

## isc Three Terminal Positive Voltage Regulator

ISC7815

## FEATURES

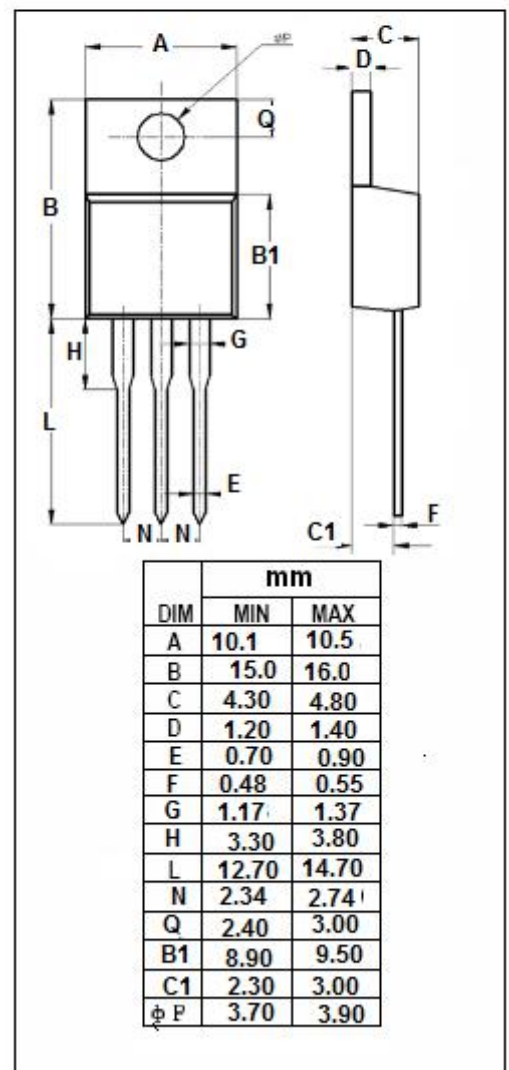
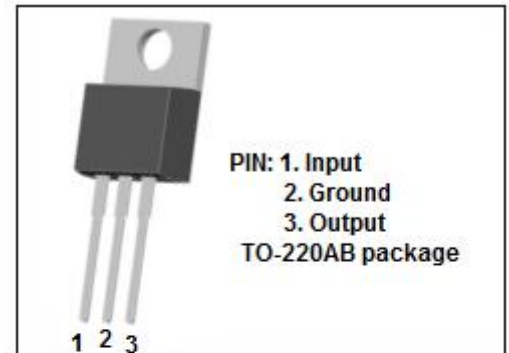
- Output current in excess of 1.5A
- Output voltage of 15V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

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	0~150	$^{\circ}\text{C}$
$T_{stg}$	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

 $T_J=25^{\circ}\text{C}$  ( $V_I=23\text{V}$ ,  $I_O=0.5\text{A}$ ,  $C_I=0.33\mu\text{F}$ ,  $C_O=0.1\mu\text{F}$  unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_O$	Output Voltage	$V_{in}=23\text{V}$ ; $I_O=1.5\text{A}$	14.4	15.6	V
$\Delta V_V$	Line Regulation	$17.5\text{V}\leq V_{in}\leq 30\text{V}$ ; $I_O=0.5\text{A}$		150	mV
$\Delta V_I$	Load Regulation	$5.0\text{mA}\leq I_O\leq 1.5\text{A}$ ; $V_{in}=23\text{V}$		150	mV
$I_q$	Quiescent Current	$V_{in}=23\text{V}$ ; $I_O=1\text{A}$		8.0	mA
$\Delta_{q1}$	Quiescent Current Change	$5.0\text{mA}\leq I_O\leq 1.0\text{A}$ ; $V_{in}=23\text{V}$		0.5	mA
$\Delta_{q2}$	Quiescent Current Change	$17.5\text{V}\leq V_{in}\leq 30\text{V}$ ; $I_O=500\text{mA}$		1.0	mA

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