

isc Three Terminal Positive Voltage Regulator

LM7815K

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	$^{\circ}\text{C}$

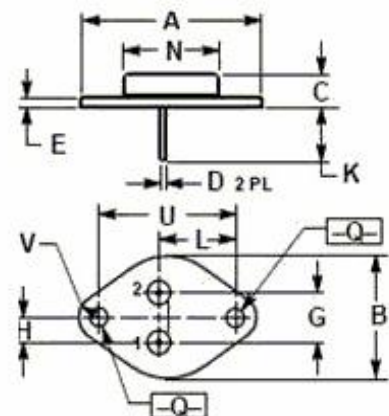
THERMAL CHARACTERISTICS

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	$^{\circ}\text{C/W}$



PIN 1, Input
2, Output
3, Ground

TO-3 package



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

isc Three Terminal Positive Voltage Regulator**LM7815K****• 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
ΔV_v	Line Regulation	$17.5\text{V} \leq V_{in} \leq 30\text{V}$; $I_o=0.5\text{A}$		150	mV
ΔV_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
Δ_{q1}	Quiescent Current Change	$5.0\text{mA} \leq I_o \leq 1.0\text{A}$; $V_{in}=23\text{V}$		0.5	mA
Δ_{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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