isc Three Terminal Positive Voltage Regulator KA7815

PIN 1, Input
2, Ground
3, Output

1 2 3

TO-220C package

FEATURES

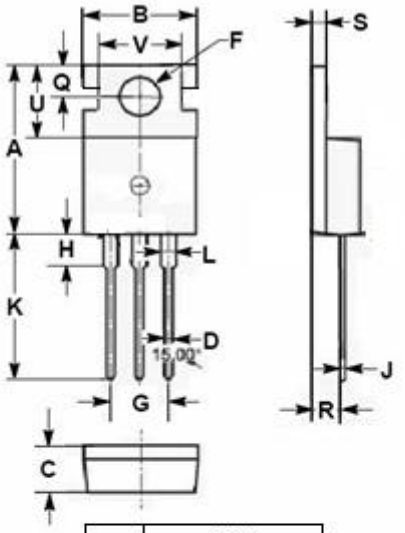
- Output current in excess of 1.0A
- Output voltage of 15V
- Internal thermal overload protection
- Output transition Safe-Area compensation
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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	0~125	℃
T_{stg}	Storage temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	5	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	65	℃/W



DIM	mm MIN	MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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• ELECTRICAL CHARACTERISTICS

T_j=25℃ (V_i= 23V, I_O=0.5A, C_i= 0.33 μF, C_O= 0.1 μF unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_O	Output Voltage	V_{in}=23V; I_O=500mA	14.4	15.6	V
V_O	Output Voltage	I_O=5 mA to 1.0A;Po≤15W V_{in}=18.5 to 30V;	14.25	15.75	V
$\triangle V_V$	Line Regulation	17.5V≤V_{in}≤30V; 20V≤V_{in}≤26V		300 150	mV
$\triangle V_i$	Load Regulation	5.0mA≤I_O≤1.5A; 250mA≤I_O≤750mA		300 150	mV
I_q	Quiescent Current	V_{in}=23V; I_O=1A		8.0	mA
$\triangle_{q1}$	Quiescent Current Change	5.0mA≤I_O≤1.0A;V_{in}=23V		0.5	mA
$\triangle_{q2}$	Quiescent Current Change	17.5V≤V_{in}≤30V; I_O=500mA		1.0	mA