

isc Three Terminal Positive Voltage Regulator

7824K

FEATURES

- Output current in excess of 1.5A
- Output voltage of 24V
- Internal thermal overload protection
- Short circuit 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	40	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	-40~150	$^\circ\text{C}$

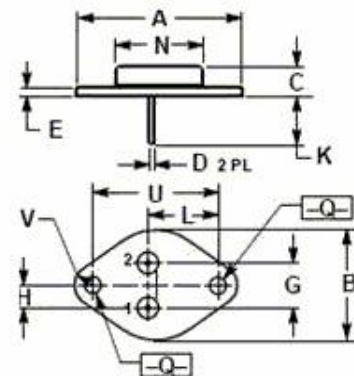
THERMAL CHARACTERISTICS

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



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**7824K****• ELECTRICAL CHARACTERISTICS** $T_J=25^{\circ}\text{C}$ ($V_I=33\text{V}$, $I_O=0.5\text{A}$, $C_I=0.33\ \mu\text{F}$, $C_O=0.1\ \mu\text{F}$ unless otherwise specified)

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_O	Output Voltage	$V_{in}=33\text{V}$; $I_O=500\text{mA}$	23	25	V
ΔV_V	Line Regulation	$27\text{V} \leq V_{in} \leq 38\text{V}$; $I_O=500\text{mA}$		480	mV
ΔV_I	Load Regulation	$5.0\text{mA} \leq I_O \leq 1.5\text{A}$; $V_{in}=33\text{V}$		480	mV
I_b	Quiescent Current	$V_{in}=33\text{V}$; $I_O=0.5\text{A}$		8.0	mA
Δ_{b1}	Quiescent Current Change	$5.0\text{mA} \leq I_O \leq 1.0\text{A}$; $V_{in}=33\text{V}$		0.5	mA
Δ_{b2}	Quiescent Current Change	$27\text{V} \leq V_{in} \leq 38\text{V}$; $I_O=500\text{mA}$		1.0	mA

NOTICE:

ISC reserves the rights to make changes of the content herein the datasheet at any time without notification. The information contained herein is presented only as a guide for the applications of our products.

ISC products are intended for usage in general electronic equipment. The products are not designed for use in equipment which require specialized quality and/or reliability, or in equipment which could have applications in hazardous environments, aerospace industry, or medical field. Please contact us if you intend our products to be used in these special applications.

ISC makes no warranty or guarantee regarding the suitability of its products for any particular purpose, nor does ISC assume any liability arising from the application or use of any products, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages.