

isc Three Terminal Positive Voltage Regulator

L7810CV

FEATURES

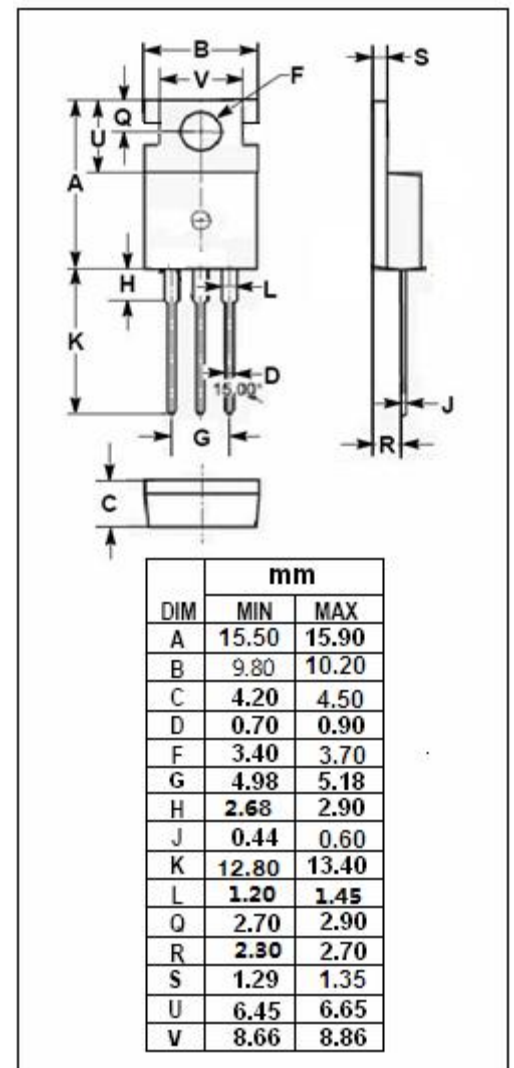
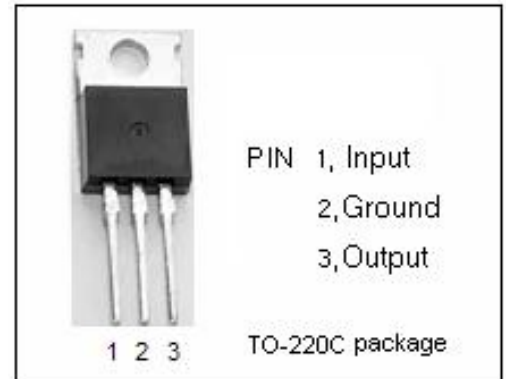
- Output current in excess of 1.5A
- Output voltage of 10V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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

SYMBOL	PARAMETER	RATING	UNIT
V_i	DC input voltage	35	V
I_o	Output current	internally limited	
P_{tot}	Power dissipation	internally limited	
T_{OP}	Operating junction temperature	-40~125	$^{\circ}\text{C}$
T_{stg}	Storage temperature	-55~150	$^{\circ}\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3	$^{\circ}\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	50	$^{\circ}\text{C/W}$



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• ELECTRICAL CHARACTERISTICS

 $T_J=25^{\circ}\text{C}$ ($V_i=16\text{V}$, $I_o=0.5\text{A}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_o	Output Voltage	$V_{in}=16\text{V}$; $I_o=500\text{mA}$	9.5	10.5	V
ΔV_v	Line Regulation	$12.5\text{V}\leq V_{in}\leq 25\text{V}$; $I_o=500\text{mA}$		100	mV
ΔV_i	Load Regulation	$5.0\text{mA}\leq I_o\leq 1.5\text{A}$; $V_{in}=16\text{V}$		100	mV
I_b	Quiescent Current	$V_{in}=16\text{V}$; $I_o=1\text{A}$		8.0	mA
Δ_{b1}	Quiescent Current Change	$5.0\text{mA}\leq I_o\leq 1.0\text{A}$; $V_{in}=16\text{V}$		0.5	mA
Δ_{b2}	Quiescent Current Change	$12.5\text{V}\leq V_{in}\leq 25\text{V}$; $I_o=500\text{mA}$		1.0	mA

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