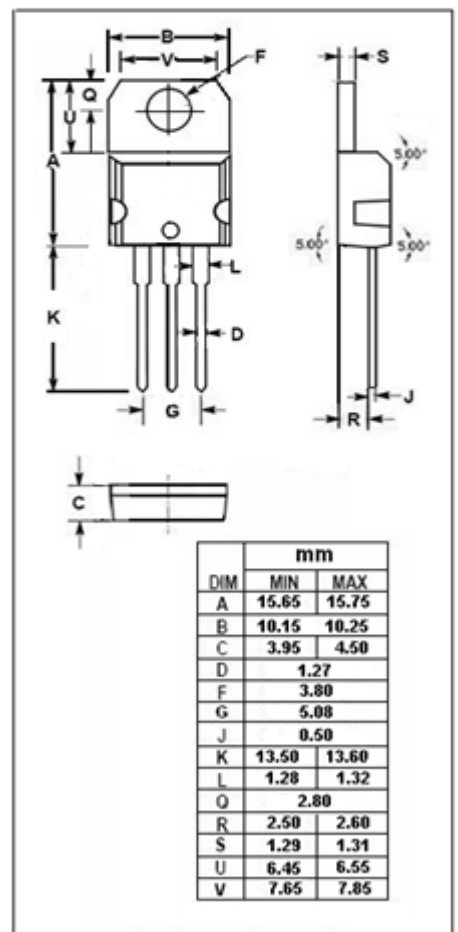
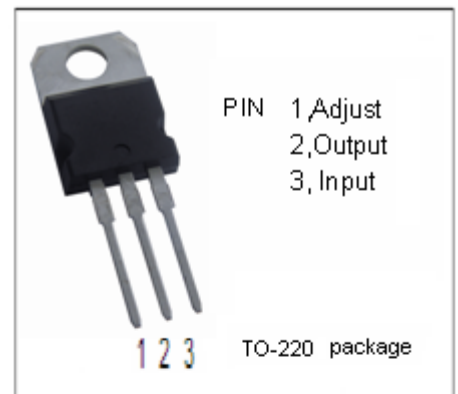
- They are designed to supply more than 1.5A of load current with an output voltage adjustable over a 1.2 to 37V range.
- The nominal output voltage is selected by means of only a resistive divider,making the device exceptionally easy to use and eliminating the stocking of many fixed regulators.

ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	3	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	50	°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			0.05	%/V
ΔV _o	Load Regulation	V _i -V _o = 5V ; I _o = 10mA to 1.5A			1.0	%
I _{ADJ}	Adjustment Pin Current	V _i -V _o = 5V ; I _o = 40mA to 500mA			100	μ A
ΔI _{ADJ}	Adjustment Pin Current	V _i -V _o = 3V to 40V; I _o = 40mA to 500mA			5	μ A
ΔI _{ADJ}	Adjustment Pin Current	V _i -V _o = 5V; I _o = 10mA to 1.5A			5	μ A
S _{VR}	Ripple Rejection	V _o = 10V; I _o = 500mA; V _i -V _o = 5V f= 100Hz, C _{ADJ} = 10 μ F	66			dB