

isc Adjustable Voltage Regulator

LM317T

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
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

DESCRIPTION

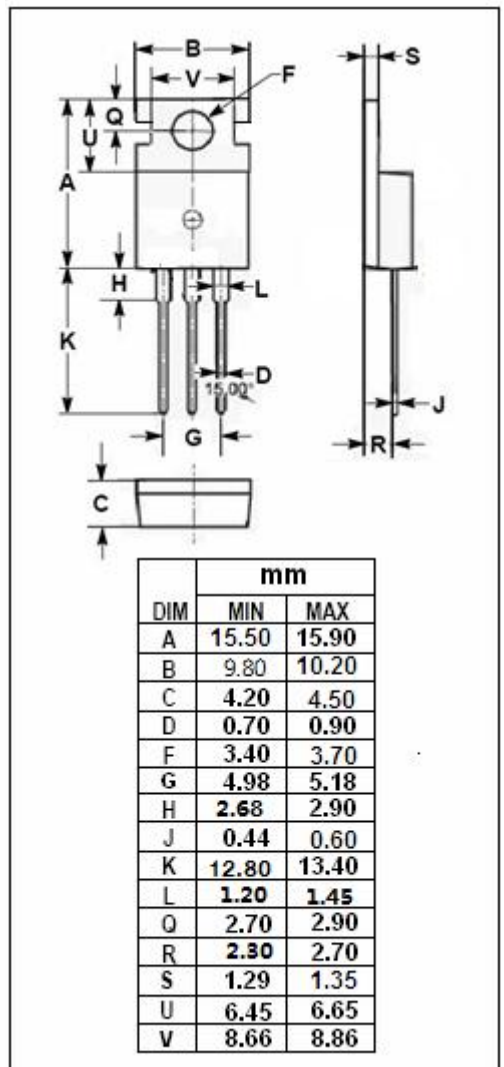
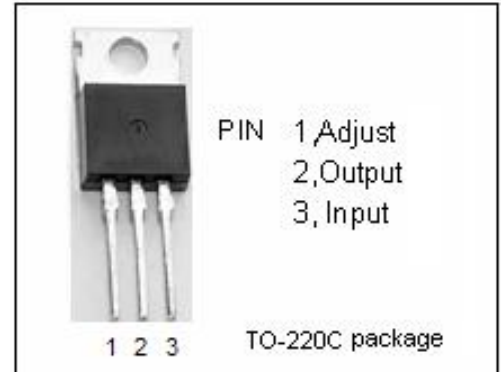
- They are designed to supply more than 1.5A of load current with an output voltage adjustable over a 1.2 to 37V range.
- The nominal output voltage is selected by means of only a resistive divider, making the device exceptionally easy to use and eliminating the stocking of many fixed regulators.

ABSOLUTE MAXIMUM RATING($T_a=25^{\circ}\text{C}$)

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	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-65~125	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	5	$^{\circ}\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	35	$^{\circ}\text{C/W}$



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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
ΔV_o	Line Regulation	$V_i - V_o = 3V$ to $40V$; $I_o = 10mA$ to $1.5A$			0.07	%/V
S_{VR}	Ripple Rejection	$V_o = 10V$; $f = 120Hz$, $C_{ADJ} = 10 \mu F$	66			dB
ΔV_o	Load Regulation	$I_o = 10mA$ to $1.5A$; $V_o \leq 5V$; $T_j = 25^\circ C$			25	mV
		$I_o = 10mA$ to $1.5A$; $V_o > 5V$; $T_j = 25^\circ C$			0.5	%
I_o (min)	Minimum Load Current	$V_i - V_o = 40V$			12	mA
I_o (max)	Maximum Load Current	$V_i - V_o \leq 15V$	1.5			A
		$V_i - V_o = 40V$; $T_j = 25^\circ C$		0.3		A
I_{ADJ}	Adjustment Pin Current	$V_i - V_o = 5V$; $I_o = 500mA$			100	μA
ΔI_{ADJ}	Adjustment Pin Current	$V_i - V_o = 3V$ to $40V$; $I_o = 10mA$ to $1.5A$			5	μA
V_{REF}	Reference Voltage	$V_i - V_o = 3V$ to $40V$; $I_o = 10mA$ to $1.5A$, $P \leq 15W$	1.2	1.25	1.3	V

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